
Australian
SAPPER
2014

ROYAL AUSTRALIAN ENGINEERS

CORPS SUBSCRIPTIONS

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Subscriptions to Corps Funds provide the income that allows us to care for our heritage and foster Esprit de Corps.

The Corps of Royal Australian Engineers has a collective responsibility to our predecessors and ourselves to ensure we preserve, protect and develop our heritage.

The legacy that we have been left, and that we will subsequently leave, includes historical equipment, important medal groups, diaries, photographs, publications, letters and other records of the Corps' achievements.

Most of our items of importance are displayed in The Australian Army Museum of Military Engineering or at The School of Military Engineering.

Your Corps Fund subscription will ensure that the Royal Australian Engineers can afford to preserve, protect and develop our heritage while fostering our Esprit de Corps.

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The Corps Fund has provided financial support to:

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- the annual Sapper of Excellence awards,
- the publication of Unit histories.

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The Future

The Corps Fund will continue to support Corps sporting, adventure training and other activities. Funds will also be required to assist with the research and publication of Volume V of The Corps History.

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For further information or to request support from the Fund, contact the RAE Head of Corps Cell via email at: *RAE.HOC@defence.gov.au*

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COVER: The construction of the new 'Home of the Sapper' is well progressed with the School of Military Engineering scheduled to move into the new Steele Lines in April 2015. The official opening of the Corps' new facility is planned for 27 June 2015. (Source: Department of Defence, image taken by SKYview)

Message from the Head of Corps

Royal Australian Engineers

Brigadier Wayne Budd, CSC

Welcome to this 2014 edition of Sapper Magazine. These pages record that we remain busy on operations, training and support to domestic activities. In all endeavours our Corps has maintained its reputation for leading the way and getting the job done. I congratulate you all.

When I last wrote to you I assessed that the reduced operational tempo would let us get back to foundation training in our core skills. This adjustment has allowed many unit training activities to be undertaken this year and for a successful Exercise HAMEL to be conducted. The force generation cycle is solidly in effect and we can forecast the activity schedule with some degree of certainty. That said, the world remains an uncertain place and we have seen the ADF responding to previously unimagined global security threats. Our core sapper skills will be essential to all future operations, so the training cycle opportunities must continue to be grasped.

Our commitment to domestic and regional support operations has also been fruitful training for our regiments. The G20 was a massive undertaking and all the hard work enabling security saw our high risk search skills rolled out and refreshed. The OPERATION RENDER SAFE activity lead by 6th Engineer Support Regiment was also a valuable EOD training opportunity. Additionally the AACAP program remains strong. This is a wonderful commitment by Army to the indigenous communities of Australia. I know that those of you who have the opportunity to work on an AACAP task understand the value it has for the country, the recipient community and for our own training benefits.

The Corps is also getting some great new facilities across the country. I recently attended the opening of the 2nd Combat Engineer Regiment's Ubique Lines in Enoggera. These are fantastic regimental lines and returns to the Corps an expanded corner of Gallipoli Barracks. The School of Military Engineering relocation is moving forward. The new Corps Museum has been handed over to AAHU staff and many of the new buildings at Holsworthy have been occupied. We will begin some training in the new SME early next year with full relocation planned for May next year.

Our organisations do not stand still either. The new Reserve model has been implemented across the 2nd Division. Sadly some old unit titles have ceased after long and distinguished service, while some new ones have been added. Amalgamations will ensure heritage and history lives on and I welcome the future for our reserve regiments. Growth in our ARA units is also welcome under Plan Beersheba and I assess our CERs to be strong and well balanced structurally. What we need to do is continue to push for the next generation of equipment which is needed to maintain and expand our capabilities on the battlefield. This is a key area of work for those of us with a strategic focus on the Corps future.

On the people front there have been many of our own who have received significant honours this year both in terms of awards and also in terms of their appointments within the Army. Our people simply achieve outstanding things. What I will ask of all of us, is a continuing commitment to the welfare of our entire Corps family. At the strategic level we continually try to understand the impacts of operational service from our multiple operations. What I have learnt is that the bonds of friendship simply help. I encourage all of us to join a regional RAE association if you depart fulltime or part-time service. Staying connected this way will help all of us, those that need help and those that want to ensure their mates are well and happy. A multitude of service support organisations are out there for support now but we have our own RAE Foundation which seeks to underpin support to all sappers. Your continued support to our Foundation is appreciated.

2015 will bring many more World War 1 anniversaries to us. The 100th anniversary of the Gallipoli landings will be significant and the Corps' own special place with the 1st Field Company Engineers at the front of those boats will be remembered. Many wonderful traditions of the Corps stem from those times and our heritage should always be important to us. I look forward to celebrating each milestone with you as we walk through the year.

Thank you for another great year of service. You have all worked hard and I hope you all get a restful traditional leave period. 2015 will be another challenging training year with an increased operational support requirement. So enjoy time with your families and friends over leave, read this record of our achievements and be proud of what you have achieved in 2014.

Ubique!

Article Submission Guidelines

The Editor is always pleased to consider articles for publication in Australian Sapper.

Subject. *Articles submitted to the editor should have some direct correlation to military engineering. or the RAE. Articles of a historical nature are welcome.*

Length. *Articles of any length will be considered by the editor. Authors should attempt to provide articles whose length is between 500 to 2000 words. Note that about 950 words covers one page less photographs.*

Copy. *One copy of text should be submitted, together with the author's name and any photographs to the editor. Articles should be submitted in Word. Photos are required to be submitted separately and are not to be embedded in the text.*

Photographs. *Photographs must be of a good quality with sharp definition and the author is responsible for providing captions for each photograph submitted. The photographs should not be altered prior to submission and MUST NOT be embedded in the document. Digital images can sent via email to RAE.HOC@defence.gov.au or CD to the School of Military Engineering*

Abbreviations. *The use of abbreviations, jargon and acronyms should be limited to only widely known abbreviations such as RAE.*

Submissions. *All articles provided for submission are required to be collated by units into the following categories: RAE Operations, RAE Exercises, SITREP or General Interest. Unit or individual contributions should reach the Editor by 3 October for December 2015 issue.*

Message from the Corps Sergeant Major

Royal Australian Engineers

Warrant Officer Class One Michael Kerr, OAM

I have a number of goals and expectations for my tenure. I want to ensure we have efficiency in our RAE training continuum. IET training is being continually extended as we introduce more training and equipment into the course. More importantly, on the equipment side, is the complexity of some of the new equipment being introduced into service.

As a Corps, we need to be more engaged with all stake holders as we look at new equipment to support our capability requirements. We need to link the sapper on the ground with DMO project personnel and FEB. The new equipment needs to embrace technology and be simpler to use with less training time, be easily transported, yet still provide the capability required. I personally do not believe we have done this very well over the years and, therefore, we have become a burden on the system.

We cannot continue this trend. We have many smart sappers across all ranks within the Corps. If you have a good idea to improve or introduce a new piece of equipment, let your chain of command know. We need to use our collective knowledge and experience to determine the requirement and to support the capability. Knowledge and experience do not necessarily go hand in hand. An individual may be very smart and have knowledge, but have no experience. In the equipment procurement game we need both of these things when we look at developing our equipment requirements.

The current IET course was 75 days long and looked like being expanded to around 130 days. We have worked hard this year reviewing the IET course with the FEB, unit COs and RSMs, and SME to maintain the IET course at around 80 days. We have achieved this by removing outdated and duplicated training which allows us now to spend a greater amount of time on the Corps' 'bread and butter' skill sets. We need to continually seek ways to deliver training more efficiently. The IET review was never about saving money and/or time, but all about ensuring a sapper left SME retaining as much of the information taught on the course as possible, ready to develop into Pte (P) within 12 months at their unit.

In 2015, I want to look at junior NCO training and development and ensure we are setting NCOs up for success. This will include a full review of the RAE training continuum. Requiring NCOs to have more time in rank will allow junior leaders to develop their skills and leadership style. I ran junior NCO training for the Corps annually for about four years. I see merit in re-initiating this once again and will engage the HOC and unit COs/RSMs on this in the near future.

Army Reserve Training

We have conducted a curriculum review board of ARes IET and ROBC training. This will improve the delivery and relevance of training through modularised capability blocks, which can be selected by a unit commander to provide capability based on a specific brigade's requirements. The full proposal is about to go out to stakeholders for final review and comment shortly.

Associations

I would like to see more engagement between the Corps and the RAE associations. I believe there is much to be gained by developing closer relationships with these organisations.

I am pleased with how the RAE associations conduct themselves. The associations I have observed appear to be managed by honest personnel with nothing but good intentions, backed by a love of the Corps. Well done to each and every one of the associations committee and members!

Unfortunately, I can not attend all association meetings. I would love to get to a meeting of each association to say hello and have a chat to the members. As we know, money is tight and my only chance of getting to a meeting is if a trade and training or Corps related trip coincides with one of these meetings.

Our Corps would not be the same without the support and networks maintained and supported by the association and the personnel that make them up. I thank all associations for making the Corps better and for supporting our current and ex-serving personnel.

Draw down from operations

As we draw down from operations, it will give us time as a Corps and as individuals to reflect on what we have achieved and what we need to do from here. As a Corps, we need to do plenty. We cannot continue to stand on our past successes.

We need to promote ourselves as a viable, highly trained, capable and relevant battlefield enabler. This will require foresight on the Corps capability requirement and future planning. We need to be communicating our strengths and capabilities in the combined arms environment. We need a strong communications plan, something LTCOL Warren Jolly and others have been firm advocates for as long as I can remember.

Having a break from operations is a good thing. It will give us time to become 'brilliant at the basics' once more. Those of us who experienced the Army post Vietnam and pre Timor Leste will remember the long field exercises and the ritual training regimes which drilled us time and again on the basics. We could live in the field comfortably for months on end. We were good at what we did and excelled in combat engineering tasks.

The tempo of operations forced us to move away from the basics of a war to concentrate on the war. This has led to a sharp rise in skills in support of operations in the Middle East, but also a degradation of some basic skills.

This is an exciting time for Army. This break is well deserved and will be well received. Commanders now have an opportunity to develop soldiers' skills. RSMs/SMs can get on with training and junior NCOs will have the freedom to conduct training. We just need to avoid getting bogged down with administration.

RAE Trades and Training Cell

The RAE TT Cell will have a big turnover in 2015 (see page 10). Not all personnel departing will be replaced. I think it is time the Corps made a decisive commitment to ensure appointments at the RAE TT Cell are filled as a priority.

Lastly I would like to wish MAJ Michael Carroll all the best for his new appointment at the Australian Geospatial Organisation. The RAE TT Cell is now in a strong position leading into 2015 due to his leadership, passion for the Corps and dedication to achieving viable training solution outcomes.

The Royal Australian Engineers Foundation

'For Sappers, By Sappers'

By Colonel Tara Bucknall

2014 has seen the RAE Foundation continue to reach out to the Sapper Community and provide support to members who needed assistance. This year also saw a number of developments in the way that the Foundation is able to connect and communicate with the Corps and the broader corporate environment.

The keystone event for the Foundation, The Reynolds Dinner, was held in Sydney in October 2014. The Dinner was attended by a number of current and former serving members of the Corps as well as representation from our Corporate partners. It was at the dinner the Lockheed Martin was announced as the Foundations latest Platinum Partner, joining Komat'su Australia and Interlink Roads. Lockheed Martin has strong ties to the Army and RAE through a number of employees who are former serving members. The Art Auction again continued to attract a range of high calibre pieces of art donated by artists with connection with RAE. It was also a privilege for the Foundation to welcome one of the artists, Dave Sturmer, who was able to attend the dinner with his wife Amanda. This year has also seen the Foundation welcome Rydges as our Reynolds Dinner Partner. With two of the last three Dinner's held at Rydnges location, it is a fitting partnership for the future. Planning has commenced for the 2015 Reynolds Dinner to be held in Melbourne on Friday 9th October at Rydges Melbourne.

In addition to the art auctioned at the dinner itself, the RAE Foundation is now conducting a raffle for a Bronze Sapper's Slouch Hat (pictured here) donated by Ron Gomboc. Ron was a National Serviceman and created this limited edition piece based around his own slouch hat. Other pieces are at the RAE Memorial at 13 Field Squadron, Irwin Barracks, Karakatta, The Australian War Memorial and a piece was donated to Sergeant Michael Lyddiard. Tickets are being sold for $10 a ticket and the raffle will be drawn on ANZAC Day at the School of Military Engineering. There will only be 1000 tickets sold, so contact the Foundation to purchase your tickets now.

2014 also saw the roll out of the upgraded RAE Foundation website (www.raefoundation.org.au). Unfortunately, when viewed on the Defence Restricted Network the website is not particular user friendly but it is expected that the next generation of SOE within Defence will enable the complete functionality. The increased functionality has enabled online donation and payments for events and memorabilia. The receipts that are issued from the website are also able to be used as tax deductible receipts for taxation purposes. There is a "members only" section that acts a bulletin board and blog environment for website members to keep up with news and information from various associations and other interested parties. The RAE Foundation is proud to welcome the NSW Sapper's Association and the RAE Association of Victoria as website members. Other members include a number of individuals who have been providing ongoing support through regular donations to the Foundation. We welcome and encourage you to join as a member – the cost is $60 per year (again fully tax deductible) and this fee goes towards covering the ongoing website maintenance and hosting fees.

A number of members of the Corps currently provide ongoing support to the Foundation through PMKeyS pay allotments. This will cease in Jan 2015 and these members are encouraged to become members of the website and convert their weekly payment into a website membership. The ongoing support provided by members of the corps go directly towards those is the Sapper community who need it, via the Foundation's suite of support programs. Amongst other objectives, the programs provide support for wounded soldiers, and the families of those killed while serving. " These programs acknowledge the valuable service Sappers provide our nation and offer those that need it a "hand-up, not a hand-out" said Colonel John Wertheimer (Chairman of the RAE Foundation Board).

Further information about the Foundation can be found the website (*www.raefoundation.org.au*) or via email at *contact@raefoundation.org.au*

BRONZE SAPPER'S HAT SCULPTURE

Limited edition Bornze Sapper's Slouch Hat created by Ron Gomboc (National Service number 5716665) using Lost Wax Bronze Casting Process.

Purchase your tickets now for this unique memento. Ticket books of 20 available for units or individuals to sell on behalf of the RAE Foundation. Ticket sales and further information available on the RAE Foundation website.

Ticket price: $10 per ticket
Number of tickets available: 1000
Value of prize: $6600
Ticket draw: School of Military Engineering, ANZAC Day 2015

Force Engineer Branch

By Lieutenant Colonel James Dugdell

The Force Engineer Branch (FEB) has, once again, had a busy year. The Force Engineer, Colonel Steve Gliddon, has been tasked as the lead on a number of key initiatives that will have a significant impact on the future direction of the Corps of Royal Australian Engineers. Key to this is the development of the Engineer Combat Support Concept of Operations in support of the Combat Brigades as part of PLAN BEERSHEBA. As well as the future development of the engineer capabilities, the FEB has also been responsible for the establishment of the Army's Seaworthiness Management requirements for all Engineer small boat and work diving mission systems.

Aside from the two large tasks that have kept the branch busy for the majority of the year, the branch has been involved in planning and support to:

- OP PARAPET: the military support to the G20.
- Support to the Solomon Islands after flooding in February 2014.
- EX VITAL series of exercises with Headquarters 1st Division.
- The Geospatial Enterprise Review and the development and modernisation of all geospatial capabilities within the Corps, including 1 Topographic Survey Squadron and the Littoral and Riverine Survey Squadron.
- The review of Explosive Ordinance Disposal (EOD) training.
- The development and implementation of new capabilities such as equipment bridging, including the new rapidly emplaced bridge (REB), replacement fire trucks, and armoured breaching and bridging capabilities.

Plan Beersheba and the Combat Engineer Regiment of the Future

This year has presented a unique opportunity for the development of the Engineer capabilities within the Combat Engineer Regiments (CER). Plan Beersheba has imposed on each CER the requirement to be able to support armoured, mechanised, motorised, airmobile and dismounted manoeuvre as well as to continue to support the logistic and force preservation requirements of the Combat Brigade. This has increased the range of skills required within each CER; no longer is 1 CER covering armoured and mechanised manoeuvre, 2 CER covering motorised manoeuvre or 3 CER covering dismounted and airborne manoeuvre.

Under Plan Beersheba, 1st, 3rd and 7th Brigades—the Combat Brigades—are all to be structured identically with some small differences for the 3rd Brigade to support the Amphibious Capability based on the 2nd Battalion, Royal Australian Regiment (2 RAR). This rebalancing has resulted in the formation of an Armoured Calvary Regiment (ACR) within each Combat Brigade. The ACR consists of a Tank Squadron, an Armoured Personnel Carrier (APC) Lift Squadron and a Reconnaissance Squadron. Mobility is also provided to the Brigade through a Protected Mobility Vehicle (PMV) Lift Squadron in the Combat Service Support Battalion (CSSB).

The APC Lift Squadron and the PMV Lift Squadron are each structured to lift one of the two Standard Infantry Battalions (SIB) within the brigade. The greater variety of mobility platform has lead to a greater variety of support tasks being required from the CER. To enable the Combat Brigades to function they require specialised enabling support from the 6th Combat Support Brigade (6 CS Bde), 16th Aviation Brigade (16 Avn Bde) and 17th Combat Service Support Brigade (17 CSS Bde)—the Enabling Brigades.

To enable this fundamental shift in the way Engineers support the Combat Brigade and the capabilities from the Enabling Brigades has required a rethink of the structure of the CER and the Engineers resident in 6 CS Bde. The primary focus of this work has been the development of the Engineering Combat Support Concept of Operations. The Concept of Operations defines how the CER, the Reserve Engineer Regiments (ER) and the enabling assets from the 6th Engineer Support Regiment (6 ESR) and 19th Chief Engineer Works (19 CE Wks) will support the Combat Brigade in delivering the effects required on the modern battlefield.

In consultation with the Commanding Officers of the Corps, FEB has conducted a review of the current personnel structures and equipment allocations for the CER against the increased variety of tasks. This has lead to a number of key conclusions on the development of the Concept of Operations and areas for future development within the Corps. The primary focus of much of the analysis has been the definition of responsibilities for the CER and the handoff points to 6 ESR and 19 CE Works. A number of key areas were identified that can provide a substantial boost to capability through the implementation of capability projects to support the development of the CER. This work is aimed at influencing the development phases of Land 907 – Main Battle Tank Replacement and Land 400 – Land Combat Vehicle System to ensure that there are appropriate vehicles for the CER included in the basis of provisioning for each project.

The key area of capability that has been analysed has been the assault breaching and bridging capabilities. These capabilities have long been recognised as a gap within Army's armoured capability. Exercise Headline 2013 provided a chance to demonstrate the capability that currently exists within army for supporting the M1A1 and other mechanised manoeuvre within the direct fire zone. This lead to and informed the conduct of a limited objective experiment this year to determine the optimal capability bricks for the CER to provide manoeuvre support to the ACR in the direct fire zone.

The results of this analysis showed that the heavier the equipment and the more versatility that could be built into each Engineer vehicle, the lower the risk to personnel and mission. A key implication is that the heavier and more versatile the Engineer vehicle, the more expensive and difficult to support. After much deliberation amongst the Commanding Officers and FEB, the general consensus is that the optimal solution is a mixture of heavy and medium capabilities that can meet a wide range of contingencies is needed.

The focus of the Engineer Combat Support Concept of Operations is to articulate how the Combat Brigade Commander and staff should manage and task the Engineer capabilities that are allocated to the brigade. The concept for the employment of Engineer reconnaissance and the need for early identification of tasks, and the early conduct of Engineer reconnaissance to allow for the most effective use of limited assets is key. This is backed up by the new structures within the CER, which have a Regimental Reconnaissance Section to conduct this important task. The high demand on logistic support is also detailed within the concept of operations as the CER and the enablers from 6 ESR and 19 CE Wks will have a large demand on the Combat Brigade's logistic systems to ensure that the Engineers are efficiently employed and sustained across the wide range of tasks now required.

The Engineer Combat Support Concept of Operations and the impending implementation of a number of key capability projects has also lead to a review of the structure of a CER and how to best employ the Sappers that are available within the CER. The current paradigm of a CER consisting of two Combat Engineer Squadrons of two or three troops each with a Support Squadron providing all the trade and technical support is not likely to be sustainable or effective into the future. The implementation of new, more technical and specialised equipment will require Sappers to spend more time maintaining currency, in turn reducing their ability to be cross trained on multiple equipment types. This ranges from operators of any potential armoured engineering vehicles, water purification systems, and technical search equipment through to the new REB and the continued need to maintain a dive section. While no way forward has yet been determined, it is likely that there will be changes to the way the CER, and possibly 6 ESR, are manned and structured.

The need to critically examine the way we do business as Army Engineers and how we best support the Combat Brigade, and Army as a whole, will result in many opportunities to advance the Corps in the coming years. Our ability to embrace the opportunities and adapt to the changes will ensure that the Corps meets its changing requirements with a positive and proactive attitude.

Corps Capability Development

Army Headquarters

By Lieutenant Colonel Scott Davidson & Major Benjamin Gill

Above: Water purification units in operation on the shores of the Georges River at Steele Barracks.

The Engineer Development Cell, within the Modernisation Branch in Army Headquarters, is responsible for assisting the Director General Modernisation in making decisions about RAE capability development, and to provide advice to the Director of Logistics for the in-service management of RAE capability. The cell is staffed by two officers who liaise regularly with CDG, DMO, and the Force Engineer Branch. Here is a snapshot of RAE capability development over the last 12 months.

LAND 144 Countermine

Following a successful trial of the Personal Explosive Line Clearance Charge (PELCC) by 3 CER during a 3 Bde field exercise, Final Operational Capability for L144 will be declared later in 2014. L144 has been a long running project delivering countermine capability to Army and has delivered the following capabilities:

- ***Protected Hazard Reduction Capability (PHRC).*** The PHRC is based around the MV10 remote controlled flail and provides the CERs the capability to quickly and safely reduce legacy minefields. Due to the size and manoeuvrability of the machine, it is not suited to supporting combat operations, but is very useful in stability operations or humanitarian operations to reduce the threat to friendly forces and civilian populations from anti-tank (AT) and anti-personnel (AP) mines.
- ***PELCC.*** The PELCC gives dismounted sappers greater capability to support combined arms teams in offensive operations by providing the ability to rapidly create a lane through anti-personnel mine fields, allowing assaulting forces to close with and destroy enemy forces.
- ***Improved Handheld Detector (IHD).*** The AN/PSS-14 Rev 4+ (HSTAMID) was the first dual sensor handheld detector introduced into Army, incorporating metal detection (MD) and

Above: Sappers prepare the Personal Explosive Line Clearing Charge (PELCC) for trials during a field exercise.

ground penetrating radar (GPR). This system was the most advanced system when it was procured in 2008 and provides a high level of confidence for operators conducting countermine operation, with a high probability of detection for low metal content AP mines. With the development of the IED threat over the last six years, particularly low and no metal content IEDs, there is work underway to identify upgraded equipment to replace the current in-service model, including a software upgrade to the AN/PSS-14 to Revision 6.

LAND 154-3A. Counter IED (Project NINGAUI)

This project has delivered the Australian Protected Route Clearance Capability (APRCC) into service. There is now an APRCC with each CER, and a set at SME for training. The APRCC consists of:

- 2 x Husky blast resistant vehicles mounted with dual GPR and MD capability
- 1 x Husky with an interrogator arm (IA) to allow the operator to interrogate suspect items under armour.
- 2 x SPARK mine rollers (SMR) that are pushed by PMVs to proof the route of Victim Operated IEDs (VOIEDs).
- 2 x High Mobility Engineer Excavators (HMEE) to rapidly create bypass routes or repair explosive damage to routes.

This capability allows CERs to provide a greater level of mobility assurance for CSS and other assets using main supply routes.

After a successful introduction into service of the APRCC into theatre to support troops on Op SLIPPER, the focus for this year has been to integrate the equipment with Rain/Train/Sustain systems, particularly L200 communications and the in-service PMV, and further individual training to expand the pool of operators from just those who deployed on Op SLIPPER. This should be complete by the end of this year with a APRCC ready to deploy with a CER from December.

LAND 998 – Expeditionary Airfield Rescue and Fire Fighting

L998 will replace the Titan Fire truck and deliver new vehicles capable of providing aircraft crash response, emergency response, and fire fighting services. L998 will provide deployable vehicles capable of supporting expeditionary operations. 10 Army variant vehicles and 18 RAAF variant vehicles will be delivered to bases around Australia. Government agreed to this proposal in August 2014 and AHQ has commenced coordinating the delivery of all elements of the capability with DMO providing the new Fire Trucks and DSRG providing the facilities. The new vehicles are expected to be arriving during 2016. Fire Fighter training will remain the responsibility of RAAF Security and Fire School, but all Army crews will be trained in the parent unit's locations.

LAND 155 – Enhanced Gap Crossing Capability

L155-1 seeks provide replacement bridges for the Medium Girder Bridge and the Floating Support Bridge. This project will also introduce a modular foot bridge capability and a vehicle bridge that can span over 40 meters in 90m rated at Military Load Class 70+. Any product indication of the future bridges is purely speculative. Government consideration of the Project business case will occur in 2015 and if endorsed the new bridges will roll out into units from early 2017.

A key element of the Enhanced Gap Crossing Capability will be Sappers with Heavy Combination Drivers Licenses. As these licenses take years to achieve, Units will need to start developing these skills in the units from 2015.

Below: A High Mobility Engineer Excavator (HMEE) is loaded onto a RAAF C-17.

Above: Titan Fire Trucks are being replaced under L998.

LAND 2110-1B – CBRND

L2110-1B will replace and enhance the current stock of CBRND equipment within the ADF. The project will provide each of the services with the capability to conduct their warfighting roles within a CBRN threat environment. The project received First Pass approval at the end of 2013, and DMO has recently released the tender to industry for supply of the replacement equipment. With Second Pass due at the end of 2016, this should see this equipment reaching units from 2019.

CBRND capability is not just about equipment. The capability across the ADF and other ABCA nations is not in great shape, so a large amount of work will be done in the next year to develop the individual and collective training continuums for single-service and joint training to develop and maintain this collective capability.

LAND 907-2 Main Battle Tank upgrade

While mainly an RAAC project, this phase of L907 will see an upgrade of the M1A1 Abrams MBT as well as the introduction of the long deficient assault breaching capability. This project goes to First Pass in 2016, and Army will be seeking government approval to provide the missing piece from our mounted combat capability; the ability to reduce obstacles in contact under armour. Expected delivery of the capability into units is from 2021.LAND 400-3 Land Combat Vehicle System

LAND 400-3 Land Combat Vehicle System

With the second phase of L400 focused on the replacement to ASLAV, the focus of L400-3 is the replacement of the M113 with an Infantry Fighting Vehicle (IFV), and the procurement of a Mobility Support Vehicle (MSV). This will provide a protected engineer vehicle to Combat Engineer Squadrons with comparable mobility to supported mechanised units. L400-3 is due for First Pass in 2018-19 with the capability to be introduced into service after 2024.

Minors

The key minors project for this year was the enhancement of High Risk Engineer Search equipment for Op TESTAMENT. Following a power of work by 2 CER and FEB to develop the user requirements, additional endoscopes and non-linear junction detectors were purchased along with a quantity of TAC6 light EOD suits to replace the obsolete SRS-5 Search Suit. Following Op TESTAMENT, this equipment will be held centrally at JLU-E to equip a CE Sqn for subsequent domestic search tasks in support of DFACA activities.

Hand Held Detector Evaluation

From the end of 2013 until the end of 2014, DSTO on behalf of Army, conducted an extensive assessment of in-service, in-use, and developing hand-held detectors. The results of the first trial have provided a comprehensive assessment of the performance of each in-service and in-use detector including probability of detection against different mines and IED components in different soil types, expected FPECM interference, and ergonomic factors. The second trial, in late 2014, will assess developing detectors to inform a plan for the upgrade or replacement of the AN/PSS-14 Rev 4+.

In 2015, the Engineer Development Cell will be headed up by Lieutenant Colonel Jen Harris. While the cell's priority of effort will remain introduction into service of major projects, it will remain responsive to assist with issues relating to management and improvements to in-service capability.

Below: The Terrier vehicle is an air-transportable armoured combat engineer vehicle for the Royal Engineers. A similar vehicle may be considered under L400-3.

DSCM-A RAE

By Captain Anneke Jamieson

2014 has seen the implementation of a large number of changes to processes, timelines and procedures within DSCM-A to increase transparency and efficiency within the soldier career management world. We are now firmly embedded at Brindabella Park in Canberra and co-location with Army Officer, Navy and RAAF career management agencies has allowed us to start pooling resources and learning from each other.

The RAE career advisors for 2014 have certainly had their hands full. Newly posted in this year was WO1 Mel Patterson, fresh from his appointment as RSM 1 CER, who took on the Combat Engineer and EOD trades (LCPL – WO2) which equated to some 700 soldiers. CAPT Anneke Jamieson moved across from post cell at DSCM-A and picked up the Construction trades (SPR – WO2) and WO1 Steve Hill moved across to the Geo Tech, Multimedia Tech and Emergency Responder portfolios. Our 500 Combat Engineer SPRs were split across the three career advisors to ensure paperwork continued to flow. After ably carrying most of the Corps career matters for three years, WO1 Brent Doyle deployed to Afghanistan as the RSM of the Afghan Officer and SNCO Academy, but not before ensuring the new career advisors were firmly settled in.

The roll out of the Enhanced Career Management Model for Soldiers in 2014 has been communicated to units and DSCM-A is starting to implement numerous policies such as:

- Average Time in Rank (ATiR) of 5 years for most soldiers (noting the transition period for CPL to SGT promotions)
- No promotion courses in a soldier's first year in rank
- Presentation of soldiers to PAC in Sep-Nov of 2014 for promotion in 2016
- Identification of talented soldiers to move through the ranks faster with the support of their chain of command
- Roll out of the outplacement program for talented SGT/junior WO2
- Support of flexible workplace arrangements in many units on a temporary or permanent basis

The Corps remains very strong in some ranks and trades yet critically low in other trades. Our Combat trades remain strong at the SPR level with 30% over strength, yet are 10% under strength at the CPL level. The Construction trades are similarly 30% over strength at the SPR level however the vacancy rate ranges from 30% at LCPL to almost 40% at SGT. Our Multimedia Technicians are the healthiest trade with one or two vacancies at each rank, however the Geo Tech trade has 75% vacancies at LCPL, reducing to 15% at CPL and SGT. Finally, the Emergency Responders are experiencing a 20% vacancy rate from SPR right through the lower ranks and 25% vacancy at the non-commissioned end of the ranks.

Despite the withdrawal of Australian soldiers from Afghanistan, the work tempo within RAE units does not appear to have slowed and I ask that units give strong consideration to growing soldiers by identifying and releasing them for promotion courses. Additionally, retention of our strong performing SPRs remains an issue. We are, as a Corps, not in the habit of promoting soldiers before they are ready, however DSCM-A and the chain of command must work together to ensure we identify talented soldiers early and retain the right people.

A Unit Establishment Review within DSCM-A (yes – even DSCM-A has them) has downgraded the Senior RAE Career Advisor position from MAJ to CAPT, however you will see three WO1 career advisors managing your careers in 2015. RAE Cell in DSCM-A will unfortunately experience a 100% staff turn over in 2015, however, rest assured the handovers will be thorough. The new career advisors will be CAPT Iain Selth from 6 ESR, WO1 Josh Andrews from SME, WO1 Tony Wicks from 6 ESR and WO1 Sean McAlinden from SOER. The final portfolio break-up is yet to be confirmed but will be determined based on the strengths and experience of each new career advisor. Your careers are in experienced and strong hands.

To all those soldiers who have been promoted this year we pass on our congratulations. Your promotion is recognition of valuable service, but more importantly it is the identification of your potential to lead Sappers into the future.

DOCM-A RAE

By Major Scott Jamieson

It has been a pleasure meeting every RAE officer from LT to MAJ this year. As postings come to an end and the focus shifts to the 2015 Career Management Cycle, I make the following observations on RAE Officer Career Management this year.

The recent of trend of a reduction in promotions from MAJ to LTCOL leaves the RAE slightly over strength in Majors (as with most other corps). Despite this, there remains a shortfall at LT and CAPT ranks in all corps. With RMC throughput not expected to meet GSO requirements any time soon, it is expected there will be continued close management of these shortfalls, with vacancies shared between units and IAW the CA's priorities.

The shortage of LTs is generated largely by the length of training facing RAE LTs, with ROBC finishing in Aug and many officers undertaking additional courses afterward, leaving them unavailable for troop command roles in their first year out of RMC. The shortfall was mitigated significantly by the new corps model of civil engineers completing a second regimental posting as LTs. As a result, critical troop command positions with the regiments, SME and ARTC were filled and these officers received a second year of regimental experience prior to being considered for promotion to CAPT. In 2015, 47 RAE LTs will post to 55 LT positions, leaving vacancies (including troop comd vacancies) in RAE units. LTs should continue

to expect to complete two postings after they complete their ROBC. The first will be as a troop commander within a regiment, and the second either remaining in the regiment or to a training establishment – SME or ARTC.

At CAPT rank, the RAE is carrying a significant shortfall. There are 129 CAPTs to fill 128 RAE CAPT positions – this means that posting RAE CAPTs into any-corps positions will result in an RAE CAPT position remaining vacant. This does impact on the development opportunities for RAE CAPTs and reduces RAE presence in the wider Army. To help mitigate this, DOCM focuses on those officers performing very strongly by seeking high profile non-RAE postings, accepting that some vacancies will be carried as a result. Part of this issue is generated by the structure of RAE units (with a very large number of RAE CAPTs compared to LT positions) within Army, and will not be rectified any time soon.

RAE CAPTs should expect one regimental posting, and at least one of either a training or staff posting during their time as a CAPT. Some officers will complete two years in regimental, training and staff roles; however, since 40% of RAE CAPT positions are regimental, many CAPTs will spend 3 or 4 years in RAE regiments. Army needs MAJs and OCs with an understanding of more than just the regimental environment, and this is achieved by any posting from the regimental environment as a CAPT – there is no formula requiring both staff and training postings as a CAPT. In promotion and selection boards, all voting board members are advised of the service need for RAE CAPTs to complete additional regimental postings and these officers are not disadvantaged

There is now a slight surplus of RAE Majors, with 147 Majors to fill 142 positions. When those officers transitioning from defence and on LSL are considered, the numbers were about correct. This, combined with the shortfall in CAPTs, means that promotion to MAJ is not a guarantee – minimum time in rank should now be seen as a minimum. In particular, CAPTs who do not complete ACOTC requirements should not expect to promote unless in exceptional circumstances. Selection for SUC and ACSC was again fiercely competitively, and officers who would no doubt perform strongly at SUC or ACSC were unsuccessful at PAC because they were simply outcompeted by better reporting officers. The strength of the future leadership of the RAE was pleasing to see.

On performance reporting, the new PAR was implemented with a number of technical issues last year. Those issues are still being addressed. I urge units and individual to look at the DOCM guidance on PAR submission, and for unit ADJTs to taek responsibility for PAR submission on behalf of all officers in regimental environments. ACGs are likely to be released via word document again this year due to technical reasons; all CAPTs and MAJs will receive an ACG NLT mid December, while LTs will not receive ACGs from DOCM this year.

I have been impressed by the professionalism of most RAE officers this year. I made it clear during the tour that the priorities for officer career management remain: service need first, officer development second and personal preference third, and that DOCM would balance the three where possible. Officers engaged during the year about postings outside their preference list, including some at quite late notice, were largely very positive and up for the challenge presented by new opportunities. Unfortunately, some officers remain focussed on their own desires to the exclusion of the Army, and demonstrated a lack of understanding of what Army requires of its leaders in posting to where service need requires. It is vital that Army Officers understand that service need drives postings, and to ensure their subordinates similarly understand. As leaders, we should all seek to manage our subordinates' expectations and encourage the development of the loyalty to Army that is part of our profession.

It has been a pleasure interacting with units, Commanding Officers and officers this year and seeking to achieve the best possible outcomes for Army Capability and RAE Officers. I hand over to MAJ Paul Pembroke next year. I wish him and all the corps the very best and I look forward to catching up with you for a beer in a mess somewhere, sometime, in the years to come.

RAE Trades & Training

An Overview from CATC

RAE Trades and Training

This past year has been a challenging one for the RAE Trade Training cell. Even with reduced manning, it has managed to achieve some important milestones. These include the development of the IET capability statement as the basis for developing sapper training, and shaping legislative requirements for Defence with regard to WHS, HRW and White Card polices. The development TMPs has been limited due to vacancies within the cell. Fortunately, local reserve members and the double-hatted Employment Category Managers (ECM) have provided much-needed Training Development (TD) support.

The review of the ARA IET and ROBC curricula that commenced with the CRB last year provided the opportunity to look seriously at those CE skill sets that support RAE METLs and provide engineer capability support to Army. Combined with the review of the ARes IET curriculum, the anticipated outcomes will produce a more sapper ready to meet current expectations.

The cell has encouraged greater integration between the CERs and ERs to examine the engineer support they provide and its relevance to the capability requirements of Plan Beersheba.

Initiatives developed this year have been exploring alternative training methodologies that may result with greater training outcomes. One of those initiatives was the conduct of a simulation trial of the Civil Construction Plant course where CATC funded eight trainees to attend a week's plant simulation at the South Australian Civil Construction Federation facility in Adelaide. Trainees attended the week prior to the first day of the course at SME. Trainees were exposed to various simulated plant equipment that provided various degrees of motion that recorded the trainee's operator skills. DSTO were involved in developing the evaluation tools and it is anticipated that the introduction of simulation may reduce the amount of live training required while at the same time increasing operator skills.

The review of ARes IET and ROBC training investigated alternative training delivery options which may incorporate a combination of training system methodologies. This may include

trainees undertaking part of their training in the unit prior to attending a residential phase, and long distance learning packages where trainees could undertake part of their training online or via a CD. Any formal assessments would be either conducted at the unit or during a residential phase, thereby potentially reducing the existing training liability due to time and space.

In 2014, we welcomed CAPT Ash Turkenburg as the SO3 ECM. He was an extremely valuable member of the cell who was able to contribute to the cell's successes. We also welcomed WO1 Mick Kerr as the CRSM. He has provided valuable guidance and mentoring to both his superiors and subordinates. Many of the achievements in RAE TMPs have been due the contribution and direction that has been provided by CAPT Paul Bender over the past three years. I express my appreciation to WO2 Scully, WO2 Waugh and SGT Young, who will also post at the end of this year and have made important contributions over the past three years. Thank you to all members of CATC, SME, FEB and RAE units for the work they have done and the assistance they have provided over the past three years and I welcome MAJ Paul McComb as the incoming SO2 RAE ECM.

By Major Michael Carroll

Geospatial Technician

The past twelve months have seen the redevelopment of the geospatial technician training continuum. This has received excellent responses from units. Geospatial qualifications are now on Army's scope of registration and qualifications are now being awarded, subject to appropriate supporting evidence. Much of 2014 has been focused on preparing the Capability Proposition for the Geospatial Technician EC423 Employment Category Review (ECR). The Employment Category Review Endorsement Meeting (ECREM) was due to be presented in November 2014, but has now been deferred until October 2015 in order to align with the AUSTINT 003 ECR and the outcomes of the Defence Geospatial Enterprise Review. Further development and consultation will occur in 2015 prior to finalising the submission.

Combat Engineering Trades

Issues affecting the combat engineer trade include the RAE IET Curriculum, the sustainability of ECN096-5 Operator Specialist Vehicle, SOVO Vol 4, TMP amendments and completion of PARs/PCRs by units conducting exported training.

RAE TT cell in consultation with FEB and units has undertaken a review of ECN 096 IET and ROBC training, focusing on foundation war fighting. This review considers lessons learnt from recent operations and aspects of Plan Beersheba. This has resulted in a capability statement endorsed by the Corps. The capability statement aligns with the revised RAE METLs that will enable RAE to more effectively train and execute its capability requirements.

RAE TT Cell is commencing preparation for ECREM in April 2016 for both ECN 096 and ECN 432. This is still in the early stage of preparation with the terms of refernce still waiting to be signed by FORCOMD.

The release of SOVO Vol 4 earlier this year directly affected RAE. Amendments were required IOT reflect RAE watercraft capability requirements. With input from SME, discussions were held with RACT Marine and amendments were submitted that provided RAE with favourable outcomes.

By Warrant Officer Class Two Andrew Payne

Construction Trades

Issues affecting the construction trades include legislative requirements for WHS and HRW, trade health and retention initiatives, OSV and the Employment Category Reviews for the construction trades programmed for April 2015. As the construction trades ECM, I wish to emphasise that CATC is doing all it can within the employment category space to resolve these issues and improve trade management for construction trades.

The aim for the next few months leading into the vertical trades ECREM (earmarked for April 2015) is to engage construction stakeholders for ideas and initiatives to progress the future trade capability requirements. This will be enabled through various working and advisory groups which will discuss issues that affect current and anticipated future service. Until that time, a mountain of work needs to be done to understand and gain endorsement for future capability, intent and expectation of associated vertical trades and how these will dovetail into the Corps' future needs.

Operator Specialist vehicle (OSV) is a difficult trade to manage for both RAE and RATC. CATC, in consultation with FEB and RAE units, is developing a trade structure that will hopefully be more sustainable for the future.

A review of the construction trades training continuum has been progressing and will continue into 2015 with the rewrite of the Subject 4 CPL Construction Core TMP and the Subject 4 SGT Construction Core TMP. It is anticipated that with an increase of TD capacity that much of this work will be completed during 2015.

By Warrant Officer Class Two Rob Emerson

Army Emergency Response

The ECREM for AER is likely to be delayed until 2015. The draft capability proposition reflects the AER Capability CONEMP drafted by Force Engineer Branch (FEB) which is pending FORCOMD endorsement. The capability proposition will be sent out to stakeholders for comment once the meeting date has been confirmed. The Operator Emergency Response (OER) Training Management Package (TMP) rewrite has also been delayed pending endorsement of the AER Capability CONEMP. The revised TMP aligns with the AER Capability CONEMP and will cover Tech Rope Rescue, USAR (level 1), Confined space rescue, CBRN detection equipment, CBRN reconnaissance, CBRN survey, SIBCRA, Insertion / extraction and Field operations.

A submission is also being developed that would see this training delivered at RAAF SFS immediately following the completion of ADF FF Basic course. This will ensure AER personnel are fully employable on arrival at their posted unit.

Multimedia Technicians

Multimedia technicians (MMT) continue to be in the spotlight following the ECREM in November 2013. AUSTINT will consider MMTs and geospatial technicians in their ECREM submission scheduled for July 2015, and the RAE Trade and Training cell will be called upon to provide assistance to the AUSTINT ECM prior to ECREM. AHQ are to conduct a Capability Needs Assessment (CNA) of the ECN, with requests for information going out to units that employ MMTs.

The new TMP for the MMT Basic course was released in May and is being conducted at GEW. The new TMP includes an increased focus on hand held imagery management and a widened range of software including desktop publishing, video editing and 3D modeling.

The contract for the Subject 4 CPL and SGT MMT courses concludes after the CPLs course in 2015. Work will begin prior to the end of the contract on the Statement of Works for the training in preparation for calls for tender for a new contract.

The MMT requires all MMTs to actively demonstrate their capability and relevance in support to warfighting and provides a valuable capability to current and future operations

By Warrant Officer Class Andrew Westover

School of Military Engineering

Home of the Sapper

Photo by Mr Steve Comer

Above: SME staff form up in front of the Headquarters Buildng at Steele Barracks, Moorebank.

From the Commanding Officer

Due to a pleasant set of circumstances, I find myself in the exciting situation as the Commanding Officer of the School of Military Engineering on the eve of its relocation to Holsworthy Barracks. The relocation of the school is a major undertaking and the preparation and planning for it has characterised the nature of this year. Relocation planning has occupied all our spare capacity, and every event that was conducted this year was within the context of 'the last … at Steele Barracks'. As a result, we have seen strong patronage at many of this year's activities and it has been pleasing to see many current and former serving members taking the opportunity to return to SME for one last time to reacquaint themselves with the Corps Home before it moves.

Despite all the distractions that come with moving, we have been able to maintain our focus on the delivery of the training that forms the foundation of our Corps. As the following articles will detail, the wings have been heavily committed but continue to deliver and develop quality individual training.

This year was significant from an organisational perspective with a number of changes to the unit establishment. Early in the year Engineer Tactics Wing was collapsed to a Cell within the SME HQ, providing a Major to assume the school Operations Officer role. On 1 Jul the Army Dive Cell transferred to the RAN Dive School - soon to become the ADF Dive School. This move has been a long time coming and reflects that operational relationships that the Cell have been operating under for a number of years. Further, as I write this article, the RAINF Assault Pioneer Cell are in final preparations to return to the School of Infantry after many years at SME.

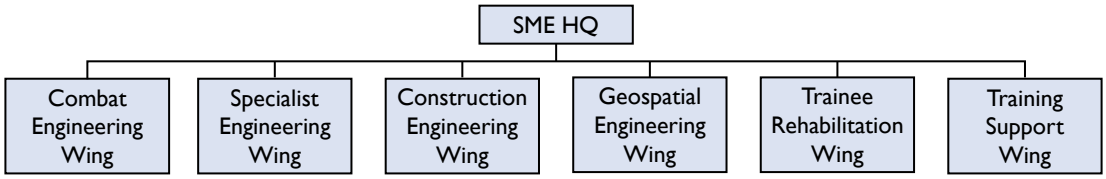
Of particular interest SME was subjected to a Unit Establishment Review in Aug this year. This review was timely, forcing us to critically review how we saw the school operating one we occupied our new facilities and to identify opportunities for organisational tweaks to optimise our training outputs. The result was a six wing structure as detailed in the diagram below. Of particular note, this structure sees functional alignment of combat engineer training within SME – all combat engineer basic, and promotional training, including tactics, will be delivered within CEW and all the specialist combat engineer functions to be delivered in SEW. The establishment of a training support wing consolidates many of the miscellaneous support functions that were previously managed directly by SME HQ or were dispersed across the various wings across the school.

While the new unit establishment will not be 'turned on' until 2016, the school will adopt these structures at the commencement of 2015. Wait out for Sapper Magazine next year to see if this experiment worked.

It is with excitement and trepidation that I wait for the new year. 2015 will be monumental for SME and the Corps and it will pose significant challenges and pressures to our primary mission of training sappers. It also presents great opportunities – we will be occupying a first class training facility that will be the envy of all training establishment within Defence. We have a once in a generation opportunity to renew how SME operates and to refresh our culture to establish a 'New Home of the Sapper' that the Corps can be proud of.

To all the members of SME and your families, I thank you for your efforts and support through this year. To those leaving the school, all the best in your new posting or endeavours.

Ubique



By Lieutenant Colonel K. Martin

Initial Employment Training Squadron

This year Initial Employment Training Squadron (IET SQN) has been focused on improving the quality of the currently delivered IET course, with a priority on the ECN 096 Combat Engineer. Supporting efforts have been applied to the imminent relocation to Holsworthy Barracks, the Unit Establishment Review and assisting the framing of an IET capability statement to drive a comprehensive review and re-write of IET training. The SQN has benefited from an increase in priority from RHQ which has manifested in an increase of resources and instructor coverage during high tempo periods.

The current IET course is evolving to produce a more relevant sapper for the regiments. With all graduating CE IETs now sent to the CERs for their first posting we have placed a renewed emphasis on producing the CE who is 'qualified and prepared' for service within the regiments.

There is an increased emphasis on core combat engineering skills, physical fitness, introducing digital communications and enhancing the intensity of Exercise Bardia as the final field activity. The final two courses of this year will trial a longer Ex Bardia enhanced with more challenging activities and support from the rest of SME. The Combat Arms PES-A remains a march out requirement for all ARA RAE IETs with the exception of the geospatial trades and so far this year no trainee has failed on this activity. Initial feedback from the CERs suggests this is contributing to a more robust soldier marching in to the units.

The level of dismounted close combat skills and tactical acumen acquired by the trainees through Kapooka remains generally at a low level, as noted by staff during the conduct of field activities. IET SQN has no remit to address these shortfalls with formal training, although revision periods have been worked into the course and some improvements in tactical performance have been noticed on EX BARDIA. The limited time available for consolidation of combat engineer and tactical skills in the field environment will continue to be an issue until a wider overhaul of the TMPs is completed.

After a hiatus at the start of the year ARes IET training has recommenced in September with two sets of courses to be conducted prior to stand down. Some difficulties were experienced with obtaining sufficient ARes instructors for the course. Greater engagement with the ARes Engineer Regiments will need to be conducted to ensure support to IET courses is synchronised within the ARes force generation cycle.

The recently completed unit establishment review will result in significant changes within the combat engineer focused wings which will be enacted during the move to Holsworthy. In particular the IET SQN will once again become Combat Engineering Wing and take under command the Engineer Tactics and Basic Combat Engineering cells. This will see the Wing take on responsibility for all combat engineer training from SPR to CAPT with specialist courses and modules being delivered by the Specialist Engineering Wing. This is a significant opportunity to put in place a comprehensive and cohesive approach to all initial entry, tactics and promotion courses for combat engineers.

The Force Engineer and CATC are close to finalising a change in the IET training which will see an increase in focus on key combat engineer tasks and tactical consolidation. This will come at the cost of capability in other areas which will be controversial with many, but should further enhance the capability and robustness of the IET trainees.

By Major D Hebditch

Combat Engineering Wing

Australian Protected Route Clearance Capability (APRCC)

By now, you've probably read, heard of or seen elements of the Counter Mine Cell Australian Protected Route Clearance Capability (APRCC) whether it is on operations or around the various Brigades. The aim of this article is to provide members of the Corps with an update regarding the Introduction Into Service (IIS) of this capability. Each Mobility Support Detachment (MSD) consists of three Huskies; two are fitted with a Ground Penetrating Radar (GPR) and one is fitted with a FASSI 15 Interrogation Arm (IA). The MSD also contains two Protected Mobility Vehicles fitted with SPARKS II rollers and two High Mobility Engineer Excavators (HMEE).

The past 12 months has seen a significant number of activities occur in support of the IIS of the APRCC, of relevance is:

- The conduct of UK simulation training serials, attended by members of various CERs as well as other relevant Army stakeholders. These serials were aimed at creating and testing the software and scenarios required to develop an APRCC Synthetic Collective Training System for use by ADF members. Integration of this system into existing simulation infrastructure is ongoing with the expected initial rollout to be focussed at SME in the next six months.
- The assembly of the APRCC systems for both 1 CER and 2 CER.
- The development and implementation of the Husky Operators TMP.
- An Original Equipment Manufacturer (OEM) run course in Townsville to qualify members of 3 CER, 1 CER and SME as Husky Operators.
- The C3 fit-out of the Husky and HMEE fleet with various Harris 152 and BMS hardware.
- The establishment of a Countermine Cell within Combat Engineering Wing at SME.
- Finalisation of the maintenance support arrangements for the capability (ALI 15/77).

The next 12 months will see feature Final Operational Capability (FOC) being declared (expected Dec 14), the most notable impact being the handover of responsibility for the management of the capability from DMO to Army. The following key events regarding the APRCC will also occur:

- Development and implementation of an APRCC Commanders TMP.
- Completion of APRCC compounds at 1 CER, 2 CER, 3 CER as well as SME.
- A Directed Training Requirement (DTR) for both the Operator and Commanders courses confirmed by FORCOMD.
- Ongoing development of simulation packages to support of the training of the APRCC.

Training

The Husky Operators TMP (PMKeys ID: 214014) is currently in Pilot and can be accessed via TMPSS. The APRCC Commanders TMP is currently in Draft and anticipated to be in Pilot stage by Dec 14. Units with members who have completed OEM, Canadian or US based training serials are encouraged to submit RPL/RCC applications to the Countermine Cell at SME IAW CATC guidelines.

The POC for further information regarding this capability are CAPT Kev Hamilton and WO2 Greg Miller of the Countermine Cell at SME.

By Captain Kev Hamilton

On Exchange

The School of Military Engineering recently welcomed its latest UK exchange officer, WO2 Trevor Michael who, together with wife Emma and children Bethany and Finlay arrived in Australia in late August 2014.

WO2 Michael assumed command of the Demolitions Cell within Combat Engineering Wing (CEW). It is expected that he will hold this appointment for two years.

Like his predecessor, WO2 Michael brings vast knowledge and experience to the School from which the whole Corps will benefit. Most recently, he served with 24 Commando Engineer Regiment in the South of England but with 6 operational tours conducted over a 9 year period, he has spent a significant amount of time abroad. His operational tours include three tours to Afghanistan, two tours to Iraq and a tour in Kosovo. We thought we'd use the opportunity to introduce him to the Corps.

2IC CEW, CAPT Chris Kukas, conducted the following short interview with WO2 Trevor shortly after his arrival:

CK: What attracted you to coming to Australia and the School of Military Engineering?

TM: The job here at SME is a high profile job within the Royal Engineers and is well sought after in the UK. It was an added bonus that it was an accompanied post and I could bring my family with me.

CK: What are you looking forward to the most whilst here in Australia?

TM: A different lifestyle and location to where I have been previously. Having never been to Australia, it's a great opportunity to see this side of the world and to travel around. I'm also looking forward to seeing the similarities between the British Army and the Australian Army.

CK: What do you think is the biggest task for the Dems cell over the next 12 months?

TM: The relocation of the School to Holsworthy is the first big issue as we transition to brand new lines. Right now, we have our work cut out for us implementing the new Dems Pam which is set to be released shortly. Another area that the Dems Cell is focussing on is developing a closer working relationship with the Special Forces community, particularly relating to urban breaching and exploring associated training opportunities. Additionally, we interested to explore our options for improving training delivery mechanisms.

CK: Describe something about yourself that is different to most.

TM: I spent the majority of my life growing up in Zimbabwe until I followed in my grandfather's footsteps and joined the British Army. I am not the stereotypical British Soldier who is passionate about football (soccer)!

CK: Thanks for your time Q and welcome to SME!

Construction Wing

Civil Squadron

Civil Squadron, Construction Wing continued to provide capability enhancements to the ADF throughout 2014. Civil construction equipment and manual handling equipment courses remained the focus for the squadron for the year, and there continues to be non-RAE attendees, with RAAF making up larger proportions of the trainees for various courses conducted by Civil Squadron. The second Construction Civil Plant Course (CCPC) for the year was attended by a corps transfer trainee, who we welcome to the Corps, and three RAAF trainees. Additionally there were a number of trade transfers from within the Corps who have finally seen the light and wish to be grown from 'veggies' and trained as 'planties'. With instruction also provided to outside units; Ground Guide Only (GGO) courses at ASEME for both Recovery Mechanics and those Vehicle Mechanics who have streamed into C Vehicle, Skid Steer Loader and Dozer course for SOER, and a High Mobility Engineer Excavator (HMEE) course at 3 CER, Civil Squadron remained busy throughout the whole training year.

The CCPCs conducted at SME are undergoing continuous restructure and review as we strive to improve the course at every opportunity. The course modularisation, implemented in 2010, continues to be reviewed and adjusted enabling RAE units to familiarise operators on individual plant equipment held in their particular units in order to close the deficiency gap across the trade. A practical initiative introduced into the course is the conduct of live tasks at the end of each module. The first of these tasks was conducted at Randwick Barracks, clearing a large area of scrub on behalf of DSRG. This was followed by a minor sub-division construction for confirmation training at the end of the course. All the trainees agreed that the positives provided by these live tasks will help them in their assimilation on their returns to the Brigades.

After completion of the first two Mobile Slewing Crane 60 t (C6) courses in early Jun 14, legislation came into affect that effects how Army trains on cranes and in dogging operations. With the introduction of High Risk Work (HRW) licences for Dogging, Rigging and Crane works, several Civil Sqn instructors attended civilian HRW courses to allow the crane course to continue. Whilst Defence has again been granted an extension to the waiver till 01 Dec 14, teaching to the HRW requirements now ensures the gap training requirements for units is mitigated as best we can. These changes regarding HRW will also impact Standing Orders for Vehicle Operations, Vol 3, C&D Vehicles (the Plantie's Bible), which is undergoing a re-write as I type.

Future Developments. Potential plant operators attended CATC approved simulation training in Adelaide prior to commencing the CCPC. This simulation training was designed as formal off-the-job residential training to meet the core requirements for Defence plant operators. The curriculum consisted of three modules that provided the skills, knowledge, and attitude required for personnel to safely operate earthmoving equipment. The simulation software increased the difficulty of the operating techniques required as the scenarios progressed. To a minor degree it also helped to improve; situational awareness, mental agility, the ability to calculate blade and bucket loads, build early muscle memory, learn safe operating procedures and improve fine motor skills. Further evaluation by DSTO during the CCPC will continue into the feasibility of incorporating simulation training into the Army plant training continuum.

Following the retirement of Mr Geoff Sies from the squadron, our ability to support other SME sub units and external units has been severely hampered. The role of the 'Yardy' allowed training to continue with support provided at no loss to the squadron.

Below: Civil Sqn – CCPC course conducting Randwick Barracks fire hazard reduction works

Several SME sub units have been forced to amend their training as plant support could not be provided. Whilst Civil Squadron doesn't like disappointing other SME instructors, the training of the next tranche of ECN 270 operators has to take priority.

Training Courses

Civil Squadron has trained the following number of personnel in the various Civil Construction Engineering disciplines during the period Sep 13 to Jul 14:

Construction Civil Plant Course	26
Miscellaneous Plant Equipment Courses	9
Telescopic Handling Equipment Course	26
GGO Courses	60
Total Trained	121

By Warrant Officer Class Two CA Walker
Plant Training and Equipment Manager

Trade Training Troop

2014 started for Trade Training Troop similar to most other years; staff changes and new faces adjusting to the way the Tp does business. This year saw another new Tp Comd, the departure of the SMTT, the HOTO of the Carpenter Supervisor and 3x Foreman posted in from wider FORCOMD units. CAPT Gray took over from LT Schulz as the Tp Comd, WO2 Thorne stepped-up to the SMTT position on promotion from WO2 Stevenson, SGT Mock stepped-up to the Carpenter Supervisor position on promotion from WO2 Thorne, and finally CPL Hurst, Lee and Pemberton marched into TTTp as Plumbing and Carpentry Foremen.

Throughout the training year TTTp has continued with its core business of trade related On the Job Training for Army and Air Force trainee Carpenters, Electricians and Plumbers. This generally sees the Tp's trainees employed with civilian trade contractors, gaining a wide range of trade skills from civilian specialists. 2014 saw a course from each trade finalise training and post out into the regular Army and Air Force, however, there ranks were quickly filled with the posting in of the 0021 Carpenters, 0012 Electricians and 0013 Plumbers courses.

On the Job Training is only one element of the Tp's operations with numerous support requests quickly filtering in from other SME sub-units. 2014 saw TTTp lend spt to multiple IET, Combat Engineer and Construction Subject courses, RAE Officer courses, and ceremonial activities both in and out of SME. In particular TTTp provided the catafalque party for the conduct of a Vietnams Veterans Remembrance Service observed by numerous ex-service members, local Politicians and the Governor-General at SME. In particular, the Governor General highlighted the catafalque party's excellent standard of support to the activity. Certainly well deserved praise for the members involved.

2014 also saw TTTp support the ongoing AACAP program, this year within Central NT. TTTp provided a composite Trade Section in support of 17 Construction Squadron for the conduct of the task during July and August. The members involved gained valuable insight into the conduct of construction tasks within the Army setting and also a taste of being involved in a deployment to a remote location, albeit, within Australia.

Military training was not forgotten, not doubt to the disappointment of some of the members, during 2014. This year saw a focus on individual All Corps Soldier skills particularly from within an Infantry Minor Tactic setting. 2014 saw TTTp deploy to the Majura Training Area near Canberra for the conduct of its annual field training exercise. Multiple skills were revised during the exercise from basic IMTs, to the construction of strong points within the training area's Patrol Base, and finally most Tp members were able to gain new qualifications in Tree Felling and Portable Saw Mill operations with the support from CEW staff. It was certainly a welcome change to escape the scrub and sandstone plateaus of Holsworthy's Training Area for this years exercise.

Top: Trade Trainees conducting the bayonet assault course as part of Ex Tradie Assault 2014. **Above:** The Portable Saw Mill in operation at Majura Training Area near Canberra.

As 2014 begins to wind down, TTTp continues with its core business of trade related training. The Tp still has a few more support tasks to complete before the year is done, in particular ceremonial support as a part of the Ingleburn RSL Beating of the Retreat. Finally, the Tp will commence activities in preparation for SME's relocation during 2015 and the occupation of the Tp's new home within Holsworthy Barracks.

Geospatial Engineering Wing

Beyond Steele Barracks

This article is a snapshot of GEW's future aspirations in terms of delivering geospatial and multimedia capability for the Adaptive Army. It covers the wing's training vision, requirements of geospatial and multimedia technicians (GTs and MMTs) in the operational context, our contribution to the Defence Geospatial Strategy 2010 and the direction of both trades, the opportunities presented by the move into our new facilities and a brief look at the possibilities of a Geospatial Schools Network.

A Vision for GEW trainees

Trainees from GEW will be able to provide timely and relevant products, services and advice on operations. On completion of GEW training, members will be able to adapt their support to enable the commander to move effortlessly between operations

throughout the spectrum of conflict. Trainees will be able to support a variety of units, agencies and coalition partners. On top of developing skills, knowledge and attitudes, trainees will be able to conceive and develop solutions to support the commander. GEW will exploit any training opportunity to develop trainee technical endurance and leadership. In summary, GEW's vision is: *to deliver the highest quality individual training that meets the needs of current and future Geospatial and Multi Media Technicians.*

Geospatial and Multi Media Technicians operational context

The challenge for GEW is to continue to develop training that will enable technicians to overcome future operational challenges. At the completion of a GEW course, trainees will need to be able to produce high quality, timely and relevant support, manage fatigue and stress, problem solve and innovate.

The environment GTs and MMTs will need operate in successfully is described in the Army's Adaptive Campaigning – Future Land Operating Concept, which recognises the enduring nature of warfare as "dynamic, unpredictable, difficult to control and therefore chaotic". GTs and MMTs will need to be trained to provide support to a military HQ and whole-of-government agencies engaged in the five lines of operation. The demands of the Primary Operating Environment (POE) and five lines of operations will require a broad range of personal abilities from our GTs and MMTs. In effect the training scenarios and tasks generated by GEW will need to be linked to a line of operation and must relate to terrain found in the POE.

GEW and the Defence Geospatial Strategy

The Defence Geospatial Strategy 2010 outlines the direction for implementing a new geospatial domain within Defence. This domain will be a core enabler of the ADF's future joint warfighting concept and will ultimately enhance the way that information is shared and consumed within the battlespace. Within a network enabled force, geospatial information and intelligence services will feed C2 systems, provide Commanders with enhanced situational awareness, provide advanced planning and simulation mechanisms and allow near real time analysis to be provided to soldiers on the ground via dissemination through mobile technologies.

GTs will be the custodians of terrain data and information that will underpin a vast range of C2 and sensor systems, as well as being disseminated digitally to all connected task force members through mapping services. Data management and server technology expertise will be essential to ensure efficient data delivery, archiving, geodatabase replication and multiple user editing is enabled within an enterprise environment. Additionally GTs will be exposed to a greater number of information sources as the suite of sensors, weapons and other systems that provide useable geospatial information and are linked through the networking of the ADF. This will require high level analytical and visualisation skills in order to derive an understandable operating picture from the "data deluge", and analyse this in a meaningful and comprehensive way.

GTs and MMTs trade direction

In many ways GEW must empower all technicians to 'swarm' towards a common trade vision. As GEW is the common space that all technicians start from and return to during their career, it stands to reason that GEW must facilitate a common trade understanding. A common and accepted trade understanding can only be achieved by engaging with other key stakeholders such as 1st Intelligence Battalion.

This common understanding must be fostered consistently and energetically during all GEW courses. This common vision includes software and hardware and extends to approved practices and procedures. It includes a shared mindset on command, task management and methods of interacting with a support unit. All technicians need to be believers and advocates for their trade's current and future capabilities. In practical terms this requires GEW to clarify to all trainees on which is the best and preferred procedure and which is an alternate procedure. The best and preferred procedure needs to be current, credible and have been validated by other trade stakeholders. It also means that all training is clearly linked to the workplace. This can be best achieved through the GEW Training Materials Lane Management System.

Opportunities available in new facilities

The new Holsworthy facilities have been designed with larger classrooms that can be divided up into smaller syndicate or tutorial rooms, using sound resistant screens. Classrooms will not be of a fixed rank and file configuration, but be able to be modified relatively easily between courses into any configuration. This will be enabled using a flexible computer floor system and/or wireless technology in the future. Several entrances will allow small teams to enter and leave independently of others. These flexible learning spaces provide many opportunities for GEW to enhance the learning experience for trainees and to replicate operational workplaces. Instructors will be able to deliver lessons using different teaching styles improving trainee interaction, cooperation and understanding.

The move to the new Holsworthy facilities have provided GEW with an opportunity to train at up to secret level. This is commensurate with the environment and workplace that many trained GTs and MMTs are employed in. This will require planning, training and a culture change in GEW. A key challenge for GEW will be to provide protected level training to Basic course members (who are undergoing a security upgrade) and concurrently provide up to secret level training to promotion and officer courses.

The new facilities at Holsworthy will provide each trainee with a DRN terminal as well as a GeoNet workstation. This will provide GEW with the ability to significantly enhance the training experience. The greatest opportunity that DRN provides is the ability for the trainees to access on-line training such as ALPC products, CAL products, Defence Campus, ESRI Campus and Lynda.com. On-line training has many uses for GEW including providing instructor training, providing pre-course training to trainees who can arrive at GEW before a course starts; and providing on-course training, with the appropriate level of supervision.

Geospatial Schools Network

Currently, Army Geospatial Training is a mostly closed system. It is assessed that this closed system on geospatial training will increasingly develop a stale and unchanging Geospatial Technician trade. Diversity can be created by opening the organisational boundary to let in more views. The Geospatial Schools Network is a proposed system that would enable all Defence Schools to collaborate in training and open each school to new ideas. The schools and units that could be involved are GEW, RAN Hydro school, DINTTC and 1 Topo Svy Sqn.

The Geospatial Schools Network would consist of shared collaboration in developing teaching materials and a formal programme of visiting lecturers. Technologies such as Objective and Sharepoint may be key to successful collaboration between the nodes in the Geospatial Schools Network. Visiting lecturers would be common however lectures would be virtual. The Geospatial Schools Network would exploit a COTS system to provide virtual lecturers to any classroom. The same system would also enable regular meetings within the network.

Conclusion

GEW must continue to be flexible and innovative to meet the challenges and opportunities that arise from a rapidly developing

Army environment. GTs and MMTs will continue to be critical to supporting adaptive campaigning because everything happens somewhere and if it's an information requirement then it must be displayed graphically.

Trainee Rehabilitation Wing

Trainee Rehabilitation Wing (TRW) is a subunit of the School of Military Engineering and is responsible to the care and rehabilitation of Initial Employment Training soldiers who have sustained a significant injury that requires prolonged rehabilitation. While the main user of TRW is the School of Infantry, TRW is available to all Training Establishment including the Army Logistics Training Centre, Defence Command Support Training Centre and other Combined Arms Training Centres. TRW is staffed by a command team from the Royal Australian Army Medical Corps, two Physical Training Instructors and a training team of Junior Non-Commissioned Officers from varying Corps.

In 2014 TRW experienced a high turn over in staff and brought with it new ideas and a positive approach to the rehabilitation of trainees. Implemented this year, an internal training package for military instruction based on the existing curriculum from Kapooka has provided a course for revision for the trainees while building on the foundation skills already learnt. In addition, a mental health resilience package based around the existing Battle Smart package has been piloted and implemented to great success. The continuation of the Physical Employment Standards Assessment resulted in a shift in the Physical Conditioning Assessment Framework that both the trainees and staff have participated in and has set the benchmark for the Arms Corps trainee returning to their Training Establishments to continue their careers.

In order to provide variety to the program TRW conducted an adventure Training Activity run by the Wing Sergeant Major and adapted to soldiers undergoing various stages of rehabilitation. The activity was a success with a number of trainees facing some unknown fears and discovering that despite their injuries were able to achieve the challenging tasks set before them.

As at 16 Sep 14 TRW had marched in 55 trainees and of these 41 have remained in trade to return to their Training Establishments (TEs). In addition, TRW saw the first trainees arrived from SOARTY and the RAAF STT, training Army's Aviation Technicians. Continued liaison with the TEs have ensured that trainees return at the required fitness levels to recommence training. Where trainees have not been able to return to their trade due to permanent medical restrictions, they are made Goal 2 under the Australian Defence Force Rehabilitation Program and trade transfer via the MECRB. In 2014 TRW only had four members go Goal 2 from the 2014 intake of 55.

In 2015 there will be new staff including Officer Commanding and Second in Command. This will have with it the inherent challenges of staff turnover; though, will benefit from new ideas and approaches to the management on Army's trainees undergoing rehabilitation.

Paulatim!!

By Lieutenant C. Strachan

Construction Troop, Armament & Construction Wing, Army School of Electrical & Mechanical Engineering

Construction Troop within Armament and Construction Wing (ACW) of the Army School of Electrical and Mechanical Engineering (ASEME) provides Initial Trade Training (ITT) for both the RAE and RAAF construction disciplines.

Within Construction, ASEME focuses on three core trades: carpenters and plumbers at Latchford Barracks commencing January each year and electricians with Electrical and Electronic Systems Wing (EESW) at Bandiana North with courses commencing July each year. As well as ITT for the trades, ACW maintains and provides further training in the conduct of RAE Subject Four CPL and SGT courses as well as Building and Engineering Services (BES) courses through the year.

With ACW responding to the wider requirements of Army, Construction Troop is looking to increase the numbers of trainees able to attend the CPL and SGT Subject Four BES courses each year. With increased numbers and early notification of course dates by DSCM-A to relevant units, the units will be better placed to identify suitable candidates. The increase in numbers and improved nomination process will facilitate greater output of qualified JNCOs in turn addressing issues of trade vacancies across RAE within construction trades.

The past year has also seen a progressive and proactive review of training requirements and delivery resulting in improvements in both military and civilian trade training. Considerable changes to the delivery of trade training are being developed with the gradual integration of E-Book learning for both theoretical training and assessments due to commence in 2015.

The year has seen considerable facility upgrades with all classroom facilities within ACW upgraded to accommodate the new E-Book laptop training system. Additionall various new pieces of trade equipment has been purchased and installed. The implementation of the E-Book process will go towards streamlining the delivery of training greatly reducing the preparation and correction time for instructional staff. This improvement will provide staff with the ability to address and review maintenance and training materials in order to remain compliant with the relevant TMP and the National Training Package for civilian licensing accreditation.

Construction Troop has undertaken several self help projects aimed at providing trainees with 'real world' work experience as well as improving facilities within Latchford Barracks and the greater Albury Wodonga Military Area. Projects this year have included the installation of Army Values signage to all bases, new ACW honour boards as well as signage and custom shelving for the Army Logistic Officers Mess cellar (located at South Bandiana). Upon completion of these projects ACW has now turned it's 'out of trade training' focus to two sizeable projects for 2015, the construction of a new BBQ facility at Latchford Barracks and trade support to repair some of the old historic buildings within the Victorian town of Walhalla. Both projects will provide invaluable experience for the trainees as well as providing a platform to showcase ACW to the local community.

For all past instructional staff and trainees that have been posted to Construction Troop (previously Building Trades Wing), there has been one name that all would know and remember as part of the establishment since Latchford Barracks was first built in 1983. That is the loyal and committed storeman Mr Greg Cox (Coxy). Coxy completed his last day at work on the 31 Oct 14 after serving both the Regular Army and Public Service Sector for over 47 years of service. Coxy was farewelled from the Wing by close friends and work colleagues at a function held in his honour.

With a considerable change over of military staff for 2015, ACW looks to have another busy year ahead.

By Major Charlie Mansfield

Operation SLIPPER - Afghanistan

The largest operational base in southern Afghanistan was transferred to the Afghan government in November 2013, with the last troops returning in December 2013. Major Brent Maddock, Chief Joint Engineer Combined Team Uruzgan (CTU), saw the initial expansion of Multinational Base - Tarin Kot (MNB-TK) when he deployed with Australia's Reconstruction Task Force in 2006. He led the Australian and U.S. Army engineers responsible for reducing the base's infrastructure and transferring the remaining facilities to the Afghan National Security Forces. The engineer workforce incorporated the CENTCOM Material Retrograde Element (CMRE) from South Carolina National Guard's 124th Engineer Company and tradesmen from Australia's Force Extraction Unit.

In 2014, ADF personnel continue to be engaged in Afghanistan through training and advising the Afghan National Security Forces in Kabul and Kandahar.

(Source: Department of Defence)

Engineer Works Support to the Middle East Region

In 2014 the Engineer Works capability for the Middle East Region (MER) reduced to a Chief Engineer and a RAAF Airfield Engineer Team located at Al Minhad Air Base (AMAB), and an Army Project Management and Camp Maintenance Team located at Kandahar Airfield (KAF).

Despite the reductions in manning there was still a significant amount of engineering work completed in-theatre in 2014. This included the construction of new living and working compound for the NATO Special Operations Advisory Group (SOAG) in Kabul, the deconstruction of Australian infrastructure assets at Kandahar, the refurbishment of Australian facilities at HQ ISAF, the completion of numerous minor works projects and the ongoing maintenance of CAMP BAKER at KAF.

From January 2014, the KAF Project Management Team became responsible for all Afghanistan-based infrastructure, and the Works Supervisor and Project Engineer became frequent-flyers, transiting from Kandahar to Kabul to inspect works and conduct reconnaissance. The NATO Support Agency (NSPA) was engaged to provide construction management support and supervision for the construction of the NATO SOAG compound, capable of housing 80 personnel located at the Kabul International Airfield North. Despite initial teething problems (as this was the first time NSPA directly supported a non NATO member nation) the final product was of a good standard.

In addition to the ongoing support to OP SLIPPER / OP ACCORDION, 19 CE Works also provided Force Protection Engineering advice to a Force Protection Review of ADF facilities for some of our other minor operations (OP PALADIN, OP MAZURKA and OP ASLAN).

The MER continues to be an unstable area, and despite the drawdown in Afghanistan the recent deployment of another Project Management Team as part of OP OKRA to provide support to the Iraqi contingency highlights the fact that technical Engineer Works support remains in high demand.

By Major Scott Davis






Left page: Local contractors assist with the removal of blast resistant T-walls during demolition works at Multi National Base – Tarin Kot (MNB-TK).
This page: (clockwise from top left) WO2 Col Walker, MAJ Brent Maddock and CAPT Christopher Neilsen were the engineers from Combined Team Uruzgan responsible for reducing MNB-TK's infrastructure and transferring the remaining facilities to the Afghan National Security Forces; MAJ Leigh Dalman and MAJ Scott Davis handing over as Chief Engineer JTF633; MNB-TK during its deconstruction; Sapper Ben White from the 1CER and EDD "Domino" conduct a simulated route clearance, prior to the start of the parade; Sapper Lindsey Albion's family were at welcome home parade in Darwin; Afghan local contractors during demolition works at MNB-TK; The former aviation task force facilities at MNB-TK during its deconstruction. Source: (Source: Department of Defence).

Regional Support

Operation RENDER SAFE - Bougainville

Operation RENDER SAFE is the Australian Defence Force's (ADF) annual series of operations that aims to safely dispose of World War II-vintage Explosive Remnants of War (ERW) from South Pacific island nations.

Above: An Australian Army Light Amphibious Resupply Cargo (LARC) from HMAS CHOULES (background) taking Eod teams ashore. (Source: Department of Defence).

Operation RENDER SAFE 2014 was the largest mission in the series yet undertaken. It involved some 500 personnel and was conducted in the district of Torokina on the west coast of Bougainville. Some 16 tonnes of ordnance was disposed of, which involved the clearing of 109 sites of 2293 ammunition items.

The ADF-led mission involved Explosive Ordnance Disposal (EOD) teams from Australia, the United States, the United Kingdom, New Zealand, Canada and Solomon Islands. In many cases the individual teams consisted of members from different countries, transforming the operation into an opportunity for the international EOD community to swap notes and compare techniques.

Below: A joint Explosive Ordnance Disposal team consisting of Australian Defence Force personnel and United States Marines prepares to destroy a large cache of World War II munitions discovered in the Jungle of Torokina, Bougainville. (Source: Department of Defence).

Above: Australian Army Warrant Officer Class 2 David Austin (left), Warrant Officer Class 2 Jon Travis, a Royal Papua New Guinea Constabulary officer and a Bouganvillean guide with a cache of unused World War II mortar rounds discovered in the jungles of Torokina. (Source: Department of Defence).

Major ADF assets and platforms assigned to the operation included the amphibious operations ship HMAS Choules, an LCM-8 landing craft and an MRH-90 multirole helicopter.

Driving the success of the operation was the extensive community engagement conducted in the months leading up to the mission to explain to the local population the safety procedures that were used during the operation.

Operation RENDER SAFE is an ongoing peacetime commitment to the people of the South West Pacific and was this year conducted at the request of the Autonomous Bougainville Government.

Disaster Recovery - Solomon Islands

The Defence Assessment Team was part of the Australian Government's rapid response to a request for assistance from the Government of the Solomon Islands following devastating flash flooding on the 3rd and 4th of April 2014.

The DFAT led relief efforts provided humanitarian support to thousands of effected residents of the capital Honiara, and throughout Guadalcanal Island.

Within hours of the main airport re-opening a RAAF C-130 Hercules had brought in a team of Defence specialists to assess damage to critical infrastructure and provide planning support to the reconstruction and relief efforts.

An international engineer assessment team was formed with civil and military engineers from the Australia, New Zealand and the Solomon Islands. The team was accommodated with the Regional Assistance Mission to the Solomon Islands (RAMSI) at Guadalcanal Beach Resort, which was last used by the ADF during Operation ANODE.

During the deployment the team provided assistance to the engineer works department of the local council of Honiara by:

- Conducting assessments to the condition of a large number of bridges running along the Kukum Highway, the MSR running through the capital from the East to West of the island.
- Designing and providing guidance on the construction of an NEB across the Mataniko Bridge.
- Conducting assessments of existing bridge abutments, supports and gabion walls for erosion from the floods.
- Conducting the assessment of the abutments of a Bailey bridge that had been washed away in the floods to allow for the construction of a replacement bridge.
- Providing engineer advice on distribution of the main domestic water supply within the fringe areas of the capital.
- Conducting an inspection of a gold mine's support infrastructure to ensure the security of HAZCHEM, commercial explosives and the integrity of a tailings dam.

Above: A local man ponders how to cross the water after damage to the bridge is caused by flash flooding in Honiara, Solomon Islands. (Source: Department of Defence).
Below: An Australian C-17 Globemaster aircraft touches down at Honiara airport to deliver support personnel and critical humanitarian aid on 09 April. (Source: Department of Defence).

At the end of the deployment, the team provided the Solomon Islands Australian High Commission with an engineer assessment report of the main infrastructure so a plan for rectification could be put in place following the floods.

Army Aboriginal Community Assistance Program

This year the 17th Construction Squadron of the 6th Engineer Support Regiment conducted AACAP in the two indigenous com munities of Wutunugurra and Canteen Creek, situated approximately two and a half hours drive east / south east of Tennant Creek in the Northern Territory. The remote nature of these two communities provided the opportunity for the Squadron to exercise its capability over extended logistic lines of communication that closely resemble the conditions that may be encountered in responding to a Humanitarian Assistance / Disaster Relief operation.

The construction effect included the delivery of two new structures and the upgrade of an existing road. Wutunugurra, a small community of approximately 200 people, was provided a new Community Centre and Workshop, both delivered by the Construction Troop (8 Troop) with the support of Plant Troop and other specialists within the Contingent. 60km away, elements of Plant and Resources Troop upgraded 1 km of road for the Canteen Creek community, resulting in the provision of a sealed, all-weather access road.

The Wutunugurra Community Centre project included the delivery of a $1.5 million facility located on a green field site situated in the middle of town. Being positioned next to the very popular church, this new centre has created a central hub for the community, where gatherings, meetings, training and other activities now take place. There are two large conference rooms which the community plans to decorate with local art, as well as offices, bathrooms and a staff room. At one end of the building the roof extends over a large playground, with play equipment installed by an Engineer section from the Falintil - Forças de Defesa de Timor Leste (F-FDTL - Timor Leste Defence Force) who participated in AACAP for two weeks in August. The Community Centre saw the Carpenters, Electricians and Plumbers of 8 Troop sharing the workload to pour large quantities of concrete alongside some very experienced civilian contractors who shared valuable methods and advice. The structure is a steel frame building, internally lined with fibrous-cement sheeting and externally clad with CGI. Working to very fine tolerances with such robust materials proved a challenge and constructability solutions had to be carefully considered.

Below & opposite page: 'Camp Birt', in the Wutunugurra community, was home for the personnel on AACAP 2014. (Source: Department of Defence).

The Wutunugurra Workshop was built to meet the needs of the community, providing an area for woodwork and metalwork to take place. The project was a Design-and-Construct task for the 17th Construction Squadron, allowing the Works Office and 8 Troop to consider the end user requirements, find solutions to best meet them and practice designing to Australian Standards and the Building Code of Australia. The building is a spacious, high-pitched roof, with a triple-bay garage and an attached carport complete with a set of vehicle ramps to provide a safe working area for the community mechanics. The internal fit-out includes an office area and a number of steel cages for secure storage which were custom welded by elements of the AACAP Training Team. Work benches, tools and protective equipment were also supplied as part of the Training Team's welding course.

In September, an Engineer Section from the Tongan Army provided great assistance to both construction sites during their two week attachment. The Tongan Sappers were organised into small groups to supplement 8 Troop's efforts during the cladding of the Community Centre and the finalisation of the Workshop.

The Canteen Creek Road Upgrade saw the operators and drivers of Plant Troop tested in tough conditions, meeting tight timelines while always supporting the other logistic requirements of a Squadron deployed in the field. The roadworks required the Troop to import 11 000m3 of fill which was sourced from a local borrow-pit in order to bring the existing road surface to the correct level. Three culverts, installed by members of Resources Troop, formed the focal points of an extensive drainage plan; this was required due to the mostly flat nature of the surrounds and the large (despite infrequent) quantity of rain that falls in the area. While spraying a bitumen seal is not a capability held within the Regiment, the Works Office gained additional contract management experience co-ordinating the placing of black-top by a civilian contractor. The end result is the community now has a durable and long lasting entrance road, that enhances the ability for logistic supply in the wet season and does not pose a health hazard by raising dust in the dry season.

Throughout AACAP, the Contingent was housed in Camp Birt, the construction of which provided training in the conduct of sustainability support in a deployed environment. Within two weeks the plumbing, electrical and communication services were installed, ablutions, messing, living and working accomodation raised, a field kitchen built, and the entire camp fenced and ringed by expedient road. Supplied with only diesel, untreated water and an unpredictable ration delivery system, the camp produced all requirements to support over 150 men and women for the five month deployment. Camp Birt proved to be a very comfortable home for the Contingent, as well as for the array of visitors including politicians, international personnel, government workers, community members, civilian contractors, and one bull.

By Captain Alex Buenen

Other than Construction

AACAP is much more than a construction project. Other training and services provided this year included an accredited Welding/ Fabrication Course, a Multimedia Program and a tailored Sports Program that targeted key community interests in AFL and Softball.

The Health Team delivered services that included 130 Healthy School Aged Kids checks; 354 hours work at the clinics financial result of this work amassed to $26,729 for the communities; dental checks and treatment to a total of 131 children and 232 adults with a total financial effect for the communities of $132,754; clean-up days, a hygiene education program for school aged children and pesticide spraying of community homes.

The Veterinarians conducted de-sexing, worming, parasite treatment and microchip to the local dogs in the communities. They treated a total of 269 dogs, 11 cats and a donkey. The total financial effect in the communities was $56,289.

The Operational Support Squadraon (OSS) provided Cooks, Q staff and Workshop personnel which are supplemented primarily by 17 Combat Service Support Brigade personnel. With a 150 personnel to be fed, a fleet of nearly 100 vehicles and the plethora of tooling and equipment that required maintenance OSS was busy and made a significant contribution to the health and living conditions of our fellow country men and women.

RAE Operations

Operation RESOLUTE

Transit Security Element - 72

With a change in operational tempo there was a requirement to increase the number of personnel for the Transit Security Element - Rotation 72 [TSE-72], Operation RESOLUTE, the ADF contribution to civil maritime security operations as part of Border Protection Command. The ADF component is known as the Joint Task Force (JTF) 639 controlled by the Headquarters JTF639, lodged in Headquarters Northern Command in Darwin. The Army Contingent was predominately 4th Brigade personnel. The TSE provides an additional Security Capability to OP RESOLUTE.

The task of preparing the Army Contingent TSE-72 was given to the newly formed 22nd Engineer Regiment: a combination of the 4th Combat Engineer Regiment and 22nd Construction Regiment which was created in 2014.

Of the 88 Army personnel, 34 were selected from the RAE. Engineers led the way with a OC, 2IC and CSM (all RAE) as well as a Platoon plus of Engineers. Additional Army personnel were sourced from Infantry and Armour as well as a Logistics element.

The RAE led Tri-Service Company formed in Darwin and participated in an intensive seven week training program. The training included a 9mm Pistol Course, Boarding Operations Common Course, Military Self Defence Course (MSD) and the Population Protection and Control Course (PPC).

At the conclusion of the course TSE-72 were assessed on their knowledge and skills taught to date in a Navy-led Mission Rehearsal Exercise (MRE) Week. The MRE assessed boarding parties, capability to control irregular maritime arrivals (IMAs), compartment clearance, Armidale Class Patrol Boat (ACPB) hands to boarding stations and orientation. The culminating activity for this training phase was conducting scenario training on MV Discovery III, the Navy's training vessel for boarding utilising Rigid Hulled Inflatable Boat (RHIB) insertions.

TSE was privileged to receive a visit from two "VVIPs" – the Prime Minister and Commander Border Protection Command (COMBPC). The PM and COMBPC completed a TSE-72 company PT session and then observed a demonstration of the TSE capabilities and skill sets.

For their time at sea, the Tri-service Company team came together and achieved all implicit and directed tasks. TSE became an integral part of the Ship's Company wherever and whenever embarked and some TSE crews made it to Singapore, some to Bali, some to Christmas Island, some to Ashmore Island, some to Broome and some to Perth for logistics and resupply visits. All members of the RAE, Army Reserve led TSE Tri-service company group deployed from the Darwin area in support of the mission. Some spent a large number of days at sea, some spent only a few, but all the efforts have been recognised and the team have been individually awarded the 'Operational Service Medal – Border Protection' for their services.

When members were not assigned to vessels, continuation training was conducted including 9mm Training with gloves and Body Armour as well as PPC and MSD refresher training. Whilst ashore TSE supported the Sea Training Group, assisting in preparing the Naval vessels (both Major Fleet Units and Minor War Vessels) for Operation Resolute as either embarked TSE or as simulated opposing force members.

As a result of TSE-72, a number of new friendships have been made across the three services and a number of old friendships have been strengthened. TSE has supported a number of crews and vessels in the RAN, Australian Customs and Border Protection Services in training, in preparation for operations and the operation itself.

The RAE approach to leadership, Centralised Command with Decentralised Control and the RAE 'have a go attitude' as well as the support your mates ethos displayed what a large TSE contingent can produce and provide.

By Major Scott A. D'Rozario

Operation PARAPET

In November 2014 the G20 Leaders Summit was held at the Brisbane Convention and Exhibition Centre, South Bank.

The Group of Twenty, known as the G20, is an international forum for the governments and central bank governors from 20 major economies. The members include 19 individual countries—Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States—along with the European Union (EU). The EU is represented by the European Commission and by the European Central Bank.

The role of Defence in the G20 security arrangements related to the provision of niche capabilities in support of major events consistent with its obligations under the Australian Government Crisis Management Framework. The Australian Government deployed appropriate ADF assets available to support the G20 taskforce and civilian police to provide a secure environment for the conduct of G20 events, including the Leaders Summit held in Brisbane on 15 and 16 November.

Approximately 2000 soldiers, sailors and airmen will supported the Queensland Police Service and other government agencies with force elements such as Black Hawk helicopters, F/A-18 Hornets, clearance divers, explosive ordnance detection dogs and members of Special Operations Command.

Sappers assisted police at various locations around Brisbane using specialised search equipment to ensure the safety of delegates and members of the public attending the various G20 events.

Clockwise from top: SPR Peter Knight and EDD Bundy, from 2CER, make their way through a storage area of the Brisbane Convention Centre with Queensland Police Service Senior Constable Kim Ensinger; SPR Ryan Rifai, attached to 2CER, inspects underneath a vehicle at a checkpoint in Brisbane; SPR Kristopher McGhie, from 2CER, searches the contents of a dry-cleaning van at the Suncorp Stadium vehicle screening point; Sappers from SOER man a static display during a visit from international military delegates. (Source: Department of Defence).

SAPPER SITREP

1st Combat Engineer Regiment

Above: 1 CER members observing correct loading of PMVs as part of a PMV Driver course conducted by 1 CER. A number of courses conducted invigorated the Regiments capacity to take on PMV's as part of Plan Beersheeba provisioning.

The Commanding Officer's Report

In November 2013, the 1st Brigade transitioned to the RESET year within Army's force generation cycle. This saw the last formed body of 1 CER personnel return from operations in Afghanistan in December 2013. The focus for 2014 shifted from support and operations to individual and collective training at the section and Troop level. The key message for the Regiment was to get back to the basics and RESET. This provided an opportunity to remediate a number of areas that had not been a focus during the past 14 years of operations. This often proved difficult to achieve, as the Regiment was consumed with a large number of collective support tasks, in particular support to RMC.

The first critical task was to adopt the structures of the CER within a Combat Brigade as directed in Plan BEERSHEEBA. This resulted in a significant change to the Regiment equipment holdings as we handed over all the M113s to 1st Armoured Regiment. This provided a significant training burden as we needed to qualify a large number of personnel as PMV drivers and crew commanders. Thanks to the efforts of the Training cell we are now well postured to transition to the READYING phase in 2015.

Due to excellent work at the Squadron level, the Regiment has continued to build on its strong reputation by contributing to a number of higher level directed tasks. For 23 Support Squadron this was clearly evident in the construction of a standard grenade range at Kapooka and the delivery of the handheld detector training lanes. 9th Field Squadron has continued to provide personnel for the handheld detector trials to inform future capability development decisions. They have approached their relocation to Darwin in differing ways, some chose to separate, some fled to Darwin and others returned to Darwin or were posted to new units.

1st Field Squadron has undertaken a number of demanding and challenging training exercises and activities to ensure they are well positioned to support higher training levels in 2015. This included a challenging and demanding watermanship and bridging Exercise which culminated in rafting operations between Larrakeyah and Mandorah. They also provided support to 2 CER for OP PARAPET for 6 weeks during October and November, ensuring 1 Fd Sqn remained busy until the end of the year. OSS has again proved their worth as a critical enabler to all of the above activities and ensured the Regiment received excellent logistic support.

The year has seen a number of individual deployments to Afghanistan, SINAI and also personnel participating in AACAP in support of 6 ESR. A special thanks to all the partners, relatives and friends for their support during deployments, exercises and short notice events, that are part and parcel of Army life. Welfare of the Regimental members has been a high priority for all of the chain of command and the support of partners, relatives and friends plays a critical role.

This year has seen a significant increase in sport within barracks life. As we approach the end of the year, I fully anticipate our sporting teams will compete strongly in their respective finals. The sporting strength of our personnel is evident in the large number of representatives for the Brigade, Army and Defence at higher level sporting events. The Regiment has also undertaken a number of social and additional activities throughout the year. This has included family days, community engagement with the Cancer Council and Moulden Park Primary School and the Regimental Ball to be undertaken on the grounds of the Darwin Casino. The Regiment also participated in the ANZAC Day march through Palmerston and is looking to continue this participation in 2015 by undertaking the march with elements of the 1st Field Squadron Association.

Finally, I would like to thank all the staff in RHQ. Although often a thankless task, you have proven your worth in enabling and facilitating all the efforts of the sub-units. Looking forward to 2015, although I will move on to the colder climate of Canberra, the Regiment is well positioned for future challenges. This is due to the hard work, commitment and dedication of all members of the Regiment. I thank you for your contribution and after close to ten years in 1 CER over four postings, I will always feel privileged to have had the opportunity to be the Commanding Officer of the premier engineer unit within the Australian Army.

Ubique

By Lieutenant Colonel Mick Say

1 Field Squadron

The end of 2013 saw 1 CER transition responsibility for providing engineer FE for the RGB to 3 CER, it saw 1 FD relinquishing its M113AS4 fleet, commence an 18 month Reset period and adopt the structure of the Generic Combat Engineer Regiment.

The Squadron quickly completed the restructure during the corporate governance period and was poised to commence one of the many field exercises for the year. 2 TP received their compliment of Bushmasters and commenced workup trials using the new vehicles before deploying with the Squadron to Kangaroo Flats Training Area to conduct IMT and demolition activities. Heat, humidity, precipitation, all too common with operations in the Top End was a rude awakening to the new march-ins.

In April a 12 man section was detached to support a 5 RAR rotation through Tully. Rerolled in our secondary task they excelled in all activities and followed the exercise with a 4 month deployment as part of a 5 RAR company to RIMPAC. For the first time in many years, a majority of the Squadron was able to commemorate the 99th anniversary of the landing of Gallipoli in Darwin. Joined by US Marines for the dawn service and enjoying a gunfire breakfast, the Squadron joined the Regiment in marching through the City of Palmerston before continuing the commemorations back at Robertson Barracks and in the city.

A shift in focus for Ex PREDATORS CRAWL allowed the Squadron to train in basic combat engineering, digging in a Company position to stage 3, construction of an aerial ropeway, culvert construction, hasty HLZs and conducting route search through our assigned AO. With the influx of IETs over the year to bolster the ranks, this exercise provided an invaluable lesson in the ability to live in the field for prolonged periods, conducting tasks both day and night and working in tactical situations.

Following their time in the sand and dust 1 TP joined another 5RAR rotation through the jungles of Tully and excelled in all activities. Although surrounded by infantry in their natural environment, SPR Dugan and his section of engineers won the section challenge conducted by CTC.

The unexpected consequence of the reset year is the increase in amount of support requests from various organisations including RMC, ADFA, DSTO and DMO. Elements up to TP size have provided battle noise simulation dets, OPFOR elements and instructors to name a few. The consequence of this external support coupled with the release of the squadron's senior sappers on promotion courses saw our next tier of leaders stepping up to the plate and lead their sections on the majority of activities.

Bridging training in June was conducted on both dry and wet gaps in the Darwin area. Each TP moved ASLAVs, PMVs and G-Wagons across Darwin Harbour through fluctuating tidal ranges during the night. It even saw one of the rafts stranded on dry land due to the rapidly moving tide. The MGB training concluded with a bridging gallop, requiring each TP to build two single storey MGBs to get the bridging train to the gap and out again and a 17 bay double storey to allow the crossing of a BG reconnaissance element all over a 16 hour period.

The benefit of a reset year is the ability to conduct individual skills training in equipment that time has not previously permitted. During July proficiencies in Portable Saw Milling, tree felling and PMV driving were completed to ensure these skills could be utilised in the future.

In August and September the SQN provided TP and Section sized elements to Ex KOOLENDONG and Ex PREDATORS WALK. The engineers provided mounted and dismounted mobility support to the mechanised and motorised Combat Teams.

Our focus has again shifted and with confirmation of support requirements to G20, the Squadron will deploy to Brisbane in October and support 2 CER operations to ensure the summit is safe for all of the delegates.

Below: 1 Fd Sqn members conducting FSB rafting operations on Darwin harbour as part of Ex GOANNA BRIDGE. 1 Fd Sqn conducted a number of crossings on Darwin harbour including live load moves of 2 CAV ASLAVs.

Top: 1 FD SQN members undertaking a bridging activity.
Above: 1 FD SQN constructing culverts during Ex PREDATORS CRAWL.

As we close out the year, we still have six months of the Reset cycle to complete before moving in to the Readying phase. The challenges ahead include a complete change of HQ staff, new troop commanders arriving in the Squadron and with the return of 9 FD Squadron to Darwin we will once again have to compete for equipment and training requirements.

By Major Ian Rainbow

1 Field Squadron Bridging Activity

The ocean is a harsh mistress, capricious and taciturn at best. These lessons were learned in detail by the Officers and Sappers of 1 Field Squadron during their bridging activity, Ex AMPHIBIAN BRIDGE. The troops were confronted with a rapid, dramatically changing tide and busy shipping lanes for their rafting operations as part of the Exercise. All of which was conducted by night.

Different troops in the Sqn rafted differing payloads varying from Bushmasters held within the unit to an ASLAV from 2nd Cavalry Regiment.

Working with elements from outside the Corps provided realistic training for 1 Troop, as they were faced with the technical challenge of rafting in these difficult conditions and also integrating the cavalry elements into their plans. The activity was a resounding success with many lessons leaned both for the engineers and members of Armoured Corps who supported the activity. Early rising members of the public were also pleasantly surprised to see the hulking forms of armoured vehicles traverse Darwin Harbour aboard the raft, demonstrating one of the core combat engineering capabilities of the ADF.

By Lieutenant Tom Wickham

9 Field Squadron

In what is to be the last year that 9 Field Squadron will be based at Royal Australian Air Force (RAAF) Base Edinburgh, the Squadron has spent the year focussed on Reset Operations. The lower tempo of training has given the much needed opportunity to clear leave, participate in Brigade sports and focus on completing individual and small team training requirements.

Despite the lower tempo, the Squadron maintained opportunities to support wider Defence activities, including Captain McWhirter deploying to Afghanistan in the Operations cell of the US 4 Infantry Division, a section deploying to Rifle Company Butterworth in Malaysia with 7 Royal Australian Regiment and elements deploying to support Ex HAMEL. Further support was provided on a consistent basis to training establishments around Army as well as to the testing of new hand held detectors. The combination of individual training commitments combined with a lack of reinforcements from Initial Employment Training enabled the Squadron to focus on preparing to relocate to Darwin and minimise its footprint in Adelaide over the year.

Relative to Darwin the weather can be quite suitable for training in Adelaide, however ironically, whilst the wet season closed off training areas up north, South Australian training areas were closed due to the hot dry conditions, creating a total fire bans across the state for the first few months of the year. When field activities were able to get underway, the Squadron completed a number of live fire activities, demolitions tasks including urban breaching, dismounted and mounted tactical manoeuvres, engineer reconnaissance tasks and navigation. It also completed training in Chemical, Biological Radiological and Nuclear Defence with the conduct of the Mask Test facility, use of the medium girder bridge and urban operations training rounding off the main activities for the year.

The Squadron made the best of being in Adelaide by working with 7 Royal Australian Regiment, 1 Armoured Regiment, Logistic Support Element and 3 Field Squadron on a regular basis. In addition there was interaction with the RAAF through capability briefs and displays of aircraft and specialist skills held at the base. Another benefit of a joint base was the opportunity to engage on a social basis with the other services and it was eye opening to experience some of the varying cultures as we mixed together on formal occasions.

The latter half of the year was focused on relocating the Squadron to Darwin to re-occupy the lines abandoned three years ago. There will be a decrease in autonomy and independence however the ability to plan and execute training will be enhanced by the co-location with Regimental Headquarters. The Squadron is looking forward to rejoining the Regiment and making the shift from Reset to Readying in 2015

9 Field Squadron Relocation

In late 2013, 9 Field Squadron was warned out to relocate to Darwin over the 2014/15 posting cycle. This was made official in early 2014 with the Chief of Army and Minister for Defence approving the relocation to meet the needs of Plan Beersheba. The relocation would remain the main effort for the Squadron in 2014 with a focus to learn from the move of 102 Battery that had been conducted at the end of 2013.

The relocation of the Squadron effectively meant the end of a permanent engineer unit stationed in Adelaide, despite the very

Top: Members of 9 FD SQN conducting urban breaching.
Above: 9 FD SQN undertaking a bridging activity.

brief presence that it had been (three years in total). The short time frame meant the Squadron was never able to embrace the midday knock offs on Friday that the Royal Australian Air Force holds so sacred, however the general knowledge of our brothers and sisters in blue is a strength the Squadron will retain as it trades the wines of the Barossa Valley for a Darwin stubby.

The relocation did impact on training throughout the year, however it was minimal and more importantly there was no surprise to Squadron personnel or their families with plenty of notice given to all. Whilst it was planned to move the majority of the Squadron back to Darwin, in reality only about a third of its people ended up being posted there. The opportunity to work with 2 Royal Australian Regiment as part of the Amphibious Ready Element saw two sections of Sappers given postings to Townsville to get their sea legs with the remainder scattered around other units in Australia.

Relocating a Squadron can be a complex task but with the posting orders released, the Second in Command, Captain Thomas Whale, the Squadron Quarter Master Sergeant and Corporal Callum Dunlop shouldered the majority of responsibility in moving the entire Squadron's equipment north, ready to use in 2015. In Darwin the Executive Officer coordinated the many moving parts to prepare the facilities for the Squadron's arrival. This included self help work in repairing facilities and the internal move of 23 Support Squadron's offices and hangars. Costs for the move were kept to a minimum as RAAF sustainment flights and Brigade Transport assets were utilised wherever possible. Overall the move north was executed with minimal impact to capability, providing a smooth transition for people and equipment. The Squadron is now positioned to continue training following the Christmas break.

By Major Ryan Orders

23 Support Squadron

The most common phrase heard from the members of 23 Spt Sqn in 2014 was, 'so much for a RESET Year!' Although it was another busy year, 23 Spt Sqn had a very fulfilling and successful year, achieving some great results across all three Troops. The focus for this year was the upkeep of individual trade and specialist skills, as well as Section and Troop level training.

23 Support Squadron's biggest achievement in 2014 was Ex WARTHOG BUILD 14. Plant Troop deployed to Kapooka for three months to construct a grenade range, whilst Support Troop remained in Darwin to construct a countermine training facility under project LAND144. Both troops gained excellent training from these projects and produced outstanding end products that the unit and Army will benefit from in the future. The tasks, managed by Forces Command, Capital Facilities and Infrastructure Branch respectively, were an excellent opportunity for a Support Squadron to maintain and develop its skill sets in a Reset year.

Being such a diverse Squadron with multiple support engineering capabilities, the staff at all ranks worked hard to ensure skills were maintained and developed throughout the year. Resources Section continued to maintain and qualify members on the Water Purification Unit, Emergency Responders and Plant Operators continued to support various units within the Brigade on field exercises and the Explosive Detection Dog Section achieved their annual requalification prior to deploying to Brisbane to support the G20 summit. Amongst all of these tasks, the Squadron also managed to run other minor activities such as Ex WARTHOG SHAKEOUT, Ex WARTHOG DRIVE 14 and a Troop deployment to East Timor under Ex HARII HAMUTUK.

Despite experiencing sleet, rain and freezing temperatures on site in Kapooka, or dust, fire and extreme heat in Darwin, 23 Spt Sqn maintained an excellent attitude and high morale this year resulting in a very rewarding year.

The Squadron is well postured to meet its challenges in 2015. 23 Spt Sqn plans to conduct Ex WARTHOG BUILD again in 2015, but this time as a Squadron deployment to Mount Bundy to conduct horizontal and vertical construction. The Squadron will also continue to support the Combat Engineer Squadrons and Brigade as it transitions to the Readying phase.

By Major Rachel Brennan

Below: Kapooka Grenade range Aug 2014, Ex WARTHOG BUILD, Completed grenade range. (pic LT Foley)

SAPPER SITREP

2nd Combat Engineer Regiment

From the Commanding Officer

Following an action packed RESET in 2013 (which appeared to be far from RESET) the Regt was ready for an extended READYING in 2014. The Regt was handed over in great shape and was well manned for a series of demanding foundation warfighting exercises at SWBTA and focused on combined arms training.

The year started quickly with Tp and Sqn level field training, culminating in the first Regt deployment since 2011 on Ex SEMPER PARATUS. The key focus was basic combat engineering skills and setting the foundations for the Bde CATA. There was ample opportunity for tree felling by hand, mechanically and explosively, preparing obstacle belts, defensive positions, water production, diving and the construction of a Divisional sized CP. The Regt concluded the exercise with each CE Sqn conducting a live breach.

We then upped the tempo with a Bde CPX followed by the Bde CATA where the CE Sqns were allocated to the manoeuvre BG and 24 Spt Sqn held as Bde asset to complete the BG defensive position for the LFX. The Bde CATA clearly provided the opportunity to exercise in a combined arms setting and conduct live fire, including danger close serials. The danger close serials reinforced the Army Achilles heel of having no under armour breaching capability.

Just as we thought it was time for a break, the Regt began packing up to move into new lines whilst concurrently mounting for the provision of search support for the G20. It allowed the Regt to live up to the Corps unofficial motto: 'bite off more than you can chew and then chew like crazy.'

On behalf of the Regt, I would personally like to congratulate the members of 2 CER recognised for their efforts in the 2014 Australia Day Honours List. CHAP Crosby and WO1 Robertson were awarded CSM, LCPL Errol Parson was awarded a Commendation for Distinguished Service and CPL Chalk received a MG. Well done, your selfless service inspires us all.

Many thanks to the members of the Regiment for your work in 2014 and thanks also to your families for your ongoing support – we couldn't do what we do without you. We look forward to 2015 which will see the Regiment and the formation assume the RBG role.

Ubique.

By Lieutenant Colonel Matt Richardson

From the RSM

The year started with EX SEMPER PARATUS where the unit deployed as a Regiment into the field. Some fundamental skills in regard to operating at a Regimental size organisation had to be relearnt. The combat squadrons conducted basic engineering tasks including constructing a series of obstacle belts and breach ing each other's obstacles. The Support Squadron conducted works projects that would be used on the 7 BDE CATA.

ANZAC Day saw over 2500 ex and serving soldiers and their families attend the final ANZAC Day at the 8/9 RAR facility. The new memorial is looking great and should provide the opportunity for large crowds again next year. The unit continues to provide ongoing support to SPR Moeland's home town in Gayndah, western QLD. The Regiment is overwhelmed by the community support for Defence and in particular the support given to the members of 2 CER by SPR Moeland's family and the Gayndah RSL. The guys and girls of the regiment are treated like celebrities by the town.

The Regiment deployed to Shoalwater Bay to support the 7 BDE CATA. It was with great pride that I watched members of 7 CE SQN during a live fire attack breach obstacle after obstacle leaving their infantry support behind as they looked in awe upon explosions around them. The sappers continued to react and deploy to the next obstacle instinctively. The Squadron also went on to win the 6 RAR soldier's competition, as well as take out the best shot in the Battalion. Three sappers where in the top 10 shots and all scored high enough to be awarded the crossed rifles.

2 CER will move into the new lines at the end of September after a 2 year hiatus in the old 8/9 RAR lines, where we have learnt to play Tetris with our equipment very effectively. The opening of the new lines will occur with a formal parade on 24 Nov 14, being the unit birthday. This activity will signify the end to what has been full on year for the officers and soldiers of the Regiment and time to have a well earned rest.

By Warrant Officer Class One Graeme Nagle

2nd Combat Engineer Squadron

After the initial shake-out activity of Ex PHANTOM CRAWL and range practices, it was straight into the training year and preparation for the upcoming REGT Exercise.

In March the SQN rolled out with the rest of 2 CER to participate in Ex SEMPER PARATUS and completed a range of CE tasks and preparations for the upcoming 7 BDE CATA. 10 Tp proved the myth that PMV's do indeed like their bellies scratched and have now taken the motto 'that's how we roll'. The exercise was a good way for some lesser used skills to be practiced, including tree felling and HLZ construction.

During June the SQN had the lead role in organising the annual Waterloo Dinner for SE-QLD and this year it was held on an FSB constructed by the SQN. Also along the lines of bridging, the

Below: CO LTCOL M. Richardson, XO MAJ J. McCreadie and RSM WO1 G. Nagle open the gates to new lines on 29 Sep 14 for the first time.

Above: Premier Campbell Newman and COMD 7 Bde after a Battle PT session with 2 CER.

SQN conducted an MGB build activity in an area infested with 'bities' at WBTA.

The SQN supported 2/14 LHR and BG WARHORSE during the conduct of the 7 BDE CATA. Once again the PMV mounted Engineer SQN proved they could keep up with the CAV, no matter how hard they tried to lose the Sappers along the way. The Troops injected themselves into the CBT Teams and provided the close ENG support they are renowned for. 10 Tp was mentioned in dispatches for having the highest kill count during the visually impressive live fire MDP battle, which included 155mm danger close missions, Javelin engagements and overhead SFMG fire.

Following the battle successes during CATA, 11 Tp went on to support 8/9 RAR during the CTC run WARFIGHTER serial at SWBTA, which included supporting a CBT Team, live UXO searches and providing Observer Trainer support.

Aside from the extensive field time completed by the SQN in 2014, the soldiers found time to participate in several in-barracks support tasks. These included the parade for the TK memorial, support to the popular Bulimba Festival, the BDE open day and the list goes on. CPL McDonald from 11 Tp was extremely lucky to be supported by the RSL to travel to Fromelles, France in order to attend the headstone dedication of his great uncle's remains, which were identified as one of the unknown soldiers uncovered in a WWI mass grave near Fromelles.

The SQN also enjoyed success during the inter-REGT competitions winning the REGT Fitness Comp and the REGT Section Competition.

As this article was written, the SQN was extensively involved in the lead-up training for the upcoming G20 conference being held in Brisbane and looking forward to some well earned Christmas leave.

By Major Tim O'Brien

7th Combat Engineer Squadron

The initial months of 2014 allowed the Sqn to complete all of the administrative requirements, with specific focus on individual soldier and engineer skills before moving on to our first section level exercise, Ex LIGHTNING SOLDIER. This section level competition in the challenging terrain at Canungra provided the sappers the chance to practice section skills, and very good results were achieved at all stands.

During March and April, 7 CE Sqn deployed to Shoalwater Bay with the rest of 2 CER for Ex SEMPER PARATUS. This saw the Sqn conduct numerous engineer tasks, including defensive position & obstacle construction, tree felling, LZ construction and expedient route repair. Culminating with a Squadron breach and attack onto an enemy defensive position.

The training on Ex SEMPER PARATUS was quickly followed with additional Squadron activities, which included Ex LIGHTNING SOLDIER II that focused on IMTs and Watermanship. Also Ex LIGHTNING STRIKE which concentrated on Demolitions. Both exercises provided vital training opportunities before the Sqn deployed with 6 RAR on Ex BLUE DOG III and the 7 Bde CATA.

Ex BLUE DOG III involved sections attached to Infantry Combat Teams providing intimate combat engineer support. The focus of the Exercise was Combined Arms, with each Combat Team conducting a live-fire obstacle breach and attack, with simulated indirect support. The entire Battle Group then concentrated to conduct a clearance of the Raspberry Creek Urban Operations Training Facility. Again, Engineer sections were in direct support and proved to be vital in opening breach lanes in the numerous external obstacles and achieving point of entry breaches into buildings.

The 7 Bde CATA also allowed the sappers to demonstrate their technical mastery with more in-stride obstacle breaching before participating in the live-fire BG defensive battle. The Sappers enhanced the defensive position, established additional obstacles, and fought from the position with overhead and flanking fire from MAG 58s, .50 cals, Javelins, 25mm main guns from the attached LAV Tp and along with 155mm danger close missions.

During the middle of the year, 7 CE Sqn also acquired and commenced an operational test & evaluation of the Hydro-Noa Hydraulic Breaching Kit. This breaching kit comprises of a hydraulic hand-pump with several attachments including bolt-cutter, door buster (expanding wedge) and bar spreader. It will remain under trial until March 2015.The breaching kit has a very broad utility; it was particularly useful in conducting non-explosive urban breaching into Raspberry Creek following a lengthy approach-march on Ex BLUE DOG III.

In October, 7 CE Sqn will relocate as part of the Regimental move to the new 2 CER precinct in Gallipoli Barracks. These purpose built facilities will allow all elements of the Squadron to be housed under the one roof for the first time in two years.

This busy training year is aimed at ensuring the Squadron is best prepared to assume RBG responsibilities in the future as part of the 6 RAR Battle Group. Readiness remains a major part of our training plans and will ensure 2015 is even more demanding than 2014.

By Major Rodney Davis

24 Support Squadron

As part of the Regiment, the Squadron deployed to SWBTA on Ex SEMPER PARATUS in preparation for the 7 Bde CATA. Training included the preparation of the Main Defensive Position (MDP), the building of a protected BG CP and the preparations for establishing a water point to provide potable water to the Bde. Emergency Response Troop remained in Oakey maintaining their high tempo support to the AAvnTC flying operations.

In between Ex SEMPER PARATUS and the 7 Bde CATA, the Squadron deployed on Ex CROCODILE TEST. This Exercise emphasised the testing of the technical skills within the Troops.

Plant Troop

Plant Troop has enjoyed a considerable amount of time at SWBTA conducting road construction and remediation, quarrying operations, emplacing culverts and establishing a BG size MDP. The MDP included dismounted fighting positions and trenches which were used by the Bde for the live fire exercises. The Troop remained after the 7 Bde CATA to conduct DAMCON, and redeployed sometime later to complete the DAMCON task and conimproved infrastructure on the range.

Above: The Main Defensive Position (SWBTA) on CATA 14.

Construction Troop

Construction Troop has had a constructive year supporting the Brigade. The main effort at the beginning of 2014 was the construction and fit out of the BG CP at SWBTA. In between field exercises the Troop has provided support to Kokoda Barracks and turned a neglected building into a highly desired piece of real estate at Canungra.

The Troop contributed to the 7 Bde CATA by developing innovative and imaginative moving targetry to enhance the live fire defence range practice. During CATA the Troop also built a new shower block for the staff at Range Control, a long desired facility that was finally established.

Specialist Troop

Specialist Troop has been involved in a number of broad projects including the construction of the new HLZ Crocodile at SWBTA. The Troop established a water point at Tilpal and provided potable water to 7 Bde during their CATA. The Troop refurbished both 2 CER Bridge and Turner Bridge at SWBTA, an excellent CE job. The Troop has come together to take the lead on the Army Dive Concentration Camp at HMAS Penguin in Sydney, which has successfully incorporated all Army Working Divers to consolidate and train together. The Troop will be heavily involved in the G20 summit with the EDD capability providing that added assurance to clearing facilities.

Emergency Response Troop

As of the start of 2014, 2 CER has transferred SRFF responsibility at Swartz Barracks, Oakey to a civilian contractor, which unfortunately saw a significant portion of the Troop separate from the Army to join the civilian contractor. 2 CER has maintained the ARFF support to Swartz Barracks throughout the year, whilst providing occasional support to both 7 Brigade and AAvnTC. Mid year an ER crew deployed to SWBTA to provide hot refuelling support to AAvnTC, an activity we would like to see more of once we have transferred the ARFF responsibility at Swartz barracks.

The Troop continues to train with the Queensland Fire and Rescue Service and will continue to develop this relationship into the future.

By Major Christian van den Bosch

Operational Support Squadron

We began the year with stocktaking up to the eyeballs, we seemed to end that way too. I suspect it was because the RQMS, WO1 Shane Haynes, is trying to get in as much pain before his retirement as possible.

The rains that caused so much devastation in 2013 showed mercy in 2014 and the Regiment wasn't required for a Flood Assist in February. After much preparation, we made it to Shoalwater Bay to begin providing support. Unfortunately, all of the plans put in place did not survive first contact with the deluge of rain that fell just before we arrived. All in all, the Squadron was able to find a dry home and was able to begin providing some excellent support.

One challenge that proved a little too much though, was the moving of portaloos around the battlespace. This horrendous task proved too much for our battle hardened ASM who, being one of the few people with a Mack code, found himself elbow deep in the good stuff throughout the exercise.

The exercise saw OSS fit into a routine of omelettes provided by CFN Navjot Bhambra, poor spelling provided by CPL Daniel 'Rubish' Wade and a steady stream of medical evacuations involving LCPL Glen Harding, the OC and CFN Steven Cuip. The saviour of all of these people was SPR Andrew Usher-Clarke the medic. Always ready with a cigarette in one hand and his medical bag in the other, it was good to know Usher had your back.

With Ex SEMPER PARATUS a distant memory the Sqn focused on the up and coming CATA. LT Bonnell led the OSS push as the WKSP deployed independently under the command of 24 SPT SQN. LT Bonnell and CPL Goss were pivotal in creating one of the greatest Articles Manufactured in WKSPs ever - The Mobile Javelin Target. Thousands of dollars of cold hard steel, man hours and winching power all coming together to be gloriously blown up on CATA.

The FRTs did a sterling job once again and represented OSS to the highest of standards. The WKSP Main was not without incident though with SGT Andrew Gillespie attempting to 'eye pole vault' using a broom handle resulting in the magnificent bastard having to come home a little early.

The year did have some other highs. The ASM, WO1 Clint Robertson was awarded a CSM and CFN Lewis Allan a Soldiers Medallion, both of which were greatly deserved. All in all, another crisis managed year.

By Major Andrew Olechnowicz

SAPPER SITREP

3rd Field Squadron

From the OC

2014 saw 3rd Field Squadron come under command of 10th/27th Battalion, the Royal South Australia Regiment. Whilst it was sad to see the loss of the Sqn's colour patch – which drew its history from the Rats of Tobruk, we are now part of a Regiment with a very long and distinguished history that pre-dates federation.

Whilst integration into the infantry battalion has not been without some teething issues, these are quickly being overcome and the Sqn has had a very busy and successful year focussing on Corps skills such as watermanship, construction, search, demolitions and plant. A number of courses have been run within the Sqn and we have supported external tasks.

8 members of 3 Fd Sqn deployed on Transit Security Element – 73 as part of OP RESOLUTE. The members gained valuable experience training in Darwin and whilst deployed on patrol boats or major fleet vessels. Following the safe return of the TSE-73 contingent, a further 3 members of the Sqn are now deployed on TSE-75.

A personal achievement worthy of mention was our Training Officer, CAPT Julian Field. He was presented a Prince of Wales Award by His Excellency the Governor of South Australia.

With individual training a focus for this year, the Sqn conducted a small boat handlers (W1) course for 29 members not previously qualified. Utilising the Navy facilities Birkenhead, Port Adelaide, students conducted the practical components of the course whilst more senior members were able to revise their skills in the zodiacs and new Army Utility Watercraft

(assault boats). The training incorporated rehearsals in formations, drills and tactical landings followed by a search exercise based around a DACC scenario in which the Sqn was supporting civil agencies following local flooding.

At Port Wakefield in June, the CEs focussed on field engineering and construction tasks. This culminated in the construction of a non-equipment bridge constructed from timber milled with the portable sawmill system. The bridge became the final target in a demolitions activity conducted at Cultana in September. The end result left the bridge reduced to splinters and was an excellent way to cap off the practice.

The Sqn integrated into a number of activities with the rest of the Battalion, giving additional opportunities for our members to develop skills in combined arms activities. Of note, the Sqn's section placed 4th in the combined 4th and 9th Brigade Military Skills Competition.

The Mobility Support Troop's main focus of 2014 has been the conduct of a non-continuous plant course to qualify operators on grader, dozer, backhoe, front end loader and excavator. The bulk of this course has been conducted at the Proof and Experimental Establishment – Port Wakefield. The course was supported by SME with the Construction Wing providing WO1 Aaron Watts to conduct employment category testing.

As the Sqn progresses on the 'Road to Hamel' we look forward to working with 22 Engineer Regiment and 1 CER in the future, with a number of combined activities being planned for 2015.

By Major Sam Benveniste

Below: Members of Mob Spt Tp, 3 Fd Sqn, conduct plant works at Proof and Experimental Establishment at Portt Wakefield during the plant course.

SAPPER SITREP

3rd Combat Engineer Regiment

The 3rd Combat Engineer Regiment is nearing the completion of another high tempo year which has seen it continue to provide the full suite of engineering support to the Army's ready brigade. In addition to the normal training cycle, the Regiment also contributed to operations, notably OP Philippines Assist, and provided support to DACC tasks. 3 CER continued to pioneer the implementation of Army's amphibious capability and maintained a squadron as part of the Ready Battle Group.

November 2013, 3 CER led the deployment of the Recovery Support Force to the Ormoc region in the Philippines in the wake of Super Typhoon Haiyan. The RSF was built around 16 CE SQN with attachments from 25 SPT SQN and OSS within the regiment and a host of other assets from across the Army. The RSF embarked on HMAS Tobruk in Townsville on 17 November and with the main body arriving in Ormoc on 27 November.

The RSF provided valuable support particularly to re-establishing the school system within Ormoc which was established as the highest priority task. Engineer effort was directed to rebuilding parts of the 802nd Infantry Brigade facilities and assistance was also provided to the World Food Program NGO for whom a distribution point was established. Following the completion of works the bulk of the RSF redeployed to Australia by 16 December with all personnel returned and on Christmas leave by 19 December.

The RSF delivered rapid and valuable Humanitarian Aid and Disaster Relief effects to the people of Ormoc. OP Philippines Assist demonstrated the resolve and professionalism that exists within the Australian Soldier. Soldiers of the RSF served their country and the ADF with distinction and pride. The deployment also demonstrated the capability of the Regiment to stand up a deployable force at short notice, achieved through the dedication and commitment displayed by each Squadron. For 3 CER, this deployment served only to reinforce the capability and professionalism that exists within our ranks.

The Regiment commenced 2014 much as it had ended 2013 with preparations to deploy a similar support force to the Solomon Islands following another massive storm and magnitude 6 earthquake. In the end, this force did not end up deploying overseas but was dispatched north within Queensland in anticipation of Tropical Cyclone Ita. Fortunately, the impact of this cyclone was far less than expected and the clean up operation was within the capacity of the civilian agencies of North Queensland.

The Regiment managed to complete the usual foundation engineering skills exercises for each squadron in preparation for the major brigade exercises. These commenced with a full Regimental deployment on the Combined Arms Training Activity which was anticipated as a rehearsal for Exercise Hamel. CATA saw the Regiment detach combat engineer squadrons to 1 RAR and 3 RAR battle groups for the provision of intimate engineering support. The culmination of the exercise was the live fire portion during which 18 CE SQN conducted a live reserved demolition and explosive minefield breach by night.

The conduct of Exercise Hamel thrust the Regiment into new territory where it deviated from the now customary practice of operating as a dispersed force with sub-units attached in support of various battle groups. 3 CER became the Engineer Task Group with Support Company of 3 RAR attached. While significant training outcomes were achieved, such as the integration of a troop of New Zealand engineers into 18 CE SQN, it did appear that some elements of the Regiment were underutilised with 16 CE SQN maintaining a reserved demolition and defensive position for the majority of the exercise and OSS along with 25 SPT SQN providing protection to Task Group HQ.

On return from Exercise Hamel the Regiment maintained focus on real time tasks deploying a troop for a Rifle Company Butterworth Rotation and providing 18 CE SQN as part of the Army's commitment to G20 security operations. 3 CER's divers also conducted their concentration, developing and reacquiring the skills required rebuilding the Army Working Diver capability. The EDD section again proved their expertise being recognised for a second year running as the premier EDD section within the Corps.

25 SPT SQN conducted spearheaded the annual commitment to Exercise Puk Puk aimed to conduct joint training with the

Papua New Guinea Defence Force. This year's contingent was bolstered with the addition of personnel from the United States Marine Corps and UK Ghurka Engineers. The SQN completed a six week deployment to the Wewak area where they were garrisoned in Moem Barracks. Valuable training was achieved across the support engineering trades with the scope of works including refurbishment of the barracks, winning local resources and trade training. The contingent was supported by a CSS element from 3 CER which, in addition to sustaining the deployed force, also managed to provide training to the host nation forces. The SQN redeployed in mid October with enduring partnerships formed between the contributing nation's soldiers.

It is also worth acknowledging the significant contribution provided to 3 CER by the non-RAE elements of the Regiment. The men and women of OSS continuously provide the services which set the conditions for the Regiment to achieve its core business of enabling the Brigade to live move and fight. The logistics soldiers continue to be asked to achieve more with less and have done an admirable job of keeping the Regiment in the fight during 2014.

3 CER is now preparing to enjoy a well earned Christmas break after a characteristically demanding year. More of the same is expected in 2015 when the Regiment will continue to remain on line until the ready Brigade transitions to 7 Brigade following Exercise Hamel 15.

Previous page: Members of 3CER pause for a photo following a bridging activity. (Source: 3CER)
Top: Sapper Zachary Lawton from the 3rd Combat Engineer Regiment, places an explosive charge on a bridge. (Source: Department of Defence).
Above left and above: 3CER's various training activities during 2014. (Source: 3CER)

SAPPER SITREP

5th Engineer Regiment

5ER's formation occurred on 01 Jan 14 as a result of the amalgamation of the 5th Combat Engineer Regiment and 21st Construction Regiment. Now headquartered in Holsworthy. 5ER is comprised of four sub units with a strength of 400 personnel: The sub units are:

- 4 CE Squadron (HMAS Harman, Canberra)
- 5 CE Squadron, (Penrith MUD)
- 101 Const Sqn (Holsworthy)
- Littoral and Riverine Survey SQN (Holsworthy)

4 Combat Engineer Squadron

4 Squadron was able to deliver all the training outcomes required, take the lead on the Engineer Squadron for BG Waratah and support a high tempo of support tasks throughout the year.

Firstly it was the start of a new era with the merger of 5CER with 21 Construction Regiment, which added capability to our Exercise in March. Ex BALIKPAPAN at Majura Field Firing Range utilised the plant assets within the new regiment. In this Exercise a Troop was deployed with plant support to conduct works on the FOB and conduct a number of CE tasks and activities around the range.

Due to Ex BALIKPAPAN being moved from Marrangaroo to Majura late in 2013 as the bushfires shut the range, 4 Squadron was unable to conduct a demolitions activity during the Exercise. This required the Squadron to conduct a demolitions activity in June at Holsworthy. Once again the Squadron staff organised an activity that provided good training of benefit to the soldiers. This included an advance party establishing obstacles to breach and construction of a bridge to blow. These real time targets added value to the training activity.

It was assessed that there was a shortage of qualified Corporals within 5ER and hence 4 Squadron was allocated the task to conduct a CE Subject 4, Corporal Course. This was conducted in August and was a success with personnel attending from all the four squadrons within 5ER and also personnel from 8ER. It was a good starting point for the cooperation that 5ER and 8ER will be continuing leading into BG Waratah.

During the mid year 4 Squadron was tasked to lead the Engineer Squadron in BG Waratah. BG Waratah is the Reserve BG that is part of 7CB. In the lead up to BG Waratah's involvement in Ex DIAMOND STRIKE 15, the Sqn supported Ex GREEN DIAMOND. A 5 Brigade Exercise to test and train the BG Waratah's 5 Combat Team. 4 Squadron provided Combat Engineer Support to the Combat Team.

4 Squadron looks forward to the further development of capability and readiness as we head towards Ex POLYGON WOOD and Ex DIAMOND STRIKE in 2015.

By Major Attila Ovari

5 Combat Engineer Squadron

5 CE Sqn conducted Ex SLATERS KNOLL at Beecroft Weapons Range and Majura Training Area over the period 18-24 May 2014. The primary tasks for the activity were culvert repair, route clearance and construction of an aerial ropeway.

5 Sqn deployed in convoy to Beecroft Weapons Range on the north side of Jervis Bay on 18 May 14 and once firm on the ground got stuck into the tasks at hand. This commenced with the route clearance of the road verges of any Unexploded Ordnance along the section of road that led from Range Control to the North East boundary of the range where the culvert task was located.

Above: 5ER Sappers Elliott and Halse finishing a concrete slab at Moem Barracks, Wewak, PNG as part of Ex Puk Puk 2014. This slab was to become the foundation for the adjoining barracks new water tanks, pumps and shower facilities. Evidently the broom handle left something to be desired in terms of length.

The clearance of the roadway verges provided an excellent opportunity for the Sappers of 5 Sqn to practice their search skills in a real life situation. Although no UXO was detected, the Navy had left plenty of ordnance to keep the search teams busy.

5 Sqn then spent the next day and half constructing a culvert along a particularly boggy stretch of track whilst repairing another culvert further down the track. Needless to say the Sappers, and vehicles, found working in the boggy conditions challenging but were able to overcome any difficulties and get the job done. Although the track remains quite boggy, the Navy will quickly start benefiting from the new culvert with increased mobility around the range, particularly during bushfire season.

5 Sqn then picked itself up and moved in convoy to Majura Training Area for phase 2 of the Exercise which involved winning local resources and constructing an aerial ropeway. Sappers began by practicing their tree felling skills in the Majura Range pine forest, including competitions for felling spars by axe, and finished the exercise by successfully constructing a ropeway to move stores from the tray of a Unimog across a 30m gap. This was quite a challenging experience for many of the sappers who had never built a ropeway previously.

Ex Slaters Knoll provided an excellent opportunity for members of 5 Sqn to practice numerous engineer skills with a diverse and logistically challenging activity.

By Major David Poirier

101 Construction Squadron

Through organizational changes on a scale not seen in decades, 101 Construction Squadron (101CS) has taken the disestablishment of 21 Construction Regiment and integration this year into 5 Engineer Regiment in its stride; all whilst continuing training and supporting courses, exercises and operations across Australia.

Unlike many other units winding down for the end of 2013, the tempo remained high for 101CS: moving the unit to the new Jordan Lines; seeing longstanding members transferred across to 102 Construction Squadron as part of plan Beersheba and gaining

Above: 5CE Sqn members erect an aerial ropeway as part of Ex Slaters Knoll.

a host of new members; syncing in with new regimental staff and rapidly turning over a new UE.

The Christmas DACC period saw 101CS rapidly respond to the call for OP WARATAH RED. During the Sydney bushfire crisis Reserve engineers from 5 and 8 Brigades from every corner of NSW mobilised in under 48 hours notice, and were ready to roll out within 72 hours ultimately working with 17 Construction Squadron in post fire recovery assistance in the Blue Mountains.

101CS kicked off 2014 with a successful individual training block, seeing a significant increase in plant, construction and resource skill sets to augment the squadron's capability. Specialist training in bridging was part of maintaining the all-important bridging capability for the Corps. CE skills were developed with demolitions practice and range practices throughout the year. The SQN concentrates again in September as a composite construction troop to design and build the permanent defensive position training facility for ARTC, for the training of Army recruits for years to come.

Our specialist plant operators, tradies and instructors have been continually sought Army-wide, with members tasked in support of EX HAMEL 14, 5BDE CATA, AACAP, EX PUK PUK, 102CS and SUR courses. Squadron-wide preparation for EX HAMEL 15 to deploy a construction/support troop has begun in earnest, as 5BDE steps up to the plate in support of 3BDE as the READY brigade for 2015.

The squadron remains focused, postured and ready for the DACC season ahead, as well as the next twelve months of training and exercises and whatever may eventuate in real time. 101CS has continued to provide the essential capability for 5ER to be able to deploy a specialist reserve construction element in its own right, and also crucially support other units in their activities and operational tasks.

By Lieutenant Trung Ton

Littoral and Riverine Survey Squadron

2014 has been another successful year for Littoral and Riverine Survey Squadron (LRSS) with the completion of survey tasks, continued development of capability, the acquisition of new equipment and the move to 5 Engineer Regiment.

The key survey task for 2014 saw Littoral and Riverine Survey Squadron identifying potential landing sites for the LCM-1E. We provided littoral terrain analysis and supplied beach landing graphics of various locations within Pittwater, NSW. This will be used for the testing and evaluation of the new craft and the training of operators.

The approach used an iterative process that included the following four steps: a desktop reconnaissance, visual assessment, beach gradient assessment and where all these criteria where satisfactorily a detailed survey was undertaken. The objective of each step was:

- Desktop reconnaissance identified a broad number of locations that were likely to be suitable.
- Visual assessment ruled out locations where the physical conditions presented substantial risks or difficulties to the use of the site for LCM-1E activities.
- Beach gradient assessment ensured a broad range of different conditions where available to test and evaluate the vessel type and train the operators.
- Detailed survey produced a Beach Landing Graphic (BLG).

For this activity LRSS was supported by 4 surveyors from 6ESR. The contribution from these members was appreciated. Thank you to LCPL Stewart Cox, SPR Daniel Pidcock, SPR Mathew Van Rees Hoets and SPR Mohammad Johnny-Moore. We look forward to working with you in the future.

In addition to the LCM-1E activity LRSS has provided support to 1CDO and 2CDO for training activities. This has been very useful as the cross pollination with other units is most valuable in that it trains our Coxswains to operate in a range of very different environments which often have unique constraints.

The professionalism and dedication of two individuals was recognised with SPR Justin Odell being award a Soldiers Medallion and WO1 Adrian Markson receiving the honour of an Australia Day Medallion.

New equipment has been added and some existing equipment replaced. Key equipment changes include replacement of the Single Beam Eco Sounders and Side Scan Sonars and the upgrade of the motors on the Inshore Survey Vessels (ISVs).

From an LRSS capability perspective we have been engaging with the Amphibious Working Group (AWG) to better understand this ADF capability. We anticipate that LRSS will be aligning how we operate with AWG and undertaking tasks for amphibious activities. In time this is likely to bring clarity to the LRSS Establishment Review in terms of what we should look like and where we should reside in Army's structure.

Below: LRSS getting their feet wet.

6th Engineer Support Regiment

The Engineer Support Regiment concept has continued to evolve over 2014, with some significant developments in the Regimental structure and methods of doing business. These changes have occurred against the backdrop of regular events such as AACAP and regional engagement activities, plus the now-familiar short notice tasks in support of ADF elements around the globe. As the old saying goes, "…there are never enough engineers…"

At home…

The most significant change to 6 ESR was the transfer of 1 Topographical Survey Squadron to the 1st Intelligence Battalion. Originally scheduled for 01 July 2014, it was brought forward to January, thus creating some significant work for the Quartermaster and his staff. Whilst the Regular Army geospatial capability is now mainly residing in 1st Intelligence Battalion, two sections of surveyors have been retained within the 6 ESR Regimental Works Office.

The Regimental Works Office is a new concept, giving the unit four works teams. This allows the Regimental Construction Officer (Major) to oversee project inception for future works with two Works Teams in the Regimental Works Office. At a designated point, the Regimental Works Office will hand over the project to the Construction Squadron Works Teams for the construction phase. On completion of the construction phase, the Regimental Works Office will manage the defects liability period and close out the project. The 6 ESR Regimental Works Office also has the capability to provide project management advice and assistance to the Combat Engineer Regiments. Currently, The Regimental Works Office is currently planning for the major 2015 constructions tasks, a Explosive Hazards Training Area at Holsworthy (17 Construction Squadron) and AACAP 2015 (21 Construction Squadron). This has allowed the Construction Squadron Works Offices to concentrate on their current activities for the year without having to concurrently plan for 2015.

The major project for 21 Construction Squadron has been the construction of an Assault Grenade range (AGR) at Canungra. The project has not been without its challenges, including unexpected rain that forced the just-finished foundation material to be dug out and re-compacted, plus some exceptionally hard rock. The project was also utilised the "Core 24" plant hire arrangements through DMO. Whilst there were some initial issues, the model was eventually made to work as advertised. It is expected that that as more RAE units utilise the Core 24 model, the process will become more streamlined.

17 Construction Squadron was responsible for the conduction of AACAP 2014. This year's AACAP deployment was to Wutunugurra and Canteen Creek, in the Northern Territory. (See pages 22).

Below: SGT Jamin Nest setting up to X-Ray a suspected IED in the storeroom of a shop in Atherton, QLD during EX HAMEL 14 (7 Jul – 01 Aug 2014).

Photo: CPL Matthew Bickerton

With the majority of the Regiment now located in South East Queensland, planning is underway for the eventual movement of 17 Construction Squadron to join HQ, 21 Construction Squadron and Operational Support Squadron at RAAF Base Amberley. The timeline is dependent on funding approval and is not yet confirmed.

With drawdown from Afghanistan, 20 EOD Squadron commenced its transition from training against the threat of Improvised Explosive Devices (IED) to more Conventional Munitions Disposal (CMD) scenarios during 3 Brigade's Combined Arms Training Activity and Ex HAMEL. The Ex HAMEL scenario occurred across a number of Defence and non-Defence training areas in North Queensland. EOD Sections were required to travel by rotary wing or road means from Townsville to as far north as Atherton and Innisfail to conduct Counter-IED operations. On return from Ex HAMEL and in line with 'Ready' commitments, 1 EOD Troop immediately commenced training for G20 Conference in Brisbane, working closely with State and Federal organisations.

2 EOD Troop deployed to Woomera to confirm current knowledge and skills with regards to high and low order UXO disposal, EOD tool training, and Remote Positioning Vehicle IEDD Operations, culminating with the employment of a 'boot banger' against a simulated Vehicle Borne IED.

…and abroad

The other major activity for 21 Construction Squadron in 2014 was the deployment of a Troop to participate in Exercise PACIFIC PARTNERSHIP. The exercise is a joint Australia and United States military deployment to provide medical and engineering support to a developing country in the Pacific. This year the joint contingent deployed to Timor Leste, where the sappers spent one month working alongside the US Navy "Seabees" to construct a school ablutions block in the capital city, Dili.

2 EOD Troop deployed on Ex TRICRAB 14 with the US Navy's EOD Mobile Unit 5 on the island of Guam with other EOD teams from the United States Air Force, United States Marine Corps, Royal Australian Navy, Royal Australian Air Force, and Royal Singapore Navy. The aim of TC14 was to enhance interoperability and strengthen relationships whilst reviewing Tactics, Techniques and Procedures (TTPs) between USN and participating forces. The focus of the first week was to become familiar with team equipment, differences in TTPs and allowed for shake out tasks prior to the commencement of the main exercise. A broad range of tasks were conducted including CMD, IEDD, Rapid Airfield Clearance, evidence collection and report writing for the Combined Explosive Exploitation Centre (CEXC) Level 2 Laboratory. The exercise culminated with a Full Mission Profile including an airborne insertion at night into an urban training facility to clear buildings of IED threats and target IED facilitators.

Operation RENDER SAFE is an annual Navy led exercise to dispose of WWII-era munitions in the South Pacific. It is multi-national, with participants from the US, UK and the Solomon Islands. Op RENDER SAFE 2014 is being conducted in the PNG province of Bougainville Island. This year, 6 ESR has been tasked to provide the HQ element, as well a EOD and construction elements. This exercise provides an excellent test bed to develop 6 ESR's ability to deploy a command and control element for a Humanitarian Assistance or Disaster Relief focused engineer taskforce.

None of the above exercises, activities or deployments could have occurred without the logistical support provided by Operational Support Squadron (RAAF Amberley) and the OSS element located with 17 Construction Squadron at Holsworthy.

Below: SPR Bradley Schopp, a carpenter with 21 Construction Squadron, assists an engineer of the Timor Leste Defence Force at the Comoro Intermediate School in East Timor during Exercise Pacific Partnership 2014. ((Source: Department of Defence)).

Above: SOER members continue to support ADF operations in the MEAO.

SAPPER SITREP

Special Operations Engineer Regiment

From the Commanding Officer

2014 has continued as 2013 finished for the Special Operations Engineer Regiment (SOER); tempo has been and remains high with SOER members either deployed to the MEAO, preparing to deploy and / or postured for short notice domestic, regional and international response operations.

The wide ranging, ever increasing and niche skill sets resident and developing within SOER make us continue to be well suited and postured to undertake the roles expected and often asked, be it in support of: special operations abroad, the Tactical Assault or Contingency Groups domestically.

SOER adopted a revised force generation cycle to meet the demands of a number of new capabilities implemented within the Regiment. It has continued to support the Special Operations Advisory Group (SOAG) in its counter-network operations in Afghanistan, as well as a number of individual deployments supporting other short notice contingencies. Domestically, we have continued to support the TAG for all DCT responsibilities. The SOER detachments in Perth reinforced with members and capabilities from the East Coast continued their invaluable support to SASR in their special recovery operations role as well as the myriad of regional collective training and international engagement activities. We have had a Tp maintain the Contingency Role in support of 2 Cdo Regt with aplomb, undertaking complex multi national, multi agency exercises domestically, regionally and abroad. Testing the full suite of mission essential tasks, including, the implementation of the Airborne Engineer Capability. The SOER reinforcement cycle was successfully completed for the newer members of the Regiment and they were immediately deployed in support of contingency and training support activities. All members embraced the opportunities and firmly established themselves as key members of the organisations with whom they worked and operated. The SOER EDD Section has continued to develop specialist TTPs in support of special operations and have commenced, in cooperation with SME, a puppy trial to better meet the Corps' needs.

In addition to the traditional Combat Engineer, EOD and EDD skill sets, SOER continues to provide, develop and enhance our specialist CBRN medical capability. Our dedicated team of medical personnel constitute SOER's Primary Health Care Team (PHCT) and CBRN retrieval capability. In addition to the specialist CBRN medic course, run as part of the PHCT reinforcement cycle, this year attended by international SOF medics, SOER medics are qualified in SOF air and water insertion and extraction techniques, fast roping and other Special Operations skills in order to provide exemplar medical care for SOER and other Special Operations FE, in or out of a CBRN threat environment. The PHCT continue to deploy and support the DCT troop in unilateral DACC6 tasks as well as the TAG and CCG and have proved to be another key enabler for SOER and SOCOMD.

SOER continues to increase our intelligence fusion and technical exploitation capabilities, drawing on our full range of operational, intelligence and geospatial / MMT capability to progress these important yet often overlooked operational force-multipliers. We have continued to improve these areas in 2014, increasing our engagement with the wider Defence and Law Enforcement Intelligence Communities.

The Logistic Support Team (LST) continues their behind-the-scenes support to the Regiment with orderly room, ammunition, clothing, maintenance, vehicle and Q support being provided at the same NTM as the remainder of the Unit. They have worked tirelessly and often go unrecognised in ensuring the Tps are fed, clothed, transported and equipped to undevrtake their missions and tasks.

The welfare and other support mechanisms available and provided to SOER continues to grow. Our already strong relationship with the North Bondi RSL continues to flourish. The

Sub-Branch's dedication and willingness to support the Unit and its members remains the exemplar. We are privileged to count them as true friends. The support from the Commando Welfare Trust and the RAE Foundation remains exemplary, providing assistance and support in an array of ways to the families of our fallen and injured. Our relationship with the Vietnam Tunnel Rats Association based on shared experiences continues to grow and following the approval by the CA to afford SOER the honour of an Honorary Colonel appointment, we welcomed COL (retd) John Hopman from the Tunnel Rats Association as our inaugural Honorary Colonel.

With a continued high and sustained operational tempo, a relentless drive for innovation and excellence whilst maintaining relevance and leading edge tactics, techniques and procedures, it is imperative to recognise the past, present and future efforts of all involved in SOER's evolution. Noting the Regiment's title, our strength and raison de etre is indelibly linked to our relationship with the Special Operations Command and the Corps of Engineers. We remain firmly committed to both as we set our sights on opportunities and challenges in 2015 and beyond.

Lieutenant Colonel Hugh Meggitt

ALPHA SQN

"We would not die in that man's company that fears his fellowship to die with us"
Shakespeare's Henry V

The tight knit group of A Squadron Sappers have had to wield the axe of SO Engineer Support to a vast variety of activities throughout 2014. Whilst the Squadron is heavily focused on the support to SO Advanced Force and Contingency Operations, the majority of the year has been driven towards the Airborne Engineer Capability (AEC). This is based on a Troop sized element with enhanced skills in airfield damage assessment and repair with enablers from wider Army and RAAF in support. This allows for the provision of an engineer response paired with supported SF FE to be employed within AFO.

Whilst many old and bold Sappers may be shaking their fists and telling tales of old – "this isn't new!"; the contemporary SO battlespace presents many complex environments. Whilst the concept of Airborne Engineers is not a recent development; the previous in service equipment, skills sets and TTPs to clear, repair and open an APOD were not necessarily best aligned with the requirement of SOCOMD mission profiles. The Sappernuity and tireless training serials has allowed for an adaptive AEC FE to be formed and provide Army with a contemporary Engineer force.

Below image: Conducting search in assistance of the Victorian Police as part of a DACC task.

Above: SOER members go through a decontamination station.

Future iterations will include the airborne deployment of EDD as well as other lighter compaction/plant options.

The year has also brought many opportunities for the A Squadron Sappers to get involved in International Engagement. Whether it is planners working in a CBR cell on multi-national exercises throughout the region, parachuting into some neighbouring countries, in support of AFO activities or teaching demolitions in the jungle, the Sappers have been busy and able to get amongst what is happening globally whilst training with other Sapper forces. 2014 has seen A Squadron support training exercises and foreign force development in a multitude of countries around the world.

On top of all these activities, the Squadron has also had the chance for some fun and excitement. Training in insertion techniques either on the land, in the air or by the water allows for the Sappers to be as far forward as possible in order to support their FEs appropriately. An increased involvement in specialist training allows for the Squadron members to stay motivated and determined to support Contingency Operations.

2015 will see the Squadron grow on the capabilities developed in 2014, and continue support to AFO as well as regional international engagement. Operational planning will keep the Officers and SNCOs busy as usual while the Squadron remains ready and relevant to support SOCOMD whenever they require it.

Excelsior.

BRAVO SQN

Despite the reduced MEAO operational commitments, 2014 has remained a high tempo environment with a number of operational, exercise and training commitments for Bravo SQN. Bravo SQN HQ element remained busy by providing the planning, preparation and execution of training and exercises both domestically and abroad. The HQ element also provided liaison elements to various overseas partner countries in support of SOCOMD activities.

The Sqn has been responsible for the support to the Tactical Assault Group for all Domestic Counter Terrorism responsibilities. The role saw the provision of mobility, counter mobility and other specialist C-CBRE support to SOCOMD, as well as providing niche support to State and Federal agencies. A focal point for the Sqn was their support to the G20 series, including a team forward deploying to Cairns for two weeks in what was probably the most sought after activity on the calendar after Sydney's winter. The Sqn's calendar has been packed solid with a combination of exercises enhancing their support to domestic response including training with a number of State based organisations. When not conducting one of the many exercises we were involved in, the Sqn were providing support to the reinforcement cycle training, namely decontamination princi-

Left: Plant from the Airborne Engineer Capability in action.

ples, equipment and TTP. Further one of the Troops has had a significant International Engagement program, with reciprocal activities undertaken with Special Forces elements from various countries in the world.

Specialist Troop (SPEC TP), a new capability raised under the Unit's recently adapted force generation cycle, were responsible for the growth and development of specialised C-CBRNE skills that were beyond the scope of other troops within SOER. This involved a number of training and exercise commitments both domestically and abroad IOT establish resident capabilities with the SOER. SPEC TP assisted the Victorian Police as part of a DACC 6 operation that provided niche specialist search and EOD capabilities to limit risks to the police. Additionally; the Troop provides support to the Special Air Service Regiment for both domestic and offshore recovery operations; this has seen them participate in a number of activities in Australia and overseas often in conjunction with partnering SF elements.

Overall 2014 has been an exceptionally busy time for SOERs lead SO C-CBRNE capability.

SAPPER SITREP

8th Engineer Regiment

14 Combat Engineer Squadron

14 Combat Engineer Squadron used 2014 to establish the foundations for expansion and the groundwork for providing support to Ex HAMEL LIVE 15. This was achieved by readying personnel with realistic training and inducting new combat engineers. 14 CE Sqn continues to consolidate on the experience of its NCOs and officers to ensure that lessons are passed on to the newest members of the Squadron.

There was a dramatic increase in participants for force preservation training in February. This was a consequence of the newly raised 102 Construction Squadron which we absorbed at a parade in Moorebank the year prior. Officer Commanding Captain Collaros ensured that all personnel were aware of his intent for the year; make 102 Squadron as well as 6 Squadron respect the quality of combat engineering that we practice in the Hunter Valley. We also had the privilege of welcoming our new full-time 2IC, LT Barkley on CFTS and our new Training WO, WO2 Arp from SME.

The Squadron conducted Regimental Training (Small Arms Range Practice at Singleton Training Area) in March, with most of the Regiment given the opportunity to fire and pass LF6. Furthermore we employed Mag-58, 9mm SLP and F1 Grenades where personnel were qualified.

ANZAC Day afforded 14 Squadron with the honour of providing a number of catafalque parties and speakers, with the residents of Wallsend and Adamstown being impressed with the drill and bearing of our sappers on the 99th anniversary of the Gallipoli landing.

May and June were taken up with successive weekend activities securing a FOB at Singleton that was constructed by 102 Construction Squadron and gave the squadron a chance to brush up on IMTs. 14 Squadron Combat Engineers were able to dominate the close country with patrols and ensured that any threats did not interfere with the planties. Additionally a troop commander (LT Featherstone), section commander (CPL Cousins) and a number of sappers participated in Ex POLYGON WOOD.

The squadron utilised July to demonstrate their commitment to the community and dominance of their small-team skills within the Regiment. 14 Squadron supported 8 Engineer Regiment commitments to Reserve Forces Day in Newcastle on 05 July, the squadron contributed to the two sub-units on parade. Furthermore, LCPL Duncan-Watt commanded a catafalque party of personnel who shortly after marched into the squadron. Two weeks later our section entrant under the command of LCPL Errock successfully competed in and demolished the competition in the regimental skills competition at Moorebank on a frosty weekend. This was a memorable demonstration of leadership, resilience and soldiering and all participants are to be congratulated. A squadron section represented the Regiment at the 8th Brigade skills competition in Singleton in September where they also gave a good account of the sapperinuity within the Regiment.

Significantly, within 2014 a large number of individuals completed IET and promotion courses. There is the genuine feeling of a rejuvenated spirit in this proud squadron coming up to its 100 year anniversary in two years. Numerous new NCOs and sappers have replaced our vacancies. This was achieved by a consistent procession of personnel passing to Moorebank to savour the delights of the old school for courses one last time. Additionally the squadron benefited from an IET Phase 1 organised by Regimental Ops and conducted at Singleton during August which added 17 new sappers to our swelling ORBAT.

This year we farewelled a number of personnel into full-time service, this included: SPR Stevens, SPR McNaughton, SPR Moro and SPR Wangmann to the ARA (RAE). Oddly we also lost LT Featherstone, SPR Maurer and SPR McCrindell to the RAN. We are sure they are all being taken care of. Another worthwhile and enjoyable year has been had by all soldiers in 2014.

By Captain Sam Baumgarten

6 CE SQN

It has been a busy year for the members of 6 SQN, 8 ER who have been undertaking preparation as a part of the Readying phase in their force generation cycle, which is set to conclude in June 2015. The Squadron, as well as undertaking demolitions, search and target hardening exercises during the year had members take part in Ex POLYGON WOOD, the first large scale field exercise for Battle Group Waratah, which incorporated elements from all regiments in the Brigade, elements from 5 Brigade as well as British Territorians. LCPL Adam Davis who took part on Ex POLYGON WOOD noted "It was great working alongside the Hunter River Lancers with their PMVs for such an extended period of time. The inter unit co-operation really fostered a greater understanding of each others capabilities and ways we can mutually support each other on the ground which will no doubt be the foundation of future all corps activities as a part of Battle Group Waratah".

During the year 2 Troop, the training troop, recruited and trained up to 15 new soldiers including diggers of 8 CSSB as well as sappers from 8 ER. This has resulted in a closer bond amongst the diggers and sappers at Timor Barracks with the 2 Troop Section Commander, CPL Ben Choi stating "Both the Sappers and Truckies have great motivation and it is good to see us Engineers giving a helping hand in developing diggers in other Corps through the process before shipping off to 8 CSSB." More importantly the effectiveness of 2 Troop has enabled the raising of a second troop within 6 SQN, 5 Troop, giving 6 SQN two CE troops. Combined with elements of 2 TP and elements of the newly formed 102 Construction Squadron, 6 SQN Dundas is now stronger than ever.

On the 5th of July members of 6 SQN were given the opportunity to represent the regiment and the brigade as a whole by taking part in the Reserve Forces Day celebration in Newcastle. This gave the members of 6 SQN the chance to connect with past members of the squadron and 8 ER who are currently members of the 14th Field Squadron Association. The retired reservists commended the current serving members for their exemplary dress and bearing on the day as they paid honor to the memory of all who served, especially the reservists, who fought in the First World War one century before them.

With 6 SQN gearing up to play a more active role supporting 7 BDE in the Ready phase in 2015, the intensity of training undertaken has also ramped up with 8 ER undertaking training in watermanship and having all Combat Engineers qualified in their W1 Watercraft License. This comes on the back of a large scale successful combined activity with 12/16 HRL in route search. Such challenging activities combined with the growing size of 6 SQN will further enhance 8 ER and Battle Group Waratah ahead of Ex DIAMOND STRIKE in 2015.

102 Construction Squadron

It has been an exciting first year for 102 Construction Squadron which joined 8 Engineer Regiment (8 ER) as part of Plan Beersheba and the UER for Reserve Engineer Units. The Squadron which is based across multiple locations with a headquarters at Lone Pine Barracks Singleton and element groups at Adamstown, Dundas and Holsworthy has focused on establishing effective communication means and team development. A great effort from DSRG saw the completion of a newly refurbished building in the first half of 2014 and a small permanent presence was established in July.

Growth of personnel numbers continued across the year and exceeded initial expectations with sappers joining the Squadron from within 8 ER, other units and ex ARA members transferring to the Reserve. The prime mixture being a blend of the previous 8 Combat Engineer Regiment and 21 Construction Regiment soldiers, and it has been great to witness the building of camaraderie between these members and the identity of 102 Construction Squadron being realised. External to the unit, particularly in the Singleton Military Area the permanent presence of an engineer capability was recognised and the associated relationships that have developed has allowed for a beneficial transfer of knowledge and support.

The Singleton location for a construction squadron has proved to be very suitable particularly with the close proximity of the Singleton Training Area (STA) and the ample opportunities for construction tasks including minor road maintenance works and environmental improvements.

The STA was utilised for the first major nine day Exercise in May which saw the Squadron start construction of a Forward Operations Base (FOB) within a southern area of the range. A large attendance was achieved with about three quarters of the

squadron members on the ground at different periods of time dependent on their availability. This in itself was a good achievement as with most Reserve units getting a solid attendance for a significant period of time is a balance between member's civilian work and family commitments. The attendance demonstrated how keen the sappers were to meet everyone and have a solid start. This activity was a great task to bring the squadron together, to bond as a team and assess the initial capability. The end of the Exercise saw the FOB area cleared and compacted, the HESCO perimeter wall predominantly placed and filled, and two shipping containers positioned.

The year was intense with activities which also included the organisation and conduct of numerous courses which culminated in the Squadron leading the conduct of the annual regiment courses camp. For the first time 8 ER was assisted by 5 Engineer Regiment (5ER) in the running of the Unimog drivers course component and the benefit of combined training was evident. The courses camp was based out of "G Block" Centre Ridge Lone Pine Barracks and was home to fifty three trainees plus instructors and support staff for the two week period. IET Mod One, MR2 Unimog, HR2 Mack and three plant code courses were successfully conducted, thanks to the big effort put in by the courses camp manager, course managers, instructors and support staff. Particularly of note was the great food provided by the 8 Combat Services Support Battalion lead team of cooks.

Demolition of a timber bridge originally built by 8 CER and Pioneers from 41 Bn in 1996, was the prime task for the September training weekend. The small team of plant operators and trades persons safely removed the superstructure of the bridge. Some effective team work and construction processes were observed, including coordinated site management and a well consulted and developed safe work method statement was generated. The plant capability of the squadron is proving to be effective, including coordinated plant interaction and safe site management.

A second nine day Exercise has been planned for November to construct two strong points on the FOB and complete the remaining wall structure. This activity shall exercise the Squadron's vertical construction trade capability and construction site management.

The future for 102 Construction Squadron is positive and a developing strong capability in the plant and transport streams is evident. A focus for 2015 will be the continued growth across the Squadron with particular focus on the recruitment of trades persons and Resources Troop combat engineers. If 2014 is an indication then the next year will be equally intense and exciting.

By Major David Cullen
& Warrant Officer Class Two Ian Ratcliffe

SAPPER SITREP

11th Engineer Regiment

The Chief of Army approved the establishment of 11 Engineer Regiment (11 ER) as of 01 January 2014. The Regiment's structure comprises of RHQ at Enoggera, 35 Combat Engineer (35 CE SQN) (previously 35 Field Squadron) in Townsville, the newly formed 104 Construction Squadron (104 CONST SQN) at Greenbank, CIMIC TST at Enoggera and 11 Combat Engineer Squadron (11 CE SQN) from 2CER as of 01 January 2015.

The newly formed 104 CONST SQN will consist of a plant, resources and construction troop with manning being sourced primarily from 11 CE SQN 29 Support Troop. The Squadron is also supported by three ARA SGTs each with individual skills appropriate to the three troops.

To date 104 CONST SQN has been supporting 11 CE SQN on some of their training weekends. The SQN has been able to assist by providing SMEs for various construction and plant tasks for breaching activities.

11 ER as part of the force modernisation plan, supplements the ARA RAE capability or as discrete elements in a Combat Team. 11 ER's primary role is to support 3CER and eventually 6ESR in the future as the Regiments capabilities increase.

11 ER's mission is to generate specified combat and construction engineer capabilities to support foundation warfighting training, during the Force Generation Cycle, for contingency operations from 2014 and directed capabilities for the 2017/18 Ready year.

In April this year, 11 ER supported 25/49 RQR on Ex CRAWFORD at Wide Bay with a section of sappers from 35 CE SQN and a plant detachment from 104 CONST SQN attached to a Combat Team (CT) of BG CANNAN.

The first 3 days of the Exercise consisted of a defensive phase with the CT moving to and establishing a Main Defensive Position (MDP). Sappers provided support with counter mobility and survivability tasks including advising the CT Commander on obstacle plans and integration of wire and construction of a Command Post and Stage 2 gun pits. The employment of a 434E backhoe/loader meant digging the pits and Command Post could occur concurrently with the counter mobility tasks.

Photo: CAPT Ben Gyetvay

Above: CPL Southerland spotting SGT Ollerenshaw operating the 434E to establish the Main Defensive Position on Exercise Crawford (date) at Wide Bay Training Area. The employment of a 434E backhoe/loader meant digging the pits and command post could occur concurrently with the counter mobility tasks.

During the offensive phase of the Exercise, sappers conducted mobility support in the form of route and area searches at Vulnerable Points and suspected enemy cache locations. These offensive tasks led up to a Company sized attack on an enemy MDP where the sappers assaulted the position alongside the infantry while providing obstacle breach and area search capabilities.

SAPPER SITREP

19th Chief Engineer Works

'Plan, Design, Deliver'

Plan, Design, Deliver

As with every year, in its 52 years of existence, 19th Chief Engineer Works (19 CE Works) has been incredibly busy throughout 2014. In order to support current ADF operations, domestic and regional project delivery, scoping reconnaissance and career courses, the Unit generally has less than half of its full-time manning parading at Randwick at any one time. The Unit has again been involved in a wide range of infrastructure engineering tasks this year, including the delivery of the annual Army Aboriginal Community Assistance Program (AACAP), support to regional Defence Co-operation Programs (DCP), domestic infrastructure design and delivery in support of Army modernisation, Force Protection Engineering (FPE) assessments of Australian facilities supporting United Nations (UN) missions and our own Continuing Professional Development (CPD) activities. This year was also the final year for the CO and Chief Engineer, LTCOL Len Rouwhorst, after a solid three years in command.

Infrastructure Support to Operations

Following the successfully remediation of the Australian Facilities at Multi-National Base Tarin Kot in 2013 and the subsequent shift in engineer support, 19 CE Works has continued to actively support current operations throughout the Middle East Region (MER) in 2014. A Project Management Team (PMT) has been deployed on OP SLIPPER, with a Senior Project Engineer fulfilling the role of Chief Engineer on OP ACCORDION. Recently a second PMT has deployed to support OP OKRA in Iraq. Unit members involved in these operations throughout 2014 include MAJ Scott Davis, MAJ Leigh Dalman, CAPT Daniel Dunkley, CAPT Andrew Oxlade, WO2 Craig Fairweather, WO2 Nicola Fierinck, WO2 Peter Gardiner and WO2 Rodney Smith. This high operational tempo has meant that 19 CE Works has operated only two of its three Works Sections this year, with 198 Works Section the 'phantom' section comprising those currently deployed and APEP vacancies.

In addition to these longer duration MER operational commitments, several shorter deployments have occurred in support of International Policy Division's various regional DCP and HQ Joint Operations Command's 'Rest of World' operations. CAPT Harrison and CAPT Hawkins conducted separate FPE reviews of Australian facilities utilised on OP ASLAN (South Sudan), OP PALADIN (Israel / Lebanon) and OP MAZURKA (Egypt). A reconnaissance to Tuvalu in late May 2014 provided a gentle reminder to everyone visiting the South Pacific of the dangers of local wildlife. Upon returning to Australia the team members (WO1 'Troggy' Smith, WO2 Leeroy Wyness and WO2 Rod Smith) were bedridden and some hospitalised with a virus (originally suspected as Dengue Fever). Fortunately the test results were negative and all members have fully recovered.

11 Works Section

This year has been a busy and disruptive year for 11 Works Section, as there have been a number of personnel movements due to courses and deployments. MAJ Leigh Dalman was the OC of the section until July when he deployed on OP SLIPPER to complete a job swap with MAJ Scott Davis, who was the Chief Engineer for JTF633. WO2 Craig Fairweather and WO2 Nicola Fierinck both deployed on OP SLIPPER, and CAPT Andrew Oxlade and WO2 Rod Smith deployed on OP OKRA. The main projects for the section have been the finalisation of the AACAP 2013 project at Fregon (SA), the development of AACAP 2015 at Titjikala (NT), the scoping of AACAP 2016 at Laura (QLD) and the management of Project HALIVIM POROMAN in Papua New Guinea.

CAPT Josh Porter began the year with the development of Project HALIVIM POROMAN Phase 4 located at Taurama Barracks, before proceeding to the UK to complete the FPE Officers Advanced course. CAPT Andrew Oxlade continued with the project through delivery, supported by WO2 Mark Chirita and SGT Stu Cameron providing alternate onsite supervision for the refurbishment of 25 married quarter homes.

CAPT Greg Stannard has spent the year developing the AACAP 2015 project with assistance of WO2 Leeroy Wyness and WO2 Craig Fairweather (once he returned from OP SLIPPER). The design phase has been condensed in order to provide detailed (90%) designs by October and the team have experienced the challenges of fast tracking the design process and have gained significant experience.

The two Smithies - WO1 'Troggy' Smith and WO2 Rod Smith - spent the majority of the year finalising the AACAP 2013 project. Despite this they also managed to spend a week on a tropical island (along with WO2 Wyness) conducting a scoping study of the DCP facilities in Tuvalu.

12 Works Section

12 Works Section has been full steam ahead in 2014 with the delivery of AACAP 2014 and the inception, development and delivery of Plan BEERSHEBA works in Townsville. The section also produced the detailed designs for the new Kapooka Grenade Range, built by 1 CER, and scoped the Explosive Hazard Training Area (EHTA) to be built at Holsworthy by 6 ESR. In addition to these projects, members of the section have been involved in the unit's revitalised short-term industry secondment program and the final completion for the EHTA Townsville and AACAP 2012 projects.

A PMT comprising CAPT Fabian Harrison, WO1 Martin Newlin, WO2 Chris Jones and WO2 Daryl Coady have managed the delivery of AACAP 2014 in the communities of Wutunugurra and Canteen Creek, located approximately 150 km south east of Tennant Creek in the Northern Territory. As usual, the scope of works comprised of a mix of horizontal and vertical works, delivered by both 6 ESR and civilian contractors, with the aim of improving environmental health and living conditions for the remote indigenous communities. Water supply was a critical constraint for the project, and provided some interesting hurdles from various government departments and stakeholders. To gain approval for the works to proceed 19 CE Works had to incorporate water saving strategies and technologies into their design for the entire new infrastructure to be delivered.

Early in the year, CAPT Cam Hawkins ably assisted by WO2 Peter Gardiner and one of our talented reserve members CAPT Angus

Left: WO2 Pete Gardiner inspecting some drainage works AACAP 2014
Above: Civilian contractors laying two coat seal on the Canteen Creek Road

Johnson, a structural engineer, designed the new Static Grenade Range at Kapooka. This was subsequently constructed by a Troop from 23 Support Squadron, 1 CER. It was a refreshing change to focus only on technical design, and leave the project management to others (in this case, HQ FORCOMD G4 branch).

The remaining PMT in the Works Section, consisting of CAPT Remi Rafter and WO1 David Grope, burned the midnight oil diligently working on the inception, development and delivery of the Plan BEERSHEBA facilities at Lavarack Barracks, Townsville. The works consist of refurbished and new facilities to support the relocation of the 2nd Cavalry Regiment from Darwin as a part of the new 3 Bde Armoured Cavalry Regiment. This project was successfully developed from inception through to Parliamentary Works Committee endorsement in a record 10 months, compared to the usual 30 months if delivered by DSRG, and required a herculean effort by all involved.

Technical Support Section

19 CE Work's Surveyors and Draughtsmen started off the year with a strong focus on finalising the AACAP 2014 designs. CPL Joe Culliver, SPR Kelly Hall, SPR Scott Crawford and SPR Troy Roseman spent hundreds of hours developing the designs and documenting Canteen Creek's road upgrade and Wutunugurra's vertical construction scope items. With the assistance of CAPT Matthew Jesson (ARes), the Surveyors and Draughtsmen successfully finalised the road design – with many lessons learnt along the way.

The Kapooka Grenade Range project provided an excellent opportunity for 19 CE Works to refresh its internal design skills and knowledge. The Survey team of CPL Joe Culliver and SPR Kelly Hall collected the spatial data, and the Draughting team of SPR Brad Bartels, SPR Scott Crawford, SPR Todd Girvan and SPR Troy Roseman successfully developed detailed 'For Construction' drawings for 1 CER to build. This is the first internal design task for a number of years and the lessons learnt on this project will assist the Section with future projects.

In 2014, the Surveyors and Draughtsmen completed multiple CPD opportunities in their respective fields. This included short courses on software programs such as 12D and Revit, in addition to Short Term Industry Secondments. SPRs Butler and Hall enjoyed six week secondments to Cardno Hard and Forester in Sydney, whilst SPR Roseman enjoyed two weeks with Opus International Consultants in Alice Springs. Both of these provided members with 'real-world' training and exposure to industry practices outside Army.

The remainder of 2014 remains busy for Technical Support Section. Drafting support will continue for the development of the Helicopter Insertion and Extraction Training (HIET) facilities and AACAP 2015, whilst a Survey Team is expected to deploy to Antarctica over Christmas. CPL Joe Culliver and SPR Anthony Butler will have a six week window to complete airfield and tidal surveys in support of the Australian Antarctic Division (AAD).

Unit Headquarters and Support Staff

19 CE Works were put under the microscope this year from a governance perspective with a comprehensive external audit from the Army Compliance and Assurance Agency (ACAA) that covered the supply chain, corporate management – finance, safety, domestic security and technical integrity management. The audit confirmed that 19 CE Work's processes and procedures were sound, which meant the XO, MAJ Graham Hales, kept his job.

The other key area of effort, led by the Adjutant CAPT Jordan Witt, has been in revising the Construction Project Management System (CPMS) to support the development and delivery of all ADF construction works. When finalised, this will see an integrated and comprehensive Quality Management system suitable for use by all ADF construction and project management agencies. The Senior Works Manager, WO1 Glenn Bridges, ensured that the updated system had comprehensive Safety Management procedures that met our obligations under the WHS Act 2013 and associated Regulations. These construction management safety procedures were nominated for the 2014 ArmySAFE awards.

The remaining support staff, including the Log Cell (WO2 Peter Hume and CPL Shayne Buenaobra), Ops Cell (WO1 Greg Polson and WO2 Barney Hunt), Resource Cell (Mr Mark Carolan and Mrs Debbie Goodwin) and Orderly Room (SGT Fred Carre and LCPL Kelly Nelson) have enabled the Unit to operate at its usual frenetic pace. Despite this, there was some time found to be involved in the sporting front with CPL Shayne Buenaobra competing in hockey at regional, state and national levels for the Army and ADF. The QM continued to do well on the range with a win in his class and a fourth place overall at the NSW Small-bore Rifle Titles.

By Captain Jordan Witt

SAPPER SITREP

22nd Engineer Regiment

From the Commanding Officer

The unit's inaugural year provided an opportunity to build on the strength of the culture and capabilities of the two former Regiments to ensure that 22 ER is equipped to deliver the capability demanded, as it heads towards EX HAMEL 16 and beyond.

The establishment of 22 ER did not just happen on the 1st of January 2014. It marked the culmination of over two years of tireless work that was carried out by many personnel from across the former 4CER and 22 Const Regt.

The main effort for 2014 has been to further develop the combat engineer and construction capabilities of the Regiment, whilst increasing the opportunities for members to train with other units from across the Brigade. The Regiment has implemented a 'combined' training program this year where members have been encouraged to participate in training across all RAE disciplines. Consequently, regardless of trade or employment category, all members, whether CE, tradesman, plant operator or draughtsman, have been encouraged to participate fully in all training activities, with responsibility for conducting each exercise being assigned to either RHQ, 8 CES, 10 CES or 105 Const Sqn. This has assisted in supporting the development of a strong, unified culture within 22 ER and has also provided many members with exposure to broader employment opportunities within the Corps, which has led to some members taking action to transfer to other engineer trades.

The secondary effort for 22 ER for this year was to finalise the force preparation of the Company-sized deployment of personnel to the Transit Security Element Rotation 72 (TSE-72), OP RESOLUTE. In mid 2013 4 CER was tasked with being the mounting unit for the deployment with members to be drawn from units from across the 4th Brigade. All members performed exceptionally well and they upheld the hard-earned reputation of the Sapper (See the article on page 23).

EX PLATYPUS LEARNS 1 and PLATYPUS LEARNS 2 focused on individual trade training. Formal courses in Basic Plant Operator, W1 license, Portable Sawmill, CE hand and power tools were conducted. These exercises established a baseline of key qualifications (in line with the RESET year of the FORGEN Cycle) across the Regiment which will continue to be built upon over the next three years.

The S7 Cell inherited a training liability when the ECN 510 members from the former Regiments were merged. 22ER gained approval to conduct an RAE IET Ph1 course over a non-continuous period from April to August. 19 members completed the course, reducing the Regimental training liability by over 60%, increasing the CE capability of the unit and reducing the training burden on SME.

EX PLATYPUS BLASTS, the annual demolitions practice, was merged with small arms practices and the RAE IET Ph1 CBRND Basic Operators Course. Whilst the descending fog may have halted a serial or two, it did not quell the enjoyment of constructing a NEB on the range followed by its rapid deconstruction.

EX PLATYPUS DISRUPTS, was a CE led exercise that focused on CMOB through the construction of an integrated obstacle belt. This was the first time the CE's had worked with the Plt Ops in a tactical setting, as 107 Plt Tp worked in support of 8 CES to create an AT Ditch. The exercise was an important step with the task organisation of elements from each of the Sqns under a single Sqn command.

EX PLATYPUS SURVIVES centred on survivability training with a CE Tp supported by heavy plant assets and tradesmen to harden the Road Transport Wing at Puckapunyal. The guard tower (pictured) was the Main Effort and was erected in less than 48 hours. With a 4x4 Mil 10 HESCO base and a reach of over 10m in height, this imposing structure is not going anywhere in a hurry!

EX PLATYPUS SUSTAINS saw 105 Const Sqn assume the lead and deployed to ALTC Bandiana for a 15 day period of construction, closely supported by 203 Wks Section. The scope of works on this task included the construction of a 500m ring road, a Tp sized field defensive position with in-ground fighting pits, concrete culverts and associated drainage works. Aditional tasks were the development of a water point (for fire fighting purposes and the establishment of an access road loading ramp.

This exercise represented the culmination of 18+ months of work by the 203 Wks Section which included stakeholder engagement, scope development, the preparation of detailed design documentation and the gaining of the necessary approvals to conduct the work. In support, 8 CES deployed to ALTC to provide security as the exercise was conducted within a RASO context.

10 CES also deployed a Tp to Koetong (approximately 45 minutes east of Bandiana) to conduct forestry tasks, a capability that is unique to 22 ER. 10 CES felled and milled in excess of 60 trees during the exercise. The timber will be used for future courses, construction activities, and some provided to the "High Country Rail Trail" for the ongoing remediation of trestle bridges in the region.

This was the final large-scale training exercise for the year and was critical in confirming that that the merger was complete. There is no greater confirmation of success than achieving a positive outcome on a Regimental exercise of this scale.

I thank all of the members who are marching-out for your service to the Regiment and I wish you well at your next posting. It has been an honour and a privilege to have served with the two Regiments over the past three years and whilst there have been challenges along the way, the 'RAE family' in Victoria has certainly gone from strength to strength. My sincere thanks to every member of the Regiment and your families for your toil, your professionalism, your ongoing commitment to the Army and to one another.

Follow the Sapper

By Lieutenant Colonel Glen Pilbeam

Geospatial Intelligence

The 1st Topographical Survey Squadron, 1st Intelligence Battalion

The new edition of Land Warfare Doctrine 1 – The Fundamentals of Land Power notes that two of the four enduring features of land war are the importance of geography and the variety of topography. At its simplest, Geospatial Intelligence (GEOINT) provides a means of predicting the impact of these features on the operation of combat forces. The concept of GEOINT evolved from the increasing fusion of Military Geographic Information (MGI, essentially a record of the terrain) with the rapidly increasing amounts of data obtained from imagery, signals intelligence and other sources to provide an understanding of not just terrain, but how it affects the employment of forces throughout the battlespace. As the most important relationships between features or events are their proximity in location and/or time, GEOINT is vital to those trying to understand the environment in which they fight.

The rapid penetration of digital technologies and the evolution of Network Centric Warfare concepts over the past 20 years have caused a rapid increase in the amount of information available to decision makers. Operations are being conducted in an increasingly complex battlespace, with complex physical and urban terrain combining with an increasing proliferation of allies, threat forces and non-combatants. Unfortunately the capacity of an individual to assimilate the increased volume of information and make effective decisions from it has not undergone a corresponding increase. There is a resulting need for analysis and decision support products that accurately summarise all available information about the battlespace and the impact it will have on a combat commander. This need has seen the evolution of geospatial capabilities from collection and display to the present focus on the active exploitation of information.

The history and the requirement for change

By virtue of reliance on computing technology that has undergone rapid expansion in recent years, Army's GEOINT capabilities have progressively evolved from collectors to analysts. The 18 years since the demise of the Royal Australian Survey Corps (RASvy) has seen the focus change from collecting and presenting basic information on terrain to gathering and analysing information about how the entire battlespace will influence operations. Technicians who previously collected information on topography and vegetation by laboriously hand tracing aerial photographs and surveying individual points can now rely on a plethora of civilian and military sensors that provide vast amounts of data in very short timeframes. The result has been a transition to becoming experts in the collation, analysis and exploitation of many different types of data. While the process of managing, collating and exploiting information is dependent upon scientific principles and an engineering approach, the effect generated has become more and more of an intelligence effect.

This change in the nature of the information produced by geospatial Force Elements has seen a consequent change in the locations and ways in which they are employed. Before the emergence of digital technologies the dissemination of geospatial information was via hardcopy maps that were distributed down to the lowest ranks. A switch to digital technologies did not replace this function, but meant that the majority of analysis only occurred where such technologies were being employed and where they were relevant to a commander's decision making: at Battle Group Headquarters or above. Other factors, such as the increasing distribution and 'democratisation' of geospatial information through applications like Google Earth have also resulted in a change of focus away from determining what terrain lies over the horizon, and towards what effect all components of the battlespace will have on a commander's plan. In recognition of this change geospatial capabilities have been increasingly employed where they can best access relevant information and where they can best inform the commander: from within the Intelligence Cell in a Headquarters. Army GEOINT detachments now exist in all Combat Brigade Headquarters, SOCOMD units, in HQ 1 Div, HQ NORCOM and HQ JOC, and within the Australian Geospatial-Intelligence Organisation. They therefore span all levels of Command from the tactical to the strategic.

The move to employ Geospatial Technicians within Intelligence cells meant that the continued location of the 1st Topographical Survey Squadron (1 TSS) within an Engineer unit was anomalous with the employment of the rest of the capability. 1 TSS is the primary Raise-Train-Sustain unit for GEOINT within Army, and contains 70% of Army's Geospatial Technicians (ECN 423) as well as all of its Imagery Analysts. It also possesses strong links to a variety of intelligence units and agencies. With the need to generate detachments to be embedded within the 1st Intelligence Battalion's (1 Int Bn) All Source Cells becoming the first priority for the Squadron, it was a logical move to re-allocate command of the Squadron from the 6th Engineer Support Regiment to 1 Int Bn as part of Plan Beersheba.

The transfer process was a rapid one, with authorisation for the move issued by the Chief of Army in November 2013, and the change of command occurring on 20 January 2014. The survey capability has remained under command of HQ 6 ESR, and is now focused on engineer survey in support of construction activities. While now commanded by an intelligence battalion headquarters, 1 TSS proudly remains a RAE Squadron comprised mainly of Sappers. It is also the custodian of the heritage and traditions of the former RASvy following the amalgamation of that Corps with RAE in 1996. In terms of lineage, the Squadron is directly linked to the 1st ANZAC Survey Section formed in 1915, and has retained its unique colour patch on the slouch hat as a result.

Thanks to careful planning the administrative impacts of transferring command of the Squadron has been relatively uncomplicated; integrating a sub-unit with an Engineer and process driven culture within an Intelligence unit has been more challenging. To ensure successful integration the units' focus has been to maintain the methodical and scientific nature of geospatial analysis while creating more intelligence focused products. All sub-unit training activities are now intelligence-led, with analysts from other Battalion sub-units directly driving the analysis process through a combination of scripted and real-world information requirements.

The capabilities

The Squadron provides four main capabilities in support of ADF operations:

Photos: CPL Terry Tucker

Above Left: SPR Holmberg, SGT Rogers, SPR Karzons - a Geospatial Technician Sergeant briefs his Sappers on the conduct of an analysis task.
Above: LT Phil O'Byrne, CPL Terrence Flaherty, Caption: a Geospatial Technician briefs a commander on the outcomes of his analysis.

1. Geospatial Intelligence. Comprising the bulk of Squadron personnel and equipment, GEOINT Detachments provide intimate deployable geospatial support directly to combat commanders in a variety of Headquarters.
2. Geospatial Imagery Analysis. Imagery Analysis trained individuals drawn from a geospatial or intelligence analyst background; these teams analyse and exploit imagery from a wide variety of platforms including UAS, satellites, and fixed and rotary wing reconnaissance assets.
3. Data Management. The extraordinarily wide variety of geospatial and imagery data sources available require dedicated teams to verify, sort and collate it so that the analysts can access relevant information when they need it.
4. Imagery Collection and Exploitation. Army operates an ADS-40 digital sensor that is flown in a RAAF BA350 aircraft to collect very high quality multispectral imagery. The imagery is used to support analysis and is also used as the base layer for a number of Command and Control systems.

All these capabilities are staffed by Army (predominantly RAE) personnel who are equipped and trained to move with the combat commanders they support. In addition to the deployable capabilities provided by the Squadron, it also trains personnel to serve in GEOINT detachments that are embedded within all Combat Brigade HQs, SOCOMD units and a variety of other ADF units.

The year that was

This year has been a busy one for the Battalion and Squadron, with the main focus being the commitment of the majority of the unit on Exercise HAMEL and the associated work up training while simultaneously supporting a number of ongoing ADF operations. As the last formed body deployments from both the Sqn and Bn returned from Op Slipper in late 2013, this year has also been about ensuring that the lessons from 15 years of continuous deployments are captured and consolidated within the unit. The requirement to generate directed Contingency Force Elements as well as support the Road to Hamel exercises was challenging, with near total commitment of all Ready and Readying elements at times. In addition to supporting the Battalion, the Sqn committed forces to support a wide variety of units including 20th Surveillance and Target Acquisition Regiment, 16th Aviation Brigade, 3rd Combat Brigade, Headquarters Joint Operations Command and 38 Squadron (RAAF). RAE units directly supported in 2014 include SOER, 2 CER, 6 ESR and SME. In addition to supporting a large number of Australia-based exercises, the Squadron has also provided direct support or deployed personnel to a number of operations in Australia and overseas. Although 2014 was intended to be a 'reset' phase after a demanding period of operations, global instability has meant that the tempo has hardly eased.

The future

In the last 15 years Army's geospatial capability has undergone a rapid evolution from collection and display towards analysis and exploitation. This has only been possible through the selection of intelligent individuals and their education on the principles of geospatial analysis as well as the specifics of operating their exploitation software. It has also been enabled by the adoption and continual upgrade of a variety of deployable technical systems that are able to keep pace with developments in the civilian geospatial sector. The Squadron is currently consolidating a variety of different systems into a single fleet of deployable equipment that can be networked into all ADF Command and Control systems. While delivery of this capability will take place over several years, it will represent a major advancement over the current systems and will improve the ability of Sappers to provide more timely and relevant GEOINT to commanders. Innovation by Sappers is vital to ensuring the capability remains relevant, and is actively encouraged through a series of activities and exercises throughout the training year. The wealth of operational experience that resides with the NCOs and junior officers is being captured and cross-levelled across the unit through a series of exercises and lessons-learnt activities. Ultimately, the capability is well placed to continue to provide relevant and actionable intelligence to commanders in support of ADF operations.

The future location of Army's geospatial capability will be shaped by decisions made in the ECN 423 (Geospatial Technician) Employment Category Review Endorsement Meeting (ECREM) process scheduled for prior to mid 2015. The scope of this process includes consideration of the most appropriate Corps for the geospatial capability given that it now largely resides within intelligence organisations. In the meantime Army's geospatial intelligence capability retains its strong engineer heritage and continues to contribute to the proud traditions of the Royal Australian Engineers.

Personnel Matters

SIGNIFICANT MILESTONES

S14949 Lance Corporal Charles Holden Brown

Charles Holden Brown was born in Ceduna, South Australia on the 9th of February 1914. He enlisted in the CMF on 14 March 1941, serving in Bougainvile, New Guinea and preparing defences in Darwin. Following the war Charlie returned to Australia and worked on the land. On the 9th of February 2014, Charlie celebrated his 100th birthday, surrounded by his close family, friends and some South Australian based sappers.

Below: OC 9 Fld Sqn 9th, MAJ Ryan Orders, and SSM, WO2 Craig Anderson with Charlie Brown on his 100th Birthday.

AWARDS

Medal (OAM) in the Military Division of the Order of Australia

Major Peter Morton GREEN

Medal for Gallantry

Corporal Michael Patrick Chalk

Sergeant Jim Profitt

Commendation for Gallantry

Corporal Anthony Patrick Clarke

Distinguished Service Cross

Brigadier John William Shanahan AM

Commendation for Distinguished Service

Major Geoffrey Andrew Elford CSM

Lance Corporal Errol Parsons

Conspicuous Service Cross

Lieutenant Colonel Glen Jeffrey Braithwaite

Lieutenant Colonel Amanda Johnston**Conspicuous Service Medal**

Colonel Russell John Maddalena

RAE Excellence in Military Engineering Award

The sapper awarded this prize, has returned a superior performance in technical/trade skills, soldiery qualities, espirit de corps and leadership (for the JNCO award only) and their achievements are in keeping with the finest traditions of the Corps of Royal Australian Engineers. Nominations for this award are required to be submitted by units to the CRSM by the end of September each year.

The ARA Excellence Award (SPR):

Sapper J. Athorn (3 CER)

The ARA Excellence Award (JNCO):

Corporal T. Vallas (3 CER)

The ARES Excellence Award (SPR-JNCO):

Corporal D. Kelly-Grimshaw (22 ER).

Engineers Australia 2014 Awards

Western Australian Division - Professional Engineer of the Year

Major Bruce Hughes CSM MIEAust CPEng

PROMOTIONS

To Brigadier: N. Beutel

To Colonel: M. Galton, M. Pearse, S. Hoffmann, C. Lauder

To Lieutenant Colonel: No information from DOCM-A

To Major: M. Bali, M. Donaldson, J. Jory, C. Murray, S. Padman, M. Pesce, J. Plimmer, R. Schmidt, B. Sullivan, T. Whale, G. Jones.

To Captain: C. Ashburner, M. Cannington, M. De Meter, L. Grono, T. Harch, J. Henstridge, R. Johnston, M. Jones, G. Koen, C. McCullough, W. Miles, B. Moroney, T. Murphy, B. Poole,

C. Schulz, B. Turner, D. Robertson, B. Allsop, P. De Boam, L. Ebneter, J. Karantonis, B. Ritchie, D. Santilli, Z. Tiplady

Officer Appointments to the Corp – Lieutenant: M. Baily, A. Bennett, I Brooks, J. Colley, J. Cross, M. Jones, S. Laws, J. Lush, I. McCarthy, N. Mckenzie, B. McMurdo, D. Menzies, J. Oosthuizen, A. Petersen, T. Potter, J. Reading, X. Ricketts, B. Stanyer, D. Storrie, J. Walsh, S. Welch, T. Xavier, B. Xenos

To Warrant Officer Class One: G. Donaldson, P. Tran, S. Corkery, T. Wicks.

To Warrant Officer Class Two: D. Austin, F. Brown, L. Burgess, B. Frith, W. Gunning, B. Kennedy, S. Kimber, C. Mikulec, G. Miller, A. Moore, A. Newsome, D. Petrellis, M. Reed, C. Schaefer, S. Smith, B. Stevens, R. Thomas, D. Thorne, C, Townsend, G. Waddell, I. Weihrauch, K. Williams, M. Wilson.

To Sergeant: C. Anger, A. Barnes, B. Bartolo, M. Bell, J. Brown, B. Carr, M. Chalk, T. Clark, A. Eagle, D. Eaton, M. Ellis, T. Farmer, M. Giannoukas, B. Goodall, D. Gregson, I. Hallt, K. Harding, M. Jeffery, T. Key, J. Lancaster, C. Langley, S. Lee, A. Maybury, W. Meech, A. Mock, J. Moon, E. Moore, S. Moore, S. Morrissey, D. Myers, J. Newcombe, A. Norlander, M. Pasin, J. Peers, M. Pillington, M. Snowden, J. Thomas, S. Williamson, B. Wolinski

To Corporal: C. Albion, K. Anderson, D. Angel, N. Baker, M. Ball, S. Bennett, T. Birrer, E. Blair, N. Braithwaite, S. Campbell, J. Cauzzo, M. Chapman, L. Connell, M. Cordukes, S. Cox, R. Crouch, D. Daleris, D. Daniel, K. Dawson, J. Delaney, M. Dellosa, S. Derwent, D. Dickson, M. Evans, T. Flaherty, S. Folkard, T. George, E. Goeman, T. Goss, B. Grantham, J. Hall, S. Hayward, A. Hession, D. Hicks, S. Imms, L. Keiler, N. Kenyon, L. King, N. King, D. Kleefson, S. Laing, N. Langley, D. Livesay, J. Marshall, C. Mathias, T. McGarry, K. McGovern, G. McKenzie, M. McLelland, D. Moore, N. Owen, R. Pepper, C. Price, R. Prowse, C. Renew, S. Rolfe, T. Rollinson, L. Scriven, M. Stafford, S. Stanley, D. Taylor, K. Tiller, C. Tindale, R. Tyrrell, C. Waite, J. Walters, C. West, P. Windred, M. Worthington.

To Lance Corporal: I. Ackroyd, A. Adams, G. Albanese, S. Anderson, B. Andrews, S. Barry, A. Bateman, S. Bennie, K. Booth, C. Bowtell, K. Caldwell, N. Carpenter, S. Champion, J. Channing, B. Cooke, E. Cottell, D. Cross, J. De La Rue, R. Dinsmore, J. Druett, M. Esguerra, R. Griggs, D. Hosken, Z. Hurst, D. Jarrett, M. Keynes, S. Komisarczuk, J. Lederhose, P. Lincoln, E. Littlewood, B. Macpherson, R. Maddren, M. Maxwell, S. McGuckin, B. McIntyre, D. McLeod, B. Michalzik, N. Moro, I. Moss, J. Myers, D. Noble, D. Norris, I, O'Loughlin, R. Paltridge, B. Peacock, R. Peregrine, D. Pidcock, M. Pierce, E. Powell, D. Power, J. Reilly, D. Ritchie, A. Rowell, S. Shotton, J. Sims, J. Smith, M. Snelders, M. Stewart, A. Sunderland, M. Taylor, D. Toms, G. Tunstall, A. Turk, C. Tyler, D. Van De Wouw, M. Watson, T. Wertheim, J. Weston, J. Wooden, P. Xhaveteux.

LEAVING THE REGULAR ARMY

Colonel: N. Rowntree

Lieutenant Colonel: A. Mellier, M. Thomson, S. Cross, D. Langrehr, T. Heares, L. Hale

Major: M. Todd, B. Maddock, J. McCarthy, K. Eaton, W. Luxmoore, J. Rudd, B. Hughes, S. Winner, L. Bowden, K. Vann

Captain: M. Butler, A. McMahon, M. Bennett, S. Barns, S. Mulligan, T. Bowers, G. O'Dwyer, D. Stubbs, R. Collins, A. Turkenburg, L. Gibson

Lieutenant: C. Sheahan

Warrant Officer Class One: W. Schoer, D. Quirk, S. Attleir.

Warrant Officer Class Two: B. Veltmeyer, S. Plunkett, M. Durnin, C. Dabbs, K. Abrahams, A. Heffernan, P. Niven, B. Day, P. Burnham, T. Malone

Sergeant: M. Lyddiard, G. Joyce, J. Smith, M. Colebrook, N. Mitchell, G. Fox, C. Nott, R. Csincsi, C. Speirs, P. Miller, A. Burbury, J. Reid, R. Swales, T. Elliot, J. Johnstone

Corporal: T. Bergamin, R. Jauncey, G. Sawyer, G. Caddy, J. Allen, J. Lovi, M. Byron, S. Bookallil, O. Jones, G. Memery, T. Anderson, J. Donlan, S. Day, S. Lockyer, J. New, J. Moreels, B. Peters, F. Muthu, J. Richter, S. Pritchard, J. Trickey, J. Cardey, D. Avery

Lance Corporal: J. Bird, B. MacPherson, J. Gavin, S. Millar, J. Southwell, O. Perry, L. Adamson, M. Coulson, S. Marshall, S. Eccles, P. Dugand, B. Hughes, J. Wooden, C. Price, J. Glenn, R. Maddren, W. Eady, N. Cox, M. Woods, K. Weblin, K. Hewett, S. Cuzner

Sapper: G. Adams, L. Ames, L. Amos, I. Anderson, T. Anderson, B. Anthony, M. Ayres, M. Barnes, M. Birkett, A. Black, T. Blackburn, N. Bolton, D. Bolwell, K. Bookham, B. Boyd, J. Braddon, L. Bray, J. Brennan, G. Brice, C. Burger, J. Burrows, C. Campbell, B. Carbery, R. Casten, J. Charrison, A. Chaytor, J. Cooney, R. Coward, T. Cross, J. Crowe, A. Dalgliesh, B. Darlington, J. De Maria-Ryall, R. Deans, K. Dhu, R. Dixon, L. Dolan, S. Don Paul, J. Donlon, P. Doyle, C. Duggan, J. Dunn, J. Eyers, J. Fairholm, R. Fieck, L. Fitch, E. Foster, R. Fox, L. Freeman, P. Frost, R. Gaudion, J. Goodwin-Wicks, C. Goulding, O. Graham, S. Griffths, J. Groves, B. Habel, A. Hanlin, T. Hardy, J. Harper, D. Hart, E. Hart, M. Hearn, B. Heffernan, C. Hetherington, G. Higgins, R. Hingston, B. Hodges, J. Holmberg, D. Holmes, S. Hopkins, G. Hord, D. Horlor, K. Jackett, P. Jarvis, A. Jennings, B. Johnson, B. Jolly, A. Kalkan, J. Kane, K. Karpinski, R. Kelly, R. Kennedy, J. Kidd, S. Kroehn, T. Landers, M. Leamer, M. Leddy, E. Lee, J. Lenihan, J. Littman, K. Livesay, T. Logue, L. Louis, A. Mahoney, D. Mansell, J. Maraldo, T. Matheson, M. May, J. McGee, B. McGowan, S. McHenry, L. McLeod, J. McMurray, A. McPhedran, C. Mead, N. Meere, I. Melia, L. Millar, D. Mitchell, S. Monro, J. Morris, A. Muc, A. Muller, S. Mutlu, R. Nally, M. Nicholas, T. Noble, J. Norton, P. O'Bree, C. Osborne, T. Palmer, J. Panas, S. Papsdorf, J. Parsons, B. Partridge, D. Petrie, J. Pike, C. Poteris, M. Powell, J. Power, J. Praeger, C. Pratt, M. Preusse, J. Puniard, D. Ralph, J. Rice-Levitt, P. Rinderman, T. Rogers, R. Rose, A. Ross, M. Scully, J. Sharpe, N. Shewan, S. Slape, B. Smith, C. Smith, P. Southworth, B. Stenfors, S. Stent, K Stirrat, M. Stone, D. Sultana, B. Taylor, G. Taylor, M. Torney, L. Turnbull, C. Turner, B. Valencius, R. Vander Straaten, S. Vuat, D. Watson, K. Waugh, I. Webb, C. Weeks, B. Wenck, B. Wenta, W. White, B. Whitehorn, G. Wiles, D. Williams, N. Williams, D. Wilson, B. Woodrow, A. Wright, G. Zgrajewski

Sapper Obituaries

Lest we forget

SERVING IN THE RAE AT THE TIME

8225644 Major Peter John Crabbe

Peter's military career began in the Reserves with the Royal Australian Artillery before he transferred to the Regular Army attending RMC, Duntroon and graduating into the Royal Australian Survey Corps. Peter continued to serve the geospatial community through the transition of Survey Corps to Engineers and was the Officer Commanding Geomatic Engineering Wing at the School in 2004-5, the last former Survey Corps officer to hold this post. Peter's military career included deployments to Iraq and Afghanistan, and experience in Capability Development and Project Management. Peter was an athlete, enjoying Aussie Rules and running. He passed away in his home state of Western Australia on 15 November 2014.

8215192 Warrant Officer Class One Ernest John Delai

John was from Shepparton enlisting in October 1974. He served in 2FER, 2/3FER, 21 Const Sqn, SME (to name a few) and he deployed with 17 Const Sqn to Namibia in 1989.

A WO1 since 1996, he transferred to the active reserve in July 2002 and continued to serve RAE on a fulltime basis as the Corps' senior doctrine WO until 2011 when he posted into SME. A keen fisherman, an enthusiastic supporter of the AFL but most importantly a devoted family. A quiet professional and staunch friend to all, he will be sadly missed. John passed away on 30 September 2014

8220324 Lance Corporal John William 'Rocky' Helliar

John Helliar has been a long serving member of the Engineers. Postings included 21 Construction Regiment, 17 Construction Squadron and the 5th Engineer Regiment. John's service saw him awarded the Soldier's Medallion in 1995 and he served on Op OUTREACH in NT during 2008. Outside of Army, John was involved in the community as a volunteer Rural Fire Fighter. His station was Merimbula, and he was a member of the Bega Valley team that fought the fires in Wagga Wagga earlier in January 2014. John passed away on 27 June 2014.

PREVIOUSLY SERVED IN THE RAE

Captain Terry Olsen

At the time of his retirement Terry was posted to 39 Construction Squadron at Newborough – he was very involved in the Latrobe Valley Sappers Association. Terry passed away on 4 February 2014.

Captain Anthony (Tony) J. Bourke

Tony was the SSM 106 Construction Squadron from 1969 to 1982 and subsequently took a commission. He was also on the Historical and Heritage Committee for many years. Tony passed away on 31 Aug 2014.

Corporal Phil Baxter MM

Phil served with 1st Field Squadron in Vietnam during 1968-69. He was awarded the Military Medal for his actions during a mine incident on 21 July 1969. Phil had moved on from the Army and had retired to Campbelltown. He passed away on 29 May 2014.

Lance Corporal Charlie Brown

Charlie enlisted into the Australian Army in 1941 and served through to 1946. At the time of his passing Charlie was Australia's oldest Sapper. Charlie passed away in September 2014.

Warrant Officer Class Two Michael Barry Byrne

Michael served in Vietnam with 1st Field Squadron and was attached to the AATTV during 1969-70. He passed away on Wednesday the 27th August 2014.

Sean Gavin Cartledge

Sean was a Carpenter and Joiner from the 39th intake of the Army Apprentice School, graduating in 1985. He loved life, family, friends and music. Sean passed away on 27 March 2014.

Sapper Luke Ames

Luke served with the Special Operations Engineer Regiment and the 2nd Combat Engineer Regiment. He passed away on 21 Aug 2014.

Sapper Thomas Robert Dodds

Tom was born in Queensland and served in Vietnam in 1971 with 1st Field Squadron. He passed away on 4 September 2014

Corporal Gordon Lark

Gordon enlisted in 1981/82 and completed the Engineer IET at SME. He contributed over 20 years service to the Reserve in the Melbourne area. Gordon passed away on 29 October 2014.

Sergeant Kenneth James Shannon

Ken served in Vietnam embarked with the AS JOHN MONASH and AV CLIVE STEELE in 1968-69 and with the detachment of 30 Terminal Squadron in 1971-72. Ken was the Vice President of the 32 Small Ships Squadron Association. He passed away on 2 July 2014.

Sergeant John Snell

John served in Vietnam and Borneo spending time embarked on AV VERNON STURDEE and AV JOHN MONASH in 1964-5. He was a former instructor at SME, continuing to serve until 1980. He passed away in October 2014.

Lance Corporal Dirk Bowes

Dirk was a loyal and dedicated Sapper. His enthusiasm and commitment contributed greatly. He passed away on 9 February 2014.

Moorebank Unit Relocation Project

By Major Craig Clunas

The School of Military Engineering (SME) will move into new facilities at Holsworthy Barracks next year. Works are now well progressed with the School on track to relocate in April 2015.

The new front entrance to Holsworthy Barracks is nearing completion and key buildings such as the Mess, Chapel and the Australian Army Museum of Military Engineering (AAMME) have been handed over to Defence for occupation.

The official opening of the Holsworthy Barracks Mess and the consecration of the All Saints Chapel at Holsworthy Barracks is scheduled for 27 February 2015.

The 'Back to SME', in October, and Farewell to Steele Barracks activities, in November, were well attended by current and ex-serving members and has been followed by the relocation of some equipment to Holsworthy. The relocation of Corps heritage items has been occurring steadily. The museum relocation is complete and we are waiting to see how the relocation of the obelisk, the Corps Memorial, is achieved.

The official opening of Steele Lines and the new 'Home of the Sapper' is planned for Saturday, 27 June 2015.

Below: (Clockwise from below) An aerial view of the Plant Shelters and Dust bowl, currently under construction at SME's new facilities within Holsworthy Barracks; the new Museum builidng; the All Saints Chapel, Holsworthy Barracks; the new SME HQ building is nearing completion; the entrance to the new Mess at Holsworthy.

The Corps' Museum

Australian Army History Unit

By Mr Sebastian Spencer, Curator

The movement of the collection is one of the largest undertaken in the history of the country. Hundreds of tons of equipment, objects and records have been moved into the complex and the planning, coordination and execution of the move has been seamless.

We have worked with sappers, AAHU volunteers and civilian contractors and the result is something for us all to be proud of. The new museum is a fitting tribute and home to the history of our Corps and an integral part of the new SME.

A cohesive and coherent history display captures significant events and moments told through our objects, images and records in the galleries. Our main floor area has interwoven current doctrine with our larger exhibits to provide not only a historical perspective but to illustrate the variety of tasks that sappers face. This forms an excellent teaching and training platform for our new sappers and shows the public what we have and can do.

The move has also allowed us to rationalise the collection and AAHU have returned hundreds of thousands of dollars to Defence through the auction of surplus items and scrap.

We have undertaken more restoration and conservation work of our large equipment in the past twelve months than has ever been achieved previously. The contribution of our volunteer staff under the guidance of AAHU to accomplish this has, as always, been tireless and extraordinary.

In many instances, as plant and machinery were prepared for transport, it was our volunteers who were the only people who knew how to operate the equipment and this assisted greatly in the relocation. Special thanks also to WO1 'Nev' Watts and the team for all the assistance they have provided with both the relocation and the clean-up of the site.

The assistance we have received from the School, Corps, associations and individuals must also be noted. I have been in contact with hundreds of current and former members in the development of the museum and the contribution of time, information and artifacts has been overwhelming and inspiring.

Without question the most significant donation we have received is from the family of Major Richard Victor Morse DSO. We have negotiated the donation for over two years and the main factor for Victor's family has been the creation of the new facility. Victor, as he was known, commanded the Australian Electrical and Mechanical Mining and Boring Company which was a specialist unit established in WWI when the mining battalion was broken up and consisted of the tunneling companies and the specialised boring sub-unit. It was referred to as the Alphabetical Company as a result of the abbreviation of their name. The company's main taskings during WWI were tunneling operations and boring for water, geological work and demolition purposes. They were instrumental in the destruction of Hill 60 on the Western Front.

Below: The relocation and positioning of the Centurion tank and railway car was a challenge. **Right:** The Australian Army Museum of Military Engineering will officially open in 2015.

Victor's collection includes personal effects, diaries, ledgers and a still working German generator that he had captured behind enemy lines. The collection is magnificent due to its rarity and condition and particularly poignant that we should take it into our care during the commemorations of the outbreak of WWI and Anzac Day 2015.

One of the most complex, if not the most complex, elements of the move has been the staging of the Centurion tank onto the railway car. It was always a dream that we would realise this 'one day' but the move has finally allowed us to make it a reality. At present we are the only museum in the world, civilian or military, to have such a display and the skill, patience and expertise of all those who made it happen is indicative of the passion that has gone into every facet of our new home.

These photographs go some way to illustrate the complexity involved, of course you'll have to visit to see the result.

The Joint Improvised Explosive Device Defeat Organization

By Lieutenant Colonel Micheal Brereton

The Joint Improvised Explosive Device Defeat Organization (JIEDDO) remains the preeminent CIED organization within the US Department of Defense. It has a presence on six continents and is, first and foremost, led and structured to respond rapidly to warfighter requirements necessary to ensure the success of deployed forces. JIEDDO's support to operations encompasses US military forces, local 'supported' indigenous forces as well as 'supporting' coalition partners. As a 3-Star, joint headquarters, JIEDDO also influences, and learns from, a wide range of interagency engagement including NATO, the US Drug Enforcement Administration, and the US Department of the Treasury.

JIEDDO's mission is executed along four lines of operations categorised as Attack the Network, Defeat the Device, Train the Force, and Staff and Infrastructure. Since establishment, JIEDDO has fielded over 390 initiatives across its four lines of operations at a cost of approximately USD$12.8B. Of these, 217 have been operationally proven, accounting for 93% of JIEDDO's total financial expenditure. JIEDDO's continued support to deployed forces is underwritten by a Fiscal Year 2014 budget of USD$879M and guided by four priorities:

1. Respond Rapidly to Warfighter Requirements.
2. Support Combatant Commands.
3. Remain the Center of Gravity in the CIED fight.
4. Continue to Adapt and Transform .

There are currently four ADF personnel serving with JIEDDO. In addition to the current Liaison Officer, CMDR Mike Maley from the RAN, there are three embedded Army officers, one each from RAE, RA Sigs and Aust Int.

Established in August 2006, the CIED Operations/Intelligence Integration Center (COIC) hosts an Army Major from Aust Int and serves as the primary lead for Attack the Network. The COIC's mission is to harness, mass and fuse information, analysis, technology, interagency collaboration, and training support to enable more precise attacks to defeat violent extremist networks which employ IEDs in support of all combatant commands, Special Operations Command, US Government organizations and coalition partners. COIC maintains unique databases harnessing over 300+ intelligence feeds, providing analysts rapid access to geographically-aligned information to provide direct, time sensitive and specific intelligence support. This is further enabled by COIC's partnering with more than 30+ government/intelligence agencies and other coalition members (Canada, UK, Australia and NATO). COIC's contribution to the CIED fight is ably demonstrated by the 22000+ satisfied requests for information, 42000+ recipients of Attack the Network training, and an increasingly improving prediction accuracy of CIED pattern analysis.

The second Army Major, an officer from RA Sigs, is embedded within the Directorate of Rapid Capability Delivery (DRCD). Whilst the Australian position has been focused primarily on Electronic Counter Measures (ECM), DRCD has a much wider remit. DRCD specialises in the assessment and prioritisation of CIED operational and technology gaps and serves as the lead for JIEDDO in rapidly developing, acquiring, integrating, assessing, and fielding proven materiel and non-materiel CIED initiatives. DRCD's scope includes known, newly deployed and emerging IED threats and in 2014 it has devoted significant contributions to robotics training, route clearance, battlefield forensics and Unmanned Aerial Vehicle (UAV) integration. Many of these initiatives benefit coalition forces by providing direct access to capability or through the benefits associated with the effects delivered by United States' forces. In 2015, DRCD will continue to support the delivery of CIED initiatives to deployed forces and Combatant Commands across the globe. Through consistent engagement with these organisations, DRCD will continue to foster the link between CIED requirements and those resourced to provide the solution. DRCD also strongly promotes the sharing of information and technology for the benefit of the greater force, both in combat and in training.

Over the past six years, JIEDDO has developed numerous training programs in response to the ever-changing IED threat. To date, JIEDDO has successfully transitioned 34 key training programs that are now integral parts of unit pre-deployment training. These include the Dismounted CIED Tactics Master Trainer, Advance Situational Awareness Training, and Counter Explosive Hazards Planner Course. As a key member of the JIEDDO team from 2011 to 2013, my predecessor, LTCOL Heath Stevens made a significant contribution to these courses and warrants individual recognition for his influence in both the Train the Force and Defeat the Device lines of operation.

JIEDDO's contribution to Train the Force remains a line of operation in 2015 but the emphasis is shifting to a supporting role as the Services continue to undertake this as one of their core tasks. Initiatives such as the JIEDDO Knowledge and Information Fusion Exchange (JKnIFE) portal will continue to provide United States Defense forces, coalition and inter-agencies with validated training resources to enhance training and JIEDDO will continue to monitor the development and compatibility of CIED training across the joint environment. Critical to this last objective is JIEDDO's participation in the review and preparation of Service and Joint doctrine. The lessons learned from a decade in the Middle East will migrate from handbooks and précis into the formal foundation publications upon which the Services will plan, equip and fight. Under the newly established J7, the RAE embedded officer at JIEDDO will lead this task and be responsible for ensuring that CIED considerations become a core element of all future doctrine discussions.

The JIEDDO of the future will be significantly smaller than the organisation that evolved during the past decade. Reductions across the United States Department of Defense have resulted in JIEDDO reducing its personnel strength by over 50% with more cuts to come. In response, JIEDDO is structuring itself as a small, scalable, strategic level organisation with continued expertise in intelligence and operational analysis (including anticipatory threat and gap analysis). Combined with the most effective CIED tool, a well-trained Soldier, JIEDDO will continue to offer the United States, and its allies, an agile military option dedicated solely to countering today's adaptive, resilient, CIED threat networks and protecting combatants in the close fight.

Further information and news is available on the JIEDDO website at https://www.jieddo.mil/index.aspx .

‘Helping me to help you...’

Update from the Australian Army Liaison Officer

By Lieutenant Colonel Matt Prior

Fort Leonard Wood in Missouri is home to the Maneuver Support Center of Excellence (MSCoE) for the US Army. MSCoE incorporates the US Army Engineer School (USAES), US Army CBRN School (USACBRNS) and US Army Military Police School (USAMPS). MSCoE also hosts the Army Transport Training Battalion and a large US Marine detachment that feeds into the three schools and conducts a significant amount of recruit-level training, which is executed by dedicated training Battalions within the CBRN School.

The Australian Army currently maintains three positions here. There are two exchange instructors in the Engineer School and one Australian Army Liaison Officer (AALO) who works across MSCoE.

AALO MSCoE’s role is to provide just that – liaison. A key objective is enhancing our inter-Army relationship with the Engineer, Military Police and CBRN Schools. The liaison role also encompasses the US Marine Corps Engineer School at Camp LeJeune in North Carolina. A large part of this role is the lodging and processing of information requests between the two armies.

This article will focus on the RFI part of the AALO role – specifically, advice on how you can use the Army LO network in North America to support your own work. The advice aims to help new staff officers understand the opportunities and limitations relating to the use of the Liaison Officer at Fort Leonard Wood. AALO in other facilities across the US will experience differing degrees of success with their RFI, but the processes we use are essentially the same.

Many of us will have friends in the US military we’ve met on previous deployments. These can make for great personal and professional networks, but using them for RFI needs careful consideration. AALO are basically the only authorised conduits for information exchange. By all means chat with your contact to get a better idea about what you want to know, but once that’s done, you should submit your RFI through the appropriate LO for follow-up.

This can be a cumbersome process and may not give you the answer you need. It is however, the process that keeps everyone’s involvement legitimate. The security relationship between the US and Australia is too important to burn people over inappropriate RFI support. It’s also a convention the Defence Embassy staff take very seriously, as lower-order disruptions to the security relationship can sour higher-level dealings, which may have consequences that work against our national interests.

It’s also important to understand the difference between embedded exchange staff and liaison staff. Embeds are essentially seen as a US soldier who wears a different uniform. They are specifically prohibited from collecting and distributing information back to Australia, even if they have ready access to it. If they are caught sending information home they are likely to have their accreditation revoked, and could face early RTA as a result. Consequently, exchange personnel (WO2 Russ Peel and MAJ Scott Jamieson at Ft Leonard Wood in 2015) must pass on any RFI they receive for the AALO’s action, but without materially assisting the RFI.

If you’re looking to lodge an RFI, refer to the RFI Tips below and remember, RFI’s like “can you send me everything on route clearance” really don’t help.

One of my goals is to make this position as ‘two-way’ as possible. The fact that we offer up suggestions, ideas and experiences for US consideration is well received, and does tend to cast Australians in a favourable light. Unfortunately, it’s not always simple for those of us over here to stay abreast of current developments in our portfolio, so if there are issues that might be of interest for the US Engineer School, I am happy to submit them for consideration. The more background you can send me, the better I can fashion it into ‘US-speak’.

The span of activity in MSCoE is impressive, and there are a lot of good ideas here – even if they won’t all apply to the Australian situation. The past decade of working together has built upon the already deep relationship between the US and Australian armies. Consequently, we have an excellent opportunity to use this relationship to strengthen our armies’ ability to work together, and understand how we each approach our core business of warfighting. The AALO role then, is to foster and maintain this relationship above all else. Helping me to help you, ends up serving our wider interests as well.

Finally, RAE stakeholders should note that the AALO MSCoE position will not be filled from December 2015. This means that the RFI system for the US Amy Engineer, CBRN, Military Police and Transportation Schools will revert to a much more formalised process from 2016. Practically, the flow of information out of Fort Leonard Wood will likely decrease. This may be offset by other Army positions established elsewhere, but the Australian presence at FLW will reduce to one (embedded) exchange MAJ in the US Army Engineer School.

Tips for developing RFI for the US Army:

1. *Research and analyse what you want to know. Focused RFI work better than broad ‘shotgun’ RFI. Balance this against being too prescriptive and detailed in your questions.*
2. *Keep it simple. Remember, you’re ultimately asking someone in another Army to help you out, so make it easy for them to do so. Make sure your questions are clear and that your request is achievable.*
3. *Realistic timelines. Noting timezone differences, US workload priorities and other factors beyond our control, you need to request a reasonable timeframe for your RFI. The US RFI process requires filtration through several layers of approval or consideration. Further, your RFI may not be a priority to answer. If it’s urgent, you’ll need to justify why and when.*
4. *Consult within your unit/ command first. Your RFI might be something others are interested in. It might have already been well and truly answered.*
5. *Help me to help you. The US military is a huge organization. Even ‘smaller’ US bases like Fort Leonard Wood host a uniformed military population close to the size of the ARA. If you know which part of the organization is best suited to answer your RFI, include it in your request.*
6. *Be prepared for ‘no’. AALO have to work within well-defined boundaries for their accreditation. This means we can’t simply lodge an RFI for an area/ topic. At best case, you might receive a full or partial answer to your RFI – the worst case is refusal to answer the RFI. There are ways to repechage this, and AALO can advise if these apply.*

Animals in War Remembered

Trainees on the 2014 Basic Dog Handlers Course together with their Explosive Detection Dogs (EDD) and retired EDD Sarbi attended the 'Of Animals in War' event which was held at the Australian War Memorial in Canberra on Sunday 23 Feb 14. Led by Sergeant Cameron Elliott, Corporal Shaun Laing and Corporal Phillip Grazier (all of SME), the group was invited to represent the EDD trade to honour and commemorate fallen colleague Sapper Darren Smith and EDD Herbie, both of whom paid the ultimate sacrifice whilst serving in Afghanistan on 7 June 2010. The purpose of the event was to pay tribute to all animals that have served alongside Australian military personnel in times of our nation's greatest conflicts.

The event, sponsored by the Australian War Memorial, was an family day that allowed the visiting group to showcase the Explosive Detection Dogs through static and mobile displays, including a brief demonstration of the dogs in action. Also present were representatives from the Australian Light Horse Association and the Canberra-based Racing Pigeon Association. The day began with a commemoration ceremony, presided over by the Chief of Defence Force, General Hurley, AC, DSC and the Director of the Memorial, Dr Brendan Nelson. The keynote speech was delivered by Mr Nigel Allsopp; author, renowned animal trainer and behavioral advisor who spoke about the significance of the contribution made by animals in war-time. He paid particular attention to the role messenger pigeons played and the contribution of Private Simpson and his donkey during the Gallipoli campaign, but Military Working Dogs (MWD), which includes EDD's, received equal attention, particularly as his speech evolved into coverage of more recent conflicts.

Sergeant Elliott, from SME, followed with a short speech that highlighted the important role of EDDs in supporting the full spectrum of ADF operations and how the dogs assist Combat Engineer search teams. The ceremony concluded with the laying of wreaths and CPL Laing had the distinction of being one of only three official parties to be formally invited to lay a wreath on behalf of all EDD handlers; he did so alongside Dr Nelson at the base of the statue Simpson and his donkey.

At the conclusion of formalities, the general public were invited to engage directly with the EDD handlers and their dogs, as well as to visit the static display where they were allowed to meet retired EDD Sarbi. The handlers were well received by the public who showed genuine interest in the

various photo boards showcasing the history of EDDs on operations around the world. Mobile demonstrations were conducted throughout the day to show the EDD's in action and, again these demonstrations were well received by the public.

It was an honour and a privilege for the trainee dog handlers to interact with members of the public and be able to answer questions from genuinely interested people who had come to learn more about the role that EDD's provide the ADF; typical questions ranged from "what breed of dogs are used" to "how long does an EDD typically spend in the service" and "how do you become an Explosive Detection Dog Handler". Of course, there was significant interest in EDD Sarbi and her exploits whilst deployed.

Perhaps the most moving activity of the day, certainly for the handlers, was their participation in the Last Post Ceremony at 1700h; this is now a daily event conducted as the Australian War Memorial closes and features a serving member of the ADF reading a story that links that day or a specific individual to a key event in military history. In keeping with the theme of the day, the last post ceremony was dedicated to the memory of SPR Darren Smith* and EDD Herbie. This was the first time that EDDs were formally involved in a ceremonial event held around the pool of reflection in the centre of the Australia War Memorials forecourt. Hundreds of visitors watched as the trainees together with their dogs paid their respects to all those commemorated on the walls of the memorial as the lone piper played a solemn rendition of the National Anthem whilst wreaths were laid.

It was an experience that none of the handlers will ever forget; we were extremely fortunate to be part of such a humbling activity.

**SPR Darren Smith originally enlisted as a reservist on 29 Nov 01. On completion of Recruit training he was posted to 3 Field Squadron in South Australia before transferring to the Australian Regular Army in 2004. From 2004 to 2006, SPR Smith was posted to 1 CER where he served as a Combat Engineer. In 2006 he returned to SME, this time to attend the Basic Dog Handler Course before being posted to 2CER. Whilst at 2 CER, SPR Smith deployed to Afghanistan as a member of the 1st Mentoring Task Force (1 MTF). SPR Smith was awarded the Australian Active Service Medal with Clasp "International Campaign against Terror", the NATO service medal, the Afghanistan Campaign Medal and the Australian Defence Medal.*

By Sapper S. C. W. Chan

RAE Short Term Industry Secondment Program

By Lieutenant Colonel Len Rouwhorst

2014 has seen the reintroduction of a Short Term Industry Secondment Program for RAE technical staff, with the endorsement by DGCM-A of a proposal put up by 19 CE Works to allow RAE technical staff to be seconded for short periods to civilian engineering companies. This program provides continuing professional development and opportunities for personnel to enhance their technical skills in situations otherwise not available through normal unit tasks or military training. It is a supplement to the annual DOCM-A sponsored, year-long secondment of a Captain Project Engineer to John Holland Group, and allows for a greater number of technical RAE personnel of all ranks to gain experience of current industry best practice in their various fields.

The short term nature of the individual placements, anywhere from one week to several months, allows for flexibility to make the most of gaps and opportunities in the yearly training program. 19 CE Works has currently established five separate agreements with local construction, survey and design companies that has allowed the full breadth of the Engineer Works capability, including Project Engineers, Works Mangers, Works Supervisors, Draughtsmen and Surveyors to have the opportunity to gain valuable knowledge and experience under this program. The program is not limited to 19 CE Works, and any RAE Unit can establish its own Short Term Secondment Agreements utilising the template agreement to meet its particular training needs, or leverage the existing 19 CE Works' agreements.

The start of the year, Project Engineer CAPT Cameron Hawkins undertook a six week placement with the construction company Hansen Yuncken Pty Ltd working on a redevelopment project at Sydney's Port Botany. CAPT Hawkins worked on pre-cast concrete and large structural steel construction within an operational port-side site. The experience he gained in rectifying constructability issues due to limited design detailing came in handy in his concurrent role as Design Manager for the Kapooka Grenade Range project.

In July, our Senior Works Manager WO1 Glenn Bridges and Works Supervisor WO2 Chris Jones got to experience challenging high-end commercial construction with John Holland Group at the University of Sydney's Abercrombie Precinct project site. WO1 Bridges worked along side the site safety manager gaining insight into large scale site safety and WO2 Jones worked as a site foreman ensuring construction quality was maintained.

Above: Project Engineer CAPT Cameron Hawkins with CO 19 CE Works LTCOL Len Rouwhorst at Hansen Yuncken's Port Botany redevelopment project site, March 2014.

19 CE Works' Technical Support Section was not left out either. Draftsman SPR Troy Roseman got to enjoy Alice Springs for two weeks while working for Opus International Consultancy Ltd in support of AACAP 2014 working on House Lot Servicing Plans and other drafting tasks for Opus. Surveyors SPR Anthony Butler and SPR Kelly Hall undertook an eight week placement with the surveying firm Cardno Hard and Forester in Sydney. Tasks that they conducted included feature surveys for safety camera locations, intersection upgrades, a cycleway as well as boundary surveys. Both Sappers agree that the placement was worthwhile as it gave them exposure to a broader range of surveying tasks and provided invaluable industry experience.

I encourage all RAE Units with technical staff to consider implementing suitable Short Term Industry Secondments as a part of a holistic Continuing Professional Development approach. These opportunities give the staff renewed technical enthusiasm and confidence, and will benefit Army's engineering capability in the long run.

Force Protection Engineering

By Captain Josh Porter

Force Protection Engineering

Force Protection Engineering (FPE) is a critical speciality knowledge area maintained by RAE that enables the assessment of risk and development of mitigation plans and physical works to increase the protection of personnel and infrastructure on operations against hostile threats.

The Corps' FPE skills were in increased demand in 2014. CAPT Fabian Harrison and CAPT Cameron Hawkins from 19 CE Works deployed with HQ JOC on separate Force Protection Reviews in support of OP ASLAN (South Sudan), OP PALADIN (Israel / Lebanon) and OP MAZURKA (Egypt). The task included the conduct of FPE risk assessments, reviews of extant force protection measures and recommendations for upgrade works. 19 CE Works was also called upon to provide FPE instructor support to the Combat Officer's Advanced Course throughout the year.

As part of the formal FPE training continuum, several Overseas Training and Education (OTE) serials are funded each year to attend the seven-week FPE Officers Advanced Course run by Cambridge University on behalf of the UK Royal Engineers (RE). CAPT Joshua Porter (19 CE Works), LT Craig Ashburner (6 ESR) and FLTLT Nicole Sutton (RAAF) attended in 2014 and form the next cohort of FPE 'Level 3' trained personnel.

In June, MAJ Jonathan Haling (OC 12 Works Section) accompanied delegates from DFAT and the Attorney General's Department to the 2014 International Physical Security Forum (IPSF) conducted this year in Tel Aviv, Israel. MAJ Haling presented to the forum on 'Force Protection Risk Assessment' using lessons learnt from his recent OP SLIPPER experiences, and found similarities with other coalition partners' processes. IPSF 2015 is scheduled to be held in Cambridge, UK in April 2015 and will be immediately followed by an international Military FPE Forum hosted by 502 Specialist Team Royal Engineers (Force Protection Engineering) in Nottingham. These events will provide an excellent opportunity to expand the ADF's knowledge and exposure to international developments in the field of FPE.

The networking opportunities from all these activities have strengthened RAE's ties with our international counterparts, in particular our RE brethren. This was exemplified in their contribution to the two-day RAE FPE Seminar conducted at Randwick Barracks in October 2014. This Seminar provided a forum for transfer of FPE knowledge between over 65 participants from RAE, RAAF, DFAT, DSTO, ASIO, coalition partners and industry. Notably, it also provided an insight into RE FPE capability and doctrine and stimulated discussion about where and how RAE might improve. Key discussions focused on centralising FPE information and making it available for practitioners across Defence. In response, 19 CE Works has created a Sharepoint site dedicated to FPE in an effort to stimulate collaboration between units and professional development for those in the field.

The operational need for the provision of FPE advice remains strong. The development of the FPE training continuum and the ongoing improvement in FPE doctrine are the foundations of RAE FPE capability. Networking and knowledge transfer ensures that RAE maintains a current appreciation of the threat and available mitigation measures to ultimately ensure that our advice meets the optimal balance between risk and cost.

Above: CAPT Cameron Hawkins and the team at OP PALADIN conducting a Force Protection Review for Rest of World (Minor) Operations – July 2014.

The Kapooka Tragedy

Lest not Forget

By Major Kieran Jackel

'On the 21st of May 1945, in a single blinding flash of gelignite 26 young lives were snuffed out in an underground bunker. When they buried the victims three days later, half of the population of Wagga Wagga – 7000 men women and children – lined the streets to bow their heads at the passing of the coffins. It remains to this day the Nations largest military funeral. But then something strange happened. Australia forgot.'

In an un-assuming paddock on the outskirts of Wagga Wagga five Bailey panels rest in place, encircled by 26 saplings for company. Unless you had taken a wrong turn on route to Kapooka, The Home of the Soldier, you would most likely be unaware of this site. Yet the fact remains that on this site a humble memorial exists in memoriam of the Australian Army's worst accident that claimed the lives of 26 soldiers, including two who died of wounds in hospital. All of those lost had a common hat badge and at some stage would have responded to 'Sapper'. Like many of the Sappers currently serving at the 1st Recruit Training Battalion I felt a wave of guilt to my ignorance of this event as the memorial service came and went this year.

The incident, or the 'Kapooka Tragedy' as it is referred, was in essence a training incident occurring during a demolitions practice. However it occurred during a time when the country was at war on the 21st of May 1945. The gravity of the loss likely compounded by the fact that World War II was drawing to a close, the Germans had surrendered and momentum was with the Allies in the Pacific.

'It was the Australian Army's worst accident a tragedy so grim and gruesome it tore the heart out of a country town'

The Wagga Wagga Township has for over 70 years had a close relationship with the Australian Army, with the majority of soldier ab initio training being conducted at Kapooka, the Home of the Soldier since 1951. What is not widely known is the Corps association with the region, perhaps fitting in 2014-15 as the School of Military Engineering once again looks towards a new home.

In 1942 Sappers conducted their Field engineer training at what was then termed the Royal Australian Engineer Training Centre (RAETC). Wagga was chosen as the site to centralise six of the seven engineer training depots due to its proximity to both Sydney and Melbourne. By July 1942 headquarters and accommodation had been established to provide for four engineer training battalions and also to accommodate for reinforcement training to Australian and United States Engineer units.

The method of training conducted at the RAETC at the time was viewed as radical, today it is the norm. The training continuum had evolved to a stage were it was believed trainees would retain more knowledge if training on a given subject area was concentrated over a number of weeks. As such, training focused on demolitions, minefields, field defences and machines, camouflage, roads, airfields, Sawmilling, cement construction and bridging. In order to progress in training each Sapper had to be deemed satisfactory in each area.

The parallels for the IET of today are obvious. This concentration of training concept also extended to instructors with subject matter experts being utilised based on module. A number of these instructors now have a plaque beneath one of the 26 trees on site.

The day of the tragedy was like any other, week 4 of training, 0630 reveille, 0730 Breakfast in the mess, 0825 Morning Parade, 0840 Training begins.

At 1415 Lance Sergeant Kendal and three trainees entered the dugout (Bunker as known today) to prepare fuses for the night practices. This included affixing matches to lengths of fuse cord, attaching electric leads and binding with detonator cord.

At 1430 Sergeant Pomeroy, Corporal Cousins and twenty-two trainees entered the dugout for an explanation on the night practice and how to develop hand charges. In addition to the complement of trainees and staff, detonator cord, fuse wire and ignition sources; the dugout also contained over 50 Kilograms of High Explosive including Gelignite and monobel.

At approximately 1445 as members were counting detonators with safety fuses it is believed the explosion occurred. The dug out colloapsed and smoke and debris filled the air. As Sappers, it is clear that this description is benign, and the scene confronting first responders would have been horrific.

In the chaos that followed both the military and community responded as best they could to the incident site, triaging survi-

Opposite page:
top left - The four flat bed trucks carry the 26 coffins to the Wagga Wagga war cemetery during the funeral service;
bottom right - ARTC staff, as well as veterans and their families, attended the memorial service near Kapooka on May 21, 2014.
Above: Former Sapper Paddy Cranswick, 88, of Perth, at the Kapooka Tragedy Memorial, 69 years after an explosion killed 26 of his mates. The cement wall at the end of the farm shed in the background is all that remains of the bunker where the explosion happened.
(Source: Department of Defence)

vors and identifying the deceased. By 2000hrs all bodies had been identified and a nominal roll of the deceased produced. Telegrams were then dispatched to the members Next of Kin.

The funeral service conducted on the 24th of May saw four flat bed trucks carry the 26 flagged draped coffins to the Wagga Wagga war cemetery. As much as half the town turned out and lined the main streets in respect, with 200 returned servicemen forming a guard of honour.

The service had a profound and lasting impact on the region and emotion overcame a number of people during the service as the coffins were simultaneously lowered to the sound of a squad of buglers playing the last post.

As the Second World War ended, the Royal Australian Engineer Training Centre closed and all functions were absorbed into the School of Military Engineering that had been established at Casula in Sydney since 1939.

Annually, and only since 1995, the Army Recruit Training Centre conducts the Kapooka Tragedy Memorial on the 21st of May. Although a small and intimate service it provides a forum for those that still reside within the local community an opportunity to silently reflect on the tragedy and costs of service. At the time of the incident a prevailing social strategy existed of not talking about the difficult issues, rather focusing on moving on after the war. Consequently the memories of these fallen had long only been held by families and friends, many who are clearly carrying the burden of age.

As I reflected on a simple handshake with a member who was, as fate would have it, attending an appointment at the time of the blast, I found myself compelled to strike this article driven by the sense that it needed increased awareness as an integral aspect of Corp history. I was shocked that as a member of the Corp for a decade and as a past Adjutant of the School of Military Engineering I was unaware of the magnitude of such an event.

As age will continue to claim those that remember that day I believe it is fitting the Sappers that continue to serve make effort to remember those that have given their lives, not simply in conflict, but also through training for it.

As an Army we continue to learn how to manage those that suffer following a traumatic event and perhaps the lessons associated with the past at times have not been fully learnt, as I am sure mates and commanders of those Sappers lost in recent operations can relate to the comments below:

'Fellow instructors and sappers were devastated by the explosion particularly those who had to pack up the belongings of their mates. Paddy Cranswick was particularly distressed he was left alone in the six-man tent he had shared with sappers killed in the explosion for several days. Paddy still has nightmares which, he says, are like repeatedly watching the accident unfold 'as if watching it on TV'.

Perhaps we as a Corp owe elements of our Demolition Range Safety practices to these members and that the tragic loss has in some way contributed to the safety of all Sappers hence forth, and for that, lest we forget.

The Kapooka Tragedy Memorial and the Wagga Wagga War Cemetery are open to the public and recommended as a worthy Visit. The Author would like to thank and acknowledge the efforts of local historian Sherry Morris in researching and helping to revive this part of Corp History.

ANZAC Day

Villers-Bretonneux

By Corporal Philip Managrave

I am a proud recipient of the Chief of Army's 'I'm an Australian Soldier' Scholarship 2014; I had the unique opportunity to represent the Australian Defence Force and to participate in the ANZAC Day commemorations at Villers-Bretonneux, France. The following retraces my journey and the importance of understanding the gravity of World War 1, the impact it has had on me and the relevance to the Royal Australian Engineers of today.

As I walked up the slope toward the Australian National War Memorial at the Villers-Bretonneux Military Cemetery, an overwhelming sense of sadness came over me.

I passed over the well manicured lawns lined with rows upon rows of gravestones and stopped to ponder how these men must have felt in the cold darkness of war thousands of miles from home, missing their loved ones.

As the bugle played I stood proudly at attention in the freezing temperatures as flag orderly on the most memorable ANZAC Day in my experience, with a renewed appreciation of the thousands of soldiers who had lost their lives in this region. By acknowledging their sacrifice and commitment to their country, I was filled with a sense of privilege representing our forebears on such a significant occasion.

Later that morning I was handing a wreath to the Minister of Foreign Affairs, the Honourable Julie Bishop, at the wreath laying ceremony in Bullecourt Township. Throughout my tour of the Western Front the Commonwealth War Graves Commission's promise, "We will always remember them", was clearly evident.

ANZAC Day 2014 ceremonies were concluded at Digger's Memorial just outside of Bullecourt Township where I had the pleasure of being addressed by the Chief of Joint Operations, Lieutenant General Ash Power followed by meeting with some French soldiers.

A lasting impression is the number of cemeteries throughout France and Belgium and the fact that many of these soldiers resting there are unknown to man. Everywhere I travelled I came across a cemetery and I realised how inconceivably enormous the number of lives lost in World War 1 is without seeing it firsthand.

The amount of work that has been invested into the myriad of cemeteries throughout France and Belgium are a constant reminder of the loss of so many lives and why we must continue the traditions of honouring and remembering the fallen.

The day following ANZAC Day I visited the Le Tommy Museum and recreated tunnel system at the rear of Tommy's Cafe, Pozieres (Somme Offensive) where thousands of rusty old projectiles are stacked in rows, a sobering reminder of the devastation that once took place on this site and the remnants of war that remain scattered throughout this beautiful land.

Opposite page: Dawn at Villers Bretonneux, ANZAC Day 2014.
Below: CA, LTGEN David Morrison, CPL Philip Managrave, Mariah Duncan and RSM-A WO Dave Ashley. (Source: Department of Defence)

During my tour I placed small wooden commemorative crosses at our soldiers' graves on behalf of Australian school children as part of an Australian War Memorial initiative. Each cross contained a unique hand written message, allowing the school children to pay their respects and honour the fallen. It was definitely one of the highlights of my tour to be able to place these tokens on graves on behalf of the children.

I had my travelling companion, AWOL the bear, who comes from Weir State School where my son attends. AWOL provides an important link between the military and students of the school, helping them understand the importance of our military history and why we need to remember the sacrifices made by our predecessors. AWOL is very popular and he has been on several deployments overseas, however, this would be one of the most memorable highlights of his travels to date.

Another significant and enlightening part of my tour was Hill 60 (The Battle of Messines 1917) where the German frontline was obliterated by the British and allowed further advances toward the enemy; it is a monumental piece of history, especially as a Sapper. Traversing the entirety of the craters gave new meaning to the term mining and tunnelling and the complexities encountered by the Field Engineers of old and what now remains as a gentle reminder of an extremely influential event that helped shape the battlefield.

The sheer size of one of the craters I paced out was over 250 paces in diameter, with a depth I could not believe without seeing it with my own eyes. The history behind Hill 60 is a reminder of the importance engineers played within the battlespace, the discipline required and the professionalism to carry out the task no matter the consequence to one's own life. The mining operations we conduct in today's training environment are minute in comparison; however our advanced equipment, tactics and techniques have been adapted to facilitate modern warfare and are still an important aspect to counter mobility and shaping the battlefield.

Why it is so important to remember?

Our forebears were selfless, accountable, and professional soldiers that fought for their country and it is our responsibility to ensure the ANZAC traditions are remembered and upheld.

How is this relevant to Combat Engineers of today?

In the modern Army it is our role to provide a capability to the main effort being mobility and survivability support; it is our responsibility as sappers to ensure commanders understand how to incorporate our capabilities to enhance their strategy on the battlefield in order to allow the best possible outcome.

How has this changed my perspective of the Army and Australian military history?

Having completed my battlefield tour of the Western Front I have developed a better understanding of the hardships the soldiers and officers that served during World War One faced and the significant decisions they had to make in such harsh conditions. I also gained a comprehension of the resilience required to maintain the professionalism and values that soldiers, just like me, demonstrated 100 years ago. We have a duty to incorporate the 10 core values of the Australian Soldier into to our daily life and fully understand what they mean.

As junior leaders we need to ensure these values are displayed at our level through positive mentoring and leadership practices. The Chief of Army's 'I'm an Australian Soldier Scholarship' has developed my leadership significantly and provided a greater insight into military history and what it means to me.

The Invictus Games

The Invictus Games initiative is an international adaptive multi-sport competition for current and former military personnel who have been wounded, injured or become ill in service to their country.

The Australian Defence Force, in partnership with the Returned and Services League (RSL), supported a team of 36 serving and former serving wounded, injured and ill military members to compete in the inaugural event.

Medal tallies were not officially recorded for the Invictus Games, but Australia won close to 20 in events such as athletics, cycling, archery, swimming and rowing.

The Australian team also made an impression on the other nations with their style and sportsmanship during the wheelchair rugby and wheelchair basketball events.

Prince Harry said:
"the games shone a spotlight on the unconquerable character of servicemen and women and their families – their invictus spirit…These games have been about seeing guys sprinting for the finish line and then turning round to clap the last man in. They have been about team-mates choosing to cross the line together; not wanting to come second, but not wanting the other guys too either. These games have shown the very best of the human spirit."

The Royal Australian Engineers were represented by Sapper Curtis McGrath (6ESR), Sapper Matthew Taxis (2CER) and retired sappers Leon Seccombe and Dennis Ramsay.

Opposite page, main image: The Australian Invictus Games Team gathered in Sydney on September 3; **Top left:** Dennis Ramsay and RAAF FLTSGT Tony Benfer of No. 23 Squadron hit the court during a game of wheelchair rugby against Denmark; **Top right:** Leon "Harry" Seccombe joined Assistant Minister for Defence, Stuart Robert for the launch of Australia's Invictus Games campaign at Parliament House on Tuesday 26 August 2014.
This page, main image: Sapper Curtis McGrath of 6ESR, prepares for a swimming event at the Invictus Games in London on 14 September 2014;
Top left: Sapper Matthew Taxis of 2CER, and former military policeman Sarah Archibald, pose with His Royal Highness Prince Harry after being awarded their gold medals during the Invictus Games Jaguar Land Rover Driving Challenge; **Top right:** Dennis Ramsay wins the ball during a game of wheelchair rugby against Denmark;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