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Spring Edition
2006



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Contents

Distribution	4
Editors Comment	5
Letters to the Editor	8
A Bigger Army	11
Chief of Army - Order of the Day	12
Regimental Aspects	15
Letter from Queen Elizabeth II	17
Letter to Queen Elizabeth II	18
Representative Colonel Commandant	19
Regimental Master Gunner	20
Headquarters Land Command Artillery	21
2nd/10th Field Regiment	22
4th Field Regiment and Relevance	23
20th Surveillance and Target Acquisition Regiment	25
16th Air Defence Regiment	31
7th Field Battery	33
Joint Proof and Experimental Unit	35
Professional Papers	37
Hardened and Networked Army & Plan STAN: An Artillery View	39
Improving Joint Fires in the ADF	42
Looking to the Future of Fires – USMC	54
Fighting with Fires and Effects – USMC	57
Delete: ‘Offensive Support’ Insert: ‘Joint Effects’	60
It’s Not a Black Art	66
Personnel Aspects	69
Vale	71
Honour and Awards	74
New Command and Regimental Sergeant Major Appointments	75
DOCM-A	76
SCMA	78
Retired Full-time Officers’ List	80

Capability, Training and Doctrine	81
Offensive Support Transformation – Land 17	83
Offensive Support Battle-space Operating System Section	86
Defence Materiel Organisation	89
CATC – Artillery Trade and Training	92
Newspaper Article	94
Operations	95
Overwatch Battle Group (West) and AATTI-VI	97
Operation Acolyte	103
Australian Army Training Team (Iraq) - IV/V	104
Evacuation Operations	105
Combat Team Thor	108
Operations in East Timor’s Rural Districts	110
Newspaper Article	112
Articles	113
Rifle Company Butterworth - ‘The Bad Ram Tour’	115
Long Tan 40 years On	118
The Week Remembering the Battle of Long Tan	121
The Air Observation Post	123
Sound Ranging - It’s 90 Years On	126
Book Reviews	129
Monash: The Outsider Who Won a War	129
Warrior of Kokoda: Brigadier Arnold Potts	130
Unit and Sub Unit History	133
7th Field Regiment	135
16th Field Battery	137
7th Field Battery	140
Associations & Organisations	141
Associations & Organisations Contact List	143
Benefactors of the Royal Australian Artillery Regimental Fund	146
National Museum	149
History Sub-Committee	151
Association Reports	152
Advertisements	154
RAA Regimental Shop	154
Order Form - ‘History of 18 Light Anti Aircraft Regiment - Take Post’	155
Order Form - ‘Tasmanian Colonial Artillery 1803–1903’	156

Memberships and Miscellaneous Application Forms	157
Royal Australian Artillery Association (QLD)	157
Royal Australian Artillery Association (NSW)	158
Royal Australian Artillery Association (ACT)	159
Royal Australian Artillery Association (TAS)	160
18th Light Anti Aircraft Association	161
Locating Artillery Association	162
A Field Battery Association	163
41st Battery, 11th Field Regiment Association	164
105th Field Battery Association	165
Royal Australian Artillery Historical Company	166
North Fort Volunteers	167
Memorial Walk Information	168
Regimental Publications Index	170

Distribution

- Representative Colonel Commandant
- Colonels Commandant
- Royal Australian Artillery Association (QLD)
- Royal Australian Artillery Association (North Queensland)
- Royal Australian Artillery Association (NSW)
- Royal Australian Artillery Association (NSW) Newcastle Sub-Branch
- Royal Australian Artillery Association (ACT)
- Royal Australian Artillery Association (VIC)
- Royal Australian Artillery Association (TAS)
- Royal Australian Artillery Association (SA)
- Royal Australian Artillery Association (WA)
- Royal Australian Artillery Association (NT)
- Miscellaneous Unit and Sub Unit Associations
- Royal Australian Artillery Historical Company
- Royal Australian Artillery National Museum
- Head of Regiment
- All COs
- All BCs of Independent Batteries
- RMG HQ CATC
- All RSMs
- DJFHQ (Joint Exercises and Targeting)
- 1st Field Regiment
- 2nd/10th Field Regiment
- 4th Field Regiment
- 7th Field Regiment
- 23 Field Regiment
- 7th Field Battery
- 16th Field Battery
- 48th Field Battery
- 8th/12th Medium Regiment
- 20th Surveillance and Target Acquisition Regiment
- 16th Air Defence Regiment
- School of Artillery
- Joint Proof and Experimental Unit
- 1st Ground Liaison Group
- Miscellaneous Individual Gunner Officers/Warrant Officers and SNCO

Editors Comment

Introduction

The content and variety of articles and unit reports in this edition of the Liaison Letter is testament to the wide and varied range of operations and activities that individuals and sub units of the Regiment are currently undertaking or have recently completed. These are professionally, and hopefully personally, rewarding times for Gunners as they find themselves individually and collectively involved in operations across the globe, as well as here at home in Australia. With the current high tempo in mind, as well as the question in the mind of some as to where do Gunners fit into the force structure to support operations, I draw readers attention to the unit report by Lieutenant Colonel M.J. Kingsford in Regimental Aspects, entitled 'Relevance and 4th Field Regiment'. In view of the recent announcement by the Federal Government regarding increasing the size of the Army I recommend reading the Chief of Army – Order of the Day which is included in this edition.

I would like to acknowledge not only the individuals who continue to support the Liaison Letter, but also those who have been sufficiently motivated to contribute for the first time. I would particularly like to acknowledge the contribution of the members of 105th Medium Battery especially Bombardier T.E. Whittaker and Lance Bombardier M.P. Raw. It is very impressive to see our junior non-commissioned officers taking the time to record their experiences.

Unwitting Erosion of Traditions

Although in recent times there have been some very positive moves to preserve our history, including the establishment by the Regimental Committee of the History Sub Committee, I have observed a re-occurring theme of sacrificing some of our historical links in the name of innovation. To the uninitiated some of these changes appear to have been needlessly thrust upon us. I appreciate this may not always be the case and that there is almost always sound rationale used to support these decisions. The aspect I would like to raise is whether these decisions have been taken for short term expedience rather than any real long term benefit.

This theme got me thinking about why is it that we as Gunners are prepared to forgo traditional aspects of our Regimental heritage to make changes for apparent short term outcomes or what seemed like a good idea at the time. A few examples which come to mind are:

- The disbandment of 102 Battery in the 1987. I acknowledge from the outset that all batteries have a worthy lineage and rich tradition and that it is always a very difficult decision to disband a unit or sub unit. This aside, it still confounds me how we as a Regiment could allow 102 Battery to be disbanded given its role in the Battle of Coral. Imagine the outcry if a decision was taken to disband 'A' Battery.
- School of Artillery to Offensive Support Division. Fortunately the title quickly reverted.
- Regimental Officers and Sergeants Messes to Bridge Barracks Officers and Sergeants Messes. A direction thrust upon us as part of the whole offensive support division experiment. Unfortunately the mess names did not revert back when the School of Artillery returned.
- Title change from Commanding Officer / Chief Instructor to Chief Instructor. Another offensive support division initiative which was short lived.
- Recent change of the title Commanding Officer / Chief Instructor. For those unaware the title is now Commanding Officer School of Artillery.
- Title of this Journal. Even such small things as the title of 'Liaison Letter' for our official journal. This title has been used since 1948 yet for well intended reasons from time to time I receive suggestions to give the journal a more 'catchy' name. The title and publication has served us well for almost 60 years and I believe in the old adage 'if it ain't broke - don't fix it' (without very good reason).

- Instructor Arm Bands and Student Appointment Bibs. During my time as a student at the School of Artillery the two accoutrements I recall were the 'student bib' used to designate appointments in the field and the instructors green and gold arm band. I look back on the bibs with a 'fond' smile and must admit I see their demise as no major loss. The armband is another matter. It has always been my view that an instructor appointment at the School of Artillery was acknowledgement that the individual was at the top of Gunnery technical proficiency within their peer group. The arm band was very visible recognition that the individual was an expert in their field and therefore the custodian of the Regiments' technical knowledge, along with the honour and privilege of serving as an instructor at the School of Artillery. The arm band also brought with it certain responsibilities and expectations from both peers and students - I refer here to technical mastery. I am sure a cogent and logical argument to support a very good reason to remove the armbands was made.
- Regimental Number. Whilst not specifically unique to the Royal Australian Regiment, our Regimental number being replaced by a PMKEYS number essentially because it suited the new personnel administration computer program better. I am sure someone can enlighten me to the 'real' reason.

The question I leave you with is that are we as Gunners allowing some of our smaller traditions to be eroded away or is it just me being a little too precious - I look forward to hearing the views of readers.

Mount Schanck Trophy

I would like to thank all those individuals who have taken the time to respond to my request for help in filling in the missing 'winner' blanks on the Mount Schanck Challenge Trophy. Although the response has been good there are still more missing years so if you haven't contacted me and you have a Battery to put forward with supporting evidence (if possible) please do so. The list of winners as they are currently recorded on the trophy is in the Mount Schanck article published in the Liaison Letter 2006 - Autumn Edition. The information I have received as a result of my request is outlined below. The winners for 1974/1975, 1987 and 2005 appear straight forward and undisputed, however the winner in 1967/1968 is less clear although the evidence highlights a possible error in the current Mount Schanck records.

- 1966/1967 - 26th Battery, 7th Field Regiment, Willoughby (Source: Apparent confusion between period dates trophy 'won' and 'held'.)
- 1967/1968 - 13th Field Battery, 5th Field Regiment, Brisbane (Source: Mount Schanck Parade Program dated 1st December 1968 provided by Colonel A.R. Burke Colonel Commandant Northern Region.)

Based on the date of the parade program provided by Colonel Burke the Mount Schanck Trophy was won in the immediately past year, that is, 1967-68. Therefore the current listing of the winner for 1967/1968 (26th Battery 7th Field Regiment) is incorrect. It is highly likely that 26th Battery 'WON' the trophy for the period 1966/1967 'but actually HELD' the trophy for the period 1967/1968 before it passed to 13th Battery, 5th Field Regiment in December 1968. It would simply appear to be an error of engraving the wrong dates on the trophy. This would explain why there is no winner shown for 1966/1967. (Note: This is a vacancy I did not clearly highlight as a vacant line in my article on the Mount Schanck Trophy published in the Liaison Letter 2006 Autumn edition). On the balance of probability the winner in 1966/1967 should be 26th Battery, 7th Field Regiment.

- 1974/1975 - 37th Battery, 10th Medium Regiment, Colac (Source: Editor of 10th Medium Regiment Journal and Colonel G. Farley and Cascabel. The trophy was awarded at Cultana in April 1975.)
- 1987 - 104th Field Battery, 1st Field Regiment, Brisbane (Source: LCARTY and Lieutenant Colonel R. Gibson former Battery Captain in 1987.)
- 2005 - 7th Field Battery, Perth (Source: LCARTY.)

Next Edition

Let me start with an apology for amending the date for submissions for this edition from that published in the last Liaison Letter. The rationale for the change was to ensure the Spring Edition is distributed prior to the turbulence of the posting cycle.

Contributions for the Liaison Letter 2007 – Autumn Edition should be forwarded to the editor at the address below by no later Friday 2nd March 2007. Any 'late' correspondence after that should be sent to the editor via the School of Artillery.

Conclusion

For the first time since I started as editor in 2000 I find myself in the position of having to consider deferring publishing submissions in this edition due to the number I have received. I again thank everyone who has contributed to this edition, the response to the request for submissions has been magnificent and from my perspective, as well as the readers, your efforts are most appreciated. I look forward to your continued support for the 2007 - Autumn Edition.



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Major
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Editor's Note: Retired or serving Gunners who would like to receive future copies of the RAA Liaison Letter should contact the editor by email or write to the address above with their mailing details. Conversely if you would like your name removed from the mailing list please advise the Editor.

Letters to the Editor

Artillery Day Greetings

Gentlemen

From all staff at Land Command Artillery, please accept our best wishes and warm regards on this occasion of the official birthday of the Royal Regiment of Australian Artillery. Colonel Don Roach, Commander Land Command Artillery, passes on his regards and will be gathering with available Gunners in Timor to mark the day. Although this is the last opportunity for Land Command Artillery to acknowledge this day, we remain confident that the Royal Australian Artillery is well placed to meet the Australian Defence Force future offensive support, surveillance and target acquisition and ground based air defence needs.

All the very best, Ubique,

Lieutenant Colonel Paul McKay
SO1 Artillery, Land Command Artillery

G'Day from the USA

Terry

I received my Liaison Letter, thankyou, and thanks for your continuing excellent efforts as the editor. Life here in the United States is interesting, however I have not lost my Artillery roots as the Combined Arms Centre (for which I am the Liaison Officer) owns, amongst a myriad of things, the Field Artillery School and Centre and the Army Joint Support Teams (which teach all air ground courses including Close Air Support).

Since I have been here, I have run into three former United States Instructors-In-Gunnery from our School of Artillery that folks maybe interested in. Jack Silvers (former IG Locating 1989–1991), now retired and works as a defence contractor here at Fort Leavenworth for the improvised explosive devices (IED) defeat training and tactics team. Mike (Kit) Koba (former IG 1993–1995) is currently a Lieutenant Colonel in Washington working in Human Resources Command. He is the career advisor for the field artillery soldiers. Chris Mack (former IG 1995 - 1997) has just finished command of the Field Artillery School support battalion (2-2 Field Artillery Battalion). He will be replacing Mike Koba in Washington in the spring.

Ubique

Lieutenant Colonel Scott Clingan
Australian Army Liaison Officer
US Army Combined Arms Centre/ABCA STANREP

Feedback on Letters to The Editor

I was pleased to see such a complementary letter from Brigadier Ken Fullford; he was the Commanding Officer /Chief Instructor of the School during my Young Officer's Course and a very hard task master. His book 'We Stood and Waited - Sydney's Anti-Ship Defences 1939-1945', RAA Historical Society 1994, typifies the technical precision of the man. I would regard any compliment from him as very laudatory.

I must agree with Sid Penhaligon that I had never heard the term 'Grey-coats on - Grey-coats off'. In my time at RMC 1956-59, 'Great-coats on - Great-coats off' was used intensely, for the same reason detailed by Sid. In minutes before 0800 hours Parade, a decision would be made by the Battalion Sergeant Major as to whether Great-coats were to be worn, often countermanding an order given only a short time previously. The delay in relaying such decisions frequently caused near-panic to comply with the latest change, especially if one resided 'Over the Hill' in the area now occupied by Duntroon hospital and which necessitated leaving one's barrack block at least five minutes before the time of any parade on the Parade Ground.

Congratulations on the continuing quality of the Letter and thanks for your perseverance with it.

Brigadier G.T. Salmon AM (Retd)

List of Benefactors – Missing Initials

Terry

I am enjoying very much the most recent edition of the Liaison Letter. A nice balance of information on policy, hardware and personnel which keeps the 'oldies' up to date, although I must admit some of the abbreviations stir the old grey matter.

Looking through the list of Benefactors, including me, would it be possible to provide full initials for those who in fact have more than one Christian name? To that end, I have tried to provide those that are missing.

Looking forward to the Spring Edition.

Warm Regards

Colonel M.C. Crawford MBE (Retd)

Editor: Many thanks for your comment and assistance in this regard. I appreciate where you are coming from as it is a bit like the instructor who drags his finger nails along the chalk board. At your behest I have continued to endeavour to develop your good work. Believe it or not some people do only have one initial.

Gunners are Special People

Dear Major Brennan

I herewith respectfully request to be added to the mailing list of the RAA Liaison Letter. I was loaned two back copies from an old mate I served with back in the 60's and I thoroughly enjoyed the presentation, even read a great 'letter to the Editor' from my old commanding officer (Then Lieutenant Colonel Ken Fullford) at 1st Field Regiment. We're off to Enoggera for an 'Old & Bold' Night in the 'Snake Pit'. Looking forward to it Very Much!! Gunners are Special People!!

Many thanks in anticipation.

Ubique Tony Foley.

Editor: Your name has been added to the mailing list with pleasure. I am extremely pleased to be increasingly receiving requests from Gunners to be placed on the mailing list.

Colonel Commandant Northern Region

Hello Terry

Congratulations on another well balanced edition of the Liaison Letter. It reminded me that I had been somewhat neglectful with contributions this time as matters such as organising the Gunner contingents (WW2 and post WW2) for the Brisbane ANZAC Day Parade and re-raising the RAA Association (Qld) Inc have somewhat distracted me. As a fellow editor and publisher, I have a great respect for the way my fellows pull items out of history and present them to break up otherwise potentially dry reading matter. Your very kind review of my concise history of the 105th, the Tom Simpson Memorial, the origins of the 4th Field Regiment RAA Memorial Garden and the 'Tiger Rag' extracts updating the 105th Association demonstrate that you are reading widely and ensuring that the benefits of your literary adventures are shared with the readership of the Liaison Letter. Well done, mate.

It was also refreshing to find that at last the elements of my flock which I persuaded to contribute to the RAA Central Fund have finally been recognised - 105th Battery Association and the RAA Retired Officers of South-East Queensland. Thank you for this - there will not be any phone calls caused by their omission this time!

Your review of my 105th history warmed my heart - thanks, mate. Whilst I did not plan to undersell this publication, I had to be very careful to set it aside from being a formal historical piece for to have footnoted it would have added at least another 50 percent to its size - an undesirable approach which would also have detracted from the basic aim of providing a story that is easily readable by both old Tigers and the young cubs of today's medium battery. As you rightly commented, however, it is as accurate as I could make it - proof readers such as Ray Sunderland, Colin Cunningham, George Salmon, Peter Tedder, Paul Stevens, Bruce Stark and Alan Hutchinson were all invited to comment on relevant chapters and the readership of 'Tiger Rag' also contributed as it was published by sections in the Rag over the last ten years.

The Mount Schanck Challenge Trophy article also caught my eye. During a couple of years of research on the 4th Field Artillery in Victoria, I became a great fan of the Clarke Family. They were quite unique in their support for the military and the flair and dedication which established the Rupertswood Battery and maintained it indelibly enshrined the Clarkes in my mind. Lindsay Cox's book 'The Galloping Guns of Rupertswood and Werribee Park' highlights the patriotism of this family and I felt like I had dropped back a century when I spent a delightful day of exploration at Werribee Mansion (after playing a round of golf at Werribee Park, of course.) Nevertheless, there is a rub to this reflection - my battery's award of the Mount Schanck Trophy has somehow dropped off the list. I say 'my battery' because I was the Gun Position Officer of 13th Field Battery, 5th Field Regiment during 1967 and up until I transferred to the ARA on 21st February 1968. It won the trophy in 1967-1968.

Ubique

Colonel Arthur Burke OAM (Retd)

Editor: Many thanks for all your comment and feedback. I support your claim in regard to when 13th Field Battery won the Mount Schanck Trophy (see my Editors Comment section). Hopefully this

error and other omissions can be rectified as soon as possible.

107 Battery History

Dear Major Brennan

Re: Letters to the Editor Liaison Letter 2006 – Autumn Edition

Further to my letter on 107 Battery history. I wish to add an Addendum. Lieutenant J.P. Abundo was correct, in stating in the Liaison Letter 2005 - Spring Edition, that 28 Battery was redesignated 107 Howitzer Battery in 1916.

In the reorganisation of the field and howitzer brigades in the AIF artillery, the last field battery of a brigade was transferred to the howitzer brigade (which became a field brigade) and a howitzer battery was transferred to the field brigade. This was the general movement of the reorganisation.

However 'It is said' that in at least one case the guns and the title of the batteries but not the men, were exchanged. This applied to 7 FAB, whether this also applied to the other field brigades in the 3rd Division Artillery I don't know.

Therefore 28 Battery of 7 FAB became 107 Howitzer Battery and 107 Howitzer Battery of the then 23 Howitzer Brigade became 28 Battery of 23 Field Artillery Brigade.

References:

- Page 681, Appendix No 1, Note 3 Volume 5 Official History of Australia in War 1914-1918 by C.E. Bean
- Correspondence with Keith Glyde, Tasmania

Yours Sincerely

R.C.M. Toplis

Editor: I thank you for your many letters they are most appreciated. I draw the attention of readers to the history article on 7th Field Regiment in this edition.

ACT News

Dear Terry

I received the Autumn Edition of the Liaison Letter which I read with great interest. Congratulations on your good work in producing this publication. It is certainly a credit to you. Nothing much to report from here in the ACT. The Association is struggling hard to keep going The only real regulars are John Whitelaw, Sid Penhaligon, George Salmon and

myself. Still we enjoy it so that is the main thing I suppose.

Cheers for now. Kindest Regards

Keith Cossart

Editor: As a former secretary of the Association when it had well over 100 paid up members and had regular monthly gathering with very good attendance, with the exception of winter, it is disappointing to hear the Association is not as vibrant as it was once. I hope things pick up in the near future.

A Bigger Army

ON 24 AUGUST, 2006, THE GOVERNMENT ANNOUNCED A FURTHER EXPANSION TO ARMY, OVER AND ABOVE THE HARDENED AND NETWORKED ARMY. THE GOVERNMENT PRESS RELEASE EXPLAINED THE ANNOUNCEMENT AS FOLLOWS:

In order to fully meet future regional and global security challenges, the Government has decided to increase the size of the Army by two additional battalions. The Army will increase to eight battalions, with an additional 2600 soldiers recruited.

Ever increasing security challenges mean the Australian Defence Force must be stronger, more versatile and adaptable. As recent events in East Timor and Solomon Islands have again shown, Australia has, and is seen to have, a leadership role in contributing to security and stability in our region. Regional states will continue to look to Australia for help, and we must have a capability to act in a manner commensurate with those responsibilities. At the same time, the ADF also needs the capacity to contribute to coalitions in areas further afield where our interests might be at stake.

The new battalions will be raised in two stages. The headquarter elements of the first battalion will be established later this year. The battalion will be manned by the end of 2008, and will be ready to deploy overseas on operations in 2010, if necessary.

The precise timing of the establishment of the second battalion will be determined once the core capabilities for the first battalion are substantially in place.

This increase in the size of the Army is in addition to the enhanced capability for the land forces that was announced late last year as part of the Hardened and Networked Army initiative.

In order to support this expansion, the government has foreshadowed a number of announcements on Recruitment and Retention. Again, the press release states:

The Government has also decided on a number of innovative recruiting and retention initiatives to ensure the ADF is able to attract and retain the people that are central to the maintenance of our defence capabilities. Retention will be a particular focus. The broad scope of these initiatives will be announced by the Minister for Defence over coming weeks.

The Chief of Army has released an Order of the Day, which follows.



ORDER OF THE DAY A LARGER ARMY

Today the Prime Minister announced a further increase to the size of the Australian Army. This increase is in addition to that announced, in December 2005, as part of the Hardened and Networked Army. In total these two increases will see a Regular Army of approximately 30,000.

Government has authorised this increase in the size of the Army for two reasons. First, in anticipation of increasing strategic volatility and further demands being placed on the Army both in our region and further afield. Second, in clear recognition of the operational tempo of the Army right now in Iraq, Afghanistan, East Timor, The Solomon Islands and the wide range of smaller United Nations and other deployments.

The Hardened and Networked Army plan already recognises changes to both the global security environment and the nature of our future battlefield. The HNA plan will continue with its emphasis on combined arms battle groups and the maximisation of Army's firepower, protection, mobility and communications. The fundamental task of Army will remain close combat in combined arms groups.

However, as we have seen in recent campaigns, as an Army we are increasingly required to be among populations at risk, supporting, protecting and persuading them. This is likely to continue into the future. Defence and security challenges of this nature are very demanding and will take place in complex environments. They will require more boots on the ground.

Over the next few weeks the details of the plan to further increase the size of the Army will be explained. Right now I would like to provide an outline of the major aspects of the plan. We will:

- Split 5/7 RAR and make two mechanised battalions under command of HQ 1 Brigade and locate 7 RAR in Adelaide;
- Re-role 3 RAR as a light infantry battalion, under command of HQ 3 Bde and in due course locate it in Townsville;
- At a time to be determined in the future re-raise 8/9 RAR under command of HQ 7 Brigade in South East Queensland;
- Raise and supplement appropriate elements of Combat Support and Combat Service Support in existing brigade locations; and
- Extend the Defence Capability Plan to acquire the necessary extra equipment to equip the new units.

This will mean an Army of 8 infantry battalions. This will increase our capacity to provide combined arms battle groups and allow us to meet Government's overarching requirement of deploying and sustaining a brigade on operations as well as separate contingency forces.

The task of increasing the size of the Army will present us with many challenges. The most significant challenge will be recruitment and retention. As an Army we are currently under strength and must at first overcome this deficit before embarking on the plan to make a larger Army. We can achieve the task. The announcement by the Prime Minister provides substantial funds to implement an extensive range of personnel initiatives to help recruit and retain the soldiers required.

This increase to the size of the Army as well as being a recognition of the likely increase in future tasks is a clear statement of the value of the Army's contribution to the Nation. Your efforts in the field and in barracks today are vital to the security of Australia. You should all be proud of what you are achieving and the way that you live our Army and Australian values. I look forward to continuing to work with you as we grow the Army and continue to serve the Nation.



P.F. LEAHY, AO
Lieutenant General
Chief of Army

24 August 2006

Regimental Aspects

The First AIF on Gallipoli

‘Life was very dear, but life was not worth living unless they could be true to their idea of Australian manhood. Standing upon that alone, when help failed and hope faded, when the end loomed clear in front of them, when the whole world seemed to crumble and the heaven to fall in, they faced its ruin undismayed.’

*C.E.W. Bean, The Official History of Australia in the War of 1914-1918,
Volume 1, The story of ANZAC (Sydney, 1921), page 607*



BUCKINGHAM PALACE

Major General T. R. Ford, AO,
Representative Colonel Commandant,
Royal Regiment of Australian Artillery.

Please convey my warm thanks to the Colonels Commandant, Head of Regiment and all Ranks of the Royal Regiment of Australian Artillery for their message of loyal greetings sent on the occasion to celebrate my eightieth Birthday which is being held today.

As your Captain General, I much appreciate your kind words and, in return, send my best wishes to you all.

ELIZABETH R.

17th June, 2006.



ROYAL REGIMENT OF AUSTRALIAN ARTILLERY
Bridges Barracks, PUCKAPUNYAL VICTORIA, AUSTRALIA 3662

The Private Secretary to Her Majesty the Queen
BUCKINGHAM PALACE

Dear Sir/Madam

I request that you submit for Her Majesty's consideration the following message from the Royal Regiment of Australian Artillery:

The Colonels Commandant, the Head of Regiment, and all ranks of the Royal Regiment of Australian Artillery convey to Her Majesty, their Captain General, their respect and loyalty on the occasion of Royal Australian Artillery Day, 1st of August 2006. On this day the Regiment celebrates 135 years of dedicated service.

Yours faithfully

A handwritten signature in black ink, appearing to read 'T.R. Ford'.

T.R. FORD, AO
Major General (Retired)
Representative Colonel Commandant

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7 July 2006

Representative Colonel Commandant

Major General Tim Ford AO (Retd)

Dear Fellow Gunners,

It has been a busy six months since the last Royal Australian Artillery Liaison Letter with gunners contributing significantly as part of a busy Australian Defence Force that is deployed in a wide range of peace operations around the world. Gunners are involved in these operations both as individuals and as formed units.

I have written on behalf of all gunners past and present to congratulate Major General Ash Power and Colonel (Retired) Tony English on their appointment as Members in the Order of Australia in the Queen's Birthday Honours list. Ash is our senior serving Gunner and we note with pride that he is leading the 1st Division well during these busy times for the Australian Army. Tony's award was in the civilian list for the excellent work he has done over many years as a Professor of veterinary science, but those of us who know him well recognise that at the same time he also served the Royal Australian Artillery with distinction in his reserve career culminating in the appointment as Commander Land Command Artillery. Both Gunners have made major contributions to the Royal Australian Artillery and the community over many years, and it is good to see these so fittingly recognized.



I also congratulate Lieutenant Colonel Craig Furini on being awarded the Conspicuous Service Cross and Warrant Officer Class One Bill Degenaro the Medal of the Order of Australia in the Queen's Birthday Awards.

In June, the Head of Regiment hosted a mid year conference of the Royal Australian Artillery Colonel Commandants at Randwick Barracks during which we again strengthened the connections outlined in the Royal Australian Artillery Strategic Plan between the capabilities required of today's gunners and the heritage and traditions of the Royal Australian Artillery. In particular, we agreed a coordinated approach to guide state and unit associations in their support to the diminishing World War Two associations. The Colonel Commandants also attended the inaugural meeting of Royal Australian Artillery History Sub Committee that was formed last year. As reported elsewhere in the Liaison Letter, thanks to the determined application of its Chairman (Major General (Retired) John Whitelaw) and members, the History Sub Committee has made huge strides in their plan to ensure that the history of the Australian Artillery is fully and accurately recorded. I encourage all Gunners to support them in their collection and collation of data.

I would also like to take this opportunity to comment on the continued development of the Royal Australian Artillery National Museum at North Fort, under the care and support of the Army History Unit and the Royal Australian Artillery Historical Company. I recommend to all a visit to North Fort to see how it has progressed and to view the new Air OP display about to be opened. Much of the development of the Museum over the years has been supervised and assisted by its curator, Warrant Officer Class Two Steve Crawford who has now retired. His magnificent personal contribution has been most fittingly acknowledged by many and we wish him the very best for the future.

I look forward to meeting with you at Royal Australian Artillery activities and to your continued contributions. Good luck and good shooting to all.

Ubique

Regimental Master Gunner

Warrant Officer Class One Paul Washford

'Ultima Ratio Regum' (The final argument of kings)

Motto inscribed on French cannon by order
of King Louis XIV c.1660



Greetings from the Combined Arms Training Centre

Yes, that's right, the CATC has had another name change, just when you were getting used to the 'Combat Arms' we're now the 'Combined Arms'. And it's this change of name that brings me onto what I would like to discuss in this article.

During the year I have been to many conferences and meetings and this word 'change' has been bandied around the corridors of the RAA with a little too much ease. I am not suggesting for a moment that 'change' is a bad thing - we in the RAA have to embrace it and move forward into the future. The RAA has the LAND 17 Artillery Replacement project just around the corner, JP129 TUAV is already upon us and the LAND 19 RBS 70 upgrade (except for one component) is complete. All these and many more minor projects will enhance the capability of the RAA well into future generations.

No, that's not the change I was thinking about. I am concerned at this almost subliminal tendency by some within the RAA community to push for our soldiers to be trained in roles and tasks other than our core business. Are our soldiers moving away from our primary role as 'Gunnery' or are we making them more adaptable and therefore more employable? Depending on who you ask will depend on the answer you get back.

Let's have a look at the basics. What is our role? This is what LWD 3-4-1, Employment of Artillery, 2005 says: *'The role of the RAA is to maximise the Australian Defence Force (ADF) fighting power through the provision of joint offensive support coordination and targeting, indirect firepower, surveillance and target acquisition and ground based air defence'*.

To me, as a 30 year gunner, this seems to sum it all up, but then I'm in the 'X' not the 'Y' generation.

LWD 1 Fundamentals of Land Warfare - Annex C Training to Win states: *'All officers and soldiers must be proficient in the wide range of knowledge and skills that underpin service in any part of the Army. Additionally, they must be proficient in the specialised skills and general competencies necessary for them to perform their particular job'*, and LWD 0-2-2 Character states that: *'Every Soldier is an Expert in Close Combat. The disaggregated battlespace and the array of enemies likely to be encountered mean that there are no secure areas and every soldier needs to be genuinely capable of effective participation in close combat in complex terrain'*.

To put all these quotes into soldier speak the RAA soldier needs to be able to fight and defend himself and at the same time be able to do his job. This is nothing new and the methods currently in place to train our soldiers encompasses all of this and are still valid. Training evolves and new units of competency (UOC) come and go depending on the needs of the service but fundamentally, (as the Head of Regiment puts it), our soldiers are highly educated, flexible, adaptable and widely employable.

Although artillery (the guns) by its very nature has historically been used at the far end of the spectrum of warfare there has and will continue to be many opportunities for RAA soldiers to participate in current and future Australian Defence Force operations. We will continue to fill niche capabilities for the Army until called upon to once again let the guns speak.

To sum up we must be careful not to lose sight of why we are members of the Royal Regiment of Australian Artillery, and we must always make sure we are ready to fulfil our role when asked.

Ubique

Land Command Artillery

*Provided by Lieutenant Colonel Paul McKay
Staff Officer Grade One Artillery, Land Command Artillery*

After 33 years of contribution to the technical control and development of the Royal Regiment of Australian Artillery, Land Command Artillery will be disestablished on 20th October 2006. Structural changes within the Australian Defence Force, centralisation of the joint operations function and the pressure to introduce new equipment have all created additional demands on Army. Unfortunately, the role of Land Command Artillery was not clear within the Australian Defence Force's revised operational structure, so the difficult decision was taken to close the Branch at the end of the year.

Land Command Artillery was raised in 1973, with the Branch evolving through several role, structure and task changes. A consistent thread though, has been the provision of Artillery technical control for Army. This aspect, most notably exercised through the Army Training and Evaluation Program (ARTEP), has been the core role for the Branch and has directly influenced the technical and tactical development of the Corps. The role of Land Command Artillery grew further with the disestablishment of Corps Directorates in the late Nineties. The Royal Australian Artillery was fortunate within Army to retain a central organisation, external to the School of Artillery that could continue to provide Artillery command, control and advice. It was at this stage though, that Land Command Artillery would start to struggle with personnel pressures and external tasking, two issues that contributed to the disestablishment of the Branch.

The key task linked to the closure of the Branch has been to develop a transfer plan for the various key Land Command Artillery tasks. First, command of the 16th Air Defence Regiment will pass to the Headquarters of the 1st Division. This is an important step as it will align all of the three branches of the Royal Australian Artillery, Offensive Support, Surveillance and Target Acquisition and Ground Based Air Defence, under the same command unit. Headquarters 1st Division will also assume responsibility for the ARTEP program, reviewing both 1st Division and 2nd Division Royal Australian Artillery units until the function can be effectively managed through the Combat Training Centre in Townsville.

The key capability development function will be retained within Land Headquarters, with an Royal Australian Artillery coded position to be maintained within the Development Branch. With six major and eight minor projects providing capability direct to the Regiment over the next ten years, it is essential to focus in this area to ensure that we deliver the capability needed by Army.

The School of Artillery will be reinforced as the centre of excellence for all Royal Australian Artillery matters by adopting the Artillery technical control and advice function. The School has the subject matter experts for all aspects of Artillery in order to provide this core function for Army. In addition, the School will continue to provide staff support to the Head of Regiment and Regimental Committee.

Although a significant change for the Regiment, the disestablishment of Land Command Artillery has provided the opportunity to align several functions. Outcomes from the ARTEP will directly inform the command chain, whilst our technical and procedural knowledge will be fostered through the School. These changes are also reinforced by the intent outlined in the Royal Australian Artillery Strategic Plan 2006 - 2011. Delivering the operational capability and effects needed by Army is fundamental to the development and viability of the Royal Australian Artillery. We must now adapt to the changed Artillery structure, and concentrate on the capability, skills, lessons and experience that will allow us to remain as a fundamental system in the complex battlespace.

Colonel Simon (Don) Roach, as the twelfth and last Commander Land Command Artillery, remains deployed on Operation Astute, but has asked me to pass on his thanks and kind regards to the Royal Regiment. The disestablishment of Land Command Artillery on 20th October 2006 closes a 33 year chapter in the history of the Regiment. But with the investment in the Defence Capability Plan and the ongoing operational focus in Army, it is an exciting and challenging time to serve with the Royal Regiment. As outlined in the Regiments' Strategic Plan, it is now up to us to realise the potential.

2nd/10th Field Regiment

2006 saw the Regiment welcome new personnel to the key appointments of commanding officer, operations officer, battery commander 22nd Field Battery, adjutant, quartermaster and regimental sergeant major. With the Commonwealth Games looming only two months into the year, the Regiment held back on gunnery training, focusing on becoming 'Brilliant at the Basics'. By the start of March, the Regiment had completed all mandatory induction training and achieved an AIRN compliancy of above 90%, by far the best performance in the Brigade.

The Commonwealth Games, Operation Acolyte, quickly approached with small numbers of personnel employed in support undertaking a wide range of tasks from late February right through until the end of March. The Chapel Street barracks was quickly overrun by Commonwealth Games support staff on operational tasking, as the Regiment played host to the Army and Royal Australian Airforce engineers and commanding officer 1st Field Regiment. The finish to the Games saw the Regiment participate in the 1812 Overture at the Sidney Myer Music Bowl, in support of the largest ADF tri-service concert band formed in 50 years and it was viewed by more than 11,000 members of the public.

A Dawn Service was held for ANZAC Day at the Chapel Street barracks welcoming many of the 'tribal elders' of the Regiment not seen for some time. The Regiment then departed for Geelong to support the local ANZAC Day march to Johnstone Park, followed by a family bar-b-que at the Geelong barracks, gratefully provided by the members of the 10th Medium Regiment Association. 38th Field Battery was back in Geelong!

Throughout the year, the major refurbishment of the Regiment's facilities in Geelong continued with the promise of an opening before the end of the year. This coincided with the re-establishment of the unit's presence in Colac, and a face lift for the exterior to the Chapel Street barracks.

The Regiment then settled down to focus on basic gunnery, with a change in priority given to the joint offensive support team capability. Field exercises were successfully conducted in May and June, as well as various trade courses were completed, leading up to the focus for the year - the brigade annual field exercise at the start of September. The year finished strongly with the Regiment topping the 95% mark for AIRN, and preparing to provide support to the 50th Anniversary re-enactment of the Melbourne Olympic Games.

The Regiment is now in a good position for 2007 to continue its focus on being 'Brilliant at the Basics'.



Relevance and 4th Field Regiment

*By Lieutenant Colonel M.J. Kingsford
Commanding Officer, 4th Field Regiment*

There has been much talk of late about the 'relevance' of the Royal Australian Artillery in current and future operations. You can almost hear the wringing of hands and nashing of teeth across Australia as the Royal Australian Artillery ponders this issue. Well I must say since April this year the 4th Field Regiment has proven to be very relevant to operations.

Of course the purist would say that the guns have not deployed so why do we need to have them. My answer is that I, like most of you, have insurance policies covering all manner of events that I hope will never come to fruition. The people of Australia should look at our guns and see this as a very capable and potent insurance should we ever get to the level of warfare where they are needed. Certainly recent events in the middle-east have shown what effect artillery has. On the news every night as I write this the M109s of the Israeli Defence Force are firing into Lebanon or the Hizbollah rockets are landing in northern Israel. We are not currently involved in this level of warfare but who knows what the future holds.

It is not to the future that I look at this time but at the present. As I start writing this article I have:

- soldiers assisting evacuation operations from Lebanon;
- a Joint Offensive Support Co-ordination Centre (JOSSC) and a Joint Offensive Support Team (JOST) with Over-watch Battle Group (West) (OBG(W)), as well as some individuals in other units, in Iraq;
- individuals in Afghanistan, the Sinai, and the Solomon Islands;
- 107th Field Battery (plus) on Rifle Company Butterworth (RCB), they have subsequently returned and are focussing on their Ready Battalion Group role; and
- another large contingent based on 'A' Field Battery and 108th Field Battery in Timor Leste have restructured and operated as a rifle company as part of Battle Group Faithful.

Indeed if I had not been able to form another company group then the Commanding Officer of the 3rd Battalion Royal Australian Regiment would have had a more restricted scheme of manoeuvre. This composite battery has undertaken security tasks around the Government buildings in central Dili, a key area that required great discipline and an understanding of the political situation in order for their operations to succeed. By the time you are reading this they will have returned to Australia.

In April a small number of soldiers deployed with the 1st Battalion Royal Australian Regiment Ready Company Group to the Solomon Islands to conduct evacuation operations as part of the effort to re-establish order after the riots. This deployment was undertaken with a few hours notice and utilised the Regiment's secondary task of Evacuation Handling. This is something that the Regiment had trained to do for a number of years.

Shortly after the 1st Battalion Royal Australian Regiment soldiers deployed to the Solomons 108th Field Battery was called upon to replace the infantry on Exercise Croix de Sud in New Caledonia as a rifle company as part of a multi-national amphibious exercise. This deployment was short notice as due to the deployment of 1st Battalion Royal Australian Regiment but 108th Field Battery achieved this task with ease and all reports indicated they did a great job.

Both of the deployments to Timor Leste and New Caledonia are proof that the 4th Field Regiment is relevant to the conduct of Operations Other Than War. The fact that we are trained as soldiers first, regardless of trade or corps, meant that the Regiment was able to restructure a battery and perform all tasks required by the commander on the ground in two different theatres within one month of each other.

All of these deployments have been based on one of the three gun batteries but both Operations Support Battery and Combat Service Support Battery have also provided large numbers of soldiers.

Most of these soldiers are not Royal Australian Artillery hat badged. Indeed without the soldiers of these other two batteries we would not have achieved the same level of effort. Rough calculations show that upwards of 80% of the 4th Field Regiment have been overseas this year either on exercise or operations. To say that the Regiment is not relevant to current operations is to ignore reality.

Aside from these overseas deployments I have had to move a number of the staff from Regimental Headquarters to Headquarters 3rd Brigade Rear to maintain the home front from a governance and welfare point of view. The versatility of the Regiment was again demonstrated as the operations officer became the S3 Rear with the majority of the S3 staff drawn from Operations Support Battery and the Battery Commander Combat Service Support Battery became the S1/4 Rear with a number of key members of his Battery filling key jobs within the S1/4 staff. The fact that members of the Regiment were able to step up to these demanding positions demonstrates the versatility of soldiers from across several corps, all members of the 4th Field Regiment.

As indicated above I have gunners employed in their primary role in Iraq and Afghanistan. They do not have access to Australian guns to provide fire support but they can call upon coalition resources. I have asked these soldiers to write about their experiences when they return so we can draw lessons for future such deployments.

Three times this year I have been asked to provide a rifle company structure for deployment overseas, twice at short notice as mentioned above. The third deployment to RCB was planned from late last year and required 107th Field Battery to undergo some fundamental structural changes and include some reinforcement to meet the requirement. They did this and have since returned from an extremely successful deployment. All their training objectives were met, they had some fun and all returned home safely. Most of them achieved qualifications on weapons we have in our armouries but rarely get to use. It is important to note that all the skills and activities undertaken on RCB have relevance to the Royal Australian Artillery, particularly in our defence of the gun position.

As I mentioned earlier the 4th Field Regiment has an additional role in the manning of Evacuation Handling Centres in support of evacuation operations. The two deployments this year were led by the Operations Officer, Major Jeffery Ashton and occurred at extremely short notice. No other unit in Land Command has this role and it is something the Regiment has had for a number of years but never used to the level they have this year. Soldiers of the Regiment, through their training and professional approach, were able to help Australians return home safely from the Solomon Islands and Lebanon. The latter deployment saw the soldiers man reception rather than evacuation centres. This meant a completely different focus as they helped the Department of Foreign Affairs staff cope with the hundreds of fleeing expatriates.

Gunnery is still there as our primary role and in October we will once again conduct live firing exercises at High Range Training Area and Singleton. I hope that next year we will be able to reach the high levels of training evidenced at the beginning of this year whilst remaining ready to react on any task allocated to us.

At this point you are all probably thinking 'so what, my unit has done similar things'. That is exactly the point I am trying to make, 4th Field Regiment is not unique in the RAA with its experiences this year. All Regular Army Royal Australian Artillery units will have or have had soldiers overseas this year, fulfilling a wide variety of roles. Whether it be manning a weapon locating radar in Iraq, a JOST in Afghanistan, conducting security patrols in the Solomon Islands or providing soldiers for RCB, we have all been relevant to operations. The Royal Australian Artillery should be capitalising on these deployments and telling everyone we see that we can do all this and still have the capacity to provide much more.

Ubique

Development of 20th Surveillance and Target Acquisition Regiment

*Lieutenant Colonel P.R. Swinsburg
Staff Officer Grade One
Surveillance & Target Acquisition Regiment CIT06*

Background

Chief of Army Directive 11/05 dated 8th December 2005 provides the guidance and direction for the establishment of 20th Surveillance and Target Acquisition Regiment (20 STA Regiment).

132nd Unmanned Aerial Vehicle Battery (132 UAV Bty) was raised on 16th January 2006, as part of the growth of the STA Regiment. 132 UAV Bty will command the Army Tactical UAV capability due to enter service in October 2008. Even before personnel could be posted into 132 UAV Bty, personnel were deployed on operations to introduce a Tier I Mini-UAV capability for operational service in the Middle East. This capability married up with the already deployed STA detachment in the Middle East.

131st Surveillance and Target Acquisition Battery (131 STA Bty) currently has a Target Acquisition Troop with two AN/TPQ 36 weapon locating radars deployed in the Middle East and has done so for over 12 months. The STA Regiment is now one of the longest continuously serving units deployed into the Al Muthanna region in Iraq.

Whilst the Regiment was technically formed on 9th October 2005, with the approval of the Unit Establishment, the Regimental Headquarters will complete the raising of 20 STA Regiment in January 2007. Currently 131 STA Bty is administratively commanding both 131, 132 and the CSS Bty.

20 STA Regiment was so named after 20th Locating Regiment which existed for a short period of time in the early 1950's. The Regiments formation date was selected to coincide with the first employment by an Australia force using counter battery fire in World War One during the battle of Passendale.

Concept of Operations

The creation of the STA Regiment has resulted in a fundamental change to the concept of operations for how STA support is provided to brigade (Bde) and battlegroups (BG). The troop level capability brick remains the same, however a STA coordination/fusion cell and a C2 element commanded by the battery commander of either the STA or UAV Bty is now provided with all deployments. Where possible a balanced mix of ground surveillance, UAV and TA elements are provided. It is essential that the Royal Australian Artillery is aware of this change in operations for their exercise and operational planning. The respective battery commanders of the STA Bty's will command the deployed STA element. This provides for a significantly increased STA capability.

The STA battery commander will work with the Bde/BG S2 (Intelligence Officer) and collection managers and synchronises the Intelligence, Surveillance, Target Acquisition and Reconnaissance (ISTAR) effort for the supported formation. The battery commanders will coordinate an ISTAR working group on a regular basis and work with the Joint Offensive Support Coordination Centre (JOSCC) to ensure a coordinated ISTAR, targeting and sensor to shooter network is established.

The STA cell is where the respective troop headquarters are located in the supported formation headquarters. The STA Cell coordinates all STA information flow as well as routine administration and deployment. The STA Cell will also be the location where the direct UAV feeds enter the supported formation headquarters. This information is synchronized with reports from ground surveillance patrols, listening post, target acquisition radars, unattended ground sensors (due to be delivered in 2007/2008) and other formation ISTAR asset to provide increased situational awareness. Information is immediately passed to the operations, intelligence and targeting cell for actions as required.

Risk Mitigation Activities

As part of the development of the STA Regimental concept of operations (CONOPS) and unit development, a series of risk mitigation activities are being conducted. These activities are designed to identify deficiencies in current concepts and procedures. Two activities have been completed so far this year.

The first activity was a JTF headquarters deployment, testing the DJFHQ ISTAR CONOPS. This exercise saw the deployment of the STA Regimental Headquarters to provide an ISTAR Cell to a JTF headquarters, responsible for the synchronization and tasking of all assigned Joint ISTAR assets. The second activity was a field exercise designed to test the Bde/BG STA Cell and assigned STA assets. This exercise included the deployment of a Bde/BG level UAV for the first time and the adjustment and engagement of targets with indirect fire using 1st Field Regiment and 6th Battalion Royal Australian Regiment mortars. During the exercise up to three UAV were flown simultaneously, with at least two UAVs flown simultaneously for up to eight hours per day. The limitation on UAV endurance was due to a lack of UAV crew availability and not aircraft availability.

Both exercises were highly successful and proved that the CONOPS and procedures being developed for both 20 STA Regiment and the DJFHQ ISTAR cell are sound. Some significant training deficiencies were however highlighted. These exercises proved that specialist STA officer and SNCO training is required to be taught to be able to effectively plan and synchronize the STA system, which now includes the UAV and ground surveillance capabilities. Currently these subjects are not taught at the CATC.

A third risk mitigation activity is scheduled for October 2006. This activity will include the deployment of the UAV Bty, with STA elements allocated from 131 STA Bty. During October 2006, 132 UAV Bty has been allocated three weeks of a Bde/BG level UAV capability, on lease from the US. This UAV will be capable of persistent ISTAR operations by day and night with each sortie lasting over 15 hours. This activity will also include the conduct of a Mission Readiness Exercise (MRE) for the next rotation of UAV personnel into the Middle East, as well as a three week STA exercise. A visitor's day will be scheduled for this exercise for those wishing to attend.

Collective Training

In order for the STA C2 element to be exercised fully, and for the surveillance elements to have targets that can be found and tracked, the concept of training for the unit has also had to change. In order to train effectively, all elements of the STA system must be exercised and deployed simultaneously. The result is that target acquisition troops will no longer deploy purely to track indirect fire. These activities, where possible, will be synchronized with a Bde activity, where the entire STA system can be employed. This includes the planning of ISTAR assets, the reporting of information into a STA Cell, the tracking and handoff of surveillance information to other sensors and the creation of information for subsequent action. In the past, a very simplistic training model has been used, which reinforced the stove-piping of information. The STA Regiment is moving away from the old training model and adopting a systems approach to training. The end result for the field regiments may appear to be a reduction in direct support to traditional exercises. What should be noticed, however, is an increase in support for Bde/BG level activities.

Each of the regular Bdes has been allocated a STA command team and STA Cell for support to command post exercises, operational planning and exercise support. Battery Commander 131 STA Bty and staff are allocated to 3 Bde; Battery Commander 132 UAV Bty and staff are allocated to 1 Bde. The STA Regiment headquarters remains in support and allocated with a priority of STA support to DJFHQ.

Trade Migration Plan

A trade migration plan is in draft and has been for a number of months. It is anticipated that the trade migration plan will be released by DGPERs-A in the coming weeks. The trade migration plan allows any Corps soldiers, to transfer to ECN 250/430 without loss of rank or pay during the period 2006-2009. A further grace period extends beyond this period to ensure all personnel have completed ECN 250/430 training. An all Corps recruiting drive will be commencing shortly to reduce the impact the growth of

20 STA Regiment is having on soldiers and non-commissioned officers within the Royal Australian Artillery. The trade transfer to ECN 250/430 is deemed to be only suitable for gunner to sergeant. The length of time require to train warrant officer class two personnel in all STA disciplines preclude their transfer without the loss of rank and seniority.

The base trade for the UAV capability will remain ECN 250 until such time as the DFRT make a ruling on the trade skills requirement and pay-level. With the increased automation of survey and meteorology skills expected over the next three-five years, it is anticipated that ECN 250 will remain the base trade with the emphasis in training shifting to UAV, and the current AMS tasks being an additional skill within the UAV trade.

Before soldiers attend the UAV training, an aptitude testing regime will be put in place. This testing regime is currently under development and will take a number of years to refine. Until that time, soldiers will be accepted in ECN 250 under the current aptitude level for the AMS trade. The current UAV experience being gained by 20 STA Regiment in both Tier I and Tier II UAVs will significantly inform this aptitude testing level and its application.

Personnel and Recruiting

Table 1 below reflects the current Officer manning within the STA Regiment.

Table 1 – 20 STA Regiment Officer Manning July 2006

	<i>Requirement</i>	<i>Avail</i>	<i>Deficiency</i>	<i>Percentage</i>	
LTCOL	1	1	0	100	75% or greater
MAJ	5	3	2	60	50% - 75%
CAPT RAA	8	4	4	50	50% or less
CAPT RAA RES	5	1	4	20	
CAPT OTHER	4	2	2	50	50% or less
CAPT OTHER RES	2	0	2	0	
LT RAA	10	7	3	70	50% - 75%
LT RAA RES	7	0	7	0	
Total ARA Offr (2008)	28	17	11	61	
Total GRES Offr (2008)	14	1	13	7	

Table 2 reflects the current Other Ranks manning for the STA Regiment. The growth of ECN 250 personnel in 8th/12th Medium Regiment will place additional burden on the growth of ECN 250 for the introduction into service of the UAV capability, especially at ECN 250/430 bombardier/sergeant rank.

PR Strategy

A Public Relations strategy to inform Army about 20 STA Regiment has been approved and will commence implementation in the later part of 2006. This strategy will include the conduct of a series of presentations to formation and training institutions on the new capabilities and how they will be employed. A multi-media CDROM and video are being produced that will be distributed widely throughout Army and recruiting agencies to assist in the dissemination of information.

Facilities

20 STA Regiment will move into a combination of refurbished office accommodation and purpose built UAV instructional, simulation and maintenance facilities. The unit will move into the area currently occupied by 25/49 Royal Queensland Regiment. This move will be a phased approach to the occupation of this site, commencing with 131 STA Bty moving into the new area on 1 September 2006. The remainder of the unit will move into the new area progressively with the move complete by March 2007. 25/49 Royal Queensland Regiment will occupy the current 131 STA Bty precinct once those lines have been refurbished.

Table 2 – Other Rank Manning July 2006

	<i>Requirement</i>	<i>Avail</i>	<i>Deficiency</i>	<i>Percentage</i>	
WO2 RAA	8	5	3	63	50% - 75%
WO2 RAA RES	6	2	4	33	
SGT RAA	19	10	9	53	50% - 75%
SGT RAA RES	15	4	11	27	
BDR Rdr	15	7	8	47	50% or less
BDR Rdr RES	8	2	6	25	
BDR AMS	16	6	10	38	50% or less
BDR AMS RES	10	0	10	0	
LCPL Rdr	11	2	9	18	50% or less
LCPL Rdr RES	7	0	7	0	
LCPL AMS	8	2	6	25	50% or less
LCPL AMS RES	4	0	4	0	
PTE Rdr	27	23	4	85	75% or greater
PTE Rdr RES	21	6	15	29	
PTE AMS	22	10	12	45	50% or less
PTE - AMS RES	13	0	13	0	

A Regimental parade will be conducted over the ANZAC day period to coincide with Locating Association activities planned for Brisbane in 2007.

Doctrine

The evolving requirement and importance for new doctrine and guidance on STA operating principles cannot be understated. Draft UAV doctrine has already been produced for the insertion of the Mini-UAV capability on operations. An update to this publication is likely by October 2006 to update this for lessons learnt as well as expand its applicability for Tier II (Bde/BG level) UAV operations.

The new battle space effects publication will also have a chapter on STA operations. This publication will include how the STA Cell operates inside the Bde/BG level and how the STA organization conducts their planning and product development. This publication will also explain the linkages between the ISTAR collection processes and the targeting cycle at both the joint and tactical levels.

To assist in the production of doctrine, the only remaining member from the Combat Arms Doctrine and Development Section (CADDSS) will be attached to the unit for the first half of 2007. We already have an outposted member from CADDSS in Brisbane to meet this task. This has proven extremely valuable in having this person attend unit field exercises and command post exercises to gather information first hand on how the unit is changing. It is disappointing however that with the growth of the STA Regiment, the STA officer position in CADDSS has been removed from the Land Warfare Centre Development Centre (LWDC) unit entitlement. This appears incongruent with an understanding of the need for increased doctrinal development in the area of ISTAR and STA operations.

UAV Training

The introduction of the JP129 UAV capability from 2008 requires personnel to be trained in this capability. As part of the UAV facilities being built a state of the art UAV simulation and training facility will be built in the unit. Contractors will be tasked with the delivery of all UAV training; however, this only extends to soldier training on equipment and does not include employment or planning competencies required by the UAV leadership. This is required to be part of the STA officer and senior non-commissioned officer training continuum.

UAV troop commanders and lieutenant section commanders will be designated as authorizing officers for the purpose of authorizing UAV flight operations. This will require those personnel to have completed specific UAV training which will include airspace management and aviation radio procedure, aviation safety, UAV mission planning, basic flight awareness, meteorology and weather, crew resource management, aviation risk management and an introduction to aviation maintenance procedures. In addition, these personnel will be required to undertake elements of the UAV mission commanders course and complete a written and oral examination. The exact nature of the UAV training is still undergoing refinement, however elements of the UAV training have commenced.

As part of maintaining currency in UAV operations, all soldiers in a UAV position will be rated every six months to ensure they remain current for the positions in which they will fill. A number of different rating levels will apply within the UAV troops, ensuring that only those personnel current in the relevant procedures undertake those function during UAV operations. (For example: Only a rate 1 UAV operator will be able to undertake multiple UAV operations simultaneously or precision strike operations with the laser designator. Rated 2 or 3 operators will still be able to perform their duties but at a pre-defined level of complexity and conditions).

UAV assessments for soldiers will involve the conduct of both simulation and live UAV operations on a 90 day cycle. Instructor UAV pilots in the unit will be used to assess the UAV operators in their task and ensure that all elements of the operational airworthiness requirement are being maintained. Officer and senior non-commissioned officers will also undergo a similar evaluation regime, based upon an oral and written examination every 12 months. In order to ensure compliance with operational airworthiness regulations, officers and senior non-commissioned that are posted to the unit must have completed all relevant training and be deemed competent by an authorized agency.

In the past 12 months, four personnel from 20 STA Regiment have been posted to the United Kingdom, where all four members were subsequently sent to Iraq and/or Afghanistan as part of a United Kingdom UAV Troop. The Captain who attended this posting will be posted to the School of Artillery in January 2007 as the IG STA Wing to allow the commencement of the UAV training to occur. The other members posted to the United Kingdom will be returning to the UAV Bty in late 2006.

Surveillance Training

The unit's ground surveillance troop is commanded by a lieutenant. This troop includes eight ground surveillance patrols each of six personnel, equipped with ground surveillance radar, thermal surveillance system type two, unattended ground sensors and image capture and transfer system. Currently there is no officer training included in the offensive support officer training continuum to provide for competency in surveillance planning, tasking and advice to higher headquarters.

STA Commanders Training

The current offensive support and surveillance and target acquisition officer training at captain and major level does not prepare the STA battery commanders for their jobs as STA commanders, nor does it prepare them to undertake the commanding officer STA Regiment tasks in support of a JTF headquarters. In addition, the battery commander of both the UAV and STA Bty's will also be designated as authorizing officers for high risk UAV operations. These personnel will also need to have had prior UAV training and experience as part of their officer career development and will also undergo similar currency evaluations on a yearly basis.

A training needs analysis has been conducted to capture these areas of concern. A proposal is being staffed by CATC to have these training deficiencies rectified in the officer training continuum. Adjustments are also being made to STA junior non-commissioned officer and senior non-commissioned officer courses to update these for new competency requirements.

Artillery Metrological Survey Capability

In 2005 a review of the Artillery Metrological Survey (AMS) capability was conducted. The outcome of this review was that Deputy Chief of Army directed that the AMS capability within the Royal Australian Artillery was to centralise the precision survey capability within 20 STA Regiment for the provision of survey control points. In addition, the Royal Australian Artillery meteorological capability was to be

decentralized to unit level to include each of 8th/12th Medium Regiment, 4th Field Regiment and 20 STA Regiment maintaining a meteorological capability.

A Minor Capability Submission to acquire metrological equipment for both 8th/12th Medium Regiment and 4th Field Regiment was to be staffed by Land Command Artillery to secure a capability for these units. At a recent Land 17 meeting, it was decided that LAND 17 will provide some form of meteorological capability from 2011/2012 and that additional equipment for 8th/12th Medium Regiment and 4th Field Regiment was not required.

From 2008 20 STA Regiment no longer has a role to provide meteorological support to the rest of the Royal Australian Artillery, excluding extant Chief of Army Capability Directive (CACD) tasks. In the coming months 20 STA Regiment will be staffing a requirement for additional meteorological equipment for the unit to tailor the capability to support UAV, target acquisition and unattended ground sensors better. The current balloon based systems will remain as the central element of this capability.

Under the HNA Master Migration Plan, both 8th/12th Medium Regiment and 4th Field Regiment are due to receive an entitlement to AMS personnel and equipment from August 2006. At this stage no increases in training numbers have been forecast to the CATC to accommodate this increased recruitment or training requirement. Units will need to demand for their AMS equipment and place the burden for additional equipment onto DMO.

Airworthiness

20 STA Regiment will operate within the Australian Defence Force defined operational and technical airworthiness framework for the conduct of UAV operations. This will change how tasks have been planned and performed in the past. UAV personnel, as described above, will be required to undergoing currency evaluations. No one will be exempt from this training or currency criteria.

Aviation risk management and crew resource management are being elevated to the highest level of importance in the unit in order to avoid unnecessary aircraft mishaps. Traditionally, with the introduction into service of a completely new capability, accidents happen; either through negligence or honest mistakes. The unit will be attempting to learn from overseas experience as much as possible, however strict compliance with flying regulations will also assist in this. This will include the compliance with crew duty hours and rest periods. The failure to comply with these regulations will mean the grounding of the capability. This is another reason why training of personnel in UAV operations and aviation awareness is significant in order to reduce risk to the capability.

Operations

The STA Regiment currently has a STA element deployed in the Middle East. This has included the target acquisition and Mini-UAV surveillance capability. A larger UAV system (Tier II) will also be deployed in support of operations shortly. This will see a further increase in the number of STA personnel deployed on operations. It is expected that within the next six months some personnel will return on operations for their 2nd tour in the Middle East and 3rd operational tour in the past five years.

The high operational tempo for the unit, combined with a move into new facilities, the doubling of trainees throughout at the School of Artillery, the development of new operating concepts and doctrine and the growth of the Regiment has made for busy times in the past 15 months. I expect this to continue well into 2008.

Conclusion

The growth of the STA Regiment will continue well beyond the establishment of the Regimental headquarters in January 2007. UAVs for the Army is a fundamentally new capability, not a continuation of a current system. As a result new techniques in training, doctrine and personnel development must be adopted if this capability is to be successful. This will also require people to have open minds about change and embrace new technology.

16th Air Defence Regiment

110th Air Defence Battery

Since the return of the Battery from Malaysia, life has only become more hectic. First task was the conversion training for the Battery on the newly modified RBS 70 and the new BORC Night Device. This was followed by the final departure of all Rapier equipment and associated stores. We have also slowly taken receipt of the new bays and vehicles, both of which are still being outfitted and should be complete by September and December 2006 respectively. Promotion courses, Systems Acceptance Testing (SAT) and Stocktakes have now become the Battery's focus for the remainder of the year with up to 60 Battery personnel away from the Regiment from mid August to the end of October.



Lieutenant's Costello & Armstrong (standing behind)

Our conducted and upcoming events include Freedom of Entry Parade, in Adelaide; Exercise Remember Borrella, a week long Troop deployment around the Adelaide Hills; SAT of the new Automatic Cueing System, 14-25 August 2006 at Murray Bridge; Exercise Desert Winds, 4-7 September 2006 at Woomera; and hopefully some adventure training in late September. All this in between the mundane stocktaking process required for the removal of Rapier and issuing of RBS70.



Gunner Joseph Neate preparing dinner on Exercise Remember Borrella 06

A few personnel have returned and left over the period to date: Lance Bombardier Riddle and Corporal Paul Allan Royal Australian Signals Corps have discharged, Private Mick Rayner Royal Australian Army Ordnance Corps has returned from Butterworth after remaining to assist 4th Field Regiment, Sergeant Keith Banfield has returned from the Sinai, our Battery Commander Major Liegh Crawford has just deployed to the Solomons and Sergeant Garry Robertson has laterally transferred from the British Army to join us here in sunny Woodside.

111th Air Defence Battery

The year began with a major change over of staff that saw a new Battery Captain, Captain Christian Hamilton, Battery Sergeant Major, Warrant Officer Class Two John Westcott and Troop Sergeant Major, Sergeant Mick Dewar marched into the Battery with many others in January. The Battery Commander Major Tim Lopsik saw an opportunity to build on the lessons learnt and successes of last year, with the introduction of some fresh ideas and enthusiasm.

The Battery's first task was to support the official opening of the Advanced Air Defence Simulator; this involved members of the Battery providing equipment displays and hosting the many official guests that included The Foreign Minister Alexander Downer, the Chief of Army and CEO of Tenix. The day provided an opportunity to show off the Battery and Regiments, best.

Ceremonial commitments followed this up with a march through the streets of Adelaide City for ANZAC Day and the annual opening of the South Australian Parliament; in which the Battery provided

the lion's share of manpower and the 'Freedom of Entry to Adelaide City' parade which proved to be a spectacular day for all involved.

Training, both individual and collective, has been at the forefront for the Battery so far this year. The most important which has been conversion training to the new Land 19 Phase 6 build, this saw every member of the Battery retrained to a level commensurate with their position. Also the Battery Sergeant Major has endeavoured to get every member on at least one promotion or professional development course before our commitment to Pitch Black 06.

The first Battery exercise this year, Raptors Run 06, saw the Battery conduct a defence of the Mount Gambier and Port McDonald areas. For the first time in many years the Battery conducted both vehicle based and light scales deployments in both urban and open environments. This tested not only the skills and knowledge of our detachment commanders but also their mental and physical strength and endurance in coping with heavy equipment, freezing temperatures and driving rain.

The Battery was allocated, at short notice, the opportunity to participate in Operation Relex and Resolute. Some 50 soldiers were selected to participate in the operation which saw them conduct training over a two week period, which included police baton, capsicum spray familiarisation, crowd control, and search techniques (people and vessels) training. From the initial 50 soldiers 20 were selected to remain in Darwin on the operation. Whilst there, the soldiers have been busy assisting with Mission Rehearsal Exercises (MRE) for HMAS Larrakia; conducted sea patrols with HMAS Albany where the guys conducted boardings and controlled potential illegal immigrants. The soldiers' motivation, level of skill, professionalism, flexibility and determination has won strong praise from the Navy. The operation is continuing with further MREs and daily sea patrols on the HMAS Albany prior to a three week patrol.

With the majority of the Battery's soldiers allocated to support Operation Relex/Resolute Exercise Pitch Black was scaled back to 40 personnel; the Battery deployed a command post, battery headquarters and four reconnaissance teams, artillery controllers and a liaison team to support the Singaporean Air Defence Squadron. From all accounts the exercise has been a great success providing the command posts, battery headquarters, reconnaissance teams, artillery controllers and the liaison team with the opportunity to learn new skills and practice and hone many others.

The rest of the year for the Battery will see an RBS 70 live-firing activity using the upgraded equipment and for the first time the new Bolide missiles will be fired at a Banshee RPV. The year will culminate with the annual regimental sporting competitions and the christmas leave.



111th Air Defence Battery on ANZAC Day



The Banner of Queen Elizabeth II being marched on during the Granting of Freedom of Entry Parade to 16th Air Defence Regiment

7th Field Battery

Introduction

7th Field Battery started the new year with the changing of only one cadre staff member. The Battery welcomed our new battery quartermaster, Sergeant Haslett who has come to us from 16th Air Defence Regiment. The Battery commenced the year with the running of several courses being safety, M2A2 conversion and ICT course and the firing of a salute to commemorate Australia Day.

The Battery has had two new officers march in to the unit. Lieutenant Kerr came to us from 23 Field Regiment and Lieutenant Soh from West Australian University Regiment. Both members are now busily doing their ROBC course within the unit.

Recruiting

This year 7th Field Battery has had positive growth, as was the case last year, making it one of the few units to do so within the 2nd Division. At present we have 18 enlisted into the unit this year, four are re-enlists, three of these have come from 8th/12th Medium Regiment. We have six recruits waiting to go to Kapooka and another 16 almost there.

Work in the recruiting cell is very busy. Our success has come from constant contact with the candidates that want to come to the unit and by helping them through the process of enlistment, and by working closely with Defence Force Recruiting. By having the candidates think outside the square, we have been able to compete with the infantry units for 'new blood'.

The recruiting team has been kept busy by attending school talks, displays and Army Live at Irwin Barracks. If anyone is thinking of moving to the west and transferring to the active Reserve, then contact Sergeant Steve Morrow on (08) 9383 6434.

ANZAC Day

On ANZAC Day 2006, 7th Field Battery dispatched the battery guide and six members of the unit, mainly from the Rockingham Depot (MUD), to Donnybrook to provide a catafalque party. Donnybrook is a small country town approximately three hours south of Perth well known for its apples. The catafalque training, commanded by Bombardier McMahon, was conducted down at the MUD the night prior. It was established that a number of the party had very little experience in rest on arms and slow marching. This was quickly overcome and off they headed in the dark hours of ANZAC morning. Upon arrival at Donnybrook, down came the rain. Due to some quick thinking and make-shift rearrangements, a monument was built in the local hall and the ANZAC Day service continued. The Battery also conducted a dawn service at the depot in front of the Artillery Memorial. The service was well attended by both members of the Battery and the public. After the service the Battery marched in the ANZAC Day march in Perth with units from 13th Brigade. The march was well supported by the public and we managed to make it back to the buses and return to the unit before it started to rain.



7th Field Battery Catafalque Party at Hobbs Artillery Park

Live Firing Exercise

7th Field Battery conducted a live firing exercise in May to get the Battery up and running again in its gunnery skills. This was the first time the Battery had live fired since winning the Mount Schanck trophy in September. The gun line performed well with the Battery managing to put three guns in the field. The hill was placed under the watchful eye of a visiting Instructor-In-Gunnery Captain Gordon, who came to us from Adelaide University Regiment due to Captain Hunter being on his COAC. The Battery would like to thank Captain Gordon for his efforts.

Birthday Dinner

On 8th July the Battery had its Birthday Dinner. The Dinner was a formal evening enjoyed by past and present Battery members and their partners. 7th Field Battery used this evening to unveil the Mount Schanck Trophy plaque, that the Battery had been awarded. The Queens Banner was bought over for the occasion and the evening went off without a hitch and a good night was had by all.

Coming Events

The Battery is about to conduct an annual field exercise at Cultana Range with 48th Field Battery. The two batteries combined will make up 55th Field Battery. It is hoped that with the two units together we will be able to place a full strength Battery in the field. 7th Field Battery will be flying across to Adelaide by civilian air, as unfortunately the service air was cancelled. Both units have planned and worked hard for this activity to be a success and are very much looking forward to this activity.

Joint Proof & Experimental Unit

The Joint Proof and Experimental Unit (JPEU) continues to consolidate in its third year of operation. It is a direct command business unit of the newly formed Joint Logistic Group (JLG) and commands the Proof and Experimental Establishments at Port Wakefield and Graytown.

The unit has had a very busy year in achieving its role of proofing and testing weapons and explosive ordnance (EO) for Defence. To maintain its role an active facilities program was commenced. By December this year it is estimated that funding for \$30m in new facilities upgrades will have been approved. At Proof & Experimental Establishment Port Wakefield (P&EE PW) this funding will deliver a new ordnance breakdown facility, replace old and unsafe EO storage magazines and build a new 5"/54 Battery for Navy. Proof and Experimental Establishment Graytown (P&EE GT) will undergo \$4.7m of redevelopment after many years of neglect and its Munition Test Centre (MTC) at Benalla has officially opened \$1.6m of new accommodation and firing tunnels.

JPEU is an integral part of the process that enables the respective service Technical Regulatory Authorities ensure that weapon systems and their ordnance are safe and suitable for service (S3). JPEU supports the S3 process by being an ISO9000:2001 quality accredited organisation and it is currently in the process of becoming an accredited engineering organisation (AEO), under the Director Technical Regulation - Army (DTR-A). DTR-A staff completed their first round of audits in June and if the next round of audits in October is successful the unit should become accredited by Christmas.

A number of personnel issues have also been progressed during the period. In particular isolated establishment allowance. Defence Personnel Executive staff are currently visiting the unit to review this situation.

Proof & Experimental Establishment Port Wakefield

The 'Proof Range Port Wakefield' has had a very busy 2006. The tasking calendar has been kept full with tasks for all parts of the Australian Defence Organisation. A number of these have been specifically for the RAA's fleet of ammunition and delivery systems. Tasks specific to the RAA have included fuze proofing of M739A1, M582A1 and M577A1. Numerous tasks involving 105mm and 155mm ammunition natures have been conducted as either proofing or in-service surveillance (ISS).

The Proof Range continues its 'annual' testing of the M45 recoil mechanisms for the M198 fleet. This task utilises the now out-of-service 155mm HERA round with red bag charge. It is fortunate for the select few RAA gunners that are posted to JPEU P&EE PW to participate in this rare event; a M198 firing a red bag charge.

Other tasks of note to the RAA have been the Verification and Validation of the new Indirect Fire Computer System, testing of the Artillery Orienting System and the benchmarking of the ANTPQ-36 WLR prior to its life of type extension under LAND 58-3. P&EE PW is also eagerly awaiting MARAP as we will play a significant part in this project. We are anticipating firing at Woomera in 2007 and will require support from the RAA community.

Significant issues involving RAA personnel for 2006 include:

- Most RAA personnel being presented with their Australian Defence Medal.
- Captain Kym Schoene being presented with both his commission and his 30 year certificate.
- Bombardier Trent Kennedy being selected for 'Exercise Long Look 06'.
- Bombardier Matt Jones representing the ADF as Captain of the ADF Basketball team that successfully defeated the National Singaporean Team, with a 5-0 win.
- Warrant Officer Class Two Pete Armstrong being posted mid-year to take up his position as the Museum Curator at the North Fort National Artillery Museum.

Unfortunately, the end of 2006 will see a large turnover of Royal Australian Artillery and support personnel, with most being posted back to Land Command.

Postings Out

MAJ Doug Mallett - Aust Comd & Staff College
WO2 Pete Armstrong - North Fort

BDR Darren Cahill - 8/12 Mdm Regt
BDR Erin Teague-Suradi - 8/12 Mdm Regt
BDR Trent Kennedy - 20 STA Regt
LBDR Phil Lack - 4 Fd Regt
GNR Brad Wakefield - Transfer 48 Fd Bty
GNR Nick Windridge - 4 Fd Regt

Posting In

MAJ Andrew Langford
WO2 'Stretch' Phillips
SGT Shaun Buxton
BDR Malcolm Mercieca
Not replaced - posn disestablished
Not replaced - posn disestablished
GNR Nathan Lewis
GNR John Van Loon
GNR Cameron Parker

Proof and Experimental Establishment Graytown

2006 has been a challenging and extremely busy year for P&EE GT. Our major range users continue to be DSTO and ADI. P&EE GT is still doing more with less, with three of its senior military members overseas. The Officer Commanding Major J. McRae, Royal Australian Army Ordnance Corps, is in the United Kingdom for six months completing the long proof course and the Master Gunner Warrant Officer Class One G. Boyce and Corporal I. Kay are on six months operational deployment.

Introduction into service (ISS) and proof tasks have occurred at a frantic pace over the last year with 20mm, 25mm, 105mm primer proof and short notice trials to support overseas operations, eg 7.62mm Miniguns for the CH47.

There are three Royal Australian Artillery members currently posted to P&EE GT. Master Gunner, Warrant Officer Class One G. Boyce, Bombardier N. Ferrari was posted from 4th Field Regiment and Gunner Haritopoulos was posted from 20th Surveillance and Target Acquisition Regiment Brisbane. Postings for next year are below.

Postings Out

WO1 Grant Boyce - 4 Fd Regt
BDR Nino Ferrari - School of Artillery

Posting In

WO2 Brett Armstrong (on promotion)
SGT Gerard Saint

Conclusion

To those leaving the JPEU, ensure you have a merry christmas and new year, enjoy your break, but most of all stay safe. For all those personnel being posted into JPEU, the unit looks forward to seeing you arrive safely and ready to tackle the unique experience that is Proof and Experimental.

The Commanding Officer, Lieutenant Colonel Gary Potter will depart in December 2006 after three years of overseeing the unit's consolidation. The Commanding Officer and the respective unit Officer Commanding, Major Doug Mallett, Major Jamie McRae and Major Nick Sanders (acting OC GT) extend their best wishes to you all.

Professional Papers

Vietnam War

Part of the speech by Prime Minister, Sir Robert Menzies, announcing the sending of an Australian battalion to Vietnam.

'The takeover of South Vietnam would be a direct military threat to Australia and all the countries of South and South East Asia. It must be seen as part of a thrust by Communist China between the Indian and Pacific Oceans.'

*Parliamentary Debates (Australia) 1965,
House of Representatives, Volume 45, page 1061*

Part of the rebuttal speech by Leader of the Opposition, Arthur A. Calwell

'... to exhaust our resources in the bottomless pit of jungle warfare, in a war in which we have not even defined our purpose honestly, or explained what we would accept as a victory, is the very height of folly and the very depths of despair.'

*Parliamentary Debates (Australia) 1965,
House of Representatives, Volume 45, page 1105*

Hardened & Networked Army & Plan STAN: an Artillery View

By Lieutenant Colonel Sean Ryan, Acting Director Force - Structure

In recent times, the Australian Army has been very successful on many operations such as the Australian led INTERFET operation and as part of other coalition operations such as those the Global War On Terror in Afghanistan, Operation Iraqi Freedom and the Solomon Islands. During these operations the Army has learned many valuable operational lessons. These lessons include the fact that the modern battlefield has become more complex and lethal, and that high operational tempo is likely to be the norm for the foreseeable future. However, if the Army is to maintain its operational success, it must adapt and respond to the changing demands of the battlefield and a state of high operational tempo.

In addition to the issues of a complex battlefield and operational tempo, the Army needed to respond to the requirements of the Defence 2000 White Paper, which are reiterated in the 2003 and 2005 Defence Updates, which states that the land forces are to have sufficient firepower, protection and mobility to provide clear advantage in any likely operations in defence of Australia or its interests. Furthermore these requirements identified the need for the Army to be able to sustain a brigade size group on operations, like INTERFET, while retaining the ability to deploy a battalion size group for other short term contingencies, such as that which was mounted for the Solomon Islands.

In response to the Government direction in the Defence White Paper and the Strategic Updates 2003 and 2005, and the lessons learned on recent operations, the Army undertook a research project into how Army should be postured for the challenges of the new millennium. This research resulted in the Hardened and Networked Army initiative. On 15th December 2005 the Government approved this initiative.

In addition to the Government's announcement in December 2005, the Government announced it would expand the Army by two battalions. This announcement, made on 24 August 2006, is in response to the pressing security situation in the region (East Timor and Solomon Islands) and a strategic need to have greater operational depth and concurrency within the Australian Defence Force's land force. The detail of this expansion will be developed over the coming months under what the Chief of Army calls 'Plan STAN.'

The Hardened and Networked Army and Plan STAN are aimed at providing the Army depth through an 'Army of Twos'¹ and the capacity to generate a wider range of sustainable options for operational contingencies. This 'Army of Twos' is a stepping stone to an 'Army of Threes', which is the Australian Army's objective force aspiration.

Both plans are based on the enduring need to conduct 'close combat'² on the modern battlefield. To conduct 'close combat' the Army will use the tried and true philosophy of the combined arms teams, whereby infantry, armour, artillery, aviation, engineers and combat support and combat services support work together to support and protect each other to achieve the assigned mission.

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1. The 'Army of Twos' refers to an Army that has a force structure of at least two units of everything. Where this cannot be achieved in units, it is achieved by like sub units within a unit such as two armed reconnaissance helicopter squadrons in the one reconnaissance aviation regiment.
 2. **Close Combat:** Actions that place friendly force elements in varying terrain and in immediate contact with the threat; where direct fire, supported by indirect fire, are applied to shape, strike and shield in order to defeat adversary forces, or seize or retain decisive places (from WinNow Papers).

The Chief of Army aims to deliver these initiatives along four lines of operation. Those lines of operation are:

- the effective introduction and employment of new capabilities being delivered in the Defence Capability Plan,
- the re-organisation of unit force structures to provide a better networked and lethal forces,
- the modification of training and doctrine to provide better prepared and more adaptable soldiers, and
- finally a significant change in the Army Reserve in order to a more cohesive one Army.

Both initiatives will have a range of major and minor effects on the Royal Australian Artillery. Those effects are:

- The Army will raise two additional Battlegroup Joint Offensive Support Coordination Centres to support the new battalions. These Battlegroup Joint Offensive Support Coordination Centres will give the RAA a total of two Brigade Joint Offensive Support Coordination Centres, eight Battlegroup Joint Offensive Support Coordination Centres and 24 Joint Offensive Support Teams.
- 101st Medium Battery will relocate from Darwin to Brisbane in 2011 to join 1st Field Regiment. The battery is moving to conform to the HNA field artillery support arrangements, which is based on each regular field regiment having two firing batteries. There will be three regular field regiments. These regiments will be based in Darwin, Brisbane and Townsville.
- 'A' Field Battery will relocate from Sydney to Adelaide in 2011. The battery will join 8th/12th Medium Regiment upon transfer to Adelaide. As a result of this move, 8th/12th Medium Regiment will operate from two different locations. 'A' Field Battery, along with other Army units, will establish a relationship with the 7th Battalion, the Royal Australian Regiment, to form a new Mechanised Infantry Battle Group. The battery will be based in new purpose built barracks that are being constructed in the Edinburgh Defence Precinct.
- To support these field battery moves the Royal Australian Artillery will be expected to introduce at least two self propelled 155mm batteries and no more than four towed 155mm batteries into the three regular field regiments. The two self propelled batteries will be based in 8th/12th Medium Regiment. The new guns will be acquired under project Land 17 - the Artillery Replacement Project.
- 16th Air Defence Regiment will grow progressively over the next ten years. The HNA initiative recognises the value of this important capability by organising the Regiment into two firing batteries to meet the normal ground based air defence functions and having the flexibility to task organise the regiment into six firing troops. One troop to support each of the six battle groups identified in first and second brigade rotations outlined in the 2000 Defence White Paper.
- The 20th Surveillance and Target Acquisition Regiment will grow rapidly over the next five years to accept the Army's new Tactical Unmanned Aerial Vehicle capability. The regiment will amalgamate the functions of the Tactical Unmanned Aerial Vehicle with the Weapon Locating Radar and other recently acquired surveillance equipment. As a result of this amalgamation the Regiment will provide a vastly enhanced target acquisition capability for the Army. The Regiment will be organised into 131st Weapon Locating Battery and 132nd Unmanned Aerial Vehicle Battery to provide multi-disciplined, task organisable surveillance and target acquisition batteries for deployment with each brigade rotation outlined in the 2000 Defence White Paper.
- Royal Australian Artillery training and doctrine will progressively change to make best use of the Network Centric Warfare concepts and systems. These new systems will improve the Royal Australian Artillery situational awareness and speed of response. An important part in under going this change will be the capacity to grasp new training paradigms and simulation.
- The Army Reserve will be re-focused to provide approximately 2,800 High Readiness Reservists to support the Army's front line deployable units. Royal Australian Artillery units will be expected to provide or generate approximately 150 High Readiness Reservists for the five regular regiments and the Ground Liaison Group. To achieve this outcome the Army Reserve will be allocated positions and

tasks within Army's operational units to improve their relevance. There will be three categories of service within the Hardened Networked Army Reserve:

The **High Readiness Reserve** will provide immediate reinforcement to first and second rotation regular forces.

The **Active Reserve** will provide domestic security capabilities, round out and third rotation forces if required, as well as provide strategic depth.

The **Standby Reserve** will provide a pool of individuals who possess critical skills that may be called upon in times of emergency.

- Training for Reservists will be refined to match the time that they have available to the new tasks that they are being given. Reserve remuneration package to accommodate this service has been reviewed by Defence and endorsed by the Government. The submission covers incentives for High Readiness Reservists, improved conditions of service for all Reservists, and complements the Reserve initiatives within Hardened and Networked Army.

Hardened and Networked Army and the Expanded Army is a ten year plan, starting in 2006 and 2007. These initiatives represent a significant boost to the Army and are recognition of the increasingly important role the Army is playing in serving the Nation.

These initiatives will posture the Army to meet the challenges of the 21st Century strategic environment. For further information visit the Hardened and Networked Army website at www.defence.gov.au/army/hna/ for further information.

HARDENED AND NETWORKED ARMY AND PLAN STAN IN A SNAPSHOT

Hardened and Networked Army is the result of three years of analysis and experimentation. It is based on the combined arms philosophy and that '*close combat*' will be fundamental to operations for the next twenty years.

The tenets for Hardened and Networked Army are firepower, mobility, survivability and communications. It is designed on the basis of an Army of 'Twos' (One capability deployed and one capability at home reconstituting and training). Hardened and Networked Army is a ten year plan:

- An extra 1485 soldiers
- An additional 123 Australian Public Servants
- Improved communication networks to ensure the rapid transfer of information across the Army
- Re-focus of the Army Reserve

The Expanded Army, under Plan STAN, is the Army's response to the Government's announcement on the enhanced Land Force. This will provide the Australian Defence Force with greater operational depth and concurrency in these uncertain times. Plan STAN builds upon the analysis and tenets of the Hardened and Networked Army to provide a much improved Army. The major features of Plan STAN are:

- Additional 2600 soldiers
- Raising of the 7th Battalion, the Royal Australian Regiment, as the second mechanized battalion in the Hardened and Networked Army by splitting 5th/7th Battalion, the Royal Australian Regiment
- Retaining 3rd Battalion, the Royal Australian Regiment as a light infantry battalion
- Moving 3rd Battalion, the Royal Australian Regiment, to Townsville
- Raising of the 8th/9th Battalion, the Royal Australian Regiment in South East Queensland
- Raising additional command and control, protected lift, combat engineering, communications and combat service support elements
- Increasing training capacity to accommodate the expanded Army
- Raising additional Navy, Air Force, strategic communications and Special Forces elements

Improving Joint Fires in the ADF A System Approach

By Squadron Leader T.J. Van Haren, Royal Australian Air Force
Australian Command and Staff Course 2005

Introduction

Recent operations in Afghanistan and Iraq have highlighted a renewed approach to modern war fighting - the partnership of air and land forces.¹ In Afghanistan, small teams of Special Forces and Terminal Attack Controllers directed the precision firepower of US air forces to effectively defeat the Taliban. In Iraq the same partnership denied Saddam Hussein's *Scuds* freedom of manoeuvre in the Western Desert, whilst regular ground forces used manoeuvre warfare teamed with Air Interdiction and Close Air Support to neutralise Saddam's Republican Guard with very few losses. This new relationship has refined the paradigm from one of supporting fires to one of a partnership. The new approach is referred to as the conduct of 'Joint Fires'.²

The Australian Defence Force (ADF) can learn much from coalition lessons on the conduct of Joint Fires (JF). ADF doctrine, training and organisation are based on the Offensive Support traditions, and like US Forces, the ADF needs to revise its approach to the conduct of JF. This is especially important considering the RAAF's drive for network centric warfare (NCW) and the Australian Army's plans for a hardened and networked army (HNA). The vision of conducting effective JF will depend on these networks working in harmony and enabling a future where there is seamless integration between sensors and shooters - whether they be army sensors and air force shooters, or vice versa.

Scope. This paper will establish a simple model of the Joint Fires system. Using this model, it will outline the component parts of this 'system of systems'. It will describe the trends and review recent lessons learnt that affect each component system. It will then discuss the synergies between these components and outline the essential organisational structures and networks that are required to optimise the conduct of the JF.

Aim

The aim of this paper is to identify improvements to the conduct of Joint Fires in the ADF using a system approach.

The Joint Fires System

JF is the synergistic product of three sub systems: command and control (C2); target acquisition (or *sensors* in a network approach); and attack resources (or *shooters*).³ The C2 of the JF system supports the unity of effort by observing centralised command, under the Joint Task Force Commander, whilst practising the principle of decentralised control through the delegation of tactical control to the lowest possible level in the system.⁴ The main functions of the C2 component are decisions in the form of prioritised targeting, Fire Support Coordination Measures (FSCM) and deconfliction through

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1. Pirnie, B. Vick, A. Grissom, A. Mueller, K. Orletsky D. 2005, *Beyond Close Air Support: Forging a New Air-Ground Partnership*, RAND Corporation, Santa Monica, CA pp 7-30.
 2. Joint Fires. [JP 1-02] (US DoD) Fires produced during the employment of forces from two or more components in coordinated action toward a common objective.
 3. Department of Defence, *ADDP 3.1*, 'Offensive Support System', p 2-1.
 4. *ibid*

the provision of a Joint Terminal Attack Controllers (JTACs). The target acquisition or *sensor* component of the system is responsible to locate, identify and track potential targets. The attack resources or *shooters* are those assets which that will prosecute the attack, with desired effects (either lethal or non-lethal), and assess the outcomes of the attack to inform the C2. The simple model of JF is in figure 1.

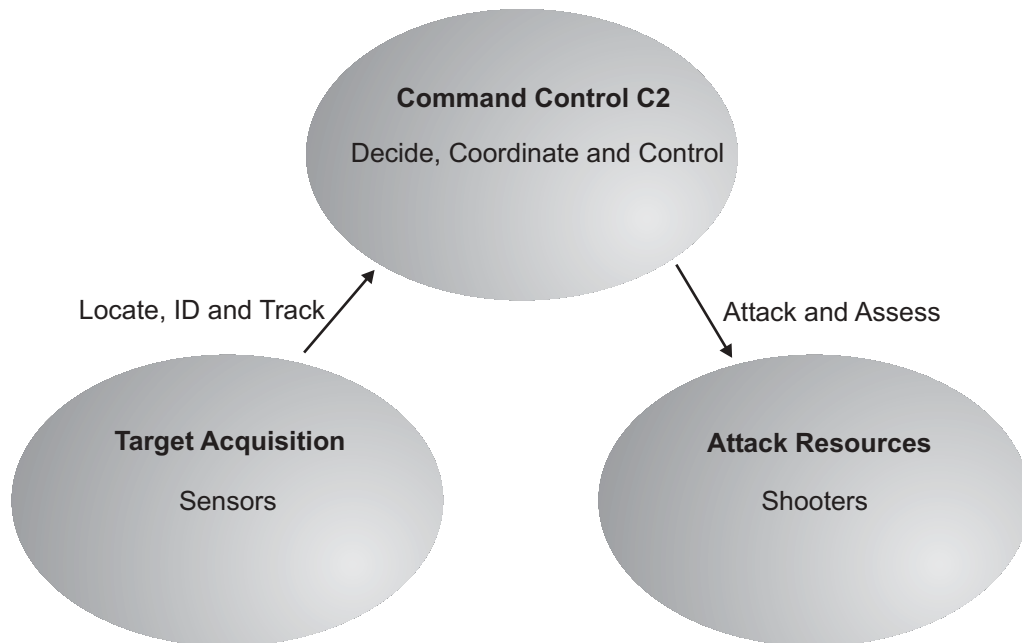


Figure 1: Simple Joint Fires Model

Sensors

Traditional Approach. The traditional approach to locating, identifying and tracking potential targets on the battlefield has been to get 'eyes on' the target by either ground or air observation. The forward observer (FO) has been an important part of this network on the linear battlefield. The FO has typically been an artillery spotter who has reported back to the artillery battery commander, who has been responsible for fire support and coordination. The traditional airborne observer has been employed in a utility type aircraft, such as a reconnaissance helicopter, or has operated as a forward air controller [FAC(A)] in a more specialised aircraft. These approaches have been focused on the immediate battlespace ahead of the forward line of own troops (FLOT) and these observers have the luxury of positioning themselves with the knowledge of the overall scheme of manoeuvre.

Current Trends and Recent Lessons. With the advent of modern tactical intelligence, surveillance and reconnaissance (ISR) platforms, such as unmanned aerial vehicles (UAVs), the extension from direct observation has been the use of these platforms for remote observation. The wide area surveillance capability of modern sensors has allowed joint commanders to see deep into the battlespace. The advent of systems such as the synthetic aperture radar (SAR) and electro-optical infra red (EO/IR) systems on tactical platforms has revolutionised the detection, identification and tracking of battlefield targets.

In Operation Iraqi Freedom (OIF), the Joint Surveillance and Target Attack Radar System (JSTARS) proved to be a valuable wide area surveillance system for the USMC and US Army.⁵ The use of the JSTARS Ground Common System (GCS) at Division Headquarters (HQ) allowed US land forces to interact with the system to provide real time intelligence and tracking of enemy forces in all weather.

5. 1st Marine Expeditionary Unit, 'Operation Iraqi Freedom Lessons Learnt', viewed 20 August at http://www.globalsecurity.org/military/ops/operation_iraqi_freedom/lessons_p5

Tactical UAVs, such as Predator and Dragonfly, proved valuable in conducting aerial surveillance and reconnaissance in focal areas of interest. US forces also used manned surveillance platforms such as P-3 Orions (including RAAF AP-3C) especially over complex terrain, to support friendly forces, conduct route reconnaissance, and provide disposition of forces soon to be engaged. The USMC stated that the use of such assets proved most valuable when a ground representative was on board the aircraft to direct the employment of the sensors to meet the tactical needs of ground forces.⁶

In the current counter insurgency operations in Iraq and Afghanistan, new lessons are being learnt that have renewed the approach to the use a mix of sensors to locate the enemy. Current operations are characteristically conducted in complex terrain, against a well-concealed and lethal enemy. Stand off sensors have had little success when used in unison in this environment. Instead, the JF system has had to rely on a combination of human observation and advanced sensors to locate and identify the enemy.

Traditional artillery FOs have decreasing relevance in complex terrain, such as urban environments. Realising the limitations of the traditional employment of FOs, US Forces have revised the role of the FO in the creation of a Joint Fires Observer (JFO). A JFO is a trained service member who can request, adjust and control surface to surface fires, type 2 and 3 close air support attacks and perform autonomous Terminal Guidance Operations (TGO).⁷ US Army plan to have a JFO in each platoon and for that JFO to pass target information back to company headquarters for appropriate fire support. That may be either organic indirect fire such as artillery or close air support (CAS) controlled by the company JTAC. In both cases the JFO may be called upon to terminally guide the munition with laser designation of the target.

ADF Approach. The ADF has had a traditional approach to sensor input into the JF system. The system is dominated with artillery FO's who report to the battery commander or appropriate headquarters for fire support, coordination and control. Special Forces units regularly employ a JTAC in each troop. In the air, observers are employed in Kiowa Light Observation Helicopters (Kiowa LOH) with that role about to be passed onto the Tiger Armed Reconnaissance Helicopter (Tiger ARH). Additionally the ADF has FAC(A) for the dual role of observation and control in PC9A, Kiowa LOH and FA18 aircraft. The most recent adaptation of the traditional approach has been the employment of the AP-3C in non-traditional ISR in Iraq. This now represents the leading airborne tactical ISR capability in the ADF.

The ADF will continue to invest in technological approaches to tactical ISR. Air 7000 plans to acquire a 'Global Hawk like' UAV, and possibly a Multi Mission Aircraft (MMA), which will bring highly capable wide area surveillance SAR and EO/IR sensors to the battlefield.⁸ Army is planning to field a tactical UAV, such as the BAE's *Shadow 200*, for focused tactical ISR.⁹ The utility of other platforms with advanced sensors, such the upgraded FA18 with the Lightning Advanced Targeting pods (Lightning AT) and the Tiger ARH, should also be recognised as important sensor additions available to the ADF JF system.

Optimum Sensor Suite for the ADF. Recent lessons learnt by Coalition Forces engaged in Iraq and Afghanistan have shown that technology is not a panacea for locating and targeting the enemy. A combination of sensors is required to appropriately inform the JF system. Direct observation by a qualified and experienced observer embedded with manoeuvre elements (such as a JFO) is needed to overcome the complexities of terrain and the concealment of enemy forces. Additionally, the use of advanced aerospace sensors should support these elements by locating enemy concentrations and heavy equipment. A combination of both the traditional and technological approaches is required to build a robust sensor suite for the JF system.

6. *ibid*, p7.

7. 'Joint Fires Observers', brief to the Joint Fires and Effects Seminar, June 2005, Col Micheal Longeria, ACC Joint Air Ground Office, LTC Wayne Andrews, Army Joint Support Team - Nellis AFB

8. Department of Defence, 2004, *Defence Capability Plan 2004 -2014 Public Version*, Air 7000.

9. *ibid*, Joint Plan 129, Tactical UAV

Shooters

Traditional and Current Trends. Before looking at the important interactions of C2 in the JF system, the attack resources or shooters require analysis to see what they provide and need from the system. Traditionally artillery, tactical fighter and strike aircraft, attack helicopters, and naval gunfire support (NGS) have conducted JF. Recent trends have not demised any of the available means of offensive support, but the advent of the precision guided munitions (PGM) has redefined the lethality of shooters, particularly aircraft. In Operation Desert Storm, only 7% of air delivered ordnance were PGMs. By contrast in Operation Iraqi Freedom, 68% of munitions were PGMs.¹⁰ This means that a unitary target that was attacked by an aircraft in 1991, with a stick of dumb bombs, is now being destroyed by a single PGM. More importantly, the fact that attack aircraft carry a number of these weapons means that these same aircraft can now attack multiple targets. In essence, the PGM has become a significant force multiplier for air assets.

Recent Lessons. PGM require precise targeting information. The Joint Direct Attack Munition (JDAM) has a circular area of probability of hit less than 13 metres in all weather.¹¹ The critical information in the attack is the coordinates supplied by the sensors to the shooter in the JF system. Many shooters carry their own sensors to confirm target location. If these sensors are unable to paint or image the target, the shooter relies on the communication of accurate coordinates from the JF system. The major lesson learnt in recent operations is that robust information handing and communication is critical for the JF system. Miscommunication in the system has lead to failure of joint fires and to mix-ups where friendly coordinates have been engaged with tragic results. To reduce the potential for miscommunication, the preferred passage of targeting information is now by digital means such as Joint Variable Message Format (JVMF).

ADF Approach. The ADF has been relatively slow to extend its use of PGMs. Although RAAF Hornets dropped 100% Laser Guided Bombs in Operation Falconer (OIF), the RAAF does not currently have an all-weather PGM.¹² This issue is being addressed in projects Air 5409/5418, which aim to introduce an improved guided bomb (ie JDAM type munition) and follow on stand off weapon, for the FA18 and AP-3C.¹³ This project is believed to include the purchase of BRU 56A/B vertical extension racks for the FA18 which allow carriage of two weapons per station, effectively doubling the load out of smart weapons for the Hornet. Other PGMs in the ADF arsenal include laser guided artillery shells, laser guided rockets and Hellfire missiles on the Tiger ARH, and a proposal to acquire GPS guided naval shells. The ADF joint fire system will be well serviced by precision in the near future.

The ADF has also invested in JVMF radios in its airborne shooters; the FA18 and the Tiger ARH. The critical issue at this time is the supply of JVMF capable radios and data processors for JTAC and cross network transfer of data. The ADF will closely follow developments in the use of JVMF in US forces to maintain interoperability, but it should also ensure all its unique sensor systems, such as the AP-3C, maintain interoperability with the ADF JF system.

Command and Control

Command and control (C2) in the JF system is probably the most important area in terms of realising the synergies of the sensors and the shooters to produce optimum effects on the battlefield. It is also the area where there are fundamentally different approaches between the US Army in partnership with USAF, and the USMC. By looking at the main functions of the C2 system and the lessons from recent operations, the optimum C2 system can be assessed.

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10. Department of the (US) Air Force, 2003, *Operation Iraqi Freedom - By the Numbers*, viewed 4 August 2005 at http://www.globalsecurity.org/military/ops/operation_iraqi_freedom/lessons
 11. Joint Direct Attack Munition (JDAM) Brief viewed 2 September 2005 at <http://www.globalsecurity.org/systems/munitions/jdam.htm>
 12. Department of Defence, 2004, *ADF lessons learnt Op Iraqi Freedom*, Canberra
 13. Department of Defence, 2004, *Defence Capability Plan 2004 -2014 Public Version*, Canberra

Fire Support Coordination Measures. One of the main functions of the C2 component of the JF system is the implementation of Fire Support Coordination Measures (FSCM). The FSCM guide controllers and shooters of the coordination procedures required to prosecute attacks in the battlespace. Traditionally the area between the FLOT and the furthest range of long range organic fires, known as the Fire Support Coordination Line (FSCL), has been the area requiring fire coordination by the land commander.

Recent operations in Iraq saw the FSCL being placed up to 130km ahead of the FLOT, due to the advent of long-range rockets such as the ATACM¹⁴ and deep strike operations by attack helicopters.¹⁵ The resultant area proved difficult to manage and created inefficiencies in the conduct of JF. The USMC has adopted a second coordination line known as the Battlefield Coordination Line (BCL). The BCL is supplementary fire support coordination line, which facilitates the expeditious attacks of targets between the BCL and the FSCL, especially by attack aircraft. The BCL is placed at the range of traditional artillery (approximately 30km). Between the BCL and FSCL, airspace coordination procedures are used to deconflict air users, but fires are unrestricted. The BCL concept is in figure 2.

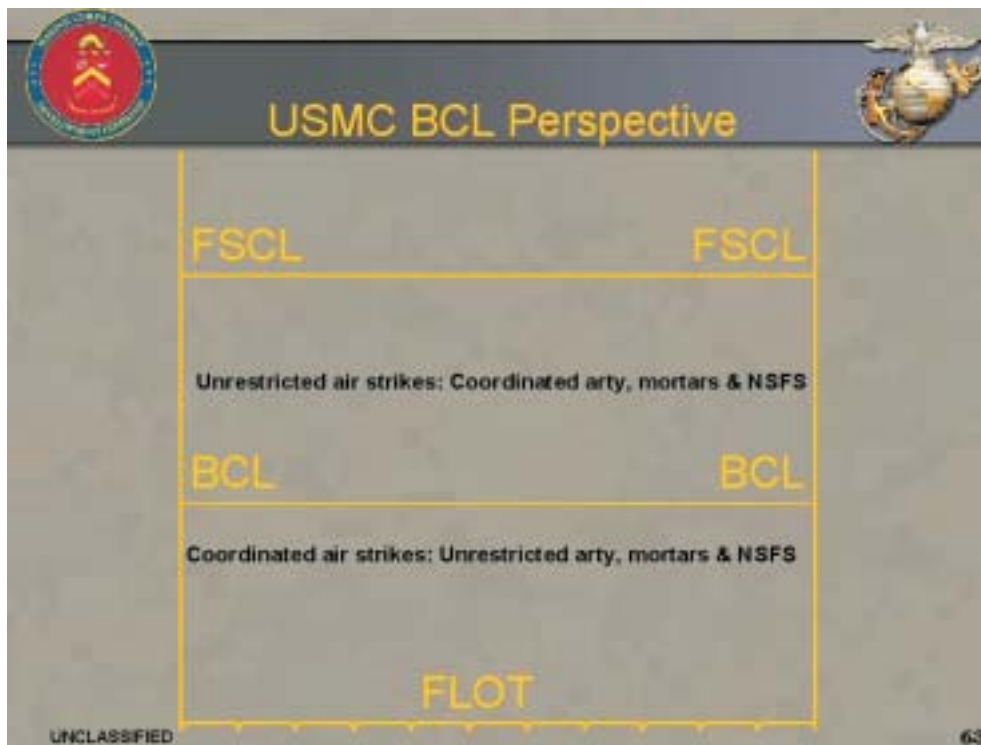


Figure 2: The USMC BCL concept¹⁶

The other FSCM that has proved its utility in recent operations is the Common Grid Reference System (CGRS) or 'Killbox' system. The CGRS system divides that battlespace up in 30 minute latitude by 30 minute longitude boxes, with an alpha-numeric reference system based on a common datum. Each 30 by 30 box can be further broken up into keypads as shown in figure 3.

The killboxes are used as a FSCM, where 'open killboxes' allow unrestricted air attack of targets in that killbox and 'closed killboxes' require terminal attack control by the owning control agency. The flexibility of this system has been demonstrated on non-linear battlefields, such as in western Iraq and

14. ATACM is US Army Tactical Missile System
 15. Department of the (US)Army, 2003, *Third Infantry Division (Mechanised) After Action Report, Operation Iraqi Freedom*, Chapter 12, pp106-107
 16. Babington, G. Macnab, A. 2005, *Overview of USMC Air/Ground Integration*, Australian Army Liaison Officer to United States Marine Corp, Quantico, VA

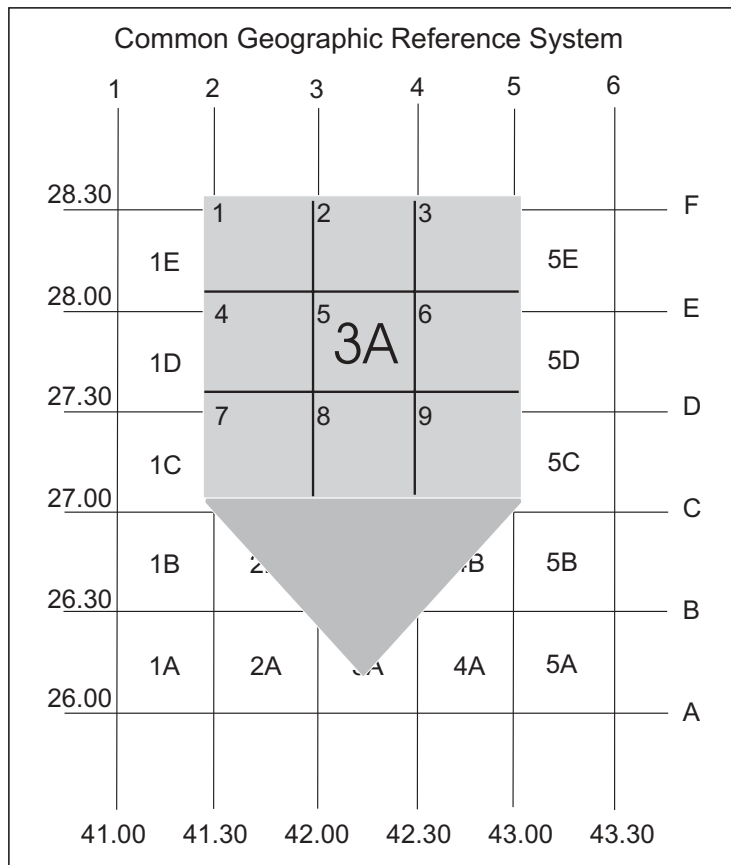


Figure 3: The Common Geographic Reference System

Afghanistan, where there were no definable FLOTs or FSCLs. The CGRS system also allows the easy communication of traditional FSCMs to users by referencing the killboxes and their status, to form the 'closed zone' where friendly troops are operating, and the 'open zone' outside the BCL/FSCL (as per figure 4).

Replacing the FSCL with Kill Boxes

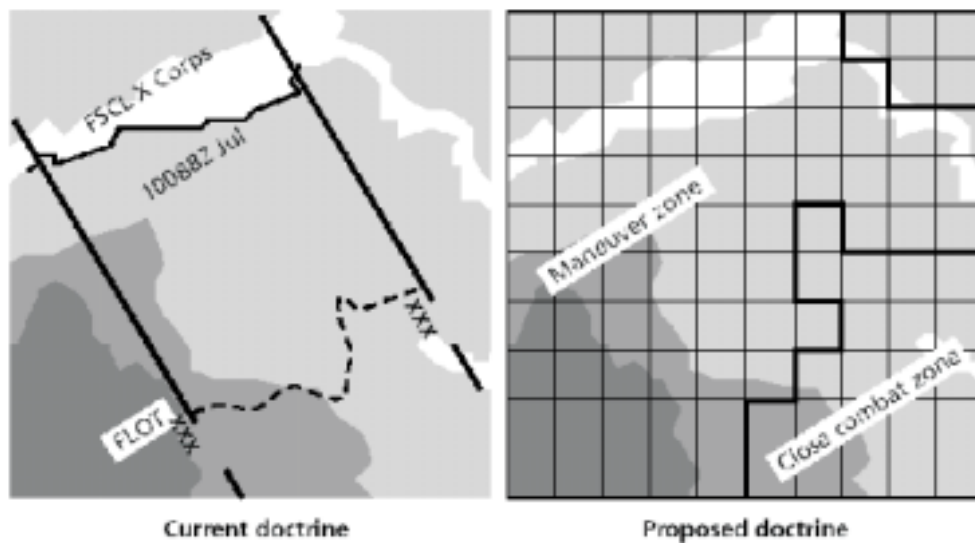


Figure 4: The Passage of Big Picture FSCM via Killbox Nomination

Target Prioritisation. Another major function of C2 is the prioritisation and selection of targets. Target selection occurs by necessity when ground forces are in close combat, but requires clear prioritisation when shooters are working more independently, such as in air interdiction (AI). Doctrinally shooters on AI missions are supposed to attack targets based on the approved priority target list. In reality, aircraft conducting AI prioritise on targets that are easily locatable. This tendency means that targets of higher priority are potentially bypassed without engagement, especially if they are well camouflaged and concealed. In Operation Allied Force, this tendency was exploited by Serbian ground forces in Kosovo who used mock ups of attractive targets, such as armour, to decoy attack aircraft from well concealed equipment.¹⁷

This tendency was addressed in OIF where the JF C2 elements, such as the USMC Direct Air Support Centre (DASC), practised 'ground directed AI'. Ground directed AI has the lead JF control agency use its wide area ISR assets to locate and identify valid high priority targets, and pass those to the AI aircraft for priority targeting. This proved an effective way of directing priority targets and improved the efficiency of AI missions.

Deconfliction. Probably the most important function of C2 in the JF system, especially in CAS, is the deconfliction of fires in close proximity to own troops. Traditionally a FAC has conducted this task by positioning, on the ground or in the air, to have eyes on the target area whilst ensuring that the attacking aircraft is pointing at the target area before clearing the attack. This classic type of CAS control is now termed 'type 1 control'. With the advent of remote observation and the use of stand off PGMs, the ways of controlling CAS has changed considerably. Procedures have been developed where the FAC, and now JTACs, can control attacks: with either observation of the target area or the attacking aircraft (type 2 CAS); or without direct observation of either target or attacking aircraft (type 3 CAS). This expansion in the types of CAS has increased the complexity of tactical control of JF.

Attack Control. The basic principle of control of CAS is that the C2 agency with ownership of the battlespace and the best situational awareness should control the attack. On the linear battlefield where the company JTAC has direct observation of the intended targets and the manoeuvres of own troops, this principle is relatively easy to satisfy. To look a little deeper into the battlefield from a position of advantage, the traditional approach has been to get them airborne or employ a briefed FAC in a specialist aircraft. New problems have occurred with other agencies looking deeper into the battlefield with stand off sensors, such as tactical UAVs and strategic ISR assets.

Recent lessons in operations have highlighted that tactical control of JF needs to occur in accordance with ownership of the battlespace. During OIF, US Forces had a number of encroachments of fires from Corp into Divisional Areas of Operations (AO), and on other occasions from the CAOC¹⁸ into army AO. On one occasion, an F15E misidentified a MLRS as an enemy surface to air missile system and gained permission to engage through AWACs, killing three own troops.¹⁹ The reason for this and other incidents was the reluctance of the agencies owning the surveillance information pushing that down to the commander owning the respective battlespace. There was a tendency for higher commands to seek friendly disposition from the subordinate commands and then conducting JF from an inappropriate level. The basic lesson remains that control must be conducted at the lowest level consistent with the ownership of the battlespace and the development of appropriate situational awareness.

Organisation of Control Agencies. Another lesson from OIF was that the lead agency in JF system should ensure that the sensor information and shooters link up with the appropriate attack controllers. The lead agencies for Operation Iraqi Freedom were the US Army's Air Support Operations Centre (ASOC) and USMC's DASC. These agencies are established under their respective land commanders and are usually collocated with their respective senior Fire Support Coordination Centres. The ASOC remained in Kuwait and attempted to coordinate offensive support remotely. It experienced communication

17. 'Operation Allied Force' Brief viewed 5 September 2005 at http://www.globalsecurity.org/military/ops/allied_force.htm

18. CAOC is Combined Air Operations Centre.

19. Department of the (US)Army, 2003, op cit, pp140-141

problems with Division and air assets. The DASC moved with the Corp headquarters and operated as a hub for USMC air and ground integration. The DASC operated more efficiently and was able to effectively integrate air and ground forces for JF. The DASC received all the USMC tactical air strike requests, processed wide area surveillance imagery from JSTARS and received tactical UAV imagery. However the DASC specialised in maintaining the big picture and prioritising requirements. The DASC had the capability to conduct JF but would ensure that the sensor information was available to the appropriate controllers. On join, shooters would be given big picture information and passed directly to the appropriate controller. The DASC had a higher capacity than the ASOC to coordinate sensors, shooters and link them to the appropriate level in the control organisation. This was in part due to the cultural jointness apparent in the USMC, but also due to the experience and specialist training of the personnel.²⁰

The ADF Approach To Improving The JF System

There is clear emphasis on improving the conduct of joint fires in the ADF. The Chief of Army, LTGEN P. Leahy has stated that:

*'If the ADF is to develop effective land-air operations concepts and doctrines for joint warfare, then the Army and the RAAF must build an operational partnership that is based on mutual recognition of the interdependence between fire and manoeuvre.'*²¹

AVM J. Quaife, Air Commander Australia, has made the development of JF Air Commands second highest priority.²² The ADF has embarked on a number of system improvements and investments that should increase the capability of the JF system. The way to realise the synergies of the system is to ensure that the sensors are informing the appropriate levels of the JF C2 system, and that the JF C2 system is effectively employing the shooter based on the priorities of the joint force commander.

ADF Sensors. The first priority of the JF system is to ensure that the sensors of the system are harnessed to increase the situational awareness of the C2 system. The Australian Army has traditionally employed a bottom up approach. This approach will be enhanced by the provision of a tactical UAV in the near future. The sensor output of the tactical UAV will enhance the land commander's situational awareness when fused with other information the system. This picture should be made available at Combat Arms Group's Tactical Air Control Party (TACP), such that a JTAC can use the fused picture to control JF.

The RAAF has maintained a top down approach to ISR and will need to review the means by which it passes information into the tactical C2 system for JF. The need for real-time imagery and sensor output will mean that the passing of such information by an appropriate network will be necessary if it is to add value to the JF system. In OIF, the JSTARS CGS terminals proved valuable at Divisional HQs for the conduct of JF. The use of appropriate liaison personnel in manned platforms such as the P3C is also important. The RAAF should ensure that the sensor outputs from its AP3C, and potentially its Global Hawk system, are accessible by the appropriate controllers in the JF system.

Another synergy is easily realised when JTACs are positioned in the sensor platform. One of the most important sensors the ADF will operate on the battlefield will be the Tiger ARH. It will be highly beneficial if one of the crew is a JTAC. The Tiger JTAC/FAC can be expected to have high situational awareness of enemy positions as well as the friendly scheme of manoeuvre. 16BDE plans to qualify its battle captains as JTACs but it will require additional resources from Air Force to help train and keep these pilots current.

Other areas where an airborne JTAC could be advantageous would be in an AP3C when that aircraft is in direct support of land forces. Other possible uses of airborne JTACs may include in airborne C2

20. Babington, G. Macnab, A. 2005, op cit.

21. Leahy, P. 'The Army in the air, Developing land-air operations for a seamless force', *Australian Army Journal*, Volume II, Number 2, Autumn, 2005, Land Warfare Studies Centre, Canberra ACT

22. Hodson, R. '1 Ground Liason Group Concept of Operations', Brief for RAAF Single Service Program, HQAC, Glenbrook, 5 September 2005.

platforms, such as the RAAF's Wedgetail aircraft, in situations where that platform is providing fire coordination and support for land forces such as Special Forces.

ADF Shooters. The ADF is also making significant investment in its shooters. The FA18 and Tiger ARH both bring better sensors and precision to the battlefield as improved communication. The upgraded FA18 will be better equipped to pursue the JF mission, not only in direct support of land forces, but also in the conduct of ground directed AI. The information that is required for the AI mission is the status of killboxes (ie FSCMs) and the last known position of priority targets. Additionally with the advent of all weather precision weapons, the joint forces commander will be able to pursue fire and manoeuvre on terms unfavourable to the enemy.

JF C2. Although there is significant development in sensors and shooters in the ADF JF system, the greatest challenges occur in the C2 system. The ADF has had a bottom up approach to tactical control of JF, and will now be challenged in organising itself to realise the synergies of the system. The ADF has maintained a focus on training JTACs to feed the bottom levels of the organisation. The ADF has recently realised the importance of the organisation of C2 in the JF system. 1 Ground Liaison Group (1 GL GP) has produced a new concept of operations that sees the establishment of a JTAC Troop at RAAF base Williamstown to become the backbone of the JTAC capability in the ADF.²³ It has also proposed to form a Battlefield Coordination Detachment (BCD) that will attach itself to the Joint Air Operations Centre (JAOC) for operations to represent the land commander. It also proposes to have senior controllers of JTAC Troop deploy as BCD (Air) (Forward), in the Army's ASOC, to perform coordination of air requirements for the land commander. The concept also relies on the RAAF supplying appropriately qualified Air Liaison Officers (ALO) to man the ASOC and various TACPs.

The challenges for the ADF in developing C2 of JF are associated with developing a balanced approach. The JAOC will be well serviced by the BCD in planning of JF. But because the execution of JF needs to occur at the level of ownership of the battlespace, there needs to be an internal network between the various levels of the command, that allows the display of the overall picture whilst at the same time servicing the situational awareness of the element controlling JF. One such system is the USN developed Joint Fires Network, which is an overarching network designed to integrate multiple source inputs for the control of JF.²⁴ The USMC has also demonstrated that the use of well trained and experienced personnel in the lead coordination agency, as well as supportive information networks, is required to ensure that JF are conducted at the correct level with the best information available. The ADF needs to develop supportive C2 networks as well as skilled personnel with appropriate JF coordination training. Given our limited resources it would be beneficial if these key personnel were trained by experienced organisations such as the USMC's Marine Warfare and Tactics School (MAWTS-1) in Yuma, New Mexico.²⁵

The developed model of the optimum ADF JF system is shown in figure 5. The important distinction is that the critical path to effective JF is the linking of sensors and shooters through the appropriate level of C2 in the organisation, coordinated by a lead agency. The main networking that needs to occur is inside the C2 hierarchy, to ensure that information is flowing between levels of the organisation. It is a combination of this network enabled approach and a people approach that is required to make the system run at an optimal level.

23. Hodson, R, op cit.

24. Naval Sea Systems Command, News Wire, 'Blue Ridge, Hickham AFB Demonstrate Joint Fires Network Capabilities' viewed 5 September 2005 at www.navsea.navy.mil/newswire_content2.asp?txtTypeID=2&txtDataID=8343

25. MAWTS-1 runs a 3 week Ground Combat portion of its Weapons Tactics Instructors course suitable for ADF officers who are employed in senior fire coordination agencies.

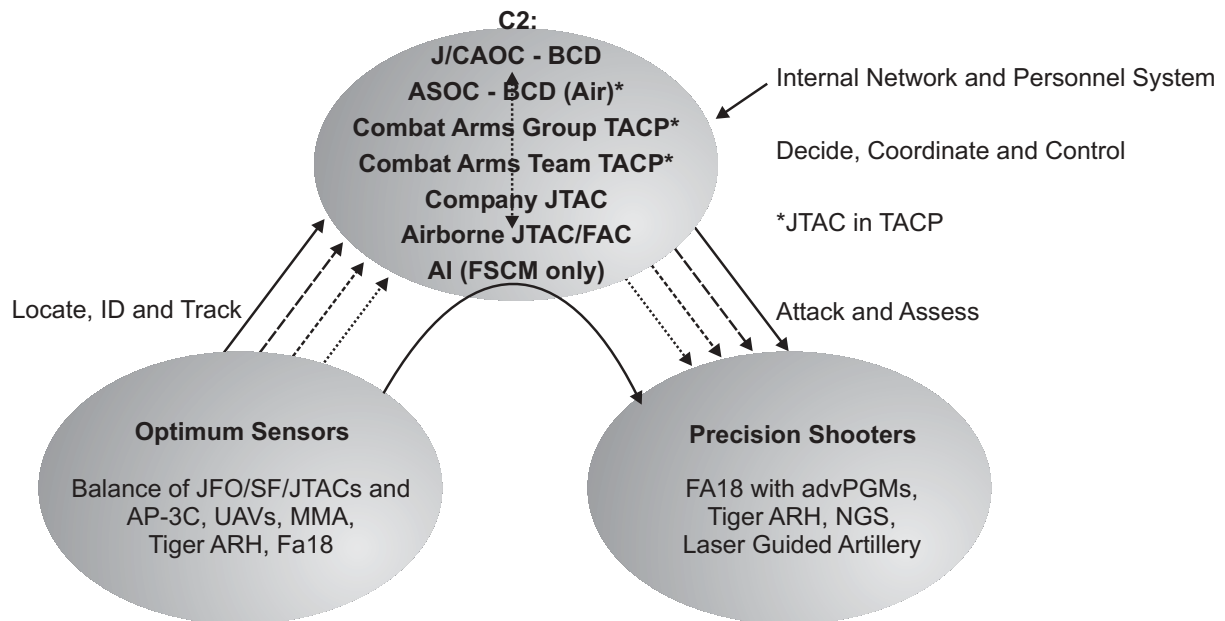


Figure 5: The Optimum ADF JF System

Conclusion

The aim of this paper was to identify improvements to the conduct of Joint Fires in the ADF using a system approach. Each component of the JF system was analysed to describe the current status, recent lessons and the proposed improvements. The final part of the paper analysed the relationships between the component systems and described the optimum functioning of these systems to realise a synergistic effect.

The JF system is a 'system of systems' where a variety of sensors can be used to locate, identify and track targets, and a variety of shooters can produce a number of effects. But it is the C2 function and communications networks within the system that release the synergies of the system. The ADF is making a number of investments that will improve the sensors and shooters of the JF system, but it will need to make a number of improvements to its C2 system to realise a return on these investments. A technological solution to link sensor to shooter is unlikely to produce results on its own, as the link is only enabled by the interaction of the C2 system. Although networks will give the system higher situational awareness, the requirement for tactical control to be conducted at the level of ownership, will mean that this activity will remain a people enabled activity. The ADF needs to recognise the importance of the C2 system and ensure it is enabled with well-trained and equipped people. The JF system will benefit from a network-enabled approach but is unlikely to become a network centric activity.

Recommendations

From this system analysis of the JF system it is recommended that the:

- a. ADF balance the use of direct observation and technological sensors;
- b. ADF investigate the US's JFO approach to direct observation;
- c. ADF closely follow developments in the use of JVMF data transfer in US forces to maintain interoperability;
- d. ADF adopt the Battlefield Coordination Line (BCL);
- e. ADF adopt the Common Geographic Reference System (CGRS) and associated fire support coordination conventions;
- f. ADF indoctrinate ground directed AI;

- g. ADF investigate communications networks for the multiple levels of C2 in the JF system, such as the USN 'Joint Fires Network';
- h. ADF train Tiger ARH battle captains as JTACs;
- i. ADF employ JTACs in AP3C Orion and AWAC on specialist missions;
- j. ADF train selected personnel on US JF courses such as at MAWTS-1; and
- k. RAAF appropriately train its ALOs in JF.

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Looking to the Future of Fires

*By Lieutenant Colonel Lance A. McDaniel, USMC
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The Marine Corps has, for quite some time now, stated without equivocation that it will fight as a Marine Air Ground Task Force (MAGTF). In fact, one of the Marine Corps' Core Competencies is Combined Arms Integration.¹ Certainly, the Marine Corps has enjoyed great success across the spectrum of conflict with our way of fighting with maneuver and fires. The question for the Marine Corps now is how to evolve from where it is so that it can remain relevant-even increasingly so-as advances in technology and changes in battlefield environments bring new challenges and perhaps some new opportunities.

Since World War Two and the advent of the Cold War, combat operations have evolved along very predictable lines. With the exception of the Marine Corps' small wars activities, most of the efforts since the mid-40's have been aimed at increasing the service's abilities to kill the Threat from greater distances, with greater precision. The military sought to increase lethality by developing more effective warheads and by more accurately engaging the target. The military in general, and the Marine Corps specifically recognized that in a force-on-force battle against a peer or near-peer competitor, its ability to locate the enemy's critical vulnerabilities and engage them with adequate precision, lethality (and mass or volume) of fires often amounted to the decisive effect that it sought in order to achieve victory.

The Marine Corps has learned that simple attrition is rarely effective. The Marine Corps needs to strike the right targets at the right time-and normally in support of or in concert with maneuver. To be able to do this, we acknowledge a significant need for intelligence, surveillance, and reconnaissance (ISR) of a capable and persistent nature. That is, we must do more than simply destroy enemy targets in order to win. We need to engage in the traditional Decide, Detect, Deliver, and Access cycle.

Will the future warfighting challenges that the U.S. military faces require something different than what it experienced in the past? Perhaps this is mission analysis at a very rudimentary level, but before we can identify a requirement for fires in the future, we need to start by attempting to predict the warfighting environment. Most authorities today are of the opinion that the security environments that the military as a whole will operate in will be characterized primarily by irregular warfare-or that irregular warfare will play the dominant role.² However, almost no one would recommend a singular or exclusive focus on irregular warfare (that is to the exclusion of conventional combat operations). In fact, such an authority on guerrilla warfare as Mao saw guerrilla warfare as a '... necessary strategic auxiliary to orthodox operations.'³ We can state with some authority that the U.S. military needs to maintain a conventional capability even during a period dominated by irregular warfare, if for no other reason that we cannot divine the long-term future and must be ready to fight major combat operations when the time comes.

The real questions are related to determining the right irregular warfare capability and capacity-and using the answer to this question to inform force structure decisions. Secondly, and related to the first question, are the structure and tools for irregular warfare decidedly different from the military's requirement for more conventional operations? Though this may sound counterintuitive, the answer is 'no,' that the structure and military tools the Marine Corps developed for conventional operations provide most of what will be needed to fight irregular warfare-or 'small wars' in a larger context. This assertion emanates from a Marine Corps perspective, admitting that the other services may find that

1. MCDP 1-0, Marine Corps Operations p. 2-3
2. This supposition comes from numerous sources to include Strategic Planning Guidance (SPG) and various influential analysts and writers
3. FMFRP 12-18, Mao Tse-tung on Guerrilla Warfare, p. 57

they are required to adjust more to this new small wars reality. For instance, we know from both historical perspective and from recent experience that fighting small wars presents an extensive manpower requirement—specifically in the way of ground forces that work 'up close' with the populace (and the enemy for that matter). The Marine Corps is already poised for success when it comes to force structure in general terms. However, this is not to say that some small refinements will not be in order.

So if we acknowledge that the existing structure may not be in need of sweeping changes, what areas do we need to re-validate or adapt outright to fight small wars? The answer lies in the Marine Corps' core competency of integrating combined arms. The specific areas that we need to address are intelligence, surveillance and reconnaissance (ISR), air-delivered fires, ground-based fires, fire support coordination for the 21st century, and what can be generically referred to as 'non-kinetic' fires (IO would be an example). Naval Surface Fires will not be addressed here because this capability rightly falls into a category all to itself—but that does not lessen its role and importance in the overall fire support picture.

One of the lessons the U.S. military is re-learning from operations Iraqi Freedom and Enduring Freedom is that there is a substantially greater need for persistent, capable ISR that meets the needs of our tactical units involved in small wars. Tactical units at the battalion and below have a requirement for much more 'actionable' intelligence that they can use for targeting purposes. Typically, units experience two extremes when it comes to intelligence. They are inundated with information, primarily of a general nature—so much so that the 'noise' precludes any hearing. At the same time, tactical units receive almost no specific, timely intelligence that they can bring influence to bear upon. Often, in conventional operations, the ISR assets tend to be focused in a 'top-down' manner. That is to say that the higher headquarters element (e.g. division, MEF, etc.) normally coordinates the activities of collection agencies and is the first to receive products and information from national assets. Battalions find that the Marines on the ground are virtually their only reliable source of information. Unfortunately, the tactical units in small wars are the 'user' and where most of the 'Decide, Detect, Deliver, Assess' activities take place. In small wars, the activities of fires and effects in concert with maneuver (there can be no separation—even intellectually) are principally conducted and coordinated at the tactical unit level. The Marine Corps needs an expanded capability at the battalion level along with a greater ability to handle the intelligence and use it for targeting purposes. Finally, we need to re-examine what information we give the battalion (and below) and what information we demand from them.

Volumes could be written about the delivery agency for kinetic fires that is most relevant for small wars. Simple mission analysis tells us that we need fire support that is persistent. When a platoon out on patrol makes contact with an enemy of equal or greater size, they will probably want to engage with a combination of direct and indirect fires. Artillery and mortars can be hugely effective, but may not always be available (range fans probably will not cover the whole operating area). Moreover, despite the enhanced precision that artillery in particular is able to achieve by virtue of improved target location equipment, ground-based indirect fire is still an 'area weapon' and collateral damage and 'proportionality' weigh even more heavily in small wars such as a counter-insurgency than in conventional combat. That fact brings up the next requirement. Fire support needs, at times, to be more precise and discrete. In a perfect world, we would be able to "dial-a-kill" from all our ground and air-delivered fires so that we could be more discriminatory in our application of kinetic effects. The second and third order effects from massive collateral damage are impossible to estimate or predict, but nothing good can come from killing 'innocent' bystanders and destroying people's homes. If we acknowledge that the people are usually the center of gravity, we can 'win the battle and lose the war' if we cannot be discrete in our use of firepower. For instance, if we use a kinetic effect to destroy a bridge in order to foil the enemy's use of it, we would be remiss if we failed to consider the impact on the local population who can no longer use the bridge to continue trade. We could inadvertently create more enemies. These characteristics apply universally to all sources of fires. In today's terms, these requirements give an advantage to rotary wing platforms compared to fixed wing (with the exception of survivability), if only due to the enhanced ability to discretely engage a target from a perspective more closely aligned with the force being supported. The Marine Corps, while directly engaged in a small wars operation like COIN, will have a need for more rotary wing Close Air Support

(CAS) than in conventional operations. Experience from OEF and OIF II seems to be indicating that the Marine Corps' use of fixed-wing CAS working well at current levels. This is not to indicate that we will require less fixed-wing CAS, only that we will continue to have more emphasis on the use of rotary-wing CAS. In a more conventional operation like OIF I, this statement simply could not be made as fixed-wing aviation, at least initially, seemed to play the dominant role.

The Marine Corps' philosophical approach to fires has long been that, wherever possible, we will seek to use the synergistic effect of air and ground-based fires-in concert with maneuver. In conventional operations, that means we need to not only have a CAS capability, but the services of ground-based systems as well. Conventional combat against a near peer competitor is certainly complex, but establishing force structure requirements for the ground combat element is reasonably straightforward. In contrast, small wars are generally of a more complex and unpredictable nature, making force structure decisions substantially more difficult. Counter-insurgency operations in particular present some unique fire support challenges. The forces on the ground are likely to be dispersed in a non-contiguous fashion. As a result, the ground-based fire support providers will be likewise spread out and ultimately unable to support all the small units on the ground. A counter-insurgency operation may not require the same capability from the artillery and mortars. In fact, using 'area fire weapons' may simply not be practical in many cases. However, that is not to say that there will be no role; only that they will probably be used a little differently. For instance, the requirement to 'mass' fires is not likely to play a dominant role. On the other hand, responsiveness and accuracy with the ability to be discriminating in the application of effects, will assume an even greater importance. Moreover, the expeditionary nature of most small wars operations requires that the fire support systems be easily deployable and transportable. Where the maneuver force goes, their fire support assets should be able to go. All this is to say, that to be relevant for the range of military options, a force structure that is capable of supporting conventional combat operations and then rapidly adjusting to support small wars such as an insurgency, is the organization the Marine Corps needs-and this applies to fire support assets in particular. In the end, operating in a counter-insurgency environment may require some unique task organization adaptations, but the current general-purpose force structure is still the best starting point. From a purely combat development perspective, the Marine Corps must continue to work to acquire systems that will improve the ability for the man on the ground to obtain the fire support he requires when he needs it.

In conventional operations, the business of fire support coordination is difficult enough. The complex nature of small wars brings a whole new dimension to fire support coordination. In fact, with the shift to include 'effects' coordination, so that the Fire Support Coordination Center (FSCC) can coordinate kinetic and non-kinetic 'effects,' FSCC personnel will be required to think more broadly in the use of means of influence. Likewise, FSCC planners will be required to better understand the potential second and third order effects.

In order to support the maneuver commander's campaign design, the management of effects will include influence means as diverse as a kinetic strike on an enemy headquarters building to a civil military project like assisting a local medical clinic in the provision of basic services. Effects will nearly always be used in an "offensive" capacity-to influence someone to think or do something. Information Operations are an area ripe for enhancement as the Marine Corps shifts to a greater focus on small wars.

The core competency of combined arms integration will be no less important in the future, but it will require some change, particularly in the manner the Marine Corps integrates all the tools of influence and to the management of effects. However, while the tactical commander will probably have to do some creative task organization of his force in line with the demands for a specific operation, the general-purpose nature of the existing structure remains relevant for future combat. Aviation delivered fires will continue to play a critical role, especially in areas where the ground force has no ground-based fire support available to them. From the standpoint of supporting the specific functions the ground forces require in small wars, the Marine Corps will have an even greater need for rotary wing CAS in particular. Finally, based on the recent combat experience, the need for more capable ISR assets to support the tactical commander cannot be over-emphasized.

Fighting with Fires and Effects

By Lieutenant Colonel Lance A. McDaniel, USMC
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The American military's use of fires seems to mirror the American Way of War¹, particularly as it has evolved during the Cold War and specifically during the post-Vietnam era. The United States experience in Vietnam was viewed almost as an aberration in the sense that military leaders (at least throughout the 1980's and 1990's) did not foresee the United States military becoming likewise entangled in another dirty small war with vague goals and an irregular enemy. It is hard to blame the military exclusively for this point of view, as it seems to match our national psyche and how we developed as a nation. In fact, the National Military Strategy and the corresponding Defense Planning Guidance have traditionally fallen in line with the focus on major combat operations. Another factor in this perspective emanates from the industrial capability that helped win World War Two; that is the particular dominance of the American industrial complex writ large. America can make the instruments of war in large numbers and can make them well. This particular competence gives the nation a proclivity to seek and use materiel solutions for the problems presented in war. In fact, it even seems to cause the American military to attempt to plan for and train almost exclusively for wars in which this magnificent competency can be wholly manifested.

Small wars, with an elusive, even vague enemy that is difficult to target (and therefore apply American tools of war), generally do not fit into the category of the conflicts the American military would traditionally choose. Of all areas in which this issue is examined, the most pronounced case would be fires and effects. The American military would like to develop and acquire advanced fire support systems, ground-based, aviation, and space-based, that would allow it to fight "traditional," symmetrical combat operations, regardless of the threat to be engaged. This all begs some important questions. First, is the United States military most likely to face conventional forces in a symmetrical type of 'traditional' fight in the future?

Even before we attempt to answer this question, we need to challenge a basic premise—that the American Way of War is indeed aligned with what has become known as the Powell Doctrine. This doctrine is based on the idea that America should only opt to involve itself in wars fought for vital national interests and that have clear political objectives and enjoy popular support.² In fact, once American forces are introduced into combat operations, the American Way of War may cause the military to deny indicators that confirm that they are engaged in a different kind of war. The author Max Boot in his book, *The Savage Wars of Peace*, challenges the belief that the United States only fights major conventional wars against symmetrical, near peer, enemies. As Max Boot notes, a look at United States history simply does not support that premise. Max Boot would probably argue that World War One and World War Two might be considered the aberrations. He points out that America fought small wars not to attain decisive victory over the enemy, but for other less clear reasons such as inflicting punishment, achieving pacification, and benefiting from profiteering.³ Reading Max Boot's book gives a person the impression that there may be more than one 'American Way of War.' The United States military traditionally is used to intervene whenever and wherever the President feels American interests are in jeopardy. The Cold War and the advent of nuclear weapons proliferation makes total war between major powers a last resort—and therefore an unlikely circumstance.⁴ However, the world order is no less chaotic (assuming you believe there is 'world order'). So, we can say that the answer to this first question of whether the United States military is most likely to face conventional forces in a

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1. Read Russell Weigley's, *The American Way of War*
 2. Echevarria II, Antulio, LTC, USA. "*An American Way of War or Way of Battle?*"
 3. Boot, Max. *The Savage Wars of Peace: Small Wars and the Rise of American Power*, Basic Books 2002
 4. This point is made by Martin van Creveld in his paper "Modern Conventional Warfare: An Overview"

symmetrical type of 'traditional' fight in the future is 'no' and further that we need to even rethink what we call traditional warfare.

Small wars, which are, at least in the case of the United States military, typified by a conventional force pitted against an enemy who quickly determines he cannot fight in a peer-on-peer, conventional manner, involve complex, asymmetric combat. Small wars present an environment in which it is difficult for the conventional military force to fully apply its tools of war. Of course, that fact is the specific design of the enemy. It is axiomatic that a conventional military force such as the United States military, will seek with great diligence to apply that force when the time for combat action arises. For this reason, we should be slow to 'blame' the military for strident efforts to find relevant applications for the tools of its trade. So, for instance, when the United States Air Force develops extensive procedures to implement a very physical or materially oriented version of Effects-Based Operations (EBO), that speaks well to how they see war being fought (or even how they can fight). In this sense, they are simply aligning themselves with their theory and organizational mindset of warfare. Both the Air Force and the Navy have developed competencies in the ability to strike identifiable targets. An engineering approach to identification of relevant target sets allows these targeteers to analyze the 'right' targets to strike and how to strike them through a process colloquially called 'weaponeering.' There is some undeniable wisdom to this approach in that it seems to take military planners away from the arguably pointless practice of carpet bombing of an enemy who collocates himself with the civilian population.

The use of EBO seems to fall in line with some aspects of maneuver warfare in that planners need to identify the enemy *centers of gravity*, and then look for a *critical vulnerability* that if engaged could undermine or neutralize the enemy's center of gravity. Practitioners of EBO will attempt to strike these *critical vulnerabilities* – normally with a munition (or munitions) that will produce a kinetic effect. However, small wars often present a dynamic where *centers of gravity* are difficult to determine. In fact, the *center of gravity* may even be the population themselves whom both the insurgents and the conventional military are trying to influence. There may simply be few 'clear' targets to engage with kinetic weapons of war. It may be even counterproductive to apply kinetic effects in any strike capacity-unless it is tied to support for a counterinsurgency force on the ground. The concept for EBO places far too much focus on a systemic design, almost an engineering approach to combat, and though EBO acknowledges the use of both kinetic and non-kinetic effects, the focus is clearly on identifying targets for prosecution. Moreover, targeteers practicing EBO will find it quite difficult to accurately predict the second and third order effects from any kinetic strike. The United States military's experience fighting small wars, and the recent interventions in Iraq and Afghanistan in particular, indicates that this engineering approach (resident in the practice of EBO) is not effective, if for no other reason than that men on the ground are dealing with an adaptive enemy in an extraordinarily complex and dynamic environment. For this reason, EBO is not the answer to how the military should design a campaign to fight with fires. However, the use of effects is an element of how maneuver commanders will fight small wars.

Effect can be defined as, 'Something that is produced by an agency or cause; result; consequence.'⁵ To achieve effect is to produce the results or outcome you desire. In our maneuver warfare doctrine, we acknowledge that to win in combat, we must concentrate combat power toward a decisive aim and seek to strike the enemy at a time and place when he is most vulnerable. The Marine Corps' maneuver warfare doctrine states that Marines should endeavor to strike the enemy when and where they can hurt him the most.⁶ Maneuver warfare involves seeking out the enemy's center of gravity (or centers of gravity), and attempting to divine critical vulnerabilities that can be exploited to attack the enemy where he is weak in order to '...undermine, neutralize, and/or defeat an enemy center of gravity.'⁷ The concept of effects in this sense must be aligned with the military objective.

5. The Random House College Dictionary

6. MCDP 1, p. 45-47

7. Strange, Joe. Perspectives on Warfighting, Marine Corps University, p.74

Again, if the answer to the first question is 'no,' then a second question is in order. What can we do to re-look at how we will use fires and effects against an enemy we will more likely encounter? I believe we need to begin by marrying up fires and effects with what the maneuver commander is doing on the ground. That seems very basic, but in application it tends to up-end the roles some of the traditional fire support agencies perform (notice who is 'supported' and who is 'supporting'). Together with this, we need to redefine what a fire support agency is now-and we need to open up our lens to include elements and agencies which do not use 'fires' at all, but are capable of wielding influence tools. Finally, we need to key on all aspects of effects. In small wars, Information Operations, which normally do not directly involve kinetic combat operations, can be a 'fire support' tool. Stated a different way, the maneuver commander and his staff, who are engaged in small wars, should practice a form of operational design and campaigning that brings both physical and non-physical elements of military (and civil) power into play. For example, there can be no separate Civil Military Operations effort that is divorced from some proposed offensive 'cordon and search' activities. In this sense, the maneuver commander who is conducting counterinsurgency operations takes a holistic view of all his fires and effects, considering all the ways he can bring influence to bear on his enemy and on the non-combatant population. His actions involve not only good tactical sense, but also genuine operational art.

There is another question that we did not ask, but that this discussion must ultimately address. If we acknowledge that for the United States military, small wars will be the most common type of combat in which the nation will employ their services, and if we also acknowledge that we are going to need to change the conventional paradigm for the use of fires in this 'new' kind of fight, then what are the implications for organizational change for the Marine Corps? I believe that, strange as this may sound, when it comes to structure and organization, there are very few required changes. Conventional capability is still a requirement because conventional combat operations will still occasionally be necessary and the military must be ready when they occur. We do need to institutionalize some of what we have learned from recent combat experience. For example, the artillery fire support coordination center may, as a functional element of the maneuver operations center, take on coordination responsibilities for all 'fires,' including non-kinetic influence activities such as Information Operations and Civil Military Operations (CMO).

So how can we say that the United States military is going to be predominantly fighting small wars, and then advance the position that in most cases, and the Marine Corps in particular, there simply is no requirement for major force structure adjustments? The answer is that the harder we examine roles and missions, and try to map these roles and missions to the right force structure; we find that a general-purpose force remains the correct solution for small wars. Further, I believe we will find in the long run that a Marine Corps that retains its general purpose force structure and works with typical Herculean effort to develop competency in small wars, will ultimately be quite effective doing its part in a major combat operation against a near-peer competitor. Small wars will still require fire support in healthy measure. Perhaps the biggest difference from what we previously called traditional combat is in the way we perceive the use of fires in concert with all the available tools of effects and influence.

Delete: 'Offensive Support' Insert: 'Joint Effects'

By Captain D. Patterson, School of Artillery

'Firstly, the HNA is not an RAAC conspiracy to marginalise the Infantry and Gunners. Whether you are marginalised is entirely in your hands. But you must rise to the occasion or risk irrelevance. No change is no option. If you do not like change you will like irrelevance less.'

Chief of Army, RAA Conference, 28 October 2004

Introduction

The problem with the Royal Australian Artillery (RAA) current offensive support planning doctrine is that it does not remain relevant throughout the spectrum of conflict; and hence, during most conflicts neither do we. For years we have prided ourselves on our technical competence in the application of offensive support on the conventional battlefield, but that has been of little comfort as we have watched our peers in other Corps deploy in their roles on a string of low-level non-conventional operations.

'We need you to adapt to the complex environment that we must operate in now and into the future.'

Chief of Army, RAA Conference, 28 October 2004

Arguably, the writing is on the wall for the RAA. Adapt to complex warfighting or face irrelevance in the majority of conflicts. Fortunately there is a role for us throughout the spectrum of conflict.

What's Wrong with the Current System?

Significant efforts are being made to update our current offensive support doctrine. The reason this is necessary is because it is still strictly focussed on the coordination of lethal effects and does not offer any acceptable system for integrating *non-lethal* effects. Current doctrine does make a single paragraph reference to electronic warfare, but fails to make any mention of how it, or any other non-lethal capabilities, can be effectively integrated into effects planning. As such the doctrine is only relevant when lethal effects are the order of the day. In short, our doctrine is not designed to be relevant throughout the spectrum of conflict.

Another major flaw in our doctrine is that it only caters for planning for set-piece battles. It doesn't really deal with long-term campaigning at the tactical level or *tactical campaigning* for want of a better term. For example, if you are the battery commander supporting a battlegroup that has been allocated the Bobonaro Province in East Timor or the Al Muthanna Province in Iraq, what process do you follow to coordinate the application of lethal and non-lethal effects over time throughout the six month deployment?

In complex warfighting the requirement exists for both lethal and non-lethal joint effects to be synchronised in support of the commander's plan. Non-lethal effects that require synchronisation with lethal effects can include those created by, electronic attack, psychological operations, the release of information to the media and public, the distribution of humanitarian aid, reconstruction, funding of community projects, the provision of medical aid to the public and many others. For example there is a need to ensure that we are not handing out humanitarian aid in a village one day and then undoing any good will generated by bombing it the next. That is only one of many examples.

The US Army in Iraq and Afghanistan has realised this and expanded the role of its artillery cells in every headquarters to include responsibility for both lethal and non-lethal effects. Known as Fires and Effects Cells (FEC), or in some instances as Joint Fires and Effects Cells (JFECs), these cells are now providing a function essential to conducting operations in a complex environment.

'The FEC is responsible for coordinating not only lethal fires, such as artillery, but also nonlethal effects. These nonlethal effects include information operations (IO), psychological operations (PSYOP), public affairs (PA) and civil-military operations (CMO).'

Current Operations Section of the Modular Brigade FEC in Afghanistan,
'Field Artillery' July-August 2006¹

What's Right with the Current System?

Before we go ahead and change doctrine it is important that we remind ourselves what is right with our current system so we ensure we don't lose it in the process. In certain circumstances, the schedule fireplan is still a sound method of synchronising effects and needs to be retained; in situations where poor communications are being experienced, or radio silence is required, the schedule fireplan may be the only suitable option. We are well-drilled in schedule fire planning and it has taken us years to master it, so it would be senseless to not retain it as an option for effects planning. We do however, need to clearly articulate in our doctrine how we represent non-lethal effects on a WG2 or other product, and communicate the desired outcomes to the agencies that provide those effects.

Another strength of our current system is fire discipline. As we know sound fire discipline facilitates the rapid and clear communication of information in order to apply effects in a timely manner. It is essential that we retain our mastery of fire discipline.

Which ever way you look at it, schedule fire planning and sound fire discipline should remain as our baseline means of coordinating effects. Instructors of event-based fire planning will often advocate that schedule fire planning should always be taught first. But schedule fire plans and good fire discipline aren't enough. We need more options.

Stop the press! Inventing the term 'battlespace effects' is not the way ahead

Currently the RAA's offensive support doctrine is under review. As part of this review the term 'battlespace effects' has been floated around as a term to describe both lethal and non-lethal effects. The author strongly opposes the invention of this new term because the appropriate term already exists. The term we should be using is joint effects. There are several reasons for this. *Battlespace effects* is too generic a phrase and describes what the operations staff should be doing, not the artillery staff.

The role of the artillery staff is to coordinate and synchronise fighting power in support of the commander's plan; that is those effects that are applied against an adversary, not every effect generated by the force. Furthermore, the term *Joint effects* is already defined in LWD1:

'Joint Effects. The term 'joint effects' refers to the outcomes that result from the application of each of the Service's fighting power in the battlespace.'

The term joint effects is already well understood within the ABCA coalition and at the joint level. DJFHQ has been calling the old JOSCC the Joint Effects Cell (JEC) for three years now. The US Army in Iraq and Afghanistan is also using the term for its artillery staff from company to corps headquarters level. Those who have concerns about using the word joint are reminded what the 'J' in JOSCC and JOST stands for.

The Chief of Army refers to the term and he wants the Australian Defence Force (ADF) to master the art of coordinating and synchronising joint effects. Arguably, the RAA already does the lethal component very well, we just need to work out how we are going to do the non-lethal component better.

'As a small highly sophisticated Force the ADF must exhibit a high level of professional mastery of Joint and Coalition operations. We are more concerned with effects than single service platforms. And the art of Joint Warfare lies in being able to rapidly harmonize Joint Effects throughout the Battlespace.'

Lieutenant General P.F. Leahy, Chief of Army²

We Need the Right Label

If a man wants to buy a hammer, he won't walk into a fruit shop to get it.

What's in a name? – *everything!* Your organisational title tells people what you do and, like it or not, they judge your relevance based on it. We need to label our capability bricks with titles that are self-explanatory. With our organisation titles like the 'Joint *Offensive Support* Coordination Centre (JOSCC)' or 'Joint *Offensive Support* Team (JOST)' we should not be surprised when our infantry and armour brethren want to leave us behind when the guns aren't needed.

To be judged as relevant throughout the full spectrum of conflict our organisational titles must reflect our relevance. We need to drop the JOSCC and JOST titles and replace them with Joint Effects Coordination Centre (JECC) and Joint Effects Team (JET) respectively. Then we need to give the right name to our doctrine. Our new doctrine pamphlet should be titled: *LWP-G X-X Joint Effects Planning and Execution for Land Operations*.

Effects Based Targeting (EBT)

We need a means to coordinate joint effects over prolonged periods of time. Non-lethal effects can take months to execute and achieve, but they still need to be coordinated and synchronised with other joint effects. An effects-based approach to the targeting process provides us what we need. The targeting process is already being used to great success on operations by artillery staffs to coordinate both lethal and non-lethal effects. Plus, targeting is now part of our endorsed role:

*The role of the RAA is to maximise the ADF fighting power through the provision of joint OS coordination and **targeting**, indirect firepower, STA and GBAD.³*

The DJFHQ JEC already has an Effects Based Targeting (EBT) SOP and it provides a model for JECCs to use right down to company level (where a company has been given a specific TAOR to secure). The same EBT methodology was also being used by the British-led Multi-National Division South-East (MND-SE) in 2005. EBT follows the targeting process (D3A⁴) and encompasses the coordination and synchronisation of kinetic and non-kinetic means to achieve both lethal and non-lethal effects. The end result is a disproportionately greater outcome than what would be the sum of the individual targeting outcomes. MND-SE nested EBT objectives and tasks within four tiers:

- Mission & Principal Effect.
- Effects Lines of Operation (ELOs) (subordinate effects).
- Decisive Effects (DEs) (Events, outcomes, consequences, along ELOs).
- Effects Targeting Tasks (ETTs) (Tasks to subordinate capabilities).

The planning methodology reflects a ripple effect, whilst in execution it is reversed, and creates a mechanism to break down a mission into actual tasks (refer figure 1). In planning the mission and principal effect are determined first (by the commander), and then the joint effects staff determine the subordinate ELOs, DEs and ETTs necessary to achieve the mission and principal effect. The ELOs and DEs may reflect the lines of operation and decisive *events* chosen for the manoeuvre plan if they directly translate, or they may need to be created separately. For example, the MND-SE principal effect was 'To establish the required preconditions for operational transition to Iraqi self reliance in the MND(SE) AOR', and the ELOs were:

- Form an effective Iraqi Security Force.
- Neutralise Anti-Iraqi Forces.
- Maintain/improve consent.
- Improve essential services.
- Create effective civil governance.

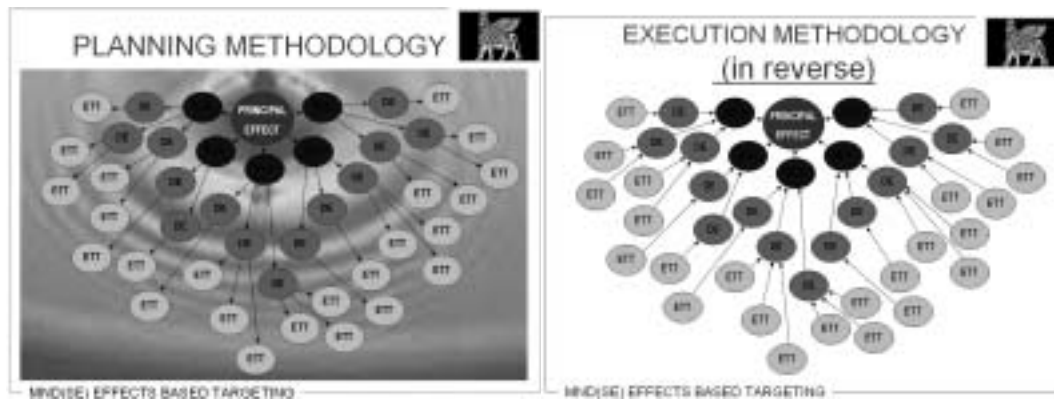


Figure 1. Effects Based Targeting Methodology

This formed the basis of the tactical targeting campaign plan at the tactical level. Target lists and *Response Guidance Matrixes* were then developed. These were all then briefed to the commander and endorsed during the Joint Effects Meeting (JEM), before being released as orders to subordinate units/capabilities through the operations cell in OPORDs/FRAGOs.

As you can see by the example given, in complex warfighting there is always more than one adversary or target group that will need to be targeted; or '*shaped and influenced*'. As such, it is essential that ELOs are determined to articulate the commander's intentions toward each group. Decisive Effects are those key effects or 'stepping stones' that must be achieved to collectively achieve the ELOs. ETTs are where the 'rubber meets the road' and result in direct tasks to subordinates in plain language.

Event Based Fire Planning (EBFP)

The schedule fire plan is a tried and proven method of coordinating lethal effects in conventional conflict, but it is only one method available to us. Of course we need to retain the same high level of competence in this technique, but it should only be one tool in our kitbag. The first indicator of a person who doesn't understand Event-Based Fire Planning (EBFP) is when they describe it as 'just an on-call fire plan'.

In EBFP you are required to do everything that a timeline fire plan calls for. The only difference is that rather than have a schedule, you have separate triggers to engage each target. These triggers may include, not only when to engage, but when to lay-on another target or change a method for a target. EBFP requires a detailed understanding of the manoeuvre plan and the triggers required to generate pre-determined effects in time and space to support that plan. It requires a thorough understanding of how long it will take to generate the required effect once triggered and thus where or when the trigger must be placed. It also requires all parties involved having a detailed understanding of the plan and the triggers identified. EBFP is far more than an 'on-call fire plan'.

A Tool Box Approach

The truth is that there are several methods that are suitable for coordinating and synchronising joint effects for throughout the spectrum of conflict. What we really need is a tool box approach where we have a range of options available to us in our doctrine. At the *macro* level an EBT framework will remain valid for guiding the overall joint effects tactical campaign throughout the spectrum, but at the *micro* level it will be necessary to select the appropriate tool for fighting specific events, depending on the circumstances. Examples of specific events that require the coordination and synchronisation of joint effects may include, an attack on a defensive position in conventional warfare, or a raid on a safe house in a complex warfighting environment.

Theoretically, there are three ways to synchronise the application of joint effects for specific events. They are:

- Option 1. By a timeline (eg. Schedule Fire Plan)
- Option 2. By triggers/events (eg. Event Based Fire Plan)
- Option 3. On call (eg. On-Call Fire Plan or Response Guidance Matrix)

All three options should be included in the joint effects planning doctrine that needs to replace the current offensive support planning doctrine. Furthermore, all three options need to clearly articulate in detail how to integrate non-lethal effects. Whether it be how to show jamming by electronic warfare elements on the WG2, or when and where we are going to hand out humanitarian aid, our doctrine needs to explain it clearly.

What Does our Training Regime Need to Provide?

Fort Sill is working to become the Army's Joint Fires and Effects Integration Center. It will provide training in the integration of all joint lethal and nonlethal effects, to include FA, close air support (CAS), naval gunfire, information operation (IO), electronic warfare (EW), etc. The Joint Fires and Effects Course will train members of the joint fires team in the skills required for integrating, coordinating and synchronizing the full range of joint fires and effects (lethal and nonlethal).⁵

In order to meet the Chief of Army's intent, and become the masters of orchestrating joint effects in support of land operations, we need to ensure that we inculcate a joint effects culture in to our training regime. In addition to the lethal effects skills already taught, our JOST Course, ROGC and COAC Module 2, need to teach our officers how to coordinate and synchronise joint effects and what non-lethal effects capabilities we have at our disposal.

We also need to be taking advantage of course like the Officer Grade 2 and 3 courses and COAC for our own IO campaign to send out to the other corps the following key messages:

- What the term joint effects means.
- That the RAA coordinates and synchronises all joint effects for the commander.
- That we facilitate the targeting process and use an Effects-Based Targeting (EBT) approach for tactical campaigning.
- That depending on the circumstances, the artillery commander at every level may use a timeline, event-based or on-call planning method to synchronise joint effects for each key event/battle.

Conclusion

When you are in the business of coordinating joint effects, as opposed to just offensive support, you remain relevant throughout the spectrum of conflict. Whether the time interval in your coordination plan is in minutes, days or weeks, the concept remains the same throughout the spectrum of conflict. It is only the ratio of kinetic and non-kinetic means that you employ, and the desired lethal and non-lethal effects that you generate, which will change.

Like a celebrity fading in popularity, we too need to reinvent ourselves and adopt a modern and relevant identity that people want around. We need to drop the JOSCC and JOST titles and replace them with Joint Effects Coordination Centre (JECC) and Joint Effects Team (JET) respectively. Then we need to train our people to understand complex warfighting and Effects-Based Operations, and the capabilities of Electronic Warfare (EW), Psychological Operations (PSYOPS), Human Intelligence (HUMINT), CIMIC, and other assets that generate non-lethal effects on the battlefield. Not so we can be experts in these fields, or mission-creep into their roles, but so that we can coordinate and synchronise their collective effects for the manoeuvre commander.

Gunner officers should be facilitating the coordination of joint effects through the running of Joint Effects Meetings (JEMs) and the production of joint effects coordination plans (not unlike traditional targeting products and fire plans, but modified to include non-lethal effects), in every headquarters at

every level of command. We need to become the experts in coordinating all joint effects, not just the lethal ones. Once we have done that, we need to tell the world that we provide that capability.

In short, we need to delete: Offensive Support, insert: Joint Effects.

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Profile

Captain Daimien Patterson graduated from the RMC in 1997 into the RAA. Since graduation he has served as a Sect Comd at 8/12 Mdm Regt (Holsworthy) and 131st Loc Bty, as a JOST Comd at 8/12 Mdm Regt (Darwin), as the SO3 Targeting at the DJFHQ, and as the A/OPSO at 1 Fd Regt. He served in East Timor as a CMA Team Comd and was also dual-roled as the battalion Information Operations Officer. In Iraq he served with the British Div HQ in Basra, the 4th Brigade Combat Team, 3rd US Inf Div and the HQ JTF 633 in Baghdad. Captain Patterson has co-authored the writing of the Effects-Based Targeting SOPs for the Deployable Joint Force Headquarters (DJFHQ) and the Divisional HQ of the British-led Multi-National Division South-East in Iraq. He is currently posted to the School of Artillery as an instructor.

It's Not a Black Art

By Major Russell Underwood and Captain Daimien Patterson
Surveillance and Target Acquisition Wing, School of Artillery

Introduction

Artillery Intelligence (Arty Int) is not a black art. But it has gained this reputation from a lack of understanding of its role and the role of the Arty Int staff. The aim of this paper is to dispel any myths about Arty Int and to clarify the difference between *Artillery Intelligence* and the conduct of *Unit Intelligence* in gun regiments.

Arty Int has undergone a recent resurgence in profile as a result of the experiences gained by the Al Muthanna Task Group (AMTG) in Iraq and the efforts of the Arty Int staff attached to AMTG from the 131st Surveillance and Target Acquisition Battery. This has served as a bit of a reality check for the Royal Australian Artillery (RAA) as the capability had been neglected for some years. Now, more than ever, all members of the RAA, in particular offensive support (OS) and surveillance and target acquisition (STA) streams, need to ensure they understand what Arty Int is, and what capability it provides us to offer to Army for deployment on operations.

Artillery Intelligence is not Unit Intelligence

First and foremost, we must all remember that *Artillery Intelligence* is not the same as *Unit Intelligence*, and is not the job of the gun regiment intelligence officer (IO). Indicators of this common misunderstanding include gun regiment IOs attempting to conduct *Artillery Intelligence* instead of *Unit Intelligence*, and the inclusion of the Artillery Intelligence Estimate (ARTYINTEST) in the OS annex of the Operations Order (OPORD).

Put simply, *Artillery Intelligence* is done by the Arty Int staff attached to the formation headquarters from the STA Regiment, and *Unit Intelligence* is done by the gun regiment IO. *Artillery Intelligence* deals with determining the threat posed to the *entire formation*, not just the gun regiment, by the enemy's artillery; and *Unit Intelligence*, deals with threats posed only to the *Gun Regiment* by *all* enemy capabilities.

For example, the gun regiment IO would want to concern himself with the threats posed to the gunlines, observation posts (OPs) and the echelon by enemy reconnaissance parties, raids, airstrikes, manoeuvre forces, improvised explosive devices (IEDs), airborne ISR assets. These threats are not considered in Arty Int doctrine. Obviously then, it would be a fatal error for any gun regiment IO to think that because he is the IO of an artillery unit he should be doing *Artillery Intelligence*, when in fact he should be doing *Unit Intelligence*.

Arty Int staffs receive their training through successive blocks conducted in every career course from IET through to the STA Captains' Course. The unit IO gets his training from a two-week Battlegroup Intelligence Officers Course which should be run annually by the formation intelligence staff.

The products that the Arty Int staff produce are relevant to all units in the formation, not just the artillery unit. Thus it is a grave error for these products, in particular the ARTYINTEST, to be an appendix to the OS annex of the formation OPORD, as they need to be read by all elements in the formation threatened by the enemy's artillery, not just those who are compelled to read the OS annex. The ARTYINTEST must in fact be an appendix to the formation S2's INTEST contained within the Intelligence annex of the formation OPORD so that it is read by all parts of the formation.

Concurrently, the gun regiment IO should be conducting his own unit Intelligence Preparation of the Battlefield (IPB) and producing a unit Intelligence Estimate (INTEST) for inclusion in the gun regiment's own unit OPORD. This INTEST should outline all specific threats to the unit, and show more analysis than a cut-and-paste from the formation INTEST or ARTYINTEST.

What should the Gun Regiment IO be Doing?

In short, the gun regiment IO is responsible for gaining *relevant* intelligence for the benefit of the gun regiment alone, and disseminating that information at regular intervals to all unit elements. The IO is also responsible for passing information gained by the unit's subordinate elements to the formation headquarters S2 cell.

In the first instance, during planning the IO should conduct a unit-specific IPB, using the doctrine outlined in *LWP-G 0-1-4 The Military Appreciation Process* as a basis. In the same vein, one should expect that the IO of the formation's engineer regiment would be doing a similarly tailored IPB for their regiment. Products produced by this process should be specifically adapted to be relevant to the needs of the specialist unit. Examples include: a Modified Combined Obstacle Overlay (MCOO) identifying ground suitable for the deployment of guns, OPs and echelon areas, and suitable ground for specific threats to the gun regiment to deploy/manoeuvre; and an INTEST (not to be confused with the ARTYINTEST) outlining all specific threats posed to the unit, including threat Courses-Of-Action (COAs). These products would then support unit-specific decision making and be included as part of the unit OPOD for dissemination throughout the unit.

Once the IPB is conducted and the INTEST is issued, the IO then seeks to answer the Intelligence Requirements (IRs) submitted from the sub-units. He should also work to provide ongoing intelligence updates in the form of immediate Intelligence Reports (INTREPs) where required and daily Intelligence Summaries (INTSUMs). This information then informs such things as the formulation of local defence plans and future deployment orders.

The current problem with the sound execution of *Unit Intelligence* in gun regiments is two fold. Firstly there is confusion about the difference between the role of the unit IO and the Arty Int staff provided by the STA Regiment. Secondly, in barracks there is little for IOs to do, and as such, the position is often left vacant. Ironically, on operations the role of the unit IO is critical to force protection and the survival of the unit's elements on the ground. In that light it is arguably the most important job for a lieutenant, if not a captain, in the regiment.

Artillery Intelligence Staff Support to the Formation Headquarters IPB

During planning, the Arty Int staff attached to the formation headquarters, or in the instance of AMTG, the battlegroup HQ, should be full participants in the conduct of the IPB. By doctrine, the IPB conducted by the formation HQ will be led by the S2. As such the Artillery Intelligence Officer (AIO) should work to the S2 and his timeline for the IPB. The Arty Int staff do not do their own IPB in isolation.

Key outcomes that the Arty Int staff should produce during the IPB should include: analysis of environmental factors and deductions, an Enemy Artillery MCOO, an Enemy Artillery Weather Effects Matrix, an Enemy Artillery Doctrinal Overlay, an Enemy Artillery Order-of-Battle (ORBAT), assistance to the S2 in the identification of enemy objectives and COAs, assistance to the S2 in the identification and analysis of the enemy centre-of-gravity (COG), an Enemy Artillery Situational Overlay, an Enemy Artillery Event Overlay, and finally the production of an ARTYINTEST.

The Artillery Intelligence Cycle

During current operations, the Arty Int staff will follow the traditional Arty Int Cycle, as outlined in *CTN 1.2 (RAA) Artillery Intelligence Staff Duties*, 1991. Although now an old process, in concept the Arty Int Cycle is still as relevant and sound today as it was when it was created. The Arty Int Cycle consists of five steps: *Direction, Collection, Processing, Dissemination and Retaliation*. The Arty Int Cycle will start immediately once a unit/formation is put on notice to deploy and will occur concurrently with the IPB.

Direction is effectively a combination of the commander's direction and the information requirements identified by the IPB and MAP. *Collection, Processing and Dissemination* are self-explanatory, except to emphasise that all sources will be exploited to gain information, not just the use of radars and listening posts, and *Retaliation* is basically the conduct of intelligence-led Counter-Battery Fire (CBF) by all available means.

The primary tool of the Arty Int Cycle is the Artillery Intelligence Collection Plan (AICP). The AICP follows the same format as any intelligence collection plan (refer figure 1) and is basically a list of outstanding information requests (IRs) and their corresponding combat indicators and specific information requirements (SIRs). The AICP must always be nested with the S2 Cell's Collection Manager's Intelligence Collection Plan (ICP) in order to avoid duplication of any staff effort. Gun regiment IOs should also be using an ICP for the conduct of *Unit Intelligence*.

COLLECTION PLAN												
FORMATION / UNIT: <u>12 Bn</u> PERIOD COVERED: FROM <u>21 FEB 06</u> To: _____												
INTELLIGENCE REQUIREMENTS			SOURCES AND AGENCIES							Time/Form of Report	Remarks	
PIR OR INFORMATION REQUIREMENT (IN PRIORITY ORDER)	INDICATIONS	SIR	Own Sources				Other Sources					
			AC	CD	CO	CR	CS	CS	CS			CS
What are the locations of the threat Bn level HQ in 12Bn AOT	Concentrations of radio traffic	Ident concentration of radio traffic in the Alpha. Include in report: a. observed level of comm. and b. location.									As obtained or negative report every 4 hrs. LTION 230400K LTION 230400K	Likely threat units or formations will maintain radio silence during the advance
	Concentrations of assets	Ident concentration of assets in WH 1, 2, 5 and 6. Include in report: a. observed level of comm. and b. location.										

Figure 1. Collection Plan

Counter-Battery Fire

By doctrine, CBF is the responsibility of the AIO and for good reason. The AIO is the only experienced artillery observer who is also intimately aware of the enemy artillery picture minute-to-minute by virtue of being the AIO. An essential requirement for the conduct of CBF is timeliness. The AIO commands the assets that identify Hostile Batteries (HBs) and they serve as his eyes and ears when firing CBF missions. Due to the need for timeliness and his intimate understanding of the enemy's artillery, the AIO is the most capable of making timely decisions as to whether the HB should or shouldn't be engaged with CBF.

The requirement for the AIO to conduct CBF is one of the key reasons why it is essential for the surveillance and target acquisition cell (STAC) and the joint offensive support coordination centre (JOSCC) to have a close working relationship in both physical collocation and mutual confidence, and it is important that AIOs are competent and experienced artillery observers. Whilst the AIO is effectively the observer for the conduct of CBF missions and fireplans, the JOSCC still retains responsibility for the allocation of resources and the clearance of fire.

Conclusion

In conclusion, we must all remember that *Artillery Intelligence* is not a black art and is very different to gun regiment *Unit Intelligence*. The gun regiment IO handbooks for the conduct of unit intelligence are *LWP-G 0-1-4 The Military Appreciation Process* and *LWD 2-2 Land Intelligence*. The Arty Int staffs' handbooks are *LWP-G 0-1-4 The Military Appreciation Process* and *CTN 1.2 (RAA) Artillery Intelligence Staff Duties*. We must also continue to ensure that the JOSCC and STAC work closely together and are equally well-versed in each others duties, in order to retain the ability to conduct timely and sound CBF.

This paper has aimed to dispel any myths about Arty Int and to clarify the difference between *Artillery Intelligence* and *Unit Intelligence*. Now, more than ever, all members of the RAA, in particular OS and STA streams, need to ensure they understand what Arty Int is, and what capability it provides us to offer to Army for deployment on operations.

Personnel Aspects

Sir John Monash

‘Leadership counts for something, of course, but it cannot succeed without the spirit, élan and morale of those led. Therefore I count myself the most fortunate of men having been placed at the head of the finest fighting machine the world has ever known.’

Argus, 15th March 1927

Vale

Major J.E. Killender RFD, ED

*Provided By Brigadier D.I. Perry RFD, ED
Colonel Commandant Southern Region*

Major James (Jim) Killender was born on 31st March 1935. He died suddenly and unexpectedly on 21st November 2005 at the age of 70. Jim like many thousands of 18 year olds in the 1950's he was liable to be called up for National Service and so on 10th August 1953 he was enlisted into 14 National Service Training Battalion. After his initial training period he was posted to 40th Heavy Anti Aircraft Regiment where he served as a gun number. He was subsequently promoted to sergeant and was commissioned in May 1956. When all air defence artillery was brigaded in New South Wales, Jim transferred to 2nd Field Regiment.

Jim served as an active member of the Army Reserve for 32 years and retired on age in 1984. During his service he held a wide range of postings in 40th Heavy Anti Aircraft Regiment (Gun Position Officer), 2nd Field Regiment (Gun Position Officer & Second In Command), 15th Field Regiment (Quartermaster), 132nd Divisional Locating Battery (Battery Captain & Battery Commander), 3rd Training Group (Instructor), Melbourne University Regiment (Officer Commanding Headquarters Company), Reserve Command & Staff College (Student & Instructor) and finally Headquarters 3rd Division (Staff Officer Grade Two). He retired on age in 1984.

Jim's personality was quiet, abstemious, diligent and determined. The major feature of his funeral service was the surprise expressed by each element of the community, and his family, at the level of his involvement and commitment within the community and the military environment.

Jim only had two civilian careers. He was 23 years in the footwear industry and 19 years with Red Cross. In the latter job he particularly used his military training as an organiser of fund raising and national activities such as the Murray River Marathon.

Throughout his working lifetime he was involved with the Victorian Marching Girls Association, with over 30 years involvement, rising to Victorian State President. He was Cadet Liaison Officer with TRY Youth, providing liaison to 10 community based cadet units throughout Victoria for five years. He was State President of the Deaf Blind Association, State President of the Neighbourhood Help Association, member of the Nunawading Community Committee, he lectured for Red Cross on International Humanitarian Law, he was a guide and a guide instructor for the Shrine of Remembrance and he had volunteered and been accepted as the flags marshal for the Commonwealth Games.

Over the last five years of his life he extensively researched for and published 'The Gunners of Victoria 1948 to 2000'. This is a valuable publication and reference for future history projects. Three days before his death he volunteered to assist Colonel Graham Farley in his capacity as Victoria's representative on the Royal Australia Artillery History Sub-Committee.

The military component of his eulogy was delivered by Brigadier D. I. Perry RFD ED (Retd) who had known and served with Jim for 46 years.

Captain J. Gunn MBE

*Extracted from 'The Artillery News'
Official Newsletter of the RAA Association (Tasmania)
Additional information provided by the Association Secretary, Mr N. Andrews*

When we talk about the Launceston Artillery over the last 60 or so years, the name of John Gunn always seem to enter the conversation. On Sunday 28th May 2006, in his 90th year, he became a part of that proud Gunner history. As a great stalwart of all things artillery, John will always be remembered with a generous mixture of respect and admiration as a participant and a leader of men while he was a member of the 2/8th Field Artillery during World War Two; and as mentor, and benefactor, of the former 6th Field Regiment in peace; as well as a foundation financial life member of the Royal Australian Artillery Association Tasmania.

However, ex-members of the Regiment, and those of the association, will always know that we were amongst those who had the privilege to serve with him as a fellow Gunner and we also know that his name will continue to enter our conversations as long as Tasmanian Artillery continues to be part of this state's military heritage.

John Gunn did many good works for the Tasmanian Artillery including providing the buildings at Stoney Head Range including places like Oxley House (6th Field Regiment Officers' Mess) named after the commander of 6th Military District, Colonel P.H.G. Oxley; the long hut and kitchen for the other ranks; Hereford Lodge a Q store and a hut for the Sergeants' Mess. All of the buildings came from Lefroy near the range and were paid for out of his own pocket with labour supplied by the Regiment.

Captain T.E. Beer

*Provided By Colonel A.R. Burke OAM (Retd)
Colonel Commandant Northern Region*

Captain Trevor Ernest Beer was a 1950s National Serviceman who was called up on 14th August 1956. After three months full-time training with 12th National Service Training Battalion, he completed his National Service obligation in 7th Field Regiment. The military bug etched deeply into this teenager and he transferred to full time duty on 5th January 1959 with Headquarters Eastern Command. Later that year on 25th September, Trevor decided to make the commitment of joining the Australian Regular Army and was posted to 14th Field Regiment.

After air defence training at the School of Artillery, Gunner Beer was posted to the 111th Light Anti Aircraft Battery and moved with them to defend Butterworth Airfield in Malaysia, arriving on 25th May 1964. When the 3rd Battalion Royal Australian Regiment (serving with the 28th Commonwealth Brigade) was rotated for anti-terrorist operations on the Thai-Malay border, Trevor was part of the Gunner 'infantry company' based on 102nd Field Battery which joined the battalion. He returned to Australia on 17th December 1964 to 110th Light Anti Aircraft Battery. When 110th Battery replaced the 111th at Butterworth, Trevor arrived in Malaysia again on 14th June 1966 and served with that unit until 5th October 1967.

Young Beer now took the full plunge into the military system, was commissioned into the Australian Staff Corps on 14th November 1967 and spent November and December in Singapore before returning to Australia and the 2nd Recruit Training Battalion (2RTB). After surviving a year as a platoon commander, Trevor was promoted to temporary captain and appointed adjutant of 2 RTB. Twelve months later on 15th December 1969, he was appointed adjutant of 12th Field Regiment and deployed with that unit to Vietnam on 3rd March 1971 as part of Australia's last year in that war. During the withdrawal phase from Nui Dat, Trevor was injured accidentally in Vung Tau on 27th October. He returned to Australia with the Regimental Headquarters of 12th Field Regiment on 11th November 1971 and was posted to 4th Field Regiment in Townsville.

Peacetime soldiering began to lose its gloss and two years later, Captain Trevor Beer resigned his commission. Civvy life was as varied as his life in the military - 'too honest' for real estate, a couple of years in roof and ceiling sales with Stramit (the 'holy order of St Ramit' as he called it), a health food store at Ulladulla and then a white goods store partnership.

Vale Trevor Ernest Beer - Ack Ack digger, fun loving subbie and Vietnam field regiment adjutant. Gone to the Great Gun Park up above at only 68 years young.

Lionel James 'Toby' Edwards

*Extracted from 'The Artillery News'
Official Newsletter of the RAA Association (Tasmania)
Additional information provided by the Association Secretary, Mr N. Andrews*

Lionel James 'Toby' Edwards served with the Launceston Artillery prior to World War Two as a bugler and during the war he served with the Royal Australian Air Force. He was financial life member of the Royal Australian Artillery Association Tasmania and worked hard for the Launceston Artillery Old Comrades Association and the Artillery Historical Trust of Tasmania.

Those of us, who knew him well, will remember him as happy go-lucky humorous stirrer - a great bloke with the biggest of hearts - who we were lucky to have on our company of Gunners.

Major I. G. White RFD, ED

*Provided By Brigadier D.I. Perry RFD, ED
Colonel Commandant Southern Region*

Major Ivor George 'Chalky' White RFD, ED was born in Norwich England on 21st January 1923. At the outbreak of war he enlisted immediately upon turning 18 and was posted to a Heavy Anti Aircraft Regiment deployed as part of homeland defence. He was commissioned in 1944 and following the reduction in the air threat was posted to India where he served as a Staff Officer Grade Three Royal Artillery. In this posting he met his future wife Joan who was a sergeant with the Women's Auxiliary Army in India and had been born in India.

Following the cessation of hostilities 'Chalky' returned to his civilian occupation as a clerk with Norwich Union Insurance and continued to serve with Heavy Anti Aircraft in the Territorial Army. In 1957 he migrated to Australia to open the first office in Australia for Norwich Union.

On arrival in Australia he enlisted in the Citizens Military Forces as a Captain. He was posted to 2nd Field Regiment where he served as a battery captain. He was appointed battery commander 132nd Divisional Locating Battery for four years (1963-1966), and then posted to 15th Field Regiment where he was second in command for two years.

Following these Regimental postings he served until his retirement in 1979 in a series of staff appointment at 3rd Training Group. He continued with Norwich Union until retirement in 1987.

Following his retirement from military service 'Chalky' became an active member of the United Service Lodge and the Anglican Church. He served both of these callings with dedication and distinction.

His funeral service was a particularly touching ceremony, well attended by his fellow Gunners. A fitting eulogy, covering all aspects of his life, was delivered by Major General Frank Poke AO, KStJ, RFD, ED.

Honours and Awards

Queens Birthday Awards – 2006

Member of the Order of Australia - AM (Military Division)

Major General Brian Ashley POWER CSC

For exceptional service to the Australian Defence Force as Defence Attache Thailand, Commander 1st Brigade, and as Director United States Central Command Combined Planning Group, Tampa.

Member of the Order of Australia - AM (Civil Division)

Colonel Anthony William ENGLISH

For service to veterinary science in the field of wildlife health and conservation through research, education and professional organisations, and to the deer industry in Australia.

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

Warrant Officer Class One William John DEGENARO

For meritorious performance of duty as a Master Gunner, Regimental Sergeant Major, Soldier Career Adviser within the Royal Regiment of Australian Artillery, and Regimental Sergeant Major Ceremonial at Defence Headquarters.

Conspicuous Service Cross

Lieutenant Colonel Craig Dennis FURINI

For outstanding achievement as the Deputy Director of Weapons Systems (Land), Defence Intelligence Organisation, responsible for strategic level technical intelligence analysis.

Lieutenant Colonel Furini conducted strategic level technical intelligence analysis of the highest order that has resulted in significant benefits to the Australian Defence Force and coalition partners. Lieutenant Colonel Furini's untiring efforts in the field of technical intelligence during his current appointment in DIO and, earlier, in the United Kingdom's DIS, represent great dedication and accord with the highest ideals and standards of the Australian Army, and are truly worthy of recognition.



New Unit Command and Regimental Sergeant Major Appointments for 2007

The Chief of Army has determined the following Commanding Officer appointments with effect 15 January 2007.

- Lieutenant Colonel C. Furini - 8th/12th Medium Regiment
- Lieutenant Colonel P. McKay - 16th Air Defence Regiment
- Lieutenant Colonel S. Ryan - School of Artillery
- Lieutenant Colonel D. Garside - Joint Proof and Experimental Unit

The Chief of Army has determined the following Regimental Sergeant Major appointments (Level Two) with effect 15 January 2007.

- Warrant Officer Class One I. Gardiner - Combined Arms Training Centre
- Warrant Officer Class One J.S. Hansen - CSIG - Hobart
- Warrant Officer Class One P.A. Matthysen - CSIG - Adelaide
- Warrant Officer Class One W.L. Parker - Army Ceremonial

The Chief of Army has determined the following Regimental Sergeant Major appointments (Level One) with effect 15 January 2007.

- Warrant Officer Class One G.L. Boyce - 4th Field Regiment
- Warrant Officer Class Two J. Fabri - 20th Surveillance & Target Acquisition Regiment



DOCM-A

By Major Charles Weller, Career Advisor Artillery

I would like to provide an update on what is happening in the world of officer career management. Specifically, I will articulate the DOCM's intent; cover the individual officer's part to play, the All Corps Officer Training Continuum (ACOTC) and touch on two key contemporary issues.

The DOCM's Intent

Quite simply Colonel McLachlan wants our officers put in command of their careers, and it is toward this aspiration that all the career advisers have been working. We are developing the tools available to officers to take ownership of managing their career and there is much work going on behind the scenes to improve the DOCM website.

The DOCM is well aware that each individual posting preferences and personal circumstances are very strong drivers. I believe that most officers are relatively satisfied in regard to these two factors. The reality is that some individuals will not be happy with their postings and it is the primacy of service need and the competitive selection process that drive this reality. The bottom line is that we want to retain our officers and thus wherever and whenever possible personal preferences will be satisfied. However, each officer must remember that the Army's needs come first and that unrestricted service is part and parcel of holding the Queen's Commission.

Your Part

Career management requires active participation by the officer. My portfolio includes about 300 officers, including 50 from RACMP, and I do not have the time or resources to manage your career to the stage where each nuance is taken into account. Investigate courses of action to achieve your goals thereby ensuring our interactions are dynamic not merely on send. Of course I will make every effort to ensure that you are prepared for PAC or paneled for course but you are involved. You need to know the ACOTC and Royal Australian Artillery specific courses you need to get that job or be promoted and take action to ensure that you are nominated in a timely fashion. If you don't know the courses or mechanism find out!

There are a number of key steps that you need to take to successfully plan your career.

- Read the Royal Australian Artillery Officer Career management guide and DI (A) 47-1 Career Management of Australian Regular Army Officers. Both of these are available on the DOCM web page.
- Consult with your CO/OC and Career Adviser for realistic options. Investigate the postings they and your peers have completed.
- Identify positions outside of your Regiment that will broaden your profile and set these as career goals. These positions should include training (instructional), staff or reserve postings - in both corps and non-corps environments.
- Take the first available opportunity rather than suitable opportunity to complete your courses. The perfect time for you or the unit will never occur. Do not be that officer not promoted or posted because they were not qualified.
- Perform – There is an undeniable link between strong performance and your preferences being fulfilled. The Army is, in many ways, a meritocracy.

Being in command of your career generates two significant changes – you have a renewed ability to gain what you desire however you will be held more accountable, for example avoiding courses is no longer acceptable.

Finally, be flexible and have a back up plan, plan your personal life and most of all be realistic in your expectations.

The All Corps Officer Training Continuum

Chief of Army directed that promotion to major and captain is tied to successful completion of the Grade 2 or 3 courses respectively. DOCM is the authority to remove officers panelled on courses and will only do this for compelling service reasons or compassionate circumstances. This year officers have been returned from operational deployments for career courses.

Presently, Army has only achieved between 75% to 80% course panels. Ergo up to 25 % of positions go begging on ACOTC courses. DOCM is pushing a hard line on course withdrawals to reduce this short fall. This hard line will continue in 2007 - so plan now.

Please be under no illusion, individual officers have reverted from their provisional rank back to their substantive rank. One day a major the next a captain don't let that happen to you!

The Army Personnel Establishment Plan (APEP) and Agreed Vacancies (AVs)

The cry that a position has been APEPed is often heard around the Army but rarely understood. APEP is the plan authorised by the Chief of Army to manage the shortfall of personnel whilst the Army endeavours to grow towards the Hardened and Networked Army. AVs are the mechanism employed and, from a career management perspective, I am unable to post to an AV or leave an officer there unless there are extenuating circumstances such as a compassionate situation. Army Headquarters via the chain of command decide which positions are AVed not DOCM. Rather DOCM is the plan's executor for Officer positions, a sometimes invidious and odious task as I have often been the bearer of the bad tidings being the first to inform the individual or unit of the AVs for the next year. So I would ask that you 'don't stone the messenger' and you address the problem through the chain of command.

Conclusion

It is your career - be knowledgeable, well informed and involved. DOCM wants you to be in command of your career. This gives you greater freedom to be involved; however you are more accountable for the results.

At the end of the year I will be taking over from Lieutenant Colonel Graham as the Senior Career Adviser. My replacement is Major David Kelly. Major Kelly spent two years at SCMA thus has significant experience in the Personnel and Career management fields.

Finally, I would like to wish you and your families all the very best for the coming Christmas season and for 2007.

SCMA

By Captain Nick Wilson and Warrant Officer Class One Maurie Tauletta

Introduction

As the year rapidly draws to a close and my tenure as career manager thus ends, I wish to take a few moments in order to extend a warm thanks to those that have supported SCMA's efforts and re-affirm some key matters in relation to personnel management. However, as a prelude, let us examine the year in brief from a career management perspective.

Initially, the personnel advisory committee (PAC) cleared 46 RAA soldiers for promotion across all ranks and streams. PAC notifications were then released in a new e-mail format, which is a change that has been well received across Army. Subsequently some 208 posting orders were issued to personnel across the Corps, and over 20 soldiers were recruited to RAA units from other trades. RAA career management interviews were completed in all major localities, and the perceived attitude, presentation and trade knowledge of personnel was seen to be excellent across the broad spectrum. Notably, we currently have significant numbers of RAA soldiers deployed in all theatres of operations, and likewise posted to high profile appointments both within Australia and overseas. Reports indicate these personnel are acquitting themselves to a high standard. Thus in review, the year has been challenging yet rewarding. Now, what should we plan on for 2007?

Notable Appointments

Firstly, congratulations to all soldiers who were successful in clearing the PAC for promotion. The standard was very competitive at every rank and trade. In particular, the following Regimental Sergeant Majors are congratulated on their upcoming Level 2 appointments for 2007:

- WO1 I. Gardiner RSM CATC
- WO1 W. Parker RSM Army Ceremonial
- WO1 P. Matthysen RSM CSI-SA
- WO1 J. Hansen RSM CSI-Tas

Career Management Cycle

Please use the following timeline for planning purposes:

- Personnel Advisory Committee:
 - RSM PAC February -March 2007 (Regimental WO1 across Army)
 - WO1 PAC NB April 2007 (for target rank Regimental WO1)
 - WO2 PAC NB May 2007 (for target rank of WO2)
 - SGT PAC NB May/June 2007 (for target rank of SGT)
- PAC Notification - Four weeks after relevant PAC sitting
- Postings - NLT 15th Jul 2007
- Unit Visits/Interviews - Jul/Aug/Sep/Oct

Please note – Unit's visits to SCMA will not be authorised prior to 1st April 2007.

Key Issues

2007 promises to be equally as challenging for the RAA. The following issues deserve special mention:

- *'Empowering the soldier'*. SCMA has tasked you, the soldier, to take ownership of your career. The responsibility for effective career management lies as much with you, the individual, as the career manager, and you must take all opportunities and support mechanisms to assist in achieving your goals. Notably, the old web forms AD148 (preferences and restrictions) has been superseded by the new Electronic Preferences and Restrictions (EPAR) on PMKeys Self Service. Instructions for its use are maintained on the SCMA web site.
- *Pay/Trade*. PORs are still problematic. In almost every trade stream within the RAA, soldiers require a POR to change ECN/grade after relevant experience in trade and/or time in rank. Without appropriate paperwork, pay/trade cannot conduct the appropriate transaction.
- *Incorrect Trade Path*. Major problems still exist with the senseless cross-training of soldiers at gunner - bombardier rank. For example, an OPCP 254-3 should not be panelled on Advanced Gun/Detachment Commander courses, and nor should a Detachment Commander (162-4) be panelled on a JOST course to 'add to unit capability'. Trade streams are established in order to provide skill sets and capability. Diluting these only adds to qualification confusing and incorrect pay groups. Contact the Regimental Master Gunner, Warrant Officer Class One P. Washford for further information here.
- *20th Surveillance and Target Acquisition Regiment*. Significant development in personnel implementation for manning has seen the first of several trade transfers approved. Thus far, 12 RAA junior non-commissioned officers and four senior non-commissioned officers have been selected for migration. Army Newspaper adds hope to add to this from outside of RAA.
- *Training Command-Army (TC-A)*. Chief of Army (CA) is clear in his intent to ensure that TC-A units (including ARTC and SOArty) are manned to the best possible level. Although the Corps is deficient in corporal/sergeant rank, it does not lessen our responsibilities in providing necessary support. As per RAA ECSOs, all personnel from bombardier to warrant officer class two should expect several TC-A/non corps postings throughout their career. Be realistic in your expectations. Such postings raise your profile when striving for promotion.
- *Unrestricted Service*. Once again, we must reinforce the requirement for unrestricted service. Last year's message remains extant: Our 1st Division full-time units are in Australia's north, and TC-A/non-corps appointments are generally south. As a bombardier onwards, you will be required to uplift in order to meet the needs of the Service as outlined above. If you argue that this is not possible due to a range of factors (the normal ones include home ownership, wife's employment, family network, undesired locality), you are providing restricted service, and your personal needs no longer meet those of Army. At times, this creates unfavourable friction and will inevitably end with separation. Read DI (A) PERS 34-8. The nature of service in the Australian Regular Army is well described.

New Blood

With my tenure complete, I am due to depart SCMA in order to take up my next appointment at the year's end. My replacement is Captain Piero Bertocchi who is currently posted as an Instructor-In-Gunnery at the School of Artillery. Hailing from an offensive support background, he comes with a multitude of Regimental experience. I wish him well in what has proven to be a very rewarding job. In conclusion, I would like to thank all those who have provided sound advice and counsel throughout my tenure as Career Manager RAA. I have thoroughly enjoyed my time at SCMA and firmly believe that our best assets, our people, are second to none. Finally, I would like to wish you and your families a very happy festive season and a safe return for 2007.

Ubique

Retired Full-Time Officer's List

<i>Worn Rank</i>	<i>Name</i>	<i>Initials</i>	<i>Final Date of Full-Time Service</i>
Brigadier	Retter	P.B.	2006 (*)
Colonel	Black	J.P.C.	2007 (*)
Colonel	Jones	W.N.	2007 (*)
Lieutenant Colonel	Connery	D.K.	18 July 2005 (*)
Lieutenant Colonel	Hill	J.	10 May 2004 (*)
Lieutenant Colonel	Overstead	P.L.	10 May 2005 (*)
Major	Cook	J.L.M.	31 December 2005
Major	Deasy	M.P.	7 February 2005
Major	Marshall	G.L.	16 August 2005
Major	Narramore	D.R.	8 February 2005 (*)
Major	Nichols	T.M.	10 December 2006 (*)
Major	Stephens	D.B.	10 April 2005
Captain	Clarke	C.J.	16 January 2006
Captain	Hunter	M.J.	15 March 2006
Captain	Tierney	R.M.	14 February 2005
Lieutenant	Coles	M.L.	8 February 2005
Lieutenant	Daws	P.	2 January 2006

Note:

(*) Means the officer has served 20 years or more in the full-time Army

Editors Note:

Whilst the editor makes every effort to ensure the names and details above are correct, he is not responsible for the information provided and apologises in advance for any errors of accuracy and content.



Capability, Training and Doctrine

Special Orders to No 1 Section (machine gun section) on 13th March 1918

1. The position will be held, and the section will remain here until relieved.
2. The enemy cannot be allowed to interfere with the programme.
3. If the section cannot remain here alive, it will remain here dead, but in any case it will remain here.
4. Should any man, through shell shock or other cause, attempt to surrender, he will remain here dead.
5. Should all guns be blown out, the section will use Mills grenades, and other novelties.
6. Finally, the position, as stated, will be held.

C.E.W. Bean, The Official History of Australia in the War of 1914-1918, Volume 5, The Australian Imperial Force in France (Sydney, 1939), page 110

Offensive Support Transformation

Provided by Combat Support Section, Land Development Branch

The RAA is on the cusp of massive 'transformational' change. For those unaware, LAND 17, the Medium Artillery Replacement Ammunition Project (MARAP) and Joint Project 2085 (JP 2085) will deliver substantial capability improvements to the Gunners. These projects will include new major equipments, munitions and networked capability. This capability increase will be crucial if Army is to be successful in its adoption of complex warfighting.

In February 2006, Federal Cabinet granted First Pass Approval for LAND 17. Cabinet agreed that Defence would develop a business case that would include the acquisition of:

- protected 155mm Self-Propelled howitzers;
- lightweight 155mm towed howitzers;
- artillery delivered high precision munitions (ADHPM); and
- a Battle Management System - Fires (BMS-F) comprising:

a digital Joint Fires (JF) terminal control system for RAA joint offensive support teams (JOSTs);

an Artillery C2 system for the joint offensive coordination centre (JOSCC)/command posts capable of the tactical coordination of JF; and

digital fire control systems for the SP and lightweight howitzer platforms.



Potential Protected SP Howitzer - BAE Systems Bofors Defence 'Archer' currently undergoing joint trials with the Swedish and Danish Defence Forces

In making its decision, Cabinet took into account assessments of the future threat, feedback from coalition forces in Afghanistan and Iraq, and the Hardening and Networking the Army initiative. The result was significant as it removed from consideration long range towed howitzers, and unprotected SP howitzers. Cabinet agreed that Defence would seek Second Pass Approval in 2008.

Howitzer Platforms

The exact number of SP versus lightweight howitzers are yet to be determined, but expected numbers are not less than 18 SP howitzers and up to 35 LTWT howitzers. These numbers are based around six batteries of six guns plus additional platforms for training, repair and attrition stock. Where the project can afford an increase in the number of SP platforms, the number of LTWT platforms will decrease.

The project is due to release a worldwide, open Request for Tender (RFT) in 1st Quarter 2007 in order to seek accurate capability and costing proposals from industry.

Protected SP Howitzers

A 'protected' system is one where the detachment can operate the howitzer, and conduct local defence, from behind armoured protection without having to alight from the cabin. This capability is required for the 1st Brigade to be able to conduct medium-high intensity operations in ambiguous and complex environments.

The SP systems expected to be offered include (in alphabetical order): the BAE Systems Bofors 'Archer'; Denel's G6-52, Krauss Maffei Wegmann's PzH2000; and Samsung Techwin's K9 Thunder. The SPs systems will be 52 Caliber, with on board navigation, fire control and ballistic computation. The SPs

(above) are either tracked or wheeled and will be capable of firing base bleed ammunition to 40 km, and approaching 60km with extended range munitions (such as Excalibur). Compared to an M198, the SP should provide at least a threefold increase in the area that it can influence.

Lightweight 155mm Towed Howitzers

The Lightweight (LTWT) 155mm Towed Howitzer is required to be suitable for deployment by a CH-47D (fitted with ballistic protection) as part of a complete tactical load. The tactical load requirement includes the howitzer, detachment, gun stores and a minimum number of 155mm projectiles and charges. This capability is required for the 3rd Brigade to be able to conduct rapid strategic and tactical deployment, especially in an amphibious environment.



Potential Protected SP Howitzer - Denel G6-52 presented for inspection by a LAND 17 study team in South Africa in 2005



Potential Lightweight 155mm Towed Howitzer - Singaporean 'Pegasus' in 2005

Army is currently finalising the LTWT's detailed air mobile mission requirements, and this information will drive the capability solution. The known LTWT howitzers are the BAE Systems M777 and the Singapore Technologies Kinetics (STK) Pegasus. Both are 39 Calibre systems which will be capable of firing base bleed ammunition to 30 km, and approaching 40km with extended range munitions (such as Excalibur).

Government directed that LAND 17 would consider the M198 in lieu of new LTWT platforms, in order to ascertain whether any savings could be put towards additional SP batteries. Once again, the LTWT's detailed air mobile mission requirements will have an influence here.

BMS-F

The BMS-F, outlined above, is the singularly most important part of the new capability that LAND 17 will introduce. It comprises the:

- **The BMS-F (FO).** This digital fire control system will be carried by the JOST. It will be the one tool to conduct terminal control of artillery, OAS and naval surface fires. In time it is likely to also be able to control mortar fire. An indicative system is the USMC Strikelink system (Target Location Designation Hand-off System).
- **BMS-F (C2).** This will be the Artillery C2 system operated by the JOSCCs and Fire Direction Centres (RCP/BCPs). The JOSCCs will utilise this system to tactically coordinate JF as well as conducting the C2 of the artillery sub-units and units. The BMS-F(C2) is the system that will interface with the WLR Operating System to be delivered under LAND 58 Phase 3, BCSS, the BMS to be delivered by LAND 75/125 and the RAAF's Theatre Battle Management Core System etc. In time, it is hoped the BMS-F(C2) will also interface with the Air Defence C4ISR system in order to assist with situational awareness.
- **BMS-F [Fire Control System (FCS)].** The weapon management system on the howitzer platforms will include a digital FCS. The FCS will link to the BMS-F(C2) in the FDC and JOSCC and will allow the detachment to electronically set fuses, navigate, pass important weapon status information, fire orders as well as on-board ballistic computation. The howitzers will be capable of autonomous deployment within a capability brick (ie troop) structure. Depending on the threat, this will enhance their survivability.

A capability for voice communications will remain, however, will be the secondary means of passage for fire orders rather than the primary means.

ADHPM

LAND 17 will introduce Course Correcting Fuses (CCF) into service, while JP 2085 will introduce other precision munitions.

CCF. CCFs are fitted to conventional munition as if they were a normal fuse. The CCF will deploy canards, fins or brakes (depending on the solution) in flight in order to reduce the dispersion of the rounds. A CCF will not provide the same degree of precision as an Excalibur projectile, however, will provide a near-precision effect - regardless of range. Other Armies are looking at similar capabilities with circular errors of probability in the vicinity of <50m. It is anticipated that the CCF will be capable of correcting the trajectory for range (PEr) and lateral (PEd) dispersion. The fuses will be required to be fitted to the Medium Artillery Replacement Ammunition Project (MARAP) projectiles.

JP 2085. Other natures of ammunition will be introduced into service under another project - JP 2085 Explosive Ordnance Warstocks. JP 2085 will introduce Sensor Fused Munitions (eg SMARt 155 or BONUS) as well as an extended range trajectory correctable munition (eg Excalibur). These munitions, planned for introduction into service around 2009 will provide an immediate and very real boost to Army's capability to operate within complex urban terrain. Once fielded, these precision munitions will provide the ADF with a readily deployable capability should a precision capability be required on current and future operations. The plan is to field these capabilities with the M198 and subsequently with LAND 17 platforms. The aim is to assist the manoeuvre commander to destroy high value and high pay-off targets, such as armoured and soft-skinned vehicles, command posts, building structures etc while minimising the chances of fratricide and collateral damage.

MARAP. MARAP will provide a new family of ballistically and range matched projectiles for the M198 and future LAND 17 platforms. The current M107 family of munitions will be replaced with the MARAP solution. MARAP is expected to enter into service in late 2008/09 and is planned to deliver:

- A projectile family that is capable of being fired from a L39 (eg M198) and L52 caliber howitzer. This takes care of the M198, LTWT and SP platforms.
- New fuses.
- A modular charge system (MCS) for the L39 howitzers only. *Note: The MCS for the SP will be delivered by the SP manufacturer in order to reduce the risk that a pre-selected MARAP MCS may not be compatible with the SP.*

Conclusion

The capabilities to be delivered by LAND 17, MARAP and JP 2085 will deliver a very substantial increase in the RAA's capabilities. In some cases, it may require a different way of doing things - the LAND 17 Training IPT is currently working these issues. The operational concepts underpinning LAND 17 and JP 2085 are also currently in the process of being provided to the wider RAA in order to confirm that the requirements that have been developed by Capability Development Executive are appropriate.

As the lead Indirect Fire Support project, LAND 17 is the vanguard of the RAA's transformation. There is no doubt the new RAA capability will compliment the Hardened and Networked Army's complex warfighting approach by providing the type and weight of fire Army will need to fight and win future land battles, while at the same time providing the appropriate level of protection for our soldiers. I urge all Gunners to take the LAND 17 message forward and help shape your own destiny. Finally, change ... for the better ... is at hand!



Potential Protected SP Howitzer - PzH2000 currently in service in Germany and a number of other European countries

Offensive Support Battle-space Operating System Section

Lieutenant Colonel S.A. Summersby, Staff Officer Grade One Offensive Support Force Development Group, Land Warfare Development Centre

Introduction

2006 continued at a high tempo for the Offensive Support (OS) Battle-space Operating System (BOS) Section of the Force Development Group (FDG). Between the Army Personnel Establishment Plan (APEP) and deployment obligations, the BOS is more often than not operating at 66% capacity. Notwithstanding these manpower constraints, the BOS has continued to achieve its mandated tasks ranging from leading an ABCA programme Project Team on Joint Fires and Battlespace Management through to coordinating DSTO's science and technology support to Army.

I must point out that the OS BOS does not report directly to Land Command Artillery or Head of Regiment, and therefore a lot of what the BOS does is not transparent to the Royal Australian Artillery community. We are force developers for Army, who, in our capacity as gunners, provide subject matter expertise on OS issues. With this caveat in place, it is probably a good time to pass on some of work and issues being developed by the BOS.

EXFOR 2025

EXFOR 2025 are aspirational Army force structures set in the 2025 time frame. In essence, these force structures are developed and refined through experimentation in order to highlight capability gaps extant within the Army in Being (AIB). These gaps are then prioritized during the Army Capability Gap Analysis process and, subsequent to ACMC endorsement, are submitted to CDG for inclusion into the DCP.

In accordance with Army's *Complex Warfighting* Future Land Operating Concept, EXFOR 2025 has been optimised for close and sustained combat in an urban environment. Given the disaggregated nature of the urban battlespace and therefore the obvious requirement for distributed operations, the ongoing issue for force developers is how to arm the plethora of combined arms teams with the means to harness responsive or pre-planned OS. Despite initial thoughts that suggested that technology might mitigate the requirement for joint offensive support teams (JOSTs), the latest iteration of EXFOR 2025 employs 27 JOSTs within a Task Force (TF) (minor) setting. Further, these JOSTs are manned in such a way that they can be task organised to provide individual 'effects coordinators' down to platoon level.

As for the organic land based indirect fire support, surveillance and target acquisition and ground based air defence components, all are equipped with LAND 17, Counter Strike - 2015, and LAND 19 Ph 7 solutions respectively.

As mentioned earlier, EXFOR 2025's purpose is to inform capability decisions. Already experimentation has identified a requirement for a Manoeuvre Force Organic Non Line of Sight Engagement System to replace the 81mm mortar. Additionally, it is becoming increasingly apparent that Army will require a wider range of non-lethal non-line of sight munitions to be able to effectively conduct the lines of operation espoused in *Adaptive Campaigning* (the draft response to *Complex Warfighting*).

I have no doubt that as EXFOR 2025 continues to be tested more opportunities will be presented to the Royal Australian Artillery to progress concept led capability development.

Manoeuvre Force Organic Non Line of Sight Engagement System

Earlier this year the Offensive Support BOS was tasked by Commander Land Warfare Development Centre (LWDC) to commence work on introducing into service a capability that mitigated the limitations of the 81mm mortar, namely the system's limited range and lack of precision capability.

These, and other gaps associated with the 81mm mortar were tabled at Army's Capability Gap Analysis conducted June. Although the analysis did not accord the gaps an overly high priority, an Initial Capability Definition Statement (ICDS) has been raised for submission to the Army Modernisation Steering Group in October.

The ICDS states that the Manoeuvre Force Organic Non Line of Sight Engagement System will provide manoeuvre forces and organic, networked, precise, all-weather, enduring, flexible, guaranteed and modular offensive support capability. Further, it will be fully integrated with the LAND 17 Battle Management System - Fires, be able to be employed in both the mounted and dismounted roles, and engage targets out to a range of 15km employing the full range of lethal and non lethal munitions.

The ICDS was presented at the Royal Australian Infantry Corps Conference in August, where it met with a favourable response. Expected concerns regarding increased weight, logistic footprint, manpower and training imposts were largely overshadowed by the recognised need for a capability that provided the manoeuvre force increased range, lethality and precision.

Visit to US Field Artillery School

In November 2005 the OS BOS was invited to present to the US / Australian Army to Army Staff Talks conducted in Sydney. At the conclusion of these talks an engagement plan, bounded within a list of 'agreed to actions', was endorsed by respective heads of delegation. This list included an exchange of information between the OS BOS and specific US Artillery force developers located at Fort Sill.

During the period 20 - 24 July 2006, the OS BOS closed off on its obligation during a visit to Fort Sill. Whilst a detailed PAR has already been distributed, I would like to this opportunity to highlight three key issues that might be of interest to the wider audience.

'Information Operations' Training

A cursory glance at the training being conducted by the US Field Artillery School for all personnel involved in targeting and fire support coordination reveals that there is a growing emphasis on the application of non-lethal effects. It is evident to the US Artillery that the contemporary land battlespace demands fire support coordinators to be able to synchronise the full range of effects made available through other Army organisations, joint and coalition partners and other government and non-government agencies. Through the provision of this 'information operations' training, it is envisaged that US Field Artillery 'effect coordinators' will become more relevant when operating within the contemporary land battlespace, providing the manoeuvre commander tailored response options across all the lines of operation.

Do we need to review what we teach?

The US Joint Fires Observer

The USAF has undertaken the responsibility to provide one JTAC per Army manoeuvre sub unit. However, given the disaggregated nature of the land battlespace there is a realisation by the US Army that operations are more likely to be conducted using platoon sized Combined Arms Teams (CAT). The USAF recognises the requirement for platoon CATs to be able to harness CAS, but also recognises that it can not meet the training liability to train one JTAC per platoon CAT. The JFO course is designed to mitigate this gap by providing each platoon with a 'registered' observer who has a degree of 'operational credibility' to terminally control CAS. Optimally, a JFO will work through a JTAC when employing CAS. If a JTAC is not available, the USAF, cognisant of the increased risk, will drop ordnance in support of a JFO.

In essence, it would appear that the Royal Australian Artillery's ACO of old has come of age! Indeed, discussions with the USAF member running the JFO training suggested that the USAF would be supportive of Australia seeking an MOA to accredit our ACOs with similar 'operational credibility' as that afforded to the JFOs.

Should we take this opportunity to reinstate the ACO?

Change of Mission Training

During the course of our visit we received a brief on how the 1-14th Field Artillery Battalion (missile) restructured at short notice to fulfil a TA role within the Afghanistan and Iraq theatres. The 1-14th Field Artillery Battalion restructured one of its batteries in less than four months and the other two in six months. The batteries are undertaking independent operations throughout Afghanistan and Iraq whilst the battalion headquarters remains in the US to facilitate its transition to the modular structure.

The brief aptly demonstrated the flexibility of US Field Artillery and I believe provides an excellent example for the Royal Australian Artillery to follow, given the Australian Defence Forces's recent operational commitments. If the Royal Australian Artillery could demonstrate its ability to methodically transition to other trades (either within or external to the Corps) in order to meet operational surges, it would provide Army a far more relevant capability than what it currently offers.

What, if anything, should the Royal Australian Artillery do in order to provide Army with more response options to operational commitments?

Conclusion

In closing, I would like to thank those members of the Defence Materiel Organisation and Directorate General Land Development with whom we have had close engagement over the last eighteen months. Armed with their technical expertise and detailed knowledge of defence capability development, we, in the OS BOS, have been able to effectively promote the Royal Australian Artillery's ongoing significance within the context of the FLOC.

Defence Materiel Organisation

RAA Related Project and Fleet Synopsis

The Defence Materiel Organisation (DMO) brings together the acquisition of capital equipment and through life support of materiel for the Australian Defence Force. The DMO has achieved this union by integrating the acquisition (Project Management) and support (Sustainment Management) elements of its business. An organisational outcome of this union has been the establishment of the System Program Office or 'SPO'. For land based capabilities, the key SPO of interest to Gunners are found predominantly within the Land Systems Division of DMO, based almost entirely out of Victoria Barracks, Melbourne. Whilst the pervasive nature of artillery on the battlefield is such that a great many projects within the DMO have some inherent relevance for the Corps, what follows is a series of overviews of the projects and fleets within the DMO that might be of most interest to Gunners.

LAND 17 - Artillery Replacement Project

The purpose of this project is to deliver a networked, enhanced and sustainable digitised field artillery system that can coordinate indirect and joint fires, and deliver indirect fire. Enhancements required include improvements in effects generated by ammunition, increased range across the system, improved tactical mobility, improved crew protection and the introduction of networked digital command and control systems to support network centric warfare. As a result of 'First Pass' approval of the project in February 2006, the LAND 17 project office will now conduct solicitation activities to source a potential supplier for the LAND 17 missions system elements. A request for tender will be issued early in 2007. In-service date target (one battery fully trained and equipped) is 2011.

POC LTCOL Steve Hume

AMP 040.10 - Medium Artillery Replacement Ammunition Project (MARAP)

The MARAP Project plans to replace the existing 155mm ammunition family with a new family of 155mm conventional ammunition, with improved performance in both range and effect. The new family of ammunition is primarily intended for use with the in-service M198 Howitzer and may be suitable for use with 155mm howitzers introduced into service under Project Land 17. The complete family would require a modular charge system and a variety of fuse combinations. The MARAP plans to tender for industry responses in early 2007. Introduction into service is expected in 2008/2009.

POC MAJ Tony Pearse

AMP042.18 - Indirect Fire Computer Software (IDFCS)

The purpose of the IDFCS project is to acquire 125 licenses for replacement ballistic calculation software for the Royal Australian Artillery, to operate on the upgraded in-service IDFC. The software calculates a ballistic firing solution for an artillery battery. The project is in the in-contract stage and the production unit software was delivered in August 2006 for acceptance and training. Introduction into service includes train-the-trainer training, followed by rollout to user units in late 2006 /2007.

POC Mr Brian Horvat

AMP 042.15 - Artillery Orienting System (AOS)

The purpose of this project is to deliver an accurate and rapid inertial based survey device capable of providing high order fixation and orientation to artillery indirect fire systems. The system will be able to operate independently of the global positioning system (GPS) and the Artillery Gun Laying System (AGLS). A fleet of 16 AOS are being procured with the first production unit batch delivered on 23rd August 2006. The remainder of the AOS fleet will be delivered in three batches with the final delivery occurring in late November 2006. Operator and maintainer training will commence in October 2006 and conclude in November 2006.

POC Mr Chad Burke

LAND 58 Phase 3 - Weapon Locating Radar Life of Type Extension

Project LAND 58 Phase 3 seeks to extend the Life of the AN/TPQ-36 Weapon Locating Radar (WLR) to 2015 by upgrading and enhancing the components of a minimum of five of the current WLR, and the simulator, with military proven equipment. The project released a request for tender in August 2005 and complete tender evaluation and source selection in May 2006. The project was considered and endorsed by Army Capability Management Committee in June 2006 and Defence Capability Committee in August 2006. Second pass approval from Government is expected by November 2006 with contract signature in early 2007. The delivery of the first two systems to 131st Surveillance and Target Acquisition Battery is planned by December 2008 and delivery of all systems is planned for completion by December 2009.

POC Mr Michael Cronin

LAND 53 - Ground Surveillance Radar

The delivery of AMSTAR radars to infantry, artillery and surveillance units across Army is now complete. The process for the assessment and review of AMSTAR FIC issues will be detailed in the Land Headquarters AMSTAR Capability Integration Plan that is due for release in September 2006. The review period is expected to be 12 months. Units may direct sustainment and technical queries to the ADFLM Radar Fleet Combat Support SPO on (03) 9523 6550.

POC MAJ Paul Adams

LAND 53 Phase 1F - Thermal Surveillance System (TSS)

The TSS surveillance capability, TSS Type 2, was introduced into service between May 2004 and May 2005 (163 systems). The issue of the TSS surveillance, target acquisition and fall of shot adjustment capability, TSS Type 3, will commence in October 2006. This capability enables highly accurate STA and fall of shot adjustment day/night and in poor climatic conditions. TSS Type 3 operator and maintainer courses commenced at CATC and ALTC in June 2006. Royal Australian Artillery units receiving TSS Type 3 are 1st Field Regiment, 4th Field Regiment, 8th/12th Medium Regiment, and 20th Surveillance and Target Acquisition Regiment. Limited numbers will also be issued to infantry battalions and Special Operations Command units. During the introduction into service period units may direct sustainment and technical queries to the Project Director Surveillance Projects Group - 03 9282 6059 or ILSM TSS - 03 9282 4663.

POC Mr Iain Dunn

Indirect Fire Support Weapons Fleet

Indirect Fire Support Weapons Fleet undertakes logistic management of the 105mm M2A2 howitzer, 105mm L118/L119 gun, 155mm M198 howitzer, 81mm mortar, fire control computers, and associated accessories required for the operation of this equipment. This equipment provides essential capabilities to indirect fire units within the Australian Defence Force.

The fleet is looking forward to the introduction of new capabilities (and more acronyms) with the Artillery Orienting System (AOS), the Indirect Fire Computer Software (IDFCS) and the Intercommunication Set Gun Control (ISGC) all due to begin transition from projects to fleet in 2006. With the introduction of the new IDFCS, we will see the Gunnery Computer System, the Computer Fire Control - Artillery and the Indirect Fire Control Computer replaced by one computerised method of calculating artillery fire control data for the Royal Australian Artillery. We have also requested the GAK1 be withdrawn from service as it is no longer supportable and it's role can be met by the Artillery Gun Laying System (AGLS) providing a primary survey system and AOS a reversionary survey system.

First pass approval has been given through the Army Minor Capital Program to upgrade the M1A1 collimators and the sight control system of the M198 with new sights that do not contain Gaseous Tritium Light Sources (GTLS). The new sights are fitted with a battery operated LED system. This fleet replacement proposal requires further scrutiny and endorsement as a MINCS(L). We have also welcomed in an Assistant Fleet Manager in Captain Vicci Young, and an assistant inventory manager in Sue Bell and look forward to any feedback or questions units may have.

POC Mrs Karen Christensen

Special Report – AMP989.05 – Replacement Intercommunication Set Gun Control (ISGC)

*Provided by Mr Jason Cooke, Deputy Director Project Support Services
Battlespace Communications Systems Program Office, Electronic & Weapon Systems Division*

Background

The original ISGC or 'Tannoy' was introduced in 1965 and reached its life of type in 1990. The replacement ISGC is a 'functional replacement' for the existing system and has been designed using commercial off the shelf (COTS) parts. This decision was deemed the most cost effective interim solution until LAND 17 fields a fully digitised replacement system.

Development

Land Command endorsed a replacement ISGC under the Army Minor Capital Program and passed this requirement to DMO, (EWSD), Battlespace Communications (BC SPO-PSS) based at Victoria Barracks Melbourne. A concept demonstrator was developed and extensively trialled by 53rd Independent Battery. The Battery's input helped refine the design and had a direct input into the contract requirements. 53rd Independent Battery then extensively trialled the initial production version and identified problems/shortcomings which were fed back into the design of the production system. BC SPO-PSS as the project manager appreciated the good working relationship established with Land Command Artillery and 53rd Independent Battery in the development of the replacement ISGC.

Equipment

One ISGC set consists of a control unit, six station units, and an accessory container complete with one set of accessory cables and a user handbook. Each of these containers are identical in size (Trimcast container accredited to DEF (AUST) 1000C, dimensions 300Wx300Dx200H). The control and the accessory container are finished olive drab and the sub station units are black. The system is powered by either the BA-5590/U primary military battery or the BB-590 secondary (rechargeable) military battery, there is a voltage indication on the control unit and the voltage will automatically cut-off at 20 volts (required for safe operation when using the BA-5590/U primary lithium battery). Results from the trials indicate the BA-5590 battery should last for 3 days, dependant on rate of use/operation. Repair philosophy is based on equipment return to a maintenance provider with minimal - if any - repairs carried out by the unit.

Project Status

24 systems were delivered in June 2006 and, in accordance with basis of provisioning (BOP), allocated to 1st Field Regiment, 4th Field Regiment, 8th/12th Medium Regiment and School of Artillery. Another 24 systems are scheduled for delivery August 2006 and will be allocated to 1st Field Regiment, 7th Field Regiment, 23 Field Regiment, 2nd/10th Field Regiment, 16th Field Battery, 48th Field Battery and 7th Field Battery. A final 24 system delivered in September 2006 and in accordance with the BOP will be allocated to 1st Field Regiment, 4th Field Regiment and 8th/12th Medium Regiment.



Control Unit in Command Post



Sub Station in Use

CATC – Artillery Trade & Training

*Warrant Officer Class One Paul Washford
Regimental Master Gunner*

'The courage of a soldier is heightened by his knowledge of his profession'

Flavius Vegetius Renatus
De Re Militari (Military matters) - (387 A.D.)

Introduction

2006 has seen the Artillery Trade and Training (Arty TT) Cell continue on with the work started by the team from last year. This work, however, has been punctuated by the usual short-notice tasks that are a matter of course within any headquarters.

A quick reminder to all of what the Arty TT Cell is capable of. Broadly Arty TT falls into three areas:

- *Trade Management:*
 - Trade Reviews;
 - DFRT Pay Reviews;
 - Trade Modelling;
 - Employment Specifications; and
 - Policy Development.
- *Training Analysis:*
 - Validation,
 - Competency Analysis, and
 - Training Continuum Development.
- *New Capabilities:*
 - Competency Analysis, and
 - Trade Analysis.

Our Training Developers within the Arty TT Cell also:

- produce Training Management Packages (TMP);
- review and/or upgrade TMP;
- provide training system advice; and
- ensure we comply with the National Training Framework (NTF), the Registered Training Organisation (RTO), and the Australian Quality Training Framework (AQTF).

This Year to Date

The cell has re-established closer liaison with the School of Artillery (SOArty) ensuring that we have the subject matter experts (SME) from the SOArty available to attend project meetings and specialised working groups.

Tactical UAV (JP 129) - an Integrated Project Team continues to work together to develop the training continuum for this new capability both within the TUAV stream and the wider STA trade. The TMP for the TUAV Pre-requisite Training is nearing completion awaiting only the AAAvn components.

Offensive Support Enhanced Communications Training has been advanced this year with an amended Business Case submitted to HQTC-A for approval. This will see the gap training between the Specialist Combat Communicators Course (SCCC) and the appointment of Signaller BDR/SGT within ARA OS units being conducted on the Advanced Gunner Course, Basic OPCP Course and the Module 3 of the Supervisor (OS) Course. A solution for ARes OS soldiers is yet to be developed.

IET 2006 - this was a proposal put forward by the RMG in 2005 for the addition of IMT Competencies to the RAA IET Training Continuum. Work has been progressing steadily on this proposal throughout the year and it is envisaged that the analysis will be complete by the end of TY 2006.

A review and analysis of the ARes HNA Training Model (HTM) has been underway within HQTC-A since May 2006. Arty TT has had significant input into this review in relation to all ARes RAA trades for both officers and other ranks.

A review of the Manual of Army Employment (MAE) and RAA Employment Category Standing Orders (ECSOs) is continuing, primarily as a consequence of the difficulties associated with the development the ARes Training Continuum.

2006 Manning

- SO2 Arty MAJ J. Webb
- SO3 Arty CAPT G. Metcalf
- Regimental Master Gunner WO1 P. Washford
- SM OS WO2 P. Meester
- SM STA WO2 S. Voss
- SM GBAD WO2 M. Scheidl
- Training Developers WO2 C. Crout
SGT D. Mason
WO2 S. Morse (ARes)

Trade Management Issues

A reminder to all units that the Recognition of Current Competencies (RCC) process is not complicated and the following should be noted:

- if the RCC application is pay/trade related it should be sent to the SO2 Arty at Arty TT, CATC;
- if the RCC application is in relation to a specific RAA course it should be sent to the CO/CI SOArty;
- all applications should be sent to the relevant agency with as much evidence as possible; and
- all applications are processed.

Future

As always the above issues will keep the cell busy for the remainder of this year and into 2007, however the training continuum for the Land 17 project and the associated trade issues that go with it needs to be put onto the Arty TT radar. The influence of this project is starting to be felt within the RAA already.

Ubique

Sim all fired up

By Capt Brendan Kellaway

PROJECT Land 19 Phase 2B has delivered a state-of-the-art Advanced Air Defence Simulator (AADS) to 16 AD Regt - and unit training is already under way.

AADS provides a fully immersive environment for an RBS70 detachment with a 12.5m diameter dome used to display a 270 degree field of view. An RBS 70 launch simulator in the centre of the dome mimics realistic features and characteristics of the weapon including the night sight, Identification Friend or Foe (IFF) and recoil during firing.

The dome displays the local scene, friendly and hostile aircraft, with 80 unique aircraft types and 20 3D training scenes included.

Terrain representations are more than just pictures though, as each is based on real terrain data from the Defence Imagery and Geospatial Organisation.

CO 16 AD Regt Lt-Col Inger Lawes said the system provided realistic limitations during simulated engagements.

"For example, low flying aircraft are obscured by mountains or buildings and close objects such as trees and poles can interrupt the simulated RBS 70 missile guidance beam," he said.

"Weather and battlefield obscurants such as smoke, dust and so on also have a realistic effect on visibility, thermal vision and RBS70 laser-beam range so that detachments become more accustomed to engaging aircraft in all conditions.

"Simulated scenes reproduce ambient light for the detachment under training, so that when the sun is high, the area is well lit, and at night, under the stars, the training facility is dark. For



Blown away: CA Lt-Gen Peter Leahy receives instruction on an RBS 70 from Bdr Daniel Griffiths at the opening of 16 AD Regt's Advanced Air Defence Simulator.

night-time simulation, binoculars show an NVG view and the RBS 70 simulator provides a thermal view as if the clip-on night device were attached to the real weapon system."

Next to the "dome room" is a full debrief facility where instructors can replay engagements as seen from any position on the battlefield, including the gunner's sight, and then print the results for the trainee's records.

This enables the RBS70 detachment to be effectively trained and assessed both at basic-individual and advanced-detachment level in employing the correct operational procedures and command-and-control functions.

The simulator has an open-architecture design that will permit other simulators such as Tiger helicopter to be integrated into future training scenarios.

Operations

Field Marshal Sir Thomas Blamey

Blamey's remarks to the men of 2/16 Battalion after their experiences in the battle on the Kokoda Track.

'The rabbit that runs away is the rabbit that gets shot.'

*H.D. Steward,
Recollections of a Regimental Officer (Melbourne, 1983), page 147.*

RAA Commitment to Overwatch Battle Group (West) and AATTI - VI

By Major D.M. Edwards, Battery Commander 108th Field Battery, 4th Field Regiment

Overwatch Battle Group (West) (OBG (W)) is the name of the Australian Battle Group charged with the maintenance of the security and monitoring and mentoring of the Iraqi Security Forces (ISF) in Al Muthanna Province.

The 450-strong Battle Group's mission of providing operational overwatch in Al Muthanna Province has never been conducted before by any Multi National Force (MNF) unit in the MEAO, but the task is being achieved thanks to typical Australian fortitude and adaptability. The eyes of senior MNF commanders are on the battle group, with keen interest in lessons learned by the Aussies in the deserts of southern Iraq.

Formerly known as Al Muthanna Task Group 3, OBG (W) 1 is a unit comprising two combat teams, a headquarters company and an admin company. The two combat teams are based on a cavalry squadron (ASLAV - 2nd/14th Light Horse Regiment Queensland Mounted Infantry) and a rifle company (A Company 2nd Battalion Royal Australian Regiment) mounted in Bushmaster Infantry Mobility Vehicles, personnel come from the Army and the Air Force, representing 18 Corps and more than 27 different units. The Royal Australian Artillery (RAA) has personnel from 4th Field Regiment (4 Fd Regt), 20th Surveillance and Target Acquisition Regiment (20 STA Regt) and Deployable Joint Force Headquarters (DJFHQ).

This new mission is the result of the work achieved by AMTG 1 and 2 and the Australian Army Training Team - Iraq (AATT-I) 4 and 5 who set the conditions for the ISF to take responsibility for security in the province and allowed Al Muthanna to transition to Provisional Iraqi Control (PIC). AMTG 3 arrived at the end of this process, oversaw the transition phase and the withdrawal to the new base of operations. This is a significant step forward and it is unique in the nation of Iraq.

Along with the new mission comes a new base - Camp Terendak. It is located just outside Al Muthanna in the neighbouring province of Dhi Qar. The Camp is part of Ali Airbase, Tallil which is also the location for a major coalition airhead and the home of the US Army



SGT P.M. Grieve in discussion with an Italian General while CAPT M.L. Van Tilburg looks on

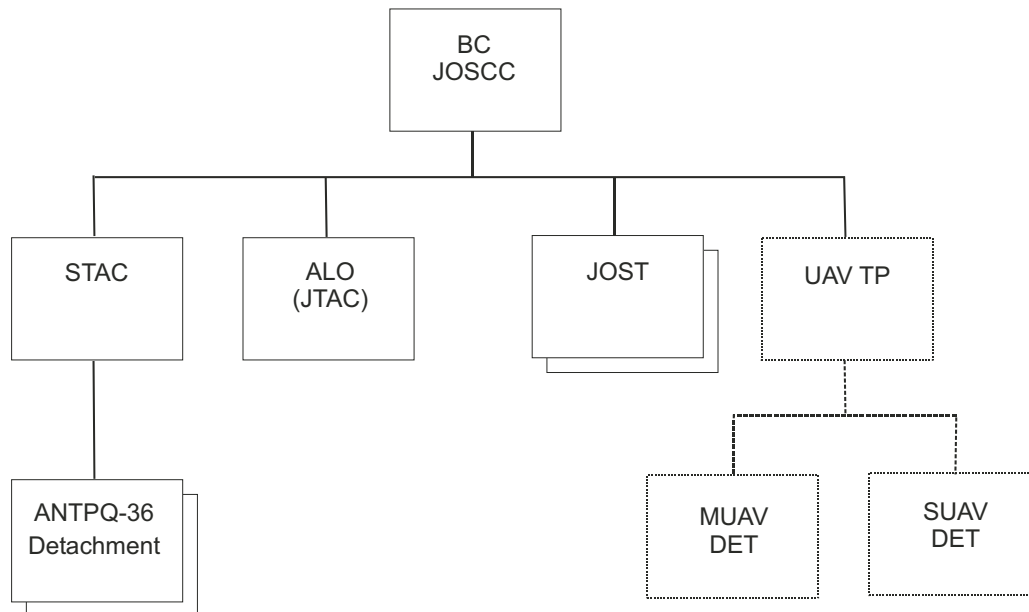
and Air Force, the Italian Brigade and the Romanian Battle Group along with a multitude of private security companies, contractors and various attachments from the coalition forces.

The new Battle Group is required to balance its approach to Al Muthanna in achieving its mission. This is a balance between the need to maintain consent for the OBG (W presence (permissive environment) and maintenance of situational awareness (anticipate the threat). In both these themes elements of the Royal Australia Artillery are playing an essential role.

RAA Organisation

The new mission required reinforcements to compensate for the loss of the UK battle group that shared the TF Muthanna along with AMTG. The Royal Australian Artillery commitment is a composite 'Battery' comprising elements of 108th Field Battery (108 Fd Bty), 'A' Field Battery (A Fd Bty) and 131st Surveillance and Target Acquisition Battery (131 STA Bty) which has contributed to all AMTG/OBG (W) Joint Offensive Support Coordination Centre (JOSCC). It should also be noted that a number of other Gunners are currently within the OBG (W), including the bulk of the Military Transition Team (responsible for liaison with the Iraqi Army and Department of Border Enforcement) and the Battery Sergeant Major 'A' Battery fulfils the important role of Regimental Sergeant Major AATTI-VI.

The following is the OBG (W) RAA ORBAT:



The 131 STA Bty STAC (Surveillance and Target Acquisition Cell) provides a number of its conventional capabilities in regards to ISTAR (Intelligence, Surveillance and Target Acquisition and Reconnaissance) and Artillery Intelligence.

Most recently the ANTPQ-36 Weapon Locating Radar (WLR) has been integrated into the coalition defence measures of Tallil. This has been keenly sought after and is greatly appreciated by the US and the other coalition forces.

Furthermore, the equipment and operators are able to provide additional intelligence through the track of small arms fire within the search sector. Since being in theatre the radar has had over 7000 tracks. The collation of reporting certain on a particular night or analysis over a period of time provides direction to the intelligence and operations for patrols to investigate security threat locations and can be used to track contacts from ISF and insurgent forces based on the point of origin and point of impact analysis over time. This has been represented through a graphical display of the collated reports and makes an easy form in which to identify areas of interest. This creative work of the 131 STA Bty personnel and adaptation to the non-conventional environment we operate within.

The ALO/JTAC is another unique capability for the RAA in OBG (W). The position provides a significant amount of ISTAR capabilities to the commander especially due to our distance from the area of operations (AO) and the main population centres. It also represents the only offensive support (OS)

asset available to the OBG (W) with most field artillery units being withdrawn to Afghanistan or re-rolled for security operations.

The numbers, types and capabilities of the aircraft in the MEA is quite remarkable. Significant lessons learnt have been identified by the use of different aircraft types and systems to produce imagery in support of the manoeuvre groups and in the collection plan. Close protection and escort duties for aircraft are also an important role and during or post incident the presence of aircraft give the commander immediate and accurate situational awareness and provides a simple measure of deterrence for further insurgent action. This can be exploited in a graduation of force and previous use of aircraft in a low level, high speed pass has provided an effective non-lethal option to the commander.



Capt Jeremy Schieb, C/S 31 establishing air communications on the TACSAT at the Forward Operating Base somewhere in Al Muthanna Province

Further, Joint Terminal Attack Control (JTAC) have been identified for each Joint Offensive Support Team (JOST) so that they may employ Close Air Support (CAS) and intimate ISTAR for the Combat Team Commander. Understandably the JTAC skill is not as common as RAA would like and the requirements for maintenance of currency mean that the skill pool is very shallow. The experience from this mission so far has clearly underlined the need for continued training of all observers in the Air Contact officer skill so they may utilise aircraft effectively when they are on station. The prevalence of air and the likely ongoing preference for air based ISTAR and OS only amplifies these requirements.

Furthermore it has been made clear that the JTAC must have an intimate knowledge of manoeuvre arm operations, be able to deploy with them, insert into tactical hides in the urban and rural environment and understand the OS systems. This is a practical and realistic example for the need to keep this skill in the RAA and SF community.

The JOST have not been employed in role in the past, being separated into supporting the Japanese Reconstruction Task Force and the FO providing the Task Force Commander LO. Recent CT deployments have seen the insertion of JOST to support the CT Commander. This has primarily been the provision of air support and communications. The analysis for force protection requirements have prevented them deploying as a group of four or five so far. The 20 STA model of an eight man

surveillance team would provide the minimum level of force protection. This manning issue will be mitigated through further training and education of the OBG (W) of the capabilities. Furthermore the acquisition of the GSR will enhance the JOST deployability and can be re-rolled directly to the BC to support the OBG (W) ISTAR plan. The JOST has also commenced training with the Brigade Surveillance Company in order to learn some of their specialist observation skills and gain from their experience in anti-hostile battery operations

Due to arrive soon to the OBG (W) organisation has been the UAV detachments. Despite the amount of air in the AO, it is often given different priorities and can not be guaranteed for the commander to obtain timely information. An integral UAV would relieve much of this problem. Although prepared to deploy with the main body in May, the MUAV Detachment was held back due to the end of the trial period being reached by AMTG 2. The trial has been declared successful and now awaits the requisite minimum number of systems to allow it to be an effective capability brick. The MUAV is likely to be deployed within the CT to provide an intimate 'over the dune' capability for the CT Commander. This will improve situational awareness immediately prior to the task and provide effective early warning.

The rapid acquisition of the UAV was an initiative of OBG (W) and commenced early in the preparation phase. The capability was recognised early for a medium to long range UAV that could support the OBG (W) throughout the AO (slightly larger than TAS). Some efficient work from 20 STA Regt has seen this project come to fruition. Although yet to be fielded the same UAV type has been successfully flown by the USMC throughout the year in the AO. This is significant as many nations have withdrawn UAV during the summer period due to the heat limitations.

Lesson Learnt

There have been a number of lessons that have been learnt so far and many more to come. The following are just some of the pertinent lessons to date.

Environment

This tour took place during the Iraqi summer. Temperatures were averaging in the high 40C and peaking into the 50C. Other conditions included the wind which, in the desert added to the level of discomfort and heat (wind heat factor). It can be simulated by turning a large hairdryer on full and placing it in your face. This wind also brought with it dust storms. These would reduce vision down to meters at times and also reduced troop freedom of movement. Terrain was extremely open desert with no vegetation, criss-crossed with irrigation channels of various depths. This varied to overcrowded urban terrain with multi-storey buildings, low village dwellings and areas of palm plantations and high reeds in the irrigated areas bordering the Euphrates and major population centres.

The heat, dust and wind all affected operations. Clearly the issues associated with carriage of equipment for a dismounted party need to be considered. The need for body armour and helmets is essential as is the need for ballistic glasses. The overall additional weight of this equipment must be carefully considered for water carriage. Observation posts cannot deploy for long periods of time without sufficient water brought in by them and cached or resupplied in depth.

VHF propagation is severely affected by the weather and HF was not reliable enough for operations. A heavy reliance on TACSAT systems became the norm and is the preferred coalition form of communication for aircraft. A thorough understanding of secure TACSAT systems (PRC - 117F and SPITFIRE-5D and 5C) needs to be incorporated into unit level training.

Heat has also been a telling factor in the use of aircraft particularly helicopters and UAV's. Over 45C many aircraft have problems operating. Both the UK and Italians withdrew their UAV systems once the summer started due to the limited launch timings available.

Similarly the heat affects computers and processing capability. Heat generated by computers is already high and is exacerbated in the heat of Iraq. Systems reliant on computers (WLR CP, Liaison Officer Briefcases) start to fail in excessive heat. Other systems also feel the effects of heat, despite the conditions in Australia, and may react in an unpredictable manner or simply shut down. Some of this has been solved by additional large air conditioning units being installed, but this is not workable for any mobile units. Recently a visit from a Joint ATO team arrived to inspect magazines and also the

effects of heat on ammunition. There had been no study on how HEAT rounds or guidance systems were affected by heat, even in a storage facility. RAA weapons would need to be managed and storage in ammunition bays carefully reviewed to ensure rounds are still able to be employed safely and within the prediction limits of the software.

The flat rural desert terrain made covert insertion of observation posts very difficult and visibility was for kilometres even with the naked eye. Obviously the maximum use of night and well planned routes is essential. The deliberate use of an overt observation post provides a good deterrent effect for threat activity, but must be balanced against force protection and sniper operations. The use of GSR and TI systems is ideal for the conditions and very little thermal cross over was experienced from the latest TI equipment. The urban terrain provided a challenge for any form of observation post and units would do well to consider the techniques and problems with inserting, occupying and defending an urban observation post within their training.

Rules of Engagement (ROE)

The subject of ROE has been identified as an area of concern. The use of offensive air support (OAS) and any heavy weapon within the MEAO clearly has implications for ROE amplified by the often uncertain level of conflict you could find yourself in. OS advisers must be conversant and understand the Australian concept of targeting from a legal perspective (the criteria that qualifies a target). The Legal Officer from OBG (W) has designed and issued a Targeting System that allowed the OS adviser and the commander a clear idea of criteria for legal aspects of target selection.

The OAS rules also required collateral damage estimates to be made as part of the mission (and should be part of any mission planning process). This may be a formal process in a deliberate stage or a quick CDE for an immediate neutralisation. The ROE also provide for a collateral damage allowance for a mission for the basis of considerations. This represents a serious commitment by the OS adviser and commander for the execution of the mission. ROE for other electronic based devices also need to be understood. This type of detail and specific OS ROE issues are generally not covered in individual training at the School of Artillery where only an overview of the principles and applications for ROE is discussed. This may be partly due to the fact that we have not been firing in support of operations for some time and we have generally not been practicing the use of OS in anything other than conventional warfare. The subject of detailed ROE specific to OS in non-conventional settings should be considered as a subject by units or possibly at the School of Artillery as part of ROGC and/or COAC would prove beneficial.

Frequency Management

With the ever increasing level of technology comes the management of less tangible qualities such as frequencies. In a coalition operation the bandwidth rapidly fills with different national frequencies for general communication and passage of data etc. AMTG 2 had experienced some of this with MUAV frequencies that were crossing over other frequencies that initiated the RTB sequence (lost communications) or lost imagery until the frequency was clear again. Similarly the use of all form of radar, imagery downlinks and other forms of communications (LOBS) require specific frequencies. The WLR is able to operate across a number of frequencies and can exclude some in order to fit into the limitations of the theatre and Australian ability to acquire frequencies from the host nation. A preference for equipment that has programmable frequencies rather than a fixed frequency range will be essential as the battlefield of networked army fills the EMS. Most full-time units of the Regiment field a Royal Australian Signals Corps officer as their signals officer and a good level of understanding of the frequency management issues will need to be provided to commanders before they can introduce and employ the vast array of sensory and communications equipment available to them. It may be worth considering the frequency management across the units equipment.

Conclusion

OBG (W) represents a significant step forward for the Australian contribution to the Iraq conflict and we occupy a unique position within the reconstruction of the Iraqi nation. The RAA continues to provide essential capabilities to the Battle Group both in its core business of STA and OS as well as

contributing across a range of other locations. The creative adaptation of RAA assets to fit the environment and mission has yield excellent result. In particular the work of the WLR has cemented the relevance of RAA in modern conflict through the tangible and valuable provision of force protection and Artillery Intelligence. RAA JTACs have proven their worth and the skill set is highly regarded amongst coalition partners as well, the use of air in the surveillance, escort and counter IED operations has saved lives and enabled successful manoeuvre. The JOST remains an integral part of CT manoeuvre and provides excellent tactical level surveillance and communications.

There are an innumerable number of lessons still to be learnt about this operation and I have benefited from the previous battery commanders experiences. The perception of many manoeuvre arms is still that the value of the RAA is linked to the presence of guns. The fight for relevance in a non-conventional setting is the internal battle for the RAA and is reliant on commanders at all levels to adapt and be creative with application of the skills and knowledge.



Weapon Locating Radar at Tallil

Operation Acolyte

By Lance Bombardier M.P. Raw, 105th Medium Battery

On 16th January 2006 105th Medium Battery was brought back from leave to conduct pre-deployment training for Operation Acolyte, security operations in support of the 2006 Melbourne Commonwealth Games. 105th Medium Battery was joined by members of the 7th Combat Service Support Battalion. Both units came together to form the 7th Security Task Unit (7 STU) within the Search Task Group.

7 STU started its pre-deployment training with the Reserve Response Force (RRF). On the RRF course the members of the company were taught setting up and conducting vehicle check points (VCP), searches, and a component of the military self defence course. The pre-deployment culminated in a search of Suncorp Stadium. Once the training was complete 7 STU was ready to deploy to Melbourne. The move to Melbourne was broken in two phases with a road party, followed by an air party. The road party included a stopover at Dubbo before continuing on to Puckapunyal where they signed for an M198 so the Battery could conduct a conversion course for the newer soldiers.



Down time: The author, LBDR Michael Raw (Left) with other members of 7 STU outside Flinders Street Station

7 STU operated out of RAAF Base Williams (Point Cook).

The road party arrived at Point Cook during the day. It was straight out of the vehicles, straight into the lecture room where 7 STU was united for a series of briefs about the operation and about Melbourne. During the next few days the company conducted a series of training activities where they conducted VCP's and area searches. The company was put to the test, with many challenging scenarios. With the training complete, 7 STU was ready to start its tasking, the VCP at the Commonwealth Games Village. Whilst two of the platoons were operating the VCP at the village, 2 Platoon were conducting an area search of the entire Commonwealth Games Athlete's Village, working along side dog handlers, and using a sophisticated x-ray machine.

Later on during the games 2 Platoon were tasked to search the Melbourne Cricket Ground (MCG) just prior to the opening ceremony, which they completed in just over three days working from 2000 hours to 0900 hours. Searching the MCG in such a short time frame was a demanding task.

Just before the Games started companies comprising members of the Army Reserve arrived. Sections from 7 STU were required to help train the new members before they began their taskings. During the games the company was required to man additional VCP's.



Clear: LBDR Gary Davies from 105 Mdm Bty checks a bus engine at a VCP at the games village

When the companies had a bit of down time they were able to experience the sights and sounds of Melbourne or visit the local areas surrounding Point Cook. Some members enjoyed unwinding on the base by enjoying the mess, or by playing computer games on a network established for the company.

Towards the end in Melbourne the tempo began to fall off. On one of the final nights they conducted a skit night, along with a series of games, which kept the whole company in laughter through the night.

Overall being in Melbourne for the Commonwealth Games was a great experience for the members of 105th Medium Battery, particularly for the younger members. They learnt about the flexibility of the Royal Australian Artillery, in that it can also be deployed in other roles if the need arises. The experience that the members received in Melbourne on the VCP's and conducting area search's will help them in the future when they are called upon to conduct this type of operation again.

Operation Catalyst – Australian Army Training Team (Iraq) – IV/V

By Lieutenant R. C. Myors, 105th Medium Battery

In August 2005, two members from 105th Medium Battery deployed to Iraq as part of AATTI-IV (Australian Army Training Team - Iraq). Sergeant Rodney Foster and Sergeant Paul McMillan were deployed with AMTG 1 (Al Mutthanna Task Group) and other members of the training team in Al Mutthanna Province in Southern Iraq. The two members were not the first from 105th Medium Battery to have deployed, with Captain Phil Hickey having deployed earlier in the year.

The role of the training team was to provide training and advice to the Iraqi Army's 2/10 Brigade so that a handover could take place and the Iraqi Army could be solely responsible for the security of Al Mutthanna Province in Southern Iraq. The training team was based in Camp Smitty alongside AMTG 1 and British soldiers as part of Task Force Eagle.

Sergeant Foster and Sergeant McMillan were, at first, involved with training recruits at a Basic Training Centre. The soldiers they trained then went to make up the new 2nd Battalion 2/10 Brigade which was responsible for security in Al Mutthanna. Once the battalion had been formed Sergeant Foster and Sergeant McMillan became platoon advisors to the newly formed battalion. They were involved in the day to day training of their platoons and also the companies they supported. They participated in numerous patrols and many different sorts of training.

On 17th January 2006, a further two members from 105th Medium Battery deployed on Operation Catalyst as part of the new AATTI-V to Southern Iraq. Lieutenant Rhys Myors and Bombardier Watson began their pre-deployment training the previous year alongside AMTG 2 and other members of the new training team

Bombardier Watson was part of a team which was involved in the training and advising of the Iraqi 2/10 Brigade main logistical element. He was involved in courses to train Iraqi non-commissioned officers on instructional technique as well as involved in training in convoy procedures, security operations and basic weapons techniques.

Lieutenant Myors was a member of one of the battalion training teams and was the principle advisor to the support company of the battalion. The support company was involved in providing the logistical support to the rifle companies as well as providing certain specialist elements to the battalion. Lieutenant Myors was also an advisor to the company commander, and provided training and advice to the junior officers and senior non-commissioned officers of the battalion.

Throughout their time on Operation Catalyst, Lieutenant Myors, Sergeant Foster, Sergeant McMillan and Bombardier Watson were responsible for improving the training that their Iraqi counterparts undertook and thus improved the capabilities of the Iraqi brigade. These four members continued the tradition of Gunners on operations by performing a different and difficult task with professionalism and good humour.



Good Relations. The Author, Lieutenant Rhys Myors from 105th Medium Battery, sharing a joke with a member of the Iraqi Army

Evacuation Operations – Not Just Another Chapter in SOPs

By Major J. Ashton, Operations Officer, 4th Field Regiment

Introduction

For a number of years, 4th Field Regiment has been required to provide the capacity to conduct evacuation operations. Whilst the terminology may have changed (now Non-Combatant Evacuation Operations or NEO), the procedures have not. Anyone who has been around Lavarack Barracks for awhile will have seen gunners, at particular times, madly deploying kilometres of Hessian and throwing up tents in record times to this end, and the cynics amongst us may have questioned why. We now know why, having been deployed to do this very task twice within three months of each other, this year. Fortuitously, and as a result of current other commitments, I was able to command both evacuation operations. It is appropriate to share some of these experiences here.

Operation Anode – Solomon Islands

Following the deterioration of public order in the Solomon Islands, the Ready Battalion Group (RBG) deployed at very short notice on 19th April 2006. In addition to this force element a small Evacuee Handling Centre (EHC) deployed also, with a view to evacuating Australian and Approved Foreign Nationals from the region. This team was based on a brigade joint offensive support team (JOST) of five and the RBG joint offensive support coordination centre (JOSCC), also of five. Given the relatively light scales of the deployment and the extraordinarily short notice, the deployment gave rise to the new term 'EHC Very Light.' This translates to 10 members of 4th Field Regiment with combat equipment and a small trunk of documentation. Whilst this may seem a very minor contribution, it was significant for a number of reasons. Firstly, it was the first activation and actual deployment of the 4th Field Regiment EHC capability since its inception. Secondly, despite the massively reduced scale, the team actually conducted evacuation operations, verifying and in some cases challenging the SOPs that had been relied upon in training for so long.

The actual deployment saw the team deployed only for five days as this was all that was required to evacuate the small numbers of personnel (57 in total). The team remained at Honiara air strip with additional responsibilities of security for C-130 aircraft that remained on the strip over night and evacuee handling as required. The soldiers worked extremely well in trying conditions, albeit for only a few days, utilising the Honiara air terminal as the EHC infrastructure in a relatively isolated and a still very uncertain environment. The mainstays of training were all evident with briefings to evacuees, provision of essential necessities (food, water and shelter), searching of personnel and baggage, and liaison with Department of Foreign Affairs and Trade (DFAT) officials. Of notable absence, was any deployment of hessian screening or tents much to the soldiers delight.

There were a number of matters that I reflected on following the deployment. The value of quality signallers, and whilst many would feel that this skill has been largely eroded in recent years, the gunner signaller still regularly outperforms others and is a significant asset in any environment. The fact that the flexibility of our members in all ranks was demonstrated unequivocally - such operations are simply not possible without the ability to re-role from fire-planning in barracks in the morning and negotiating for airport space with the local airport manger at Honiara in the evening - as was the case in this deployment. The final observation that these operations will by necessity involve extremely close liaison with DFAT officials and will no longer be just 'green' operations. This is a view that would be reinforced only three months later when deployed again.

Operation Ramp – Turkey

On Thursday the 20th July the call came again, this time with slightly more notice, but still a matter of hours. This time to deploy to 'a country in the Middle East to assist with the evacuation of Australian citizens and approved Foreign Nationals from Lebanon.' The team was quickly raised, again under my command due to RCB, OBG(W)-1 and Operation Astute, (see related articles), I was about the last Major standing. This time 4th Field Regiment was to provide one of two EHCs, the other coming from RAAF.

In all 16 members of 4th Field Regiment, including two from 'A' Field Battery were deployed on Operation Ramp. Quick stops in Sydney and Darwin preceded a flight to a British Air Base on Greek Cypress. The EHC was augmented by eight personnel from 1 HSB, two Military Police from 1 MP Coy, three signallers from 145 Signal Squadron and a Liaison Officer from Land Command Engineers - giving a final strength of 30 members and an organisation with some quite robust capability.

The Joint Task Force was commanded by Colonel Condon of 17 CSS Bde, with the headquarters and majority of the force deployed to Greek Cyprus. EHC - Army were in Cyprus only long enough to step off the plane and receive a short brief before stepping back on the plane and flying to Turkey. Once in Turkey we were greeted by Colonel Rerden and dispatched as quickly as was possible to the coastal city of Mersin. DFAT had begun operating out of a hotel in Mersin and had established an Operations Centre there. A quick reconnaissance of the port was completed and key personnel introduced themselves to the DFAT team, who were exceptionally busy trying to co-ordinate the movement, accommodation and processing of hundreds of evacuees. Work commenced immediately and at a frantic pace. The operation was unusual in that it was unarmed, in civilian attire and not truly an EHC as we were actually a staging post, receiving evacuees, already removed from Lebanon. The task became one of the logistics of port reception, bus movement, hotel accommodation and chartered flights to Australia often through a third country. Interestingly also, vindicating my earlier reflection, this was a DFAT operation, with Defence augmenting DFAT who had primacy throughout. These factors aside, the contribution of the gunners (and indeed the whole team) should not be undervalued. The situation was dynamic, confusing and difficult to control. It was quickly learnt that tasks which should be easy were far from it. As if the language barrier did not make things difficult to begin with the hired ferry captains and bus drivers sometimes worked on their own agendas almost oblivious to the task at hand.

The medical team were immediately deployed to the port to provide medical assistance to evacuees arriving on the Ferries from Lebanon, while the signallers strived to achieve strategic communications from a balcony in downtown Mersin. The 4th Field Regiment soldiers found themselves with a multitude of tasks. The four 4th Field Regiment sergeants played key roles in organising and leading the processing and forward movement of evacuees at the port. Members also worked tirelessly on improving the existing systems for command and control, transport co-ordination and accommodation plans. One of the larger road moves involved 470 evacuees on eleven buses and was required to travel for over eight hours. Convoy command and escort duty was a task that all of the 4th Field Regiment soldiers participated in. This was a true integrated operation with defence certainly adding value to those processes with which we are accustomed, specifically controlling large bodies of people, the logistics of mass road and sea move and the provision and control of large scale accommodation. Conversely, DFAT brought a wealth of knowledge on immigration policy, diplomacy and inter-governmental coordination, contract management and finance support.

A large number of 4th Field Regiment soldiers provided the operations centre with situational awareness by accompanying the ferries on the journey from Mersin to Beirut and back, a journey that often took more than 24 hours, on coastal ferries that were not well suited to the open ocean. Sea sickness was a major concern on the ferries and the medics needed all the assistance they could get to help prevent people from succumbing to dehydration. Additionally, these soldiers were seriously affected themselves yet worked selflessly to ensure the comfort of frightened and confused evacuees, in appalling conditions. In many instances, they then assisted with processing the evacuees after returning to the Port. In these instances, many had been awake for over 30 hours. Back in the operations centre, the accommodation problem, at times was becoming increasingly more complex as more evacuees arrived and more countries started moving evacuees through Mersin.

The 4th Field Regiment commitment to Operation Ramp last approximately 20 days. In that time 1915 evacuees were processed in some form by our soldiers.

In Reflection

The operations were significantly different yet served to prove some sound principles. 4th Field Regiment is capable of conducting evacuation operations at short notice. The skills and SOPs are sound and whilst not always fully applicable to the situation, the principles remain. Combined operations with DFAT and other agencies are likely to be the norm but the requirement to stand up the capability in isolation is still imperative. The flexibility of our members at all ranks is key and proven. Preparation and training are essential, and finally time spent on readiness is never wasted. Full post operation reports are available upon request for those interested.



Evacuees crossing the Port at Mersin, Turkey

Combat Team Thor

Provided by Major S.G.T. Mott and Warrant Officer Class Two D.J. Sinclair



The Royal Australian Artillery is a great place to be at the moment. From an 8th/12th Medium Regiment (8/12 Mdm Regt) perspective, the second group of the Al Muthanna Task Group still had not returned to Australia before we committed elements of the Regiment to Afghanistan and the Solomon Islands. 101st Medium Battery (101 Mdm Bty) has been fortunate enough to be required to support all of these activities. This article covers the deployment of Combat Team Thor to the Solomon Islands.

Pre-Deployment

On 1st June 2006, at a Regimental dinner on the 8/12 Mdm Regt parade ground, Major General Ash Power, Commander 1st Division, announced that both 101 and 103 Mdm Bty were to deploy sequentially to the Solomon Islands. We were to deploy as the sole Australian infantry company as part of Operation Anode II. As 101 Mdm Bty had recently re-rolled as an infantry company for Rifle Company Butterworth, we would be the first to deploy. The Battery commenced preparations the following day for a departure in 16 days and assumed the title of Combat Team Thor (CT Thor).

The CT was given a fair amount of leeway to structure the organisation, and what good infantry company would deploy without its supporting JOST - not us. Almost immediately the officer commanding (OC) and intelligence officer (IO) deployed on a reconnaissance. This soon became a whirlwind tour of the East Coast with visits to Townsville - 1st Battalion Royal Australian Regiment (1 RAR), Sydney - Land Headquarters and Defence Forces Support Unit and finally the Solomon Islands itself.



MAJ S.G.T. Mott, Officer Commanding

Whilst this was occurring the CT, with the Second In Command, Captain Peter Newman at the helm, continued with the detailed preparation. CT Thor was truly a combined effort and a number of personnel had to march in, complete all administrative, medical and training requirements in a short time prior to departure. All sub-units from within 8/12 Mdm Regt are represented within CT Thor, as are 1st Armoured Regiment, 2nd Cavalry Regiment, 1st Combat Service Support Battalion and 1st Combat Support Regiment. It was quickly identified that AIRN compliance does not equal 'deployable', but it is not a bad place to start.

CT Thor underwent a variety of training in preparation for Operation Anode II. This included a multitude of small arms training and shooting, helicopter underwater escape training (HUET) and even a good dose of OC Spray from the Military Police. At the completion of this training a Mission Readiness Exercise was conducted and CT Thor was ready to go.

Deployment

CT Thor paraded at 0430 hours for a 0900 hours departure, and many thanks go to the joint movements control office for that. Prior to leaving the Regiment, the Commanding Officer, Lieutenant Colonel Graeme Finney, offered his praise to the CT and wished us all the best on what is a unique opportunity. After saying goodbye to our families at the Darwin airport, Major General Ash Power issued us a final farewell. We then enjoyed the comfort of the chartered jet for the trip across to

Henderson International airport. We arrived mid afternoon and were welcomed by Lieutenant Colonel Jeff Quirk, the Commander, Combined Joint Task Force 635.



L to R: WO2 R. Grundell, GNR Dewson, SGT Smith and WO2 D. Sinclair

The handover with D Company 1 RAR, commenced almost immediately and at around 1900 hours on 19th June 2006, CT Thor assumed control of Area of Operations Star. It was identified on the reconnaissance that this was very much a junior commanders paradise. Sections are able to get out and do their business. Platoons likewise have had the opportunity to travel to remote locations and conduct extended patrols covering distances of up to 100km through country akin to Jurassic Park. All the while the CT has maintained a Forward Operating Base in Honiara and provided security to the Participating Police Force (PPF) and the Royal Solomon Islands Police (RSIP).

The CT has been involved in both security and targeted operations throughout the deployment and continues to have a positive influence on the security of Honiara and the greater region through

the impact of our patrols. We have conducted a number of observation posts against threat groups, all of which have remained without compromise for their duration. We have provided assistance to the PPF with cordons and general security. To say that CT Thor has been successful would be an understatement.

The highlights for the soldiers seem to be the provincial patrols. In platoon strength they have; traversed mountains, which have taken them days to conquer; they have negotiated seas in small vessels when the land has been impassable; they have been to villages and regions that have not seen RAMSI presence in years; and they have interacted with the community in a way that is unique to the Australian digger. Of most importance is that they have achieved their mission in a manner befitting the Royal Australian Artillery, and in doing so, have laid the foundation for a successful 103 Mdm Bty tour.



LT J. Groves with members of his platoon

Operations In East Timor's Rural Districts

By Lieutenant W.C. Close, Golf Company, 4th Field Regiment

The men of Golf Company 4th Field Regiment Royal Australian Artillery, after spending an extensive period of time conducting security and stabilisation operations (SASO) within central Dili, received orders to move from Area of Operations Hamel to the eastern city of Baucau. The orders sparked a great deal of excitement within the company as the monotony of Dili was becoming a little hard to bear.

Located approximately 100 kilometres to the east of Dili along the northern coastline of Timor Leste, Baucau was the original trading port for the Portuguese colony during the early 19th century. A city set into the side of the coastal mountains, Baucau is a city wrought with history providing a rare opportunity for the soldiers of Golf Company to develop a greater understanding of the development of the country of East Timor.

Loading all equipment into several Unimog and Mack trucks, the company stepped off in the early hours of a late July morning and began the long journey to Baucau. While the trip provided several interesting sights and spectacular views there was much frustration in taking several hours to travel such a short distance due to the poorly maintained roads and the mountainous terrain.

Arriving at the Baucau Soccer Stadium, which was to become the Company's forward operating base (FOB), the anticipation of what was to come was showing on many faces, however this did not stop the normal rush to find the best location for the men to set up their mozzie domes and stretchers and begin to brew up. The officer commanding of the infantry company we were relieving gave the officers and the company sergeant major a situation brief on Baucau giving us a fair idea of what we expected over the coming weeks. It was identified that the natural progression of urban sprawl had created two distinct areas within the city of Baucau. The two areas had been difficultly named New and Old Baucau. Old Baucau was the area of the original Portuguese settlement on the northern face of the mountains closest to the sea while New Baucau was the urban area developed to the south by the Indonesians during their occupation.

Company headquarters allocated each platoon individual tasks which were immediately undertaken with enthusiasm. 1 Platoon was allocated security of the company FOB and SASO within New Baucau, 2 Platoon was given tactical control of a section of armoured personnel carriers and tasked to patrol the outlying villages around Baucau and 3 Platoon were established in an FOB in a disused market place within central Baucau and tasked with SASO in the Old Baucau area. Along with these primary tasks, individual liaison was to be conducted through company headquarters with the FFDTL (Timorese Army) and the PNTL (Timorese Police). Both the PNTL and the FFDTL had a large presence within Baucau and the tension was still running high after the events within Dili on 25th May 2006. While the trouble was less prominent in Baucau between the two forces, caution needed to be taken to show diplomacy and an unbiased approach when liaising with the forces.

The primary focus of the company whilst located in Baucau was to instill a sense of security among the people and promote the Joint Task Force presence. Initial patrol reports from each of the platoons identified that the people of Baucau looked upon the Australian Army in a different light in comparison to the attitude of the people in Dili. Many questions were asked by the district Sukos (village leaders) as to why the Australian Army had come to Baucau and how long we expected Australian Army soldiers would remain there. This question needed to be approached tactfully and diplomatically by patrol commanders in order to maintain an image of neutrality within the city. As was shown when the company was in Dili, the patrol commanders and the soldiers showed a high level of professionalism while interacting with locals using their developing language skills in Tetum (Timor Leste's national language) along with improvised sign language to communicate with the

considerably small number of English speaking locals. The initial hesitant approach to us Australians in Baucau gradually gave way to an open acceptance and appreciation by the people of Baucau.

Golf Company, after developing an understanding of the local population, realised that normal military patrolling tactics would not suit the new working environment and immediately went about devising less conventional plans to win the trust and support of the people. Activities such as soccer matches, a less aggressive display of arms and delivery of spare food and water to the refugee camps brought immediate results with a hearty level of community involvement and support from the people of Baucau being shown toward the newly arrived Australian Forces.

The Golf Company Platoons each rotated through the task of patrolling the outlying villages in the Baucau district. A formidable working relationship was developed between the soldiers of Golf Company and the men from B Squadron 3rd/4th Cavalry Regiment while patrolling the small rural villages in the Squadron's M113 carriers. Many places had not been visited by Australians since 1999 and some areas had never seen Australian soldiers before. This was a rewarding and adventurous experience that many Golf Company personnel feel was their most enjoyable during Operation Astute.

In conclusion, Golf Company's deployment to the Baucau district was a new and challenging experience that was met with a great deal of enthusiasm by the hierarchy and in particular the soldiers. Several packets of Sedaap Noodles and a one burst water main later, the task was complete and the Company was ready to return to Dili. All members performed to a high level and the change in the attitudes of the people of Baucau toward Australian soldiers was evident prior to the company's return to Dili. The company's time in Baucau was both challenging yet enjoyable and was a fantastic way to complete a successful operational tour to East Timor.

Back to basics: 4 Fd Regt fills infantry role By Cpl Andrew Hetherington

NINETY-FIVE members of 4 Fd Regt have left their usual tool of trade at home in Townsville - the 105mm Hamel gun - and taken up a different role serving with the 3RAR Bn Gp in Dili

OC G Coy 3RAR Bn Gp Maj Michael Dawson said it was not the first time the artillerymen had been re-roled as infantrymen.

"We were lucky to have the benefit of participating in Exercise Croix du Sud in New Caledonia last month," Maj Dawson said.

"We operated as an Australian infantry company there. We did a lot of different training, like amphibious landings, air mobile training and a lot of infantry tactics. More than that, we operated as an infantry company rather than an artillery battery. This was massively beneficial to the company for this deployment.

"We have come together well and that exercise was worthwhile. At the end of the exercise, the guys said all they needed was an operational tour - they got their wish."

Gnr Justin Matangi, 108 Bty, working in the G Coy CP, said Ex Croix du Sud involved "a lot of different training which gave us a good idea of what was expected of us".

"When I found out we were going to East Timor, I was excited about being deployed overseas," he said. "We are all happy to be over here, it is awesome to be helping the people of East Timor."

Gnr Matangi said he and his mates went through some intensive training before they were deployed "We trained in things like crowd control, patrolling tactics, VCPs and detainee training," he said.

G Coy is operating out of Dili airport and its main role is to be involved with the security stabilisation operations. The company's routine involved a lot of patrolling, but Maj Dawson said that was not all it did.

"We have three platoons out each day working and they rotate through tasks such as the security of the immediate vicinity of the APOD (airport), observation roles and manning VCPs. We have a platoon seconded to carry out duties at the Dili food distribution point," he said.

Maj Dawson said the company's patrols had found and confiscated a large number of weapons.

"We have confiscated over 100 weapons ranging from crude knives and clubs to automatic pistols," he said. The unit hasn't encountered any trouble as a part of its duties in Dili, but Maj Dawson said it was occasionally called on to break up minor disturbances between locals.

"We have some minor factional differences in the streets and we have dealt with this quickly," he said.

"Every now and then the soldiers get in among people who want to hurt each other and want to help to put a stop to it."

'Army - The Soldiers Newspaper' Vol. 11, No.45, June 15, 2006

Career high job done

By Wg-Comdr Bob Rodgers

IT WAS a moment tinged with sadness and anticipation for Brig Paul Symon as he handed over command of JTF 633 to Brig Mick Moon on 12 May.

During his tenure, the men and women of AMTG2 have continued to build a close relationship with the Japanese Reconstruction and Support Group for whom they have provided a secure environment in which to operate.

JTF 633 has also played a key role in the ongoing development of the Iraqi Army to a point where it is beginning to train itself effectively.

Brig Symon said he felt a sense of loss, having worked with an excellent team comprising outstanding soldiers, sailors and airmen.

"Together we've been through a lot and we've made a positive contribution to help get Iraq back on its feet," he said.

"I am proud and privileged to have led such a diverse and professional team."

"Living in difficult conditions, these men and women are working directly with other coalition forces and elements of the Iraqi security forces. They are the boots on the ground that make our contribution to the rehabilitation of Iraq very real and productive."

As Australian National Commander, Brig Symon's responsibilities were spread across the Middle East Area of Operations and included commanding much more than the elements of the Australian Army.

"The P3C and C130 crews and maintenance personnel have done an outstanding job in supporting operations in the theatre. All members of the Air Force should be justifiably proud of their contribution," Brig Symon said.

He also had a close relationship with the RAN, having worked with the crews of HMA Ships Parramatta and Ballarat over the course of his command.



Job done: Brig Paul Symon addresses his staff for the last time before handing over command of JTF 633 to Brig Mick Moon.

Photo by Cpl Lachlan Fletcher

"The Navy team is out there, every day, ensuring the safety of key facilities and maritime approaches. It is impressive to watch them go about their daily work, like a well-oiled machine."

"The personnel of the Force Level Logistics Assets at Baghdad and in Kuwait have also performed magnificently."

"This team just keeps on producing for us all. They deal with the everyday problems of sustaining a large force, ensuring properly equipped and carefully inducted forces come into theatre."

Brig Symon sees this most recent command as a key milestone in his career.

"It has been an amazing and fulfilling experience that sadly must come to an end, but I do look forward to returning to my family and spending some time with them before commencing my next appointment."

Brig Symon is posted as DGPers-A when he returns to duty.

Articles

**The Unnecessary War
(Island Campaigns of the South-West Pacific 1944-45)**

'Will anyone knowing the whereabouts of Australian soldiers in action in the South-West Pacific please communicate at once with the Australian Government?'

Canberra Times, 10 January, 1945

Rifle Company Butterworth

'The Bad Ram Tour'

By Lieutenant R.A.G. Wehby, 4th Field Regiment

Rifle Company Butterworth (RCB) 74 deployed to Malaysia on 2nd May 2006, departing Townsville for the shores of Penang. Stationed at Royal Malaysian Air Force Base Butterworth, we were excited by the new opportunities Malaysia would bring. Over the next three months we were to train in and with different defence forces, and experience cultures starkly different to our own. Only a handful of the company had travelled to South-East Asia before.

Ten days after arriving in Malaysia, RCB 74 deployed to Gurun for the first infantry exercise (later to be described by most as a wake up call to jungle warfare). The unfamiliar terrain was a mix of palm-oil and rubber plantations, divided by areas of thick jungle. Despite hailing from a tropical city, nothing could prepare us for the heat and humidity confronted during this exercise. Although ample water was brought, no one could have estimated the consumption level for the company over the five day exercise. The company quartermaster sergeant was run off his feet with successive resupplies to each of the platoons. The exercise consisted of some difficult company patrolling in addition to some platoon level activities. The exercise was made even more complex when we discovered that the locals were using live rounds for hunting in the same areas we were in! Overall, the week was a success, and the company brushed away the cobwebs to prepare for the infantry training that would follow.

The completion of the first exercise gave RCB 74 the first opportunity to get out and enjoy what Penang Island had to offer. The 'Hosties' was the local hangout, a place where Australian Defence Force members could go and enjoy a quiet Aussie drink at subsidised prices. There were numerous places to enjoy a drink in town, whilst during the day many enjoyed the sights of Penang Hill, Batu Ferringi and the various Buddhist temples on the island.

Due to the cancellation of an activity at short notice RCB 74 organised two military history tours in Thailand and Malaysia. The largest group of 53 members departed for Thailand and after we arrived in Bangkok we proceeded on a three hour bus ride west to Kanchanaburi. We began our history insight into Thailand at the Commonwealth War Cemetery and a tour of the Death Railway museum. The next day we were up early to visit the 'Bridge on the River Kwai' and the infamous Hellfire Pass. The Hellfire Pass memorial is a must see for all servicemen. It is the site where the Australian, British and other prisoners of war from World War Two dug huge paths through solid rock mountains to lay tracks for the Thai-Burma railway (aptly nicknamed 'Death Railway'). The eight kilometre walk is fully interactive and as you reach certain parts the mp3 player plays recordings of ex-soldiers explaining the significance of that location. The most moving experience was standing at the central memorial staring up at the 15 metre high Hellfire Pass and imagining the torture endured by those who carved the rock. After two days in Kanchanaburi we headed for Bangkok and a look around the central Buddhist temples and the King's palace. The final day consisted of a visit to the floating markets and a taste of the local entertainment strips in vicinity of Pat Pong Road.

The Malaysia tour consisted of two three-day tours with 22 members of the company travelling on each tour. We travelled by bus up into the mountains of Malaysia to the province of Ipoh. We visited the Taiping War Cemetery, the resting-place for both Imperial and Commonwealth soldiers who fought in World War Two. The tour then progressed to the King's Palace in Kuala Kangsar where we experienced both the old and new palaces. Beautifully ornate, the palaces were very lavish in their decoration with gold leaf used throughout. Up early the next day and off to the King's Palace in Kuala Lumpur, a tourist favourite and another demonstration of South-East Asian royal opulence. The next stop on the tour was to the Malaysian National Museum which provided a comprehensive insight as to how Malaysia has developed since becoming a British colony. The War memorial and the Freedom

statue were both very impressive and provided a lot of great historical significance to both the Malaysians and people who fought for, and alongside the Commonwealth.

The history tours were followed by a range week in Gurun, with the aim of qualifying soldiers and officers on various weapons systems and safety appointments. The week was a great success, seeing a large proportion of the company qualifying on the 84mm Carl Gustav, 66mm SRAAW and Browning 9mm pistol. Our resident range expert also ensured that no opportunity was lost to qualify non-commissioned officers and officers on supervisory range duties.



GNR Fitzsimmons covers GNR Hancock as he searches an enemy soldier during Exercise Rambo at 39 Mile Post, Pulada

The company's next major block of training was approximately a nine hour drive south to camp Pulada, where we began the exercise with some introductory survival training provided by the Malaysian Jungle Warfare Wing. This consisted of lectures on the first day, followed by the practical side over the following days. The training consisted of how to set up animal traps, shelters that were specific for the type of terrain and duration, and how to start a fire using palm fronds and rocks. Once we had the basics it was time to put it into practice for the next three days. We had to survive on what we could catch and the shelters we built. This proved to be difficult with the monsoonal downpours. Throughout the survival training the instructors supplied us with some live monkeys and chicks, this would be our source of sustenance for the three days, definitely a first for many. It was then left to the company to skin and cook the animals; those that got a feed found it a little stringy but otherwise quiet tasty.

After survival training the company conducted a platoon bullring of two exercises, each of 48 hours, duration. Exercise Ramewe saw the sections conduct live firing activities using small arms, 40mm and 66mm prac. These culminated in a night section in defence shoot utilising 84mm illumination and a day live fire section flanking attack. Exercise Rambo resented a different set of problems to the platoons, with the platoon commander and sergeant being 'seriously wounded' and section commanders, second in commands and soldiers required to step up into a variety of roles to still accomplish the platoon or section objectives. As a whole, these exercises were a learning curve and it

gave the younger and less experienced soldiers and junior non-commissioned officers a new perspective on leadership in the field environment.

RCB 74 continued its trek down the Asian peninsula toward Singapore after the completion of activities at Pulada. During our time in Singapore the company completed another stage of its history tour and was able to conduct a variety of training pertinent on today's modern battlefield, including fighting over fortified objects (FOFO) and fighting in built up areas (FIBUA).

The Singapore history tour took us to the country war cemetery at Kranji as well as the Changi War Museum. We also visited the Battle Box, a bunker complex on Canning Hill where British and Australian commanders discussed and formulated the terms of surrender to the Japanese in World War Two. The company was granted leave for the next two days to explore the shopping opportunities and nightlife of Singapore.

Unfortunately FOFO training was cancelled due to an overpopulation of cobras in the trench complexes. Fortunately, FIBUA went ahead as planned and once again a significant learning curve was met by all whom participated. It covered method of entry and breaching techniques, tools and equipment together with lessons learnt by the British and Americans fighting in Iraq and Afghanistan. This proved challenging to all elements of the company as they negotiated their way through the multi-dimensional battle space. This was an excellent training activity and all hoped more could be emulated upon return to Australia. From all accounts, the relevance and uniqueness of the training in Singapore made it most rewarding.

On our trip back to Butterworth, we made a stop into Terendak Camp on the outskirts of Malacca where we were hosted by a Malaysian Airborne Artillery Regiment. The company held a memorial service at the Terendak Cemetery to commemorate some of Australia's fallen soldiers and visit the resting site of Major P.J. Badcoe VC, the first battery commander of 107th Field Battery. At the conclusion of the service we all headed back up the coast to Butterworth, after being away almost three weeks.

Next on the agenda and thoroughly deserved, was the much anticipated leave period. Each soldier was allowed ten days to spend where he pleased and RCB 74 was spread far and wide across South-East Asia. Langkawi Island and Kuala Lumpur in Malaysia; Bangkok, Phuket and Koh Samui in Thailand; Hanoi and Ho Chi Min City in Vietnam and Singapore Island to name a few. From the cheap and friendly cultures in Vietnam and Thailand, to the organisation and cleanliness of Singapore Island, each member had different stories to tell. Everybody had a great experience, both culturally and financially! The well timed leave period left everybody sufficiently recharged to see out the final three weeks in Malaysia.

Exercise Harangaroo proved to be the final fling the company would have in the jungles of Malaysia. Hosted by the 6th Royal Rangers the majority of the company deployed near the vicinity of Kuala Lumpur for a 130 km Battalion advance to contact. Acknowledging that the Malaysians approach some things in different ways than we would, the company shook out and approached the exercise with gusto. It was easier than most expected, and the 6th Royal Rangers were impressed with our professionalism and our adaptability to all tasks that were given to us as a rifle company.

The deployment was cut short due to a change in dates for an exercise with Thailand and RCB 75 came in early. At the end of July all the RCB made it back safely and returned to their parent units. As the battery now returns to its traditional role we assume the online responsibility as part of the Ready Battalion Group. No rest for the Bad Rammers.

Long Tan 40 Years On

*By Colonel A.R. Burke OAM (Retd)
Colonel Commandant Northern Region*

In South Vietnam on the afternoon of 18th August 1966, D Company of 6th Battalion Royal Australian Regiment (6RAR) was seeking an enemy force that had mortared Nui Dat, the Australians' base that morning. These 100 men encountered an estimated two Viet Cong (VC) battalions (estimated at 2500 men) whilst sweeping through a French rubber plantation east of the 1st Australian Task Force (1 ATF) base.

The leading 12 Australians were killed or wounded immediately and as the enemy began to encircle the company, torrential rain commenced. Forward Observer (FO) Captain M. (Morrie) Stanley RNZA in direct support, called for the field guns of his 161st Kiwi Battery and then the remainder of the 1st Field Regiment-the 103rd and 105th Australian Batteries-and the self-propelled mediums from Battery A of the 2nd/35th US Artillery Battalion.

In four hours, 3440 rounds fell on the attackers, some as close as 30 metres from D Company. The guns stopped only for the Iroquois helicopter crews to drop blanket-wrapped boxes of ammunition to the beleaguered infantrymen. Armoured Personnel Carrier (APC) borne reinforcements finally arrived and the VC fled leaving behind 245 dead. Some 500 were believed wounded and three were captured. The ANZAC forces suffered 18 killed and 24 wounded.

On the 105th Battery gun position in Nui Dat, the battery captain, Bruce Stark recalled, 'It was 'all hands to the pumps' serving the guns, unboxing ammunition and everyone was flat chat. Even had the cooks, RAEME and the detachment of 131st Divisional Locating Battery (their radar was out of action) involved.'

D Company was awarded the United States Presidential Unit Citation for its distinguished performance. The decorations and awards bestowed on Diggers directly involved in the battle under the Commonwealth system included the Military Cross for company commander Major H. A. (Harry) Smith, two Distinguished Conduct Medals and two Military Medals whilst seven members were Mentioned in Dispatches. On the Gunner side, Captain Stanley was appointed a Member of the Order of the British Empire for his gallantry whilst his radio operator, Lance Corporal W. G. (Willy) Walker was Mentioned in Dispatches. Flow-on decorations included Distinguished Service Orders for the Task Force commander and the 6 RAR commanding officer.

The rubber plantation in which this force stubbornly performed in the true spirit of ANZAC was called Long Tan. The casualties in this battle were the ANZACs' highest for any engagement during their entire time in Vietnam between 1965 and 1972 and this Battle of Long Tan, as it became known, therefore became symbolic of the Vietnam War.

Australia's involvement in this war was not popular with its people. The government's prophylactic approach to arresting the spread of Communism before it arrived on the nation's doorstep and the introduction of selective National Service were two particular policy pillars which the moratorium-motivated elements of the public attempted to knock down during some very emotive times in the late 1960s and early 70s.

Such public sentiment was also levelled at the soldiers returning from their 12-month tour of duty in Vietnam. Unlike their forefathers who had been feted as heroes whenever First and Second World War Diggers marched through the streets, the Vietnam veterans were rebuked, publicly ridiculed and even sustained buckets of red paint simulating blood thrown over them. National Servicemen returning to the civilian workforce after completing their obligation were, in many cases, belittled and verbally persecuted. Even members of the Returned & Services League shunned these new veterans as 'not being in a real war' and in numerous cases denied them membership of the League.

Not without just cause, the Vietnam veterans formed organisations of their own and, as their members rose in stature in the public arena, became a volatile and emotive voice seeking a 'fair go' for their

numbers. It was not until 25 years after Australia's involvement in Vietnam had ceased that public sentiment swung to reconciliation and a vast 'Welcome Home' parade was held in Sydney in 1987. Vietnam veterans became the flavour of the month to such an extent that the next year, following a recommendation of the Evatt Royal Commission Report into Agent Orange, Prime Minister Bob Hawke announced that the government recognised 18th August as 'a Vietnam Veterans' Day'.

With the passage of time, this day has become 'the' Vietnam Veterans' Day, a nationally-acknowledged date set aside for that war's veterans to march, conduct memorial services and have reunions. It is somewhat a shame, however, that there was such a feeling of guilt at the treatment of Vietnam veterans that they have become separated from Australia's one day of the year in which the service and sacrifice of all our nation's servicemen and women from all conflicts are traditionally remembered-ANZAC Day, 25th April.

On a similar note, it is unfortunate that the Battle of Long Tan veterans have had their day of commemoration gate-crashed by the remainder of the Vietnam veteran community. Long Tan Day is very precious to those who were involved in 1966-it is the day when they remember their mates and their time in that particular battle. On the other hand, why should the other 50 000 or so personnel who also served in Vietnam be side-tracked in the commemoration of their mates and their service to focus on a battle which, during their time in Vietnam was just one of many in which the supreme sacrifice was made by Australians?

Nevertheless, here we were 40 years on since the Battle of Long Tan and the nation was determined to remember it with a vengeance. The federal government splashed out millions of dollars to charter-fly veterans to Canberra for a 1200-strong function on 17th August and to conduct a day of commemorations and celebrations the next day. Whilst this appeared laudable, it detracted from the home of D Company, 6 RAR at Enoggera, Brisbane where the battalion and its associations had planned their own remembrance of their Diggers' sacrifice in 1966. Fortunately, it would appear that good reason overrode, or at least paralleled political grandstanding and some of the veterans from the Canberra shindigs were flown to Brisbane arriving in time for the afternoon and evening events at Enoggera on 18th August 2006.

So what happened in Brisbane? First of all, the 105th Medium Battery conducted a formal Long Tan Dinner at the ANZAC Officers' Mess, Enoggera on Wednesday 16 August. The battery extended an invitation to all previous local-resident battery commanders and members of the 105th Battery Association. It was wonderful to see the old veterans sitting amongst today's Gunners animatedly engaged in conversations and war stories. Throughout the evening a combo from the RAA Band, Brisbane provided musical interludes and members of the battery read cameos of events from that fateful day at Long Tan 40 years ago.

On the morning of 18th August, the Brisbane City Hall resounded to Adrian Cronauer's 'G-o-o-o-o-o-o-o-d Morning Vietnam' which heralded his breakfast speech to an auditorium full of Vietnam veterans and partners. This very traditional wake-up call from the 1960s set the scene for a day of nose to tail activities.

Next, there was the Vietnam Veterans' Day March. Many vets moved straight from the City Hall to the Irish pub diagonally opposite the forming up area and bonhomie and backslapping became the order of the day as they were joined by hundreds of their mates. There was no formal call to parade-the Army Band Brisbane struck up and marched off and the veterans just fell into eight abreast and into step and swung through the city with medals flashing in the noonday sun. They wheeled into ANZAC Square where a memorial service was held. Retired Brigadier Adrian D'Hage AM MC delivered a strong pacifist message reminding those present that our young men and women are still paying with their lives in Iraq, Afghanistan and Lebanon.

As the sombre notes of the Last Post faded away, Fihelly's Arms opposite the Shrine became the focus for the vets and their parched throats. This small pub cranked out beer and food at a very creditable rate, the crescendo of camaraderie reached a new height and one struggled to be heard. Nevertheless, all too soon it was time to catch a train from Central to the Enoggera Station and board a shuttle bus to Gallipoli Barracks to continue the celebrations.

Opening with the explosions, machine gun fire and bugle calls of a Vietnam-style battle, 6 RAR performed a splendid United Drum Head Service on Duncan Oval. Long Tan veterans from all regiments and corps were allocated priority seating and a busload of their mates from Canberra arrived from the airport just in time for the show. These included 105's first tour veterans BK Bruce Stark, FO Alan Hutchinson and LO Graeme Maughan. Understandably, there was hardly a dry eye as the ceremony climaxed with the old 6 RAR veterans filing proudly through the ranks of the battalion on parade. 105th Medium Battery and APCs held ground around the parade area.

This was followed by a 1960s-era band concert by the combined Army and RAA Bands Brisbane. A medley of toe-tapping Vietnam era songs by the band's vocal group and a nostalgic trumpet solo of Wonderful World were the precursors to one of master of ceremonies' Adrian Cronauer's longest ever 'G-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-o-d Morning V-i-i-i-i-etna-a-a-m' signature call. Then that great trooper, the beautiful and very long-legged Rhonda Burchmore wound the boys (and girls) up with a magnificent bracket of songs that brought the audience literally to their knees (and a couple of blokes in the front row actually to that position). With everyone was at fever pitch, the Joy Boys played in Col Joye who made sure everyone participated with tears of laughter as he swung into I Like Aeroplane Jelly . . . followed by We're Happy Little Vegemites . . . It was a wonderful evening which no one wanted to end.

But this was not the finale. During the weekend of 17-20 August, there was a 'bigger than Ben Hur' Vietnam Vets extravaganza at the Pine Rivers / Lawnton Showgrounds on Brisbane's northern outskirts. Campers and caravaners were well catered for and many grey Nomads took advantage of this facility. A children's concert on Saturday afternoon 19th August ran into another period concert that evening. Next day, tri-service display teams kept audience interest at a high pitch.

Finally, on the evening of Saturday, 19th August, the Long Tan Veterans' Association invited ten 105th Field Battery Long Tan veterans to their dinner in the Stradbroke Room, Holiday Inn Hotel, Roma Street, Brisbane. This suit and tie formal dress occasion included a night of entertainment which closed another chapter of Long Tan memories.

There is no doubt that the 40th anniversary of the Battle of Long Tan was a highlight of Vietnam veterans' lives for 2006. Much planning went into the activities in Brisbane and those who missed being part of them will regret it. Every participant was guaranteed a share of the enjoyment and camaraderie that can only be found when veterans get together to remember their mates and the good times of military service. Let there be no doubt that one should look forward with pleasurable anticipation to the 50th anniversary in ten years' time.

The Week Remembering the Battle of Long Tan

*By Bombardier T.E. Whittaker
Number One Alpha Gun, 105th Medium Battery, 1st Field Regiment*

Battle at Long Tan History

On the 17th August 1966 Delta Company 6th Battalion Royal Australian Regiment was tasked to clear the old rubber plantation at Long Tan where there was believed to be 30-40 Viet Cong from the D445 Battalion. At 1550 hours on 18th August it was reported that approximately six-eight Viet Cong had contacted Delta Company. 11 Platoon immediately opened fire, hitting one with the rest fleeing. The Battle of Long Tan had begun.

At approximately 1608 hours 11 Platoon were contacted with overwhelming machine gun fire. At this time the monsoonal rains broke with visibility reduced to 50 metres. With further contacts reported it soon became apparent that Delta Company was in a major fire fight.

Each Battery was adjusted until the nearest shells were landing approximately 25 metres from the forward troops. This was later described as 'a ring of artillery fire' which had been brought down around them. With the rain pouring down, and the battle being heard in the distance, the gunners from Regimental Headquarters were needed to bring resupplies of ammunition to the guns. With the fogging of the sights making the laying of the gun very difficult and a fierce cloud of cordite from the 3440 rounds fired making breathing very difficult, the gunners continued to fire with extreme accuracy.

The accuracy and response was a testimony to the manner in which the gunners served the guns under extreme and arduous conditions. 245 Viet Cong bodies were found in the battle area. It was apparent that the Viet Cong commanders had failed to appreciate the effectiveness of artillery fire and had paid dearly as a result. The Australians had lost 18 killed, 17 from Delta Company (including the young commander of 11 platoon) and one from 1st APC Squadron, and 24 wounded.

If not for the coordination of the 161st Field Battery, Royal New Zealand Artillery, 103rd and 105th Field Batteries Royal Australian Artillery, and the US Army 'A' 2/35 Medium Artillery Battery more lives would have been lost. This is why we celebrate the Battle of Long Tan, this year being the 40th anniversary.

Remembering Long Tan 40 Years On

Every day for a week prior saw 105th Medium Battery members on Duncan Oval rehearsing for 6th Battalion Royal Australian Regiment's Long Tan Parade on the 18th August 2006. The majority of 105th Medium Battery's members were attached to the companies of 6th Battalion Royal Australian Regiment and part of the main body of the parade. The remainder of the battery held ground with their guns. There was two M198 Medium Towed Howitzers in the far corners of the of the parade ground, and two L119 Howitzers situated centrally at the rear of the parade ground equally spaced beside the battery guide and the gun position officer.

The two L119's fired three rounds each during the parade. The interval between the two guns firing was approximately 10 seconds and was coordinated by the Band Master. The duration of the parade was approximately two hours. Some dignitaries who attended the parade were Land Commander Australia Major General M.A. Kelly, Major General Connolly (Retd), Assistant Minister for Defence and Minister for Veteran Affairs Bruce Billson. The newest member and mascot of the Battalion, 'Blue Dog' also attended. The parade consisted of the Colours marching on and off, forms, march past in slow and quick time. Overall and with the help of the 105th Medium Battery members the parade turned out to be quite successful.

Dinner With the Veterans of Long Tan

On the evening of 16th August 2006 105th Medium Battery hosted a formal dinner at the ANZAC Officers mess with members of the 105 Battery Association. The evening began with everybody taking a quick tour of the Battery history room lead by the veterans of the Association. The Battery then congregated at the mess for some pre dinner drinks and a bit of a chin wag with our invited guests.

Once the Battery sat down at the dinner table everybody enjoyed a delicious three course meal. Throughout the entire night different members of the Battery would stand up and give a bit of history about the battle at Long Tan. At one stage during the night we had the pleasure of Colonel Thompson addressing the mess and Colonel Thompson read a letter from Colonel Tedder, the man who commanded the battery during the battle at Long Tan.

Towards the end of the night all of the 105 Battery Association members were given an opportunity to address the mess and tell their own story from the battle. At the conclusion of dinner everybody had the chance to talk to our guests again at the bar over some cheese and crackers.

The night ended up being an enjoyable and knowledgeable experience. Overall the 105 Battery Association members really appreciated the night and the 105th Medium Battery members enjoyed their company.



Long Tan Cross in South Vietnam

The Air Observation Post

By Lieutenant Colonel Dick Knight (Retd)

The British Army used aerial observation to direct artillery fire and gather battlefield intelligence first in the Anglo Boer War by hydrogen balloons manned by Royal Engineer personnel. Second, in World War One when slow biplanes were employed by the Royal Flying Corps (later the Royal Air Force) flown by a pilot who directed artillery fire. An 'observer', (a misnomer), defended the aircraft with a Lewis gun. Improvements in methods of communications and refinements of technique resulted in a war-winning innovation. It continued this existence as an RAF Army Cooperation Group function, of which observance of artillery fire was but one practice. Post World War One several aircraft specifications from the Air Ministry were issued to British aircraft manufacturers, the last being the Westland Lysander.

The acceptance of the Air OP concept into the British Army was a long and difficult process. Post World War One through to the thirties the system being employed was manned and operated by the RAF. Artillery direction was conducted by morse code over a one-way wireless, the gun battery acknowledging by the use of coloured ground panels using a pre-arranged code. The pilots, some of whom were Army officers seconded to the RAF, would be briefed at a distant airfield, then take off, climb to operating height and contact the battery. This may have been adequate for the static trench warfare conditions obtaining at its inception but was hopelessly inadequate for mobile operations or for the employment of large concentrations of artillery fire units.

A solution proposed by Captain H.C. Bazeley, RA, the then Secretary of the Royal Artillery Flying Club at Larkhill, lay in locating light unarmed aircraft with two-way radio alongside gun areas. These aircraft should be flown by competent gunners using standard observation procedures. This rather radical proposal was submitted by Bazeley in a paper to the Royal Artillery Institution. It was passed on to the War Office in 1938 for consideration. It was surprising that persistent opposition came from former gunner officers of senior rank, some of whom had transferred to the RAF post war.

Proposals and persistent pressure eventually saw the War Office approach the Air Ministry but there was reluctance to alter the system. Fortunately Major General H.R.S. Massy, who was Deputy Chief of the General Staff and concerned with policy and development was supported by a very experienced World War One aviator, Colonel Richard Hilton, RA, Chief Instructor of the School of Artillery. Finally trials were conducted in December 1938 between 22 Army Cooperation Group (RAF) and Larkhill. These were encouraging and resulted in comparisons being made between several light aircraft and autogyros. In 1939 several Taylorcraft light aircraft were purchased for inclusion in the comparison and they appeared to be the best prospect. This was borne out when the RAF's Hawker Audex and Westland Lysander aircraft had to be withdrawn from operations because of huge losses sustained when the short-lived Flanders campaign began in May 1940. They were too fast in the former case and too heavy in the latter. Both were ineffective when required to execute the low level manoeuvres that were envisaged for air OP operations.

The first air OP flight equipped with Austers was attached to First Army for the campaign in North Africa (Operation 'Torch'), the BRA of which was an air OP enthusiast (Parham). The Flight and its record was outstanding. The Air OP was here to stay. Eventually 100 Taylorcraft were ordered by the RAF, production commencing in February 1942. These aircraft were to be known as Austers and 2150 were produced in nine Marks over the next 40 years.

The UK raised twelve air OP squadrons in World War Two and they served in North Africa, France, Sicily, Italy, Austria, Belgium, Holland, Germany, Burma, Java and Malaya. By VJ Day 594 pilots had been trained, 61 being killed while flying, 24 of these being non-operational casualties: 118 officers were decorated for bravery. Squadrons provided intimate and timely support to ground forces by controlling artillery fire on a daily basis, competently and efficiently with a remarkably low casualty rate despite occasional attention from time to time by ME108 and FW190 aircraft. Air OPs also controlled naval gunfire support during assault landings eg. the Normandy landings on 6th June 1944. Activities were

not confined to air OP tasks; they soon included reconnaissance, liaison, and even the tricky art of low level cable laying which must have been much more exciting than trailing wireless aerials.

The Royal Australian Air Force (RAAF) purchased the Mark III version in 1943 for service in the South West Pacific and these same aircraft continued in service in 1946 for 16 Air OP Flight at Canberra until replaced in 1959 by the Cessna 180. Aircraft deliveries to the RAAF commenced in September 1944 when the first of 56 Auster Mk IIIs arrived in the Australia by sea. The RAAF raised two air OP flights, numbers 16 and 17, employing RAAF pilots and RAA observers. 16 Air OP Flight was initially deployed to Lae in New Guinea and was a sub-unit of No 83 (Army Co-op) Wing RAAF. After fine tuning its capabilities it soon earned accolades for its work with 17th Australian Infantry Brigade. As well as providing artillery observation it transported urgent medical supplies and evacuated seriously wounded personnel. In late March 1945 the Flight moved to Morotai with 83 Wing and readied itself for the landing at Tarakan on 1st May. On 10th May it participated in the assault at Labuan where it supported 9th Australian Division. A detachment of the Flight then landed on Balikpapan on 1st July in support of 7th Australian Division.

The cessation of hostilities with Japan on 15th August increased the communication and courier sortie rate. One of these, flown from Balikpapan, located a large number of Indian POW and directed ground parties to them. On 20th September five Austers were flown from Labuan to Ranau to evacuate four of the six survivors of the infamous Sandakan to Ranau death march.

Orders to cease operations were received on 6th November 1945. 16 Air OP Flight returned to Australia by sea and air and established itself at RAAF Fairbairn, Canberra on 3rd December.

In the immediate Post World War Two period the establishment of any new endeavour ran counter to the rapid demobilisation and break up of the large wartime structure which had been developed by Australia since 1939. However a new aviation unit was raised as result of the outstanding success of the Air OP in the UK Army during World War two. The Australian Director Royal Artillery at the time, Brigadier L.G.H. Dyke, can take much of the credit for this development. Using the small Auster aircraft the Air OP brought intimate and immediate response to calls for fire support by flying from small rough strips (Advanced Landing Grounds - ALGs) often located in divisional rear areas and joining established artillery command nets as regular sub-stations. These ALGs were considered suitable if a jeep could be driven on them at 30 mph without undue discomfort! Unfortunately Australian forces never experienced this type of support as the last AIF division to leave North Africa, the 9th Division, was preparing to sail home to meet the Japanese thrust as the first UK air OP sqn (No 651 Sqn) deployed into Operation Torch (Casablanca) on 8th November 1942.

So it would not have surprised anyone when the Director Royal Artillery (DRA) in Army Headquarters gained approval in 1946 to train several RAA officers as Air OP pilots in the UK and in 1950 agreement was reached between the Chief of the General Staff and Chief of the Air Staff that RAA pilots should carry out air OP tasks which at that time were still the responsibility of the RAAF. These decisions saw a move towards the resurrection of army aviation in this country, the Australian Flying Corps having been disbanded after the war of 1914-1918, and the Army Cooperation function given to No 3 Squadron RAAF.

No one can detract from the enormous contribution made by Captain Ken Oram RAA to Australian Army Aviation - he was a pioneer aviator! Ken was the first of three RAA officers sent to the UK for air OP training between 1947 and 1951. As a freshly trained Qualified Flying Instructor (QFI) he trained the second officer, Peter Benjamin, on his air OP course. Peter returned to Australia after instructor training and became the first captain QFI of the newly established Air OP Flt, part of No3 Tactical Reconnaissance Squadron (Mustangs) then located at RAAF base Canberra. The third officer was Bill Slocombe, who was to become the first Army Commanding Officer of 16 Army Light Aircraft Squadron in 1964. The first two RAA officers to graduate from the 1/51 Air OP Course were B. C. Forward and B.T. Luscombe; they received their Air OP wings on 11 September 1951. 31 RAA officers were trained as Air OP pilots altogether as well as four Burmese Army Artillery officers.

The Air OP Course was an intense affair beginning with 60 hours with a civilian training school flying Auster J4s or the equivalent to obtain a Private Pilots Licence. This was no sinecure as the principle instructors for much of this training were two ex Luftwaffe pilots who relished the opportunity to train

young officers 'properly'. They were Joe Somerjay and Stan Birtus, both well known in aviation circles. Then to the Auster MkIII at the RAAF Base Canberra where the emphasis was on accurate flying, airmanship and tactical low flying. Two sessions totalling about five weeks were spent at the School of Artillery studying artillery tactics, communications and observation of fire. Pilots graduated at the 200 hour mark well prepared to practice their trade.

Five early Air OP pilots served in Korea with the UK's 1903 Indep Air OP Flight in 1st Commonwealth Division. They were Bill Slocombe, trained in the UK, Brian Forward, 1/51 Course, Bryan Luscombe, 1/51 Course KIA 5 June 1952, (Luscombe Army Airfield at Nui Dat was named after Bryan), Rex Deacon, 2/51 Course and Craig Beck, 3/52 Course.

1953 saw 3 Squadron disbanded and the Air OP Flight became part of the Base Squadron where it continued its instructional and support tasks. Instructors were trained in the UK and pilots remained with the unit for 6 or 12 months after graduation to fly support tasks for the Army. On 22nd September 1958 it was restored to its original title of 16 Air OP Flight.

In 1957 it was at last agreed in principle that the Army should have its own organic light aircraft. Also in 1957, 1st Army Aviation Company was raised at Bankstown, NSW. This unit flew chartered aircraft to supplement the support provided by 16 Air OP Flight. It was not until 1960 however that positive action was taken to implement the 1957 decision. On 1st December 1960 16 Army Light Aircraft Squadron was raised at Amberley with fixed and rotary wing aircraft limited to 4000 lbs all up weight (AUW). 1st Army Aviation Company provided 4 pilots, Alf Argent, Ross Harding, Charlie Miller and Bevan Smith. The Air OP connection provided 8 initially and 4 more subsequently. They were Harry Benson, Phil Calvert, George Constable (KIA in South Vietnam 23 May 1968), Brian Cooper; Rex Deacon, Laurie Doyle, Neil Harden, Graeme Hill-Smith, Dick Knight, Barry O'Neill, Brian Oxley and Bill Slocombe. Lieutenant Colonel Bill Slocombe became the first Army Commanding Officer of 16 ALAS in 1964.

Thus Air OP was the major source of trained pilots to 16 Army Lt Acft Sqn, eight of them transferring to Aviation Corps on 1st July 1968. It is note worthy that six out of seven officers commanding 161 (Independent) Reconnaissance Flight in South Vietnam were air OP gunners or ex Air OP gunners after 1st July 1968. Benson, Calvert, Constable, Doyle, Harden and Hill-Smith. Paul Lipscombe (then RAASC) was the exception.

Editor: After reading this article which was provided to him by the author, Lieutenant Colonel Ron Morris (Retd), also a graduate of the Kingsford Smith Flying Club at Bankstown advised that '... the only minor statement which does not accord my recollections, is that Messers Somerjay and Birtis were Luftwaffe pilots from world War Two. I always understood Joe Somerjay started his military time as a Hungarian Army officer who joined the Luftwaffe and flew Stukas, at least on the Russian front while Stan Birtis was a Polish Air Force officer who escaped after the fall of Poland in 1939 and then flew Spitfires with the RAF.'

Sound Ranging – It's 90 Years On

By Mr Kevin Browning, History Sub Committee Member

This year marks the 90th anniversary of the successful use of a method that would lend greatly to victory in World War I. Many have heard of the Manhattan Project, the development of the atom bomb, during World War II but few would have heard of sound ranging, its equivalent during World War I. As did the French and Germans, Britain employed physicists, mathematicians, astronomers, electrical engineers, etc, to perfect sound ranging as a means of finding the enemy artillery from the sound they made on firing.

Leading the British team was Australian born 'Willie' L. Bragg (later Sir Lawrence Bragg). Bragg was the best available expert and had been a member of Rutherford's research team at Manchester University. He recruited at least eight other British sound rangers from Rutherford's team including the New Zealander Lieutenant Ernest Marsden, an eminent physicist who was later knighted for his contribution to atomic physics.

The idea of locating enemy artillery using sound ranging had been considered before 1914 and by 1915 the French were experimenting on its potential. The British obtained some equipment from the French and set off on trying to perfect the concept. Basically sound ranging relied upon a number of microphones which were accurately surveyed and laid along the front of the battle area. As the sound from a gun firing reached each microphone (connected by cable to a central command post) it was recorded on photographic film using a machine (Einthoven electro-cartography) similar to recording heart beats. The time each sound arrived at each microphone could be determined and the direction of the source of the sound (the gun) could be measured and plotted and hence the location of the gun was determined.

The theory was fine but there were numerous problems in perfecting the technique. Apart from the great number of guns firing at the same time, it was unknown in 1915 that up to three sounds could be caused by the gun's firing. There was the gun wave (the gun firing), the shell wave (sound made when the shell travels through the air) and the burst wave (shell exploding). The microphones being used at the time could not distinguish between the three and normally the shell wave would cover the sound of the gun firing.

The solution came in stages. First, it was clear in a number of ways that although the gun report produced very little impression on the ear it was associated with large pressure changes. It rattled windows. Bragg continues 'In our billet at La Clytte, of the usual Belgium farmhouse type, the privy was in an annex opening out of the kitchen with no outer door or window and as all windows of the farm-house were hermetically closed one sat on the only aperture between interior and the outer air. The deafening shell wave of a six inch gun which fired over us left one's posture undisturbed, whereas the faint gun report had a marked lifting effect. A phenomenon which lead nearer to the solution was our noting in winter, in the tarred-paper hut in which we were quartered, the jet of cold air which came through each of the many rents in the wall when a gun report arrived.'

Having noted this phenomenon Bragg was fortunate to have among his team Corporal W. Tucker who had recently joined him from the Physics Department at Imperial College where he had been experimenting with the cooling of hot platinum wires by air current. Tucker placed a fine wire across a hole they had drilled in an ammunition box and connected it in a circuit. Bragg wrote 'I remember vividly the night we rigged it all up. A German field battery obligingly fired towards us, and when the film was developed there was a small sharp 'break' for the shell wave, followed by a quite characteristic and definite large break made by the gun report, which could be read with accuracy. It was a wonderful moment, the answer to prayer. It converted sound-ranging from a very doubtful proposition to a powerful practical method.'

Having solved the problem of clearly identifying the gun wave the next problem to be overcome was the difficulty of picking out the record of one German gun from the confused mass of data on the film. Australian Lieutenant Joseph Alexander Gray, another eminent physicist, solved this problem following

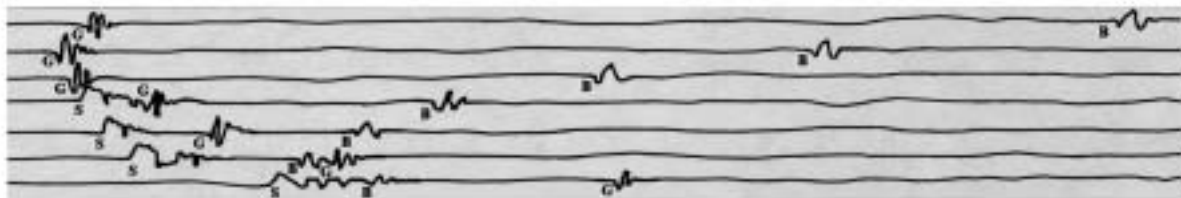
experiments with the layout of the microphones in the base. It was found that by placing them in a set pattern the breaks on the film appeared in a regular pattern which made them easier to identify. The final problem to be resolved was that of corrections to be made to the readings to allow for the variation in meteorological conditions and here both Gray and Tucker found a solution.

So by November 1916 Sound Ranging became a very important process that would lead to the ending of the war in November 1918. In doing so it was also responsible for the saving of many thousands of lives. By accurately locating the positions of enemy artillery it was possible to limit, if not stop them from firing during an attack. Although great mention is made of the effect of the machine gun on casualties during World War I it should be recognized that the greatest number of casualties was caused by the artillery.

From 'humble beginnings' in 1915 and the problems of having a section in the combat area responsible for training, operating and experimenting, by 1918 over 200 scientists and mathematicians had been drawn into the 30 sound ranging sections that had been formed.

Sound ranging during World War I was under the control of the Engineers but was principally an artillery tool. In the 1920's responsibility for sound ranging was passed to the artillery and when World War II began it was again deployed as part of 1st Survey Regiment (an artillery unit) as part of the 2nd AIF to North Africa. A very specialized unit its role was never properly appreciated by the people it was there to support and so the sound ranging component was not deployed in its correct role. Some of its members did visit the British sound ranging section at Tobruk where they observed and made plans of the comparator which was used for ranging our own artillery onto the enemy artillery the sound ranging had located. Upon return to Palestine the Australian's built a copy out of aircraft parts. This copy is on display at the Museum at North Fort.

When the unit returned to Australia after the entry of the Japanese to the war the work of the sound rangers came to a close as the terrain encountered in the Pacific Islands was not conducive to this process. The mountains caused great problems with the sound.



An example of a sound ranging 'film' showing the different types of sound occurring when a gun fires.
(S = shell wave, B = burst wave, G = gun wave)

During the Korean War a number of Australian Officers were attached to British artillery units and included amongst these were several who joined the British sound ranging troops. The technique of Sound Ranging was maintained in the Australian Army mainly through the CMF and in particular 130th Gun Locating Battery. In 1968 a sound ranging troop, 'C' Troop, was raised in 131st Divisional Locating Battery. Sound Ranging was deployed the 1st Australian Task Force (1 ATF) base at Nui Dat in South Vietnam in late 1968 to provide protection for the base and allow greater deployment of the mortar locating radars to provide protection for the fire support bases which were moving further a field from Nui Dat. The sound ranging became a dual role of the artillery survey section. Many of those that served in this section were National Servicemen with very high levels of education.

With the reduction of a threat from enemy mortars and rockets both the radars and sound ranging were withdrawn in 1970. Surveillance became the main interest for those remaining as well as the

continued task of artillery survey. Following Vietnam sound ranging became part of the Locating Batteries. Both 131 and 133 had troops as part of their organization. Within 131 it had its highs and lows as manpower issues impacted. The art was kept alive but gradually it began to fall into limbo and by 1978 it became necessary to conduct a special course to re-introduce the 'art'. About this time the supply of 'grids', the hot wire elements in the microphones, began to run short and a replacement system was needed. Despite the sound rangers clearly favouring the new British equipment it was decided to purchase the American GR-8 system.

The author would not be honest if he didn't consider cost as the resulting decider. The GR-8 was a World War II era equipment with limiting features that had been replaced years ago by the British on the equipment it was replacing. To say it was a step backwards would be a kind assessment. Great effort went into trying to upgrade it but with limited success. Eventually it was replaced with the TNS-10 system which was still far inferior to the British counterpart. Perhaps a good example would be to say that had we used the TNS-10 or GR-8 system at the time of Vietnam it may not and probably could not have been used in the manner we needed.

Today the concept of Sound Ranging remains a viable system under the right conditions but as we move into the 21st century it is doubtful whether the system as we knew it will be used, as the other options expand with technology. Providing that technology allows the location of enemy indirect fire equipments then no one can complain. But now 90 years on let us not forget what the system has given, especially its contribution during World War I.

Book Reviews

Monash: the outsider who won a war by Roland Perry

*Reviewed by Major General Tim Ford AO (Retd)
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General Sir John Monash, GCMG, KCB, VD was a remarkable engineer, academic, soldier and gunner, judged by many as one of the greatest ever Australians. But this book is more than just a fascinating portrait of the man behind the face on our \$A100 banknote and his outstanding military and engineering achievements; it is also an interesting account of many aspects of Australia and its development during his lifetime from 1865 to 1931.

The early chapters deal with Monash's formative years, outlining his schooling and academic achievements, his awakening as a young man in Melbourne society, and the struggle to establish himself through the grinding years of the depression as an innovative and enterprising mining and civil engineer, as well as a proficient legal advocate. It describes development of his innovative bridge and railway designs, the first use of reinforced concrete for construction, and the establishment of the Monier pipe company. Monash was no angel, and Perry does not avoid also outlining some of his personal foibles, his ambition or his love affairs.

The core of the biography concentrates on Monash's brilliant military career, from his commissioning as a lieutenant in North Melbourne Battery of the Militia Garrison Artillery in 1887, through the difficulties of brigade command at Gallipoli, to his outstanding successes as commander of the Australian Corps in the allied offensives in France in 1918. It describes the impact of his innovative thinking, technological experiences and study on his approach to the profession of arms. We see how he combined meticulous planning and attention

to detail, an ability to communicate clearly, and his humanity to get the very best from his soldiers and his staff. Of particular interest is Monash's outstanding success in the battle of Hamel in July 1918 through the use for the first time of combined aircraft, tanks and artillery.

Perry also highlights the petty jealousies that existed in Australia between the regular army and the militia, the competition for promotions, and the bigotry that existed against Monash with his Jewish religion and Prussian ancestry. Of particular interest, are the relationships that Monash developed with the Royal Family, with politicians in England and Australia, with allied commanders and with the media. He describes in some detail the long running campaign by Keith Murdoch, aided by official war correspondent Charles Bean, to influence the Australian Prime Minister Billy Hughes against Monash.

The final chapters record Monash's significant achievements after the war as Director-General of Repatriation and Demobilisation, as the Chairman of the State Electricity Commission of Victoria and as Vice-Chancellor of the University of Melbourne. They remind us that Monash was a real force behind the celebration of ANZAC Day as recognition of the sacrifice of Australians in war and the needs of returned soldiers. As Commander 4 Brigade, he initiated its very first commemoration at Tel el Kebir in Egypt on 25th April 1916, and in his latter years, he led the parades in Melbourne in 1925, 1926, 1927 and 1930. Monash was also a driving force for the construction of the Shrine of Remembrance in Melbourne.

As a gunner and an engineer, I found this biography to be a most fascinating and enjoyable read. It is written in an easily read style and includes well illustrated maps and photographs.



The Warrior of Kokoda (A Biography of Brigadier Arnold Potts) by Bill Edgar

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With the recent publicity and interest generated about Kokoda through the release of the film this year and various books including the one by Peter Fitzsimons a couple of years ago, I thought it timely to read and review the biography of Brigadier Arnold Potts, a 'legendary' West Australian Army Officer known as the 'Warrior of Kokoda'. It is a remarkable story of leadership, personal bravery and dogged determination in the face of adversity.

The story of Arnold Potts and the men of Maroubra Force is the focal part of the untold story not only of the battle along the Kokoda Track but the last ditch defence of Australia in those dark days of 1942. Unfortunately the treatment of Brigadier Potts, the members of 21st Brigade and the remainder of Maroubra Force by the allied high command and in particular the Australian Commander-in-Chief General Sir Thomas Blamey is not one of the proudest chapters in our military history.

If there is one person who could lay claim to being responsible for saving Australia in its hour of peril, it could be Brigadier Arnold Potts. Instead of receiving the accolades he deserved, for reasons of politics and buck passing to protect the career of higher ranking officers, he was sacked and sent home to Australia virtually as soon as the threat had passed. There was a dearth of decorations awarded to Potts and his men; there was one VC from three nominations and few other awards.

The author has woven his story of Arnold Potts life and in particular his war time experiences between his letters, in particular those to his wife. This is the strength of the book as use of these letters provides a very intimate view into the thinking, motivation and feelings of a very charismatic individual. A quality of Potts which

struck me throughout the book was his love and devotion to his wife - Doreen (Dawn).

The author claims the style and qualities of Arnold Potts as a soldier and military leader were developed on the 'football fields, on the long distance track, in the boarding house and classrooms of Guildford Grammar School.' He was a small man in stature reaching a height of 170 cm.

Whilst he had every right to be a bitter and disillusioned individual - he was not. Rather he was someone who continued to strive to do his best under any circumstances whether that was in the Army after Kokoda or on his farm and in the community after the war.

Arnold Potts military career was long and steeped in operational experience - he joined the 1st AIF as part of the 14th Reinforcements of the 16th Battalion on the 26th January 1915 aged 18. Potts joined the Battalion at Gallipoli on 28th July as a private and by October he was a sergeant. Shortly after the withdrawal from Gallipoli to Egypt Sergeant Potts was commissioned and promoted to Second Lieutenant and soon after Lieutenant. By mid 1916 he found himself on the Western Front in the vicinity of Ypres. In October Potts was awarded a Military Cross for his conduct as the commander of five stokes mortars during the fighting near Poziers in August 1916. Potts was soon promoted to Captain and appointed as a company commander. During the battle for Hamel, a name very familiar to Gunners - his luck ran out. On 6th July 1918 he was shot by a German sniper - the bullet passed through his chest missing only just missing his spine.

At the conclusion of the war he followed his dream of owning and operating a farm. He purchased 'Barrule' to the south east of Perth. It was here that he met the love of his life and future wife Doreen (Dawn) a teacher from Perth who he married in 1926. Between the wars the Potts family lived a pleasant but hard working rural life developing their property.

In 1938 Arnold Potts and many other 'Great War' veterans in the area of his property 'Barrule' supported the reformation of the 25th Light Horse Regiment as a militia unit. He was appointed as a company commander. In 1940 the 2/16th Battalion was re-raised as part of 7th Division with a 44 year

old Major Potts as one of its members. The effect of his presence was immediate, as there were soldiers who enlisted in the battalion simply because Major Potts was a member. His popularity amongst his subordinates was legendary. In the view of the author, if Potts had a leadership problem it was that 'as a soldier he thought too much of his men. He too often went into bat for them.'

In 1941 Major Potts found himself in the Middle East with his battalion as part of 21st Brigade. For his conduct he was awarded the DSO. An extract from his citation read ...'he has carried out the many tasks allotted to him with gallantry and persistence whilst under intense fire from the enemy.' He also received a MID whilst in Syria. Shortly after this he was promoted and assumed command of the 2/16th Battalion. In early 1942 Potts and his troops returned to Australia.

In April 1942 all Australian troops, not serving in Europe and Middle East theatres were assigned to General MacArthur and General Blamey was appointed as Commander-in-Chief. Soon after Lieutenant Colonel Potts was appointed Acting Commander 21st Brigade. He took the opportunity to train his charges well - the regime tough. An efficiency assessment and subsequent rating of the Australian Brigades in February 1942 saw the 21st Brigade rated 'A' whilst the 30th Brigade, nearest the enemy in New Guinea was an 'F', the lowest level. As a result some of the officers and men from Potts brigade were moved to the 30th Brigade, something he was not happy about.

In June 1942 members of 30th Brigade, known as Maroubra Force, were sent up the Kokoda Track by General Blamey to secure Kokoda and then stop a well equipped highly trained Japanese force of possibly up to some 10,000 troops landing at Buna and advancing on Port Moresby. MacArthur and Blamey would seem to have completely misjudged the extent of the Japanese landings at Buna

In August Potts and 21st Brigade deployed to New Guinea. When Potts arrived on the 7th August, Kokoda had fallen and the Japanese were rapidly advancing inland. The 39th Battalion was fighting a desperate battle for survival as they withdrew across the Owen Stanley Range along the 'Track'.

Lieutenant General Rowell Commander New Guinea Force stated 'We need a victory in the Pacific and a lot of poor bastards have got to get killed to provide it' with that the 21st Brigade were ordered to relieve 39th Battalion and retake Kokoda. Each Brigade member set off up the track with a rifle and 50 rounds, six days rations and a ground sheet. The logistic problems were just about to begin.

It is reported that Potts delivered an inspirational address ... 'Potts talked to everyone. With those perceptive, compassionate, piercing blue eyes, he was a great communicator. He saw the Kokoda situation with an absolutely clear perception'.

Potts assumed command of all Maroubra Force. He was continually pressed by his commanders to go on the offensive against over whelming odds and in appalling conditions. Potts was of the opinion the best approach was to fall back and carry out a delaying defence in order to delay the enemy and buy time for fresh brigades to be fed up the 'Track'. On hearing this suggestion MacArthur fumed at what he considered a humiliating retreat. Potts decided to engage the Japanese in a running war of attrition.

Potts slowly began to appreciate that the higher leadership had no idea of the conditions he and his men were confronting. In frustration he sent a message to his immediate commander, Major General Allen, which suggested that he or his Chief of Staff come forward and learn at first hand the situation. Instead a Captain liaison officer was sent. Potts constant withdrawing worried the generals in Port Moresby. Rowell and Allen started to believe the pressure was getting too much and they ordered him to give no further ground and to go on the offensive. By this stage the mental and physical capacities of Potts were stretched to maximum - he was wet, muddy and weary. Subsequently Potts was advised that the 25th Brigade had been delayed in relieving him and that three companies from a militia battalion had turned back due to the hard going. It was with this news that he decided he had to stand and fight. He delayed the enemy for three days although half his force had been lost. By this stage the Japanese were having their own resupply problems.

Brigadier Potts was ordered back to Port Moresby. Finally on 10th September he set off and reported to Allen on 11th September. Testament to the physical endurance of Potts, the trip took most healthy men two to three days; he had done it in one and a half days. Potts quickly sensed the attitude towards him was he was a failure. Allen had been made aware that if it had not been for Potts tactics and the stubbornness and endurance of his troops who blocked their path, the Japanese would have had reached Port Moresby by this stage.

The conversation between Allen and Potts highlighted the politics of the situation - Allen advised him that he was going to run into a lot of criticism. While Potts responded by recalling that the two of them had discussed a variety of contingencies before he went up the 'Track'. Rowell claimed Potts reports had been obscure and uninformative. MacArthur reported to Washington that 'The Australians had proved themselves unable to match the enemy in jungle fighting. Aggressive leadership was lacking.' As a result Blamey flew to New Guinea and spoke with Rowell, Allen and Potts.

Back in Australia MacArthur was still convinced that Potts had failed to hold back 1500 Japanese troops. He demanded the Australian Prime Minister send Blamey to New Guinea to take personal command. Many veterans recall that the Americans had a 'John Wayne' mentality in the South West Pacific and a Potts type fighting withdrawal did not sit well with them.

The total lack of understanding and failure to appreciate what was happening in New Guinea and what their troops were doing was highlighted by Mr Forde, the Minister for Army, when he addressed the members of 16th Brigade in September before they went up the 'Track' and encouraged their performance in their 'baptism of fire' - he failed to appreciate that most of the men were Middle East veterans.

Blamey visited Potts and pointed out that the Prime Minister and War Cabinet had instructed him that failures like Kokoda could not be tolerated - the men had shown something was lacking - and that he (Blamey) blamed the leaders - he further stated he was relieving Potts forth with. Potts was sent to Darwin immediately.

Potts wallowed in Australia for most of the remaining war years; however towards the end he was offered one more opportunity for an operational command - this time as part of the Bougainville campaign in late 1944 / 1945. He was awarded an MID in Bougainville

One positive aspect which came out of Kokoda was that planning procedures were amended. Before Kokoda the commanders decided what they were going to do. The general staff would issue orders etc and the logisticians would be told to comply. After Kokoda the general staff would consult the logisticians to see what was possible and then commanders were advised of the implications of their plan before it was finalised.

After the war Brigadier Potts returned to life on the farm and his beloved family. He was very active in community life and state affairs and was rewarded with an OBE in 1960. He made one attempt to run for Federal Parliament in 1948 but narrowly lost.

You often hear comment on an officer whose career has been operationally focused, that they have not or will not make a successful transition to the upper most levels of the military due to their lack of political savvy - this is sometimes the case. Rarely does the politics of the upper echelons directly impact on the career of an officer in combat - in the case of Potts, this is what happened.

As the last words to this story I will leave it to a comment on the dust cover of the book. 'Many veterans of the Kokoda Campaign regard this episode as a disgrace and attempt to cover up the inadequacies of the Allied High Command. Others do not agree and believe that Potts was merely transferred, for legitimate military reasons. The controversy remains.'



Unit & Sub Unit History

On the First AIF in France

‘What these men did, nothing can alter now. The good and the bad, the greatness and smallness of their story will stand. Whatever of glory it contains nothing now can lessen. It rises, as it will always rise, above the mists of ages, a monument to great -hearted men; and, for their nation, a possession for ever.’

C.E.W. Bean, The Official History of Australia in the War of 1914-1918, Volume 6, The Australian Imperial Force in France (Sydney, 1942), page 1096

7th Field Regiment

Formation

In 2006, the Regiment celebrates its 90th anniversary. The 7th Field Artillery Brigade, 3rd Division, AIF, was formed at the 'Warren', in the suburb of Marrickville, NSW, on 17th March 1916. The Brigade comprised of Brigade Headquarters, 25th, 26th, 27th and 28th Field Batterys (each of four 18 pounder guns) and 7th Field Brigade Ammunition Column. The Brigade disembarked HMAT Argyllshire at Portsmouth on the 11th May 1916 and commenced training at Larkhill on the Salisbury Plains. During this time 107th Howitzer Battery, with 4.5 inch howitzers, was allocated to 7th Field Artillery Brigade. The 28th Field Battery was allocated to the 23rd Field Artillery Brigade.

The Brigade disembarked at Le Havre, France on 31st December 1916. A further reorganisation of the Brigade occurred at Stazeele in January 1917 whereby the batterys were reformed and made into six gun batterys. This reorganisation was to economise on battery commanders, who were in short supply across the AIF.



Members of the 7th Brigade, Australian Field Artillery hauling one of their guns into position, to assist the 9th Infantry Brigade attack near Bray-sur-Somme

The Brigade first went into action on 17th January, 1917, and took part in the battles at Armentieres and Ploesgsteert. It was at the battle for Messines on 7th June 1917, that the Brigade first fired in support of its parent division, the 3rd Australian Division. Messines was to be the 3rd Division's first major attack and as part of the II ANZAC Corps of the Second Army, was allocated 120 x 18 pounders and 30 x 4.5 inch howitzers including those of the 7th Field Artillery Brigade. Towards the end of the war in 1918, the Brigade served with the 27th United States Division. On 3rd April 1919, the 7th and 8th Field Artillery Brigades were amalgamated before being removed from the order of battle on 18th August 1919.

Between Wars

On 31st March 1921, the 7th Australian Field Artillery Brigade was re-formed at Mount Street, North Sydney and comprised of Brigade Headquarters, 25th and 27th Batterys AFA and 107th (Howitzer) Battery. In 1929, the Brigade was moved into a depot at Warrane Road, Willoughby and was then known as 7th Field Brigade AFA. In 1937 the unit was renamed 7th Field Brigade Royal Australian Artillery (Militia). The 26th Field Battery was later raised in May 1939.



27 Fd Bty 7 FA Bde RAA (Militia)
Coming into action at Fingal Bay – Oct 1938

World War Two

Many individual members of the Brigade joined the AIF in the first twelve months of WWII, including 36 regimental officers and the medical officer. In April 1940, motorisation with impressed civilian vehicles and two Marmon Harrington gun tractors per battery was complete. The Brigade was now designated as the 7th Field Regiment, Royal Australian Artillery (Militia).

On 1st October 1941, 7th Field Regiment was allocated to full time duty. Late in 1941, the 18 pounders and the 4.5 inch howitzers were withdrawn and replaced with 25 pounders and 107th (H) Battery was disbanded. During 1941, the Regiment was used to defend the beaches at Narrabeen, Manly, Coogee and Wollongong.

In July 1942, the Regiment was transferred to Western Australia as part of the 2nd Division and became known as the 7th Australian Field Regiment (AIF). In October 1943, the Regiment was returned to Wallgrove, NSW, where it was disbanded as there were too many artillery units in existence for the operational requirements of the time. The members of the Regiment were allocated to other artillery units.

Post War World War Two

The 7th Field Regiment, Royal Australia Artillery, was reformed at Warrane Road, Willoughby, on 1st April 1948 with P and Q Battery's. In 1964, the Battery's were renamed 26th and 27th Field Batterys and the 25 pounders were replaced with 105mm L5 pack howitzers. The L5's were themselves withdrawn late in 1966, for use in Vietnam, and replaced by the return of 25 pounders.

During 1973, the 25 pounders were finally replaced by L5 howitzers and the Regiment was reorganised into 28th Field Battery at Willoughby and 5th Field Battery at Dee Why; and the 113th Light Anti-Aircraft Battery was attached at Adamstown. The Regiment was further reorganised in 1976 to 28th Field Battery at Dee Why, 113th Field Battery at Adamstown and Headquarters Battery at Willoughby.

7th Field Regiment Today

In 2006, the role of 7th Field Regiment is to provide specified individual and collective offensive support capabilities to support, sustain and reinforce Army's operational forces. The Regiment comprises of CSS Battery at Pymble, 28th Field Battery at Dee Why and 113th Field Battery at Adamstown and continues to proudly serve the nation on numerous domestic and operational tasks as it has done for the last 90 years. Current and former members of the Regiment have served in Timor Leste, Rifle Company Butterworth and supported Operations Relix, Sumatra Assist and Acolyte.



7th Field Regiment Today

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16th Field Battery

Early Colonisation and Self Government

The first artillery provided for the defence of Hobart during the early 1800's was manned by the British Infantry regiments stationed in the colony. In 1858, the Governor, Sir H.E. Fox-Young, urged Parliament of approach the Imperial Government with regard to having two companies of Royal Artillery personnel stationed in Hobart to man the Forte. However the request was turned down, although the Secretary of State offered to keep two hundred and sixty officers and men from line infantry regiments in the colony at the local Government's expense. This was refused by the Tasmanian Government because of the cost. A similar request in 1863 again met with a refusal. The war office's view was that the colonies should be defended by regular British Infantry, supported by local volunteer artillery. (In spite of this view, the fortes in Sydney were manned by the first battery, first brigade, Royal [Garrison] Artillery, from 1856 until 1870).

In December, 1859, the Hobart Town Artillery Company, a volunteer unit, was raised under the command of Captain A.F. Smith, 99th (Wiltshire) Regiment. In June, 1860, this was followed by a meeting of Launceston residents, held to form a Launceston Citizen's Volunteer Rifle Corps. At the meeting it was unanimously voted to change the name to the Launceston Volunteer Artillery Company. It was formed of three companies of fifty men each. The first Commanding Officer was Captain Home, the remainder of the officers being selected by the men. The Imperial Government withdrew its military support from the colonies in 1870, and in the same year, and indeed for the next eight years, the Tasmanian Government made no provision in its estimates for carrying on the Volunteer services of the colony. Both the Hobart Town Artillery and the Launceston Volunteer Artillery found themselves unable to maintain their previous establishments, and by 1875, the Hobart unit was ordered to be disbanded. By contrast however, the Launceston Volunteer Artillery had continued to train and fire salutes with a small nucleus of personnel, and in 1875, at the solicitation of the Governor, was allowed to remain in existence. As well as being equipped with field guns, the unit conducted training and firing practices on the fortress guns at Fort Cormiston on the Tamar River. The 'winter of neglect' continued until 1878, but the unit continued to serve without assistance from the Government of public.

In 1878, Parliament passed an Act authorising the re-raising of Volunteer units, although these were to be unpaid. The strength of the Launceston Volunteer Artillery was increased, and in Hobart the Southern Tasmanian Volunteer Artillery was raised under the command of Captain E.L. Crowther. The unit was originally raised as a field artillery unit, equipped with two B.L 12 pounder Howitzer's and two 32 pounder guns on field carriages, but from 1887 it began providing detachments for the guns in the Alexandra and Kangaroo Bluff batteries. The Launceston Volunteer Artillery was reorganised with a field section armed with two B.L 12 1/2 pounder guns, a siege section with two R.B.L 40 pounder jointed guns. By this time there were no fixed defences in Launceston, but during annual encampments held in Hobart, the Launceston Volunteer Artillery trained at the Kangaroo Bluff Battery. The two units continued serving on this basis until the reorganisation of the Australian Military Forces at Federation.

After Federation, the Australian Military Forces consisted of a small nucleus of Permanent Military Forces, partially paid militia, and unpaid volunteers. In Tasmania, only the permanent artillery were paid, the two field batteries and one garrison company raised after Federation remaining as Volunteers, which was a bone of contention for some years as Tasmania was virtually the only state not paying its part time units. The Tasmanian Permanent Artillery was reorganised as No 13 Company, Royal Australian Garrison Artillery in 1902, while No 1 Tasmanian Battery, Australian Field Artillery and a section of No 2 Tasmanian Battery, Australian Field Artillery (AFA) were formed from the Launceston Volunteer Artillery, and the second section of No 2 Tasmanian Battery, AFA and No 1 Tasmanian Company, Australian Garrison Artillery, was raised from the Southern Tasmanian Volunteer Artillery. No 1 Battery was still organised with a field, siege and mountain sections, but in 1905 the mountain

section was converted to a field section, and in 1908 the siege section was absorbed, leaving the battery with two field sections, each equipped with two Q.F 18 pounder Mk II guns. In the same year, the Launceston section of No 2 Battery was absorbed into No 1 Battery to allow the Hobart section to be expanded into a full battery.

In 1911, with the introduction of Universal Training, the Hobart unit became 15 Battery, AFA, and the Launceston unit, 16th Battery, AFA. These units were designated 40 Battery AFA and 41st Battery AFA respectively in 1914, and in 1916 were grouped under command of 14th Field Brigade AFA. With the formation of the first Australian Imperial Force (AIF) in 1914, these batteries were to provide many members of 9th Battery AFA, raised in Tasmania as part of 3rd Field Brigade AFA, which as part of the First Division trained in Egypt and then took part in the Gallipoli landings. At the evacuation of ANZAC, 9th Battery were the last Australian battery to report 'all clear', and their last gun was blown up because it could not be withdrawn. The brigade then served in France as a Corps artillery unit. A later unit, 17th Battery AFA, 6th (Army) Field Brigade, was also composed mainly of Tasmanian and served in France. The militia batteries of 14th Field Brigade were designated 9th and 17th Batteries respectively in 1919, although little opportunity for training had been available during the war years.

Compulsory training was reintroduced in 1921. The AIF had returned to Australia and been disbanded, and in 1920 it was decided to reorganise the militia into five infantry and two cavalry divisions based on the AIF system of organisation, with units adopting the designations, battle-honours, and traditions of the A.I.F units. 14th Field Brigade became 6th Field Brigade, AFA the batteries becoming 16th Battery, AFA in Launceston and 106th (How) Battery, AFA in Hobart. The batteries of the original 6th Field Brigade, AIF had been 16, 17, 18 and 106 Batteries. The reorganisation was completed in 1922. 106th (Howitzer) Battery, AFA had originally been raised for service in the First World War with 22nd Howitzer Brigade. When the field brigades were reorganised as three field batteries and one howitzer battery, 106th Battery was transferred to 6th Field Brigade in May, 1916. A large number of Tasmanians also served with this unit. When it was re-raised as a militia unit in 6 N.D it was equipped with four Q.F 4.5 inch howitzers. 16th Battery in Launceston was armed with four Q.F 18 pounder field guns. In 1927, 106th (Howitzer) Battery AFA won the Mount Schanck Trophy, which was awarded annually to the most efficient militia artillery battery in Australia. Despite the abolition of compulsory military training in 1929, the brigade managed to retain its numbers and continue training, despite the financial difficulties of the time.

Federation to World War Two

In 1936, the title of 'Royal' was granted to units of the Australian Artillery and Engineers by H.M King Edward V111, and the old militia titles of AGA and AFA were done away with. The unit was redesignated 6th Field Brigade, Royal Australian Artillery (Militia). War was declared in September, 1939, and in January 1940, the brigade moved to Brighton Camp for a three month period of compulsory training, including 'pneumatisation' of the batteries guns and equipment for vehicle towing. It appears that about this time, 16th Battery was redesignated 17th Battery, 16th Battery being re-raised as a unit of the Second AIF. The term 'brigade' was replaced by 'regiment' , and the unit was brought up to strength by the addition of 68 Battery later equipped with QF 25 pounder field gun, 6th Australian Field Regiment served in defence of mainland Australia against invasion, but saw no overseas service. By 1945 it had been disbanded and its personnel demobilised or used as reinforcements in other units.

16th Battery Second AIF

On the outbreak of war, Australia's army consisted of a small cadre of permanent troops and a large force of militia who were restricted to serving within Australia. Formation and raising of a Second AIF along the lines of the First AIF in 1914 was begun. It was originally proposed to only raise a division, with supporting troops, but this was later expanded to a Corps, with the resultant increase in artillery units. Formation of 2/8th Australian Army Field Regiment was authorised in early 1940, with 15th Battery to be raised in Victoria, and 16th Battery to be raised in Tasmania. 16th Battery was raised in May 1940, the first battery commander being Major A.A. Slater. It was organised as three troops of four guns and was equipped with Q.F 18 pounder guns and QF 4.5 inch howitzers. It left Australia with its parent regiment as part of Royal Australian Artillery I Australian Corps, arriving in Palestine in

November, 1940. Here it was equipped with 25 pounder guns, and one troop from each battery was grouped as 58th Battery, leaving the regiment organised as three eight-gun batteries. It then came under command of 6th Australian Division, and in April 1941 moved to Halfaya Pass on the Egyptian/Libyan border where it was to remain until the end of October or November, 1941. It then returned to Lebanon for training and rest, before joining 9th Australian Division at El Alamein in July, 1942.

It provided fire support for 9th Division units throughout the El Alamein battles, returning to Palestine in November, 1942, by now fully established as a unit of Royal Australian Artillery 9th Australian Division. The regiment returned to Australia in February, 1943, where after leave the unit was concentrated in Queensland for training. Here it was to remain for the next two years, as it was the large scale deployment of artillery. Consequently when the Ninth Division for support. The remainder of the divisional artillery rotted in Queensland until May, 1945, when I Australian Corps, of which 9th Division was part, conducted amphibious landings on Borneo. 2/8th Australian Field Regiment, including 16th Battery, took part in landings at Jabaun, Brunei, Miri and Seria, and was still in action against pocket of resistance a fortnight after the war had officially ended. Disbanding of the regiment began soon afterwards, time expired men returning to Australia on a roster basis. Disbandment was complete by early 1946.

Post-war to Present Day

With the formation of the Citizen's Military Forces in 1948, 6th Anti-Tank Regiment, RAA was raised in 6th Military District equipped with QF 17 pounder anti-tank guns. It comprised R.H.Q, H.Q Battery, the LAD, and 'P' Battery in Launceston, and 'Q' Battery in Hobart. By request the unit was converted to a field regiment in 1950, and equipped with 25 pounder guns. National Service, introduced in 1952, was abolished in 1959, resulting in a severe down turn in numbers, and in 1960 the regiment was redesignated 112th Field Battery, with A Troop in Hobart and B Troop in Launceston. The designation, '112', had first been carried by a battery of 24 Howitzer Brigade AFA during the First World War, this battery later serving with 12th Field Brigade AFA. It was reformed as a militia unit after the war and was disbanded during the Second World War without having seen overseas service. National Service was reintroduced in 1961, and in 1962, the regiment was re-raised with 'P' and 'Q' Batteries. In 1966 the policy of numbering batteries to carry on pre war traditions was reintroduced, 'P' Battery becoming 16th Field Battery, and 'Q' Battery being redesignated 112th Field Battery. (106th Field Battery had already been raised in 1965 as a Regular Army unit). In 1974, the regiment bid farewell to its 25 pounder guns and was re-equipped with the 105 mm M2A2 howitzer. However the Miller Report on the C.M.R in 1975 recommended that 6th Field Regiment be again reduced to battery strength.

16th Field Battery was placed on the Order of Battle of the Australian Military Forces in 1976, as an independent field battery of the Army Reserve as part of the 3rd Division, with the headquarters in Launceston and a detachment in Hobart. The battery has undergone a number of organisational changes till the present day. This has included the disbandment of the 3rd Division, the raising of 6th/13th Field Regiment as part of 2nd Divisional Artillery, the disbandment of 2nd Divisional Artillery and the placement of the Regiment under command of the 9th Brigade. In 1999 6th/13th Field Regiment was disbanded and 16th Field Battery once again has become an independent battery under the direct command of Headquarters 9th Brigade.

16th Field Battery has competed for the Mount Schanck Trophy of a number of occasions since its inception has most recently won the trophy in 2001.

Other Tasmanian Artillery Units

The predecessors of 16th Field Battery, the S.T.V.A and L.V.A also provided the nucleus of other artillery units.

- *Tasmanian Permanent Artillery*. This unit was raised in 1885, and on Federation was designated No 13 Company R.A.G.A. Many of its personnel served with the Australian Siege Brigade during World War One. After the war it became 7th Battery, R.A.G.A, manning Fort Nelson. In 1927 it was redesignated 7th Heavy Battery Royal Australian Artillery and in 1941, Direction Battery. It was disbanded in December 1944.

- *117 Heavy Battery Royal Australian Artillery (M)*. Raised as No 1 Tasmanian Company A.G.A from the S.T.V.A in 1902, it manned fixed defences in Hobart. In 1916 it became 13th Company, A.G.A; 17th Battery Australian Garrison Artillery in 1925; 17th Heavy Battery, A.G.A in 1927; and 17th Heavy Battery, R.A.A (M) in 1936. In 1939 it was designated 117th Heavy Battery, became Pierson Battery in 1941 and was disbanded in November, 1943.
- *13 Australian Heavy Anti-Aircraft Battery Royal Australian Artillery*. Raised in 1941 with 413 and 414 Heavy Anti-Aircraft Troops and 702 Light Anti-Aircraft Troop. It manned the 3.7 inch and 40mm ant-aircraft guns deployed for the defence of Hobart. Disbanded in December, 1944.
- *204 Australian Anti-Aircraft Searchlight Battery Royal Australian Artillery*. Raised as 59 A.A.S.L Battery in 1941 from a nucleus of Hobart Fortress Company, R.A.E, became 204 A.A.S.L Battery when manning taken over by female personnel of the A.W.A.S Disbanded in December, 1944.

7th Field Battery

7th Field Battery, 3rd Field Regiment is an Army Reserve Artillery unit located at Karrakatta, with an outlying depot in Rockingham. 7th Field Battery is currently commanded by Major Andrew Dunjey and the Battery Sergeant Major is Warrant Officer Class Two Ian Hodgkins. The Battery traces its lineage back to the Union Troop of Western Australian Volunteers, formed in the Western Australian colony on 19th July 1870.

At the outbreak of the First World War the Battery was retitled 8th Battery of the 3rd Field Brigade and departed for Egypt. At this time it was under the command of another Boer War veteran, Major Bessell-Brown, and formed part of the 1st Division Artillery under the command of a previous Battery Commander, Colonel Talbot Hobbs. 8th Battery was among the first to see action at Gallipoli, the Battery was withdrawn on 19th December 1915, reorganised and sent to France where it served with distinction throughout the war.

Between the wars there were two militia batteries in Western Australia and, in the Second World War, these combined to form 6th Battery of the 2/3rd Field Regiment. 6th Battery participated in the ill-fated Greece and Crete campaigns and saw much action, usually in support of fellow West Australians in the 2/11th Battalion.

After the war, in 1948, 3rd Field Regiment was re-raised with P and Q Batteries, which were renamed 7th and 8th Batteries in 1965. In 1975 the unit was reduced to its current composition of one field battery designated the 7th Field Battery, 3rd Field Regiment. In 2006, the Battery consists of a headquarters element, a command post, six 105mm M2A2 Howitzer detachments and other supporting elements, and trains hard to maintain a high standard of artillery skills in support of the units of 13th Brigade. The battery was awarded the Mount Schanck Challenge Trophy in 2005 for the best Reserve Artillery Battery in Australia.

The Battery is very much involved in supporting the civil community and annually fires salutes to commemorate Australia Day and the Queen's Birthday and also regularly supports Federation Guard salutes in Canberra. The Battery sponsors both 56th and 59th Regional Cadet Units. The unit also has close links with the Royal Australian Artillery Historical Society of WA (RAAHS).

Associations & Organisations

Major General Sir William Throsby Bridges

Major General Sir William Throsby Bridges to Colonel Charles Ryan after being mortally wounded at Gallipoli.

'Anyway, I have commanded an Australian division for nine months.'

*C.D. Coulthard-Clark,
A Heritage of Spirit (Melbourne, 1979), page 175*

Associations & Organisations Contact List

RAA Regimental Fund

SO2 HOR School of Artillery
Bridges Barracks, Puckapunyal, VIC 3662

RAA Historical Company & North Fort Museum

PO Box 1042, Manly, NSW 1655
Phone: (02) 9976 6102 or (02) 9976 3855
Email: northfort@ozemail.com.au
Website: www.northfort.org.au
[Membership Form See Page 166]

Cannonball (Official Journal)

RAA Historical Society WA (Inc)

President - Bruce Campbell
Phone: (08) 9221 2494 (Bus)
Secretary - Tom Arnautovic, OAM
P O Box 881, Claremont, WA 6910
Email: info@artillerywa.org.au
Phone: 0419 923 584 (mob)
Website: www.artillerywa.org.au

Take Post (Quarterly Newsletter)

4 Field Regiment (Vietnam) Association

R.J. (Gabby) Hayes
36 Ravel Street, Burpengary, QLD 4505
Email: gabbyhayes@ozemail.com.au
Email: pjbruce8@bigpond.net.au

7 Field Regiment Association

President - Bob Corbett
Email: robcorbett@bigpond.com
Secretary - John Balfour
Email: balfourj@rba.gov.au
Correspondence to:
P O Box 206
Frenchs Forest NSW 2086
Website: 7fd-regt-raa-association.com

10 Medium Regiment Association Inc

P O Box 1915, Geelong, VIC 3220

The Big Gun (Newsletter)

12 Field Regiment Association

To Be Advised. Inquiries to the Editor.

The Tannoy (Quarterly Newsletter)

23 Field Regiment Association

President - Graham Williams
Phone: (02) 4294 2039
Email: eggs_e@optusnet.com.au
Secretary - Deenel Park
15 Boundary Road, Oatley, NSW 2223
Phone: (02) 9570 1079
Email: the23fdassoc@yahoo.com.au
Website: www.23fd-regt-raa-association.org

A Field Battery Association Inc

President - Ron (Tex) Bassan
Secretary - Clare Bassan
6 Harveys Road,
Beaconsfield, QLD 4740
Email: texbassan@yahoo.com.au
Email: bonniebassan@yahoo.co.uk
Phone: (07) 4942 5433
[Membership Form See Page 163]

A Field Battery National Newsletter

101 Battery

President - Trevor Madeley
Phone: (07) 4526 4253
Email: madeley_101@bigpond.com
Secretary - Jim Booth
104 Edinburgh Drive, Mt. Hallen QLD 4312
Phone: 07 5424 6506
Mob: 0417 731 393
Email: jbooth1@bordnet.com.au

101 Battery (Malaya 1959-1961)

President - David Troedel
36 Murphys Creek Road, Blue Mountain Heights,
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102 Battery

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103 Battery

Doug Heazlewood
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104 Battery

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105 Battery

President - Ian James
Email: ginaian@bigpond.com
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Email: gwest105@tpg.com.au
[Membership Form See Page 165]

Tiger Rag (Newsletter)

Editor - Arthur Burke
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Email: arthurburke@bigpond.com
Website: www.ballaratgenealogy.org.au/105/

106 Battery

Peter J. Tibbett
PO Box 1283, Gympie, QLD 4570
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107 Battery

President - Warren D. Feakes
Phone: (02) 6231 8369
Email: wfeakes@netspeed.com.au
Secretary - Hilton Lenard
Email: hiltonlenard@hotmail.com
Correspondence to: 107 Field Battery RAA
Association, P O Box 199, Erindale ACT 2903

Ram - Ramblings (Newsletter)

Editor - Barry Pearce
Website: www.107fdbty.com

108 Battery

John Wells
PO Box 407, Beaconsfield, VIC 3807
Phone: (03) 5944 3157 (H)
Email: jcwells2@ozemail.com.au

The Journal With No Name (Newsletter)

RAA Association (QLD) Inc

President - Brian Nally
Secretary - Andrew Fleming
Treasurer - WO2 Gordon Mitchell
JOSS-SQ BLDG F26, Gallipoli Barracks, Enoggera,
QLD 4051
Phone: (07) 3332 5195
Email: gordon.mitchell1@defence.gov.au
[Membership Form See Page 157]
Gunline (Newsletter)

RAA Association (NTH QLD)

President - John Wilson
Phone: (07) 472 34158
Email: JohnWilson1@bigpond.com
Secretary - Ken Borgges
18 Bainbridge Street, Heatley, QLD 4814
Phone: (07) 477 96430
Email: kenborgges@bigpond.com
Gunners Gossip (Newsletter)
Email: kenborgges@bigpond.com
Website: www.st.net.au/~dunn/raa-nqld.htm

RAA Association (NSW) Inc

President - Don Tait
Email: dmt63@ozemail.com.au
Secretary - Bill Vanderveer
GPO Box 576, Sydney, NSW 2001
[Membership Form See Page 158]

'Gunfire' (Magazine)

Editor - P O Box 1034, West Cessnock, NSW 2325
Email: gunfire@hn.ozemail.com.au

RAA Association (NSW) Newcastle Sub-Branch

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PO Box 918, Charlestown, NSW 2290
Email: secretary@raaanewcastle.com
Website: www.raaanewcastle.com

RAA Association (ACT)

Secretary - Rob Crawford
Phone: (02) 6266 0358
Email: rob.crawford@defence.gov.au
[Membership Form See Page 159]

Shot Over (Newsletter)

RAA Association (VIC) Inc

Secretary - Major R.A.W. Smith RFD
101 Warralong Avenue, Greensborough, VIC 3088

'*Cascabel*' (Magazine)

The Editor 'Cascabel'
35 Hornsby Drive, Langwarrin, VIC 3910
Email: jlpritchard@bigpond.com

RAA Association (SA)

President - Geoff Laurie
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Email: gunnersa@chariot.net.au

RAA Association (WA) Inc

President - Bruce Campbell
Phone: (08) 9221 2494 (Bus)
Vice-president - Peter Rowles
Email: rowles@highway1.com.au
Secretary - Tom Arnautovic, OAM
P O Box 881, Claremont, WA 6910
Email: info@artillerywa.org.au
Phone: 0419 923 584 (mob)
Website: www.artillerywa.org.au

Artillery WA (On-line Newsletter)

RAA Association (NT)

The Secretary
GPO Box 3220, Darwin, NT 0801

RAA Association (TAS) Inc

President - Barry Bastick, RFD
Honorary Secretary - Norm Andrews, OAM
Tara Room, 24 Robin Street, Newstead, TAS 7250
Email: forfar@gmail.com
<http://tasartillery.o-f.com>
[Membership Form See Page 160]

The Artillery News (Newsletter)

Editor - Graeme Petterwood
P O Box 10, Ravenswood, TAS 7250
Email: pwood@vision.net.au

Locating Artillery Association

President - Major Allan Harrison, RFD
PO Box W43, Abbotsford, NSW 2046
Phone: (02) 9719 2252 or 0412 021665 (M)
Email: allan@harrisonsolution.com.au
Vice President - Major Joe Kaplun
Phone: (02) 9339 3000
Email: joe.kaplun@defence.gov.au
Secretary - Diane Wood
6 Apex Avenue, Picnic Point, NSW 2213
Email: diane.wood@defence.gov.au
Website: www.locatingartillery.org
[Membership Form See Page 162]

18 Light Anti-Aircraft Regiment Association

President - Bevan Lennie
PO Box 536, Gympie NSW 2227
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[Membership Form See Page 161]

**41 Battery / 11 Field Regiment
RAA Association Inc**

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25 Manakin Ave, Burleigh Waters QLD 4220
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Email: graemefitz@dodo.com.au
[Membership Form See Page 164]

Gunner Ear (Newsletter)

Fort Lytton Historical Association Inc

President - Maurice McGuire, OAM
P O Box 293, Wynnum QLD 4178
Phone: (07) 3399 3198
Email: guides@bigpond.net.au

Gunner's Net International

Website: <http://gunnersnet.com>

The Guns (On-line Newsletter)

Website: <http://gunnersnet.com/theguns.html>

RA Association

Website: www.raa.uk.com

The Gunner Magazine (RA Publication)

Website: www.gunnermag.com

RAA Unit Websites

Royal Regiment of Australian Artillery and other unit websites maybe accessed via the Australian Army website.

<http://www.defence.gov.au/army/RRAA>

<http://intranet.defence.gov.au/armyweb/Sites/RRAA>

Editors Note: If you are aware of more current information than that published, could you advise me. I would appreciate the contact details of any other *Gunner* organisation not listed. To keep current on what is happening around the *Gunner* community, it is requested that units and associations forward me copies of newsletters.

Benefactors of the Royal Australian Artillery Regimental Fund

Correct as at 8th September 2006

LTGEN D.M. Mueller

MAJGEN J.E. Barry

MAJGEN P.J. Dunn

MAJGEN T.R. Ford *(see note)*

MAJGEN S.N. Gower

MAJGEN B.A. Power

MAJGEN J.P. Stevens

MAJGEN J.D. Stevenson *(see note)*

MAJGEN J. Whitelaw *(see note)*

BRIG M.G. Boyle

BRIG J.R. Cox

BRIG M.P. Crane

BRIG G.P. Fogarty

BRIG R.K. Fullford *(see note)*

BRIG A.G. Hanson

BRIG J.A.R. Jansen

BRIG P.R. Kilpatrick

BRIG R.A. Lawler

BRIG R.Q. Macarthur- Stranham

BRIG T.J. McKenna

BRIG K.B.J. Mellor

BRIG D. I. Perry

BRIG K.V. Rossi

BRIG G.T. Salmon

BRIG J.R. Salmon

BRIG W.M. Silverstone

BRIG G.B. Standish

BRIG R.Q. Stanham

BRIG R.A. Sunderland

BRIG P.B. Symon

BRIG P.J. Tys

BRIG A.G. Warner

BRIG V.H. Williams

BRIG P.D. Winter

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COL R.V. Brown

COL D.L. Byrne

COL D.P. Coghlan

COL M.C. Crawford

COL S.T. Goltz

COL E.D. Hirst

COL J.H. Humphrey

COL C.B.J. Hogan

COL W.T. Kendall

COL J.C. Kirkwood

COL M.G. Lovell

COL I.A. Lynch

COL R.M. Manton

COL R.B. Mitchell

COL D. J. Murray

COL P.R. Patmore

COL J.C. Platt

COL G.M. Salom

COL B.J. Stark

COL D.M. Tait

COL A.D. Watt

LTCOL R.M. Baguley

LTCOL D.N. Brook

LTCOL A.R. Burke

LTCOL M.A. Cameron

LTCOL J.H. Catchlove
 LTCOL I.D.S. Caverswall
 LTCOL S.E. Clingan
 LTCOL R.J. Crawford
 LTCOL L.D. Ensor
 LTCOL E.P.M. Esmonde
 LTCOL J. Findlay
 LTCOL G.W. Finney (see note)
 LTCOL R.J. Foster
 LTCOL R.G. Gibson
 LTCOL C. D. Furini
 LTCOL K.R. Hall
 LTCOL M. Harvey (RNZA)
 LTCOL P.L. Hodge
 LTCOL M.J. Kingsford
 LTCOL S.F. Landherr
 LTCOL K.W. McKenzie
 LTCOL D.M. Murphy
 LTCOL S.W. Nicolls
 LTCOL P.L. Overstead
 LTCOL A.A. Plant
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 LTCOL G.F.B. Rickards
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 WO1 M.A. Pasteur
 WO1 R.J. Thompson
 WO2 A. Palovich

Deceased Benefactors

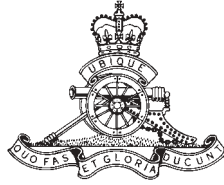
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 MAJGEN G.D. Carter
 MAJGEN P. Falkland
 MAJGEN R. G. Fay
 LTCOL R.H.E. Harvey
 LTCOL G.W. Tippetts

Note:

MAJGEN J.D. Stevenson, MAJGEN J. Whitelaw, MAJGEN T.R. Ford, BRIG R.K. Fullford and LTCOL G.W. Finney have paid two life subscriptions.

Associations

RAA Association (Tasmania)
 RAA Association (North Queensland)
 105th Field Battery Association
 Fort Lytton Historical Association
 Royal Australian Artillery Retired Officers of South East Queensland



**RAA Regimental Fund
ANNUAL CONTRIBUTION**

Name Unit/Association/Individual		BLOCK letters please
Address		
		Postcode
<input type="checkbox"/> Please find enclosed my/our contribution to the RAA Regiment Fund <input type="checkbox"/> A receipt is required		
Please return to: SO2 HOR, School of Artillery, Bridges Barracks, PUCKAPUNYAL VIC 3662		
<p><i>Life Subscription of \$120</i> means you will never be asked to subscribe again and your name will be published in the list of Benefactors.</p>		

Royal Australian Artillery National Museum

By Major John Gallagher, Museum Manager

Introduction

On 1st September 2005 I was posted to the Royal Australian Artillery National Museum, North Fort as the Museum Manager to replace Major Mike Lawrence who has been posted to Headquarter Army History Unit.

The excellent Autumn 2005 Edition of the Liaison Letter provided a comprehensive report on the current organisation, role and tasks of the Museum. Major Mike Lawrence, my predecessor, and the Museum Curator/Administrator, Warrant Officer Class Two Steve Crawford, have done sterling work with very few resources in developing the Royal Australian Artillery National Museum (RAANM) into a first class Museum within the Army History Unit Network of Museums. These two Gunners have been capably supported in this task by their Army Reserve staff, members of the RAA Historical Company, the RAA Association(NSW), the Locating Artillery Association, 18th Light Anti-Aircraft Regiment Association, the Coastal Artillery Association, and many other kindred Gunner organisations, Regular and Reserve Artillery Units, and individual gunners and volunteers, both serving and retired.

Although I am not a member of 'the brotherhood of Gunners,' having served in the Royal Australian Corps of Transport for most of my twenty plus years in uniform, I have been made feel most welcome at North Fort and by all other Gunners I have met from the rank of major general down. Perhaps I have a little Artillery blood in my veins as my father served as a Gunner in World War Two, and a number of uncles served as Gunners during both World Wars.

Retirement of Warrant Officer Class Two Steve Crawford

After almost fourteen years of close association with the RAANM and thirty-four years Regular Army service, our Curator/Administrator Warrant Officer Class Two Steve Crawford is transferring to the Army Reserve in July this year. He will continue to serve with the Army History Unit in South/Eastern Queensland in a Reserve capacity. Warrant Officer Crawford has been a tower of strength at North Fort for many years and is a great source of guidance and advice on all matters pertaining to Artillery history and heritage, rugby and soldiering in general. Steve's enthusiasm for, and knowledge of, all facets of the RAANM have helped the Museum acquire and develop Australia's most comprehensive collection of Australian Artillery historical guns, equipment and ephemera. As well Steve has largely been responsible for maintaining and enhancing the historical site of North Fort with its World War Two gun positions and system of tunnels and command posts.

I am sure all Gunners will join me in wishing Steve and his wife Teresa a long and happy retirement in Queensland and thank them both for their outstanding contribution to the preservation of Artillery heritage over many years at the Royal Australian Artillery National Museum, North Fort. Warrant Officer Class Two Peter Armstrong who is currently posted to P&EE, Port Wakefield, will be posted to the RAANM to replace Warrant Officer Crawford from 1st July 2006.

Visitors to North Fort

Recent visitors to the Museum have included the Chief of Army, the Commander 2nd Division and a number of well known politicians. A detachment from 'A' Battery did excellent work at the Museum via Exercise Heritage Assist late last year and we hope to organise a similar visit by 53rd Independent Battery later this year. Community, Ex -Service and School groups continue to visit the Museum on a regular basis with our Military History Education Program being very popular with local schools.

Development of the Museum

Excellent support from CSIG combined with the work of a team of dedicated military staff and volunteers organised and led by Warrant Officer Steve Crawford has resulted in significant improvements to the facilities and infrastructure of the Museum. The two large display hangars are being completely refurbished and this project is well advanced. Other long term projects to improve the Museum's facilities are coming to fruition and a visit is strongly recommended to all Gunners to see and enjoy the improvements to exhibitions and facilities. We also have the capability of mounting travelling and specialist Artillery exhibitions to fulfil particular needs.

The Gunners' Exhibition featuring a cavalcade guns and displays from the colonial period through to the modern era is progressing well under the guidance of well known retired Gunner Kevin Browning. This exhibition will also feature the stories of notable Gunners from each era. We plan to feature one Gunner at a time in each era from a bank of about four to allow for rotation of displays. If any of your readers have suggestions for Gunners we could feature in this exhibition please forward them to northfort@ozemail.com.au

I would strongly recommend to all Gunners they visit the Museum in the near future. As well we are always happy to receive items of Gunner history to add to the Museum's collection. Volunteers are also very welcome at North Fort. We have around 70 active volunteers ranging from guides to tradesmen and librarians. These volunteers are critical to the continued success of the Museum and do excellent work in gun restoration and exhibition preparation.

I look forward to visiting the School of Artillery later this year and meeting more of the members of the Royal Regiment of Australian Artillery. I can be contacted on 0418644933.

Ubique

Additional Museum Information

By Mr Kevin Browning

Gunners Display

A 'Gunners Display' designed to show the public what life was like for a Gunner since 1788 is presently under construction and has been assisted with a \$20,000 grant from Department of Veterans' Affairs for the Vietnam component.

Preserving Current Operations for History

We would also like to remind the serving Gunners that your very busy life is part of Gunner history and that it is essential we record and obtain information now to prevent the difficulties of the past in identifying equipments with special stories to tell and to have items which show the full stories. Photos, videos are important but also the personal equipments.

As a result of the photograph of Major Tony Thwaites appearing on the cover of the Spring 2004 edition of the Liaison Letter we contacted him and requested he donate his uniform to the Collection. We are grateful for his generosity.

History Sub-Committee Inaugural Meeting Report (M1)

*By Major General T.R. Ford AO (Retd)
Representative Colonel Commandant*

The first meeting of the RAA Historical Sub Committee (HSC) was held at Randwick Barracks on 18th June 2006. It was my pleasure to open the meeting. The chairman (Major General John Whitelaw) spoke on establishing strong foundations, the links between the HSC, the Colonels Commandant and RAA units and the Gunner community. He acknowledged that while there may be gaps and duplications among and within the 26 projects so far identified, he was confident these would be overcome by effectively working together. He saw cooperation among the extended Gunner family as essential to maintaining progress on a wide front.

The meeting discussed each project and 'sealed' the project definitions for 15 of them, with some amendments. Of particular note were strong support for Project 3 - Australia's Forts and Batteries and the welcome New South Wales Heritage funding for that states element of Project 4 - The National Artillery Register.

Some progress was made in assigning responsibility for producing definitions for a further eight of the identified projects. The need to ensure historical coverage of a range of Gunner activities so far not included, such as naval bombardment, was considered and will be kept on an active list for future attention.

Financial support for HSC activities was discussed. This is a matter which will be coordinated by the Regimental Committee. The possibilities of gaining grants for historical activities (such as the New South Wales Heritage grant for Project 4) should be borne in mind and submissions made whenever possible.

The need for a reliable repository and archive facility to encourage donation and loan of Gunner family personal papers and other items preserving Gunner history was discussed. For the time being it was agreed that the National Artillery Museum should accept this role. Other subjects considered were communications within the Gunner community, websites and publicity. These aspects are largely within the purview of the Regimental Committee and Head of Regiment. The HSC is to produce regular 'updates', such as this, for circulation on the Gunner net. The need for assistance with a number of projects was noted. Publicity about the work of the HSC will show these deficiencies and hopefully encourage those Gunners with an interest to become involved.

A session on 'other business' concluded the agenda and the meeting. It can be confidently stated that much was achieved. I understand that the HSC will shortly produce and promulgate through the Gunner network the list of projects and their present status. Comment and questions will be welcome and should in the first instance, be directed to SO2 HOR, Captain Thomas Adams, School of Artillery, Bridges Barracks, Puckapunyal, Victoria 3662, Telephone 03 5735 6465, email Thomas.Adams@defence.gov.au.



Association Reports

RAA Association Victoria

*President Major Neil Hamer RFD (Retd)
Extracted from 'Cascabel' July 2006*

The annual general meeting will be held at the East Malvern RSL on Thursday 9th November 2006. It is intended to change our annual church parade from the first to the second Sunday in February to better accommodate the requirements of 2nd/10th Field Regiment. It was also decided to hold the parade at Saint George's church, next door to the depot. This will enable the Regiment to more readily support the parade, and for us to use the depot for a family lunch.

It has been suggested that the Association could organise a group of people who are interested in 'restoring' some of the various types of equipment displayed outside various RSL's and other places. It was noticed that the condition of some of these displays needed a little 'tender loving care'. If any members, or others, are interested in donating some of their time to this cause could you please contact the president on 03 9702 2100.

On 6th May we travelled to Seymour and Puckapunyal. The plaque at the Light Horse Memorial Park, at old site 17 was unveiled and Major Merv Taggart RFD, ED (Retd) gave a very interesting and well researched address to the gathering. We then moved across to Puckapunyal where we were welcomed by Lieutenant Colonel Dean Ashton and the members of his Regiment to watch live firing from a gun position. I would like to thank Lieutenant Colonel Ashton and the Regiment very sincerely for making this visit possible.

The Shrine of Remembrance has made a special request to the Corps that a large Artillery flag be made available for them to fly on official Artillery occasions. The flag will be 4.6 m x 2.3 m. The cost of such a flag is about \$2,500. Brigadier Perry (Colonel Commandant Southern Region) has taken on the task of organising this venture and is asking for donations to help defray the cost. The Association committee has decided to start donations with a \$500 grant. If any member would like to contribute, donations can be sent to the treasurer, Staff Sergeant Reg Morrell 03 9562 9552. The flag will be used as soon as it is delivered and a formal handover will be conducted at a later date, probably Saint Barbara's Day.

A number of affiliated associations have been disbanding lately due to a lack of numbers. Concern has been expressed that some banners and other items from these associations are not being 'properly' housed and stored after the disbandment of the particular association. We would like therefore to stress to the affiliated associations that procedures are put in place to ensure the ultimate result is what the association wants. These banners and other items must be preserved as they are the history of the Regiment.

RAA Association Queensland

With effect 17th May 2006, the Brisbane-based Royal Australian Artillery Association (Qld) Incorporated (which has been in suspended animation since 2001) was re-raised. The new management committee combines youth and experience, part-time and full-time as well as serving and retired members:

- President - Brian Nally, Battery Commander 13th Field Battery.
- Vice-President - Ron West RFD, former Commanding Officer 5th/11th Field Regiment and a previous president of the Association.
- Secretary - Andrew Fleming, former Battery Commander 41st Field Battery, Inactive Reserve.

- Treasurer - Gordon Mitchell, ex- Australian Regular Army Warrant Officer Class Two, now on full-time duty.
- National Service Member - Jack Tattis, 1950s National Serviceman.

The Association has been given the mission: To promote and foster esprit de corps and to create and foster a bond of comradeship between all Gunners. Its key goals are to coordinate the Gunners in the Brisbane ANZAC Day March, assist in publicising Royal Australian Artillery news to members and Gunner associations in Queensland, provide representation at Royal Australian Artillery memorial services including funeral services of serving and retired Gunners, and to assist Artillery associations and their remaining members in their closing years.

An application for / renewal of membership form is on page 157.

The Association contact is Warrant Officer Class Two Gordon Mitchell, JOSS-SQ Building F26, Gallipoli Barracks, Enoggera, Q, 4051, 07 3332 5195, gordon.mitchell1@defence.gov.au.

'A' Battery Association (Inc)

President Ron 'Tex' Bassan

Extracted from the 'National Newsletter' Volume 4 August 2006

The first thing I must comment on was the dedication of the plaque at the Australian War Memorial. The service went very smoothly and we had a roll up of about 175 people. We had about 26 personnel from 'A' Battery, in charge was Lieutenant Darren Brilliant, also we had Brigadier Gerard Fogarty AM, Head of Regiment, Lieutenant Colonel Michael Kingsford, Commanding Officer 4th Field Regiment, Lieutenant Colonel Graeme Finney, Commanding Officer 8th/12th Medium Regiment, Lieutenant Colonel Dean Ashton, Commanding Officer 2nd/10th Medium Regiment and their respective Regimental Sergeant Major's, and 15 former battery commanders and also a good number of battery sergeant major's and battery guides. We had people like Dave Kelly, immediate past Battery Commander, Brigadier Don Weir CBE, Bill Harkness, Alex Reynolds, Rod Althaus, Tom Williams, Ken Kennedy, Don Donkin, Dave Adams, Col Maynard, Garb Ellis, Peter Hewitt and not to forget our Patron, Barry Campbell. One I must mention is Peter Prewitt and his lovely wife.

A special thanks goes to Major General John Whitelaw AO CBE (Retd) and Colonel Peter Seddon for unveiling our plaque, thank you gentleman.

There is a lot of people I must thank, and they are: Lieutenant Darren Brilliant, from 'A' Field Battery, I would have been lost without Darren getting me addresses of serving members, our hard working committee, all the people who got me addresses (I would have been lost without my computer). We got a new member a few weeks before the dedication, his name is Bob Gray and he was reinforcement to the Battery in 1959 in Malaya. Bob is a minister of religion, so we contacted him and he agreed to be our Padre. Thank you Bob. I also must thank Mr Martin Hansen, from the Australian War Memorial, without Martin's help we would have been knee deep in you know what.



Memorial plaque unveiled at the Australian War Memorial on 1st August 2006.

Something to think about for next year. It is the 50th anniversary of 'A' Battery going to the Malayan Emergency, 40th anniversary of 'A' Battery returning from Malaysia and the 36th year of going and returning from Vietnam.

A reminder about the book Don Sinclair wrote on our Malayan experience 1957 / 1959, it is available from Don for \$40.00: remember once costs are covered all proceeds go to the Association coffers. We also have car stickers and 'A' Battery badges for sale.



Royal Regiment of Australian Artillery REGIMENTAL SHOP

NEW STOCK

Check out all the latest deals on the SOARTY web page

<http://intranet.defence.gov.au/armyweb/Sites/ARTYSCH/>

- **Field Equipment**

- * Lite Weight Sleeping Bags
- * Surefire Torch Systems
- * Customised Field Packs, Day Packs and Webbing
- * Bivvy Bags
- * Nomex Field Gloves (DPCU)
- * Leatherman Knives
- * Silva Compasses

- **Plaques and Presentational Items**

RAA Regimental
School of Artillery
RAA Cyphers
Prints and Artwork
Statuettes and Action Figures
Desk Sets

- **Things to Wear**

Jewellery (Including Cuff Links, Tie Pins, Lapel Pins)
Polofleece Casual Jackets (with RAA Regiment embroidered badge)
Regimental Ties

- **Models** - L119 and M198 resin kits and assembled kits available

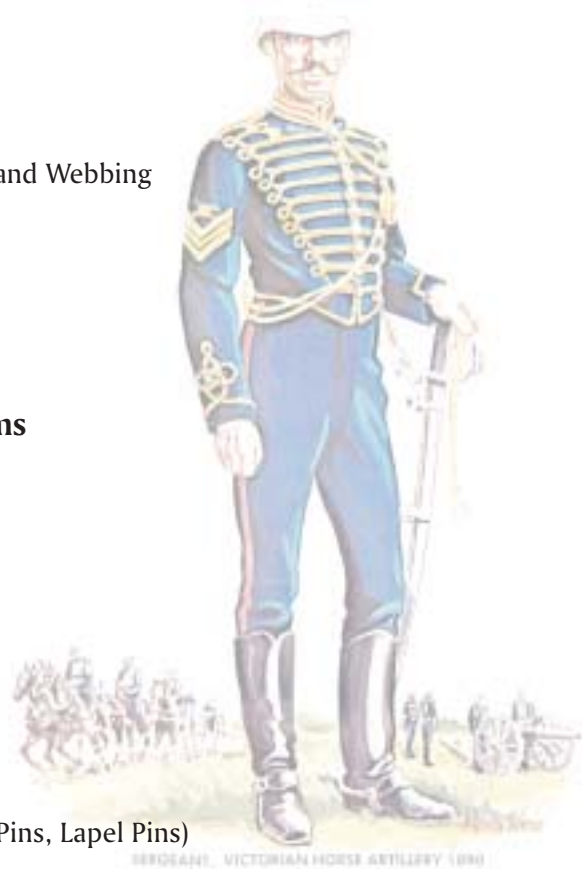
For Information and Orders:

SGT John Berger - School of Artillery, Bridges Barracks - john.berger@defence.gov.au
SGT Michael Heinrich - School of Artillery, Bridges Barracks - michael.heinrich@defence.gov.au

Trading Hours:

12.30 -13.15 hrs every Monday, Thursday and Friday

SCHOOL OF ARTILLERY
Puckapunyal - Victoria - Australia



SERGEANT, VICTORIAN HORSE ARTILLERY 1880

18 Light Anti Aircraft Regiment Association

P O Box 536, GYMEA, NSW 2227
Phone/Fax (02) 9524 5524

'TAKE POST' HISTORY OF 18 LIGHT ANTI AIRCRAFT REGIMENT ORDER FORM

When ordering please calculate postage per book
@QLD/TAS \$11.00, NSW/ACT \$8.00, VIC/SA \$10.00, W/NT \$12.00
and add the appropriate postage to your payment.

I wish to purchase _____ copies of 'Take Post' @\$39.00 each, plus postage of \$_____ per copy.

I wish to pay in full now, for _____ (copies) @\$39.00 each, plus postage of \$_____ per copy.

OR

I wish to purchase _____ copies of 'Take Post' @\$39.00 each

I wish to pay a DEPOSIT now of \$15.00 per copy, with the balance payable when publication is available.

DEPOSIT ONLY: Quantity _____ @\$15.00 each = \$ _____

BALANCE DUE: Quantity _____ @\$24.00 each = \$ _____

Plus postage of \$ _____ per copy TOTAL DUE \$ _____

Enclosed is my cheque/money order for the amount of \$ _____

All payments are to be made in favour of 18 LAA Regt Association and forwarded to:
18 LAA Regt Association, P O Box 536, Gymea, NSW, 2227

OR

I commit to purchase _____ copies of 'Take Post' when available @\$39.00 each plus postage of \$ _____.

PLEASE RETURN YOUR COMMITMENT UNDERTAKING TO THE ASSOCIATION.

Name: _____ (Please Print)

Address: _____ (Please Print)

_____ P/Code: _____

Signature: _____ Date: _____

Contact Phone No: _____

TASMANIAN COLONIAL ARTILLERY



1803 - 1903

A Chronological Diary of the Formation and Development of the Tasmanian Volunteer and Permanent Artillery from 1803 to 1903

(124 Pages, 70 Photographs, sketches and maps)

ISBN 0-646-43765-8

Douglas Morris Wyatt, RFD

Complete the order form below, include cheque or money order and mail to:

**D. M. Wyatt,
9 Morris Ave.,
TAROONA 7053**

Please send me the following copies of '*Tasmanian Colonial Artillery, 1803-1903*' as detailed below:

- ___ copies of a self starting CD which includes the text in pdf format as well as MS PowerPoint Slide Presentation at \$15 each. = \$
- ___ copies of a bound copy, printed in black & white at \$24 each. = \$
- Plus \$5 pack & post (per single copy). = \$

TOTAL \$

Your Postal Address:

Name:

Street or PO Box:

Town:Post Code:

Telephone Contact Number:.....

Royal Australian Artillery Association (Queensland) Inc
APPLICATION/RENEWAL/PRIVACY CONSENT FORM

APPLICATION: Please accept me as a yearly / life member (over 55 years of age) of the Association.

RENEWAL: Please renew my yearly membership of the association from
25 April this year to 24 April next year.

I enclose cheque/cash/money order for \$ (\$10 Annual / \$100 Life)

My current details are (for new members or renewing members with changes):

Full Name:

Preferred / Known Name:

Address:

Postcode: Phone(Home):(Work):

Email Address:

SERVICE DETAIL

Regimental Number: Highest Rank Reached:

Dates with Artillery:

Posting(s) within Artillery:

OTHER DETAILS

Wife / Partners Name:

NOK Name: Relationship:

Address (if different from member):

Are you in receipt of a DVA Pension: Yes / No:

I give / do not give permission for my contact details to be given to other members of the Association.

Can we be of any immediate assistance to you - Yes / No (Please describe separately)

ALL MEMBERS PLEASE COMPLETE AND RETURN AS A PRIORITY

Privacy Act Consent Form

Below are consent details for members willing to sign to allow their names to be printed in 'Gunline', any future Association website and so on. Due to the new Privacy Act, the Association is not permitted to print any names in same without written permission. (Without this consent, we will not be able to publish eg. Membership Lists.)

I authorise the Royal Australian Artillery Association (Queensland) Incorporated to print my name in its correspondence, newsletters, website or any publication that the Management Committee may agree to publish from time to time, providing that the information or use of my name is not associated with or connected to any defamatory writings or publication.

Signature: Date:

Printed Name:

Nominated by (Print): (Signature):

Seconded by (Print): (Signature):

Please post to: Honorary Treasurer RAA Association (QLD) Inc, WO2 Gordon Mitchell, JOSS-SQ Building F26, Gallipoli Barracks, Enoggera QLD 4051 Mobile: 0438 712 754, Email: gordon.mitchell1@defence.gov.au

ROYAL AUSTRALIAN ARTILLERY ASSOCIATION (NSW) INC.

The Honorary Secretary
RAA Association (NSW) Inc.
G.P.O. Box 576
SYDNEY NSW 2001

Date:

APPLICATION FOR MEMBERSHIP

Dear Secretary,
I hereby apply to become a member of the Royal Australian Artillery Association (NSW) Incorporated. Upon my admission as a member, I agree to be bound by the rules of the Association in force for the time being.

Surname:

Given Names:

Service Rank:

Decorations:

Permanent Address
for all
Correspondence:

Postcode

Email Address:

Preferred Title on Correspondence (Our policy is to address all as Mr or Ms)

Artillery Unit(s) and approximate dates you served:

Birth Date

Enlistment Date

- Annual membership subscription currently \$15.00.
 - RAA Association lapel badge currently \$10.00
- I enclose cheque/s for \$25.00 to cover subscription and badge.

Applicant's Signature:

Proposer's Signature:

Proposer's Name:

Date:

If you can't find a member to propose you, a member of the Committee will propose after your eligibility is verified.

Office Use Only:

Committee approves membership:

Particulars recorded:

Payment received (Treasurer):

Royal Australian Artillery Association (ACT)

- Application:** Please accept me as a yearly/life subscriber to the RAA Association of the ACT.
- Renewal:** Please renew my yearly membership of the association from 1st April 2006 to 31 March 2007.
- I enclose cheque/cash/money order for \$ _____
(\$15 Annual/\$25 Bi-annual/\$125 Life Membership).
-
-

My current details are (for new members or renewing members with changes):

Name: _____

Surname: _____

Street: _____

City: _____

State: _____ Postcode: _____

Tel (H): _____ Fax: _____

Tel (W): _____ Email: _____

What is your preferred method of communication? (Please tick one)

Telephone Fax Email Mail

Please return membership application forms to the Association Secretary:

Lieutenant Colonel Rob Crawford
Training and Development Manager
Australian Command and Staff College
ADC (Western Creek) College
Department of Defence
CANBERRA ACT 2600
Tel: (02) 6266 0358

Email: rob.crawford@defence.gov.au

Royal Australian Artillery Association of Tasmania Inc.

ABN 53 049 033 834

Esb 18th March 2000

APPLICATION FOR MEMBERSHIP

Folio No. _____

I wish to apply for financial
ANNUAL membership of the RAA Association of Tas Inc. (\$10.00) per year, each financial year
LIFE membership of the Association (\$100.00 once only payment)

Strike out non-applicable

Name: Date of Birth: /..... /.....
Block Letters (please complete given names with SURNAME last)

Address:
..... Postcode:

Telephone: (home) (work) (fax)
..... (mobile) (email)

Military Service/Period: From: To:

Military Rank: Army No:

Unit/s in which I have served:
.....
.....
.....

Decorations/Awards:
.....
.....

I wish to have the following Title, Name and Postnominals used for mail from the RAA Assoc of Tas:
.....

I pledge myself to a cheerful obedience to the Constitution and Rules of the **ROYAL AUSTRALIAN ARTILLERY ASSOCIATION of Tasmania Inc.** and its by-laws and to observe all of the provisions thereof.

I would like to purchase RAA Assoc Lapel badge @ \$10.00 ea
Packing and postage \$

I enclose a donation of \$.00 Date: /..... / Signature:

Please send this application and payment to: Norman B Andrews OAM, Public Officer & Honorary Secretary, **ROYAL AUSTRALIAN ARTILLERY ASSOCIATION of TASMANIA Inc.**, TARA Room, 24 Robin Street, NEWSTEAD, Tas 7250

Receipt No: Treasurer:

Member notified: Sec/Pub.Offr date:

18 Light Anti Aircraft Regiment Association

The Honorary Secretary
18 LAA Regiment Association
P O Box 536
Gymea NSW 2227

Date:

Application for Membership

Surname:

Given Names:

Service Rank:

Decorations:

Permanent Address For All Correspondence:

Email Address:

Details of your service with
the Regiment:

Date of Birth:

Date of Enlistment:

Period of Service:

Applicant's Signature:

Date:

There Are No Membership Fees

Committee Use Only

Membership accepted:

Date:

Particulars registered:

Date:

Member Advised:

Date:



LOCATING ARTILLERY ASSOCIATION

Application For Membership

I hereby apply to become a member of the Locating Artillery Association and agree to abide by the rules of the Association in force from time to time.

Surname			
Given Names			
Address			
		State	Postcode
Telephone		Mobile	
Email			
Signature			
Joining Fee – \$5.00		Annual Membership – \$10.00 Total on Joining – \$15.00	
Please make cheques payable to 'Locating Artillery Association' and post to: Locating Artillery Association PO Box 1042 Manly NSW 1655			
Brief outline of Service (voluntary information)			
Year enlisted:		Year discharged:	
Rank Attained:		Unit(s):	

'A' Field Battery Association (Inc)

Application: Please accept me as a yearly subscriber to the Association.

Renewal: Please renew my yearly membership of the association from 1st August to 31st July. I enclose cheque/cash/money order for \$_____ (\$15 Annually).

My curent details are (for new members or renewing members with changes).

Full Name: _____

Preferred/Known Name: _____

Address: _____

_____ **Postcode:** _____

Phone (home): _____ **(work):** _____

Email Address: _____

Service Details: Regimental Number _____

Highest rank reached _____

Dates with Battery: _____

Posting(s) within Battery: _____

Other Details: Wifes/Partner's Name _____

NOK Name: _____ Relationship: _____

Address: _____

_____ Postcode: _____

Are you in receipt of a DVA Pension? Yes/No

I give/do not give permission for my contact details to be given to other members of the Association.

Can we be of any immediate assistance to you? Yes/No (Please describe separately)

All Members Please Complete and Return as a Priority

Privacy Act Consent Form

Below are consent details for members willing to sign to allow their names to be printed in the Roadrunner, on the Association website and so on. Due to the Privacy Act, the Association is not permitted to print any names without written permission. (Without their consent, we will not be able to publish eg. members's lists.)

I authorise the 'A' Field Battery Association Inc to print my name in its correspondence, newsletter, website or any publication that the Management Committee may agree to publish from time to time, providing that the information or use of my name is not associated with or connected to any defamatory writings or publication.

Signatue: _____ **Date:** _____

Printed Name: _____

Please post to: Secretary, 'A' Field BatteryAssociation Inc, 6 Harveys Road Beaconsfield, Qld, 4740.

**41 BATTERY,
11 FIELD REGIMENT RAA
ASSOCIATION INC.**

APPLICATION FOR MEMBERSHIP
(Please Print)

Name: _____

Address: _____

_____ P/Code: _____

Postal Address (if different): _____

_____ P/Code: _____

Telephone: _____

Mobile: _____

Email: _____

(Signature of Applicant)

(Date)

Membership Fees

Annual \$15.00 Life Subscription: \$150.00

(Please make cheques payable to '41 Battery Association'
and send to address shown below)

ABN: 31 863 855 040

C/- 25 Manakin Ave,
Burleigh Waters Qld 4220

105TH FIELD BATTERY ROYAL AUSTRALIAN ARTILLERY ASSOCIATION INC.

APPLICATION: Please accept me as a yearly/life subscriber to the association

or

RENEWAL: Please renew my yearly membership of the association from 1 January to 31 December.

I enclose cheque / cash / money order for \$ _____ (\$10 Annual/\$105 Life)

Details

Full name:

Preferred
/known name:

Address:

Postcode:

Phone:

Home:

Business:

Service Details

Regimental No:

Dates with Battery:

Rank:

Postings:

Other Details

Wife/Partner's name:

NOK name:

Relationship:

Address:

Postcode:

Are you in receipt of a DVA pension? Yes / No

I **give/do not** give permission for my contact details to be given to other members of the association only.

Can we be of any immediate assistance to you? Yes / No
Details:

Signature:

Date:

Post to:

The Secretary,
105th Field Battery RAA Association Inc,
14 Marral Street, The Gap, Qld, 4061



**APPLICATION FOR ORDINARY MEMBERSHIP
of the
ROYAL AUSTRALIAN ARTILLERY HISTORICAL COMPANY
(RAAHC)**

The Company Secretary (Registrar)
RAAHC
PO Box 1042
Manly NSW 1655

phone 02 9976 6102
Fax 02 9977 2607
e-mail northfort@bigpond.com

I apply to become an Ordinary (Active) member of the Royal Australian Artillery Historical Company (RAAHC) and agree, subject to my admission, to abide by the Company's Constitution and its By-Laws.

Rank/Title.....Surname.....

Given Names.....

Post nominals/decorations/qualifications.....

Address for mailing and contact details:

No & Street.....

Suburb.....StateP/ Code.....

Phone ()..... Fax ().....

e-mail.....

I enclose my cheque (Royal Australian Artillery Historical Company) /cash for \$25 (Annual Membership Fee)

.....

(Signature)

(Date)

CONCESSIONS AVAILABLE TO MEMBERS OF THE RAAHC

Four issues of Cannonball per annum

Free access to the RAA National Museum at North Fort, and most of the other museums in the Army Museum Network

Free use of the RAA National Museum Library

10% discount on books and merchandise purchased from the North Fort Café

Associate membership of the North Fort Mess

To offer your services as a North Fort Volunteer please complete the additional information on the next page.....

OFFER TO SERVE AS A NORTH FORT VOLUNTEER

- I wish to offer my services to the Company as a Volunteer.
- I agree to conform to any instructions issued by Defence and notified to me by officers of the Company.

Next of Kin (required for use only in case of an emergency).

Full name..... Relationship.....

No & Street.....

Suburb..... State P/Code.....

Preferred phone number in an emergency ().....

Alternative emergency contact.....

Interests and capabilities

.....
.....
.....

Please indicate (tick) those areas in which you can be of assistance; or list below any other areas of expertise that might be useful to the Museum.

- | | | |
|---|--|--|
| <input type="checkbox"/> Accessioning | <input type="checkbox"/> Administration (Office) | <input type="checkbox"/> Computers, IT (website) |
| <input type="checkbox"/> Displays & models | <input type="checkbox"/> Editorial Cannonball | <input type="checkbox"/> Editorial newsletter |
| <input type="checkbox"/> Fundraising | <input type="checkbox"/> Lecturing and Training | <input type="checkbox"/> Library administration |
| <input type="checkbox"/> Library research & cataloguing | <input type="checkbox"/> Maintenance and repairs | <input type="checkbox"/> Marketing andPromotion |
| <input type="checkbox"/> Medals and Uniforms | <input type="checkbox"/> North Fort Cafe | <input type="checkbox"/> Project Management |
| <input type="checkbox"/> Publications | <input type="checkbox"/> Sound & AV | <input type="checkbox"/> Special Events |
| <input type="checkbox"/> Tour Guide (training required) | <input type="checkbox"/> Workshops and refurbishment | |

Other areas of expertise

.....
.....
.....

Please note that any personal information provided in this application and offer will not be used for purposes other than those applicable to the proper functioning of the Company in its support for the RAA National Museum.

Approved by the Board of Directors on : (Date)

Office Use Only

Receipt No: Amount:

Entered Membership Roll: (August ____)

North Fort



THE ROYAL AUSTRALIAN ARTILLERY HISTORICAL COMPANY

Invites YOU to be part of
our "Memorial Walk"

at

Historic North Fort, North Head, Manly

For a tax deductible donation of \$50.00 your name or message will be engraved into a paver which will then be laid permanently in our

North Fort "Memorial Walk"

The walkway & five memorials are dedicated to the men & women of the Armed Forces of Australia & her allies, & people who served in the Civilian Services & Volunteer organisations from Australia's Colonial past through to the present.



YOUR NAME OR MESSAGE COULD BE HERE

All proceeds go towards completing the Memorial Walk & Memorials and restoring our National Heritage listed site for the education of present and future generations. The Five Memorials will be dedicated to the Colonial Wars, WWI, WWII, Post 1945 Conflicts & Peace Keeping Operations.

To order your paver please complete and return the order form on reverse



Become a major sponsor.

For \$1,500.00 your unit badge, club emblem or organisation logo will be engraved onto a centre piece paver measuring 460mm x 460mm.

Phone (02) 9976 6102 for further information regarding major sponsorship package.



~ ORDER FORM ~

FOR MEMORIAL WALK PAVERS

Please complete the details of the name or message you would like engraved in your paver/s in the template provided below.

PAVER NO. 1
Line 1: 14 characters maximum

Please print clearly. Each letter, number, punctuation mark or space represents one character.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Line 2: 14 characters maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Line 3: 14 characters Maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

PAVER NO. 2
Line 1: 14 characters maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Line 2: 14 characters maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Line 3: 14 characters Maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

PAVER NO. 3
Line 1: 14 characters maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Line 2: 14 characters maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Line 3: 14 characters Maximum

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

For more than three pavers, please photocopy this page & return it with your order
To help with your engraving details here are some common abbreviations:

Ranks	ABBR	Ranks	ABBR	Organisations/Other	ABBR
Lieutenant General	LT GEN	Warrant Officer First Class	WO1	Headquarters	HQ
Major General	MAJ GEN	Warrant Officer Second Class	WO2	Division	DIV
Brigadier	BRIG	Staff Sergeant	SSGT	Brigade	BDE
Colonel	COL	Sergeant	SGT	Regiment	REGT
Lieutenant Colonel	LT COL	Bombardier	SDR	Battalion	BN
Major	MAJ	Captain	CPL	Battery	BTY
Squadron Leader	SNLDR	Lance Corporal	LCPL	Company	COY
Lieutenant Commander	LTCDR	Lance Bombardier	LRDR	Association	ASSN
Captain	CAPT	Gunner	GNR	Squadron	SQN
Lieutenant	LT	Private	PTE	Flight	FLT
Second Lieutenant	2LT	Trooper	TFR		

Name: Day Phone:

Address: Post Code:

Simply complete the following details and return with your donation of \$50.00. For additional pavers donate only \$40.00 each. See table below.

Payment Authorisation: Cheques should be made payable to: **Royal Australian Artillery Historical Company**

One paver	\$50.00
Two pavers	\$90.00
Three pavers	\$130.00
Four pavers	\$170.00

Please tick: Cash Cheque Credit Card Money Order

Please debit my (tick): Bankcard MasterCard Visa

Card No.: Expiry Date:/..

Card Holders Name: Signature: Date:/..

Phone, Fax or Mail your complete order form with full payment to:

North Fort
P.O. Box 1042
Manly NSW 1655

Thank you for your support

Regimental Publications Index

Liaison Letter

<i>Ser</i>	<i>Title</i>	<i>Remarks</i>
1	Director Royal Artillery Technical Liaison Letter 1/48	Copy held by HOR at School of Artillery
2	Director Royal Artillery Liaison Letter – 3 June 1954	Copy held by Puckapunyal Area Library
3	Director Royal Artillery Liaison Letter – 18 October 1954	Copy held by HOR at School of Artillery
4	Director Royal Artillery Liaison Letter – 24 November 1954	Copy held by HOR at School of Artillery
5	Director Royal Artillery Liaison Letter – February 1955	Copy held by HOR at School of Artillery
6	Director Royal Artillery Liaison Letter – 31 May 1955	Copy held by HOR at School of Artillery
7	Director Royal Artillery Liaison Letter – 30 September 1955	Copy held by Puckapunyal Area Library
8	Director Royal Artillery Liaison Letter – 20 January 1956	Copy held by HOR at School of Artillery
9	Director Royal Artillery Liaison Letter – 18 June 1956	Copy held by HOR at School of Artillery
10	Director Royal Artillery Liaison Letter – 26 November 1956	Copy held by Puckapunyal Area Library
12	Director Royal Australia Artillery Liaison Letter – 24 February 1957	Copy held by HOR at School of Artillery
13	Director Royal Artillery Liaison Letter – 26 November 1957	Copy held by Puckapunyal Area Library
14	Director Royal Artillery Liaison Letter – 30 April 1958	Copy held by Puckapunyal Area Library
15	Director Royal Artillery Liaison Letter – 28 November 1958	Copy held by HOR at School of Artillery
16	Director Royal Artillery Liaison Letter – 17 June 1959	Copy held by HOR at School of Artillery
17	Director Royal Artillery Liaison Letter – January 1960	Copy held by Puckapunyal Area Library
18	Director Royal Artillery Liaison Letter – 29 July 1960	Copy held by Puckapunyal Area Library
19	Director Royal Artillery Liaison Letter – 17 February 1961	Copy held by Puckapunyal Area Library
20	Director Royal Artillery Liaison Letter – 6 November 1961	Copy held by HOR at School of Artillery
21	Director Royal Artillery Liaison Letter – July 1962	Copy held by Puckapunyal Area Library
22	Director Royal Artillery Liaison Letter – October 1962	Copy held by Puckapunyal Area Library
23	Director Royal Artillery Liaison Letter – February 1971	Copy held by Puckapunyal Area Library

<i>Ser</i>	<i>Title</i>	<i>Remarks</i>
24	Director Royal Artillery Liaison Letter – September 1972	Copy held by Puckapunyal Area Library
25	Royal Australian Artillery Liaison Letter – February 1973	Copy held by Puckapunyal Area Library
26	Royal Australian Artillery Liaison Letter – September 1973	Copy held by Puckapunyal Area Library
27	Royal Australian Artillery Liaison Letter – March 1974	Copy held by Puckapunyal Area Library
28	Royal Australian Artillery Liaison Letter – September 1974	Copy held by Puckapunyal Area Library
29	Royal Australian Artillery Liaison Letter – March 1975	Copy held by Puckapunyal Area Library
30	Royal Australian Artillery Liaison Letter – September 1975	Copy held by Puckapunyal Area Library
31	Royal Australian Artillery Liaison Letter – March 1976	Copy held by Puckapunyal Area Library
32	Royal Australian Artillery Liaison Letter – September 1976	Copy held by Puckapunyal Area Library
33	Royal Australian Artillery Liaison Letter – March 1977	Copy held by Puckapunyal Area Library
34	Royal Australian Artillery Liaison Letter – September 1977	Copy held by Puckapunyal Area Library
35	Royal Australian Artillery Personnel Notes – October 1977	Copy held by Puckapunyal Area Library
36	Royal Australian Artillery Liaison Letter – May 1978	Copy held by Puckapunyal Area Library
37	Royal Australian Artillery Personnel Notes – 1978	Copy held by Puckapunyal Area Library
38	Royal Australian Artillery Liaison Letter – March 1980	Not available to HOR at School of Artillery
39	Royal Australian Artillery Liaison Letter – December 1980	Not available to HOR at School of Artillery
40	Royal Australian Artillery Liaison Letter – May 1981	Not available to HOR at School of Artillery
41	Royal Australian Artillery Liaison Letter – November 1981	Not available to HOR at School of Artillery
42	Royal Australian Artillery Liaison Letter – 1982 (Issue One)	Not available to HOR at School of Artillery
43	Royal Australian Artillery Liaison Letter – 1983 (Issue One)	Not available to HOR at School of Artillery
44	Royal Australian Artillery Liaison Letter – 1983 (Issue Two)	Not available to HOR at School of Artillery
45	Royal Australian Artillery Liaison Letter – 1984 (Issue Four)	Not available to HOR at School of Artillery
46	Royal Australian Artillery Liaison Letter – 1986 (Issue One)	Copy held by Puckapunyal Area Library
47	Royal Australian Artillery Liaison Letter – 1986 (Issue Two) dated 4 November 1986	Copy held by Puckapunyal Area Library

<i>Ser</i>	<i>Title</i>	<i>Remarks</i>
48	Royal Australian Artillery Liaison Letter – Issue One – 1987 dated 18 June 1987	Copy held by Puckapunyal Area Library
49	Royal Australian Artillery Liaison Letter – Issue Two – 1987 dated 11 November 1987	Copy held by Puckapunyal Area Library
50	Royal Australian Artillery Liaison Letter – Edition 1 – 1988 – dated 23 June 1988	Copy held by Puckapunyal Area Library
51	Royal Australian Artillery Liaison Letter – Edition 2 – 1988 dated 14 November 1988	Copy held by Puckapunyal Area Library
44	Royal Australian Artillery Liaison Letter – Edition 1 – 1989	Copy held by Puckapunyal Area Library
45	Royal Australian Artillery Liaison Letter – Edition 2 – 1989	Copy held by Puckapunyal Area Library
46	Royal Australian Artillery Liaison Letter – Edition 1 – 1990	Copy held by Puckapunyal Area Library
47	Royal Australian Artillery Liaison Letter – Edition 2 – 1990	Copy held by Puckapunyal Area Library
48	Royal Australian Artillery Liaison Letter – Edition 1 – 1991	Copy held by Puckapunyal Area Library
49	Royal Australian Artillery Liaison Letter – 1992 – First Edition	Copy held by Puckapunyal Area Library
50	Royal Australian Artillery Liaison Letter – 1992 – Second Edition	Copy held by Puckapunyal Area Library
51	Royal Australian Artillery – August 1993 – Liaison Letter	Copy held by Puckapunyal Area Library
52	Royal Australian Artillery Liaison Letter – 1996 – First Edition	Copy held by Puckapunyal Area Library
53	Royal Australian Artillery Liaison Letter – 1996 – Second Edition	Copy held by Puckapunyal Area Library
54	1997 – Royal Australian Artillery Liaison Letter	Copy held by Puckapunyal Area Library
55	1998–99 RAA Liaison Letter	Copy held by HOR at School of Artillery
56	RAA Liaison Letter – 2000	Copy held by HOR at School of Artillery
57	RAA Liaison Letter – 2001	Copy held by HOR at School of Artillery
58	RAA Liaison Letter – 2002	Copy held by HOR at School of Artillery
59	RAA Liaison Letter 2003 – Autumn Edition	Copy held by HOR at School of Artillery
60	RAA Liaison Letter 2003 – Spring Edition	Copy held by HOR at School of Artillery
61	The Royal Australian Artillery Liaison Letter 2004 – Autumn Edition	Copy held by HOR at School of Artillery
62	The Royal Australian Artillery Liaison Letter 2004 – Spring Edition	Copy held by HOR at School of Artillery
63	The Royal Australian Artillery Liaison Letter 2005 – Autumn Edition	Copy held by HOR at School of Artillery
64	The Royal Australian Artillery Liaison Letter 2005 – Spring Edition	Copy held by HOR at School of Artillery
65	The Royal Australian Artillery Liaison Letter 2006 – Autumn Edition	Copy held by HOR at School of Artillery

Australian Gunner Magazine

<i>Ser</i>	<i>Title</i>	<i>Remarks</i>
1	Australian Gunner – Vol. 1 No. 1	Copy held by SO to HOR
2	Australian Gunner – Vol. 1.No. 2	Copy held by SO to HOR
3	Australian Gunner – Vol. 2 No.1 – September 1979	Copy held by SO to HOR
4	Australian Gunner – March 1980	Copy held by SO to HOR
5	Australian Gunner – December 1980	Copy held by SO to HOR
6	Australian Gunner – May 81	Copy held by SO to HOR
7	Australian Gunner – November 81	Copy held by SO to HOR
8	Australian Gunner – The Official Journal of the Royal Regiment of Australian Artillery – March 1997	Copy held by SO to HOR

Miscellaneous Regimental Publications

<i>Ser</i>	<i>Title</i>	<i>Remarks</i>
1	DARTY Personnel Notes – December 1969	Copy held by Puckapunyal Area Library
2	Royal Australian Artillery Personnel Notes – 1978	Copy held by Puckapunyal Area Library

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