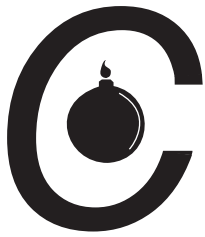




ROYAL AUSTRALIAN ARTILLERY HISTORICAL COMPANY

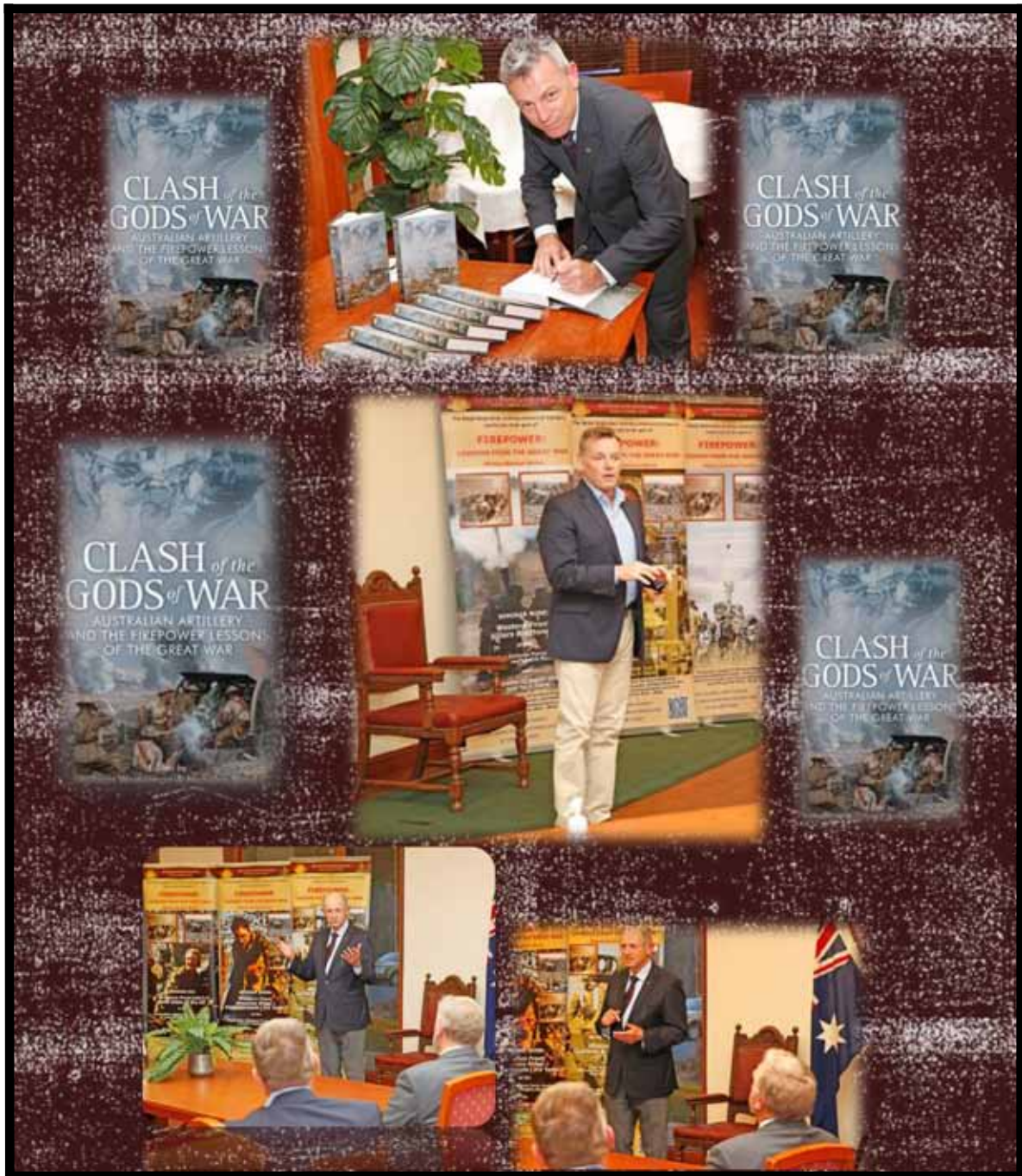


CANNONBALL

JOURNAL OF THE ROYAL AUSTRALIAN ARTILLERY HISTORICAL COMPANY

NUMBER 98

Winter 2021



ABN 66 084 470 539

ISSN 1328-6366



CONTENTS

Editorial	1
Chairman's Report	2
HISTORY AND HERITAGE	5
Warrant Officer Henry Green of the New South Wales Artillery <i>By Keith Glyde</i>	5
The Song of the Guns <i>By Captain Gilbert Frankau</i>	11
The Restoration of the Werribee Gun <i>By Allan Sterling</i>	16
Target Tank Part One: The Somme to Arras 1915-1916 <i>By Keith Glyde</i>	24
National Service During the Vietnam War <i>By Christopher Jobson</i>	33
150TH ANNIVERSARY OF A PERMANENT AUSTRALIAN ARTILLERY PRESENCE	35
TAKE POST	41
Book Review: Clash of the Gods of War <i>By David Martin</i>	41
VALE	45



- | | |
|----------------------------------|---|
| Cover Image: | Lieutenant General Greg Bilton Launching "Clash of the Gods of War" |
| Front Cover Theme: | DT (Terry) Brennan |
| Front Cover Image Design: | DT (Terry) Brennan |
| Desktop Publishing: | DT (Terry) Brennan, assisted by Michelle Ray |
- *Cannonball* material may not be copied without the consent of the editor. Personal views expressed in articles are those of the author/contributor and may not necessarily be those of RAAHC. Responsibility for accuracy lies with contributors, quoting source references wherever possible.
 - *Cannonball* available electronically on the RAAHC website – www.artilleryhistory.org



RAA Historical Company Directory

PATRON Maj Gen SN Gower AO, AO (Mil), (Retd)

DIRECTORS

Chairman	IF Ahearn
Dep. Chairman	Lt Col N Floyd
Hon. Secretary & Company Secretary	Lt Col R Crawford
Hon. Treasurer	P Lawrence
Directors	Lt Col S. Condon RFD, KCSJ
	Brig JR Cox AM (Retd)
	J Eling
	W Foxall
	R West

HONORARY CONSULTANTS

Hon. Auditor	G Martin
Hon. Solicitor	P Fordyce

OFFICERS

Airburst Editors	IF Ahearn
	G Hampton & P Camilleri
AMW Manager	J Balfour
Editor	DT (Terry) Brennan
Desktop Publishing	DT (Terry) Brennan & Michelle Ray
Grants Coordinator	B Armstrong
Cutler Research Centre	TR Ford
Obituary Resource Coordinator	PJ Bruce
Webmaster	G Hampton & P Camilleri
Website Advisor	IF Ahearn

RAAHC CONTACT DETAILS

Hon. Secretary & Company Secretary
Royal Australian Artillery Historical Company
P O Box 171, Cremorne Junction, NSW 2090
Hon Secretary Mobile: 0407 012 892 458
Email: raahcoffice@gmail.com
Cutler Research Library: 02 9977 0946
Email: cutlerresearchcentre@artilleryhistory.org





Dear Readers

Welcome to Cannonball. Many of you have expressed your disappointment at the decision to no longer support a hard copy version. To ensure our current serving members of the Regiment can develop an appreciation of our history and learn from it, I have included a history and heritage “Cannonball Supplement” in the latest edition of the Liaison Letter. I plan on making this section a permanent feature.

Now turning to this edition, I have included a section on the 150th anniversary of the establishment of a permanent artillery presence. There are a range of ceremonies, commemorations and initiatives being conducted throughout the year. There are two national days, the 1st August and 6th November. The Royal Australian Artillery Historical Company and Australian Artillery Association jointly promoting three distinct competitions, these being photography, video, and essay. All three are open to serving and retired members and have monetary prizes attached.

Keith Glyde, the very dedicated and knowledgeable Tasmanian Representative on the Regimental History Committee, has continued his amazing workload and productivity, as highlighted in this edition. Keith has provided two very thoroughly researched and educational articles. The one on Henry Green is of particular interest given his involvement with the origins of the Australian artillery. I thank Keith for his ongoing contribution to our artillery history and in particular his determination and efforts to ensure “we get it right”.

There is a great story on the restoration of “The Werribee Gun” a 12-Pounder 8 cwt RBL (Armstrong) Gun serial number 370. A band of dedicated enthusiasts have worked tirelessly to bring this gun back to life. It is only through the work of such amazing and talented people that

we can hope to preserve our past before it slips through our hands.

I came across an interesting email signature block the other day on my defence email account. An orderly room clerk at the School of Artillery had listed their rank as “Private Proficient”. Call me old fashioned but I thought “proficient” was related to “pay”. I know the Royal Australian Air Force allow their “proficient” members to wear Lance Bombardier insignia, which I have always thought was wrong as there were no associated leadership responsibilities or obligations.

This brings me to my final observation of unwarranted, in my view, change. I have noticed that the title Chief Instructor has been dropped from the title of the Commanding Officer of the School of Artillery. The title now is simply Commanding Officer. We went down this rabbit hole in “reverse” some twenty years ago when during the period Colonel Steve Goltz was the Commanding Officer / Chief Instructor, the Commandant of the Combat (now Combined) Arms Training Centre decided to drop the title Commanding Officer from those in command of schools. This lasted less than 12 months as there were several unthought through implications including the authority of a chief instructor in regard discipline and financial delegations.

I trust that you will enjoy this edition and even consider sending a letter or email with your thoughts on any of the content or for that matter any subject regarding the Royal Regiment. I would also implore readers to submit an article as I am always on the lookout for content.

Ubique



Chairman's Report

Dear Members and Friends

Farewell to a less than enjoyable 2020! I hope that you and yours have all escaped from Covid unscathed. 2021 may bring back some normality to our lives; an aspiration we all look forward to.

Planning for the 150th Anniversary of Australian Artillery continues. We have not been notified of any changes to the events planned by the Regimental Committee. The RAAHC and the Australian Artillery Association (AAA) have joined forces to conduct photographic, video and essay contests during the anniversary.

The contests will be open to all gunners, serving and retired. Funding will be provided equally by both organisations. All submitted entries can be published by AAA/RAAHC and be made available to RRAA. For the photo and video contests, there will be five rounds in 2021 bi-monthly in March, May, July, September and November. Subject matter must be artillery related (equipment, exercises, mess life, people, etc). \$100 cash will be the prize for each contest and each round.

The essay contest will be based on the topic "Time to Reflect". Subjects can be wide ranging including aspects of service, friendships, equipments used, operation experiences, good times & bad times, leadership, home support, etc. Retired gunners may want to write about their post service activities. Prizes will be \$750 for first prize, \$500 for second prize and \$250 for third prize. Essays are to be submitted by close of business on 31 October 2021. Prizes will be announced on St Barbara's Day 4 December 2021.

The details of the contests will be published on the RAAHC/AAA websites and Facebook pages. We hope we will be overwhelmed with entries so please get involved.

The AAA has produced a 150th Anniversary car sticker shown below.



To order simply go to: https://australianartilleryassociation.com/car_stickers/car_sticker_150_anniversary.htm

The AAA is to conduct a National Gunner Dinner at Caloundra, Queensland on 20/21 August 2021. You can find details at: <https://australianartilleryassociation.com>

The RAAHC has produced a photo book titled Australian Artillery Book of Days: 1871-2021. The photos cover the development of Australian Artillery from 1871 to the RRAA today. Copies will be donated to each battery in the RRAA and a limited number will be offered for sale to members and the public. Details on how to order and cost, will appear in Airburst, RAAHC website and RAAHC Facebook. The cover is shown below:



The Anzac Centennial Gun (ACG) is still on display at the Temora Aviation Museum. Please make a visit to a great regional town with a fantastic Aviation Museum, now enhanced by the presence of the ACG!

Australia's Memorial Walk through the efforts of Peter Lawrence as project manager, has been extensively restored. After 20 years exposure, the sandstone desks required resealing and the Lone Pine plinth required rebuilding. The

monuments have been restored to the quality when they were initially commissioned. The information panels on all the main monument pieces had weathered to such an extent that they became unreadable. All panels were replaced with bronze information panels.

The total cost of the Project was \$50,930.35. The Company funded \$40,930.35 and DVA provided a Grant of \$10,000.



Top: Cleaning the desks. Bottom. The Colonial Monument with bronze panels fitted.

The book *Clash of the Gods of War: Australian Artillery and the Firepower Lessons of the Great War*, a product of the Fire Power Seminar, was launched on 6 August 2020 at the Royal Military College Duntroon by Chief of Joint Operations, LTGEN Greg Bilton AO, CSC. A review by Peter Masters – July 23, 2020:

“There is a stellar cast of contributors to this book which is an edited collection of papers presented during the Firepower: Lessons from the Great War seminar series conducted by the Royal Australian Artillery Historical Company (RAAHC) [click the link for more information] – over the commemoration period 2014-2018.

Among the familiar names are Jean Beau, Roger Lee and Mark Lax, to name just a few.”

The book can be purchased at Big Sky Publishing, Phone 1300 364 611; Fax 02 8330 9221 Website: www.bigskypublishing.com.au

The RAAHC is embarking on an ambitious project to create a publication detailing the essential history of the Regiment. This publication is aimed at providing serving gunners of all ranks with a brief, highly accessible, and engaging source of information that presents the basic facts of the history of Australian artillery from the colonial period to well into the 21st century. A tentative title is *Essential History of Employment of Artillery for Australian Gunners*.

It is to be targeted at, and appeal to gunners, with an amateur to professional interest in their Regiment’s history, while meeting specific requirements. In particular the *Essential History* is intended to:

- Provide a resource for professional military education on the employment of Australian artillery.
- Be used to support School of Artillery programmed lessons on history.
- Support the maintenance of the Regiment’s esprit de corps.
- Complement and inform displays at the ‘to be built’ ‘Australian Army Artillery Museum’.
- Be designed to be of interest to and valued by a wider audience.

The *Essential History* will be a joint project involving the RAAHC, the Australian Army History Unit (AAHU) and the RRAA. The project is led by Nick Floyd and John Cox.

The RAAHC has just lost two of our Board Members who have been unable to continue for personal reasons. Brian Hall our Treasurer has done sterling work and will be sorely missed. Frank Colley’s contribution in risk assessment will be hard to replace. Both Brian and Frank have contributed to all aspects of Board activities over several years, and I, on behalf of the Board and the members, wish them all the

best for the future and extend thanks for their efforts.

We are seeking new blood for the Board and would especially welcome a volunteer Treasurer, although we would welcome anyone who has an interest in artillery or military history. The work is enjoyable and is not onerous (including that of Treasurer!). Please contact me at Chair@artilleryhistory.org or mobile 0417691741 if you have any interest. I am particularly interested in recruiting Warrant Officers and Senior NCO.

The RAAHC continues to actively promote the history and activities of the Regiment through the RAAHC Website and the periodic distribution of our journal Cannonball, our newsletter Airburst, and on our RAAHC Facebook site. The RAAHC website (<http://www.artilleryhistory.org>) has received a complete upgrade/redesign while still providing much valuable historical and current information on the RAA. It now has a capable search capability as well as feedback and information upload facilities. The upload facility enables all to add to these records by sending to us additional data on guns around Australia and biographies of Gunners. I thank Paul Camilleri Webmaster RAAHC and Graham Hampton for their continued development our electronic media and Kevin Browning and Peter Bruce for their input to the records.

We are still accepting orders for pavers to be included in Australia's Memorial Walk at North Fort. We have commenced a project to replace the information on the Monuments on the Walk to ensure that the Walk will continue to honour all those who have served in Colonial forces of Australia, the RAN, Australian Army, RAAF, the Australian Merchant Navy and their families and Allies.

The Sir Roden Cutler VC Artillery Research Centre at North Fort (the CRC) continues to operate under the management of Tim Ford; Tim can be contacted on 0408029295 and would love to hear from anyone with a few hours a week to donate as a volunteer. The CRC is open for

business although in accordance with NSW Health Corona Virus directives.

Thank you all for your continued support to the RAAHC.

Ian Ahearn



Chair RAAHC Board of Directors



Notice

Death Notices

In recent times, some of our Gunner community have died with little recognition from Gunner mates or RAA organisations large or small. A notification system to assist a more suitable farewell to departed comrades is proposed.

If you hear of the death of a gunner, let your unit / sub-unit or RAA organisation know. Contact details are available in the RAA Liaison Letter or in your State and unit organisations' publications and websites.

Please share funeral arrangements promptly; and as much detail of as you know.

If you are not a member of any unit, sub unit or RAA association, please pass the information to obituaries@artilleryhistory.org

Secretaries or responsible committee members are asked to consider forwarding any death notice to obituaries@artilleryhistory.org for wider distribution.

The RAAHC Obituary Resource Officer (Peter Bruce) can coordinate an obituary for the deceased gunner for inclusion in RAA publications and on the RAAHC website.

Please share, share and share – we are the Gunner family.

History & Heritage

WARRANT OFFICER HENRY GREEN OF THE NEW SOUTH WALES ARTILLERY

*Keith Glyde,
RAA Regimental History Committee*

On 7th August 1871 a former sergeant of the Royal Artillery (RA) resident in Australia, Henry Green, was attested into the New South Wales Artillery (NSWA) in the rank of Battery Sergeant Major (BSM).ⁱ In August 1876 he was promoted to Brigade Sergeant Major, and subsequently to Warrant Officer in June 1884.ⁱⁱ He remained in this rank, and the appointment of Brigade Sergeant Major, until he was placed on the Reserve of Officers of the New South Wales Military Forces with the honorary rank of Second Lieutenant in November 1896.ⁱⁱⁱ He was retired on 1st September 1902 and passed away on 30th May 1918 at 89 years of age.^{iv}

Henry Green remains an iconic figure in the Royal Australian Artillery (RAA) today, but this status is no modern invention. In 1896 on the eve of his retirement one newspaper heralded him as the "father" of the New South Wales Artillery, suggesting that his departure would be much lamented.^v Indeed it is reported that he was familiarly known in Victoria Barracks as "No 1" after his Regimental Number, 1.^{vi}

Henry Green was born on 24th January 1830 at Seaford, East Sussex. He enlisted in the Royal Artillery at nearby Eastbourne, East Sussex, on 1 December 1847, claiming his age as 18 years and his occupation as labourer. According to late 19th Century newspaper articles on his career he was initially posted to the 9th Battalion RA and five years later to the Royal Horse Artillery.^{vii} He was promoted to the rank of bombardier on 21st January 1854, and to corporal on 9th May 1855. His promotion to sergeant was made on 26th January 1856 and he remained in this rank

until his discharge from the British Army at Swansea, Wales, on 15th December 1868.

Although Cubis credits Green as a Crimea veteran, his participation in this campaign was restricted to conducting a draft of horses to the British forces in the Crimea, arriving at Balaclava after the Treaty of Paris was signed on 30 March 1856.^{viii} As his service fell after 9th September 1855, the date of the fall of Sevastopol, he was not awarded the Crimea Medal in consequence.^{ix} He served at Scutari before re-joining his unit in the United Kingdom after 5 months abroad.

*Although Cubis credits Green as a
Crimea veteran, his participation in
this campaign was restricted ...*

On 15th September 1857 he arrived in India, probably as a member of No 5 or No 6 Company, 13th Battalion RA. These companies deployed to India in September 1857 from the United Kingdom via Hong Kong to take part in operations during the great uprising known as the Mutiny and their service in 1857 conforms to that recorded for Green during the same period. In 1952 his son, Mr H J Green, wrote that Henry Green was one of those who knelt by the well at Cawnpore, scene of an atrocity, and swore vengeance.^x He was also at the relief of Lucknow although there is perhaps some confusion as the story was handed down over the years. It is recorded that Sergeant Green was at the relief of Lucknow under General Grant and that a force under General Havelock just beat Grant to Lucknow. They could hear bagpipes in the distance as Havelock's men were entering the city.^{xi} This statement must be incorrect as Havelock's force arrived at, and reinforced the garrison at the Residency, Lucknow, on 25th September 1857. The relieving force under Sir Colin Campbell, with Grant as his second in command, did not enter Lucknow until 17th November 1857, at which time the garrison sallied out of the Residency. The pipes he heard were no doubt those of the 78th Highlanders, which were part of Campbell's relief force.

In early 1860 Henry Green returned to the United Kingdom, and by 1861 was a member of the Coast Brigade RA at Cardiff, Wales. This unit was scattered at stations across the United Kingdom and the colonies overseas with the responsibility for maintaining the armament and stores of the fixed defences. He was discharged on a pension in December 1868 and later immigrated to New South Wales with his family, arriving in January 1871.^{xii}

Henry Green appears to have immediately enlisted in the NSW Volunteer Permanent Staff as a drill instructor to the NSW Volunteer Artillery and assisted in mounting heavy ordnance in the fortifications at South, Middle, and Georges Heads during March of that year. The raising of a battery of permanent artillery in NSW in August 1871 led to him becoming the senior non-commissioned officer of that force at its inception. There is some evidence that he was also active in the recruiting of the new battery.

The raising of a battery of permanent artillery in NSW in August 1871 ...

The majority of the one hundred or so enlisted members of this new battery had to be trained both as soldiers, and in their duties as gunners. When they were not installing armament or training in the fortifications the men were instructed in siege artillery work with rifled breech-loading 40-pounder guns on field carriages. For about 20 half-days per year the original battery was occupied in instruction and practice in field artillery drills with smoothbore guns and howitzers.^{xiii} Foot and arms drill were also a feature of their training.

For many years, the gunners were employed in the arming of the fortifications around Sydney, undertaking a substantial amount of repository work. This latter task entailed the movement to the batteries of ordnance weighing up to 25 tonnes from where it was landed ashore in Port Jackson by utilising wooden skidding, spars and sheer-legs, ropes, and pulley blocks, gins and capstans, and manpower. There were often considerable distances to be traversed across country in this manner. Once at the battery similar techniques were used to mount the ordnance on its carriage in the emplacement. It was both a science and an inherently dangerous procedure requiring a high level of skill, man-management, and teamwork.^{xiv} Henry Green's service in the Coast Brigade RA and his experience of such work in NSW earlier in 1871 would have proven invaluable in his new corps.

Henry Green's contribution to the training and development of the New South Wales Artillery cannot be overstated. He was the only senior member of the original battery with artillery experience. The first two officers, including the battery commander, appointed to the force were formerly of the Royal Marines. A third was Royal Navy, and the fourth was infantry. A similar pattern characterised later officer appointments. It was not until 1876 that the first Gunner officer was appointed to command the expanded force. Another was appointed in 1877 from the NSW Volunteer Artillery. There was thus initially no accumulated knowledge or experience in artillery-related subjects at command level.^{xv}

There is no doubt that Henry Green had a flair for instruction. In December 1871, the Captain of No 8, or Prince Alfred's Own Battery, Volunteer Artillery, presented Sergeant Major Green with a purse of 25 sovereigns, a considerable sum of money, out of respect and gratitude for his careful instruction in drill.^{xvi} His efforts had allowed this battery, formed in July of that year, to become proficient in only four months. A similar testimonial was given to Green during the same month by No 5 Battery, Volunteer Artillery. In 1880 Henry Green was appointed as the instructor to the Cadet Artillery, a position he retained until late 1883.^{xvii}

Modern accounts of his service invariably associate him with membership of A Battery. This is due to a relatively modern flawed acceptance of lineage ...

When the original battery was expanded to two, and later three batteries, Henry Green became the equivalent of today's Regimental Sergeant-Major. Modern accounts of his service invariably associate him with membership of A Battery. This is due to a relatively modern flawed acceptance of lineage that identified the original battery of NSW as being the direct predecessor of the current A Battery RAA. The original battery of the NSWA became, however, No 1 Battery on 22nd August 1876 and a new No 2 Battery was raised on this date. It is No 2 Battery that subsequently formed the nucleus of the permanent field battery later designated A Battery. Green was transferred to the Regimental Staff of the NSWA on 22nd August 1876 and thus never served with the direct predecessor of A Battery. There is no doubt, however, that he played a major role in shaping its progress as the Brigade Sergeant-Major, both by setting an

example with his high standard of conduct, and by his careful impartation of instruction to his subordinates

In 1885 he accompanied the contingent to the Sudan as a supernumerary in charge of the horses. It was the intention that he would return home to train the inevitable reinforcements required for a long campaign but in the event, he returned with the remainder of the contingent.

Nor did his interest and dedication to the Service end after retirement. In February 1897 he was a member of the official party that witnessed the shipping of the horses for the NSW Mounted Rifles contingent proceeding to England. He is also reported to have served temporarily as Riding Master during 1900-1901, training NSW Bushmen's Contingents to the Second Anglo-Boer War.

It is No 2 Battery that subsequently formed the nucleus of the permanent field battery later designated A Battery.

As testimony to his long and honourable service of 21 years in the Royal Artillery he was awarded the Army Long Service and Good Conduct Medal, denoting 18 years irreproachable service as an NCO or man in the Regular forces. After 25 years with the NSW Military Forces and subsequent, to his commissioning on the Reserve of Officers, he was awarded the Colonial Meritorious Service Medal (NSW), earned for 21 years meritorious service as a Warrant Officer or senior NCO.^{xviii}

The Australian Army, including the Royal Australian Artillery, has perpetuated his memory. A Norfolk Pine was planted in his honour at Victoria Barracks in 1952, and in 1975 his granddaughter presented the Army Museum of NSW with his cap, medals, a technical notebook, a personal record book and a photograph of him. Another photograph was displayed in the Sergeants Mess of 1st Field Regiment as early as 1962. A Field Battery established the Henry Green Room in its offices at Coral Lines, Holsworthy NSW. When this battery was relocated to Gallipoli Barracks, Enoggera, Queensland, the A Field Battery Association Inc established, and currently maintains, a history room there that is named for him.

Some aspects of his service are, however, often confused in modern writing, generally because of our misunderstanding of terminology and practices current in the 19th Century.

Much has been made for instance of the allocation of the regimental number 1 to Henry Green on his enlistment in the NSW. This has led to claims that he was the first non-commissioned officer of the Permanent Forces, and even the first soldier in the Australian Army.^{xix} On the contrary, Henry Green was allotted at least two regimental numbers during his service in NSW. The first of these, as yet unknown, was allotted on his enlistment as a drill instructor in the NSW Volunteer Permanent Staff in early 1871. The reason for this lies in the numbering practice for individual soldier's current in Henry Green's time. Unlike today's PMKeys number, or even its predecessor Army Number, a man's personal service number was strictly a regimental number, identifying him only within his unit. The same number might well have been borne by many other members of a particular defence force at the same time.

Much has been made for instance of the allocation of the regimental number 1 to Henry Green ...

Until the end of 1921 every unit, or corps, of the Australian colonial defences forces and the Australian Military Forces was responsible for issuing a man with a regimental number when he enlisted into that unit or corps.^{xx} The number was specific to that unit only, and all units started their numbering at '1' on their formation.^{xxi} If a man transferred to another unit or corps he received a new regimental number, the next available in the sequence already in use by his new unit. Officers were not allotted regimental numbers.

Under these circumstances the permanent Victorian Artillery, raised on 1st January 1871, would have issued the regimental number '1' to its first enlisted rank, who was probably but not necessarily, its sergeant major. It is possible that the sergeant-major of the permanent NSW Infantry, raised in 1871 at the same time as the NSW, also carried the number '1'.

Thus, Henry Green on enlistment in the NSW Volunteer Permanent Staff was allocated a sequential number in that group of individuals. It was certainly not the number '1', a non-commissioned permanent staff for the Volunteers having existed since at least 1860. When the NSW was raised it too followed this system, commencing their numbering at '1', which number was allotted to Henry Green. This was strictly a regimental number indicating only that Green was the first soldier to be enlisted into the NSW Artillery.

No significance or precedence in the wider Defence Force can therefore be attributed to the regimental number 1 allotted to Henry Green.

Greater confusion pertains to his actual rank on enlistment in the NSW. The Army Museum of NSW records for instance that in 1871 he was appointed in the NSW as Battery Sergeant Major with the rank of Staff Sergeant.^{xxii} Both Murray in 1903 and Cubis in 1978 record him as Staff Sergeant.^{xxiii}

No significance or precedence in the wider Defence Force can therefore be attributed to the regimental number 1 allotted to Henry Green.

Misunderstandings relating to Henry Green's rank are evident even before he enlisted in the NSW. *The Sydney Morning Herald* of 30th March 1871 for instance described him as formerly a sergeant-major in the Royal Artillery.^{xxiv} A similar statement was made in November 1896.^{xxv} These articles are in error in this regard as the Army Museum of NSW, in possession of his service record, established that he only held the rank of sergeant on discharge in 1868, having done so since 1855.^{xxvi} Indeed, a photograph on the Australian Artillery Association website of Henry Green taken prior to his discharge from the RA shows him wearing the rank badge of three chevrons, gun, and crown of a sergeant of artillery during that period.

The rank of Staff Sergeant did not exist in the Artillery when Henry Green joined the NSW, nor, apart from certain trades did it exist until well after Federation for the artillery in Australia. At that time, it was a rank restricted to the departmental corps, such as the Army Hospital Corps, Commissariat and Transport Corps, Army Service Corps, and Corps of Armourers. The title 'staff sergeant' was, however, used as a collective term across the fighting Arms to refer to senior non-commissioned officers (NCO) of all ranks on the headquarters, or staff, of a regiment, brigade, or battalion, and a squadron, battery, or company. In the artillery it encompassed senior NCO ranks such as brigade or battery sergeant-major and quartermaster sergeant, trumpet-major, assistant instructor in gunnery, paymaster sergeant, hospital sergeant, orderly room sergeant, and various trade related appointments, i.e., wheeler-sergeant, farrier-sergeant, etc. These were colloquially known as brigade or battery staff sergeants; in fact, the term 1st Class or 2nd Class

Staff Sergeant appears to have been employed to distinguish between various senior NCO grades.

Until the expansion of the rank of Warrant Officer to the whole of the Army in 1881, brigade and battery staff sergeants wore the same basic badge of rank; four chevrons surmounted by a gun and a crown. Brigade staff sergeants were distinguished from battery staff by additional tracing braid on the collar and cuff decoration of the jacket and a finer quality uniform cloth.

Henry Green, as a drill instructor to the Volunteer artillery in NSW prior to the formation of the NSW, was a senior NCO of the Artillery Branch of the Volunteer Permanent Staff and thus fell into the category of a 'staff sergeant'. In 1876 it is recorded that these men were to wear the uniform of a brigade staff sergeant without tracing braid, but with the three silver chevrons, gun, and crown of a sergeant.^{xxvii} The substantive rank of drill instructors of the NSW Volunteer Permanent Staff in 1871 was sergeant. It is possible that later writers have associated the rank badge he wore at the end of his career in the RA, and initially on joining the NSW Military Forces, with its more modern application as the rank distinction of a staff sergeant.^{xxviii}

...he only held the rank of sergeant on discharge in 1868,

The title Battery Sergeant-Major denoted a specific rank in 1871; it was not an appointment.^{xxix} It remained a senior non-commissioned officers' rank in the Australian colonial defence forces and the Australian Military Forces until late in 1917, at which time it became an appointment held by an individual with the rank of Warrant Officer Class Two, such as it remains today.^{xxx}

Henry Green was thus enlisted in the NSW Artillery with the rank of Battery Sergeant-Major. He never held the rank of Staff Sergeant, but by virtue of his appointments on the NSW Volunteer Permanent Staff and then the NSW Artillery until mid-1884, fell into a category of ranks and appointments generally referred to during that period as staff sergeants.

Henry Green well deserves our veneration. While his longevity of service, 46 years on the active list in both the British Army and the NSW Military Forces, was not uncommon in the Australian Colonies it is his contribution to the development of the permanent gunners of NSW that is important. It can have been no easy task

to recruit a unit of regular soldiers from scratch and provide basic and technical training in the extended absence of subject matter knowledge throughout the senior leadership team. Regular soldiering to British standards of discipline and conditions of service was not an attractive proposition for the average citizen of the Colonies and the unit struggled to recruit to their authorised establishment. Within the first dozen years of the regiment's existence nearly 400 men deserted, and ten years later the annual rate of desertion was still running at over 11 per cent, comparing unfavourably with the permanent artillery of other Australian colonies.

Nor was there unqualified external support for the corps. The NSWA was pilloried by politicians, the press and the public, the rate of military crime in its ranks was the subject of numerous tabling and discussion in Parliament, and reference to its officers in the press was generally concerned more with slights to reputation than martial ability.

When, however, the call to arms sounded in 1885, and again in 1899, the NSWA and its successor NSW Regiment of RAA demonstrated their capability by providing in each case a trained and fully manned sub-unit for operational service abroad. In South Africa in particular the Regiment's contribution compared favourably with other artillery units of the multinational force of which it formed a part. There is no doubt that considerable credit for development to this standard, particularly during the formative stages of the Regiment, was due to the leadership, technical knowledge, and personal standard of conduct of Henry Green.

Endnotes

ⁱ AWM: AWM1; 9/1, [Commonwealth and Pre-Federation records:] a) Nominal roll, NSW Artillery, 1871-1912. Regimental numbers 1-3980 [with gaps]; b) Nominal roll, Royal Australian Garrison Artillery, 2nd Military District, 1915-18. Regimental numbers 1-1858 [with gaps], 1871-1918.

ⁱⁱ LTCOL P L Murray, *Historical Record of the New South Wales Regiment of Royal Australian Artillery* (Sydney, 1903), p. 3. Murray's statement at p. 7 that Henry Green's promotion to Warrant Officer occurred in June 1885 appears to be in error as *The New South Wales Military Force 1887*, corrected to 22 April 1887, gives the date of his warrant as 5 June 1884.

ⁱⁱⁱ <<https://trove.nla.gov.au/newspaper/article/222829678/13286497>>, New South Wales Government Gazette Issue No 945 of 20 November 1896, effective 13 November 1896.

^{iv} *Commonwealth of Australia Gazette* Issue No 45 dated 19 September 1902.

^v

<<https://trove.nla.gov.au/newspaper/article/111033808>>, *Evening News* (Sydney NSW), 30 September 1896.

^{vi}

<<https://trove.nla.gov.au/newspaper/article/135772041>>, *Newcastle Morning Herald and Miners' Advocate* (NSW), 24 November 1896, p. 4.

^{vii}

Ibid, p. 4.

<<https://trove.nla.gov.au/newspaper/article/71222015>>, *Australian Town and Country Journal* (Sydney, NSW), 24 August 1895.

^{viii}

<<https://trove.nla.gov.au/newspaper/article/108858773>> *Evening News* (Sydney NSW), 17 February 1897. Richmond Cubis, *A History of 'A' Battery NSW Artillery (1871-1899)*, Royal Australian Artillery (1899-1971), Elizabethan Press, Sydney, 1978, p.17.

^{ix}

<https://www.armymuseumnsw.com.au/Henry_Green.php> accessed 24 October 2020. <<https://trove.nla.gov.au/newspaper/article/71222015>>, *Australian Town and Country Journal* (Sydney, NSW), 24 August 1895.

^x <https://www.artilleryhistory.org/gunners_past_and_present/gunners_of_renown_and_gunners_tales/gunners_of_renown/chapter_1/documents/bio_green_henry.pdf>

^{xi} Ibid.

^{xii} Described as a Chelsea Pensioner in the NSW *Blue Book*, editions of 1880 to 1883 inclusive relating to the appointment of an instructor to the Cadet Artillery. All British Army pensions were administered and paid by the Royal Hospital Chelsea until 1955, Green being known as an Out-Pensioner

^{xiii} *History of the Origin and Formation of the Field Artillery of New South Wales*, no author name given, printed by H Hooper, Paddington, Sydney, 1895, p. 1.

^{xiv} In March 1871 the experienced former RA sergeant in charge of such a gun mounting party at Georges Head that included Henry Green was mortally injured when a 96-hundredweight (4.877-tonnes) gun rolled on him. The same techniques and appliances were still in use until after the Second World War.

^{xv} In early 1874 two-thirds of the other rank establishment of the battery petitioned the NSW Parliament for permission to resign before the expiration of their contract of enlistment, in part citing their officers' lack of qualifications and the men's subsequent loss of confidence in and respect for them. See <<https://trove.nla.gov.au/newspaper/article/107139226>>, *Evening News* (Sydney NSW), 13 March 1874.

^{xvi}

<<https://trove.nla.gov.au/newspaper/article/60879614>>, *Empire* (Sydney NSW), 30 December 1871.

^{xvii} The appointment had been instituted on 1 December 1878 but 1880 is the first year that the

Brigade Sergeant Major of the NSWA is recorded as holding the position.

^{xviii} *New South Wales Government Gazette* Issue No 1078 dated 31 December 1897. A member in possession of the Meritorious Service Medal was obliged to forgo the wearing of the Army Long Service and Good Conduct Medal. It appears that Henry Green continued to wear both awards, probably because the earlier medal related to his RA service, the later medal to service in NSW.

^{xix}

<http://www.bwm.org.au/documents/A_Battery_History.pdf>. The initial 'T' has not been identified although in one modern account it appears as Thomas. All references to this individual, including the *New South Wales Gazette* notice regarding his promotion to Honorary 2nd Lieutenant, refer simply to Henry Green and there is no evidence of a middle name.

^{xx} The term 'corps' is used in accordance with Regulations under the Volunteer Force Regulation Act of 1867, New South Wales, which defined a corps as a united body consisting of two or more batteries or companies formed into a consolidated regiment, as also a battery or company formed separately.

^{xxi} See <http://www.samrainc.org/Pdf/Whats_In_a_Number.pdf> for a fuller description of the systems of soldier numbering used by the Australian Army and its predecessors.

^{xxii}

<https://www.armymuseumnsw.com.au/Henry_Green.php>.

^{xxiii} Murray (1903, p. 1). Cubis (1978, p. 17).

^{xxiv}

<<https://trove.nla.gov.au/newspaper/article/28418571>> *The Sydney Morning Herald* of 30 March 1871.

^{xxv}

<<https://trove.nla.gov.au/newspaper/article/28418571>>, *The Sydney Morning Herald* of 30 March 1871.

<<https://trove.nla.gov.au/newspaper/article/135772041>>, *Newcastle Morning Herald and Miners' Advocate* (NSW), 24 November 1896, p. 4.

^{xxvi}

<https://www.armymuseumnsw.com.au/Henry_Green.php>.

^{xxvii} *NSW Clothing and Equipment Regulations* 1876, p. 6. The only visual difference between the uniform of a Permanent Staff sergeant drill instructor to the Volunteer Artillery, and a sergeant of the latter corps was a silver embroidered grenade worn on the shoulder straps by the former, and the finer material of his uniform. The Volunteer Artillery sergeants wore the number of their battery on their shoulder straps.

^{xxviii} Until 1881 all senior non-commissioned officers of artillery wore a gun and crown above their three- or four-bar chevrons as appropriate to their rank. In this year the crown was abolished from the badge of rank of sergeants, and the badge of rank of battery staff sergeants became three chevrons with a gun and crown above.

^{xxix} *Royal Warrant for the Pay and Promotion, Non-Effective Pay, and Allowances of Her Majesty's British Forces serving elsewhere than in India, Part I – Pay, Division Two – Non-Commissioned Officers and Men, Section III*, editions dated February 3rd, 1866, and 27th September 1870. *The Queen's Regulations and Orders for the Army, Part I*, War Office, 1889, Section VII, para 7.

^{xxx} NAA: A1174; 20.21/6146, *The Defence Act 1903-1912 - Regulations and Standing Orders for the Military Forces of the Commonwealth of Australia* 1908, para 144. Military Order 516/1917 of 17 November 1917.



THE SONG OF THE GUNS

*Captain Gilbert Frankau,
Adjutant 107th Artillery Brigade,
Royal Field Artillery, Western Front 1915*

“THE Song of the Guns” was written under what are probably the most remarkable conditions in which a poem has ever been composed. The author, who is now serving in Flanders, was present at the Battle of Loos and during a lull in the fighting—when the gunners who had been sleepless for five nights were resting like tired dogs under their guns—he jotted down the main theme of the poem. After the battle the Artillery Brigade to which he was attached was ordered to Ypres and it was during the long trench warfare in this district, within sight of the ruined tower of Ypres Cathedral, that the poem was finally completed. The last three verses were written at midnight in Brigade Headquarters with the German shells screaming over into the ruined town.

As the gunners swing down to unkey,
For the trails sweeping half-circle-right,
For the six breech-blocks clashing as one
To a target viewed clear on the sight—
Gray masses the shells search and tear
Into fragments that bunch as they run—
For the hour of the red battle-harvest
The dream of the slaves of the gun!

We have bartered our souls to the guns;
Every fibre of body and brain
Have we trained to them, chained to them.
Serfs?

Aye! but proud of the weight of our
chain—
Of our backs that are bowed to their work-
ings,

To hide them and guard and disguise—
Of our ears that are deafened with service,
Of hands that are scarred, and of eyes
Grown hawklike with marking their prey—
Of wings that are slashed as with swords
When we hover, the turn of a blade
From the death that is sweet to our lords.

By the ears and the eyes and the brain,
By the limbs and the hands and the wings,
We are slaves to our masters the guns—
But their slaves are the masters of kings!

A Song of the Guns in Flanders

By GILBERT FRANKAU, R.F.A.

THE VOICE OF THE SLAVES

*We are the slaves of the guns,
Serfs to the dominant things;
Ours are the eyes and the ears,
And the brains of their messagings.*

Ours are the hands that unleash
The blind gods that raven by night,
The lords of the terror at dawn
When the landmarks are blotted from sight
By the thick curdled churning of smoke—
When the lost trenches crumble and spout
Into loud roaring fountains of flame;
Till, their prison walls down, with a shout
And a cheer, ordered line after line,
Black specks on the barrage of gray
That we lift—as they leap—to the clock,
Our infantry storm to the fray.

These are our masters, the slim
Grim muzzles that irk in the pit;
That chafe for the rushing of wheels,
For the teams plunging madly to bit

Headquarters

A league and a league from the trenches,
from the traversed maze of the lines—
Where daylong the sniper watches and day-
long the bullet whines,
And the cratered earth is in travail with
mines and with countermines—

Here, where haply some woman dreamed
(are those her roses that bloom
In the garden beyond the windows of my lit-
tered working-room?),
We have decked the map for our masters as
a bride is decked for the groom.

Here, on each numbered lettered square—
cross-road and mound and wire,
Loophole, redoubt and emplacement, are the
targets their mouths desire;
Gay with purples and browns and blues, have
we traced them their arcs of fire.

And ever the type-keys clatter; and ever our
keen wires bring
Word from the watchers a-crouch below,
word from the watchers a-wing;
And ever we hear the distant growl of our
hid guns thundering:

Hear it hardly, and turn again to our maps,
 where the trench-lines crawl,
 Red on the gray and each with a sign for the
 ranging shrapnel's fall—
 Snakes that our masters shall scotch at dawn,
 as is written here on the wall.

For the weeks of our waiting draw to a close
 * * * There is scarcely a leaf
 astir,
 In the garden beyond my windows where the
 twilight shadows blurr
 The blaze of some woman's roses * * *
 "Bombardment orders, sir."

There is shrapnel bursting a mile in front on
 the road that the guns must take:
 (You are nervous, you are thoughtful, you
 are shifting in your seat,
 As you watch the ragged feathers flicker
 orange flame and break)
 But the teams are pulling steady down the
 battered village street.

You have shod them cold, and their coats are
 long, and their bellies gray with the
 mud;
 They have done with gloss and polish, but
 the fighting heart's unbroke;
 We, who saw them hobbling after us down
 white roads flecked with blood,
 Patient, wondering why we left them, till
 we lost them in the smoke:

Who have felt them shiver between our
 knees, when the shells rain black from
 the skies;
 When the bursting terrors find us and the
 lines stampede as one:
 Who have watched the pierced limbs quiver
 and the pain in stricken eyes,—
 Know the worth of humble servants, fool-
 ish—faithful to their guns!

Gun-Teams

Their rugs are sodden, their heads are down,
 their tails are turned to the storm,
 Would you know them, you that groomed
 them in the sleek fat days of peace—
 When the tiles rang to their pawings in the
 lighted stalls, and warm—
 Now the foul clay cakes on britching strap
 and clogs the quick-release?

The blown rain stings, there is never a star,
 the tracks are rivers of slime.
 (You must harness-up by guesswork with
 a failing torch for light,
 Instep deep in unmade standings, for it's
 active-service time;
 And our resting weeks are over, and we
 move the guns to-night.)

The iron tyres slither, the traces sag; their
 blind hooves stumble and slide;
 They are war-worn, they are weary, soaked
 with sweat and sopped with rain;
 (You must hold them, you must help them,
 swing your lead and centre wide
 Where the greasy granite pavé peters out
 to squelching drain.)

Eyes in the Air

Our guns are a league behind us, our target
 a mile below,
 And there's never a cloud to blind us from
 the haunts of our lurking foe—
 Sunk pit whence his shrapnel tore us, sup-
 port-trench crest-concealed,
 As clear as the charts before us, his ram-
 parts lie revealed.

His panicked watchers spy us, a droning
 threat in the void,
 Their whistling shells outfly us—puff upon
 puff, deployed
 Across the green beneath us, across the flank-
 ing gray,
 In fume and fire to sheath us and balk us of
 our prey.

Below, beyond, above her,
 Their iron web is spun!
 Flicked but unsnared we hover,
 Edged planes against the sun:
 Eyes in the air above his lair,
 The hawks that guide the gun!

No word from earth may reach us, save
 white against the ground,
 The strips outspread to teach us whose ears
 are deaf to sound:

(The hawks that guide the gun!
 Eyes in the air above his lair,
 Edged planes against the sun:
 Flicked but unsnared we hover,
 Their iron web is spun!
 Below, beyond, above her,
 Their iron web is spun!
 Flicked but unsnared we hover,
 Edged planes against the sun:
 Eyes in the air above his lair,
 The hawks that guide the gun!)

But down the winds that sear us, athwart our engine's shriek,
 We send—and know they hear us, the ranging guns we speak.
 Our visored eyeballs show us their answering pennant, broke
 Eight thousand feet below us, a whorl of flame stabbed smoke—
 The burst that hangs to guide us, while numbed gloved fingers tap
 From wireless key beside us the circles of the map.

Line—target—short or over—
 Comes, plain as clock hands run,
 Word from the birds that hover,
 Unblinded, tail to sun—
 Word out of air to range them fair,
 From hawks that guide the gun!

Your flying shells have failed you, your landward guns are dumb;
 Since earth hath naught availed you, these skies be open! Come,
 Where, wild to meet and mate you, flame in their beaks for breath,
 Black doves! the white hawks wait you on the wind-tossed boughs of death.
 These boughs be cold without you, our hearts are hot for this,

That call his hand to the answering key and his mouth to the microphone.

For always the laid guns fret
 On the words that his mouth shall utter,
 When rifle and maxim stutter
 And the rockets volley to starward from the spurting parapet;
 And always his ear must hark
 To the voices out of the dark,—
 For the whisper over the wire,
 From the bombed and the battered trenches where the wounded moan in the mire.
 For a sign to waken the thunder
 Which shatters the night in sunder
 With the flash of the leaping muzzles and the beat of battery-fire.

The Observers

Ere the last light that leaps the night has hung and shone and died,
 While yet the breast-high fog of dawn is swathed about the plain,
 By hedge and track our slaves go back, the waning stars for guide—
 Eyes of our mouths, the mists have cleared, the guns would speak again!

Faint on the ear that strains to hear, their orders trickle down
 "Degrees—twelve—left of zero line—corrector one three eight—
 Three thousand" . . . Shift our trails and lift the muzzles that shall drown
 The rifle's idle chatter when our sendings detonate.

Sending or still, these serve our will; the hidden eyes that mark
 From gutted farm, from laddered tree that scans the furrowed slope,
 From coigns of slag whose pit-props sag on burrowed ways and dark,
 In open trench where sandbags hold the steady periscope.

Signals

The hot wax drips from the flares
 On the scrawled pink forms that litter
 The bench where he sits; the glitter
 Of stars is framed by the sand-bags atop of the dug-out stairs.
 And the lagging watch hands creep;
 And his cloaked mates murmur in sleep—
 Forms he can wake with a kick—
 And he hears, as he plays with the pressel-switch, the strapper receiver click
 On his ear that listens, listens;
 And the candle-flicker glistens
 On the rounded brass of the switch-board where the red wires cluster thick.
 Wires from the earth, from the air;
 Wires that whisper and chatter
 At night, when the trench-rats patter
 And nibble among the rations and scuttle back to their lair;
 Wires that are never at rest—
 For the linesmen tap them and test,
 And ever they tremble with tone:—
 And he knows from a hundred signals the buzzing call of his own,
 The breaks and the vibrant stresses,—
 The Z, and the G, and the Esses,

Careless they give while yet they live; the dead we tasked too sore
 Bear witness we were naught begrudged of riches or of youth;
 Careless they gave, across their grave our calling salvos roar,
 And those we maimed come back to us in proof our dead speak truth!

Waking, they know the instant foe, the bullets phutting by,
The blurring lens, the sodden map, the wires that leak or break!

Sleeping, they dream of shells that scream
adown a sunless sky—
And the splinters patter round them in
their dug-outs as they wake.

Not theirs, the wet glad bayonet, the red and
racing hoop,
The rush that hears the bombing-post with
knife and hand grenade;

Not theirs the zest when, steel to breast, the
last survivors cower,—
Yet can ye hold the ground ye won, save
these be there to aid?

These, that observe the shells far swerve,
these of the quiet voice,
That bids "go on," repeats the range, corrects
for fuse or line...

Though dour the task their masters ask, what
room for thought or choice?
This is ours by right of service, heedless
gift of youthful eyne!

These, that observe the shells far swerve,
these of the quiet voice,
That bids "go on," repeats the range, corrects
for fuse or line...

Though dour the task their masters ask, what
room for thought or choice?
This is ours by right of service, heedless
gift of youthful eyne!

*To the loader kneeling 'twixt trail and wheel
from the shops where the steam lathes
run—*

Theres' a lone mule braying against the line
where the mud cakes fetlock deep!

There's a lone soul humming a hint of a song
in the barn where the drivers sleep;

And I hear the pash of the orderly's horse as
he canters him down the lane—

Another cog in the gun-machine, a link in the
selfsame chain.

I am only a cog in a giant machine, but a
vital link in the chain;

And the Captain has sent from the wagon-line
to fill his wagons again;—

*From wagon-limber to gunpit dump; from
loader's forearm at breach,*

*To the working party that melts away when
the shrapnel bullets screech.*

So the restless section pulls out once more in
column of route from the right,

At the tail of a blood-red afternoon; so the
flux of another night

Bears back the wagons we fill at dawn to the
sleeping column again...

Cog on cog in the gun-machine, link on link
in the chain!

Ammunition Column

*I am only a cog in a giant machine, a link of
an endless chain:—*

*And the rounds are drawn, and the rounds
are fired, and the empties return
again;*

*Railroad, lorry and limber, battery, column
and park;*

*To the shelf where the set fuse waits the
breach, from the quay where the shells
embark—*

We have watered and fed, and eaten our
beef; the long dull day drags by,

As I sit here watching our "Archibalds"
strafing an empty sky;

Puff and flash on the far off blue round the
speck one guesses the plane—

Smoke and spark of the gun-machine that is
fed by the endless chain.

I am only a cog in a giant machine, a little
link in the chain,

Waiting a word from the wagon-lines that
the guns are hungry again:—

*Column-wagon to battery-wagon, and bat-
tery-wagon to gun;*

The Voice of the Guns

We are the guns, and your masters? Saw ye
our flashes?

Heard ye the scream of our shells in the night,
and the shuddering crashes?

Saw ye our work by the roadside, the gray
wounded lying,

Moaning to God that He made them—the
maimed and the dying;

Husbands or sons,
Fathers or lovers, we break them! We are
the guns!

We are the guns and ye serve us! Dare ye
grow weary,

Steadfast at night-time at noon-time; or wak-
ing when dawn winds blow dreary,

Over the fields and the flats and the reeds of
the barrier water

To wait on the hour of our choosing, the min-
ute decided for slaughter?

Swift the clock runs;
Yea, to the ultimate second. Stand to your
guns!

We are the guns and we need you! Here in
the timbered

Pits that are screened by the crest and the
copse where at dusk ye unlimbered,

Pits that one found us—and finding, gave life
 (Did he flinch from the giving?);
 Laboured by moonlight when wraith of the
 dead brooded yet o'er the living,
 Ere, with the sun's
 Rising the sorrowful spirit abandoned its
 guns.

Who but the guns shall avenge him? Strip
 us for action!
 Load us and lay to the centremost hair of the
 dial-sight's refraction.
 Set your quick hands to our levers to compass
 the sped soul's assailing;
 Brace your taut limbs to the shock when the
 thrust of the barrel recoiling
 Deafens and stuns!
 Vengeance is ours for our servants: trust
 ye the guns!

Least of our bond-slaves or greatest, grudge
 ye the burden?
 Hard is this service of ours which has only
 our service for guerdon:
 Grow the limbs lax, and unsteady the hands,
 which aforesaid we trusted;
 Flawed, the clear crystal of sight; and the
 clean steel of hardihood rusted?

Wherefore—and unto ye only—power hath
 been given;
 Yea! beyond man, over men, over desolate
 cities and riven;
 Yea! beyond space, over earth and the seas
 and the skies high dominions;
 Yea! beyond time, over Hell and the fiends
 and the Death-angel's pinions!
 Vigilant ones,
 Loose them, and shatter, and spare not. We
 are the guns.

Flanders.
 Winter, 1915.

Dominant ones.
 Are we not trued serfs and proven—true to
 our guns?

*Ye are the guns! Are we worthy! Shall not
 these speak for us,
 Out of the woods where the torn trees are
 slashed with the vain bolts that seek
 for us,
 Thunder of batteries fring in unison, swish
 of shell fighting
 Hissing that rushes to silence and breaks to
 the thud of slighting;
 Death that outruns
 Horseman and foot? Are we justified?
 Answer, O guns!*

Yea! by your works are ye justified—toil
 unrelieved;
 Manifold labours, co-ordinate each to the
 sending achieved;
 Discipline, not of the fact, but the soul, un-
 remitting, unfeigned;
 Tortures unholy (— — — —) maiming,
 known, faced, and disdained;
 Courage that shuns
 Only foolhardiness; even by these are ye
 worthy your guns!



THE RESTORATION OF “THE WERRIBEE GUN”

12-Pounder 8 cwt RBL (Armstrong) Gun serial number 370

By Allan Sterling, JP. Copyright 2020

Background

For many years the Australian War Memorial (AWM) had been interested in acquiring a 4.5 inch howitzer for its collection. The howitzer and 18-pounder gun had been the main weapons of the Australian Field Artillery in World War I. Only two 4.5 inch howitzers were known to exist in Australia, and both were in the collection of the Royal Australian Artillery Historical Company (RAAHC).

The AWM had in its collection the remnants of a 12-pounder Rifled Breech Loading Gun, serial number 370. This gun was one of six purchased by the Victorian Government in 1864 for use by the Victorian Volunteer Artillery. They were replaced by new 12-pounder breech loading guns in 1885 and placed in storage. In 1889 the carriage was slightly modified and the guns were issued to the Victorian Horse

Artillery. Gun 370 was one of the guns used by the Werribee Half Battery between 1889 and 1893. Sometime around 1898, the guns were disposed of and eventually gun 370 was placed on display at Lake Park, Creswick.



Bill Stuart and Bill Knight, volunteer carpenters with the RAAHC assist with the off-loading of the barrel No 370 at North Head, 2012. Photo: K. Browning

By 1940 it was in a state of disrepair and handed over to the School of Forestry at Creswick for repair and display. This work was not undertaken and sometime between 1962 and 1964 it came into the possession of a private collector who intended to restore it. Again, the work was not carried out and in 1984 the AWM purchased the gun. They funded a complete set of engineer's drawings and production of a set of wheels, axle and breech block. Work ceased when they became aware of a fully restored gun, serial number 367, and purchased it.

In 2012 the RAAHC exchanged a 4.5 inch howitzer and limber for gun number 370. The release of gun 370 required Ministerial Approval which was readily given. The AWM received a significant item of Australian military history and the RAAHC received the remnants of a gun that represented a significant development in artillery - breech loading, rifled barrel firing a conical projectile and with an on-carriage traversing capability – and associated with the Victorian Horse Artillery¹.

The Restoration

I had been interested in the future of this gun since 2003 and had originally approached the AWM and Parks Victoria Werribee Park, about the future of the gun and the possibility of returning the gun to Werribee and restoring it. The AWM sent me their curatorial guidelines for the restoration of Armstrong 370, but no further progress could be made at that time as Parks Victoria did not have any areas suitable to conduct a restoration or any personnel. In 2014 while searching for a suitable period gun which could be utilised by the newly formed Werribee Half Battery, I became aware that the RAAHC had gun 370. Their Collection Manager, Kevin Browning, advised me that there were no funds to restore it and whilst they had the volunteers capable of doing the timber work; the timber they had was ironbark and totally unsuitable due to its weight and hardness.

I offered to try to source a suitable timber and secure funding for it. Discussions with various custom timber suppliers revealed that the only timber available in the size required was Golden

Cypress, which is milled in Victoria from old Golden Cypress removed from country properties by Golden Cypress Timber Sales. Kevin provided details of the quantity and dimensions of timber required in July 2015. The cost of such timber would be \$1760. I approached the Royal Australian Artillery Association Victoria and met with LTCOL Jason Cooke and MAJ Neil Hamer (Ret), then secretary and president respectively of the Association, with the restoration proposal. This was taken to their committee and a \$2000 grant was approved.

In August 2015, my wife Maryanne and I met with LTCOL Jason Cooke at the Werribee RSL. At this meeting LTCOL Cooke, in his role as a Director of the RAAHC, offered me appointment as the project manager for the restoration. I was initially hesitant as the restoration was being carried out in Sydney, but he assured me that as it was a management role it could be done from Melbourne by way of e-mail and telephone. After some consideration and the support of my wife, I advised him the next day of my acceptance of his nomination and I was duly appointed by the Board.



Chainsaw wood shaping completed. Note the original ironbark beam which was to be used in the background, Sept. 2016

Significant additional funds were still required. Quite a few metal components had to be fabricated, the most significant and costly of these being the trail plates and towing eye. There



Arrival of the timber at North Head, February 2016. In the background note the barrel, axle, and one of the wheels. Photo: K. Browning

was a problem finding a manufacturer willing and capable of doing the work and at a reasonable price. Commercial enquiries were met with an inability to do the job, no time or interest in doing so or extremely expensive quotes of tens of thousands of dollars. My enquiries with various blacksmiths in Melbourne led me to Stephen Nicoll, recommended as the only blacksmith capable of doing the job, as he had access to a steam hammer which he had restored and electrified. Steve agreed to take on the job and at an affordable price.

All up it was estimated that we required a \$10,000 budget to complete the restoration and so I sought an additional \$8000 through the Federal Governments Building Stronger Communities Grant scheme with the full support of local Lalor Federal member Joanne Ryan and her office in April 2016. This grant application was successful, the RAAHC being notified in June 2016 and this provided sufficient funds to complete the structural work. The RAAHC Board had previously agreed to a request to provide the gun on long term loan to the Werribee Half Battery which was critical to the relevance and success of the grant. The gun would remain on loan until required for display at the proposed Australian Army Artillery Museum at Puckapunyal.

The Golden Cypress timber had been cut to the size specified and delivered direct to North Head, Sydney in February 2016. With the support of the Sydney Harbour Federation Trust, volunteers at North Head then commenced work. All the timber work had to be rebuilt, except wheels, and a quantity of the metal pieces fabricated. The first challenge facing chief carpenter Bill Stuart was how to cut and shape the huge 3 metre long Cypress beam. The restoration of the Hastings 40 pounder Armstrong had used a huge bandsaw to do the shaping, however my enquiries were unable to locate any company with a saw capable of doing the job, including boatbuilding companies in



Trail plates being fitted, Nov. 2017.

Tasmania. Bill Stuart suggested using somebody very experienced with wood shaping using a chainsaw. Whilst initially aghast at the suggestion, I recall having seen carvings done with chainsaws. Bill knew such an expert chainsaw exponent, David Taylor, who was quite confident of being able to perform the work required and was duly engaged to do so. Once reduced to the general shape the accurate finish could be obtained using electric planes and other hand tools.

In Melbourne, blacksmith Steve produced all of the blacksmith forged pieces required, the most significant of those being the trail plates and towing eye. Steve found this quite a challenge due to the large size and weight of the pieces but with perseverance and determination he produced the required pieces which were fitted and came together beautifully on the wooden trail. Producing the trail plates was even more challenging because he was often working from templates sent down by Bill. With respect to other pieces and the general construction of the gun carriage, it soon became apparent the engineer drawings were not accurate but a visit by Kevin and Bill to the AWM allowed necessary checks to be made. In other instances, reference had to be made to sections of the original plans which we had, to resolve the inaccuracies, inconsistencies and contradictions in the engineer drawings supplied to the AWM.



Gun carriage takes shape, August 2018

A simple and obvious example here relates to the traversing lever. There is a forked section at one end which is meant to fit over the azimuth nut which moves along the traversing screw. The width of the fork into which the azimuth nut fitted was less than the dimensions of the nut. Reference to the original plans confirmed what was obvious and consistent with the dimensions of the azimuth traversing nut.

Other volunteers at North Head assisted with the metal work for example the axle made for the AWM was too long and had to be reduced, using a cut and shunt method. Bill also found some spare time at home to produce all of the leather work and the bucket. He also roughed out the trail spike using a piece of naturally shaped fig timber, which Steve Nicoll completed in Melbourne. The engineering team at North Head also manufactured all the non-blacksmithing structural steel work required. It is not possible here to clearly show the expertise all these volunteers have provided but the tolerances they had to work to were very fine in many places and they met everyone. Special credit and thanks must be given to Bill Stuart, the carpenter craftsmen with Steve Hassett, engineer, who built the carriage and to blacksmith Stephen Nicoll for the major pieces he crafted in Victoria.



View of the breech, elevation and traversing mechanism with azimuth nut.

There was pressure on Bill Stuart and the team in Sydney to complete the structural restoration as the shed being used for the work was required by the Sydney Harbour Federation Trust. The building was supposed to be vacated by the end of 2018, however we were able to gain an extension to allow the structural work to be completed. As project manager, I was aware of this situation and looked for a site in Werribee to store the gun and complete the surface finishing. In December 2018 I became aware that the Werribee RSL subbranch had a storage facility and approached the memorabilia officer Merv Clifton on this matter. He took this to the committee and the committee consented to 370 being stored there.



Steve Hassett and Bill Stuart fit the barrel to check their work, Sept. 2018

The next challenge was to transport the Armstrong to Melbourne. The Fox Family Foundation had been major supporters of the RAAHC 18 pounder project, so I made a formal approach to them to assist with transport. Within 24 hours of my written request being received, it went before Lindsay Fox and the following day I received a call from the State Transport Manager saying that Linfox transport would provide transport for the gun from Sydney pro bono. We are very thankful to Lindsay Fox, the Fox Family Group and Linfox transport for their support.

On 29 April 2019 a suitable heavy rigid Linfox (Bevchain) truck with a large rear lifting platform was dispatched to Sydney and the following day the Werribee Gun was loaded onto the truck and safely secured for transport back to Werribee. On 1 May the Werribee gun

arrived back in Werribee after an absence of 126 years.



370 safely stowed arrives in Werribee, 1 May 2019



370 safely unloaded.

It was now the task of the Werribee Half Battery Living History Group under the guidance of the Project Manager, to complete the restoration which meant removing the paint from the wheels, staining and varnishing the carriage and preserving the metal work.

The first step in finishing the carriage was to remove the pink primer from the wheels. This was a massive and difficult job as there was a thick layer of pink primer. Initially after using a lot of paint stripper with wire brushes and scrapers the bulk of primer was removed. The next step was sanding the remaining primer off using orbital and detail sanders. The lesson learnt here for everyone is never ever paint any wooden surface that might conceivably be varnished and stained at some stage in the future! The wheels and hubs were found to be made of Jarrah, with Spotted Gum used for the spokes. This meant that the overall finish of the gun would be Jarrah stained. Once the sanding was completed the wheels and hubs needed to be



WHB members Ben Cook, Carl Sarelius, and Sam Jaeger hard at work on paint stripping. Steve Nicoll at the breech

stained in Jarrah to cover the primer remaining in the grain of the wood which is impossible to remove without removing a large amount of timber. During this time blacksmith Steve Nichol forged the rammer cleat on site with his portable forge and anvil to exactly fit the contour of the rear of the trail. The staining and varnishing were completed by mid-November 2019 and in late November the Werribee Half Battery attended the venue for promotional pictures with the gun. However, by this time restoration funds were exhausted and additional funding estimated at \$4000 was still required to complete the project, significant items remaining being the trail spike, drag shoe, commemorative plaque(s), completion of the spare tangent sight



Steve Nicoll at his anvil.

The next challenge was the improvement of external appearance of the barrel and cleaning

the interior. The main problem with the external barrel finishing was an extremely inconsistent surface. Part of the patina was the grey appearance of aged iron; other sections were rusted; there were significant dings and pitting and other sections had a black appearance which was either old paint or some type of blueing. It is very difficult to get uniform satisfactory results with such an inconsistent surface. Our first attempt was to use a rust converter, which in theory and in testing, converted rust to a black phosphate finish. However, when we attempted this it was not at all successful, probably due to the condition of the surface or the fact that treatment is designed for steel not iron. Ideally, we could have gone for a browned finish but with the variability of the surface the whole



Michael and Roman Absolon with Allan Sterling at the completion of the staining, 5 Nov 2019

barrel would have to be removed, cleaned and then browned. We did not have the lifting facilities to remove the barrel from the carriage and even after cleaning and browning, there was no guarantee that the process would be successful. It would also have added significant expense to the restoration. The only viable alternative was to paint the barrel in flat or satin black. The Deniliquin Armstrong Gun number 368, one of its sisters, has its barrel painted and presents well. The Australian War Memorial's gun number 367 has a pleasing browned finish but was in very good condition to start with. Painting, however, presented a major problem. Spray-painting is the ideal way to get a good finish but as we could not remove the barrel from the carriage the risk of overspray onto an

already finished gun carriage is great and so was not a viable way to go. Matt Heddle, an artilleryist from the Geelong Military Re-enactment Group suggested we look at stove paint, which not only is high temperature resistant, important for a barrel which may be fired, but apparently can be applied successfully with a brush. Online research revealed that there was a pot belly stove paint available which will brush on and not leave brushstrokes. Some of this American manufactured, toluene-based paint, was obtained, experimented with and found to produce excellent results. A small section of the barrel was tested and very pleasing results were obtained. The decision being made, the barrel was painted over two sessions with excellent results. In performing such a paint job, it is also important it is done on cool days, using the best quality brushes available. A sponge was used to push the paint sparingly into those areas where impressions were to be found, for example the trunnion lettering and the coat of arms on the top of the barrel. The breech screw and hammer were not painted as they already had a suitable finish.



Presentation ready, rear view, 8 July 2020



James Henderson and Benjamin Casey demonstrate the use of the axle seats

The barrel interior was in extremely poor condition. A Melbourne brush manufacturer was located who advised on and produced a custom steel chimney flue brush of the correct diameter. This resembled an overgrown version of the normal coiled wire brush one would use in a rifle. We also made disposable lambswool covers which could be used to mop out the barrel. Our first attempts at using the wire brush bought out a mass of flaking rusted iron. Gradually after repeated runs and a lot of WD 40, the barrel has cleaned out fairly well. My thanks to Michael and Roman Absolon for their

persistence and expertise in this operation. The rifling is generally intact. There is one section of the barrel where it is obvious that paper or other material had been lodged while it was on display in the park and water had accumulated there resulting in significant pitting and the destruction of the rifling in that area. However, the barrel will be quite safe for blank firing.

At the time of writing in late August 2020, the next challenge is to make the gun available for public display and utilisation by the Werribee Half Battery. The most appropriate location for display is Werribee Park, ideally the farm area where suitable carriage sheds exist. This is in an area immediately above the Werribee Golf Course originally called Military Flat, where artillery and small arms training was carried out by the Half Battery in the 1890s. This matter will be subject to discussions with Parks Victoria.

It is intended that the Werribee Gun will be blank firing and can be deployed by the Werribee Half Battery for ceremonial and training purposes. Blank firing requires the construction of a custom powder cartridge which has already been produced and a mechanical ignition system, yet to be produced, as friction tubes are not available.

When the Corona virus situation is resolved we look forward to officially unveiling the Werribee Gun.

My sincere thanks as Project Manager, to all those involved in realising the long-awaited restoration of this significant piece of Australia's artillery history.



Presentation ready, front view, 8 July 2020

Technical details

Type: Armstrong 12 pounder rifled breech loading (RBL) field gun

Model: 1859

Manufacture: Royal Gun Factory, England, 1864

Serial number: 370

Calibre: 76 mm (3 inch)

Markings: Crest of Queen Victoria and weight forward of the breech, serial number, manufacturer and year on the left trunnion, Marshall's Iron on the muzzle

Rifling: 38 lands

Twist of rifling: 1 in 38 calibres

Weight: Barrel –432kg (8cwt 2 qtrs), carriage – 610kg (12cwt)

Barrel length: 1829mm (72 inch)

Maximum range: 3050m (3340 yds)

Elevation: 10 degrees (Maximum)

Traverse: 2.5 degrees left or right

Muzzle velocity: 378 m/s (1240 ft/s)

Projectile weight: 5.4kg (12lb)

Rate of fire: Approx. 1 round/min

This type of gun was:

- the first wrought iron gun used in British service
- the first breech loading artillery used in British service
- the first rifled artillery used in British service

The barrel is rifled and the gun has an accurate range of 1800 m (2000 yards). Loading is through the screw breech with a projectile and cartridge. The breech is closed by the insertion of the vent piece and then sealed by winding in the screw, which locks the mitred faces of the vent piece and breech recess. It was fired using a friction tube inserted into a touch hole

in the vent piece.

The Gun Detachment (Gun Crew)

As laid down in the Artillerist's Manual 11th Edition 1868², nine active members are required to operate the gun in the field. The original Werribee Half Battery used a seven-man gun detachment, categorised as active numbers with additional members being three horse holders and three drivers³. However, the gun could be operated with the reduced detachment with the Manual also specifying the duties carried out by four, three, and as little as two active members. Certainly, once the gun is in position it can effectively, though slowly be operated by two members. The contemporary Werribee Half Battery will use a four-man detachment. The gun can effectively be moved by four-men, but is quite difficult to manoeuvre due to its weight with less than four men.

A brief history of the Werribee gun and Victoria's Armstrong guns by Kevin Browning, OAM

The gun was designed by the British manufacturer W A Armstrong and entered service with the Royal Artillery in 1859. Victoria ordered six of these guns in 1861 and these were given to the Royal Artillery in 1863 for use in New Zealand. Replacements were ordered and arrived in January 1865 and used by the Metropolitan Artillery Corps of the Victorian

Volunteer Artillery. In May 1880 twelve members of the Permanent Victorian Artillery under the command of Captain Anderson and a 12-pounder 8 cwt RBL gun were dispatched by special train from Melbourne to Glenrowan⁴. It was intended to use the gun to blow down Jones' hotel if the Kelly Gang did not surrender. Before they arrived the siege was over and the train was stopped at Seymour and returned to Melbourne.

In 1885 the Victorian Government purchased new 12-pounder breech loading guns and the old RBL guns were placed in storage. In February 1889 Andrew Chirnside, a wealthy landowner, offered to contribute to a half battery on similar grounds to the Nordenfelt Battery raised by Sir William Clarke, Bt in 1884. The Government decided to combine the two half batteries, Clarke's Rupertswood half battery and Chirnside's Werribee Park half battery became the Right Half Battery and Left Half Battery of the Victorian Horse Artillery. The Werribee Half Battery was commanded by Andrew's youngest son Lt (later Capt.) Percy Chirnside. Each half battery was provided with two (later three) old 12-pounder RBL guns which the Government promised to replace with more suitable guns as soon as these could be identified.

Andrew Chirnside died in April 1890 and with the economic downturn of the 1890s his son George wrote to the Government in December 1892 seeking to be relieved from his father's commitment. Consequently, the Werribee Half Battery was disbanded on 1 March 1893. Following the death of Sir William Clarke in May 1897 his son, Sir Rupert Clarke spoke with the Minister of Defence regarding the maintenance of the battery. As the Government was not prepared to incur the cost of supplying modern guns he announced he intended to discontinue his family's contribution to the upkeep of the battery and subsequently the Government disbanded the unit from 30 June 1897. In October 1897, in recognition of the contribution Sir William Clarke had made to the defence of Victoria, the Government presented to Lady Clarke two of the 12-pounder guns. Two other guns were in poor condition and it is

assumed the other two found their way to the Chirnside family.

Photos credits: Unless otherwise credited, all photos at North Head compliments Peter Lawrence. All Werribee pictures by Allan Sterling.

Acknowledgements: Kevin Browning, OAM for input and proof-reading this article.

Notes and References

- 1: Background section by Kevin Browning, OAM
- 2: Artillerist's Manual and British Soldiers Compendium, Major F.A. Griffiths, London 11th Edition 1868
- 3: The Galloping Guns of Rupertswood and Werribee Park, Lindsay C. Cox, Coonans Hill Press, 1986
- 4: Sister gun number 367, central exhibit in the Colonial section of the AWM



TARGET TANK!

THE DEVELOPMENT OF ANTI-TANK ARTILLERY TACTICS WITHIN THE AUSTRALIAN IMPERIAL FORCE AND THE GERMAN ARMY DURING THE GREAT WAR

Keith Glyde

Part One: The Somme to Arras, 1916 to 1917

Two years after the commencement of the Great War the British introduced a new weapon system onto the battlefield: the tank, an armoured, self-propelled, tracked cross country vehicle armed with machine guns and light artillery, designed to assist the advancing infantry to overcome many of the obstacles endemic to trench warfare. Thus began the race that still continues today, to develop effective counter measures against the armoured fighting vehicle.

Development of practical measures for the defeat of armour plate was of course nothing new at that time; after all it had preoccupied the attention of the navies of the world for over half a century prior to the appearance of the tank. Despite the introduction of specialised anti-tank weapons and man-made obstacles it was, however, the field gun that became the predominant anti-tank weapon on both sides during the Great War.

There has been little recognition of our Regiment's contribution to the battle against the tank although extensive operational experience in the role was gained during the Second World War, and it remained a specialist branch of the RAA until 1952. Even less has been recorded of the anti-tank role played by the field artillery of the Australian Imperial Force (AIF) during the Great War.

Improvisation, innovation, and experiment in organization and equipment were hallmarks of the Australian approach to anti-tank defence during the Great War and by the time of the Amiens offensive anti-tank guns were being incorporated in the consolidation of objectives immediately after they were taken. Ironically, as Australian anti-tank measures reached their peak during this period, the German tank threat revealed itself as inconsequential. On the other hand, faced with overwhelming numbers of Allied tanks, the German army was forced to divert significant quantities of its offensive

support artillery to a direct-fire anti-tank role. In the process, however, they developed increasingly effective anti-tank tactics, and at the time of the Armistice they were in the process of introducing the world's first dedicated anti-tank gun to the Western Front.

The aim of this article is to record the experience of the AIF in employing artillery in an anti-tank role during the Great War within the context of overall British Army doctrine and threat assessment, and the comparative development of anti-tank artillery tactics in the German Army, primarily as they were encountered in sectors facing Australian formations.

Prologue

At 0555 on the morning of 25 September 1918 the SOS signal, three red rockets, went up on the front of the 30th American Division, which had taken over from the 1st Australian Division (1 Aust Div) in the sector opposite Bellicourt, France, less than 24 hours previously. The artillery of the Australian Corps responded, firing defensive barrage fire, known as SOS tasks, on pre-determined points in front of the Allied line.ⁱ At 0602 the Australian artillery liaison officer with the American infantry battalion on the right of the sector reported that the Germans had broken through and were using tanks.ⁱⁱ All of the units of the artillery group covering this particular sector, consisting of the two field artillery brigades of the 1st Australian Division and two brigades of the Royal Field Artillery (RFA), began firing SOS tasks. Following confirmation of tanks from the same source at 0615 the 3rd Battery, Australian Field Artillery (3 Bty AFA), was ordered to move one gun up to the ridge in front of the gun position to engage them. The wagon lines of the 1st Australian Field Artillery Brigade (1 AFA Bde) were stood-to, and the gun teams of the 3rd Battery were ordered up to the gun position.ⁱⁱⁱ

It turned out, however, to be a false alarm generated by the penetration of the American front-line outposts by a German raiding party.^{iv} A report that there were in fact no tanks was received at 0625, and the brigade's wagon lines were stood down. The Australian artillery response to the report of tank attack by firing the defensive barrage on SOS lines through which the tanks would have to pass, running guns forward to positions in which they could engage tanks by direct fire, and the redeployment of guns to engage tanks that had broken into the defensive position was nonetheless in accordance with established British anti-tank doctrine. The anti-tank tactics employed by the

Australian Corps at Bellicourt in late 1918 had, however, been some time in their development, in fact the first attacks utilising tanks and the earliest deployments of field artillery in the anti-tank role by the AIF had occurred quite coincidentally some 30 kilometres northwest of Bellicourt two years previously.

The Battle of Flers-Courcelette and its aftermath

British tanks made their debut during the battle of Flers-Courcelette conducted between 15 and 22 September 1916. It is stated that ten, or over 40% of those that eventually crossed the start line on the first day, were knocked out by German artillery.^v Members of the 5th Bavarian Field Artillery Regiment (5 Bav FAR) for instance claimed they hit two within 200 metres of their gun position.^{vi} There had been no prior knowledge of tanks and the guns were deployed in their normal indirect fire role.

In an ironic twist, on 25 September 1916 the 13th Battery, New Zealand Field Artillery, manned two German 7.7-cm field guns captured on 15 September and fired eighty rounds at 700 metres range at an abandoned British tank in the German lines that was thought to have been converted into a strongpoint, scoring many direct hits.^{vii}



Figure 1. A British Mark I 'Male' tank knocked out during the final operations of the Somme battles of 1916 and photographed in April 1917. Similar 6-pounder tank guns were salvaged from derelict tanks by the 4th Australian Anti-tank Battery in May 1918 and mounted on improvised platforms as anti-tank guns. (AWM Collection H02120)

There is no doubt that the tactical success of the battle of Flers-Courcelette and subsequent final operations of the Somme offensive during the autumn of 1916 owed much to the support given by those tanks that did get forward. It is recorded for instance that in a sector held by a battalion of

Reserve Infantry Regiment No 238 (RIR 238), its survivors readily complied with their battalion commander's order to surrender when they were taken in the rear by a single tank.^{viii} On the other hand, immobilised tanks were often assaulted by infantry who clambered onto the superstructure, fired into vision slits and gun apertures, and used grenades against them. Several tanks were penetrated by armour-piercing (AP) small-arms projectiles, which at that stage of the war were issued on a limited scale for firing at loophole plates.

The morale of the German infantry was shaken by the encounter; the term '*Tankschrecken*', 'tank-fright' or 'tank-horror', entered the front-line soldier's vocabulary. To counter the damage to morale German soldiers were told that tanks were an English 'fad' and were harmless.^{ix} Some prisoner-of-war (POW) stated that although tanks were the subject of much discussion amongst the troops, they were not feared because they generally ditched very easily and rarely reached their objectives.^x The German supreme command, *Oberste Heeresleitung* (OHL), was equally dismissive of the effect of the new weapon, believing that it could be defeated by the development of effective tactics utilising existing technology.^{xi} This view, although shaken by Cambrai in November 1917, would persist until as late as August 1918.

Such, however, was the desire by OHL to obtain examples of tanks for examination, and to provide an incentive for the German soldier to stand and fight them, that prize money in the region of 500 Marks was offered to any unit or sub-unit that knocked one out, to be used as funds for activities such as the purchase of canteen goods, for prizes at unit sporting events, or for other festivities.^{xii}

The earliest noted reference to anti-tank measures implemented by the Germans was an order for the immediate cutting of deep ditches in roads leading into the German lines from Allied-held areas.^{xiii} Infantry were told that they could not resist tanks and in the event of such an attack they were to take cover in the traverses and let the artillery deal with them after they had passed over the trenches.^{xiv} Machine gunners were taught to work around the flanks of the tank and keep it under continuous fire in the event that it broke down or became ditched, in the hope that it could be captured.^{xv} Prisoners later stated, however, that machine gun fire was ordered not to be used against tanks in future because it was considered useless.^{xvi}

By the end of 1916, infantry anti-tank tactics utilising dummy tanks were being taught in schools behind the German lines.^{xxvii} Men were trained to use the dead angles of the tank to bomb the crew immediately they opened the doors or hatches, and special instruction was given in the use of a charge improvised by wiring the heads of several stick grenades around another stick grenade complete with its handle.

Infantry weapons and tactics were, however, considered by the German army to be subsidiary to artillery in the anti-tank role.

"...the enemy of the Tank is the gun"^{xxviii}

Both the Germans and the British rapidly reached the conclusion that artillery was the most effective means of defence against the tank. The earliest steps in this direction by both belligerents appear to have simply been an extension to their already established practice of deploying advanced field guns in a direct-fire role for infantry support and counter-penetration.

In the German army, doctrine prior to the Great War called for the closest support of the infantry by the field artillery.^{xxix} As early as January 1915 a German infantryman noted that the artillery was still in an advanced position just behind the line, and that a field gun was even incorporated in the front line in his sector, rather inadequately concealed under tarpaulins.^{xxx} An officer of *Landwehr* FAR 15 recorded in his diary in December 1915 that a gun of his battery was deployed well forward in support of the infantry.^{xxxi} In early January 1917 the same writer reported that he had inspected a gun of his battery emplaced as an anti-tank gun near Peronne, south of the I. ANZAC Corps sector, noting that one anti-tank gun was now emplaced in each sector and was only to be fired when tanks were attacking.^{xxxi}

The contemporary British doctrine publication, *Field Artillery Training 1914*, reserved reference to the deployment of sections or single guns in the infantry firing line to fighting in wooded areas but the practice of including the use of single guns in advanced positions in the front line had begun by the time the Australian divisions arrived on the Western Front in late March 1916.^{xxxi} Deployment of guns in a direct-fire role in support of infantry was not, however, a new experience for the Australian gunners. The 7 Bty AFA, firing shrapnel shell fused at zero, broke up Turkish infantry attacks at Gallipoli over 26/27 April 1915, and a gun of 6 Bty AFA was pushed forward by hand to 200 metres behind the front-line on the night of

22/23 July 1916 to enfilade German positions during the attack on Pozieres by 1 Aust Div.^{xxiv}

There is some evidence that additional guns were already being employed by I. ANZAC Corps in 1916 to supplement the normal field artillery organisation; for instance the Commanding Officer (CO) 3 AFA Bde recorded selecting positions for 15-pounder (15-pr) guns deployed as auxiliary armament as early as May.^{xxv} The purpose of these guns was not identified and they did not rate further mention in the brigade war diary or that of Headquarters 1st Australian Divisional Artillery (HQ 1 Aust Div Arty).

In mid-October 1916 a mobile section equipped with Breech Loading Converted (BLC) 15-pr guns was temporarily formed from members of 13 AFA Bde.^{xxvi} The actual role of this section is not stated, although it fired a small allotment of shrapnel in support of a raid on the enemy trenches on the night of 20 October. It might be concluded that they were specifically intended for a counter-penetration role against both infantry and tanks, as at the end of October 1916 General Headquarters (GHQ) advised HQ Second Army, under command of which I. and II. ANZAC Corps were then serving, that expenditure of ammunition from BLC 15-pr guns allotted for close defence of localities should not be resorted to except in the event of hostile attack.^{xxvii} This sub-unit was, however, dissolved on 1 November 1916 and its guns handed over to the 5th Australian Divisional Ammunition Column.

On 5 October 1916 OHL directed that two trench gun detachments and an infantry gun battery equipped with 3.7-cm guns were to be sent to the Somme front to engage tanks at point-blank ranges, although as late as the end of November 1916 interrogation of German artillery POW revealed that none had yet been seen.^{xxviii} These guns had been constructed by utilising the barrels of obsolescent naval and fortress revolver cannon, and were in service from 1915 on a fixed mounting as a trench gun, or on a wheeled carriage as an infantry gun for accompanying an assault.^{xxix} In early December 1916, I. ANZAC Corps reported the presence of a suspected light gun in the rear of a trench facing their sector, although its exact location could not be determined.^{xxx}

Similar measures had been exercising the minds of the British staff. On 11 November 1916 HQ Fourth Army, under which I. ANZAC Corps was now serving, asked GHQ for the allotment of twelve French 37-mm guns and their

ammunition. They considered these guns would be suitable for defence against tanks if the Germans adopted this method of warfare, recognising the difficulty in the current state of the battlefield in moving forward, or maintaining, field guns in advanced positions.^{xxxv} GHQ advised Fourth Army on 14 November, however, that it had been definitely decided not to adopt 37-mm guns.^{xxxii}

Both the initial request and the GHQ response suggest that the subject of a suitable gun for a direct-fire defensive role had previously been under discussion at the highest staff levels, and confirm that the use of advanced close defence guns by British field artillery was already an established tactic. The tank was just a new form of target!

The first Australian anti-tank gun deployments

The earliest reference to the deployment of Australian guns in a specific anti-tank role occurs in the war diary of 24 AFA Bde, in the left divisional sector of the I. ANZAC Corps front at Gueudecourt, France. On 3 December 1916 this unit recorded that two forward gun positions had been selected, and were being prepared for use in the event of tank attack.^{xxxiii}

Two weeks later the CO 25 AFA Bde recorded carrying out a reconnaissance for the selection of a suitable position for an anti-tank gun in the right divisional sector of the front held by I. ANZAC Corps, the first use of the term 'anti-tank' noted in Australian artillery war diaries.^{xxxiv} He reported that no position fulfilled ideal conditions for anti-tank defence because the infantry trenches were on the forward slope of the next rise, but tanks could be taken under direct fire as they came over the ridge. Several days later he reported that the position had been selected, and at the beginning of January 1917 that it was almost ready for occupation. The type of gun to be installed in these positions is not stated, but it is clear that the policy at this time in I. ANZAC Corps was to deploy Quick-Firing (QF) 18-pr guns from field batteries in the line for anti-tank work.

In evidence that these deployments were part of a co-ordinated defence scheme and not simply local initiatives, HQ 4 Aust Div Arty ordered on 11 January 1917 that the 'tank' gun of 11 AFA Bde was to be taken over by 46 Bty AFA on relief by the 12 AFA Bde; the instruction that this battery was to hand over one of its guns to the outgoing 43 AFA Bty in exchange suggests that the gun was emplaced where it could not be extricated without compromising its position,

and was simply taken over in situ by the incoming unit.^{xxxv} Nearly two weeks later 38 Bty AFA was ordered to deploy two forward guns, and 43 Bty AFA, one forward gun.^{xxxvi} In the right division sector, the war diary of 13 AFA Bde recorded their CO making a reconnaissance for the selection of a position for an anti-tank gun at the end of January 1917.^{xxxvii} Construction of a gun-pit at the selected position commenced on 7 February, but ceased prior to the end of that month, apparently without being completed.^{xxxviii}

The understanding by Australian artillery officers of the requirements for effective siting of guns for anti-tank defence, the co-ordination of deployments of forward guns by divisional artillery headquarters, and its occurrence in both divisional sectors of the I. ANZAC Corps front over the same period suggests that gun defence against tanks had become part of the normal corps defensive policy by at least the beginning of December 1916. Nor was this policy restricted to I. ANZAC Corps. When 1 Aust Div took over portion of the line from the neighbouring III. Corps at the end of January 1917, its 5 Bty AFA inherited the 'tank' gun of A Bty, 250 Bde RFA, of the British Army's 50 (Northumbrian) Div.^{xxxix}



Figure 2. A 7.6-cm *minewerfer*, or 'mine-thrower', on a new model carriage incorporating a trail and spade that allowed flat trajectory fire for the engagement of tanks. This photograph, donated to the Australian War Memorial by the German War Museum, is captioned October 1918. The casual attitude of the onlookers, and the lack of steel helmets and camouflage, suggests that the photograph was taken well behind the front-line, possibly at a school. (AWM Collection H13454)

The most intriguing aspect of the employment of Australian field guns in an anti-tank role between December 1916 and March 1917 is the absence of a clearly defined threat, indeed the earliest deployments were undertaken prior to

the existence of a German tank construction program becoming known. Interrogation of German POW and analysis of captured documents appearing in intelligence summaries issued during this period by both I. and II. ANZAC Corps, whilst highlighting developments in German anti-tank measures, make no mention of German tanks, reflecting a general deficit of information on the subject across the British forces on the Western Front. It can only be concluded that GHQ recognised the potential threat posed by tanks if the Germans had also been working on this form of weapon, and were proactive in instigating counter measures simply as a matter of prudence.

Concerns that the Germans would reciprocate with tanks were held by GHQ almost as soon as the British themselves employed the technology. On 1 October 1916 the Brigadier-General General Staff (Intelligence) at GHQ wrote to the Director of Military Intelligence at the War Office expressing this very view, and seeking assistance from other intelligence agencies in gathering information on the subject.^{xi} As a result, by mid December 1916 the British had become aware that the Germans were taking steps to build tanks.^{xii} In fact the German War Ministry had ordered work to commence on tank design on 13 November 1916. Design work was completed in only four weeks, the first order was placed at the end of December 1916, and a wooden mock-up of the vehicle was demonstrated on 6 January 1917.^{xiii} It would be another year, however, before the products of this program became operational.

Nevertheless, by the end of February 1917 reference to measures being taken for anti-tank defence had virtually disappeared from Australian artillery unit war diaries, a hiatus that would persist into 1918. The reasons for this were two-fold: firstly, it was apparent that Germany had not yet acquired an operational tank capability, and secondly, their forces in the sectors fronting the Australian divisions had clearly adopted a defensive posture. In fact a phased withdrawal of these forces eastwards to a prepared defensive position known generally to the Allies as the Hindenburg Line commenced at the end of this month.

On the other hand the development of anti-tank tactics in the German army entered a new phase from early 1917, focussing primarily on gun defence.

The German Close-Combat Batteries

In early February 1917 interrogation of German POW revealed that a new lightened field gun

was to be introduced to deal with tanks. It was to be emplaced just behind the front-line and would engage tanks with direct fire.^{xiii} Simultaneously there were reports that the Germans were forming a new series of infantry trench batteries, and that these were shortly to appear at the front specifically for action against tanks.^{xiv} By late March 1917 intelligence summaries had correctly identified these new units as *Nahkampf-batterien*, or close-combat batteries, the first of which had begun to appear in the line on the Western Front in early March 1917.^{xlv}

The raising of fifty of these batteries had been authorised by the Chief of the General Staff of the Field Army on 10 January 1917.^{xlvi} They were formed from about 24 January 1917 onwards, consisting of personnel selected from the field artillery with an emphasis on their ability to function independently in isolated gun positions in the forward battle zone.^{xlvii} These batteries were equipped with six lightened 7.7-cm FK96 n/A field guns, modified primarily by removing the lower portion of the shield and the seat foot bars, and substituting wheels of smaller diameter for the normal ones.^{xlviii} There were only one riding horse and four draught horses for the two vehicles in the battery, and teams had to be borrowed from neighbouring artillery units to move the guns.^{xlix}

Close-combat batteries were deployed with individual guns in the open at intervals of 400 yards apart, either just in front of, or behind, the third line of defence, with six guns allotted to a corps sector of two divisions. When not in use they were concealed in shallow pits and the detachments lived in dugouts in close proximity to the gun. They were to remain silent except in the event of tank attack, in fact they were forbidden to resist infantry attacks except in extreme urgency, and only then if no tanks had been reported.¹ Initially the 1915 pattern 7.7-cm field gun high explosive (HE) shell with delay action pointed fuze was considered the most suitable ammunition for the engagement of tanks. A 7.7-cm HE shell with hardened steel head was later specifically developed for anti-tank use, with an effective range against tanks of 5468 yards (5000 metres).^{li}

The *Nahkampf-batterien* were thus the world's first dedicated anti-tank units. Even so, and notwithstanding their insufficient numbers to cover the whole German front, they formed only one component of evolving German tactics to defeat tanks with artillery.

Defence in depth, the consolidation of German anti-tank doctrine, 1917

The Germans were unable to capture an intact tank for examination until early 1917, and descriptions of them given by their own troops were subject to battlefield stress factors. In February 1917, however, captured French documents that identified their 37-mm gun and some special ammunition for small arms as sufficient to destroy tanks led the Germans to reach some conclusions as to the armour thickness of British tanks.^{lii} As a consequence intelligence summaries issued by Australian formations began recording at this time that obsolescent German 5-cm fortress guns in armoured cupolas were arriving at the front, although the availability of both these and 3.7-cm guns was stated to be limited to certain Army areas.^{liii} These guns were carefully camouflaged and manned by personnel drawn from neighbouring batteries. By mid-March 1917 the Chief of the German General Staff was advising that a special anti-tank projectile was shortly to be issued for these weapons.^{liv}



Figure 3. An August 1917 postally dated postcard of a German 5-cm gun in mobile armour carriage employed as an anti-tank gun on the Western Front. Actually of 5.3-cm in calibre, the Model 1887 L/24 gun was mounted from about 1890 in German fortifications. In these it was normally housed in a shellproof concrete shelter and moved into its emplacement along a set of rails when it was required to come into action. (Author's collection)

A new mounting for the existing 7.6-cm light *minewerfer* was introduced to allow flat trajectory fire and this type of trench mortar was being actively deployed in advanced posts for anti-tank defence as early as March 1917.^{lv} There were in addition infantry gun batteries, equipped with four lightened 7.7-cm guns and deployed in a similar manner to the close-combat batteries. These were dug in and camouflaged primarily to repel attacking infantry at close range, and to engage tanks.^{lvi}

Captured orders revealed that the divisional field artillery guns already emplaced in forward positions for resisting infantry attack, and for use against tanks if the occasion required it, were to be withdrawn and replaced by obsolete 9-cm guns.^{lvii} The discovery in the same time frame of shrapnel fuzes for 9-cm guns in the I. ANZAC Corps sector suggests that this action had indeed occurred, allowing the German divisional artillery to focus on their primary indirect fire role.^{lviii}

By mid March 1917 the German army had drawn on its operational experiences of late 1916 to develop a comprehensive doctrine for defence against tanks that involved all branches of the artillery, and stressed defence in depth.^{lix} It was clearly defined that the destruction of tanks was the task of the German artillery; indeed it was recognised that no certain results could be obtained by the use of infantry weapons, improvised charges, or trench mortars.^{lx} Tanks were regarded by the German staff to be excellent targets and the infantry was enjoined to have faith in the ability of its sister arm to destroy them.^{lxi}

The artillery battle against the tank was identified as consisting of two distinct phases –
lxi

The long-range engagement of tanks in their laying up position, or while moving up for the assault and prior to reaching the German lines;

The close-combat phase, when the tanks had reached, or penetrated into, the German defensive position.

The long-range battle was to be conducted by the foot, or heavy artillery. Recognition that the guns and howitzers of the foot artillery could effectively engage attacking tanks well before they entered the defensive system had been made as early as October 1916. Each battery was allocated a specific zone for observation and any tank appearing in it was to be engaged with salvo fire by all guns of the battery. Trials carried out with 10-cm and 15-cm projectiles had shown the former to be effective on tanks out to 4500 metres, and at even longer ranges with the 15-cm howitzer.^{lxiii}

It was also recognized that the defensive field artillery barrage would commence falling at the commencement of any attack, and this barrage had been shown to successfully halt tanks. Indeed, in at least two instances in late September 1916 the appearance of even single tanks immediately brought down the German protective artillery barrage, destroying the tanks.

In one case the accompanying British infantry assault was abandoned.

Once the tanks had penetrated into the defensive zone the close-combat fight began. This was to be conducted primarily by the carefully sited guns of the *Nahkampf-batterien*, supported by 3.7-cm and 5-cm anti-tank guns deployed in mutually supporting positions with interlocking arcs of fire. Obstacles, either natural or man-made, were to be used to halt or slow tanks and the ranges to each were to be measured and recorded. It was stressed that the essential points were direct observation and direct laying with the object of destroying the tank with close-range hits that penetrated the armour and burst inside. Intensive training of gun detachments in gun drill and fire control was conducted with these points in mind.

Finally the field and foot artillery batteries in position behind the lines were to observe and be prepared to engage any tanks that presented a target opportunity while still within the defended zone, or that had passed through it. Casualties to their own infantry as a result of anti-tank engagements within the forward zone by artillery during the close-combat phase were accepted by the German high command, which argued that even higher casualties would result if the tanks were not engaged. The effect of tanks upon the morale of the infantry was recognised; they in turn were advised that they needed to ignore the tanks and fight the enemy infantry with the full conviction that their own artillery would defeat the tanks.

Interim – Part One

It has been a general practice to credit the German army as the first to deploy artillery in an anti-tank role during the Great War, an assumption that has rested primarily on the absence until early 1918 of a German tank. On the contrary, the evidence establishes that although it was the Germans who by default first engaged tanks with artillery, tactics specifically to defend against the tank threat in fact developed simultaneously, and initially on a parallel basis utilising existing artillery assets and close range direct-fire doctrine, within both the German and British armies. Both belligerents recognized immediately that the gun was the most effective counter to the tank.

Despite little guidance as to the exact nature of the potential threat, Australian gunners quickly adapted the existing principles of deployment of field artillery in a direct-fire role to a new form of target. Early implementation of anti-tank gun deployments at divisional level across multiple

corps frontages illustrates that GHQ and its subordinate formation headquarters took the potential for a German response in kind seriously after September 1916.

In early 1917, however, the policies of these belligerents diverged. Anti-tank tactics in the AIF, as part of the wider British Expeditionary Force, did not evolve any further after September 1916 than the deployment of individual field guns in advanced positions to engage tanks with direct laying. Indeed, practical measures for anti-tank defence lapsed in the AIF when it became clear by March 1917 that the Germans did not yet have a tank capability.

On the other hand the Germans developed a comprehensive doctrine for anti-tank warfare during the first quarter of 1917 that encompassed defence in depth by guns, and placed the responsibility for defeating tanks wholly on the artillery arm. In addition they created the world's first dedicated anti-tank artillery units and adapted existing field and fortress guns, and infantry support weapons to the anti-tank role. They were to have many opportunities to apply and refine their anti-tank tactics during the continual Allied offensives of 1917, and would be assisted in their endeavours by both poor tactical handling of the new tank arm, and the technological limitations of the weapon itself.

Endnotes

ⁱ Entry dated 25 September 1918, HQ 12 AFA Bde war diary for September 1918, AWM4, 13/39/29.

ⁱⁱ Entry dated 25 September 1918, HQ 1 AFA Bde war diary for September 1918, AWM4, 13/29/46.

ⁱⁱⁱ Ibid. The HQ 1 AFA Bde war diary is the only unit or formation HQ diary that refers to tanks during this action, possibly because it functioned as the Group HQ for the artillery allotted to this sector.

^{iv} Entry dated 25 September 1918, HQ 12 AFA Bde war diary for September 1918, AWM4, 13/39/29.

^v Landships
<<https://sites.google.com/site/landships/home/narratives/somme1916narratives>> accessed 8 June 2019. Figures relating to British tank numbers and casualties appearing in this article have been extracted from the information presented on the Landships website. This writer acknowledges however that discrepancies as to tank numbers and casualties exist between the works of multiple authors on the subject.

^{vi} Statements by captured personnel of II./5 Bav FAR, II. ANZAC Intelligence Summary No 87 dated 26 September 1916, Intelligence HQ II. ANZAC Corps war diary for September 1916, AWM4, 1/33/5 Part 2.

^{vii} Byrne, Lieutenant J R, NZFA, *New Zealand Artillery in the Field 1914-18*, Whitcombe and Tombs, Auckland 1922, pp. 137-8.

viii I. ANZAC Corps Intelligence Summary No 71 dated 3 October 1916, Intelligence HQ I. ANZAC Corps war diary for October 1916, AWM4, 1/30/9. This action occurred on 26 September 1916.

ix I. ANZAC Corps Weekly Intelligence Summary No 3 for week ending 25 November 1916, Intelligence HQ I. ANZAC Corps war diary for November 1916, AWM4, 1/30/10 Part 2.

x Statement by POW of RIR 100, II. ANZAC Intelligence Summary No 147 dated 23 November 1916, Intelligence HQ II. ANZAC Corps war diary for November 1916, AWM4, 1/33/7 Part 2. See, however, conflicting statement by POW of the neighbouring RIR 392 in I. ANZAC Corps Intelligence Summary No 116 dated 22 November 1916, Intelligence HQ I. ANZAC Corps war diary for November 1916, AWM4, 1/30/10 Part 2.

xi David T Zabecki, *Operational Art and the German 1918 Offensives*, p. 113. PhD thesis, Academic Year 2003-2004, Cranfield University, Royal Military College of Science, Department of Defence Management and Security Analysis, March 2004, accessed 10 January 2020, <<https://dspace.lib.cranfield.ac.uk/handle/1826/3897>>

xii Fasse, Alexander, *Im Zeichen des "Tankdrachen". Die Kriegführung an der Westfront 1916–1918 im Spannungsverhältnis zwischen Einsatz eines neuartigen Kriegsmittels der Alliierten und deutschen Bemühungen um seine Bekämpfung* [The "Tank Dragon", Warfare on the Western Front 1916–1918 and the Conflict Between a New Allied Weapon of War and German Efforts to Counter It], p. 136. PhD thesis, Humboldt University Berlin 2007, accessed 12 July 2019, <<https://edoc.hu-berlin.de/handle/18452/16336>>. The sum was equivalent to about 25 Pounds in Australian currency.

xiii Extract from a captured document, I. ANZAC Intelligence Summary No 80 dated 12 October 1916, Intelligence HQ I. ANZAC Corps war diary for October 1916, AWM4, 1/30/9. Air photograph interpretation, I. ANZAC Intelligence Summary No 97 dated 2 November 1916, and Summary No 105 dated 10 November 1916, Intelligence HQ I. ANZAC Corps war diary for November 1916, AWM4, 1/30/10 Part 1. Cratering was extensively employed.

xiv POW statements, I. ANZAC Intelligence Summary No 105 for 10 November 1916, Intelligence HQ I. ANZAC Corps war diary for November 1916, AWM4, 1/30/10 Part 1. This policy was still being emphasised in mid 1917, see POW statement, Second ANZAC Intelligence Summary No 326 dated 15 May 1917, Intelligence HQ II. ANZAC Corps war diary for May 1917, AWM4, 1/33/13 Part 2.

xv POW statements, I. ANZAC Weekly Intelligence Summary No 3 for week ending 25 November 1916, Intelligence HQ I. ANZAC Corps war diary for November 1916, AWM4, 1/30/10 Part 2.

xvi I. ANZAC Weekly Intelligence Summary No 11 for week ending 19 January 1917, Intelligence HQ I. ANZAC Corps war diary for January 1917, AWM4, 1/30/12.

xvii Deserter statement, II. ANZAC Intelligence Summary No 190 dated 3 January 1917, Intelligence HQ II. ANZAC Corps war diary for January 1917, AWM4, 1/33/9 Part 1. This is confirmed by information given by an escaped British POW that the Germans had constructed a wooden model of a British tank in Cambrai, see I. ANZAC Weekly Intelligence Summary No 9 for week ending 5 January 1917, Intelligence HQ I. ANZAC Corps war diary for January 1917, AWM4, 1/30/12. A captured order of the IR 399 dated 13 April 1917 recorded that a dummy tank was being issued to units in turn to train men in aiming at the vulnerable points, see II. ANZAC Intelligence Summary No 305 dated 25 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 2.

xviii The GSO1 HQ Tank Corps, LTCOL H Karlslake, on lessons learnt during the Battle of Amiens, 8-11 August 1918, quoted in Ventham, Philip Richard TD BA (Hons), *The evolution of British tactical and operational tank doctrine and training in the First World War*, p. 148. MA thesis submitted for PhD, University of Wolverhampton, October 2016, accessed 11 November 2019, <<https://wlv.openrepository.com/bitstream/handle/2436/620683/Ventham%20PhD%20Thesis.pdf?sequence=5&isAllowed=y>>.

xix Strong, Paul, and Marble, Sanders, *Artillery in the Great War*, Pen and Sword Military, Barnsley, South Yorkshire, 2013, pp. 5-6. Stone, David, *The Kaiser's Army: The German Army in World War One*, Bloomsbury Publishing Plc, London and New York, 2015, p. 391.

xx Jünger, Ernst, *Storm of Steel*, Penguin Books, London, 2004 (first published in German in 1920, this edition 1961, translation to English by Michael Hofmann 2003), p. 14.

xxi Sulzbach, Herbert, *With the German Guns; Four Years on the Western Front*, Pen and Sword Military, Barnsley, South Yorkshire, 2012 (first published in Germany in 1935, first published in the United Kingdom in 1973, this edition 2003), pp. 70-72.

xxii Sulzbach (2012, p. 100).

xxiii *Field Artillery Training 1914*, General Staff (GS), War Office, Chapter VII, Section 163A and 163B, pp. 260-261. SS 139/4 *GHQ Artillery Notes No 4 - Artillery in Offensive Operations*, February 1917, which replaced an edition of April 1916, refers, p. 29, to forward guns but makes no mention of an anti-tank task.

xxiv Entries for 26 and 27 April 1915, 7 Bty AFA war diary, 20 August 1914-31 July 1915, AWM4, 13/69/1 Part 1. Entry for 22/23 July 1916, HQ 2 AFA Bde war diary for July 1916, AWM4, 13/30/20.

xxv Entry dated 8 May 1916, HQ 3 AFA Bde war diary for May 1916, AWM4, 13/31/21.

xxvi Entry dated 19 October 1916, HQ 13 AFA Bde war diary for October 1916, AWM4, 13/40/8. Named Dreyer's Bty, for the Adjutant, CAPT N L Dreyer, who commanded it during its brief existence.

xxvii Entry dated 30 October 1916, GS GHQ BEF war diary for October 1916, AWM4, 1/2/10 Part 2.

^{xxviii} Fasse (2007, pp. 122-3). Fasse also records that twenty naval boat guns, presumably the 6-cm L/21 used by the naval infantry as a direct support weapon, were to be supplied to the German 1st Army (1.Armee) for anti-tank purposes. See also I. ANZAC Weekly Intelligence Summary No 3 for week ending 25 November 1916, Intelligence HQ I. ANZAC Corps war diary for November 1916, AWM4, 1/30/10 Part 2.

^{xxix} The trench gun had a range of approximately 1500 metres, see Jäger, Herbert, *German Artillery of World War One*, The Crowood Press, Marlborough, Wiltshire, 2001, p. 135 and p. 140, but HQ 6.Armee stated in March 1917 that its effective range was only 600-800 metres. It was generally used for firing at loophole plates or machine-gun positions in the opposing front-line. According to a statement by a POW formerly of Trench Gun Detachment (*Schützengrabenkanonen-Abteilung*) Nr 4, the gun was little used and was not held in high regard, see Second Anzac Summary No 61 dated 1 September 1916, Intelligence HQ II. ANZAC Corps war diary for September 1916, AWM4, 1/33/5 Part 1. Personnel for the trench gun detachments were drawn primarily from the foot artillery, those for the infantry gun batteries from the field artillery.

^{xxx} I. ANZAC Intelligence Summary No 132 for 8 December 1916, Intelligence HQ I. ANZAC Corps war diary for December 1916, AWM4, 1/30/11.

^{xxxi} Entry dated 11 November 1916, GS HQ Fourth Army war diary for November 1916, AWM4, 1/14/2 Part 2.

^{xxxii} Entry dated 14 November 1916, GS GHQ BEF war diary for November 1916, AWM4, 1/2/11 Part 2.

^{xxxiii} Entry for 3 December 1916, HQ 24 AFA Bde war diary for December 1916, AWM4, 13/45/10.

^{xxxiv} Entries dated 18 and 23 December 1916, HQ 25 AFA Bde war diary for December 1916, AWM4, 13/46/6. Entry for 1 January 1917, HQ 25 AFA Bde war diary for January 1917, AWM4, 13/46/7.

^{xxxv} HQ 4 Aust Div Arty Order No 56 of 11 January 1917, HQ 4 Aust Div Arty war diary for January 1917, AWM4, 13/13/8. Entry for 15 January 1917, HQ 12 AFA Bde war diary for January 1917, AWM4, 13/39/11.

^{xxxvi} Amendment No 1 dated 23 January 1917 to HQ 4 Aust Div Arty Order No 57, Schedule (E), HQ 4 Aust Div Arty war diary for January 1917, AWM4, 13/13/8.

^{xxxvii} Entry dated 30 January 1917, HQ 13 AFA Bde war diary for January 1917, AWM4, 13/40/11.

^{xxxviii} Entries dated 3, 7, and 25 February 1917, HQ 13 AFA Bde war diary for February 1917, AWM4, 13/40/12.

^{xxxix} 1 Aust Div Arty Order No 79 of 26 January 1917, HQ 1 Aust Div Arty war diary for January 1917, AWM4, 13/10/16.

^{xl} Beach, Jim, "British Intelligence and German Tanks, 1916–1918." *War in History*, Vol 14, No 4, 2007 (pp. 454–475), pp. 456–7. *JSTOR*, www.jstor.org/stable/26069889, accessed 17 July 2019.

^{xli} Beach (2007, p. 457).

^{xlii} Jäger (2001, pp. 155-6).

^{xliii} Interrogation of a captured officer of IR 362, I. ANZAC Corps Intelligence Summary No 189 dated 4 February 1917, Intelligence HQ I. ANZAC Corps war diary for February 1917, AWM4, 1/30/13 Part 1. A similar report, possibly from the same source, appears in II. ANZAC Intelligence Summary No 237 dated 18 February 1917, Intelligence HQ II. ANZAC Corps war diary for February 1917, AWM4, 1/33/9 Part 2.

^{xliiv} II. ANZAC Corps Intelligence Summary No 264 for 16 March 1917, Intelligence HQ II. ANZAC Corps war diary for March 1917, AWM4, 1/33/11 Part 2. These were actually units of the German field artillery.

^{xliv} II. ANZAC Corps Intelligence Summaries No 268 for 20 March 1917, and No 274 for 26 March 1917, Intelligence HQ II. ANZAC Corps war diary for March 1917, AWM4, 1/33/11 Part 2. II. ANZAC Corps Intelligence Summary No 319 for 8 May 1917, Intelligence HQ II. ANZAC Corps war diary for May 1917, AWM4, 1/33/13 Part 1. *Nahkampf* also commonly translates as 'melee'.

^{xlvi} Kraus, Jürgen, and Busche, Hartwig, *Handbuch der Verbände und Truppen des deutschen Heeres 1914-1918*, Part IX: *Feldartillerie*, Verlag Militaria, Vienna, 2007, Volume 2, Chapter 9, *Nahkampf-Batterien*, p. 623. Numbered 201 to 250.

^{xlvii} Fasse (2007, p. 132). Establishments were later increased from the one officer and 67 other ranks approved by the Prussian War Ministry on 26 January 1917, and by the end of April 1917 an extra officer and 24 enlisted ranks had been authorised, see Kraus and Busche (2007, p. 623). Captured personnel of Nkb.204 record two officers, and gun detachments of 6-8 men in April, while personnel of Nkb.203 state their strength was three officers and 90 men, with detachments of one NCO and three men per gun, in June.

^{xlviii} Statements by captured personnel of Nkb.204, II. ANZAC Corps Intelligence Summary No 297 for 17 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 1.

^{xlix} Kraus and Busche (2007, p. 623). Statement by deserter from Nkb.206, II. ANZAC Corps Intelligence Summary No 319 of 8 May 1917, Intelligence HQ II. ANZAC Corps war diary for May 1917, AWM4, 1/33/13 Part 1.

¹ Extracts from captured documents, II. ANZAC Corps Intelligence Summary No 288 for 8 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 2. A captured order by the Chief of the German General Staff dated 17 March 1917 defining anti-tank armament as 3.7-cm and 5-cm guns was misinterpreted by the staff of II. ANZAC Corps, whose conclusion that this order proved beyond doubt that the *Nahkampf-batterien* were for the purpose of repelling infantry assaults is wholly in error. See II. ANZAC Corps Intelligence Summary No 309 of 29 April 1917, Intelligence HQ

II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 2.

^{li} SS 420 *Notes on German Shells (Second Edition)*, General Staff (Intelligence), General Headquarters, 1st May 1918, pp. 80-1.

^{lii} Jäger (2001, p. 143). Para 14 of a captured order issued by HQ 6.Armee dated 25 March 1917, translated from a French translation of the original by the American Expeditionary Force, edited at the Army War College, and issued as *Use of Artillery in Combat Against Tanks*, War Department, Washington, 15 January 1918.

^{liii} Extract from a captured order dated 17 March 1917, II. ANZAC Corps Intelligence Summary No 309 of 29 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 2.

^{liv} *Ibid.* This event does not appear to have occurred. SS 420 identifies only common, tracer, and HE shells in use with the 3.7-cm gun (pp. 56-7, 280-5), and common shell with the 5-cm gun (pp. 58-9), the latter described as having an effective range against tanks of 1100 yards (1000 metres).

^{lv} II. ANZAC Corps Intelligence Summary No 280 of 1 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 1.

^{lvi} Statements by POW of *Infanterie-Geschütz-Batterie Nr. 14*, II. ANZAC Int Summary No 307 of 27 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 2.

^{lvii} Extracts from captured documents, II. ANZAC Corps Intelligence Summary No 288 for 8 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 2.

^{lviii} I. ANZAC Corps Intelligence Summary No 254 for 10 April 1917, Intelligence HQ I. ANZAC Corps war diary for April 1917, AWM4, 1/30/15 Part 1.

^{lix} *Use of Artillery in Combat Against Tanks*, p.7.

^{lx} *Ibid.*, p. 6.

^{lxi} Extract from a captured German divisional order dated 28 March 1917, II. ANZAC Corps Intelligence Summary No 309 of 29 April 1917, Intelligence HQ II. ANZAC Corps war diary for April 1917, AWM4, 1/33/12 Part 2.

^{lxii} *Use of Artillery in Combat Against Tanks*, p.6.

^{lxiii} Jäger (2001, p. 144).

NATIONAL SERVICE DURING THE VIETNAM WAR

Christopher Jobson

There are a large number of myths about the National Service of the 1960s and the service of those ‘called-up’. Here are but a few truths about the Service.

Over the period 1965–1972 a total of 804,286 Australians registered for National Service; however, only 63,735 were called-up and of

these only 19,450 (less than one-third) served in the Vietnam War.

If one was serving in the Citizen Military Forces (CMF), now named the Army Reserve, one was exempt from being called-up for full-time National Service, but that person had to be serving in the CMF before the relevant ballot was conducted. If the person’s birthdate was drawn in the ballot he was required to serve a period of six years in the CMF.

The first in-take of 20 years-old national servicemen was in mid-1965, and the last intake was in late 1972. The first deployment of national servicemen to Vietnam was in 1966.

No national serviceman was forced to serve in the Vietnam War. It was made clear to national service recruits that if they did not wish to be deployed to the War they were required to inform their relevant commanders of such, and there were a number of national servicemen who did so; as a result they were either posted to a unit, within Australia, which had just returned from South Vietnam, or to a unit that was not taking part in the War. However, most conscripts were keen to serve in the War because of the ‘advantages’; this meant, financially, tax-free pay whilst serving in the War and an additional Service allowance, it also meant gaining a Defence War Service Home Loan, and ‘health coverage’ by the Department of Veterans’ Affairs. It was also seen by a good number of conscripts as being an ‘adventurous experience’. Most national servicemen returning from Vietnam were finishing their two years of service and were discharged shortly after their return to Australia, and most were happy about this because it meant that they could then return straight back to their ‘normal life’.

A few former national servicemen now state that they were treated differently to Regular soldiers and abused; the training and treatment of national servicemen was no different to Regular soldiers. Some national servicemen have also said that they weren’t allowed to drink alcohol during the first-half of their recruit training; correct, and neither were the Regular recruits (Regular soldiers aged under 18 weren’t allowed to drink alcohol at any time). They have said too that they were not permitted to vote in political elections; initially correct, and neither were Regular soldiers who were under 21 years of age (prior to 1973 the voting age was 21).

AUTHOR. THIS PIECE WAS WRITTEN AFTER DISCUSSIONS WITH SOME FORMER ARA SOLDIERS, AND DISCUSSIONS WITH SOME FORMER NATIONAL SERVICE SOLDIERS (WHO LOOK BACK ON THEIR TIME AS ‘NASHOS’ WITH FOND MEMORIES).

CLASH *of the* GODS *of* WAR

AUSTRALIAN ARTILLERY
AND THE FIREPOWER LESSONS
OF THE GREAT WAR

Editors:	William Westerman & Nicholas Floyd
ISBN:	978-1-922265-82-1
Publisher:	Big Sky Publishing
Release date:	March 2020
Format:	Hardback 153mm x 230mm
Pages:	624 pages
Price (incl. GST):	\$34.99

Key Highlights:

- Written by 27 subject matter experts including leading International and Australian Military Historians.
- First major account of the Great War through the lens of the Australian artillery.
- A unique publication showing the dynamic and rapidly evolving battle-scape.
- Includes numerous unpublished Great War images.

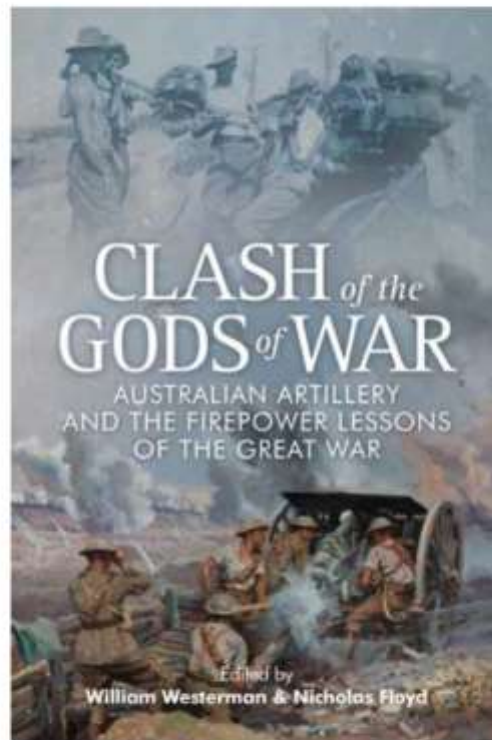
About the Book

The Great War confronted Australia's fledgling field and garrison artillery forces with a seemingly insurmountable challenge: to rapidly raise, prepare, deploy and engage in history's most lethal war to date.

By 1915, the Australian artillery entered into a bloody contest of learning and adaptation against resourceful and resolute opponents, where the stakes would be measured in thousands of soldiers' lives.

Far from popularly-held views of the Great War as one of stalemate and stagnation, *Clash of the Gods of War: Australian Artillery and the Firepower Lessons of the Great War* reveals a dynamic and rapidly evolving battle-scape, as artillery planners on each side sought to combine innovative concepts, technology and tactics into victory.

The book draws on an unparalleled array of perspectives on artillery and firepower, presented by Australian and international experts and practitioners over four years during the Firepower: Lessons from the Great War seminar series, commemorating the Centenary of Anzac.



From Anzac Cove to the Hindenburg Line, *Clash of the Gods of War* tells a gripping Australian story of the Great War through the lens of artillery – the most lethal and influential arm of the war – and considers the legacy that its evolutionary journey holds for warfare today.

Publisher – Big Sky Publishing
PO Box 303, Newport, NSW, 2106
E: sales@bigskypublishing.com.au
T: 1300 364 611 F: (02) 8330 8221



2021: 150th Anniversary of the Establishment of a Permanent Australian Artillery Presence

Calendar of Events: Kindred Associations and Organisations

PHOTOGRAPHIC, VIDEO AND ESSAY COMPETITIONS

The Australian Artillery Association (AAA) and the Royal Australian Artillery Historical Company (RAAHC) will jointly conduct three contests during the 150th Anniversary. The competition areas are:

- photographic
- video
- essay

The contests will be open to all gunners, serving and retired. Funding will be provided equally by both organisations. Entry will mean the contributor agrees that their entry may be published by AAA / RAAHC and be made available to wider RAA.

Photographic Competition

There will be five rounds with one in March, May, July, September and November respectively. Subject matter must be artillery related (equipment, exercises, mess life, people, etc). \$100 cash will be the prize for each round.

Entries to be judged by Mr Greg Behan, a retired gunner and semi-professional photographer.

Video Competition

Again there will be five rounds with one in March, May, July, September and November respectively. Subject matter must be artillery related (equipment, exercises, mess life, people, etc). \$100 cash will be the prize for each round.

Entries to be judged by Graham Hampton, Kim McGrath, Ian Ahearn, and Greg Behan.

Essay Competition

The essay topic is "Time to Reflect". Subjects can be wide ranging including aspects of service, friendships, equipment's used, operational experiences, good and bad times, leadership, home support, etc. Retired gunners may want to write about their post service activities.

Essays will be judged by Ian Ahearn, Kim McGrath, Graham Hampton and Craig Furini. Prizes will be \$750 for first prize, \$500 for second prize and \$250 for third prize.

Essays are to be submitted by close of business on 31 October 2021. Prizes will be announced on St Barbara's Day 4 December 2021.

Competition Details

Competition details will be displayed on the AAA/RAAHC websites. The development site is at:

<https://www.australianartilleryassociation.com/2021/index.htm>

Contest results will be published on AAA / RAAHC websites and Facebook sites as will submitted materials. They will also be made available to RAA for use in electronic and printed publications.

AUSTRALIAN ARTILLERY ASSOCIATION INC

Activities and initiatives by the Australian Artillery Association throughout 2021 include but are not limited to those here.

150th Anniversary Car Sticker.

These Car Stickers were recently released on both our Website and Facebook page and will continue to be available for sale until the end of 2021. Such has been the immediate and continued success coupled with a significant amount of positive feedback of the 150th Car Stickers we will make available in the first quarter of 2021 a limited edition medallion of the same size and dimensions presented in a jewellers case. We are looking towards having produced a total of 200 with only 150 being made available for sale with each of the Batteries and Regiments being gifted one along with our Patrons and Sponsors.

Sweetheart Brooch

Sweetheart Brooch is gold in colour encrusted with rubies. This is a revamp on the old Sweetheart Brooch that was available throughout WWI, WWII and last seen in the early 1980's. That previous version was silver in design and encrusted with marcasite diamonds. The new brooch has more clarity of design and will be in a burgundy jewellers case embossed with "UBIQUE" in gold lettering. With a lot of activities anticipated nationwide throughout 2021 with a significant number of personnel attending accompanied by their wife/partner we thought it would be an ideal opportunity to introduce the brooch to enable those wives / partners to also display their support for the Regiment.



Commemorative Medallion.

On the 7th May 2020, Her Majesty Queen Elizabeth II our Captain General approved the design. The medallion will be 6 cm in diameter and come as a 2 piece set contained within a royal blue jewellers case. One of the two medallions will be numbered. All numbers relevant to existing regiments



and batteries will be withheld from sale for presentation to the respective name sakes during 2021. Number One will be gifted to Her Majesty Queen Elizabeth II our Captain General.



National Gunner Dinner

The Australian Artillery Association will hold a 2021 National Gunner Dinner to celebrate the 150th Anniversary at The Event Centre in Caloundra over the period Friday 20th August (Happy Hour) and Saturday 21st August 2021 (Dinner). Full details of the dinner along with Online Registration can be viewed by visiting their website: <https://www.australianartilleryassociation.com>.

With the COVID-19 vaccine now being distributed and the borders open the dinner will be the ideal time to come together on mass to celebrate our heritage, rekindle friendships and enjoy yourself amongst friends within the greater Gunner community. “



Media Shout Outs.

Throughout 2021 we will be sending into Radio Stations, Television Stations that present sports shows requesting a “Shout Out” ... “to all the current and ex serving members of the Royal Regiment of Australian Artillery who are celebrating the 150th Anniversary of Artillery in Australia this year .

RAA ASSOCIATION (VIC).

The RAA Association of Victoria’s plan is to support and augment the national program of events with several smaller events throughout the entire year, thus providing options for community engagement about the traditions and rich history of The Royal Regiment in Australia.

150 Gun Salute, 1 August 2021

Melbourne Shrine of Remembrance

The Association is working with BC 2/10 Light Battery to create a combined artillery footprint at the Melbourne Shrine of Remembrance when the Battery supports the 150-gun salute. The Association has organised the following at the Shrine to promote how artillery has shaped our history:

- At the Melbourne Shrine there will be a display including:
- Regimental Standard flown from the flag pole;
- Recently restored Armstrong 12LB (no 370) along with the Werribee Half Battery personnel in period uniforms,
- Restored 25 pounder, and
- 2/10 Lt Bty current equipment.

At Point Nepean

The importance of Point Nepean as the first shot in WW1 is too great for this site and its history to be ignored. There will be a display including a Salute Gun from 2/10 Battery and a 25 pounder.

At Fort Queenscliff

There may be an event as the Army Museum has black powder guns that can be fired in recognition of the importance coastal artillery played in our history.

Gunner Symposiums

These will be convened throughout the year. The purpose is to bring current, and retired gunners together in a less formal format to have a light supper, refreshments and discuss the profession of Artillery.

The theme is “how we got to where we are”. This will be a continuation from the very successful Fire Power Series conducted by the RAAHC mark the Artillery contribution in the Great War.

Throughout the year Capability and CASG representatives will be invited to deliver short briefs on Artillery related Projects.

Pod Casts

To compliment the Gunner Symposiums, Major Eling will create a series of podcasts about the 10 Australian Artillery battles. Some of these

podcasts will be presented at the Gunner Symposiums.

Official Unveiling of the 12 pounder No 370 Armstrong Gun

Details to be advised / advertised.

Victorian Cocktail Event

The RAA Assoc of Vic will hold a Victorian Cocktail event around the same time as the Sydney event noting that many of our members may not be able to attend the National Event. We would like to get our gunner community involved and aligned to the national program but make it accessibility at our local level.

Regimental Dinner / St Barbara's Day

To round out the year we will hold a Regimental Dinner the night before St Barbara's Day. This is a great tradition in Victoria where the Regimental Dinner is followed by St Barbara's Day on which the RAA Assoc of Victoria conduct our AGM.

POC: Jason Cooke, President, Royal Australian Artillery Association of Victoria M: 0409 043 165

LOCATING SURVEILLANCE & TARGETING ORGANISATION ASSOCIATION.

There will be a deferred 2020 reunion planned to coincide with ANZAC Day (Brisbane) 2021 COVID 19 restrictions, border closures etc permitting.

4TH FIELD REGIMENT (SVN) ASSOCIATION.

Two separate reunions / lunches are planned for ANZAC Day 2021. One in Brisbane and the other in Sydney. The events will mark the Return To Australia of 4th Field Regiment (second tour) in March 1971.



PODCASTS: 150 YEARS OF AUSTRALIAN ARTILLERY

Major James Eling

August the 1st, 2021 represents the 150th Anniversary of the founding of the first Permanent Artillery unit in Australia, when the NSW Colonial Secretary's Office proclaimed the raising of a Permanent Military Force which included one battery of Artillery, the 'New South Wales Artillery'. Over the 150 years, Australian Artillery has participated in countless engagements in support of our troops, our Allies troops, as lone sections or batteries, as a part of combined arms engagements and joint operations.

As a part of the 150th Anniversary of Australian Artillery, I am looking to identify the 10 most important Artillery engagements that the ADF and it's precursors have been involved with and produce a podcast series around those decisive engagements to educate Army about the contribution of Australian Artillery to our Nation's proud history. I also intend to educate listeners about the role of Artillery and to commemorate the sacrifice of Australian's gunners.

Decisive engagements will be decided upon based on the following criteria.

- Lessons from the principles of the employment of Artillery – Cooperation, Concentration of Fire, Economy of Effort and Sustainment.
- Lessons from a range of conflicts, pre Federation, WW1, WW2, Korea, Vietnam, and Afghanistan.
- Lessons from important engagements where Artillery played a decisive role.
- Lessons to highlight the different artillery tasks – suppression, neutralisation, destruction, harassment, illumination, interdiction, CBF and coordination of fires.
- Lessons from different components of Artillery – Anti Aircraft, Anti-Tank, Counter Battery, Divisional Locating capabilities, field, garrison, and the heavies.



Above: Gunners of the 36th Siege Artillery Group, with a 9.2 inch howitzer, the heaviest gun operated by the RAA, with a range of 9,000 meters for it's 130kg shell.

Below: Gunners of 2/4th Field Regiment at Balikpapan with the 25 pounder short.



Research is ongoing but the initial list of likely episodes include:

- South Africa / A Bty / the private Batteries pre Federation
- Bullecourt – comparing and contrasting poor staff work with the work of Bruchmueller on the Eastern front
- Hamel – surprise and coordination
- Brallos Pass – artillery in the defence
- Divisional Fire planning with 9th Div at El Alamein
- The guns of Ioribawia / Kokoda – the morale impact of receiving artillery support vs receiving artillery
- Nadzab air insertion – flexibility along with domestic supply chain given that the 25 pounder short was made in Victoria
- Korea – I am still looking for the right battle to discuss
- Defence of FSB Coral / Battle of Long Tan
- A good account if possible of Aus gunners spt to British in Helmand
- Air Defence – Darwin? Is there something better? Given we may lose air superiority at some stage, and it has been Korea since the infantry have looked up at a plane and wondered if it was friendly
- Arty Int and CB fires. Potentially looking at the CBSO (Counter Battery Staff Officer), with sound ranging and flash spotting
- The final episode will look at the contemporary threat and opportunities in the near peer sphere, eg Armenia or the Zelenopillya rocket attack to highlight the future for integration, ISTAR and long range fires.

I am currently looking for information about the above engagements and suggestions for other engagements that would be worthy of inclusion on the list.

The podcasts will be published at <https://theprinciplesofwar.com/> and are expected to get over 100,000 downloads. This represents a significant opportunity to educate Army and the public about the role that Artillery has played in the last 150 years and more importantly highlight the opportunity, requirement and necessity for maintaining and developing the capability in the future.

If you can assist contact James Eling at james.eling@defence.gov.au

Australian Gunners
(Serving or Retired)

YOU ARE INVITED TO CELEBRATE THE

150th Anniversary of Australian Artillery in 2021

Mark Your Diary National Events

Where: Canberra, Venues - RAA National Memorial & AWM
WHEN: SUNDAY 1ST AUGUST 2021

Where: Sydney, Venue - Victoria Barracks
WHEN: SATURDAY 6TH NOVEMBER 2021

Note: More detailed information including timings will be provided when available throughout 2020 and 2021

Unit & Association Events
Throughout 2021 as advertised by those individual coordinating organisations.

CANBERRA
1st August 2021
Commemorative Service at RAA National Memorial
Mount Pleasant
Synchronised National Ceremonial Fire Plan
Mount Pleasant & all RAA Unit Locations
Last Post Ceremony
Australian War Memorial

SYDNEY
6th November 2021
Formal Parade & Drum Head Service
Incorporating the presentation of a new Queen's Banner
Followed by
150th Cocktail Party
Victoria Barracks

FURTHER INFORMATION
Contact
RAA HOR Staff
via email at raa.hor@defence.gov.au

Take Post

Book Review

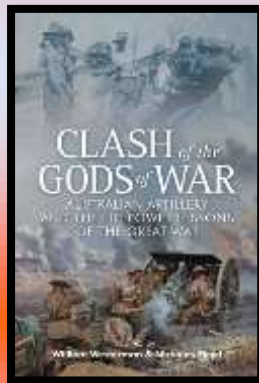
CLASH OF THE GODS OF WAR: AUSTRALIAN ARTILLERY AND THE FIREPOWER LESSONS OF THE GREAT WAR

WILLIAM WESTERMAN & NICHOLAS FLOYD
(EDS), BIG SKY PUBLISHING, NEWPORT, 2020.
HB 480PP. RRP \$34.99.

■ Review by David Martin for
Reconnaissance, the Magazine, the
Military History Society of New South
Wales Inc; Number 43, Spring 2020

From having just three field batteries in 1913, Australian artillery had increased by 1918 to number 1200 guns on the Western Front. The workhorse was the 18-pounder QF field gun which fired shells with a relatively flat trajectory to almost 5000 metres; integrated with each three batteries of 18-pounders would be a battery of 4.5-inch QF field howitzers, firing with a more elevated trajectory, to almost 6700 metres. These field guns were pulled around by six-horse-teams and operated by 10-man crews. (There was also the Heavy Artillery Group which operated the 8-inch BL howitzer, firing 90kg shells, and the 9.2-inch BL howitzer, which fired 130kg shells, with ranges of from 9600 to almost 13,000 metres. These needed tractors to pull them around and were operated by 12-man crews.)

In the first half of the war Australian gunners had available to them mainly shrapnel shells, which were detonated above their target by powder-burning time fuses, bursting in the air to spray hundreds of metal balls downwards – but



they were only lethal for troops if they were unlucky enough to get caught out in the open, not in the safety of deep trenches. Gradually shrapnel would be replaced by HE (High Explosive) shells, which were intended to explode on impact with the ground, but initially this was not instantaneous, with detonation usually occurring after a delay, resulting in cratering and a contained explosion – it was only from early 1917 that ‘graze’ fuses maximized the destructive effect.

Australian historians have written relatively little about the AIF’s artillery. The explanation dates from the Official History of Australia in the War of 1914-18: under the direction of Charles Bean, it focused attention on the Australian infantryman, presented as the epitome of the national character, and devoted minimal attention to the technical aspects of warfare such as those raised by the ‘gunner’s war’. A strong argument can be made that Bean’s emphasis was misplaced – because it was really the artillery that decided the war’s outcome. For those historians who argue thus, the centenary of the war presented an opportunity to set the record straight. A seminar series was arranged ‘Firepower: Lessons from the Great War’, conducted across eleven sessions between 2015 and 2018. These involved the presentation of papers by individuals from a variety of backgrounds which, while paying some attention to the Australian Field Artillery, gave rise to a broad ranging conversation – about the evolution of, indeed ‘revolution’ in, techniques which would see artillery ‘shaping’ the course of the conflict.

Subsequently the best contributions have been selected for publication as *Clash of the Gods of War*: it incorporates the papers of 22 authors, appearing as individual chapters. What results is a complex discourse, about the emergence of a new style of warfare – and of how Australians were involved in that process. It is not a book about heroic Aussie exploits.

Battlefield success in the First World War would be largely dependent upon infantry receiving effective, overwhelming artillery support. Such support was a prerequisite if they were to capture enemy positions. As demonstrated by the 1915 Gallipoli campaign, when it was absent fighting could readily degenerate into trench gridlock. Lacking artillery support, the 25 April 1915 dawn landing at Anzac Cove turned into a fiasco. There was some support from British naval gunnery off-shore, but because of the close proximity of the opposing forces the Turkish defenders could not be targeted. It was not until 10 am that a single gun battery (manned by Indian troops) was landed and at 11:55 am three of its guns opened fire; but because of Turkish counter-battery fire they had to be withdrawn three hours later. At 5:45 pm four more (Indian-manned) guns were put into operation; and at 6 pm a solitary Australian-manned field gun began firing.



Australian gunners, M'Cay's Hill, Gallipoli, 1915

By nightfall, the Australians had been confined to a shallow beachhead, (a situation which would prevail for 9 months). On the next day 19 Australian guns were landed, of which 10 were then returned to the ships – out of fear that the Anzac position would be overrun, and the guns captured. It would take 13 days before five

Australian field artillery batteries were ashore and in position to provide supporting fire for their troops.



Australian gunners, near Zonnebeke, 1917

A provocative interpretation, from the Turkish perspective, is provided by Professor Mesut Uyar. He argues that the British planners of the Gallipoli operation shared a common racist outlook: they were convinced of the 'racial superiority' of the troops they were landing on the peninsula, and that 'the Ottomans would witness the might of the Royal Navy and the Imperial armies as they massed on the beaches'. This didn't eventuate. 'Ultimately, the British and Australians paid dearly for their underestimation and disdain of the Ottomans'. As regards the relative abilities of the two forces, Uyar proposes that the Turks 'adapted to trench warfare better than the Allies' – he argues, for example, their artillery was used more effectively in a counter-battery role.

The Australian artillery that would be deployed on Gallipoli was grossly ill-prepared for the task at hand. Pre-war training had involved individual batteries practising without any higher coordination – and when it came to actual combat, the cooperation between all available artillery assets that would have made the greatest impact could not be achieved. In one instance a request for fire support from the artillery located in another sector of Anzac took a day to reach the relevant commander. There was a 'lack of an overarching corps artillery command and control arrangement': unified fire plans were a work in progress. '... the ANZAC commanders were on a steep learning curve in relation to arranging support for assaults against entrenched

positions'. That said, this was not a situation unique to the Gallipoli campaign: a not too dissimilar situation was playing out in Europe, on the Western Front – where most of the AIF would find itself next, after being evacuated from Gallipoli on the night of 19/20 December 1915.

About 70% of *Clash of the Gods of War* involves the war on the Western Front: of how the use of artillery evolved over the course of the conflict there. Without becoming over-technical, it is a discussion which reflects the latest research of military historians into how the British army underwent an intense and steep 'learning curve' to emerge a battle-winning force in August 1918. It is against this background that the AIF is viewed: on the Western Front, it was subsumed to a significant extent into the BEF (British Expeditionary Force). Key Australian artillery commanders Brigadier-General Talbot Hobbs and Major-General Walter Coxen had received formative training from the British Army. Nick Floyd observes: 'Throughout the war, interoperability between British and Dominion forces in a technical, cultural and procedural sense yielded highly effective cooperation'; and, 'the Australian field artillery [was] a part of and supported by the wider BEF'. David Brook:

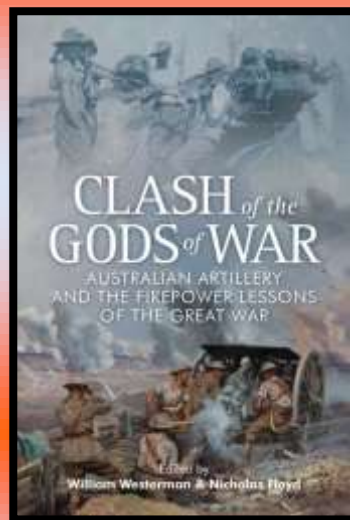
'Throughout the war, Australian artillery generally adopted the methods and training concepts, the armament and organisations of the British Army'. Ellen Creswell places the Battle of Hamel, famously planned by Australia's Major-General Sir John Monash, within the context of 'a steep and uneven learning process as the British ... wrestled with how to incorporate new technologies into their existing tactics'.

When the AIF began arriving on the Western Front from mid-1916, its mentor – the BEF – was still in the very preliminary stages of

coming to grips with the stalemate of trench warfare. The British Army had little experience in use of massed artillery: its battery commanders had only been trained to provide instant local fire support, using direct fire (against visible targets), supporting individual battalions experiencing problems. For its first full-scale offensive of the war, the 10-12 March 1915 Battle of Neuve Chapelle, the BEF gathered an unprecedented 340 guns, and the fighting began with an attempt to achieve surprise with an innovative, brief 35-minute bombardment. Apart from some initial objectives being taken, however, the British attackers were forced to retreat. Subsequently, the wrong conclusions were drawn that battles

needed to be preceded by days of bombardments, with the objective of obliterating front-line enemy fortifications and annihilating defenders. (This flawed belief in 'destruction as a foundation for fire power design' would continue to assert itself, for example in the battles in which Australians participated at Pozières in July/August 1916 and Bullecourt, May 1917.) One obvious lesson was that shrapnel shells were largely ineffective; what was needed were

more heavy guns firing HE shells (both of which had been in limited supply in 1915). Most importantly, considerable preparatory work was needed in the many weeks preceding a battle, locating enemy artillery batteries (not directly observable, many being positioned well to the rear of the battle zone) with the intention that they should be subjected to pin-point, 'indirect' counter-battery fire when battle was joined – they needed to be neutralised so that attacking infantry could cross no-man's-land as free as possible from enemy bombardment. It would take until 1918 for various lessons to be properly learned, and the remedies implemented. As Meleah Hampton puts it, Australia's General Monash 'had the benefit of the systematic dissemination of information by the BEF, within which the Australian Corps was seated. The



British Army of 1918 was heavily geared towards lesson-learning, with Stationary Service pamphlets on recent notes from attacks and lessons learnt widely distributed among commanding officers at all levels’.



Australian 18 Pounders, Ypres, 1917

The Battle of Hamel of 4 July 1918 was meticulously planned by Monash: it was ‘a limited-objective, set-piece battle predicated first on the use of artillery’, and it lasted just 93 minutes. As explained by Meleah Hampton, it was ‘one of the best exemplars’ of ‘the British offensive method of 1918 ... heavily dependent on a systematic application of firepower to support advancing infantry’. Crucial to Monash’s plan were techniques that the BEF had been developing ‘from experience gathered over years of frontal assaults on a continuous and well-fortified German line’. The infantry followed behind a creeping barrage which consisted of a series of lifts of 100 yards every two or three minutes, combined with a thick smokescreen which hid the advancing infantry. Once the village of Le Hamel was reached, a standing barrage kept it isolated for 30 minutes. In total, at least 132,000 shells had been fired by 61 batteries of field guns and howitzers. Thereby German machine-gunners and infantrymen were mostly stopped from firing on the attackers. Simultaneously, 161 heavier guns were devoted to counter-battery fire. For this purpose, since 1915 the BEF had been developing scientific methods for locating enemy artillery batteries: flash-spotting and sound-ranging – the latter technique having been perfected by an Australian, Major Willy Bragg. Using these

techniques, in the days leading up to the battle the ‘German positions had been precisely located’, and just as the battle began, ‘a sudden burst of counter-battery fire proved to be devastatingly accurate ... The attacking Australian infantry ... experienced almost no fire from the German artillery during the assault’. During their advance across No-Man’s-Land, the troops were closely supported by another example of new technology which had been developed by the BEF, the tank. And overhead, the attack was supported by aircraft. Such was the success of Hamel as a trial of the new ‘British offensive method’ of all-arms warfare, that at the end of July a pamphlet was published outlining what had occurred. It served as a model for the 8 August Allied attack at Amiens which was so successful that Ludendorff described it as the ‘Black Day of the German Army’.

The battle-winning formula arrived at in 1918 is analysed in a chapter by Albert Palazzo. He draws attention to a newly created agency, the Counter Battery Staff Office (CBSO). The first was established in July 1916, and soon every BEF corps had its own CBSO, commanded by a lieutenant colonel with a small staff of artillery and intelligence officers. Palazzo:

The CBSO linked a variety of sensors with planners who used the information to develop gunfire programs which its staff assigned to batteries to conduct. By using the CBSO system of fire management, the British and French guns became much more effective at counter-battery firing and gained the ability to silence the enemy’s artillery at the point and time of their choosing. With the enemy’s guns silenced, the infantry could now advance in the wake of tanks and a rolling barrage in relative security.

Clash of the Gods of War is a book of uneven quality. Some chapters are content-heavy, but others like that by Palazzo are full of interesting ideas and stimulating analysis. It is not a book especially about the AIF. But for anybody wanting to have an up-to-date understand of how the stalemate of trench warfare was eventually overcome, it is recommended reading.

Vale

Vales in Brief

Information supplied from a range of open sources. For more detailed tributes visit the RAAHC website and click on the Vales section.

Corporal John Edward IRVINE

1731636 Cpl John Edward Irvine passed away on 3rd February 2021. John served in the Light Aid Detachment with 4th Field Regiment in South Vietnam from 8th June to 13th December 1967. RIP John Edward Irvine.

David ADAMS

David Adams died on 16th January 2021 after several weeks of illness. His funeral was held on Monday 25 January 2021 in Mitchell, Canberra. Dave was the Battery Sergeant Major of 'A' Field Battery from 1963 until 1967, this included 2 years in Malaysia during Confrontation. Tex Bassan said first met Dave when he was posted to 1st Field Regiment, at Georges Heights Sydney, straight from recruit training at the School of Artillery, North Head and was posted down to Middle Head, 3 Heavy Anti Aircraft Battery, where Dave was a gun bombardier. David was 90 years young and had been married for 70 years and will be sadly missed.

Graham Fredrick Lawrence HUBBARD

Graham Fredrick Lawrence Hubbard (Dadda to many) died on Friday 29th January 2021. Graham served in the Australian Regular Army as a driver in RAASC in the 1950s and later

joined 41st Battery, 11th Field Regiment at Southport in the late 1960s.

Warrant Officer Class One Gordon Albert (Mick) Cole

Warrant Officer Class One Gordon Albert (Mick) Cole died on 16th September 2020. Mick was 93 years young. Mick saw service with the RAAF towards the end of World War Two and then in the Australian Regular Army in Japan with the British and Commonwealth Occupation Force and later in Malaya. Mick also serviced with 1st Field Regiment and then later as RSM of 7th Field Regiment.

Warrant Officer Class Two Peter DINWOODIE

Warrant Officer Class Two Peter Dinwoodie passed away on 30th December 2020. He was a Life Subscriber of RAA Association (Queensland), and served with 11th National Service Battalion, 5th Field Regiment RAA, and 121st Light Anti-Aircraft Battery Darwin. Peter was a regular and very sociable attendee at the Association luncheons and enjoyed the camaraderie when his health permitted.

Warrant Officer Class Two Patrick Joseph WITTIG

Warrant Officer Class Two Patrick Joseph Wittig, passed away on Friday 6 November 2020. His son Patrick advised that Pat passed away peacefully after battling cancer. Pat was a Life Member of the 101st Battery Association and served with the Battery in South Vietnam

from 19th September 1966 to 11th June 1967. He was 84.

Warrant Officer Class One George MASON

Warrant Officer Class One George MASON. George had been confined to a nursing home in Brisbane for some years. He was 79. George served with 1st ALSG in Vietnam from July to October 1966 and then with 1 ARU until November 1966 when he joined 1st Field Regiment. George returned to Vietnam with 1st Field Regiment in May 1969 and completed his 12 month tour of duty with the Regiment. A wonderful squash player (once he warmed up) and keen rugby player as well.

George PISANI

George Pisani. George (Gorg) was a member of 104th Field Battery and served with the Battery during their second tour of Vietnam from May to December 1971. Originally from Malta, George was just short of his 75th birthday.

Captain Edward Barry BESSEY

Captain Edward Barry Bessey died in Townsville General Hospital on Thursday 5th November 2020. Eddie had not been well for nearly two years and his passing may have come as a relief to some, especially to Eddie. Eddie served in Vietnam with 1st Field Regiment from February 1969 until March 1970. A full history of Eddie's service is available shortly on the RAAHC Website. Eddie was 79. RIP Edward Barry Bessey.

Sergeant Bill WRIGHT

Sergeant Bill WRIGHT. Bill served with 14th Field Battery, 41st Field Battery and 1st Field Regiment in Ipswich for many years. Bill's Funeral was on 31 July 2020. RIP Bill Wright

Randolf Wayne (known as Wayne) CURTIS

Randolf Wayne (known as Wayne) CURTIS died on Sunday 26th July 2020. Wayne had not been well for some time. He served in Vietnam with 1st Field Regiment from April 1969 until May 1970 and stayed with 1st Field Regiment in

Brisbane for many years. He was just short of reaching his 79th year. RIP Wayne Curtis.

Warrant Officer Class Two Al FOLEY

Warrant Officer Class Two Al Foley. Al died on the 9th June 2020 after a battle with cancer He was ten days short of his 73rd birthday. Al served with 106th Battery in Vietnam from February 1970 until March 1971. He stayed with 106th Battery for their tour of duty in Singapore in 1972 - 1973. Al had a variety of postings during his career including as an instructor at the School of Artillery and as a Sergeant Major Instructor Gunnery (SMIG) with 2nd/10th Medium Regiment in Melbourne. RIP Al Foley

Brigadier Jim RYAN AM, MID

Brigadier James Walter Ryan, MID died on Thursday 21 May 2020 aged 79. He requested that no funeral be held and requested that his ashes be scattered on Sydney Harbour.



Australian Gunners

(Serving or Retired)



**YOU ARE INVITED TO
CELEBRATE THE**

150th Anniversary of Australian Artillery in 2021



Mark Your Diary

National Events

Where: Sydney, Venue - Victoria Barracks

WHEN: SATURDAY 6TH NOVEMBER 2021

Where – Canberra, Venues - RAA National Memorial & AWM

WHEN – SUNDAY 1ST AUGUST 2021

Note: More detailed information including timings will be provided when available throughout 2020 and 2021

Unit & Association Events

Throughout 2021 as advertised by those individual coordinating organisations.

SYDNEY

6th November 2021

Formal Parade & Drum Head Service

Incorporating the presentation of a new Queen's Banner

Followed by

**ALL RANKS
FUNCTION**

Victoria Barracks

CANBERRA

1st August 2021

Commemorative Service at RAA National Memorial

Mount Pleasant

Synchronised National Ceremonial Gun Salute

Mount Pleasant & all RAA Unit Locations

Last Post Ceremony **Australian War Memorial**

Further Information

Contact

RAA HOR Staff

via email at

raa.hor@defence.gov.au

RAAHC

NEEDS YOUR SUPPORT



The Royal Australian Artillery Historical Company needs Your Help to Support the Preservation and Promotion of Artillery History and Heritage and the Management of the Regiments Collection Nationally



How Much Does It Cost?

\$30.00 (1 year), or \$120 (5 years)

All Gunners and friends of the Regiment are invited to join



What You Get In Return?

RAA Liaison Letter and Cannonball twice annually

Free access to the Artillery Museum (temporarily closed) and most other museums in the Australian Army Museum network

Use of the Artillery Museum's library resources

Personal satisfaction in supporting the preservation of Artillery heritage



How Does The Company Benefit?

They can add your weight to the membership numbers when seeking grants and other assistance from public and non-public sources

Your subscription assists with ongoing administration costs



How Do You Join?

A membership form can be found in this publication

Submit a form and start supporting a very worthwhile cause



RAAHC THANKS YOU FOR YOUR SUPPORT