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Sabretache



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www.mhsa.org.au

Military Historical Society of Australia
PO Box 5030, Garran, ACT 2605.
email: webmaster@mhsa.org.au

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EDITORIAL

This year sees the final opportunity for centenary commemorations of the First World War, unless you count some of the sideshows and add-ons associated with the collapse of empires initiated by the war. If you are interested in the latter, by the way, have a look at Damien Wright's new book, *Churchill's Secret War with Lenin*, reviewed on pp.54-55 of this issue – it's quite an eye-opener. But otherwise, 1918 marked the end of the war, and although casualties were particularly high that year – chiefly as a result of the offensives launched by both sides in their attempts to break the stalemate on the Western Front – it was a year of victory for the Allies, and deserves to be celebrated as such.

While this may seem a bit of an obvious assertion, there has been a tendency among officialdom to focus on the 'death and sacrifice' aspects of the war, with recognition of what was actually achieved being pushed into the background. The point was driven home to me when I tuned in last year to watch the ceremony in Israel for the hundredth anniversary of the Charge at Beersheba. What little I could endure of the proceedings proved so leaden, po-faced and dreary, you'd have thought the 4th Light Horse Brigade had been wiped out instead of achieving a brilliant success back in October 1917. 'Give me Charles Chauvel's 1940 film *The Forty Thousand Horsemen* any day rather than this,' was my reaction, as I switched off the TV.

I was therefore gratified to read the comments of British Army Colonel Tim Collins, renowned for his stirring eve of battle speech to the 1st Bn Royal Irish Regiment in Iraq in 2003. In a recent article for *The Radio Times*, Collins argues that the tenor of commemorative events is such that younger generations could be forgiven for believing that Britain and the Dominions had lost the war. He takes issue with the BBC for promulgating a 'Blackadder version' of the conflict, countering: 'our forefathers ... were not mindless dupes slaughtered in their thousands for no reason, but volunteers and conscripts who stood up to evil and, through hard-won excellence, defeated it.' Regarding the BBC's program on the centenary of Passchendaele in much the same way I felt about the official Australian treatment of Beersheba, Collins urges, 'When the time comes to mark 100 years since the Armistice later this year, I am calling on the BBC to also note that we are marking a victory.'

While not wishing to downplay the horrors of war, I echo that call, and can only hope the tone adopted in this country is as celebratory as it is reflective. Australia has good reason to be especially proud of its achievements a hundred years ago.

Paul Skrebels

THE SHOW MUST GO ON THE ROAD FOR VICTORY: THE MGO TECHNICAL ARMOURY AND THE FIRST VICTORY LOAN 1944

David Pearson and Mike Vanderkelen¹

Like the pre-dawn glow on the horizon, there were signs by early 1944 that the war effort was starting to turn in favour of the allies. Most notably in Australia the threat of an invasion by Japan was over. In Melbourne a 24-year-old artillery officer who had seen service in the Middle East with the 2/8th Field Regiment, as well as with 2/10th Field Regt at home, rose to a February morning on which he would be assigned to a somewhat unusual command. Reporting to the Master General of Ordnance (MGO) Branch housed in a Nissen hut in the bayside suburb of Albert Park, Staff Captain Phil Vanderkelen of the DMGO(E) Section,² was greeted by his CO, Brigadier John O'Brien, who gave him his new orders (see Appendix 2).

For the months following, Phil and 33 officers and ORs – members of Land Headquarters (LHQ) and the 146th Australian General Transport Company – would become the military version of a travelling show and all that involved.³ Instead of boxers, bearded ladies or hillbilly singers under canvas, the attraction of this show was the equipment of warfare (Appendix 1, Table 1). Capt Vanderkelen would shepherd some 1,500 items of Allied and captured enemy arms and equipment across more than nine locations in four states in a major fund raising project for the First Victory Loan (March-May 1944) and the Australian Comforts Fund (ACF) (Appendix 1, Table 2). This equipment consisted of items such as an Australian designed and built 25pdr (short) field gun, and captured weapons, such as the German 8.8cm (88mm) Flak 36 anti-aircraft/anti-tank gun and a Japanese 25mm Model 96 Type 2 triple barrelled anti-aircraft/anti-tank gun.

From a tank transporter to a motorcycle, 17 Australian military transport vehicles of all sizes would signal the arrival in capital cities and regional centres of an exhibition designed to attract the Australian public to buy Government war bonds which would help the country get back on its feet when the conflict came to an end. Just as the equipment exhibition was designed to entertain the public and ultimately to sell bonds, so an entertainment precinct had been the focal point of earlier attempts to sell bonds in Western Australia. Motion pictures were a popular form of entertainment and cinemas, typically attracting large numbers of people, were open until 10pm or later. In late 1942 the Austerity Bond was sold with considerable success in picture theatres, supporting the idea that 'many small investors would readily buy bonds at the theatres but not go to banks'.⁴ However, by 1943 promotion of bonds was restricted to the gathering of pledges at theatres.⁵ If the showman analogy isn't totally accurate, it nevertheless has many parallels with those who brought entertainment to a people for whom austerity had been the rule for nearly five years since war began: heralding the exhibition were music, street parades, 'radio theatre' and positive messages in newspapers

¹ David Pearson holds an honours degree in archaeology from the Australian National University, Canberra and has written a number of articles in academic journals on both archaeological and digital preservation issues. He has a keen interest in the technological and social contexts of conflict archaeology and is a fellow of the Society of Antiquaries of London. Many aspects in this article add additional details to his 2000 Thesis (Pearson 2000). Mike Vanderkelen is a nephew of the late Captain Philip Vanderkelen. He is a former journalist who was commissioned in the Australian Army and served in infantry and the artillery reserve units.

² Deputy Master General of Ordnance (Equipment).

³ AWM Private Record PR06321.

⁴ James (2009: 53).

⁵ Ibid.

and on radio about the country's road to victory.



Fig.1: Serving briefly together in the Middle East in 1941, Phil Vanderkelen (left) is pictured at El Kantara, Egypt, with his older brother Peter, also an artillery officer. (Mike Vanderkelen collection)

The story of this travelling exhibition began late in 1943 when the Commander in Chief, General Sir Thomas Blamey, granted permission for the Axis and Allied equipment housed at the Albert Park MGO Technical Armoury, to be exhibited to raise money for the Queensland division of the Australian Comforts Fund (ACF). The ACF provided free 'comfort' items to supplement those that were, and some that were not supplied by the services to all Australian servicemen. Additionally, the ACF provided recreational facilities, games, rest rooms, sporting equipment, gramophones and records to the troops, as well as writing materials such as pencils, paper, envelopes and postcards so the soldiers could write home.⁶ In 1941 and early 1942 Gen Blamey had opened two ACF hostels in Palestine.⁷ No doubt he thought highly of the contribution of the ACF to boosting military morale, but why he singled out the Queensland branch is unknown.

A report which summarised the travelling exhibition, written by its 2IC Lt L. Franklin, says that 'as the First Victory Loan was to begin at about the same time in March 1944, the Minister and the Treasurer suggested that the appeals would clash.'⁸ Franklin may have been referring to John Curtin, who at that time was both Prime Minister and Minister for Defence, and his Treasurer, Ben Chifley, although it is possible it referred to Frank Forde who was Deputy PM and Minister for War. Either way Chifley, who was also Minister for Post War Reconstruction at that time, was looking to the future and it was decided that the Exhibition

⁶ Jackson (1949: 333-334); AWM – Guide to the Australian Comforts Fund Souvenir Collection – Finding Aid. The fund had close links with associated bodies including the YWCA and the Salvation Army, who all catered for able 'fit and well members of the Services' (Jackson 1949: xxvii-xxviii, 18-19).

⁷ *Advocate* [Burnie], 24 January (1942: 2).

⁸ AWM Private Record PR06321.

should be shown in conjunction firstly with the First Victory Loan and secondly with the ACF.

Voluntary loans were one way the Government could fund the war or it could use taxation and compulsory loans and credit expansion.⁹ Sydney numismatist Tony James writes that in the Second World War the Commonwealth Government's first public appeal was a loan raised in March 1940 for an amount of £18,000,000. 'The whole amount was taken up by the public and the operation set the pattern for future loans', of which there were a total of 17 to 19 between December 1939 and September 1945.¹⁰ In his national broadcast on 15 April 1942, PM Curtin said thrift was an 'urgent duty'. Spending was to 'disregard national security' he said, urging the public to start saving immediately.¹¹

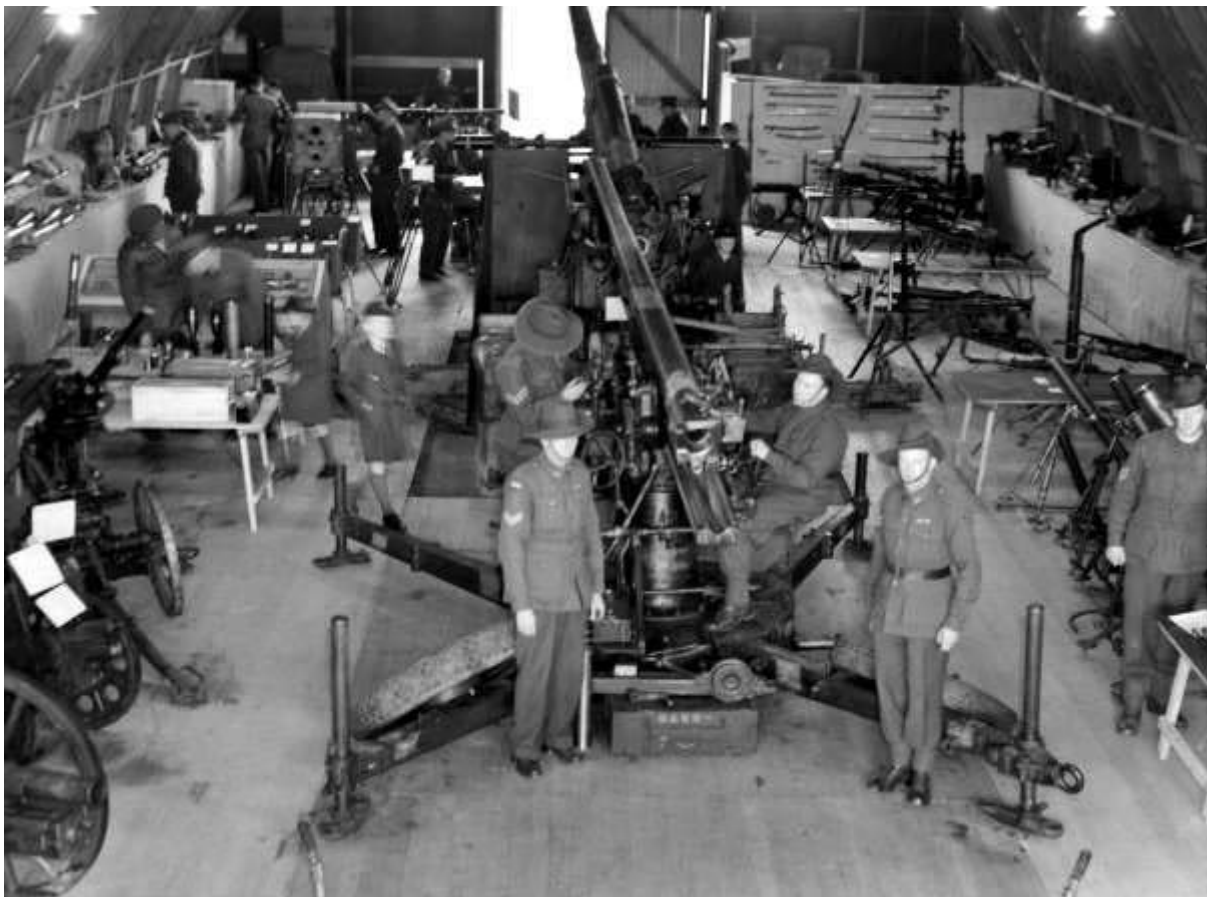


Fig.2: This interior view of the Nissen Hut, with Japanese 75mm Type 88 anti-aircraft gun in the foreground and German 88mm behind it, gives some idea of the extensive collection held in the MGO Branch Technical Armoury at Melbourne's Albert Park. (AWM 055309 – Taken by M.B. Rogers, 14 August 1943).

Initially the loans were described as 'War' then 'War and Works'. By 1942 the names had changed to reflect the progress of the conflict and the state of the nation. There were 'Liberty' loans and, an 'Austerity' loan and by March 1944 when an end was in sight, the Commonwealth floated its first 'Victory' loan (Appendix 1, Table 3). Maybe the public had

⁹ NAA CP6/2, 50 (n.d.: 110) and *Sydney Morning Herald*, 30 March (1944: 4).

¹⁰ James (2009: 50). Also see NAA CP6/2, 50; Butlin and Schedvin (1977: 580). This figure depends on whether the Conversion Loans are included.

¹¹ *Diary of a Labour Man 1917-1945*, 1942 – Speech by the Prime Minister John Curtin on 15 April 1942 in Canberra.

forgotten Curtin's call to save or spending on personal pleasures lightened the dark days of war, but along the way some loans did not look like closing fully subscribed. Posters calling for the public to support the various bond issues were on the sides of buses, on public notice boards, in cinemas and in theatres, and there were smaller examples in newspapers. To get people to open their wallets, creative promotional tactics worthy of any travelling show were needed.

By 1944 and the First Victory Loan, the use of Allied and enemy equipment was not a new phenomenon. For example, during the First World War a Mark IV Female tank was sent to Australia in 1918. The tank toured the country in late 1918 to raise money for war loans and was also used in a number of displays in 1919, before being given to the Australian War Memorial (AWM) in 1921.¹² Likewise, earlier in WW2 a German Messerschmitt Bf-109 fighter plane which was shot down in the Battle of Britain on 5 September 1940 was sent to Australia and toured the country in 1941-42, and half-way through its tour had purportedly been seen by more than 250,000 people. This aircraft was scrapped after the war.¹³ Similarly, Allied, German and Italian tanks and other equipment were on display in Melbourne in November 1942 for the Austerity Loan and in April 1943 for the Third Liberty Loan.¹⁴ In October 1943 the Lancaster bomber 'Queenie VI' (Lancaster A66-1) toured the country promoting the purchase of war bonds in the Fourth Liberty Loan (Oct 1943). Its unsanctioned flight under the Sydney Harbour Bridge was a memorable event of the tour.¹⁵ This aircraft was also used to promote the First Victory Loan throughout country and metropolitan areas in Queensland.¹⁶

After the First Victory Loan the use of Allied and enemy equipment would continue for fund-raising purposes. For example, 'Queenie VI' was also used in the Second Victory Loan which toured Western Australia, South Australia, Victoria and New South Wales (Oct 1944).¹⁷ The other Lancaster bomber in Australia, 'G for George' (A66-2, now at the AWM), and some other aircraft were also used for this purpose in the Third Victory Loan (March-April 1945).¹⁸ Similarly, a second 88mm Flak 36 in Australia, now at the Australian Army Armoured Museum at Puckapunyal, Victoria, was part of an exhibition of German, Italian and Japanese equipment used to promote the Third Victory Loan from 14 March to 10 April 1945 in Tasmania.¹⁹

¹² Cecil (2001: 36-41); Finlayson and Cecil (2015).

¹³ 140,000 in capital cities and 108,000 in country centres (*Albany Advertiser* [WA], 3 November 1941: 3; Fripp 1999: 18-19; Parker 2013: 334).

¹⁴ On 11 November 1942 (AWM Negative Number 137043; 137053) and on 14 April 1943 on Collins Street (AWM Negative Number 138586; 138588). Also see *The Herald* [Melbourne], 14 April (1943: 3) and *The Age* [Melbourne], 15 April (1943: 3).

¹⁵ Nelmes and Jenkins (2000: 186-188, 221-223); Warner (2000: 118-122).

¹⁶ Nelmes and Jenkins (2000: 222); Warner (2000: 123).

¹⁷ Nelmes and Jenkins (2000: 223).

¹⁸ Nelmes and Jenkins (2000: 189-207); Nelmes (2017: 306-312).

¹⁹ NAA P617, 471/1/54; *Advocate* [Burnie], 10 March (1945: 2); *Mercury* [Hobart], 12-14 and 16-17 March 1945; *Examiner* [Launceston], 28 March (1945: 5). This gun was captured by 'B' Company 2/24th Battalion on the morning of 31 October 1942, between the Blockhouse and Ring Contour 25, on the south side of the coast road (AWM52 1/5/20 October-November 1942, appendices; AWM52 8/3/24 September-October 1942; Maughan 1966: 713; Serle 1963: 195, 216; Johnston and Stanley 2002: 216-217; Pearson and Connah 2009: 251. This was one of four such guns captured by the 26 Infantry Brigade during this part of the operation (AWM52 8/2/26 January 1943, Report on Operations "Lightfoot", part 2 of 2). Based on prisoners captured that morning (31 October 1942), and markings that were on the gun, it was probably 'B' gun of the 1./Flak 6 (1st Battery, Flak Regiment 6) (AWM52 8/3/23 October 1942, appendices, Part 1 of 3; Pearson and Connah 2009: 252). Wilhelm Kalsch who was part of the detachment for 'A' gun of this battery confirms that 'B' gun was captured on the south side of the road and is pictured in many books about Alamein (AWM315 701/054/008;

How the First Victory Loan exhibition of enemy and Allied equipment, which opened first in Adelaide on 27 March 1944, was promoted to the people of the South Australian capital was a template for the entire project, with some minor variations along the way. It was described at the time by the *Advertiser* as ‘probably the most spectacular publicity medium introduced for any loan in Adelaide’ and most likely in all of Australia.²⁰ Drawing some parallels with a travelling tent show or circus in rural Australia, the exhibition was promoted using print and radio advertising, supported by radio interviews and newspaper reports once the exhibition was in town. Among the theatrical techniques employed to show the equipment off were painted backdrops of jungle scenes, palms, cypresses and other foliage to camouflage a Japanese ‘Juki’ machine gun in a bunker position. There was also a reproduction of an Italian gun position with a 100mm Obice (Howitzer) 100/17 as the exhibit, and mannequins dressed in the uniforms and equipment of the Axis powers.²¹



Fig.3: Adelaide, the first city on the exhibition's itinerary, welcomed the German 88mm as it drew up outside the Town Hall in King William Street. The gun is being towed by a 'Tractor, Artillery, (Aust.) No.6'. (AWM P2426.003 [with damage to the photograph repaired])

Capt Vanderkelen, having agreed a four-state itinerary with the Commonwealth War Loans director Charles Banfield, left Melbourne ahead of the exhibition convoy. In response to an invitation from ABC Radio South Australia, his first engagement was an interview on 5CL.²² As with any of the radio interviews undertaken by Capt Vanderkelen, each was tightly scripted and stamped with approval of the censor.²³ Given that 50,000 people reportedly

e.g. Lucas Phillips 1962: plate 2 between p.68-69). It is presumed that he refers to IWM photograph E19174 (Pearson and Connah 2009: 242-243). Personnel from another gun/s in the battery were captured earlier in the battle in the general area (AWM52 1/5/20 October 1942: AWM52 8/2/26 October-December 1942).

²⁰ *Advertiser* [Adelaide], 30 March (1944: 4); AWM Private Record PR06321.

²¹ AWM Private Record PR06321; *Advertiser* [Adelaide], 17 March (1944: 4); 30 March (1944: 4). The Jungle scene was not re-produced in Sydney due to a ‘lack of suitable palms’ (AWM Private Record PR06321).

²² AWM Private Record PR06321.

²³ See examples of these radio scripts in AWM Private Record PR06321.

visited the exhibition, the interview must have been a success.²⁴ After a three-day journey from Melbourne, the exhibition convoy began to unload its cargo at the Adelaide Town Hall in King William Street. Even if the public had not heard the ABC radio interview, they could not easily have missed the drawcard to the main event within the Town Hall: the German 88mm Flak 36 gun captured in the pivotal battle of El Alamein in October-November 1942, most likely by the 2/24th Bn AIF, a unit of the 9th Australian Division (see Appendix 2).²⁵

With a live broadcast relayed by radio stations 5AD, 5DN, 5KA and 5CL, the State Governor, Sir Malcolm Barclay-Harvey, opened the exhibition. If a German gun pulled people through the front door, it could be argued that in pride of place in the Adelaide Town Hall was the 25pdr (short) field gun, the design concept for which was put forward by none other than Capt Vanderkelen's CO, the youthful looking Director of Artillery Brig John O'Brien (see Appendix 2).²⁶ In discussion with one of the authors, Capt Vanderkelen said the Adelaide public and the VIPs pictured at the exhibition opening seemed as much attracted by the Australian ingenuity that resulted in the so-called 'Baby' 25pdr as they were by the collection of enemy equipment.²⁷ Similarly, after the exhibition, convoy 2IC Lt L. Franklin commented that:

Great interest was shown by the public in all equipment and in some cases more questions were asked about Australian equipment. The Owen and Bren Gun were among the Australian items which received attention, both types of 25 pdr. were also of great interest. It was found that some country centres had no knowledge of any Australian weapons, therefore enthusiasm to see our equipment was demonstrated.²⁸

With Adelaide a success, the first regional centre on the exhibition's itinerary was Ballarat, where the 88mm gun proved a major attraction. No doubt an interview of Capt Vanderkelen on Radio 3BA by announcer Jim Cross drew many people to see the 'big German gun' which was displayed at a race meeting on Easter Monday, 10 April 1944.²⁹ A photograph in *The Ballarat Courier* newspaper captures the 'big artillery piece' pointing skywards.³⁰ In Ballarat, the Loan was opened by the Minister for War, Frank Forde, who said 'it is absolutely essential that the people should subscribe to their utmost capacity in the loan, if the war was to be quickly won, for, after all, adequate finances were essential to success.' He continued that 'the exhibition ... which was on view to the public of Ballarat, was one of the most striking reminders yet seen by the Australian public of the gravity of the war position.'³¹

By Monday 17 April 1944 Geelong residents were turning out in their thousands at lunch time to see the 88mm German gun trundling through the streets of Victoria's second biggest city. Less than two years earlier it had shelled Allied troops at El Alamein. Now it was featured in a street parade, led by St Augustine's Orphanage Band, as the drawcard to get the public to visit the exhibition. Supported by advertisements in *The Geelong Advertiser* and an interview with Capt Vanderkelen on the *Advertiser* radio station, 3GL, the equipment went

²⁴ AWM Private Record PR06321.

²⁵ Ibid.

²⁶ Ross (1994: 392).

²⁷ Phil Vanderkelen, 2014 pers. comm.

²⁸ AWM Private Record PR06321.

²⁹ Ibid.

³⁰ *The Ballarat Courier*, 12 April (1944: 1).

³¹ Ibid. See also *Westralian Worker* [Perth], 14 April (1944: 4).

on show at the Army's Myers Street drill hall.³²

Accompanying Capt Vanderkelen to Geelong was Major T. Wildie, who assisted with publicity for the exhibition and may have arranged a modest form of sponsorship with a Melbourne canvas goods maker. Gairs, whose folding camp cots would have been familiar to army personnel, loaned the flags and bunting that decorated the hall.³³ A report from the time said 'Although the Myers Street Drill Hall is slightly out of town, there was at all sessions, a very good attendance. A crane for lifting the heavy equipment, guns etc. from the [Army] vehicles was obtained from the Harbour Trust.'³⁴ The personnel directly attached to the exhibition were quartered in the Officers' Mess at the drill hall as at all times there had to be a guard on the equipment. Assistance was provided by members of the Volunteer Defence Corps who also showed great interest in the exhibits, wrote Lt Franklin in his report after the exhibition.³⁵

The exhibition was opened by the Minister for Aircraft Production, Senator Cameron, who said 'when you look around this hall and see these exhibits ... you see instruments of war designed for the purpose, if not of destroying, then at least dominating our democracy. That involves us in a duty of providing the money for making similar and better instruments of war.'³⁶ The Geelong district was expected to make a significant contribution – £750,000 – to the war loan but for a while it did not look like achieving this objective. No bonds were sold at the exhibition as, according to the War Loan representative, 'no bank clerks were available.'³⁷ But it may have been other things, like price, that saw the Loan slow to take off. War bonds 'were issued in denominations of £10, £50, £100, £500 and £1000 as negotiable instruments'.³⁸ With only three million income earners in Australia and nine out of ten earning less than £400 a year, the Government had decided with earlier loans to allow 'people to purchase bonds in instalments so as to attract the maximum number of subscribers'.³⁹ So, even had the bank tellers been able to attend the Geelong exhibition, it might just have been to collect pledges to purchase bonds, the high face value of which no doubt had many people avoiding an impulsive decision in favour of seeing how the purchase would affect the family budget. Nevertheless, Mr Young of the War Savings Committee in Geelong is quoted as saying the 'Exhibition was an excellent draw card and if [sic] great assistance to the filling of the Geelong quota'.⁴⁰

While not part of the tour, Melbourne provided a rest stop before the convoy travelled to Sydney on the 23 April 1944. Although almost certainly a different gun, on 4 April 1944 (according to its caption), a 25pdr (short) was even put on display in the Collins Street window of upmarket department store Georges Pty Ltd.⁴¹ In Sydney the equipment was set up at No.2 Jetty, Circular Quay (old Manly wharf) between 27 April and 3 May 1944.⁴² An

³² *The Geelong Advertiser*, 5 April (1944: 3); 14 April (1944: 1); 18 April (1944: 3); AWM Private Record PR06321.

³³ AWM Private Record PR06321.

³⁴ Reported by Lt L. Franklin in AWM Private Record PR06321.

³⁵ AWM Private Record PR06321.

³⁶ *The Geelong Advertiser*, 18 April (1944: 3). Also reported by Lt L. Franklin in AWM Private Record PR06321.

³⁷ AWM Private Record PR06321.

³⁸ James (2009: 51).

³⁹ *Ibid.*

⁴⁰ Reported by Lt L. Franklin in AWM Private Record PR06321.

⁴¹ AWM Negative Number 140713.

⁴² *Sydney Morning Herald*, 27 April (1944: 3 and 4); 28 April (1944: 3).

image of the German 88mm and Japanese 25mm triple-barrel gun,⁴³ shows them surrounded by Sydneysiders.⁴⁴ The exhibition in Sydney ‘was especially memorable as well before its 10 a.m. opening time people were beating on the door to get in’.⁴⁵

By 2 May 1944 Capt Vanderkelen again found himself in front of a microphone, this time just before the evening news broadcast in Sydney. An interview with ABC Radio’s Bruce Miller on 2BL had the desired effect of generating public interest. There was no doubt about the popularity of the exhibition but as the closing date loomed, would the First Victory Loan – still shy some 15 percent of its objective of \$150,000,000 – close fully subscribed? While War Loans director Charlie Banfield pondered this question in a newspaper report, just days later, after showing in Newcastle, the exhibition convoy headed north to Queensland.⁴⁶

Having travelled to Brisbane via Warwick, Toowoomba and Ipswich, before opening day on 11 June 1944 in Brisbane the objective of the exhibition had changed and it was decided to charge an admission fee, with proceeds going to the Queensland Patriotic and Australian Comforts Fund.⁴⁷ The ACF relied on fundraising and donations to support Australian soldiers. It raised thousands of pounds through various activities, such as doorknock appeals, fetes and button days, to cover the cost of materials and shipping of items to the troops. The number of goods supplied, funded and distributed by the ACF volunteers is quite remarkable.⁴⁸

Fig. 4: As demonstrated by this ad in the Courier-Mail, by the time it reached Queensland, the exhibition’s objective had changed to raise money for the Queensland Patriotic and Australian Comforts Fund. (Courier-Mail [Brisbane], 6 June 1944: 5)

So, as the exhibition opened at Brisbane’s City Hall, promotion took on a new twist including ‘radio theatre’ sponsorship of the exhibition by commercial organisations and newspaper advertising. Now a radio interview

MAMMOTH EXHIBITION
of Captured
ENEMY EQUIPMENT

**Opens at the City Hall
Sunday Next, for 8 Days**

Over 1500 exhibits of GERMAN—
ITALIAN—AND JAPANESE equip-
ment captured by Aust. Army in
Libya, Syria, and New Guinea.
Australian tour arranged by Gen.
Blamey prior to exhibits being
lodged at War Museum, Canberra.
Arriving by convoy of 24 vehicles
under direction of Capt. K. P. Van-
derkelen, A.I.F., and personnel of
57 men. **DON'T MISS IT!**

Adults 1/, Children 6d.
Total Proceeds to
AUST. COMFORTS FUND

⁴³ This is a Japanese Model 96 (1936), type 2, 25mm triple-barrel anti-aircraft/anti-tank gun, which according to the *Catalogue of the MGO Technical Armoury* was captured at Lae airstrip, probably on 16 September 1943 (AWM Private Record PR06321; Dexter 1968: 390-391).

⁴⁴ *Sydney Morning Herald*, 27 April (1944: 3).

⁴⁵ Phil Vanderkelen, 2014 pers. com.

⁴⁶ *West Australian* [Perth], 6 May (1944: 4).

⁴⁷ AWM Private Record PR06321; *Courier-Mail* [Brisbane], 6 June (1944: 5); 9 June (1944:3); 14 June (1944: 2).

⁴⁸ For example, according to Jackson (1949: 332) the funds raised by the State Divisions was £6,985,306 4s 0d. Additionally, the total number of items issued during WW2 include: comforts = 952,357,711; furniture = 354,829; clothing = 16,683,164; foodstuffs = 36,781,824; Indoor games and recreation equipment = 5,257,919; and sporting material = 153,473 (Jackson 1949: 333-334).

had to ‘sell’ people on attending the exhibition. While still subject to censorship, a radio interview conducted on station 4BH on 10 June 1944 was somewhat more dramatic than the fairly prosaic ads and controlled interviews that had run in the southern cities. The production was titled ‘Weapons of War’ – which told stories based on the capture of some of the weapons on show being introduced. The transcript indicates that Capt Vanderkelen was introduced following a combination of dramatic voiceover, background music and the sound effects of war, including gunfire and explosions. Eight actors gave their services for this broadcast and it was a 14-minute production.⁴⁹



Fig.5: National tea brand Lipton was joined by businesses in various regions in paying for advertising which urged the public to support the First Victory Loan. (The Ballarat Courier, 13 April 1944: 3)

Here in the Queensland capital the text of a small advertisement which ran in the *Courier-Mail* gave a clue to the ultimate home for items being exhibited. With entry fees of 1/- for adults and 6d. for children, the ad said the ‘Australian tour [was] arranged by Gen. Blamey prior to exhibits being lodged at War Museum, Canberra’.⁵⁰ Given a new commercial imperative, the headline for this ad read ‘Mammoth Exhibition of Captured Enemy Equipment’, and said the exhibition would run for eight days. While saying that total proceeds would go to the Australian Comforts Fund, it is not known if the ACF paid for this and other advertisements.⁵¹ However, the support of various commercial organisations which had paid for newspaper advertising to

support the sale of bonds – such as upmarket department stores McDonnell & East and Edward & Lamb, and others businesses in Brisbane, and earlier the Australian Steam Laundry in Geelong, Lipton Teas and Ballarat window furnishings retailer Tunbridge – continued with the sponsorship of advertising which promoted the exhibition.⁵²

Had he been travelling with the convoy, War Loans director Banfield might well have wondered whether an exhibition of captured enemy and Allied equipment was worth the effort. After all, just three days before the Loan closed the numbers he received did not look

⁴⁹ AWM Private Record PR06321.

⁵⁰ *Courier-Mail* [Brisbane], 6 June (1944: 5).

⁵¹ *Courier-Mail* [Brisbane], 6 June (1944: 5). Similar ads appeared in other Queensland Newspapers. For example: *Queensland Times* [Ipswich], 1 June (1944: 5); 3 June (1944: 5); *Sunday Mail* [Brisbane], 4 June (1944: 11); 11 June (1944: 11); *Truth* [Brisbane], 4 June (1944: 15); *Courier-Mail* [Brisbane], 7 June (1944: 7); *Telegraph* [Brisbane], 8 June (1944: 4) and other examples.

⁵² AWM Private Record PR06321; *The Geelong Advertiser*, 5 April (1944: 3); *The Ballarat Courier*, 13 April (1944: 3); 15 April (1944: 3); *Sunday Mail* [Brisbane], 4 June (1944: 1, 10); 11 June (1944: 9, 11); *Courier-Mail* [Brisbane], 6 June (1944: 5); 7 June (1944: 6); *Telegraph* [Brisbane], 8 June (1944: 2, 4); 14 June (1944: 4); *Sunday Mail* [Brisbane], 4 June (1944: 1, 10); 11 June (1944: 9, 11); and other examples.

good. The loan response was still £20 million short.⁵³ Only 270,000 loan applications had been lodged or promised, a figure in sharp contrast to the 567,000 applications which had been received for the Fourth Liberty Loan in October and November of 1943.⁵⁴ And, says the newspaper report quoting Banfield, for the first time New South Wales had recorded more subscribers than Victoria. Across the country support had dropped to just one in 26 people supporting the loan.⁵⁵ It is arguable that by 1944 some form of economic or financial war weariness may well have set in.

The first metropolitan area to report having filled a big money quota was Richmond, Victoria, whose quota of £300,000 was exceeded by £510. The number of Australian towns which had filled their money or subscriber quotas, or both, totalled 112. Thirty-three had filled both objectives: 61 the money only and 18 the subscriber total only. There were 42 successful centres in Victoria, 24 in New South Wales, 21 in Queensland, 20 in South Australia, four in Western Australia and one in Tasmania.⁵⁶ By the official closing date the loan had not reached its target of £150,000,000. To prevent embarrassment to the Federal Government and the need to use of central bank funds to make up the shortfall, late subscriptions were accepted and also ‘by squeezing the Commonwealth Savings Bank a little harder’.⁵⁷ However, in the end according to a number of sources, the First Victory Loan exceeded its target with 452,700-701 subscribers and a total of £150,548,740-549,000. Of this about £25,710,000 was subscribed for at 2.5 percent maturing for four to five years ending 1948-49 and approximately £124,839,000 was subscribed for at 3.25 percent maturing in 6 to 16 years ending 1950-60 (Appendix 1, Table 3).⁵⁸

Across four states and over four months the exhibition appears to have been remarkably incident free. While a number of small items went missing, Lt Franklin noted in his final report a claim by Adelaide City Council for some damage to its facilities including a stairway balustrade and a slate from the main footpath outside the Town Hall and £19 for loss of boarding and rope and tackle.⁵⁹ Franklin also makes some amusing comments about the crowd behaviour during the tour. Firstly, in Adelaide, despite signage stating ‘Please do not Handle’, there appeared to be a ‘natural urge to handle everything, and spin wheels, [which] was manifested in most adults, besides children.’⁶⁰ Secondly, also in Adelaide, crowd control was a problem. There was an incident concerning a concerted rush to get into the exhibition with policemen being brushed aside, resulting in the hall becoming overcrowded, but order was soon restored.⁶¹ The ‘crush’ of the crowds was also a problem in other venues and additional reinforcements were provided for Brisbane.

In Ballarat ‘some trouble was experienced in handling a zealous public who fancied themselves pumping bullets from every weapon they examined. Children were a menace again – they were all over the equipment and had to be forcibly restrained.’⁶² Of the main attraction, the German 88mm gun captured at El Alamein, Franklin wrote that ‘This weapon was a great draw card – there was always a group admiring it at any hour of the day, or night.

⁵³ *Sydney Morning Herald*, 6 May (1944: 4); *West Australian* [Perth], 6 May (1944: 4).

⁵⁴ *West Australian* [Perth], 6 May (1944: 4).

⁵⁵ *Sydney Morning Herald*, 6 May (1944: 4); *West Australian* 6 [Perth], 6 May (1944: 4).

⁵⁶ *West Australian* [Perth], 6 May, (1944: 4).

⁵⁷ Butlin and Schedvin (1977: 581).

⁵⁸ Butlin and Schedvin (1977: 580); James (2009: 51).

⁵⁹ AWM Private Record PR06321.

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

⁶² *Ibid.*

Small boys always wanted to operate it – and the staff were constantly removing them from inside the barriers’.⁶³

If the roadshow could be credited with helping the Government meet its loan target, it was a small price to pay. Additionally, re-purposing and using *all* of the significant examples of Allied and Axis weaponry and equipment in the MGO Technical Armoury, and employing them for a completely different role than they were designed for, was a credit to the imagination of the Australian authorities. It also shows that in war, adaptability and evolution are vital qualities, not only for achieving strategic and tactical military actions, but also for prosecuting ‘actions’ on the home front. At a rally in support of the First Victory Loan at the Town Hall in Melbourne on 29 March 1944, PM John Curtin said, ‘The war has to be won by fighting men. It cannot be won on the home front, but it can be lost on the home front’.⁶⁴

*

In memory of Phil Vanderkelen and Ian Jenkins.

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APPENDIX 1

Table 1: Summary of Major Equipment in the *Catalogue of the MGO Technical Armoury* (dated 18 February 1944 – consisting of 1,170 items (AWM Private Record PR06321) which probably formed the majority of the 1,500 items displayed during the First Victory Loan.

Note: The nomenclature provided is as per the original list in PR06321, except in the case where the authors have inserted a []. Some original entries appear to be inconsistent, vague and/or wrong. Additionally, we have also tried to provide comments and AWM Catalogue Number references where ascertainable and where the relevant relic has a clear association with the MGO. However, in most cases it is difficult to ascertain if many of these weapons are the weapons in the AWM collection due to lack of serial numbers on the original list and ambiguities or lack of pertinent data in the AWM Catalogue Sheets.

1.1: Japanese

Catalogue No.	Class (Nomenclature from PR06321)	Type (Nomenclature from PR06321)	Remarks	Quantity
1	Field Guns	37 m.m. Tk/A ⁶⁵	Captured Mile Bay [Type 94 37-mm AT Gun? – Possibly RELAWM36958]	1
2	“	75 m.m. Reg. Gun	Captured Buna Mission [Type 41 75-mm Regimental Gun?]	1

⁶³ AWM Private Record PR06321.

⁶⁴ Diary of a Labour Man 1917-1945, 1944 – Speech by the Prime Minister John Curtin on 29 March 1944 at the Melbourne Town Hall; *Sydney Morning Herald*, 30 March (1944: 4).

⁶⁵ Tank Attack (T/At) is an Australian term introduced in 1943 for all Aust. in-service anti-tank weapons (Mike Cecil 2017 pers. comm.). It is not applicable to enemy weapons but has been kept for authenticity because it appears in the original 1944 List.

3	“	70 m.m. Bn. Gun (with sight)	No Breech [Type 92 70-mm Battalion Gun – Possibly RELAWM36959 or 36960]	1
4	“	75 m.m. Mountain Gun	[Type 94 75-mm Mountain Gun? – Possibly RELAWM36885 or 36947]	1
5	A.A. Guns	75 m.m. with sight	Captured at Buna [Type 88 75-mm Mobile AA Gun – Probably RELAWM30147.001]	1
6	“	20 m.m. Dual purpose Tk/A with sight	Captured at Gona [Type 98 20-mm AA/AT Gun? – Possibly RELAWM36961]	1
7	“	13 m.m Dual mount with sight	[Type 93 13.2-mm AA/AT Gun? – Possibly RELAWM36882.001 and .003]	1
8	“	25 m.m. Triple mount with sight	Captured Lae air strip [Type 96 25-mm Triple Barrel AA/AT Gun – Probably REL/07191]	1
9	“	25 m.m Dual mount	Captured at Finschhaven	1
10	“	25 m.m. Barrel & mech. less mtg.	[Type 96 25-mm AA/AT Gun?]	1
11	Tank Guns	37 m.m w/out mount	Taken from tank at Milne Bay	1
12	Mortars	70 m.m Barrage Mort.	[70-mm Taisho 11th year type Mortar?]	1
13	“	60 m.m Grenade Discharger Type 98	Spigot projectile (inert) [Type 98 50-mm Mortar?]	1
14	“	Gren. Discharger Type 89	[Type 89 50-mm Grenade Discharger – Possibly RELAWM27297]	1
15	H.M.G.	20 m.m Oerlikon less mounting	[Type 98 20 mm AA/AT Gun?]	1
16	M.M.G.	7.7 m.m JUKI with dial sights	Carrying handle (“Woodpecker”) [Type 92 7.7-mm Heavy Machine Gun – Possibly RELAWM27200]	2
17	L.M.G.	7.7 m.m. Vickers Type	From tank or aircraft	1
18	“	7.7 m.m. U/1 with sight	From tank	1
19	“	.256 “Keiki”	Adaption of Bren [Type 96 6.5-mm Machine Gun?]	2
20	“	.256 Taisho	Hopper Fed [Taisho 3rd year type 6.5-mm Heavy Machine Gun – Possibly RELAWM27240]	1
21	“	.312 Czech	Captured from Japs [Type 97 7.7-mm Machine Gun?]	1

Some of this equipment is also apparently described in Australia in AWM315 206/004/007, AWM315 328/001/008, and AWM315 748/003/005; AWM Accession Register Numbers: RELAWM27200; RELAWM27240; RELAWM27297; RELAWM30147.001; RELAWM 36882.001 and 002; RELAWM36885; RELAWM36947; RELAWM36958; RELAWM36959; RELAWM36960; RELAWM36961; and REL/07191.

1.2: German

Catalogue No.	Class (Nomenclature from PR06321)	Type (Nomenclature from PR06321)	Remarks	Quantity
283	Field Gun	75/27 Field Gun		1
284	Tk/A	50 m.m.	[5-cm Pak 38, RELAWM36890]	1
285	“	37 m.m Tk/A	[3.7-cm Pak 35/36?]	1
286	“	28/30 Tk/A Tapered	Captured at Benghazi [2.8-cm PzB41 – Possibly RELAWM36883]	1
287	“	20 m.m Dual purpose A/Tk A.A.	Captured at Fort Capuzzo	1
288	A.A. Guns	88 m.m Duel purpose	[8.8-cm Flak 36 with Flak, 18 barrel, captured EL Alamein REL/03359.001]	1
289	“	20 m.m. Flak 30	[2-cm Flak 30]	1
290	“	20 m.m Flak 38	[2-cm Flak 38 – Probably RELAWM36876]	1
291	M.M.G.	M.G. 0.8. Spandau with sled mount	Converted to .303	1
292		M.G. 0.8./15 Spandau shoulder controlled	Converted to .303	1
293	“	M.G. Schwarzlose 7.92 m.m.	[7.92-mm 07/12 H.M.G. – Possibly RELAWM33601 and tripod 33602]	1
294	“	M.G. 34/41 7.92 m.m. & Collapsible tripod	[Possibly RELAWM20532, 33484 or 33882]	1
295	“	M.G. 15 7.92 m.m. and A.A. mount	[Possibly RELAWM33483.001 or 34051]	1
296		7.92 m.m. chair mounting twin MG34 machine guns	[RELAWM36869.001–002]	1
297	A/Tk Rifle	B.39 7.92 m.m.	[PzB39 or GrB39 Grenade Launcher Rifle? – Possibly RELAWM33482, 20536, 20537 or 33481]	1

Some of this equipment is also apparently described: in Egypt, AWM315 743/001/007 and 748/026/001; in Australia, AWM93 50/3/5; AWM315 206/004/007, AWM315 328/001/008, and AWM315 748/003/005. AWM Accession Register Numbers: RELAWM20532; RELAWM20536; RELAWM20537; RELAWM33481; RELAWM33482; RELAWM33483.001; RELAWM33484; RELAWM33601; RELAWM33602; RELAWM33882; RELAWM34051; RELAWM36869.001–.002; RELAWM36876; RELAWM 36883; RELAWM36890; and REL/03359.001.

1.3: Italian

Catalogue No.	Class (Nomenclature from PR06321)	Type (Nomenclature from PR06321)	Remarks	Quantity
418	Field Guns	75/27 m.m	[Cannone 75/27-mm Mod. 11/12]	1
419	“	100/17 m.m M.14	[Obice 100/17-mm Mod.14]	1
420	“	75 m.m		1
421	Mortars	60 m.m less tripod		1
422	“	40 m.m BRIXIA	[45-mm Brixia mod. 35]	1
423	“	81 m.m.	[Mortaio da 81/14 Mod. 35 – Possibly RELAWM20529 or 33605].	1
424	H.M.Gs.	12.7 m.m Breda with mount		1
425	“	12.7 m.m. Breda less mount	[Possibly RELAWM33570]	1
426	M.M.Gs.	8 m.m. Breda with mount	[Possibly 8-mm Breda Mod. 37 – Probably RELAWM33573 and 33574]	1
427	“	8 m.m. Fiat with mount	[8-mm Fiat-Revelli Mod. 35?]	1
428	L.M.Gs.	6.5 m.m. Fiat	Can be fired shoulder controlled or with spade grips [Fiat-Revelli Mod. 14?]	1
429	“	6.5 m.m Breda Mod. 30	[Possibly RELAWM33476]	1
430	“	8 m.m. Breda A.F.V. mod. 38	Taken from tank [Probably RELAWM33541]	1
431	“	7.9[2?] m.m Herstal Mod. 29		1
432	“	7.9[2?] m.m Herstal		1

Some of this equipment is also apparently described: in Egypt, AWM315 743/001/007 and 748/026/001; in Australia, AWM315 206/004/007, AWM315 328/001/008, and AWM315 748/003/005. AWM Accession Register Numbers: RELAWM20529; RELAWM33476; RELAWM33541; RELAWM33571; RELAWM33573; RELAWM33574; and RELAWM33605.

1.4: Allied

Catalogue No.	Class (Nomenclature from PR06321)	Type (Nomenclature from PR06321)	Remarks	Quantity
544	Field Gun	25-Pdr.	[Probably QF 25-pounder Mk1/2]	1
545	A/Tk	6-Pdr.	[QF 6-pounder]	1
546	“	2-Pdr. Airborne IXA & XA	[QF 2-pounder AT Gun]	1
547	“	2-Pdr. Standard mod. IXA & XA	[QF 2-pounder AT Gun]	1

548	Mortars	4.2" Heavy	[M.L. 4.2-in. Heavy mortar]	1
549	"	M.L. 3"	[M.L. 3-in. mortar]	1
550	"	2"	[S.B.M.L. 2-in. mortar]	1
551	"	81 m.m American	[M1 Mortar]	1
552	Tk/A Inf.	Bazooka	[Rocket Launcher M1 or M1A1 Bazooka?]	1
553	H.M.G.	.50 Browning American Water cooled	[M1921A1?]	1
554	"	.50 Browning American Air cooled	[M2?]	1
555	"	.50 Boys American [sic] Tk/A ⁶⁶		1
556	M.M.G.	.30 Browning American Air cooled	[M1919A4?]	1
557	"	.30 Browning Water cooled	[M1917A1?]	1
558	"	.30 Browning Mod. 38 Amer. with spade grip handles		1
559	"	.303-in. Vickers British with field mount		1
560	"	.303-in. Vickers Twin Aust. with radial mount		1
561	"	7.9[2] mm BESA British tank		1
562	L.M.G.	.303 Lewis British		1
563	"	.303 Mk.I British ⁶⁷		1
564	"	.303 Hotchkiss portable Mk.I		1
565	"	.303 Hotchkiss portable Mk.I pistol grip type		1
566	Tk/A	P.I.A.T. ⁶⁸ British Tk/A Inf.		1
567	[Misc.]	Bomb thrower 2" Mk.IA. Aust.		1
568	"	Projector Trip Flare Mk.I Aust.		1

Table 2: Places Visited During the First Victory Loan and Queensland Patriotic Australian Comforts Fund

First Victory Loan				
Place	Date	Place	Date	Comments
Leave Melbourne	20 March 1944	Adelaide	23 March 1944	

⁶⁶ This should be .50 [.55-in. British] Boys anti-tank rifle.

⁶⁷ Not sure what this is.

⁶⁸ The PIAT is a Projector, Infantry, Anti-Tank, which was changed in Australia in 1943 to PITA – Projector Infantry Tank Attack (Mike Cecil 2017 pers. comm.).

Open Adelaide	27 March 1944	Close	5 April 1944	Opened by Gov. of SA, Sir Malcolm Barclay-Harvey. Exhibition displayed at the Adelaide Town Hall (est. 50,000 people visited) and a procession through streets. See Figures 3 & 8
Leave Adelaide	7 April 1944	Arrive Ballarat	8 April 1944	Via Murray Bridge, Tailem Bend, Coonalpyn, Bordertown, Nhill, Dimboola, Horsham, Stawell, Ararat
Open Ballarat	11 April 1944	Close	12 or 13? April 1944	Open by Deputy PM and Minister for the Army, Mr F. M. Forde (Deputy PM). Exhibition displayed at the Ballarat Drill Hall (est. 22,000 people visited) and a procession through streets. Also 88 displayed at Ballarat race course during Easter race meetings. See Figure 6 and <i>The Geelong Advertiser</i> , 14 April (1944: 1) for image
Leave Ballarat	14 April 1944	Arrive Geelong	15 April 1944	
Open Geelong	17 April 1944	Close	19 April 1944	Open by Minister for Aircraft Production, Senator Cameron. Exhibition displayed at the Myers Street Drill Hall (est. 20,000 people visited) and procession through streets
Leave Geelong	21 April 1944	Arrive Melbourne	21 April 1944	Rest and repairs
Leave Melbourne	23 April 1944	Arrive Sydney	25 April 1944	Via Albury and Yass
Open Sydney	27 April 1944	Close	3 May 1944	Opened by Lord Major of Sydney, Alderman Bartley. Exhibition displayed at No.2 (old Manly Ferry) Wharf, Circular Quay (est. 12,000 people visited on 1 day).
Leave Sydney	5 May 1944	Arrive Newcastle	5 May 1944	
Open Newcastle	7 May 1944	Close	9 May 1944	Opened by Mayor, Alderman. Norris. Exhibition displayed at Pitt Son and Badgery's Store (Large Wool Store). See <i>The Newcastle Sun</i> , 5 May (1944: 3) for image
First Victory Loan Ceased. Start of Queensland Patriotic Australian Comforts Fund (Queensland Division).				
Place	Date	Place	Date	Comments
Leave Newcastle	11 May 1944	Arrive Warwick	18 May 1944?	Via Tenterfield and Stanthorpe. At the latter a street show was held which raised £27.
Open Warwick	20 May 1944	Close	21 May 1944	Weekend only. Exhibition displayed at the Cusa Hall (£150 raised)

Leave Warwick	Unknown	Arrive Toowoomba	Unknown	
Open Toowoomba	27 May 1944	Close	28 May 1944	Weekend only. Exhibition displayed at the R.S.I.L.A. ⁶⁹ Memorial Hall (£260 raised) and a procession through streets
Leave Toowoomba	Unknown	Arrive Ipswich	Unknown	
Open Ipswich	3 June 1944	Close	4 June 1944	Weekend only. Opened by Mayor J. C. Minnis, and attended by the QLD Premier Mr Cooper. Exhibition displayed under two marquees at the Congregational Church Hall (£130-138 raised)
Leave Ipswich	Unknown	Arrive Brisbane	9 June 1944	
Open Brisbane	11 June 1944	Close	18 June 1944	Open by Vice-Mayor, Alderman Moon. Exhibition displayed at the Brisbane City Hall (65,000 people visited, raised £3,500) and a procession through streets. See <i>The Telegraph</i> [Brisbane], 9 June (1944: 3) and 12 June (1944: 3) for images
Leave Brisbane	Unknown	Arrive Melbourne	Unknown	End

AWM Private Record PR06321; *Advertiser* [Adelaide], 17 March (1944: 4); 30 March (1944: 4); 31 March (1944: 4); *The Ballarat Courier*, 12 April (1944: 1); *The Geelong Advertiser*, 14 April (1944: 1); 18 April (1944: 3); *Sydney Morning Herald*, 27 April (1944: 3-4); 28 May (1944: 3); *Sun* [Sydney], 29 April (1944: 3); *Newcastle Morning Herald and Miner's Advocate*, 6 May (1944: 2); *Newcastle Sun*, 5 May (1944: 3); 6 May (1944: 3); *Warwick Daily News*, 15 May (1944: 2); *Courier-Mail* [Brisbane], 28 April (1944: 1); 9 June (1944: 3); 14 June (1944: 2); *Queensland Times* [Ipswich], 30 May (1944: 2); 1 June (1944: 2); 5 June (1944: 2); *Telegraph* [Brisbane], 9 June (1944: 3); 12 June (1944: 3); *Truth* [Brisbane], 11 June (1944: 8).

Table 3: Names, Dates and details of Commonwealth Loans in Australian during the Second World War

Date	Name of Loan	Amount Invited	Amount Subscribed (000)	Number of subscribers	Rate of Interest approx. distribution	Maturity
Dec 1939	3½ % Loan, 1942-44		£12,000,000	10	@ 3½	Unknown
March 1940	1945 and 1950-56 Loan	£18,000,000	£18,164,740	14,339	@ 3¼ @ 3?	1945 1950-56
May-June 1940	1945 and 1950-56 War Loan	£20,000,000	£20,582,490	32,792	@ 2½ @ 3¼	1945 1950-56

⁶⁹ Returned Sailors and Soldiers Imperial League of Australia.

Nov-Dec 1940	War and Works Loan	£28,000,000	£28,499,420	21,830	@ 2½ @ 3¼	1945 1950-56
April-May 1941	War and Works Loan	£35,000,000	£35,871,450	57,217	@ 2½ @ 3¼	1946 1950-56
Oct-Nov 1941	War and Conversion Loan	£100,000,000	£34,158,490- 500	83,378-9	@ 2½ @ 3¼	1945-46 1950-57
February- March 1942	First Liberty Loan	£35,000,000	£48,331,250- 510	244,587-97	£12,869,000 @ 2½ £35,462,000 @ 3¼	1945-46 1950-58
June 1942	Second Liberty Loan	£35,000,000	£37,373,480- 374,390	196,510-64	£7,032,000 @ 2½ £30,341,000 @ 3¼	1946-47 1950-58
June 1942	Special Issue	£3,019,000	£3,019,000	-	@ 2½	1946-47
Nov-Dec 1942	Austerity Loan	£100,000,000?	£82,667,250- 684,690	454,838- 455,933	£22,838,000 @ 2½ £60,577,000 @ 3¼	1946-47 1950-58
Mar-April 1943	Third Liberty Loan	£100,000,000	£101,805,380- 825,060	432,392- 433,739	£18,661,000 @ 2½ £83,144,000 @ 3¼	1947-48 1950-59
June 1943	Special Issue [Conversion Loan]	£235,000	£235,000	-	@ 2½	1947-48
October 1943	Fourth Liberty Loan	£125,000,000	£126,408,000- 320	567,533-538	£24,500,000 @ 2½ £101,908,000 @ 3¼	1947-48 1950-59
March-May 1944	First Victory Loan	£150,000,000	£150,548,740- 549,000	452,700-701	£25,710,000 @ 2½ £124,839,000 @ 3¼	1948-49 1950-60
September 1944	Second Victory Loan	£112,479,000	£113,936,000- 937,000	421,456-62	£15,361,000 @ 2½ £98,576,000 @ 3¼	1948-49 1950-60
December 1944	Debenture issue	£43,018,000	£43,018,000	-	@ 1	1945-83
March 1945	Third Victory Loan	£100,000,000	£107,302,000- 900	422,714-828	£12,342,000 @ 2½ £94,960,000 @ 3¼	1949-50 1950-61
July 1945	Special issue [Conversion Loan]	£330,000	£330,000	-	@ 2½	1949-50

September 1945	Fourth Victory Loan	£85,000,000	£86,374,680-87,231,000	259, 709-260,271	£24,102,000 @ 2½ £63,129,000 @ 3¼	1949-50 1960-61
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(After NAA CP6/2, 50; Butlin and Schedvin (1956: 580; James (2009: 51).)

Note: These figures should be taken as indicative as the sources differ in many cases. Some of this difference is as a result of rounding up or down. In these cases a range is given. Similarly, the number of loans also differs between sources.

APPENDIX 2

MGO and technical armoury

For the first time, during the Second World War, the Australian Government found it necessary to raise, equip and maintain an army for operations in areas adjacent to its shores.⁷⁰ So, to the Master General of Ordnance Branch,

fell the task of developing Equipment, Design and Inspection Divisions to direct the technical evolution of Army equipment, to prepare drawings and specifications and discuss production difficulties with Australian manufacturers and production agencies, and to raise, train and expand a military Ordnance Service and a military Electrical and Mechanical Service.⁷¹

Among the MGO Branch's responsibilities was the technical evaluation of the design and performance of enemy equipment which had been bought to Australia. Captured equipment which was new or unknown to the MGO Branch was of the greatest interest to intelligence and technical officers, and technical evaluation of these items was given a high priority by the MGO.⁷² After examination many of these items were placed in the Technical Armoury which was located at the MGO Branch H.Q., Albert Park, Melbourne, for future reference if necessary, and controlled by Staff Captain Enemy Equipment under the DMGO(E).⁷³

The Technical Armoury comprised examples of equipment captured by Australians and allied troops in all theatres of war, including German and Italian equipment from the Western Desert and Japanese equipment from the South-West Pacific (Appendix 1, Table 1.1-1.3). When placed on display the equipment required a floor space of 1,400 sq.ft., not including the German 88mm anti-aircraft gun which weighed 6 tons.⁷⁴ Although primarily collected for technical evaluation, examples of captured equipment were also used for propaganda purposes during the war and earmarked for post-war inclusion in the collection of the Australian War Memorial.⁷⁵

⁷⁰ NAA MP742/1, 274/2/152 containing a document called 'Master General of Ordnance: History & Activities during the war 1939-45'. Also see the same document in AWM113 MH 1/233 Part 1.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid. DMGO(E) = Deputy Master General of Ordnance (Equipment).

⁷⁴ AWM Private Record PR06321. According to some sources the 88mm Flak actually weighed 5,000kg (or 5,400kg with shield) in position, and 7,200kg in transit mounted on its two limbers (Müller 1990: 139; Piekalkiewicz 1992: 181; Franco 1996: 80).

⁷⁵ AWM315 748/026/001.

The German 88mm Gun

The main attraction during the loan was the German 88mm (8.8-cm) Flak Gun, which was captured at El Alamein, Egypt and is now on display at the AWM in ANZAC Hall (AWM Accession Number REL/03359). The significance of this type of gun was that it was not only used as an anti-aircraft gun, but also as a direct-fire weapon against tanks, soft-skinned vehicles, emplacements and ships, and as a field artillery piece against troops.⁷⁶ As one Australian infantryman commented:

it [was] anti everything, everything that flies, or crawls, or hops, or travels in tanks and lorries, or on foot, or in aeroplanes. It blasts the infantryman with high-explosive shells ... it lashes him with air-bursts ... This was the gun that caused 40 per cent of Australian casualties in the battle of Egypt ...⁷⁷

It was so effective in these roles that many Allied soldiers frequently attributed any German heavy calibre gunfire to 88mm guns, even when guns of other calibres and comparable performance were often responsible.⁷⁸ When employed in the anti-tank role, it was able to knock out most Allied tanks within its effective range of 3,000 yards (2743m), a significantly greater distance than any Allied anti-tank gun could achieve at the time in this theatre.⁷⁹ Employed in the anti-tank role, under optimum conditions, the armour-piercing projectile could penetrate 100mm (3.92in) of homogeneous vertical armour at 1,829m (2,000 yards).⁸⁰

The gun at the AWM was one of two 88mm Flak 36 (with Flak 18 barrels) guns brought back to Australia from this theatre during WW2.⁸¹ The other extant 88mm gun is located at the Australian Army Armoured Museum at Puckapunyal, Victoria.⁸² A third gun, probably a First World War 88mm Flak 19, is thought to have been destroyed (as a target) on the Holsworthy Range in 1972, after it had been heavily corroded while on display for many years outside at the Army's North Head Artillery School at Manly, NSW.⁸³ The gun at Puckapunyal was captured during the battle of El Alamein by B Company 2/24th Battalion on the morning of 31 October 1942. It was located to the north-east of the Blockhouse, on the south of the coast road and to the west of Ring Contour 25.

⁷⁶ War Department (1943a: 16); Piekalkiewicz (1992:7).

⁷⁷ AWM 3DRL/0368: 196.

⁷⁸ Bidwell and Graham (1982: 230).

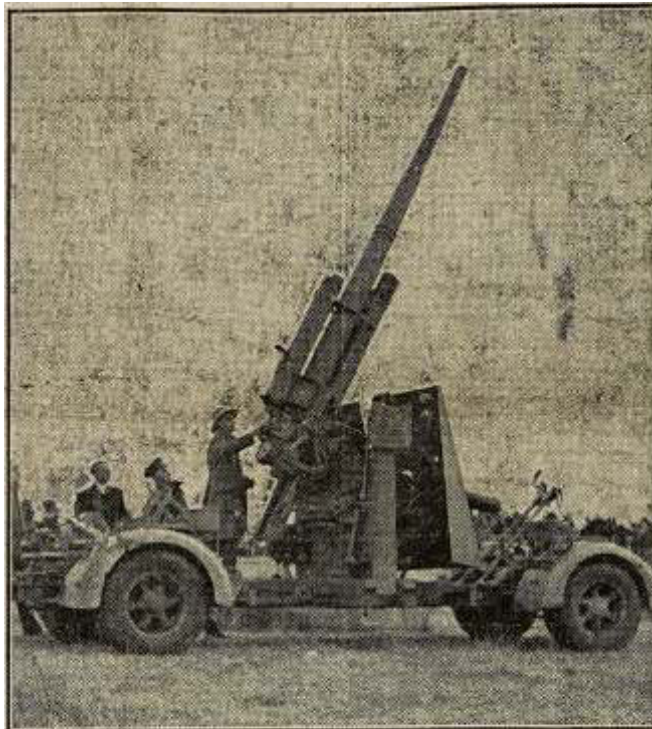
⁷⁹ Lucas Phillips (1962: 40).

⁸⁰ War Department (1943b: 29). Sources conflict but, depending on the ammunition used, it appears that it could fire a 9kg projectile of 88mm diameter at 820-840m/s for a maximum distance of 14,820m horizontally and 9,100m vertically (Ministerio del Ejército 1947: 130). Its crew of ten could fire 12-15 rounds per minute (War Department 1943a: 38, 42-43).

⁸¹ AWM 90/1887; AWM315 743/001/007; AWM315 745/001/001; Pearson (2000: 46); Pearson and Connah (2009). The 88 at the AWM has a Flak 18 barrel with the serial number R.3206 ('R' for *Rohr* [gun barrel]) on the breech ring and with the manufacturing date of 1941. The Flak 36 carriage is marked with the serial number 2416 and its date of manufacture is also 1941. Markings on components indicate that the gun was manufactured by at least nine companies. The frequency of the code for the *J. M. Voith Maschinenfabrik* (manufacturer's code 'CXX') company at Heidenheim or Brenz indicates that they had a sizeable involvement in the production of gun (Pearson 2000: 23-24, 57-60, 119-124).

⁸² AWM 90/1887; Pearson and Connah (2009). This gun has a Flak 18 barrel, the barrel sleeve and breech ring are marked with the serial number R.531 and with the manufacture date of 1936. The Flak 36 carriage is marked with the serial number 1735 and the date 1941. Components of this gun were manufactured by at least six different manufacturers. One of these is Friedrich Krupp of Essen (manufacturer's code 'bwn') (Pearson and Connah 2009: 236-237).

⁸³ AWM 90/1887; Pearson (2000: 46-47, 94); Pearson and Bailey (2000: 34-35). See Royal Australian Artillery Historical Company (RAAHC) Photo Archive for a possible photograph of this gun. Two other 88mm guns, both of Spanish manufacture, were also brought into the country in 2013 and 2016 from Spain and at the time of writing are located at The Australian Armour and Artillery Museum, Cairns (Jason Belgrave 2017 pers. comm.).



Captured by the Australians at El Alamein, this 88 m.m. German anti-aircraft gun made its appearance at the Ballarat races on Monday, in connection with the First Victory Loan drive. It forms part of the huge exhibition of war trophies now being staged at the Ballarat Drill Hall.

Fig.6: The Ballarat's Courier newspaper showed readers the German 88mm on display at the Ballarat racecourse on 10 April 1944 (The Ballarat Courier, 12 April 1944: 1; AWM Private Record PR06321)

The gun on display at the AWM was used on the First Victory Loan tour. It was brought to Australia from Egypt on 23 March 1943, on the SS *Cornwell Castle*, having been used to supplement the ship's armament during the voyage. An image of the gun in the *Sun* [Sydney] on 25 March shows a unit symbol on one of the gun's limbers, which probably indicates that the gun belonged to the German 7./25 Flak Regiment (7th Battery, Flak Regiment 25).⁸⁴ This unit was attached to the 200th Battle Group during the battle of El Alamein.⁸⁵ In transcripts of radio interviews in 1944, during the loan, Capt Vanderkelen says: 'On the shield and mudguards of this gun there are scrawled signatures of the personnel of a Victorian Unit' and that this unit was the '24th Battalion of Victoria'.⁸⁶ Although most of the signatures have long ago been effaced, there is still evidence of signatures of an Australian Workshop Unit under the outriggers.⁸⁷ If this gun was the second gun captured by the 2/24th at Alamein, then comments by Maj Mollard of A Coy, 2/24th Bn are particularly relevant. He said that the gun was

the first 88mm. captured undamaged by the allies in any theatre of war and that it was complete in every respect and in first-class condition. Apparently the Germans were so completely surprised that they had no chance to destroy the gun ... [and] subsequently made every effort to destroy it by shellfire, but without success.⁸⁸

The 26th Brigade Action Diary, under an entry from the 2/24th Bn at 1310, 27 October, says:

Following weapons captured 1 88mm 1 50mm Atk 3 37mm Atk ... 88 mm fwd of FDLs ask for gun to be recovered tonight. Gun is dismantled plus amn and is complete in all,[sic] respects including sight. Can be recced in daylight.⁸⁹

After some initial problems, the gun was finally removed using a tank transporter.⁹⁰ These narratives may explain reasons for its recovery during the battle as well as explaining some of the 20mm perforations evident on the shield and superstructure of the gun.⁹¹

⁸⁴ AWM 97/0948; NAA SP729/2 1943; *News*, 10 March (1943: 11); *Sun* [Sydney], 25 March (1943: 5); Fairfax Photo Library 28 March 1943-War File; Pearson (2000: 47-49).

⁸⁵ IWM EDS AL 879/1.

⁸⁶ AWM Private Record PR062321. Also see AWM93 50/3/5; *Sun* [Sydney], 25 March (1943: 5); *Sydney Morning Herald*, 27 April (1944: 4).

⁸⁷ AWM52 14/2/1 November 1942; Courtney (1987: 4); Pearson (2000: 75-76).

⁸⁸ AWM 90/1887; Pearson (2000: 39).

⁸⁹ AWM52 8/2/26 October-December 1942.

⁹⁰ AWM 90/1887.

⁹¹ Pearson (2000: 78-84).

The context for the action described by Maj Mollard took place on the morning (around 0040 hours) of 26 October 1942 against a feature called the ‘Fig Orchard’ or ‘Fig Garden’. Following an artillery barrage, the 2/24th Bn attacked from the south-west, and to the right of Trig 29, which was the 2/48th Bn objective. After moving 2,400 of 2,500 paces towards their company objective they encountered a well-fortified and dug-in enemy position. After fierce hand-to-hand fighting, 40-50 Italian and German prisoners were captured as well as an 88mm gun.⁹² During the whole of this action, the battalion captured 143 German and 26 Italian Prisoners as well as two 88mm guns, five smaller cannon, eighteen machine guns and ammunition.⁹³ The approximate position on the gun taken by A Coy was in the general area assigned to the 200th Battle Group (see above) and therefore most likely confirms its German unit as the 7./25 Flak Regiment. For more information see Pearson (2000).



Fig.7: Independently of the Victory Loan Exhibition, retailers helped to attract public support for the war effort, like Melbourne's prestigious Georges when it lent its shop window on Collins Street to display the Australian-developed 25pdr (short) artillery piece. (AWM 14713 - Taken by the Herald, 4 April 1944)

Australian 25pdr Short (Aust)

The need for a more transportable gun than the conventional British 25pdr Mark II, which had distinguished itself so well at El Alamein and in other places, resulted from the difficulty of deploying artillery in the harsh terrain of New Guinea.⁹⁴ Prior to 1943 the Australian Army had only four of the manoeuvrable and proven British 3.7-inch QF Mountain Guns (howitzers) and Australia's request for American 75mm M1 pack howitzers had not been

⁹² AWM52 1/5/20 October–November 1942, appendices; AWM52 8/3/24 September–October 1942; Maughan (1963: 690); Serle (1963: 204-206); Johnston and Stanley (2002: 183).

⁹³ AWM52 8/3/24 September–October 1942.

⁹⁴ Mellor (1958: 238).

immediately filled.⁹⁵ In response to these demands, in September 1942 Brig O'Brien (of the MGO) suggested an Australian variation of the 25pdr to meet these requirements.⁹⁶

All the development work was conducted in Australia by the Army, the Ordnance Production Directorate and Charles Ruwolt Pty Ltd, in Richmond, Victoria. It used the recoil system that had been re-designed for the 25pdr equipped Australian Cruiser Tank (Aust.) Mk.3 (AC3), the latter developed by Ruwolts. Just four months after the project was agreed to, an acceptable weapon was tested in December 1942, field tested in March 1943 and introduced into service in August 1943.⁹⁷

The gun was given the nomenclature-‘Ordnance QF 25-Pr. Short (Aust.) Mark.I on Carriage, Light (Aust.) Mk.I [or Mk.II]’. There were 112 guns built using the Mark I carriage and 100 guns using the improved Mark II carriage, although Mellor says that there were 213 built.⁹⁸ The gun was specifically designed with a shortened barrel and recoil system, and a lighter carriage which resulted in a weight of 2,910lbs (1,319.9kg), which could be dismantled into 10-14 loads in two minutes. Using standard 25pdr ammunition, depending upon the charge employed, it had a range of 3,100-11,500 yards (2,835-10,516m). This understandably was a shorter range than that of the standard gun.⁹⁹

The ‘Baby’ 25pdr was intended for jungle warfare and was only used by Australian units in the South-West Pacific Area during WW2. When assembled the gun could be towed by a jeep or truck. When broken down into sections it could be transported by air and/or dropped by parachute. During the New Guinea campaign the gun was manhandled up steep jungle tracks where vehicles could not operate. Indeed, in support of United States paratroopers, two guns were parachuted, with detachments from the 2/4th Aust Field Regiment, into the Markham Valley (Nadzab) on 5 September 1943.¹⁰⁰

Australian Munitions Industry during WW2

As a result of the First World War there arose a conviction that in the event of war Australia would have to be, as nearly as possible, independent of overseas supplies of essential manufactured goods.¹⁰¹ Selected individuals and workers had been sent to Britain to assist in work in munitions industries production, and the experience they gained was of enormous benefit to the Australian defence industries upon their return.¹⁰²

⁹⁵ Gower (1981: 87, 89-90). Gower (1981: 87) says that these guns were relatively old and in poor condition and were sourced from New Zealand. Additional research suggest that a number of 3.7-inch QF Mountain Guns – at least two – had also been purchased by the RAN for naval brigade work and for a time were carried by HMAS Canberra and Australia. Sometime in 1942 these guns were apparently handed to the Army (Adlam 1980: 17). This shows that the Army did not have these types of guns in stock and in desperation they had to be sourced from elsewhere.

⁹⁶ Mellor (1958: 238).

⁹⁷ Mellor (1958: 238-239); Cecil (1992a: 21).

⁹⁸ Mellor (1958: 239); Cecil (1992a: 19-20).

⁹⁹ NAA D5172, 96 (pp.12-15). This digital file contains the *Australian Military Forces, Equipment Memorandum* No.10, 29 February 1944 (pp.14-21); Mellor (1958: 238); Cecil (1992a: 20).

¹⁰⁰ Dexter (1968: 338–339, 343-345, between 348–349); Gower (1981: 94); Cecil (1992a: 21-22); Goyne (2014: 40-42). Both Mellor (1958: 239, 511) and Cecil (1992a: 20-21) say that the gun was not popular with the gun detachments because the shorter barrel caused a ‘heavy blast effect on the crews, who, in consequence, sometimes suffered from severe earache and temporary deafness, as well as occasional nose-bleeding’. Mellor (1958: 239) goes on to say that its positive points seem to have outweighed its shortcomings.

¹⁰¹ Mellor (1958: 5, 7).

¹⁰² Mellor (1958: 5-6).

Government munitions factories were established to

meet the country's small peacetime demand for munitions, which it was hoped would be sufficient to keep them operating on an economic basis. At the same time companies would acquire, and with the help of adequately equipped scientific laboratories would develop methods of manufacture and train men so that when war came it would be possible to transfer the burden of the mass production of the great bulk of munitions.¹⁰³

The success of the planning can be seen in the fact the full spectrum of the munitions requirements, with only minor exceptions, could be produced in Australia during the war. An example of the success can be seen in the arms production shown in Table 4.

Table 4: Examples of Local Manufactured Arms during 1939-45 - Local and Imported Patterns

Type of Armament	Number
3-inch anti-aircraft gun	24-33 up until 1942
3.7-inch anti-aircraft gun (Static)	600
40-mm Bofors	290 complete guns 700 spare barrels
25-Pdr Field Gun Mk.2	1,527 complete guns 675 spare barrels
25-Pdr Short (Aust.) Field gun Mk.1 & Mk.2	212-213
2-Pdr Anti-tank gun	892
6-Pdr Anti-tank gun	900
17-Pdr Anti-tank gun	128
4-inch Mk.XVI Naval Gun	230
Cruiser Tanks (Aust.) Mk.1 (AC1) 'Sentinel'	65
Cruiser Tanks (Aust.) Mk.3 (AC3) 'Thunderbolt'	1
Cruiser Tanks (Aust.) 'E' series experimental platforms	3
Local Pattern Carriers (Machine Gun, 3-inch Mortar and 2-pdr Anti-tank types)	158 LP1 MG Carriers 4,763 LP2 & 2A MG Carriers 205 2-pdr Anti-tank 400 3-inch Mortar
Scout Car (Aust.) Dingo	158
Light Armoured Car (Aust.) Rover	238
Artillery Tractors (Aust.) No.3 & 3A	1,287
.303 SMLE rifles No.1 Mk.3*	408,650
.303 Vickers (MMG)	11,601
.303 Bren (LMG)	17,335
Owen (SMG), Mk.1 & Mk.2	45,477
Austen (SMG), Mk.1 & Mk.2	19,904

¹⁰³ Mellor (1958: 7).

(RAAHC Draft Manuscript - Kennedy, A. - Bird Gunners; Mellor 1958: 238-239, 241-242, 319, 321, 324, 332; Chamberlain and Ellis 1981: 180; Cecil 1992a 15, 22, 27; 1992b: 5, 20, 38, 41, 44; 1993: 25, 36); pers. com. 2017; Ross 1994: 277, 391-92; Horner 1995: 210.)

The Maribyrnong Ordnance Factory had been built in the 1920s but it was not until 1935 that first order for twenty-four 3inch anti-aircraft guns was placed.¹⁰⁴ Once the war started the demand was beyond the factory's capability and the demand went out to the commercial world. For example, the manufacture of the 25pdr field guns was undertaken by two large engineering firms: Charles Ruwolt Pty Ltd in Victoria; and General Motors Holden in New South Wales.¹⁰⁵ Manufacture of components for the guns was sub-contracted to nearly 200 other firms. 'With the single exception of ball bearings all the 5,000 components of the 25-pounder were made in Australia'.¹⁰⁶

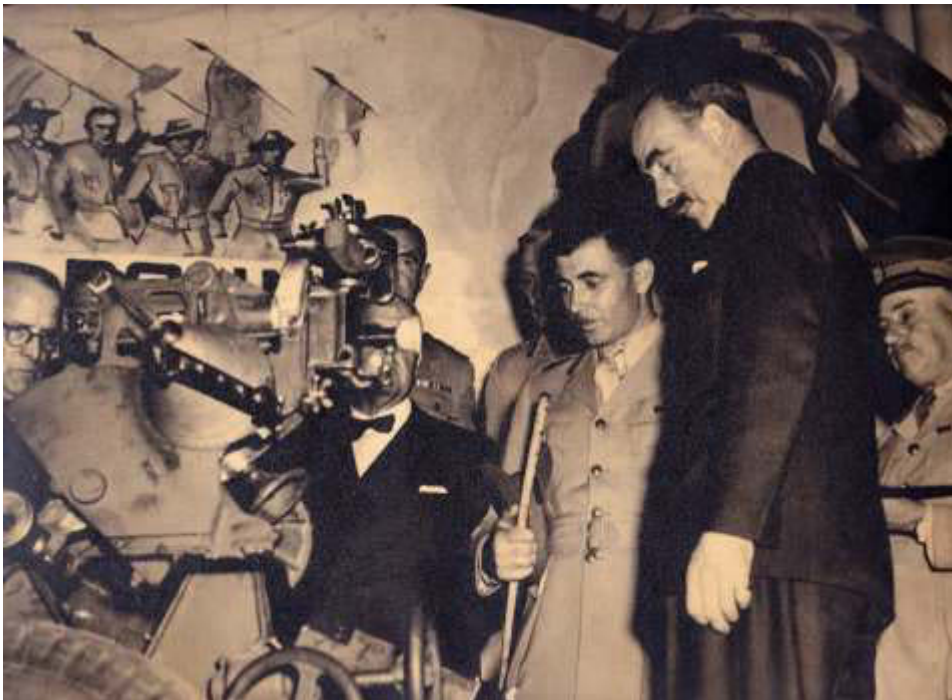


Fig.8: Brig John O'Brien (centre) explains the finer design aspects of the 25pdr (short) field artillery piece to the South Australian Governor Sir Malcolm Barclay-Harvey. (Mike Vanderkelen Collection)

The Australian cruiser tank and Local Pattern carriers (machine-gun, mortar and anti-tank) were also ordered by Army. It is worthy of note that the hull for the cruiser tank was first planned to be cast in six parts which were then to be bolted together, but the skilled foundry men of Bradford Kendall Ltd succeeded in casting it in one piece. This was apparently the first time in the world that this was accomplished in regard to tank production.¹⁰⁷ Similarly, experiments were conducted in Australia mounting the cruiser tank with modified turrets equipped with either a 25pdr, twin 25pdr or 17pdr anti-tank guns.¹⁰⁸ The latter is significant as the British considered it was impossible to fit the 17-pdr in a turret, but when told the Australians had already successfully done so, and based on this earlier Australian work fitting

¹⁰⁴ Horner (1995: 210).

¹⁰⁵ Mellor (1958: 236).

¹⁰⁶ Mellor (1958: 237); Cecil 1992a: 14).

¹⁰⁷ Mellor (1958: 310); Ross (1994: 393).

¹⁰⁸ Mellor (1958: 317-319); Chamberlain and Ellis (1981: 179-181); Ross (1994: 389).

larger guns in turrets and arresting their recoil, the British mounted them in some Sherman tanks to produce the Firefly.¹⁰⁹ The Firefly soon became highly valued as one of only a small number of British tanks capable of defeating at standard combat ranges the Panther and Tiger tanks faced in Normandy.¹¹⁰

Production of machine gun, 3inch mortar and 2pdr anti-tank carriers was delegated to major contractors: Victorian Railways' Newport Workshops; South Australian Railways' Islington Workshops; Metropolitan Gas Company's Fitzroy Workshops, Victoria; the Ford Motor Company, Homebush, New South Wales, and the State Engineering Works in Fremantle, Western Australia.¹¹¹ These contractors produced the most useful and prolific Australian Pattern AFV during the Second World War.¹¹²

The ability of Australia to arm itself during the Second World War is not generally appreciated and one must ask where we stand today.

Acknowledgements

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*

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¹⁰⁹ Ross (1994: 393).

¹¹⁰ Ross (1994: 393).

¹¹¹ Mellor (1958: 320-321).

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COLLECTORS' CORNER

Paul Skrebels

In this article I have included some pieces from my own collection, some of which I know quite a bit about, others almost nothing. As usual, all feedback or further information on any item will be greatly appreciated, and where possible included in future issues of the journal.

1. Great War Curiosities

Here are a couple of items very kindly given to me by a friend, but about which I have so far discovered nothing more than I can see on the piece itself.



Widow of World War 1 Veteran Travel Pass: It carries an individually marked number (here 5530), and on the back are the words 'Not Transferable' and the maker's name, Swann & Hudson. It's made of enamelled gilding metal with a clear coating, about 27mm in diameter, and looks like something made not all that long ago.

60th Battalion AIF badge: Roughly 32mm in diameter, it bears the motto 'Celer et Audax'



and the inscription 'D Com 60 Bat AIF'. It depicts a Rising Sun badge between two crossed flags and tassels enamelled in the 60th Bn's patch colours of white and red. On the back it is pin-fastened (or 'brooched') with the word 'Silver' in tiny lettering. While not of a particularly high standard of workmanship, it doesn't appear to be a 'shed' piece either; nor does it have the size and look of the average sweetheart badge. Interestingly, the 60th Bn was one of a first group of disbandments in the AIF in September 1918 (see Bean, *Official History* vol.6, p.937). The decision was taken very badly by the troops involved, so perhaps this badge is some form of commemorative for the old battalion? The specific mention of D Company is worthy of note.

2. Normandy Landing Brigades



This is a selection of formation signs (to use the correct British term) of independent brigades which landed on D-Day, 6 June 1944, as part of Operation Overlord.

56th Infantry Brigade: made up of the 2nd Bn South Wales Borderers, 2nd Bn Gloucestershire Regt and 2nd Bn Essex Regt. It was a newly formed brigade which adopted this particular sign because all three of its battalions had the sphinx as part of their regimental cap badges. The brigade landed on Gold Beach attached to 50th Infantry Division. In August 1944 it was permanently allocated to 49th Inf Div.

231st Infantry Brigade: made up of 2nd Bn Devonshire Regt, 1st Bn Hampshire Regt and 1st Bn Dorset Regt. It was a veteran brigade which had served three and a half years on the island of Malta as the 1st (Malta) Infantry Brigade. This explains its adoption of the Maltese Cross emblem of the Knights of St John for its sign. It was renumbered the 231st and participated in the Sicily campaign in 1943. The brigade was attached to 50th Inf Div and landed on Gold Beach.



27th Armoured Brigade: made up of the 13th/18th Hussars, Staffordshire Yeomanry and 1st East Riding Yeomanry. The brigade was formed out of 1st Armoured Reconnaissance Brigade which had served with the BEF in France in 1940. It was equipped with Sherman DD amphibious tanks for Overlord, hence (apparently) the adoption of the sea horse sign. The 13th/18th Hussars and Staffordshire Yeomanry assault-landed on D-Day, in support of 3rd Infantry Division on Sword Beach. The East Riding Yeomanry landed later in the day. The brigade was disbanded at the end of July 1944, its units being posted to other armoured brigades.

2nd Canadian Armoured Brigade: made up of 6th Canadian Armoured Regt (1st Hussars), 10th Canadian Armoured Regt (The Fort Garry Horse) and 27th Canadian Armoured Regt (The Sherbrooke Fusilier Regiment). It was formed from the renamed 3rd Canadian Army Tank Brigade, which was already stationed in the UK, in 1943, and was two-thirds equipped with Sherman DD tanks for Overlord. Its armoured regiments wore the plain black diamond sign with royal blue bar, below individual unit shoulder titles.



All three regiments landed on D-Day, with the 1st Hussars and Fort Garry Horse as the main assault units in support of 3rd Canadian Infantry Division on Juno Beach.

MUSTARD GAS: THE EXPERIENCE OF THE 25TH BATTALION AIF, OCTOBER-NOVEMBER 1917

Paul Sutton

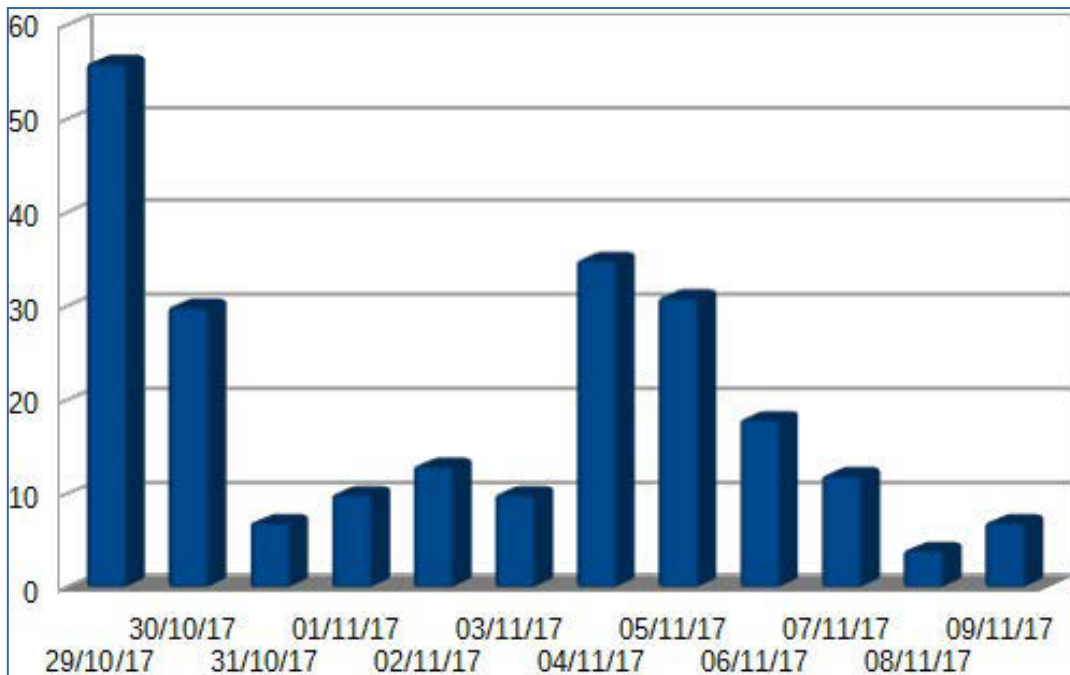


Figure 1: Numbers of 25th Bn soldiers per day who entered the medical evacuation process.

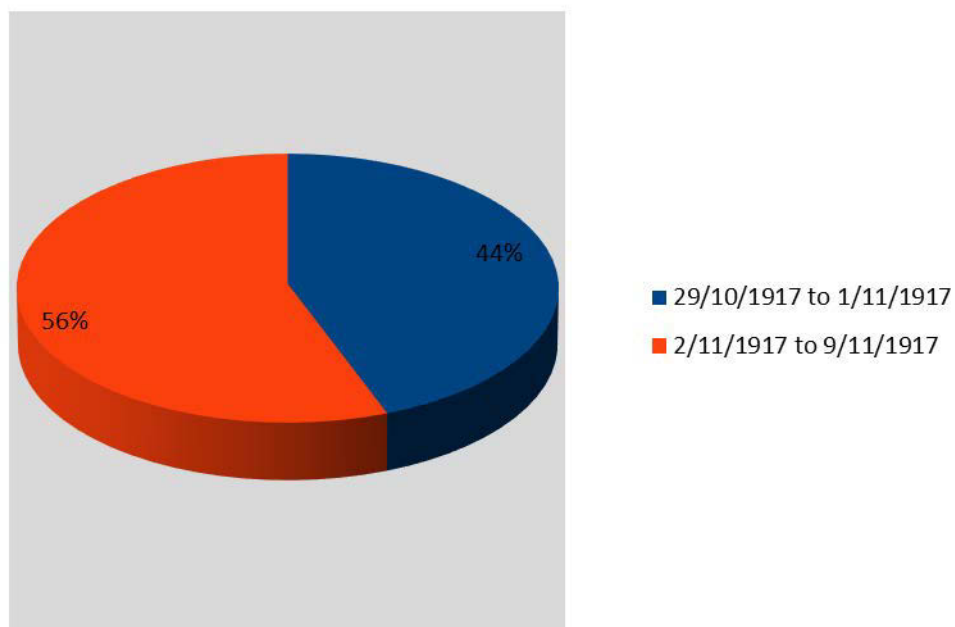


Figure 2: Percentage of soldiers who entered the evacuation process during and after their exposure to the mustard gas.

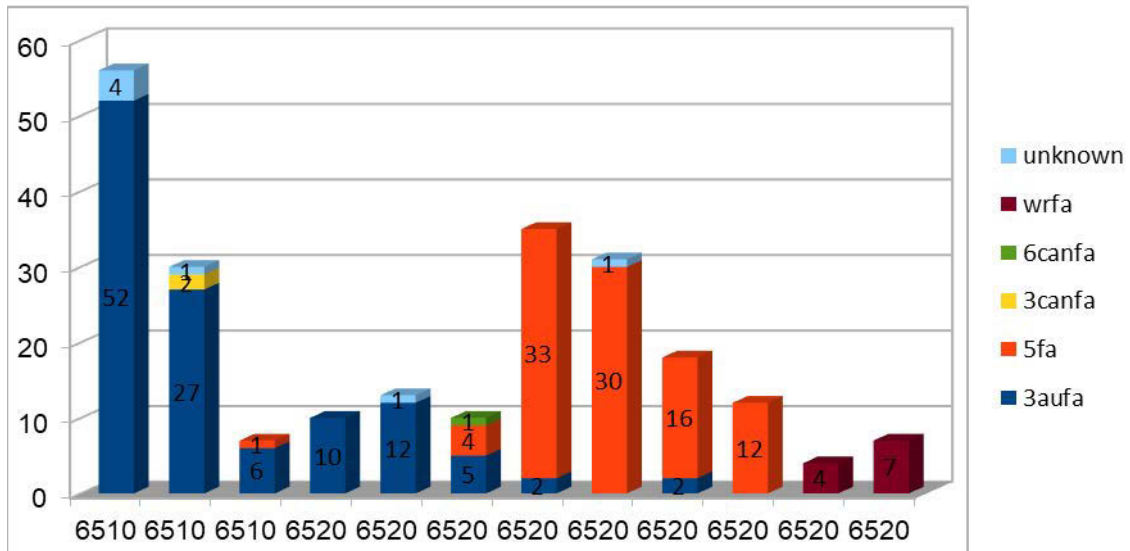


Figure 3: Numbers admitted to Field Hospitals per day.

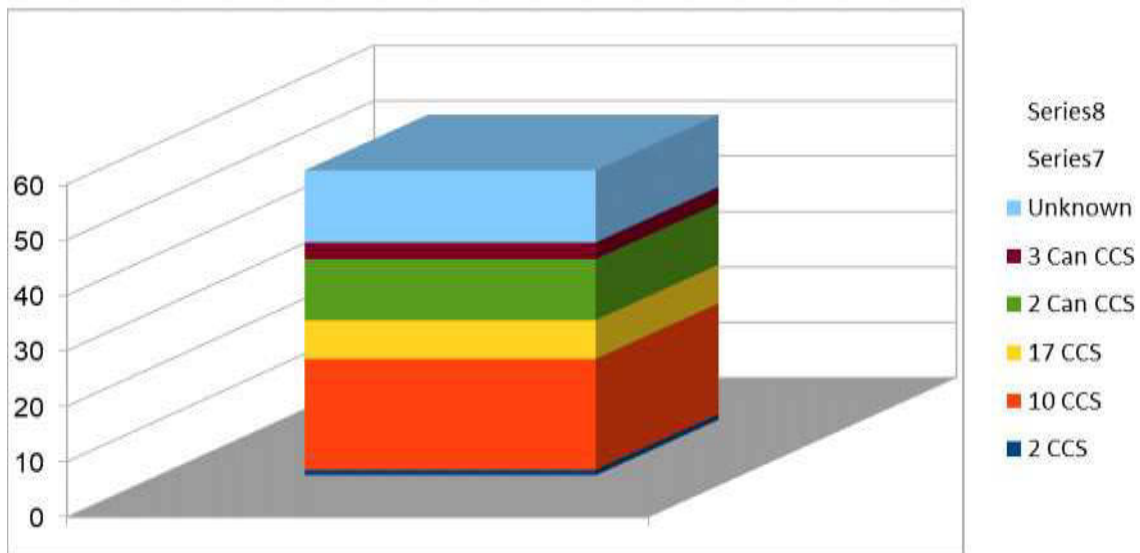


Figure 4: Numbers admitted to Casualty Clearing Stations on 29 October 1917.

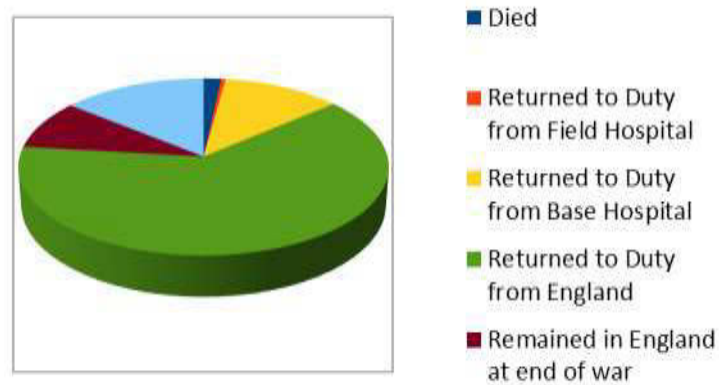


Figure 5: Ultimate distribution of casualties of 25th Battalion, AIF as a result of the mustard gas attack in October-November 1917.

This article will look at the experiences of the 25th Battalion, Australian Imperial Force (AIF), during the last week of October and into November 1917, when they were placed in a support area between Westhoek Ridge and Anzac Ridge and then spent four days under regular bombardment by mustard gas. Afterwards they relieved the front-line battalion, only to be withdrawn a day later due to the effects of the previous day's exposure to the gas. Those who were 'gassed' will be identified, their recuperation period analysed and, where possible, and their post-Great War lives investigated to see what, if any, were the consequences that this terrible week had on the rest of their lives.

The use of chemical weapons for military purposes is almost as old as warfare itself. The Egyptians actively cultivated poisons from various sources and investigated the effects of hydrocyanic acid. The ancient civilisations of China and India both employed smoke screens, toxic sleep-inducing fumes, poisonous, noxious and irritant vapours as well as incendiary devices on the battlefield. The ancient Greeks used primitive chemical weapons in 590 BCE, as did the Spartans during the Peloponnesian War (431-404 BCE) and the Romans were not averse to using toxic smoke when it suited them. The Byzantines developed and used *Greek fire*, thought to be a mixture of resin, pitch, sulphur, naphtha, quicklime and saltpetre. Leonardo da Vinci made plans for a machine capable of firing shells with a concoction of sulphur, arsenic and verdigris in them. In 1854 the British considered the use of cacodyl cyanide shells during the siege of Sevastopol while during the American Civil War both sides examined how the use of chemical weapons might assist them militarily.¹

Yet it was during the industrialised Great War that chemical agents were used on scales never before seen. The French were the first to use chemical weapons, when in August 1914, they used a form of tear gas bullet against the Germans with no actual effect. In October 1914 the Germans fired shells containing a variant of a sneezing powder at British and Indian troops – also to no effect. A few months later, in January 1915, the Germans used a form of tear gas in large quantities against the Russians at the Battle of Bolimov but with, again, little benefit. The first really successful use of a chemical agent was during the Second Battle of Ypres when, on 22 April 1915, the Germans unleashed a cloud of chlorine against unsuspecting French Colonial troops, who panicked and fled, leaving a wide breach along the Allied front-line. The Germans, nervous about the effects of the gas on themselves if they advanced into it, failed to take advantage of the panic and the Canadians soon bolstered the line. But the attack had demonstrated, under certain circumstances, that chemical weapons had the potential to provide a significant tactical advantage on the battlefield. From then until the end of the war chemical weapons, more commonly called *gas*, were a part of both sides' arsenals.²

While the use of chemical weapons during the war inevitably led to casualties, its use produced other consequences as well:

From the military point of view the purpose of gas warfare is, however, by no means limited to the actual production of casualties. It is of the greatest value as a harassing agent, and can be used to advantage for neutralising hostile batteries, hampering the supply of food and munitions in the battle zone, interfering with the movements of troops, and seriously troubling men in billets in the front area. An area shelled with dichlor-ethyl-sulphide [mustard gas] may be rendered untenable for days. The strain caused by continual attacks with gas, the personal

¹ Corey J. Hilmas, Jeffery K. Smart, and Benjamin A. Hill, Jr, *History of Chemical Warfare*, in *Medical Aspects of Chemical Warfare*, Shirley D. Tuorinsky MSN (ed), Office of The Surgeon General, United States Army, Falls Church, Virginia 2008.

² Ibid.

discomfort and the reduction of fighting efficiency caused by wearing anti-gas respirators, and the knowledge that a cloud gas or projector attack may kill many men in what is an affair of but a moment or two without any risk to those who have released the gas, so that only ceaseless vigilance can prevent a heavy toll of casualties, are factors liable to undermine seriously the moral[e] of even the best troops.³

Broadly, the types of gas utilised, by both sides fell into four separate categories. *Acute Lung Irritants*, such as Chlorine and Phosgene, first appeared on the battlefields in 1915. Chlorine stung the throat and chest when inhaled, causing significant coughing and then the chlorine reacted with water in the lungs to create hydrochloric acid. Phosgene was similar but created less coughing in the victim and so more was inhaled. The British called these gases ‘White Star’ after the markings on the German shells. *Lachrymators* were a form of tear gas and were widely used throughout the war causing severe eye, respiratory and skin irritation, vomiting and potentially even blindness. *Sternutators* irritated the eyes, nose and chest and which induced violent coughing.

Vesicants marked an insidious progression in the development of chemical weapons. These blistering agents (technically not a gas) caused chemical burns and painful water blisters on the skin and the lungs that it came into contact with. Unlike the other three forms, vesicants were heavier than air and were less prone to being dispersed by wind. Upon discharge the chemicals could, and frequently did, accumulate in depressions in the ground or shell-holes as well as within woods and the bottom of trenches. Residue could cling to boots and clothing and be quickly transported behind the front line and where it could remain active for many hours or even days. It was yellow-brown in colour and had an odour similar to mustard and was thus known then and ever since as *mustard gas*. The German shells were also marked with a yellow cross.⁴

When a mustard gas shell landed and detonated, it discharged its contents in either vapour form, or as a fine spray, over a rough twenty-metre area. It attached itself to everything in its path. Being heavier than air, it quickly settled in the lowest levels of ground that it found – the bottoms of trenches, shell-holes, depressions in the ground, in rivers and streams, on and around trees, bushes and any materials lying around. If any human being happened to be close by when one exploded, their clothes or exposed skin could be covered with it. There were no immediate effects, often leading to soldiers being wholly unaware that they had even been exposed to it. The first symptoms might take two or three hours to appear, when the casualty started to complain of a

smarting and watering of the eyes, and irritation soon develops into a definite conjunctivitis, which is both painful and obvious. About this time, also, running from the nose begins, the mucous membrane secreting a thin mucus comparable to the discharge in the early stages of an acute cold. This is accompanied by frequent attacks of repeated sneezing ... At about the same time nausea accompanied by retching, vomiting and a certain amount of epigastric pain frequently occur.

The development of symptoms now proceeds rapidly, the conjunctivitis increasing in intensity ... so that gradually the eyelids swell until the palpebral fissure is completely closed. The irritation of the respiratory tract becomes more obvious. The voice gradually becomes harsh, as the swelling of the laryngeal structures increases, and finally a complete aphonia develops when the swelling of the arytenoids is so great as to immobilise the vocal cords. The laryngeal

³ W.G. Macpherson, W.P. Herringham, T.R. Elliott and A. Balfour (eds), *Medical Services Diseases of the War*, HMSO, London, 1922-23, Volume II, p.280.

⁴ Colonel A.G. Butler, *The Australian Army Medical Services in the War of 1914-1918*, Volume III, pp.5-55.

irritation leads to frequent bouts of harsh, dry coughing, which are unaccompanied by any expectoration. The throat feels dry and a sensation of burning is complained of, leading to a desire to drink frequently.

At the same time the effects on the skin become apparent. An erythematous blush spreads and deepens in intensity until the areas affected look as if they had been scorched. The parts most affected are, naturally, those exposed without any clothing, such as the face and the hands; but the areas which are moist ... also suffer severely, and, should any part of the clothing have been actually splashed by the liquid, the underlying skin will be profoundly irritated ...

The scorched and affected skin soon begins to be covered with vesicles which quickly coalesce and form large blisters. At the end of twenty-four hours a typical appearance is presented. The eyes are now completely closed and tears or muco-pus are frequently trickling down the cheeks. The pain in the eyes is intense and leads to constant restlessness. Associated with this local pain there is frequently somewhat severe frontal headache due to the frontal sinuses having been irritated by the nasal inflammation ... any attempt to open the eyes for examination or for treatment causes considerable pain. From the nose pours a considerable discharge, which runs over the burnt and excoriated face and increases the irritation. Happily, at this stage, beyond the pain in the eyes and the headache, patients are singularly free from actual suffering, for the burns at this time are practically painless.

In the next twenty-four hours the condition is aggravated by the formation of large blisters ... so that the ears may become enormously swollen, and the genitalia are almost always affected. The stress of symptoms now falls on the respiratory tract, for the bronchial irritation passes on into a condition of acute bronchitis, associated with the expectoration of much muco-pus and occasionally shreds of necrosed mucous membrane which have separated off from the air passages ... and sometimes a death has occurred from the mechanical blocking of the larynx by such a slough. Naturally the temperature, pulse-rate and respiratory rate begin to rise ...

It is this complication which is responsible for the majority of fatalities, and the highest death-rate occurs at the end of the third or fourth day after exposure. Death within the first twenty-four hours is extremely uncommon unless the patient has been overwhelmed by such a large dose, probably of the actual liquid, that sloughing of the larynx and upper air passages leads to rapid death from asphyxia.

In the later stages the case usually resolves itself into one of two conditions, a spreading septic broncho-pneumonia or, if the skin has been widely affected, a condition of suppurating burns.⁵

For most casualties the effects of the mustard gas manifested themselves as a combination of severe conjunctivitis, respiratory tract inflammation with resulting breathing problems and blistering of the skin. Exposure to mustard gas was rarely fatal (the average death rate was 2.55%). However, it was severely incapacitating. To varying degrees the casualties were unable to perform any physical activity for many days or weeks, were frequently in great pain from blisters and conjunctivitis and were hardly able to walk. Depending on the extent of the exposure and the resulting effects, a soldier could be in a hospital or a convalescence depot for between 4 to 10 months. Consequently, this would deprive the army of their services in combat operations for lengthy periods of time as the best treatment for exposure to mustard gas was rest in a secure area and the removal of the contaminated clothing as soon as possible.⁶

The Australians, who only arrived on the Western Front during the first half of 1916, soon had their first experience of being gassed. During the night of 16-17 June 1916, near to

⁵ MacPherson et al, *Medical Services Diseases of the War*, Vol.II, pp.438-440.

⁶ *Ibid.* pp.438-62.

Messines, just as the first elements of I ANZAC Corps were taking over the front-line, they were exposed to a gas cloud. However, whilst unnerving for the new arrivals, this exposure did not cause any serious casualties. At Bullecourt in April 1917 and Messines June 1917 they were again on the receiving end of a German chlorine, phosgene and lachrymator attack. By now the Germans had perfected the art of delivering the gas in artillery shells and were thus able to extend the reach of their gas penetration without being disadvantaged by the wind direction.⁷

By July 1917 the Germans had deployed their variants of mustard gas and began using them across the Ypres salient. As the British inched their way up the Passchendaele ridge in October, it proved effective to drench their support areas with it and so cause casualties, create disorganisation and make life even more uncomfortable than it already was. Charles Bean, the Australian official historian, was to later write about its effects:

The Germans used this new agent with dreadful success, masking the shoots with high explosive ... [M]asks would have to be worn during the whole bombardment including sleep. Bivouacs were frequently knocked in, and the ground saturated with mustard oil could not be reoccupied ... On the night of October 28th, the 5th and 6th Batteries on Anzac Ridge were put out of action by gas ... On November 2nd two more battery commanders were gassed and died within 48 hours. In a short tour of the support line the 25th Battalion had 6 officers and 202 others gassed. One company had to change its bivouac three times ... Few immediate deaths were caused: of the 1,313 cases in the artillery in October only 20 were quickly fatal. But the condition of the worst cases was pitiful, eyes swollen and streaming, voices gone, and bodies blistered. Whole Battalions came out hoarse from the effects.⁸

In September 1917 it was the turn of the Australian forces to participate in the battles around Ypres that were later to be known as the Battle of Passchendaele. The 25th Battalion was one of four infantry battalions that comprised the 7th Australian Infantry Brigade, which in turn formed part of the 2nd Australian Division. On 20 September 1917 the 2nd Division took part in the Battle of the Menin Road. This was the first of three planned attacks designed to capture the Gheluvelt Plateau, from which assaults on the Passchendaele ridge could be launched. The 25th Battalion's objective was to advance off Westhoek Ridge and capture the Red Line which ran through the swampy, low-lying valley of the Hanbeek stream between Westhoek and Anzac Ridge, which was barely one kilometre away.⁹ The attack was a success and the battalion was withdrawn two days later.

By 3 October the battalion was back at the front line preparing to take part in the attack along Broodseinde Ridge at Zonnebeke, only around 1500 metres to the north-east from their previous objective along the Hanbeek. Again, the objective was gained and they remained in the front-line area until 10 October when they were withdrawn, after having undertaken two full-scale attacks within two weeks.¹⁰

After two weeks' rest and reorganisation at Steenvoorde, the 25th was once again ordered forward to act in a support capacity. This time they were to be based on either side of the Hanbeek, perhaps only 500 metres north of the land they had attacked and captured on 20 September. This was an area the battalion had come to know well; but while it was now around 1500 metres behind the British front line, it was by no means a quiet area. As a

⁷ Butler, Vol.III, pp.14-15.

⁸ Quoted in Butler, Vol.III, p.16.

⁹ AWM 23/42/25 War Diary, 25th Battalion, AIF September 1917.

¹⁰ AWM 23/42/26 War Diary, 25th Battalion, AIF October 1917.

support unit, the 25th Battalion could look forward to around five or six days' undertaking the arduous task of repairing trenches, roads and providing carrying parties to take up food and ammunition to the front line, ahead. All the while this support area could be expected to be under constant artillery attack and the ever present threat of gas.

Arriving on 27 October, the battalion set up its headquarters at Garter Point atop of Anzac Ridge with companies B and D in the trenches nearby. Companies A and C were positioned behind, across the Hanbeek and along the Westhoek Ridge.¹¹ All were in position by 5.05pm and it did not take long before the gas shelling started. Around 9.50pm, and until around 10.30pm, the Germans started to shell the area between Anzac and Westhoek Ridges with their 77mm (field artillery) and 4.2' (howitzer) guns 'with a few gas shells mixed'.¹² The 2nd Division war diary adds that more mustard gas was fired into the same area between 2am and 4am on the morning of 28 October.¹³ Later that day 'Desultory shelling was maintained over practically the whole of our area throughout the day and night ... with a considerable quantity of mustard and lachymatory [sic] gas. The shelling is most intense when his balloons are up & almost any movement draws fire, particularly around GARTER POINT and WESTHOEK RIDGE.'¹⁴

The shelling was less the next day (29 October) but 'Towards dusk our duckboards, GARTER POINT, WESTHOEK RIDGE were fairly heavily bombarded with ... a liberal quantity of gas shells'.¹⁵ The next day the shelling increased again but with less gas. That changed, however, around 1am on 31 October with 'more than 300 gas shells being distributed' in the area between Garter Point and the front line.¹⁶ Throughout 31 October the shelling was light, which gave 25th Battalion a bit of a much-needed respite to organise their own redeployment from support into the front-line trenches that was due to take place overnight. However,

Shortly after 5 p.m [the] enemy commenced shelling ANZAC and WESTHOEK Ridges with gas shells. GARTER POINT and its vicinity received particular attention, and the bombardment increased to a heavy nature, gas shells of all calibres being used, mixed with a few H.E [high explosive]. The shelling was very consistent for several hours, but diminished to a great extent shortly after midnight. Casualties so far have been very slight. There was a notable absence of MUSTARD GAS, Phosgene and Lachrymatory being prevalent.¹⁷

The 25th Battalion war diary explains the effects in more detail:

The relief was ordered to commence at 7.30pm. 31-10-17 but at about this time the enemy shelled GARTER POINT & WESTHOEK RIDGE heavily with Gas shells. Two Companies were at either place and it was deemed inadvisable to move the men, who, already were all more or less affected by the Gas from the previous nights Gas shell bombardment, until time was allowed for the gas to drift away. However the night was very still and there was no

¹¹ Ibid.

¹² AWM 34/7/26 War Diary, 7th Brigade, AIF October 1917: Summary of Intelligence from 6 a.m 27/10/17 to 6 a.m. 28/10/17.

¹³ AWM 1/44/27 Part 4 War Diary, Second Division, AIF October 1917: Summary of Intelligence from 6 a.m 27/10/17 to 6 a.m. 28/10/17.

¹⁴ AWM 34/7/26 War Diary, 7th Brigade, AIF October 1917: Summary of Intelligence from 6 a.m 28/10/17 to 6 a.m. 29/10/17.

¹⁵ AWM 34/7/26 War Diary, 7th Brigade, AIF October 1917: Summary of Intelligence from 6 a.m 29/10/17 to 6 a.m. 30/10/17.

¹⁶ AWM 34/7/26 War Diary, 7th Brigade, AIF October 1917: Summary of Intelligence from 6 a.m 30/10/17 to 6 a.m. 31/10/17.

¹⁷ AWM 34/7/26 War Diary, 7th Brigade, AIF October 1917: Summary of Intelligence from 6 a.m 31/10/17 to 6 a.m. 1/11/17.

perceptable [sic] wind until about 10pm. when it began to rise very slightly and blew in a Northerly direction. As a result of this slight breeze the gas was drifted from GARTER POINT down into the valley near ZONNEBEKE and from WESTHOEK RIDGE into the valley between it and GARTER POINT. Through these valleys was the direct route to the part of the front line we were to take over and if we were to move with the gas still hanging in the valleys it would be necessary for the men to wear their gas helmets practically the whole distance to the line. Moreover the enemy continued his gas shell bombardment until about midnight which with the very slight wind which was now more than sufficient to drift the gas into the valleys increased the density of the gas in low lying places and also our difficulties of reaching the front line. The commencement of the relief was therefore delayed until about 1.30am ... The relief was carried out without casualties ...¹⁸

The battalion spent barely thirty-six hours in the front-line before they were relieved and moved back to rest around the Dickbeusch area. The war diary noted:

The last company arrived at the camp at about 3am. On 3-11-17. The men were very tired and about 90% were suffering from the effects of the heavy enemy gas shell bombardment to which they were subjected on the nights of 27-28-29-30 & 31st. Whilst in supports at GARTER POINT about 50% of the men were suffering from temporary loss of voice and watering eyes. Washing with Sodi Bicarb gave speedy relief to the latter.¹⁹

On 4 November the battalion was required to supply a fatigue party of 100 men but only 80 Other Ranks (OR) and two officers could be provided 'as the others were unfit'. Between 5-9 November the war diary notes two officers and 154 OR were 'evacuated suffering from the effects of the Shell Gas'. The stated strength of the battalion on 1 November was given as 25 officers and 799 OR.²⁰

During the week ending 3 November 1917 the British had suffered 3845 casualties from constant mustard gas attacks around Ypres. It was the third highest weekly total since the Germans had started to use it in July of that year. A total of 45 men died that week because of their exposure to it.²¹

Lieutenant Richards, an officer in 25th Battalion, kept a diary and made the following entries for the period in question:²²

28th: Sunday. In support. Fritz stonkered hell out of us with shell gas for about four hours.

29th: Gas plentiful, ground wet and saturated with fumes ... Fritz gave us more gas at night in shells, six or seven hours of it. Think I must have swallowed more than my share, feel sick, terrible headache.

30th: Took over D Coy at night, all officers gassed.

31st: Nothing doing. Not feeling too gay, but not really sick. Big strafe on left. D Coy lost three officers and eighty O.R's sick with gas. Some of them in terrible agony. Fritz using Yellow X [mustard] gas. No desire to see me badly again. One chap died before he had been carried fifty yards by S.B [stretcher bearer].

On 27 October when the battalion moved into the support positions on either side of the Hanbeek it numbered an effective strength, as per the Field Return completed that same day,

¹⁸ AWM 23/42/26 War Diary, 25th Battalion, AIF October 1917.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Ibid.

²² Quoted in Robert Doneley *Black over Blue: 25th Battalion AIF at War, 1915-1918*, USQ Press, Darling Heights Qld, 1997, p.108.

of 29 Officers and 885 OR. Of these, 11 Officers and 236 OR had been detached from the unit for various reasons, leaving them with a field strength of 18 Officers and 649 OR.²³ The following two Field Returns include a list of all the soldiers who departed (detached, killed, wounded who left the battalion for treatment or who went on leave) and those who arrived (reinforcements, returning from hospital, leave or from detachment) between 27 October and 9 November.²⁴ Those men who were gassed and needed to depart the battalion for medical treatment at hospital were separately identified on these Field Returns. These two Field Returns list 285 men as being gassed and who departed the battalion for treatment. Of these, only 233 can be correctly identified and matched to their service files, held by the National Archives of Australia. It is these 233 men who will form the basis of the following analysis.

The Field Returns, whilst they do give a date on which the soldier 'departed' the battalion to seek medical attention, do not specify the actual date the soldier was gassed. Also, a comparison of the dates recorded on these returns with the individual's service file show that in some cases the dates were recorded differently. For example, the Field Returns state that two soldiers left the battalion on 28 October but their service file states that they entered the medical evacuation process on the following day. As such, Figure 1 (see p.33), showing the numbers departing the battalion for each day, is based on the individual service files and not on the Field Returns.

The graph in Figure 1 clearly shows that the initial attacks of 27-29 October led to a rush of evacuations on 29-30 October, presumably of those in most discomfort. After the battalion was withdrawn from the front line (1-2 November), and back in the relative safety of Dickebusch, more men succumbed to the after-effects of the gas and needed to be evacuated. Given that the last recorded incidence of the battalion being attacked with the gas was the night of 31 October/1 November, it is apparent that many of the men must have been suffering from the effects of their exposure for many days before they felt it necessary to seek medical attention.

Figure 2 (see p.33) clearly shows that 56% of the 233 men who suffered from the mustard gas attacks remained on duty for some days after being exposed, and presumably were suffering from the effects for much of this time as well.

After the war ended the British medical authorities calculated that 160,526 British and Commonwealth forces became casualties to German mustard gas attacks. Of these, 4086 died as a result, giving a mortality rate of 2.55%.²⁵ Of the 233 mustard gas casualties incurred by 25th Battalion between 27 October and 9 November 1917 only four died as a result, giving a below average mortality rate of 1.71%.

The first to die was 5618 Pte Mann. He was probably gassed on 27-28 October, and was evacuated on 29 October. He made it only as far as a Casualty Clearing Station in Remy Siding (south-west of Poperinge) where he died on 2 November. 6211 Pte Mitchell was evacuated on 31 October and was admitted into the 1st Canadian General Hospital at Etaples on 2 November but died at 8.45pm on 8 November. 6652 Pte Waters, who had only joined the battalion as a reinforcement on 24 October, died the following day at a hospital in Wimereux. Perhaps his inexperience of front-line service played a part in his death by his not knowing how to adequately protect himself from the gas. 5368 Pte Laxton perhaps suffered

²³ AWM 25/861-9 Part 203 Field Return, 25th Battalion AIF.

²⁴ Ibid.

²⁵ MacPherson et al, *Medical Services Diseases of the War*, Vol.II, p.517.

the most. Evacuated only on 4 November, he was admitted into 2nd Canadian Clearing Station at Remy Siding the same day. It was normal practice to move patients out of the clearing stations to the Base Hospitals as quickly as possible – if their condition allowed it. Laxton presumably was unable to be moved as he remained there until his death on 24 November. Given that he died three weeks after being exposed, it is likely he suffered greatly during this period. He was buried in the nearby Lijssenthoek Military Cemetery.

The evacuation chain began at the battalion. The battalion Medical Officer (MO) would have decided if a soldier needed evacuating, either during a sick parade or if he had been brought to the Regimental Aid Post (RAP) feeling ill. From here he would have been transported – maybe by stretcher, maybe on foot – to the rear where a Field Ambulance unit was located to support the brigade close by.

The majority, 116 (49.79% of all the casualties), were admitted into the 3rd Australian Field Ambulance, which was running the 1st Divisional Rest Station at Wippenhoek. Ninety-six (41.20%) went to 5th Australian Field Ambulance (2nd Divisional Rest Station) at Waratah Camp; two (0.86%) to 3rd Canadian Field Ambulance (acting as the Canadian Corps Gas Centre) at Brandhoek; 11 (4.72%) to 1/1st West Riding Field Ambulance at Waratah Camp (who had replaced 3rd Australian Field Ambulance on 8 November at 1st Divisional Rest Station); one (0.43%) to 6th Canadian Field Ambulance (Brandhoek); and for the remaining seven (3%) it is unclear to which Field Ambulance they were admitted. These admissions are shown in Figure 3 (see p.34).

Although only two casualties from 25th Battalion were admitted to 3rd Canadian Field Ambulance at Brandhoek on 30 October, the unit war diary has an interesting entry on how they handled such gas casualties. No doubt this was best practice at the time and so most of the other casualties would have been treated in a similar manner:

The Corps Gas Centre consisted of part of a School, three of the rooms of which were utilised as Admitting Room, Dressing Room, Wards, and Officers' quarters. In addition, six huts, 14 Marquees and 11 Bell Tents were taken over, having been used for the accomodation [sic] of sick and gassed cases from the Corps. A sick parade, averaging 70, was held daily in the tents, from surrounding units.

Gassed cases were received from the whole of the Canadian Corps, and were completely stripped of all their clothing upon admission, given a hot bath and sponged all over with Sodae Bicarb.Solution. They were also given 20grs.internally, and their eyes bathed with this solution. Oxygen was administered where necessary. They were then placed in a suit of pyjamas, and evacuated as soon as possible as lying cases. 370 of these cases (Yellow Cross Gas poisoning) were admitted from the 27th - 31st October, most of whom appeared to be slight, but who might have developed more serious in later stages.²⁶

Most cases, 163 (69.95%) of the casualties, passed through the Field Ambulances and onto the Casualty Clearing Stations the same day. Forty (17.17%) of them departed the following day, five (2.15%) spent two days there, five (2.15%) spent three days, two (0.86%) spent four days, two (0.86%) spent five days, one (0.43%) spent six days and one (0.43%) a total of seven days. For 14 (6%) of the men it is unknown exactly how long they remained in the Field Ambulance as their service records are unclear. Of these, all but one was admitted to a Base Hospital within a few days of leaving the battalion. L/Cpl Thomsett only left the

²⁶ Library and Archives Canada (LAC), War Diary 3 Canadian Field Ambulance, 27 October 1917.

battalion on 9 November and remained at 2nd Division Rest Station until 11 November when he was discharged back to the battalion.

From the Field Ambulances the casualties were transported, most likely by a motor ambulance vehicle to a Casualty Clearing Station (CCS). All but one (L/Cpl Thomsett) of the 233 casualties were admitted into a CCS. Fifty-two (22.32%) casualties were admitted into 10th CCS, 28 (12.02%) into 17th CCS, 28 (12.02%) into 2nd Canadian CCS, 22 (9.44%) into 3rd CCS, eight (3.43%) into 2nd CCS, five (2.15%) into 3rd Canadian CCS and just two (0.86%) into 12th CCS. The remaining 87 (37.34%) were admitted into unspecified CCSs. In all of the known cases the CCSs were located at Remy Siding; there is no reason to suppose the unknown cases did not also get processed through Remy Siding. This is particularly in light of a directive issued to I ANZAC on 15 September 1917, and which was still in effect at the end of October, instructing all gas casualties to be forwarded to the CCS group at Remy Siding.²⁷

The CCSs admitted casualties on a rotational basis at set times during the day to avoid congestion and over-crowding. The admissions for 29 October (Figure 4, p.34) give a good illustration of this. Fifty-five casualties were admitted into three known CCSs at Remy Siding. Ten of these were admitted into 2nd Canadian Casualty Clearing Station, which was only open between 2-4am that day.²⁸ Seven were admitted to 17th CCS, 20 were admitted into 10th CCS, and a further 11 into 2nd Canadian CCS, one into 2nd Casualty Clearing Station whilst 13 were admitted into unknown CCSs.

From the CCS the casualties were, in most cases, speedily transferred by Ambulance Train to a hospital at one of the British bases dotted along the French side of the English Channel. Of the 232 casualties admitted into the CCSs, two died and were buried nearby. The remaining 230 were all dispatched to a Base hospital between 30 October and 2 December 1917. Forty (17.39% of all that passed through to a Base Hospital) of these were transferred the same day they arrived at a CCS, while 131 (56.96%) were transferred within 24 hours of arrival. A further 40 (17.39%) were able to be transferred within 48 hours of arrival at a CCS. Two of the casualties (0.87%) remained at a CCS for three days, one of them stayed four (0.44%), one (0.44%) for five days and one (0.44%) for seven days. For the remaining 14 (6.07%) it is unclear as to when they were transferred.

A total of 31 separate Base Hospitals received the 230 casualties from the 25th Battalion.²⁹ The hospitals at the following bases received: Abbeville seven (3.04%), Boulogne nine (3.91%), Calais nine (3.91%), Camiers 57 (24.79%), Dannes-Camiers three (1.30%), Etaples 23 (10%), Etretat one (0.43%), Le Treport 28 (12.18%), Outreau eight (3.48%), Rouen 21 (9.13%), Wimmereux 61(26.51%) and unknown three (1.30%). Of those admitted, two subsequently died in hospital and were buried nearby (6211 Pte Mitchell in Etaples and 6652 Pte Waters in Wimereux).

Of the remaining 228, only 27 (11.84%) were discharged from the Base Hospital to an AIF Base Depot in France for return to their units. Three of these, prior to returning to the

²⁷ AWM4 26/15/20 War Diary DDMS, I ANZAC 'Medical Arrangements – Operations No.5' Appendix 1.

²⁸ LAC, War Diary 3 Canadian Casualty Clearing Station, 29 October 1917.

²⁹ The service records of two men state obviously incorrect admissions to Base Hospitals. One clearly states it as the Liverpool Military Hospital and the other states 57th General Hospital, which at the time was actually based in Marseilles. This particular soldier departed from Boulogne via a Hospital Ship a few days later and so the latter is obviously inaccurate.

battalion, were subsequently returned to the Base Hospitals and later evacuated to England. Of the 24 that did return to the battalion after discharge, each spent an average of 12 days at a Base Hospital - the shortest period was 1907 Pte Dunning, discharged the day he arrived; the longest remained 56 days (634 L/Cpl Forder). An average of 59 days passed from the date of their departure from the battalion as a casualty until the date these men returned to their unit. The shortest time absent was 19 days (686 L/Cpl Monk) and the longest was 218 (5349 Pte Heathcote). Many, no doubt like 1999 Pte Spencer, suffered from pleurisy or some similar lung complaint which, while not sufficiently serious to require them to be transferred to England, was enough to keep them in the various convalescence camps attached to the Bases for some time.

In total, 202 (88.70%) of the original 233 casualties were evacuated back to England for further treatment and rehabilitation. Of these only 200 have confirmed admission and discharge dates at the Base Hospitals. Each spent an average of nine days in hospital prior to embarking for England. Two of them (4972 Pte Anderson and 3197 Pte Richie) were embarked the same day they were admitted to the Base hospital. 5600 Pte.Kelly remained the longest in hospital at 45 days.

These 202 casualties were admitted to 60 'central' hospitals across England. They each spent an average of 41 days undergoing treatment in these hospitals. Two (3640 Pte McCamley and 1936 Pte Silver) were discharged immediately upon arrival to the AIF Depot in England for return to their unit. The longest to remain in hospital was 5401 Pte Ruff who spent 308 days there before being discharged.

A total of 107 (52.97%) of these 202 were discharged from hospital and spent time in one of the Australian Auxiliary Hospitals in England. Thirty-one (15.34%) were discharged to 1st Australian Auxiliary Hospital in Harefield; just one (0.50%) was sent to 2nd Australian Auxiliary Hospital in Southall, while 75 (37.13%) passed through 3rd Australian Auxiliary Hospital in Dartford. After discharge from the auxiliary hospitals each was sent to one of the AIF Depots in England to complete their convalescence or were repatriated to Australia. Some 95 (47.03%) of those admitted to the 'central' hospitals were discharged directly to the AIF Depots instead of to an auxiliary hospital.

One hundred and forty-seven (72.77%) were subsequently discharged from hospital and were, eventually, able to return to the battalion, via the three Auxiliary Hospitals and AIF Depots. From here they were sent to the AIF Base in France for additional training and conditioning before being returned to the battalion. They each spent an average of 159 days since discharge from the 'central' hospital until they finally returned to active service with the battalion. The shortest was 56 days (Lt Bedsor and 984 Sgt Smith) and the lengthiest a massive 351 days (2nd Lt Clavan and 6361 Pte McMahan). For those who eventually returned to the battalion, an average of 231 days passed from the date of evacuation to the date of their return. The shortest was Lt. Bedsor, who was absent for just 60 days and the longest was again 6361 Pte. Mahon after 362 days.

In some cases this lengthy rehabilitation period was not just because of the effects of the mustard gas attack. At least seven soldiers contracted venereal disease (VD) whilst on furlough after discharge from hospital, which necessitated further medical treatment with a resultant (significant) delay in returning them to the battalion. Five of those who contracted VD spent in excess of 177 days (2 x 177, 244, 299 and 328 days) away from their unit –

whilst not all of this lengthy absence was related specifically to the VD infection, much of it was.

Twenty-seven of those who returned to the battalion were to be subsequently killed during the last year of the war – eight of them on the same day, 10 June 1918 (and at least four others were wounded as well). Twenty-one (10.40%) of the casualties were still in England when the war ended some twelve months after being exposed to the gas. In most cases the men were not able to bear the rigours of active service but were not sufficiently incapacitated to be discharged from the army. Most remained in the AIF Depots acting as either orderlies, clerks or instructors. One, Pte Winkel, remained at one of the AIF Depots in Wiltshire in an unspecified role throughout much of 1918 but then contracted VD and was still recovering from this when the war ended.

5130 Pte Coakley, a habitual re-offender, was discharged from 3rd Military Hospital in Cardiff on 22 December 1917 and instructed to report to 3rd Convalescence Depot. Within two days he was recorded as Absent without Leave (AWL) and only reported for duty on 4 January, when he was Court Martialled. On 26 February 1918 he was reported AWL once again, only to be apprehended on 14 March. This time he was imprisoned at Wandsworth Prison for six months, but this was remitted after 100 days when he was released and sent back to his unit in France.³⁰

For some, 33 (16.37%) of those evacuated to England, the consequences of their exposure to mustard gas led to their being returned to Australia and eventual discharge from the army. They each spent an average of 148 days from their arrival in England until the day they embarked on a vessel bound for Australia. The briefest period was 1936 Pte Silver who spent only 45 days in England before his repatriation, whilst the longest was 111 Cpl Hassett who spent 284 days. Once they arrived in Australia each man needed to be assessed and the final decision to discharge them as medically unfit from the army needed to be made. Of the 33 returned to Australia only 31 have a clear disembarkation date in their service file. Each of these spent an average of 32 days from their arrival in Australia to their medical discharge. The least were 6430 Pte Waller and 6541 Pte Diehm who needed only 12 days to be processed and discharged. The lengthiest was 2194 Pte Kimlin who took 65 days. These 33 men each spent an average of 255 days from when they were first recorded as a casualty until the date they were discharged from the army; the briefest being 5536 Pte Brain after 159 days and the longest 4359 Pte Andersen who spent a mammoth 479 days prior to his discharge (see below for his story).

Of the 233 total casualties, 1.72% died; 99.57% were admitted into a Field Ambulance station and the same percentage were admitted into a Casualty Clearing Station; 98.87% of all casualties were then admitted to a Base Hospital; 11.59% of all casualties were able to be discharged from the Base Hospital back (eventually) to their battalion; 88.70% of all casualties were evacuated to England; 63.09% were eventually able to rejoin the battalion on active service after recovery in England; 9.01% were still recovering (or on Home Service

³⁰ Coakley was wounded in August 1918 and sent back to England. Predictably he was AWL again and was sentenced to further imprisonment. He was returned to Australia in 1919, still a prisoner and managed to escape when he was in Durban in August. Somehow he made his own way back to Australia where, in October 1919 he signed a confession of desertion and he was discharged from the army, his 'services no longer required'! He was ineligible for any war medals and never made any claim for assistance from the Repatriation Department after the war. He died in 1958.

duties) in England at the end of the war; whilst 14.16% were ultimately repatriated to Australia before the end of the war. This distribution is shown in Figure 5 (p.34).

A review of the medical notes in individual soldier service files, as well as their post-army discharge Repatriation Department files held at the National Archives of Australia depository in Brisbane, can shed some interesting light on the immediate medical consequences of their exposure to the mustard gas and how this affected the rest of their lives.

6351 Pte. Modrzynski enlisted in Maryborough, Queensland in November 1916. Only 21 at the time, and generally healthy, he was examined at an English hospital in April 1918. There he complained that throughout his rehabilitation he frequently had a shortness of breath and partial aphonia. Unable to resume General Service after recovery from his exposure to mustard gas he was still at the AIF Depot at the end of the war, when he was admitted to hospital with 'influenza complicated by Pneumonia'. So, already weakened by the effects of mustard gas, he was struck down with the influenza pandemic that spread throughout Europe in 1918. He survived this and returned to Australia where he was discharged in 1919. Throughout the 1920s and 1930s he did bush work in the Goondiwindi area of Queensland. In 1933 he made repeated claims to the Repatriation Department claiming assistance for a recurrence of the pneumonia. At the time he claimed he was suffering from chronic bronchitis as a result of his war service. He further claimed that since the war he had frequent attacks of cold sweats and feeling very weak, which would continue for a few days at a time. Sometimes these included chest pains and much coughing (blood-stained at times). One doctor who examined him confirmed he was suffering from Effort Syndrome (also known as Soldier's Heart).³¹ However, as a result of the examinations made by the Department, it was concluded his condition was not war-related and further assistance was denied. He died in 1983 of emphysema and pneumonia. Given that all his ailments were lung related, it is hard to believe there was no connection between his lifelong sufferings and his exposure to mustard gas which attacked the lungs.³²

536 Pte Brain, the first casualty to be discharged from the AIF as a result of the mustard gas attack, stated that he was sleeping in a dug-out on 30 October when he was exposed, but only sought medical attention once the battalion left the front line and when catarrhal symptoms came on. When admitted to a hospital in Exeter he was suffering from aphonia and laryngitis. It was noted at that time he had a debilitated and tired appearance, and was sweating in both hands. The examining doctor noted that he spoke generally in a whisper but whilst writing his report Brain seemed to forget himself and spoke normally. It was quickly decided he would not be able to undertake either General or Home Service duties and so was immediately returned to Australia. Unfortunately, his Repatriation File seems incomplete and there are no records of how he fared once back in Australia.³³

4359 Pte Andersen spent the longest time from his exposure to mustard gas until his eventual discharge from the army as medically unfit (479 days). His story is pitiful but worth detailing at length, as many of the other casualties would have suffered some, or indeed most, of the same symptoms he did. The following is taken exclusively from a synopsis of the medical

³¹ Known now as Da Costa's syndrome, the symptoms are similar to those of heart disease but is in fact an anxiety disorder and is common amongst ex-soldiers.

³² National Archives of Australia (NAA) J26, M16019 MODRZYNSKI, Frederick Harold [aka Frederick George] - Service Number – 6351.

³³ NAA: B2455, BRAIN V W.

notes found in his Repatriation Department file.³⁴ Andersen reported sick on 5 November after the battalion had been withdrawn from the front line. He was evacuated to England and was admitted to the War Hospital Guildford on 13 November 1917:

13.11.17 On admission. Pains in chest and cough persist[ent]. Voice husky.

Eyes improved. Heart normal. Lungs Normal ...

17.11.17 Patient complains of headache and pain back of neck.

Vomits all food even fluids. Pulse normal – no photophobia or other nervous symptoms. Tenderness over epigastrium – no rigidity or distension.

22.11.17 Continues to vomit – on fluid diet – vomiting irregular but generally occurs directly after food. Tongue coated and moist.

Pulse and temp. normal. Pain in neck disappeared – slight abdominal pain. Nil on examination. Bowels. A.T.S 1800 units given.

2.12.17 Has not vomited for past week (on light diet) until today when he vomited directly after food and became at the same time nervous and unable to articulate or make any sound. His mental condition appears good – he can understand spoken and written words and can write himself – Motor aphasia present.

9.12.17 Occasional attacks of vomiting since last note.

Still unable to articulate. Appears otherwise normal.

10.12.17 Had a fit. When seen all limbs were rigid and tremulous from time to time. Face was cyanosed and teeth clenched. Cyanosis disappeared when tongue was pulled out. Frothing at mouth and dry retching present. Appears unconscious – pupils normal and conjunctival reflex present. Catalepsy present. Rigidity and spasm of all the muscles increases every few minutes and patients [sic] struggles violently.

11.12.17 Patient conscious – is reported to have spoken once – violent attacks are much less frequent and less severe. Towards evening patient developed a squint which is not always present and his limbs became much more rigid. Tetany is now well marked.

Symptoms all increase while patient is being examined or watched.

12.12.17 Owing to violence of attacks and their number

C.H.A. was administered after which patient slept for 5 hours and when he awoke was quiet and appeared more normal.

13.12.17 Lumbar puncture performed – Fluid was not under pressure. Report came back that it was sterile and no abnormality present.

Patient has been complaining of pain in back of neck and occiput. Marked rigidity of spine – No further fits but stiffening of limbs and tetany still persist.

15.12.17 Two severe fits – marked cyanosis – knee jerks continue exaggerated.

22.12.17 Until today has had no attacks since last entry when he has again had a series of short fits – patient violent during the attacks and squint has returned. Has complained of girdle pain at level of umbilicus.

27.12.17 Lumbar puncture – fluid clear and not under pressure ...

29.12.17 Three fits. Strabismus rigidity and tetany returned all of which have been absent in the interval ...

³⁴ NAA: J26, M9806 ANDERSEN, Jacob Nielsen - Service Number - 4359.

20.2.18 Since last entry patient has had fits from time to time. On an average one or two a week of a nature similar to those described above ...

14.4.18 Since last entry patients condition has continued much the same. His fits occur on an average once a fortnight. He sleeps and eats well. He is still subject to obstinate constipation – headache and attacks of depression.

He has been allowed to sit up each afternoon and has made attempts to walk but this spastic rigidity has made this impossible without much support ...

29.4.18 Beginning to speak and walk ...

30.6.18 Re-education has brought speech back – walks fairly well with assistance.

Andersen was discharged in July 1918 for return to Australia, though obviously far from well. On the ship returning him a doctor noted:

[He] Can speak but stammers especially when excited which is often. Hysterical outbursts of anger. Refuses to eat at times and is childish in temper. Very weak but can walk a little if supported ...

Arriving in Brisbane on 5 September 1918, he was admitted to the 6th Australian General Hospital for continued treatment, where he remained until 14 February 1919. He was discharged from the army two weeks later. At which time it was noted that he had ‘made great improvement in three months’. Upon discharge it was accepted that he had 100% Incapacity and so was entitled to a full pension. The doctor that approved his discharge noted he was ‘Incapacitated for work for one year’. However, by October 1919, his pension was reduced to 50%.

Given his condition when discharged from the army, it is not surprising that his suffering continued:

29.3.20 Suffering from attacks of giddiness and in ability to stand, every two or three weeks, lasting ½ hr. in which he is paralysed and has tremors and cannot speak ...

2.10.20 States suffering from loss of weight – vomiting after food. C.E. subject very poorly nourished ...

1.6.21 States vomiting every morning after breakfast. No pain stomach but gets headaches ...

14.12.23 Left Australia for Denmark in June 1921.

Returned Novr.8th, 1923 ... Started work 3 weeks ago. Improvement last six months – doubtful. Likelihood of further improvement – Possible ...

8.12.24 Nerves and stomach still bad – Headaches (occipital region). Occasional vomiting attacks. Constipation – Takes medicine daily ...

Andersen had a check-up with a Repatriation Department doctor each year throughout the 1920s and 1930s. Whilst he was able to keep a job as an electrical linesman in Ipswich until 1936, he was always complaining of continued vomiting and bad headaches. Unfortunately, but perhaps not surprisingly, Andersen’s story does not end well. On 20 February 1936, and not for the first time, he fell from an electrical pole and was admitted to hospital:

He was profoundly shocked, had a large haematoma on his back and several fractured ribs. On 23.3.36 he suddenly became rapidly worse, and had a sudden profuse haemorrhage into his chest cavity. His death was reported to the Coroner ...

While his actual cause of death was not attributable to the effects of his mustard gas exposure in October and November 1917 (it was declared an accident), there is little doubt that the sequence of events that began next to the Hanbeek in Belgium ultimately led to his fall from that electrical pole.

4665 Pte Broomfield died 11 November 1945 – a little over 28 years after he was exposed to mustard gas. His cause of death was ‘Acute Cardiac Failure, Pulmonary Fibrosis’. His daughter, Mrs J.M. Balfour, believed this cause was directly related to his exposure to mustard gas and she petitioned the Repatriation Department for acceptance of this. The Department concurred with this and paid her £15 to cover the funeral expenses.³⁵

The wife of 6406 Pte Cotterell was not as lucky. In November 1917 Cotterell ‘was buried by explosion of large shell and his gas mask was damaged and he inhaled some gas before being dug out’. On his arrival at the Barnet War Hospital it was noted he ‘Gets headaches and pains in chest on exertion, and shortness of breath. Can walk quietly but cannot march far, even without a pack’. He was sufficiently incapacitated to be sent back to Australia for a medical discharge. Throughout the 1920s and 1930s he had regular check-ups with Repatriation Department doctors and always complained of shortness of breath on exertion but was able to work. In 1934, during an illness that required five weeks of tests in hospital and evidently very ill, a doctor noted his over-indulgence in alcohol was a contributing factor in this and rejected that his illness was war service induced! He died in 1937 of the results of alcoholism. His wife made a claim to the Repatriation Department that his premature death was a result of his war service. Needless to say this was rejected.³⁶

4159 L/Cpl Kirby was one of the first to be exposed to the mustard gas and was diagnosed with conjunctivitis. Evacuated to England, he recovered and returned to France in May 1918. Shortly after his return he was wounded again and sent back to England, after which he was sent back to Australia. In May 1919 the conjunctivitis returned and he was admitted to a hospital in Brisbane:

9/5/19 ... Phlyctaenular Conjunctivitis in each [eye], partly at least a result of gassing. A small suppurating meibomian in outer 3rd of left upper lid which is discharging by a pin point opening on conjunctival surface; the cause of the swelling of upper lid. Please have ointment ordered put into each eye night and morning.

5/6/19 Much improved. Please continue for another month.

He was discharged from hospital two months later. However, throughout the 1920s, he complained of frequent shortness of breath and how this affected his ability to work. In 1932 he was admitted into hospital for tests which noted that whilst he had some congenital defects that impacted his health, so too did the damage caused to his lungs from the exposure to mustard gas. In 1941 he was again claiming assistance for himself, wife and child as a result of being gassed.³⁷

5015 Pte Brewster was an athlete and played both cricket and football before the war. He enlisted in 1916 and after training in England joined up with the 25th Battalion in October that year but was almost immediately injured and sent back to England. After a lengthy recovery he returned to the battalion only on 20 October 1917. Nine days later he was evacuated with gas poisoning. When he was admitted into the County of Middlesex War Hospital on 3

³⁵ NAA: BP709/1, M14348 BROOMFIELD, Joseph - Service Number – 4665.

³⁶ NAA: BP709/1, M15419 COTTERELL, Wilfred Aloysius - Service Number – 6406.

³⁷ NAA: BP709/1, M15651 KIRBY, William John - Service Number – 4159.

November he was noted as having ‘Burns of Face. Laryngitis conjunctivitis and bronchitis’. He never returned to active service and was discharged in 1919. Ten years later he was to write:

I have been suffering from chest trouble ever since I was discharged from the A.I.F. which I consider is the result of being gassed. After discharge I bought cough mixtures for about twelve months thinking that it was only a matter of time and I would be well again.

Brewster was continually complaining of a bad chest and cough throughout the 1920s. A friend was to write of him in 1929, ‘During the last five or six years he has, in my opinion, failed badly as regards health’. By the 1930s his condition had not improved and he was frequently out of breath after exertion, had pains in his chest and was constantly coughing. There was little doubt amongst his doctors that this was all a result of his exposure to mustard gas. He died in 1948 of acute heart failure, atherosclerosis and bronchiectasis – to which the poor state of his lungs contributed.³⁸

The week the battalion spent in the support and front line took a high toll in casualties. From an effective strength of 29 Officers and 885 Other Ranks on 27 October it had fallen to 26 Officers and 607 Other Ranks on 10 November. During this two-week period 23 soldiers were killed in action (excluding the three that died from exposure to mustard gas). Approximately 40 others were wounded. The difference, roughly, were those evacuated due to the effects of the gas. The battalion had lost close to 30% of its effective strength in this period, an incredibly high percentage considering it was in a support position and did not take part in any attacks during this time.³⁹

As has been shown above, slightly more than 63% of those affected and evacuated by mustard gas did return to the battalion. However, as each man evacuated to England was absent for an average of 231 days, it took a considerable amount of time for them to return and it was well into 1918 before they were returning in significant numbers. By the end of 1917 the AIF was beginning to feel the effects of a manpower shortage and so the battalion found it hard to make up these lost numbers.

On 1 December the effective strength of the battalion had risen to 27 Officers and 704 Other Ranks. By the end of the month it had risen further to 44 Officers and 774 Other Ranks – still around 100 below its strength prior to the attacks. This increase in numbers was made up of new drafts or returnees from hospital, leave or detachment. In this period only a handful of those affected by mustard gas were able to return. It is obvious from these figures that the fighting efficiency of the battalion had been significantly impaired as a result of this particular deployment.⁴⁰

In total 24.89% of all the casualties incurred as a result of their exposure to mustard gas were permanently lost to the Army. This is an incredibly high ‘wastage’ rate. From the German perspective, it can be seen that drenching support areas with mustard gas was a relatively simple, cheap and effective tactic to erode the fighting capacity of the British armies. From the British perspective, exposure to mustard gas led to a very high wastage of personnel plus high incidental monetary costs required to provide care for them, as well as necessity of deploying significant resources of materiel and manpower to provide for them during what was, at times, a lengthy rehabilitation period.

³⁸ NAA: BP709/1, M20305 BREWSTER, George - Service Number – 5015.

³⁹ AWM 25/861-9 Part 203 Field Return, 25th Battalion AIF.

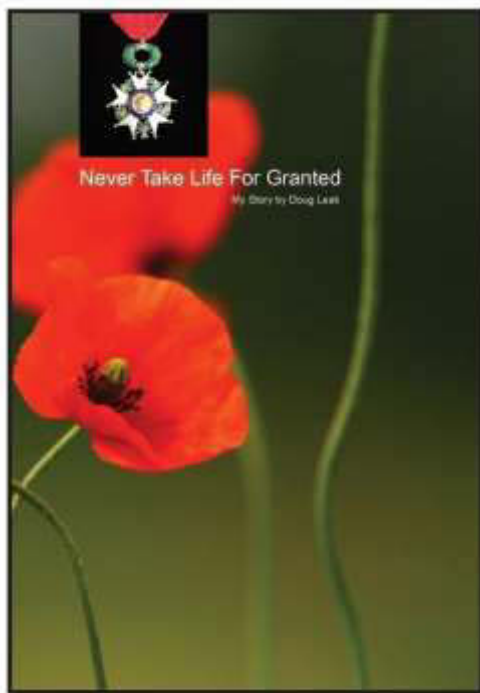
⁴⁰ *Ibid.*

While this was a relatively insignificant event in the course of the war, and not one that has been much written about, it does illustrate that events such as this, which happened at ‘quiet times’, did have a major impact of the fighting efficiency of a unit. They also created untold hardships for those involved, not just for the duration of the war, but for the rest of the participants’ lives.

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***NEVER TAKE LIFE FOR GRANTED* BY MR DOUG LEAK LD’H(FR)**

Paul Rosenzweig



The small book *Never Take Life for Granted* was produced by St John Ambulance (SA) through its Flourishing Life Project (‘Treasured Stories Program’) to commemorate the life of Mr Doug Leak (A4, 38 pages, ‘print-on-demand’). It was launched on 2 December 2016 at the St John (SA) Headquarters in Unley. Pilot Officer (AAFC) Paul Rosenzweig attended and spoke, as both the Public Affairs Officer for No.6 Wing Australian Air Force Cadets, and a long-standing personal friend of Mr Leak.¹

Doug Leak was one of 10,000 Australian airmen who served with Bomber Command during World War 2. After extensive training in Australia and the UK, Doug served as a Wireless Operator-Air Gunner with No.149 (East India) Squadron RAF, operating Lancaster II and III heavy bombers. Doug’s operational missions over Germany under Operation ‘Pointblank’ (the Allied Combined

Bomber Offensive) contributed to restricting the German war effort and materially supported the eventual liberation of France. Doug also flew sorties in support of Operation ‘Manna’ (food supply drops to the western Netherlands) and Operation ‘Exodus’ (repatriation of Allied POWs from Europe).

On 23 November 2015, former Warrant Officer Doug Leak was advised by the French Embassy in Canberra that he was to be appointed by the President of the French Republic to the *Ordre national de la Légion d’honneur* in the grade of *Chevalier* for his role in the liberation of France. In his book, Doug says: ‘I can’t think of anything that could cap off a person’s life better than such an award.’ These are some extracts of Paul’s address:

¹ Paul Rosenzweig is a collector of orders, decorations and medals, who has contributed to various journals and publications for 35 years. Now Flying Officer (AAFC), as well as being the 6 Wing Public Affairs Officer, he is also Executive Officer of No.600 Aviation Training Squadron, AAFC.

*Right: Bomber Command veteran Mr Doug Leak speaks at the launch of his book *Never Take Life for Granted*.*



At key anniversary ceremonies over the last two decades coinciding with the 60th and 70th anniversaries of the Allied landings in Normandy, the French government has graciously bestowed its Legion of Honour upon various surviving Allied veterans of the D-Day landings and the Battle of Normandy. More recently, former members of Bomber Command have also been appointed to the French *Légion d'honneur* for their participation in the liberation of France. Mr Doug Leak is one of those honoured recipients.



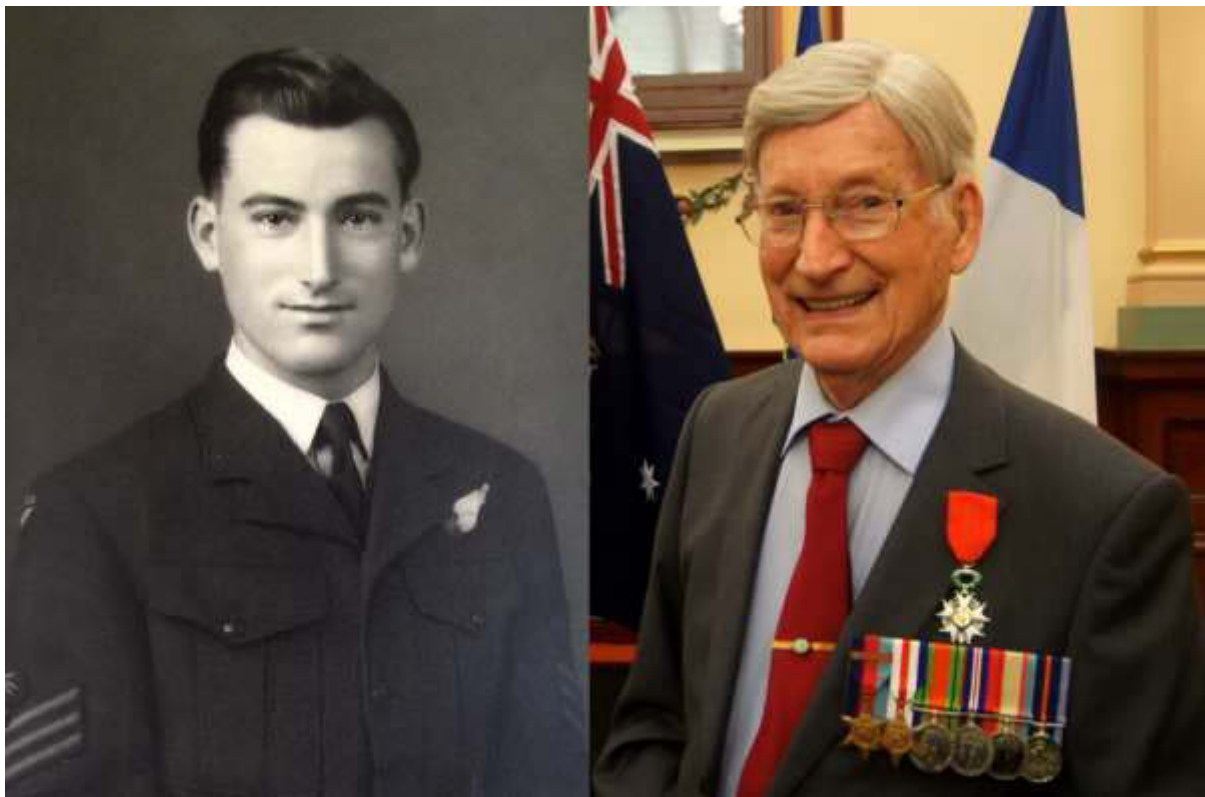
Above: Former Warrant Officer Doug Leak (extreme left of picture), pictured as a Flight-Sergeant (Wireless Operator / Air Gunner) with a Wellington Bomber in 1944.

The Legion of Honour is France's premier award for merit or bravery, and one of Europe's oldest orders of chivalry, founded by Napoléon Bonaparte on 19 May 1802. Following the

French Revolution, all orders of chivalry were abolished. Instead Bonaparte created a reward for merit, instituting a Legion of Honour – not an order of chivalry or a new system of nobility, but structured after a Roman legion, to be a body of eminent people. Two centuries later, the appointment of surviving veterans such as Mr Doug Leak, who contributed to the liberation of France, has created an historic moment in which the National Order of the Legion of Honour has returned to its very origin – to be not purely an order of chivalry but a true ‘legion’ – in this case, a worldwide body of honourable veterans.

Pilot Officer (AAFC) Rosenzweig said, ‘As a child, I remember Doug showing me his war medals. In 2008 I returned to Adelaide from the Philippines, after 25 years away. We had something significant in common – we both had the Returned from Active Service Badge. It was at this time that he politely suggested that I could stop calling him “Uncle Doug”. By the time I finished my military service I had acquired seven medals, for warlike and non-warlike service and other things. With the addition this year of the Legion of Honour, Doug now also boasts seven – but I have to say I think he did a lot more to deserve his.’

‘Although I had 32 years in an Army uniform, it gives me great pleasure to be here today as an Officer of the Air Force Cadets, dressed in Air Force Blue, as we look back over Doug’s wartime career in the Air Force – which he has recorded for posterity in this book.’



Above: Bomber Command veteran, former Warrant Officer Doug Leak, pictured as a Flight-Sergeant (Wireless Operator / Air Gunner) in 1944, and in 2016 after receiving the insignia of the French Legion of Honour from the Minister for Defence of the French Republic, Mr Jean-Yves Le Drian.

Donations to support the Flourishing Life Project are always appreciated. Copies of the book (emailed out in .pdf format) can be requested from St John Ambulance (SA): Emma.Waites@stjohnsa.com.au or vanessa.leanne@stjohnsa.com.au