

Institution Affairs

Secretary's Update

WELCOME to the second edition of the “New Look” *Journal*. We are continuing to make changes and in this issue you will notice that reviews are within the body of the *Journal* rather than in their own section. I hope you enjoy it and will perhaps find the time to write back to us giving your comments, no matter what they are.

The Institution is flourishing and has continued with the principle of widening and opening up membership to include all those members of the Corps, serving or retired, who reached the rank of Corporal. A series of briefings has recently started with the aim of informing the serving Corps of the benefits of membership. I am sure the word will soon spread through the wider Corps family. Please do all you can to encourage eligible serving and past members of the Corps to join this, our professional body. How successful this drive on membership will be is not yet known, nor is the impact it will have on future issues of the *RE List* in size content and presentation. I have been advised by a small band of retired members that the List should be issued in two volumes, retired and serving. If this is the view please write to me, or one of the Council Members.

In October this year we will be seeking reaccreditation to the Engineering Council (UK). This is not a formality and the Institution must demonstrate its commitment to various policy guidelines. Over the last eighteen months we have had a seat on the Professional Development Forum of the Engineering Council (UK). Professional development is the key word with most Institutions and a study is taking place to see where the focus of professional development should be across the wider Corps. I would hope that the result of this study will be available in the New Year.

The Heritage book “Follow the Sapper” is taking shape and is on course to be published in late spring next year. This high quality book will show some of the fantastic treasures the Corps has obtained or contributed to over the years. Many of the photographs, paintings and items shown in the book have not been on open display before. I have included some images on the back cover of this *Journal* to give an example of the quality of some of the early artefacts in our possession. You may, of course have your own view that a specific item should be included in the book. If this is the case, please let me know and if we are not covering that particular item or period we will try to include it. The book will be high quality with about three hundred and fifty images linked together with a thread of Corps History brilliantly

authored by Gerald Napier. The book will be on sale at about £40 and if you would like to reserve a copy please follow the instructions on the back cover of this issue.

Over the last two years the work on the Heritage Book has highlighted the fact that the majority of the collection, held in the Museum and Library, has not and will not be seen by most members of the Institution and public. To this end the Institution is embarking on a project to digitize our collection. This is a mammoth task and will require serious funding that could perhaps only become available from a Lottery Heritage Grant. We have engaged Kings College London as our consultancy partners and the scope and funding bid for this project should be available in the couple of months. The project will take many years and dedicated staff to achieve. Other smaller digitization projects are underway and soon we will have available some searchable volumes of Corps History and early *Journals*.

All the work I have described above takes time, effort and money and you will notice we have not been able to secure any advertising for this issue – it is not without trying. If you feel you would like contribute and become more involved in your Institution in any way, please contact me.



The Secretary

Guidelines for Authors

The Editor is always pleased to consider articles for publication in the *Journal*.

Subject. Articles should have some military engineering connection but this can be fairly tenuous, especially if an article is well written and interesting.

Length. Articles of any length are considered but should normally be between 1500 to 5000 words. About 1200 words covers one page less photographs.

Copy. One copy of the text should be submitted, together with a head and shoulders photograph of the author plus a short pen picture and any other illustrations.

Clearance. Articles must be cleared by an author's CO where applicable.

Copyright. If an article has been published elsewhere, copyright clearance must be sought by the author before submission. Where necessary copyright clearance on photographs, maps or illustrations must also be obtained prior to submission.

Photographs should, if possible, be of good quality with sharp definition, and have appropriate captions. Files from digital cameras can be used providing they are taken with a camera capable of producing high quality images. The files should not be altered in any way prior to submission and they **MUST NOT** be embedded in the document. Digital images can be sent via email to assist.sec@inst-royal-engrs.co.uk or on a CD.

Rewards can be generous. The publications committee has about £350 in prize money for each issue plus valuable annual prizes. All authors receive £20 to help cover costs.

Pseudonyms will not be revealed by the Editor under any circumstances.

Contributions should reach the Editor by:

8 October for the December 2004 issue.

4 February for the April 2005 issue.

**Submissions before the deadline
are particularly welcome.**

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Three into One Does Go!

An Account of 42 Fd Sqn's Deployment to the Democratic Republic of Congo June – August 2003

MAJOR S G HIGGENS MBE



Major Simon Higgs joined the Corps as an Apprentice Tradesman in 1983. Between 1985 and 1991 he served with 34 Fd Sqn and 51 Fd Sqn (Airmobile), deploying with the latter to Northern Iraq on Operation Safehaven in May 1991. He applied for officer training in 1991 and was commissioned into the Corps in Dec 1992. His first appointment, as Tp Comd, was with 20 Fd Sqn where he subsequently served as Ops Offr. In this role he deployed with the Squadron to Angola on Operation Chantress in May 1995. Taking up the post of Adjutant, 35 Engr Regt in Apr 1996 he was promoted and posted as Group Leader to the RCB at Westbury in Oct 1997. In 1999 he attended the Combat Arms Fighting Systems Course at RMCS and in Jan 2000 was posted to the DPA as both Requirements and Trials Manager of the then fledgling Engineer Tank Systems IPT. He assumed command of 42 Fd Sqn in Aug 2001 and deployed the Squadron on Exercise Saif Sareea II, Operation Descant and Operation Coral. He assumed his current appointment as ERLO in Sep 2003.

(Elements of this article appeared in Edition 19 of the *Sapper Telegraph*).

INTRODUCTION

IN June 2003, in the immediate aftermath of Operation *Telic*, a small UK military contingent predominantly based on 42 Fd Sqn, deployed at short notice and with expeditionary scalings to the Democratic Republic of Congo (DRC). Limited in manpower, resources and equipment, the Squadron Group was the United Kingdom's contribution to Operation *Artemis*; the first ever European Union Defence Force deployment outside of continental Europe. Operation *Coral* was the United Kingdom's title for the operation.

In total, the Squadron was deployed for just 62 days and yet in such a short period of time made a valuable contribution towards restoring peace and stability to one of the World's most impoverished and troubled regions. Contending with not only the inhospitable conditions and its isolated location, Squadron personnel had to operate in a dangerous environment against a backdrop of frequent incursions by local militia and scenes of inhumanity and brutality comparable to those witnessed in Rwanda in 1994.

With the World's attention focused elsewhere, details of Operation *Coral* are not widely known. This article seeks to record the efforts of the men and women in the Squadron, offer some personal thoughts and demonstrate how much can be achieved with a relatively small group of Sappers.

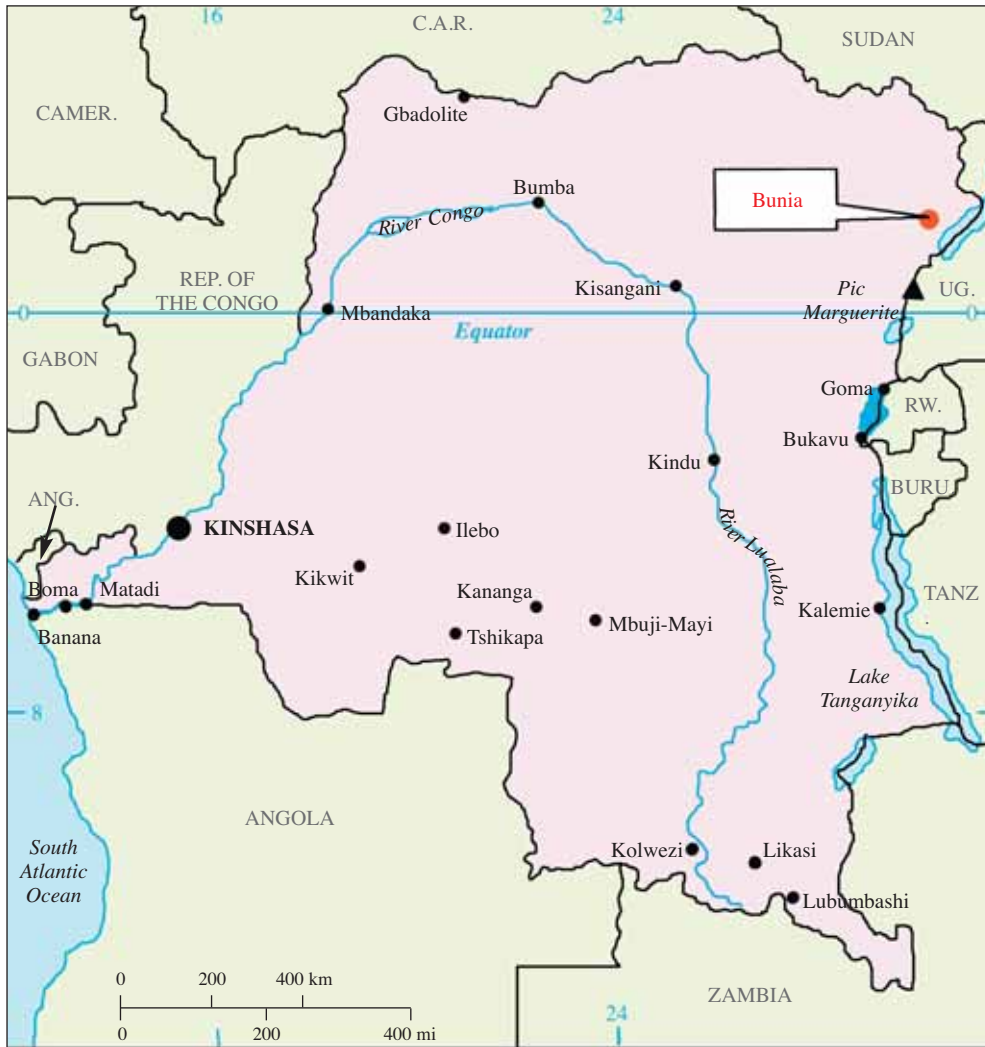
BACKGROUND

THE 2,200 strong French led Interim European Military Force (IEMF) mission, was in response to a United Nations request to the European Union for

military support in the Ituri Region of North East Congo. Based on a French Marine Brigade supplemented with Special Forces (SF), the Force also included Swedish SF and Belgian medical and air assets. The Ituri Region was witness to an increase in hostilities between the rival Hema and Lendu militia after the withdrawal in May 03 of the Ugandan Army. An inter-ethnic war had been raging in and around Bunia for the previous four years and had claimed an estimated 50,000 lives. The Bangladeshi led UN Task Force was not due to deploy until Sep 03 and the lack of a permanent, credible military presence in the region, especially around the provincial capital Bunia, required an interim military force to support the UN's efforts in returning peace to the volatile area. The leading elements of the IEMF (French SF and Foreign Legion) arrived in theatre during the second week of June 2003.



Grim realities of life in the Ituri Region.



Map of Democratic Republic of Congo.

In an effort to make the IEMF a truly multi-national force, British participation was requested by the French Government. With France's recent military history in the Great Lakes Region and Belgium being the one-time colonial master of Congo (formerly Zaire), a non-Francophone country was essential in adding credence to the force and assuaging the concerns of neighbouring countries such as Uganda, Angola and Rwanda. The request for a British military contribution came whilst efforts were quite rightly focussed on Iraq and it was decided that an Engineer Squadron could best provide a tangible contribution whilst remaining relatively small in size.

RECONNAISSANCE AND DEPLOYMENT

ON 9 Jun 03, I was ordered to report to Joint Force Headquarters at PJHQ. Two days later I received a brief on the situation in theatre and deployed with the Operational Liaison and Reconnaissance Team (OLRT) to Bunia. I had been warned that I would not return to Hameln once the OLRT had conducted its primary task but would stay in theatre until the Squadron joined me. The OLRT was commanded by Lt Col Andy Mason PARA

(COMBRITCON) with Cdr Paul Abraham RN, a Submariner, his deputy. The OLRT's mission was to establish a foothold at Bunia Airfield, liaise with the French led force and identify suitable tasks for the Squadron to undertake. Deploying from RAF Lyneham in a C130 on 13 Jun 03, the OLRT arrived at Bunia airfield during the afternoon of 16 Jun 03.

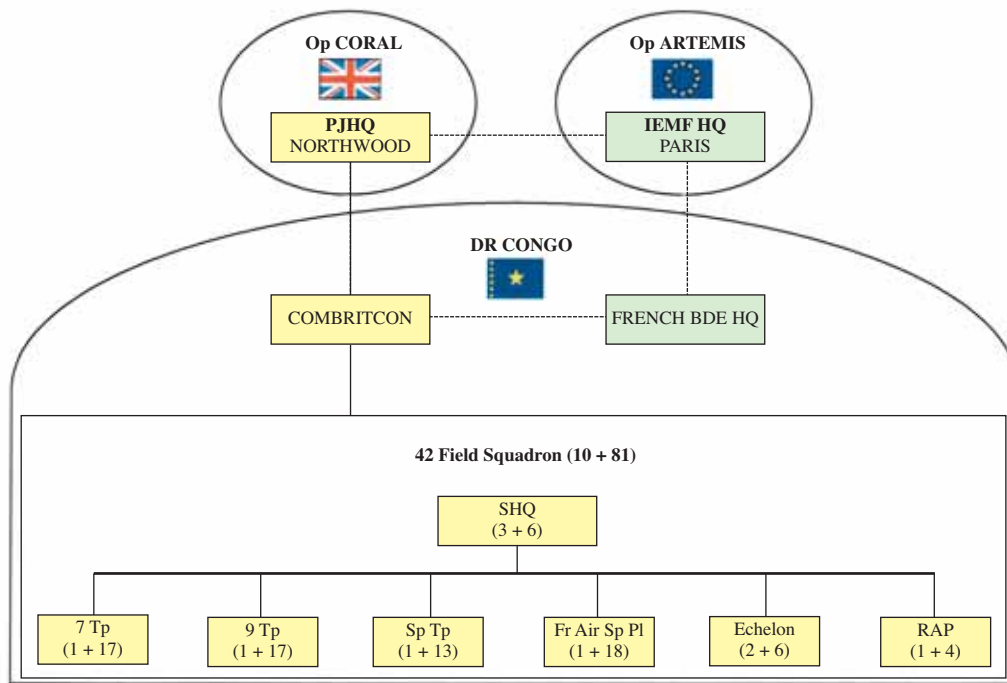
Once on the ground in Bunia, I had 36 hours to produce a detailed Works Proposal. Upon direction from COMBRITCON, I identified tasks that would assist the UN's efforts in Bunia. Significant constraints applied; firstly all equipment and materiel had to be flown into Bunia by C130, secondly there was no integral infrastructure or resource supply, thirdly the Squadron's ORBAT had to be capped at around 70 and finally the Squadron had to recover from theatre by 1 Sep 03. Establishing contact with the French military engineers and the UN's Deputy Chief of Aviation in the DRC (Chris O'Brien, a former RAF C130 pilot), it appeared that the airfield and its immediate vicinity

was vital ground to both the military and UN operations.

Since independence, the DRC's infrastructure has deteriorated rapidly and movement is now only possible by air or river. Bunia Airfield was therefore critical to not only the deployment and sustainment of the IEMF and Bangladeshi



French Patrol.



Squadron Organization.

Task Force but also the UN and other Non Government Organizations (NGO). The capacity and throughput of the airfield, however, was restricted by the size of the parking apron, which could only safely hold two C130 aircraft (or equivalent) simultaneously. With the IEMF, UN and NGO all vying for space on the apron, it became clear that if it were expanded the amount of aid and humanitarian relief flown into the region would be increased.

With the IEMF Commander agreeing to place his French Air Support Platoon under my command and the UN agreeing to supply bulk earth moving equipment, the Works Proposal submitted to PJHQ on 17 Jun 03 recommended that the Squadron undertake the apron extension task. Not being a civil engineer and having no prior experience with airfield construction, I was very grateful for the advice and technical assistance that the then OC 529 STRE (Air Sp), Lt Col Buckley, afforded over a very difficult satellite telephone link. The proposal was accepted on 20 Jun 03.

Meanwhile, not knowing when the Squadron would deploy and yet to receive any details of likely tasks in theatre, my 2IC, Capt Lorne McMonagle prepared the Squadron for deployment. Stripped of most of its vehicles and equipment to Operation *Telic*, the Squadron was fortunate not to have lost its manpower. Bearing in mind the nature of the deployment, only expeditionary levels of equipment were prepared. Squadron personnel were warned that conditions in theatre would be austere and that they were to take only the bare essentials.

With the Squadron's QM detached to 64 HQ Sqn for Operation *Telic*, Capt Neil Bevan, Resources Offr of 45 Fd Sp Sqn, was attached to the Squadron for the duration of the deployment. His knowledge of resources immediately paid dividends in that he negotiated with the Engr Resources Management Cell (ERMC) at Bicester, the reconfiguration of a 250 man Expeditionary Camp Infrastructure (ECI) into one

suitable for only 100 men, thereby releasing valuable air cargo space for more essential items such as defence stores and medical equipment. This early liaison with ERMC and the advice and assistance that Maj Andy Reed and his team provided was of significant benefit to the rapid and successful deployment.

In the period preceding my departure, the Squadron had conducted an ITD(A) and basic infantry skills camp at Sennelager and consequently its low-level skills were up to date. The short notice of the deployment precluded a prolonged training package but my Ops Offr, Capt Chris Ankers, in conjunction with PJHQ planned and organized a two-day OPTAG package in Hameln. A situational briefing by the two Op *Coral* desk officers from PJHQ proved to be of significant value and supplemented the information that was being received from theatre.

When SHQ received a copy of the Works Proposal on 20 Jun 03, it was able to fine-tune the ORBAT, source materiel and arrange for the loan and dispatch of equipment. The ORBAT of 72 included 65 personnel from the Squadron based on an SHQ(-), two Fd Tps(-) and one Sp Tp(-) and an additional seven medical, environmental health and postal personnel. Vehicle and Plant assets were kept to a minimum with the Squadron deploying with two Ultra Light Wheeled Tractors (ULWT), two Troop Carrying Vehicles (TCV), three Landrovers and one specialist soil rotorvator. In addition to the reconfigured 100 man ECI, other materiel included an Engineer Construction Pack (Light) and 4 tonnes of cold-rolled asphalt for runway repair.

Deployment was in three stages; the pre-advance party, comprising Capt Bevan and a Resources JNCO, flew by civair on 20 Jun 03 to the IEMF Forward Mounting Base (FMB) at Entebbe Military Airport, Uganda. They were prepositioned here to prepare for the receipt and onward despatch of the Squadron's Advance Party and Main Body.

THREE INTO ONE DOES GO!

The Advance Party, consisting one Field Troop, flew by C130 to Bunia via the FMB and arrived on 27 Jun 03. The Main Body, flying on strategic aircraft, arrived at the FMB on 29 Jun 03 and were called forward to Bunia in piecemeal as the Squadron Camp developed. Several of the C130s bringing the Squadron forward were struck by small arms fire; SSgt Stafford was somewhat shocked when he landed at Bunia to find that a round had passed up between the gap in his legs and out of the fuselage above him. The Squadron was complete at Bunia Airfield on 4 Jul 03.

CAMP INFRASTRUCTURE AND INITIAL STAGES

LIVING conditions in theatre were poor. The area inside the airfield where the Squadron were to be located was littered with human remains, faeces and munitions. Under the direction of my SSM, WO2 Houston, much effort was spent during the early stages of the deployment to improve conditions thereby reducing the risk of disease. Deploying with an Environmental Health Warrant Officer, adhering to guidelines on camp layout, utilizing a centralized cookhouse and strict personal hygiene prevented any outbreaks of gastro enteric or similar diseases. Malaria was prevalent in the area but sound personal discipline with regards to the taking of prophylaxis prevented any cases being recorded in the Squadron. The remainder of the IEMF were not so fortunate; 13 cases were recorded during the time that the Squadron was in theatre.

In addition to the environmental conditions, the Squadron had to contend with the physical threat. Although not capable of mounting a prolonged, direct assault, the Lendu and Hema militia were capable of mounting concentrated, rapid skirmishes using small arms and mortars. In response, the IEMF relied on a system of strongpoints with SF and infantry patrolling the ground between (the French referred to this as the "Citadel"). With the exception of razor wire there was, however, little protection around the IEMF camp. I decided from the outset to provide indirect fire protection close to the accommodation areas. This was supplemented with interlocking fire trenches on the periphery of the Squadron position.

On the three occasions when the Squadron was engaged it was reassuring to note that the hours spent planning, preparing and rehearsing for such an event paid off. Under perhaps



"Rorke's Drift".

the most stressful of situations that any member of the Squadron had hitherto found themselves, the professionalism and leadership displayed by all commanders proved pivotal in ensuring that all Squadron personnel who deployed to the DRC returned home safely. Considering the short notice of the deployment and the lack of opportunity to conduct any significant pre-deployment training, I am convinced that the ITD(A) and basic infantry skills camp that the Squadron undertook just before deploying to the DRC, provided an excellent bedrock on which to develop individual and Section level drills in theatre.

Under the command of Lt Dave Barham, 7 Troop built and maintained the Squadron's camp infrastructure and prepared the defensive positions. With the onset of the rainy season fast approaching, the Troop rapidly established an effective track and drainage system that allowed the Squadron to operate in even the most torrential of downpours. Their skills were very much in demand by the other contributing nations and the Troop ultimately became responsible for the enhancement and maintenance of the entire IEMF Camp infrastructure.

When the Squadron Camp, pertinently named "Rorke's Drift", was ready, 9 Troop, commanded by Lt Lachlan Robertson was flown from Entebbe into Bunia to work alongside the French Air Support Platoon repairing and maintaining the runway. The effective length of the runway was 1,850m and was constructed in a similar fashion to that of a



Hema Militiamen (note the child soldier, back left).



Digging ablation area.



Lance Corporal Powell protects Pygmy workforce on runway.



Work on the apron begins.

blacktop road. Classified as being able to support aircraft up to the size of C130 (or equivalent), it was patch repaired using a Limonite (a locally quarried soil) and cement mix. With the exception of emergency repairs, maintenance could only be conducted at night. The runway was located on the western edge of Bunia and as aircraft were often engaged with small arms fire as they flew over the town, the IEMF Commander ordered that all military and UN aircraft should only approach from and depart towards the west. This of course had a detrimental effect on the western half of the runway and most of the repair and maintenance tasks were concentrated here. Repairs, although slow as they relied on the local Pygmy work force to manually mix the cement, were of good quality and yielded a higher strength than that of the existing runway. The maintenance and repair of the runway, although a monotonous and unglamorous task, was vital. The combined efforts of 9 Troop and the French Platoon ensured that the runway was never once closed to aircraft.

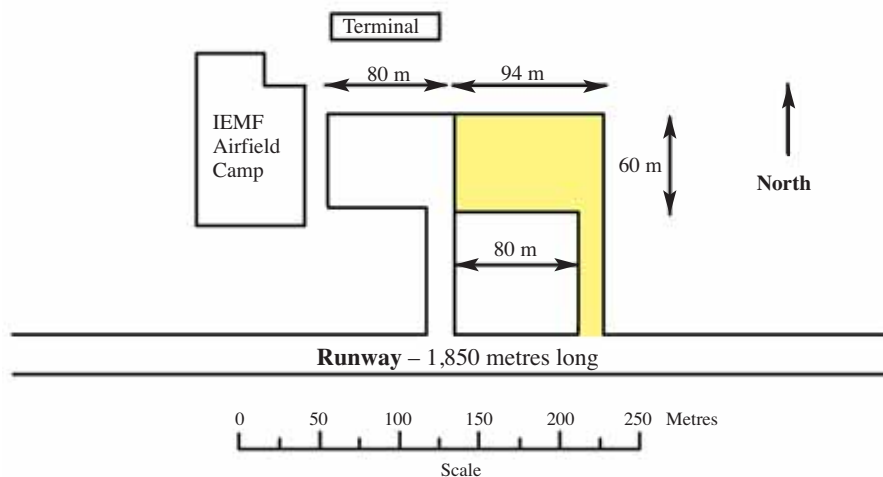
SQUADRON MAIN EFFORT – EXPANSION OF THE APRON

A DELAY in the demining of the apron expansion area prevented work starting on the Squadron's main effort until 8 Jul 03. The existing apron, constructed in an identical manner to that of the runway, was 4,800m² and had only one taxiway from/to the runway. The Squadron's task was to increase

the apron to 10,440m² and construct an additional taxiway. The expanded apron was to be soil stabilized using the locally quarried Limonite and levelled to link in with the existing drainage. As the task was plant intensive, it was given to Support Troop, under the command of 2Lt Colette Waters, to control. The French Platoon and UN provided additional plant equipment, with manpower provided by the Field Troops.

On the same day that the project commenced, I was informed by COMBRITCON that the Squadron had to leave theatre by 15 Aug 03 in order to allow the remainder of the IEMF to begin their recovery. This news arrived at the same time that the UN reneged on their promise to supply bulk earth moving equipment. With only two ULWT and one French Caterpillar D3 available, it was vital that the Squadron obtained more heavy plant. A DEUCE from 39 Engr Regt with an operator/instructor was flown out to theatre and the UN's Deputy Chief of Aviation was able to locate and fly in by helicopter (MI 26) a Caterpillar D4. This delayed the works programme by seven days and in order to make up lost time, round the clock shift work was implemented.

The original works plan divided the apron extension into five segments with each being excavated, levelled and soil-stabilized before progressing onto the next. However, the delay in



Schematic of Bunia Airfield Apron (extended area in yellow).



Aerial view from the North of finished apron.



Aerial view from the South East of finished apron.

obtaining earthmoving equipment and the impending arrival of the rainy season required the whole area to be excavated, levelled and compacted before any soil-stabilization could occur. In total, over 22,000 tonnes of soil was excavated using the UK DEUCE, French D3, UN D4 and the occasional use of a Uruguayan D5 (a Uruguayan Battalion with integral support formed part of the UN's peace-keeping force in the region). The importation of 3,000 tonnes of Limonite to provide the capping surface was a significant challenge in that delivery was reliant upon three decrepit UN tipper trucks that could each only haul two tonnes plus the Squadron's two TCVs that were converted into flatbeds and unloaded by shovel on site.

Insufficient stocks of cement and an absence of any sand or aggregate precluded the use of a concrete hard standing to cap the site. Soil stabilization at a ratio of 3 per cent cement by weight was the alternative method proposed by the UN. Although the IEMF Engr SO1 and I insisted that the ratio was too low (10 per cent was considered the optimum ratio), the UN engineer, who was the site's technical supervisor, insisted that this was the correct ratio for the local environment and weather conditions. Much heated debate ensued and it was not until the UN agreed to acknowledge my concerns and accept responsibility for the durability of the surface that soil stabilization commenced. Soil stabilization was conducted in the cooler parts of the day and the Caterpillar rotorvator that the Squadron deployed with proved critical to the efficient mixing of limonite and cement. Each stabilized area was compacted, watered and cured for seven days before being subjected to any load.

Finished on 3 Aug 03, the apron extension task took just 27 days and once completed trebled the throughput and capacity of the airfield. Whilst the apron was the Squadron's main effort, enabling tasks included quarry management, route repair, drainage, demolitions, lighting and power supply. On 5 Aug 03 the new apron was formally handed over to the UN in a ceremony that saw local politicians and dignitaries, high ranking UN staff and the French IEMF Commander taking part.

RECOVERY

WITH direction from PJHQ that once the apron extension task was finished the Squadron was to immediately return to Hameln, the recovery began on 5 Aug 03. Planned by Lt Alex Harris, my Liaison Offr, the recovery mirrored the deploy-

ment in reverse and staged through the FMB at Entebbe where materiel and equipment was cleaned and reconfigured. Using empty strategic aircraft returning from Exercise *Grand Prix*, the Squadron flew out of Uganda on three flights and was complete in Hameln on 11 Aug 03.

LESSONS LEARNT

AT THE time of writing this article (Mar 04), I have had seven months to reflect upon my experiences in the DRC. However, having handed over command of the Squadron the day after I arrived back in Hameln, I have not been party to all the discussion, correspondence and post deployment reviews that traditionally occur after such an operation. As such, I stress that the thoughts that follow are from a personal perspective and are based on the lessons I learnt whilst in theatre. I offer them to others who may in future find themselves in similar circumstances:

- **Trust (Mission Command).** Having spent 22 months commanding the Squadron before it deployed to the DRC, I was fortunate in that I knew the vast majority of my soldiers and all of my officers and SNCOs very well and was able to capitalize on their strengths. Once tasked, allow subordinates the freedom of manoeuvre.
- **Risks.** Be prepared to take qualified risks. Mitigate them as much as possible but accept that circumstances and situations may occasionally require you to make an uncertain decision.
- **Protection.** I was informed upon arrival in theatre that our protection would be provided by other elements of the IEMF. My SSM and I were not happy with this arrangement and made provision for our own protection (especially as the Squadron was accommodated immediately next to the Force's ammunition compound which had no overhead cover or blast walls). It was ultimately my responsibility to ensure the security and protection of those under my command.
- **Rehearsals.** At 0030 hrs on 13 Jul 03 the Squadron stood to in response to an engagement on the north side of the Camp. Having rehearsed the procedure for such on several occasions during daylight and darkness, Squadron personnel were quickly and quietly in place to respond to the incident. Immediately after the incident, my Command Team reviewed the procedure and implemented improvements. This happened every time that the Squadron was engaged. Rehearsals were critical but I had to strike the right balance between lack of preparedness and over-rehearsal.

- **ITD(A).** This operation highlighted that the annual completion of ITD(A) provides sub-units with an adequate template on which to base individual and low level infantry training. It was by chance that the Squadron had completed its ITD(A) training camp two weeks before deployment but it allayed the concern that I had regarding the paucity of pre-deployment training. I shall not regard ITD(A) training as such a necessary evil in future.
- **Operational Record.** My Ops Offr was very diligent in completing the Operational Record – Chronological Overview (Army Form C2118) and entered every occurrence. After the Squadron left theatre, the extended apron's capping surface failed. It would appear that the concerns regarding the ratio of cement to soil by weight was well founded. Fortunately, the Ops Offr had kept a record of all the Squadron's correspondence on this matter and I was able to confirm, when questioned by PJHQ and DMO, that we had foreseen this problem and advised the UN accordingly. Additionally, I was able to confirm that I had attempted to pre-empt the problem by suggesting to the UN that it procure AM2 matting to cap the surface.
- **First principles.** When a critical asset failed, the spares required to repair the equipment could not be obtained locally or quickly received in theatre due to the Squadron's remote location and extended lines of supply. The Squadron's Fitters, Vehicle Mechanics and Electricians displayed significant ingenuity and resourcefulness in overcoming mechanical failure by employing first principles and making good the fault using field repairs. Whilst Health and Safety legislation may normally preclude this option, it is imperative that tradesmen are encouraged to maintain these skills and practice first principles during collective and pre-deployment training.
- **Multi-Skilling.** A Sapper is a Soldier, Combat Engineer and Tradesman. This tenet provides the bedrock of the Royal Engineers and is perhaps its key strength. On at least three occasions during the deployment, the Squadron simultaneously defended itself, whilst undertaking combat engineer and construction tasks. A force of just 65 personnel could not have done such if it were not multi-skilled, thereby proving that three into one does go. It is vital that the Corps protects this unique attribute.

CONCLUSION

OPERATION *Coral* was a once in a lifetime opportunity. An RLC Maj, who deployed with me on the OLRT, stated that I was the luckiest officer anywhere in the Army; I did not fully appreciate the significance of what he meant at the time – I do now. To command a sub-unit on an expeditionary operation and be independent in its purest sense provided rewards and experiences that far outweighed my disappointment of not deploying on warfighting operations in Iraq. Having had the privilege of commanding and working alongside some of France's most professional soldiers whilst contributing to the efforts of the UN in restoring peace to one of the World's most devastated regions was a wholly worthwhile and memorable experience. The operation confirmed that a Royal Engineer Squadron (or any sized RE grouping for that matter) with minimal levels of equipment is capable of providing tangible, effective support to any force. Its strength, of course, lies with its Sappers who are all Soldiers, Combat Engineers and Tradesmen; three attributes that were needed and tested in the Democratic Republic of Congo.

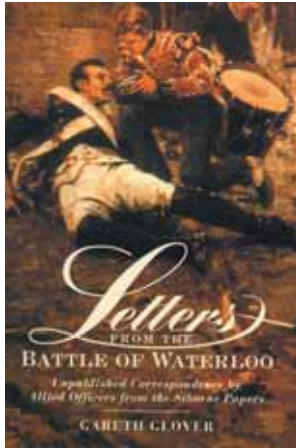


Handover Ceremony.

Review

LETTERS FROM THE BATTLE OF WATERLOO “Unpublished Correspondence by Allied Officers from the Siborne Papers”

BY GARETH GLOVER



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ALTHOUGH “The Waterloo Map” and its tale of carrying some of Sir William de Lancey’s blood is a significant part of the collection of our Museum, the Corps only played a very minor part in the battle. The compiler of this book notes that “*the staff of the engineers was completely new to Wellington, not one of those that had served with him in the Peninsula served at Waterloo*”, so why a review in the *Corps Journal*?

For those interested in the military history of the time, and students of the Battle of Waterloo in particular, the book is almost compulsory reading in that it offers 345 pages of new material about the battle which, the publishers claim, “will mean that every historian’s view of the battle will need correcting”. Any wargamers amongst our readership may also find it helpful. It is difficult to comment on the content of the book because it just consists of over 200 letters containing eyewitness accounts of the battle and the battlefield itself both during and after it. Mr Glover however has provided the reader with a great deal of help. Those letters in French and German have been translated by professional translators to get as near their writers’ meanings as possible, and all the letters carry footnotes in explanation of just about everything that requires an explanation; indeed many of the footnotes are longer than the letters themselves. Where the letters contain the authors’ original sketches (maps and landscapes) these have been reproduced, although in some cases, computer enhancement such as Jacqui Thorndick carries out on some of the material for this *Journal* would aid understanding. What then was the *raison d’être* for producing the book? Mr Glover explains this in a very long foreword and an historical background note, but so you can decide if the book will be useful to you, I have summarized them.

William Siborne, a lieutenant in the 47th Foot, eventually became Assistant Military Secretary to a succession of senior officers including Sir George Murray and Sir John Byng. In this capacity he came to the notice of General Lord Hill, the General Officer Commanding-in-Chief. In 1830, General

Hill offered him financial support from the government to complete a topographical model of the field of Waterloo. Siborne took a long leave and moved to Waterloo. There he accurately surveyed the site, and even interviewed farmers so that crop information for the time of year was correct. They also provided him with their memories of the layout of the ground, because between 1824 and 1826, a lot of what had been the Allied ridge had been removed to construct the huge mound with the lion sculpture that dominates the scene to this day. General Hill then decided that the model should also include a representation of the troops in their positions at a given time, namely 7.15 pm at the height of the final attack by the French Imperial Guard. Over 70,000 individual tin-lead alloy figures would be required!

To ensure accuracy, a circular letter was sent to all surviving British and King’s German Legion officers requesting information on their part in the battle, their troop formations, their position at the given time and the crops over which they fought. A large number of officers did reply and eventually the model, in 39 sections totalling 420 square feet and costing £3000, was displayed from 4 Oct 1838 at the Egyptian Hall, Piccadilly. A second model 18 feet 7 inches by 7 feet 9 inches was also made. This contained 7000 one-inch high figures and depicted the armies in their positions at the time of Uxbridge’s charge at about 2.00 pm. It was wondered at the time if Siborne was selective with the information at the time to fit with his idea of the models, and this charge arose again later when the letters were published. The large model is now in the National Army Museum, London and the smaller one in The Royal Armouries Museum, Leeds. What though of the letters?

They were edited by Siborne’s son, Herbert and a selection of them were published by Cassell in 1891 under the name *Waterloo Letters*. This volume, together with the models and *The History of the War in France and Belgium* then seemed to become the definitive authority on the battle. However, when Gareth Glover looked into the story, he discovered from The British Library that apart from those published by Herbert Siborne, a further 230 correspondents had contributed a total of 310 letters, containing information that in some cases was at variance with the models and the other letters so he decided to publish them. Some of them bear famous names from the battle; Major Baring who defended La Haye Sainte and Lord Saltoun and George Bowles, the defenders of Hougomont to name but three. The book is laid out in the same way as Siborne’s book in order that those who wish to cross-reference detail may do so easily.

This then is a volume packed with information for the military historian and students of Waterloo. At £25 it is a bit expensive for a casual read, but even if Waterloo is not your thing, if you do get hold of a copy, have a look – you will find some of the vibrant descriptions of military life and military thinking at the time fascinating and you will get a real insight into what it would have been like to be present at Waterloo on that day.

JEB

A Bridge-Pin Two Few!

MAJOR (RETD) JEFFERY LEWINS



Jeffery Lewins was described recently in the Journal by his then CO in 25 Corps Engr Regt, Eddie Thursden, as a nuclear engineer. But despite the missing pins, he achieved Staff College and promotion to temporary Major in 52 Lowland Div, Glasgow. Then followed a year of “gardening leave” spent at the University of Washington, Seattle to follow his professional development. Then there was three years as 2IC and OC of 2 Armd Engr Sqn, his sixth foreign posting if you count Scotland.

Lewins retired in 1968 to be first Warden of Hughes Parry Hall for the University of London and to lecture in nuclear engineering at Queen Mary College before taking charge of nuclear engineering for the University of Cambridge in 1980 and serving as President of his Professional Institution. Cambridge allowed a satisfying three-year TA stint with his final command, the Engineer Wing of the CUOTC. Membership of the Military Education Committee and a Fellowship (Director of Studies in Engineering) in Magdalene College has proved a pleasant end to his career where as Praelector he leads the graduands’ march to Senate house on days of General Admission. No pins missing he hopes as they cross Magdalene Bridge!

THIS is a recollection from a distant personal past, now too far away for me to remain embarrassed. It has some lessons in man-management and might also amuse the reader.

When I returned to uniformed service after six years in academia, I could call on only the final year of the Korean War as any evidence of junior officer’s regimental experience or “being good with men”. So it was as a somewhat long in the tooth captain that in 1959 joined 50 Sqn in 25 Corps Engr Regt stationed in BAOR, as a troop commander. Peter Leslie and Bob Lister – both amiable men, were my squadron commanders. My previous posting in the States had me over 1000 miles from my immediate military superior, a satisfactory distance for a young officer, but life in Osnabrück was lived at closer quarters.

Our war role was to support the QDG, lightly armoured troops who would be first to oppose the flow of Russian tanks across Germany. Our task was to deny crossing points on the River *Leine* and provide any other engineer support required. This meant travelling as far to the scene of operations as the Russians would have travelled crossing the Inner-German Border (IGB). I spent a more agreeable time annually with a month at Bridging Camp in Hameln on the River *Weser*. Heavy Ferry was the troop commander’s preferred occupation since early morning mists could fool the OC’s map reading and we were not visited too often. Happy memories of taking the troop 3-tonner back on the Heavy Ferry to Hameln after a night-build, resting on the canopy as the Tp Sgt steered us through the misted bridges, (were there three spans with a gap in the middle or two with a pier?) and the sappers producing toast for breakfast on the engine exhausts. But a major squadron task was the building of the Class 30 Light Assault Floating Bridge (LAFB).

LIGHT ASSAULT FLOATING BRIDGE

My troop was generally chosen to supply the head of bridge force, admirably directed by my troop sergeant, Tommy Thomson. This left me, the only officer in the troop, spare to worry about other things and to keep out of the way at the critical time when the pontoons having been launched and their side

panels extended, were floated into position by our motor tug and pins inserted to “make bridge”.

One useful occupation for the troop commander was to see that the men got some rest and a meal before bridging, generally at night. Another was to ensure that the LAFB pontoons had their full complement of accessories such as mooring ropes before we started, and then, to follow quietly up behind the head of bridge party to check that pins were in, both top and bottom of each panel. Yes, this is a disaster tale of two pins too few.

Nemesis came on a full-scale two-sided BAOR exercise in the post-harvest season of September when we were to demonstrate the skills honed at Bridging Camp. The crossing was to be a major tactical feature of the exercise. All went well to start with. We used a recced bridging site (well, we had practiced on all the crossing sites that were available on the *Weser*) and the build seemed to be going well.

It did occur to me that being an important exercise we should be prepared to defend ourselves in case the local infantry were overrun. Perhaps it was for this reason that for the first time that season I omitted my self-imposed role of pin-checker. Instead, I delegated to a lance corporal the task of checking the pins before any traffic crossed the bridge. I went off the immediate site. Delegation in itself was not necessarily a bad decision, but disaster followed.

BROKEN BRIDGE

ON completion of the bridge, we followed the routine of sending our own heavy recovery vehicle, a Scammel, to test the bridge, before declaring it open. When this class 16 vehicle reached the centre of the LAFB, it stopped, its engine stalled and it was fairly soon evident that both the lower pins on either side of the junction had been omitted. The consequence was that under the weight of the rear four wheels (the leading two wheels had crossed successfully if not safely), the panels had opened, the upper pins acting as hinges. The gap between the pontoons had widened, and the rear assembly had dropped neatly into the gap, which then closed on it to stall the engine.

THE WEIGHT OF VISITING BRASS

I HAD met this aspect of the problem once before in Korea. Due to a small navigational error, a flight of three US fighter-bombers had turned right instead of left from their aircraft carrier. They found a substantial river at the planned 300 mile target distance and bombed the high level bridge crossing it. It was unfortunate this was Teal Bridge on the Commonwealth supply route across the Imjin River rather than the Chinese border, but no direct hit was scored – perhaps due to the rifle fire of the solitary Korean guard. However, the blast as the bombs detonated beneath the bridge blew off the wooden decking. My troop hide was the nearest sapper resource and all sixty of us turned out to see what we could do about it.

This incident happened not long after a friendly napalming incident so the US forces were feeling rather sensitive. I remember that hordes of helicopters flew in, each with their one or two star general to say “gee fellah, how did you get into this mess”. I played Solomon and divided the troop into two. One half was to do something useful under the troop staff-sergeant, ie hammering decking back into place. The other half linked arms with me to keep the brass off the work site. This was effective and led later in life to me planning accident drills in nuclear power stations with the same pressure in mind.

My advice to Bob at that point was to get the brass off the bridge site by asking them to review the situation in the nearby barn with hot soup and Glenfiddich. This gave us the necessary respite while we, that is, I and my brother troop commander Duncan McKay, rejected the various proposals put to us by our seniors. Duncan had men from his troop working on the far bank and was as curious as I about the delay in opening bridge. The helpful suggestions we considered were, for example: Get a spare pontoon, flood it, get it under the gap and pump it out. Quite apart from the time involved, we could see that this would simply close the jaws on the four-wheel more tightly.

I had made an instinctive crisis-saving preliminary move when I first reported the problem to Tac HQ in the Wesergerberge hills behind us. The squadron was equipped with two 30 ton Coles bridging cranes, held at B echelon since they were not needed for the LAFB build. Although exercise rules had closed the civilian bridge at Hameln, I summoned enough gravitas to get both cranes moved forward out of exercise restrictions, one on each bank. I



A Coles Bridging Crane lifting a LAFB Pontoon.

An initial polite request by Sgt Thomson for the driver to restart his blankety-blank vehicle disclosed that the driver had omitted to bring a battery with him. The return volley was less polite.

It seemed a useful idea to get the engine restarted in what would have been a vain hope to drive the vehicle out of the bunker and to this end the SWR recovery rope was pulled a short way out to the rear of the recovery vehicle and the troop Size 4 ‘dozer driven onto the bridge with a view to pulling on the rope in gear to turn the main engine over. The ‘dozer then stalled and it seemed time to take stock

We had a class 16 recovery vehicle and a Size 4 dozer on the middle of a bridge that would certainly not be classified 30 by MEXE. Our exercise enemy would no doubt be amused; our exercise friends would be not at all amused. But the real danger was the realization of the limited time we had to get out of this problem. It was now perhaps 0100 hrs and river closure was available only to 0700hrs. At that time, we should expect the (unpowered) timber rafts to come sweeping down on their way to Bremen at the river speed of about 5 knots. I did not have to consult the handbook to expect a substantial loss of material and possibly men also.

By this time, Bob Lister was on the scene kicking himself (where he should have kicked me), for not personally checking the pins. He was followed by an uncomfortable number of senior officers, some involved in the exercise and some observers, all offering advice on what to do. There was enough brass to sink the bridge immediately without waiting for the timber rafts.



A Scammel Heavy Recovery Vehicle launching the next bay.

did not at that point know what we might do with them but it meant we had a major resource available. The 2IC trusted my judgement, for which I am still grateful but alas, not long after, he committed suicide under (other) pressures of army life.

BRIDGE OPENING

THERE was not much time for action and Duncan and I shook hands on the only solution we could see. This, was, I am glad to say, successful - otherwise I would still be in a military prison. The idea was to drive a crane either side of the trapped Scammel. My rough analysis was that with their jibs horizontal the combined load would be spread over sufficient pontoons for flotation and the symmetry would prevent too great a vertical shearing load on the two pins. Fortunately, the dozer had been removed after starting both the stalled engines. The jibs were horizontal, the hooks engaged and a coordinated lift raised the recovery vehicle clear. The redistribution of weight indeed allowed a nonchalant head of bridge sergeant, showing more sangfroid than I felt, to insert the missing bottom pins. The cranes were disengaged and after the bridge was reported clear (it had certainly been proved), Bob was able to lead the visitors out to what seemed like a calm exercise scene. Sgt Thomson had directly supervised the operation with great success and not a little courage. The delay, however, meant that we failed in our task of supporting the assault troops.

CONSEQUENCES

LATER I thought about the loading of two Coles cranes and a class 16 recovery vehicle on a broken-backed class 30 LAFB, but decided not to write about it to MEXE to enquire of the classification- or indeed whether any other course of action was available. I did wonder at the time how many of the troop would go with us into the *Weser* if my judgement had been faulty.

There were no recriminations, at least at my level and below. I am grateful to Bob who took responsibility for the event and promised that it would be he who would be court-martialed not his juniors. Sgt Thomson soon became Staff Sergeant Thomson to my great pleasure and relief. As Bob went on to become a Brigadier and Deputy Engineer-in-Chief, I suppose that he did not suffer opprobrium either. I was later moved to the vacancy of squadron 2IC in what I hoped was not demotion.

THE LESSONS

To learn a lesson from this event that seems rather more hilarious now than it did at the time; what did I do wrong? I cannot say that delegating the pin checking to a junior was wrong. In a sense, Bob had non-specifically delegated to me. My own two mistakes I think were in man-management:

I delegated to a lance corporal who was therefore junior to the head of bridge sergeant. I should have told Sgt Thomson what I was doing. As it happened, he told the lance corporal to bugger-off and the pins were not checked.

Then in addition, I should have told the lance corporal to report back with me to confirm he had carried out the instruction. I would then have prevented the whole incident.

I noted that all my SSMs were better at this aspect of man-management than I was but I hope I learned something from this experience that I can pass on.

Of course this was not the only thing that was wrong. Clearly we

had the wrong drill for checking and opening bridge. We all knew how important it was to have all pins in but we had not discussed specifically how to ensure this. Bob Lister has recently told me that the matter was considered at BAOR level as a result of the incident. Drills were laid down: check all pins before proving bridge. I have to say this took some time to promulgate; I was a further year in the squadron and had heard nothing about better drills.

My own assessment weighs up two factors. Yes, the pins are vital and checking is vital. Standard practice to raise reliability is to provide redundancy, at least two independent checks so that a one in a hundred error becomes one in ten thousand.

But the arrangement of the second check needs care if it is indeed to be independent and not of itself to undermine the first check. If the head of bridge thinks it does not matter whether a couple of pins have been left out because someone else is going to check, little has been gained from a second level of checking. Put another way, how do you arrange for the head of bridge to take responsibility for his own standards while still providing an independent check? Is this second check to be done surreptitiously? One extreme would have been for both Sgt Thomson and I to be court-martialled pour encourager les autres. Naturally I would favour a less Draconian method in which (say) the bridge officer was court-martialled and the bridge sergeant had to buy the beer in the Sgts Mess for ever after. We recognized of course that we should have had this check – independent or otherwise – before putting forward the first vehicle to test the bridge. We had not laid down who should do it. I did not write to MEXE and I received no reprimand, but there was a further occasion when I had to suffer for my sins. At Staff College, a delightful infantryman who had been exercising on the other side, recounted his ‘hilarious’ story of the sappers building a bridge without anyone removing the enemy OP who waited on tenterhooks to bring down an exercise nuclear strike to “destroy” it. “We waited for the first vehicles to cross to catch them and they never came”. For once I kept quiet. I didn’t think the Staff College syndicate needed any further explanation whatever of the mechanics of Class 30 LAFB. I didn’t even say afterwards “Why, for two pins...”.

ACKNOWLEDGEMENT

BRIG Bob Lister has kindly read this draft through and clarified certain points. My former troop commander, Col Edward Sharp spoke severely about the grammar. I am confident that all the mistakes were and are my own.

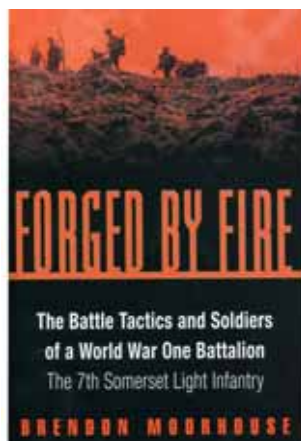


“Weight of Brass?”.

Review

FORGED BY FIRE

BRENDON MOORHOUSE



*Published 2003 by
Spellmount Limited,
The Old Rectory,
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TN12 0AZ.*

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ISBN 1-86227-191-7*

FOLLOWING the declaration of war in August 1914, the regular 1st and 2nd Battalions of the British Infantry marched quickly off to war, many forming the nucleus of the original British Expeditionary Force (BEF), the Old Contemptibles. 3rd (Special Reserve) Battalions were initially based at Regimental Depots, in this case Jellalebad Barracks in Taunton. 4th and 5th Battalions were Territorial, many of whom mobilized from their summer camps and were subsequently split into two battalions. On 21 August 1914, the government issued orders to increase the size of the army. Kitchener's "Your Country Needs You!" quickly raised the First New Army of six divisions. Further expansion, announced on 11 September 1914, raised the Second New Army which included 20th (Light) Division with 7th (Service) Battalion Somerset Light Infantry (7 SLI), the subject of this book, in 61st Infantry Brigade.

Forged by Fire is a chronicle, drawn not from the rather dry and matter of fact war diaries held in the Public Record Office, but from a host of sources connected with personnel who fought with 7 SLI. It deals with every aspect of the battalion's existence from its formation and pre-deployment training, arrival in Boulogne on 24 July 1915 to the armistice, south of Mons, and disbandment in 1919.

At an initial strength of some 1200 men, the majority from Somerset, the early life of the battalion was chaotic, but this was characteristic of the difficulties encountered in the rapid expansion of the army. There was a severe shortage of officers and NCOs and a major in the 2nd Battalion, Troye-Bullock, on home from India on leave, was promoted to command. Training in the Woking area was beset by shortages and, initially, 7 SLI had to concentrate on drill, gymnastics and route marching with those on weapon training and ranges sharing the battalion's allocation 10 obsolete Lee Metford rifles. In March 1915, the battalion moved to Larkhill to complete its training which, strangely, given the trench stalemate, majored on manoeuvre warfare. By the time this training was completed, 7 SLI had suffered the first five deaths of the 663 which the battalion was to incur on operations.

On deployment, the battalion had a strength of 990 all ranks and was organized with a headquarters company and four rifle companies, each with four platoons. After trench training with 27 Division in August 1915, 7 SLI took part in the Battle of

Loos and by the end of 1915 the battalion had lost 40 of its number killed in action (KIA). In January 1916 it moved to Ypres and on 17 July 1916 to the Somme. The battalion took part in the attack on Guillemont in late August / early September and, on 15 September, in operations at Flers, where tanks were used for the first time. At the end of September it was involved in further minor operations after which it received two drafts totalling 540 men. By the end of 1916, 7 SLI had sustained 247 deaths. In March 1917, 7 SLI was in the vanguard of the advance to contact when the Germans withdrew to the Hindenburg Line. In June, after three weeks rest and a draft of 254 it moved again to the Ypres salient where it took part in the battle of Langemarck, suffering 270 casualties. In late September the battalion moved south to Cambrai and was involved in Haig's surprise attack against the Hindenburg Line. Although initially a great success, the inevitable German counter attack prompted flanking units to give way and an uncoordinated British withdrawal started. During the battle of Cambrai 116 men were captured and the battalion's strength at the end of operations was 344. 7 SLI was removed from the battle area to rest and, when again battle worthy, took the line in January 1918 near Mount Sorrel. In March, 20th (Light) Division was part of GHQ's two division reserve, which was to be released in the event of a German attack. The overwhelming German attack went in on 21 March and by the end of March the whole of 61st Brigade was at a strength of nine officers and 440 R&F. On 1 April, what remained of 20th (Light) Division was withdrawn to Amiens. 7 SLI had suffered 61 KIA, 60 wounded and 405 missing, nearly the whole of its fighting strength, in one week of the Kaiserschlacht. Recovering, and having assimilated drafts of 12 officers and 510 R&F, the battalion went into trenches near Vimy in May prior to the commencement of the last phase of the war.

I must admit to having a close personal interest in this very readable book. As a Somerset man, the Somerset Light Infantry is my county battalion and my grandfather fought much of his Great War with 11th Battalion The Rifle Brigade, who were also in 20th (Light) Division. Although it is sub-titled "Battle Tactics and Soldiers of a World War One Battalion", those looking for a treatise on Infantry Tactics 1916 will be disappointed. The book is, however, full of absorbing detail and contains much of interest, often in vignettes and extracts from letters. There were some 1000 battalions such as 7 SLI in the Western Front and it is probably safe to say that the majority had similar experiences. If we assume that a 1000 man battalion had an operational strength of about 800, the battalion's combat deaths of 663 makes an estimated butchers bill of killed and wounded of about 2,800, a low figure compared with some other BEF battalions. For 7 SLI, this meant at least a threefold turnover of manpower during its time on the Western Front. A nightmare for the maintenance of unit morale and operational efficiency but, apart from the panic retreat at Cambrai, the spirit of the dour British infantry never seems to have broken. To have been part of the awfulness of the First World War the soldiers must all have been giants. They deserve their history to be known and you have a debt of honour to read of their achievements.

MDC

Carpe Diem

PART III (FIRST PART PUBLISHED IN AUGUST 2003)

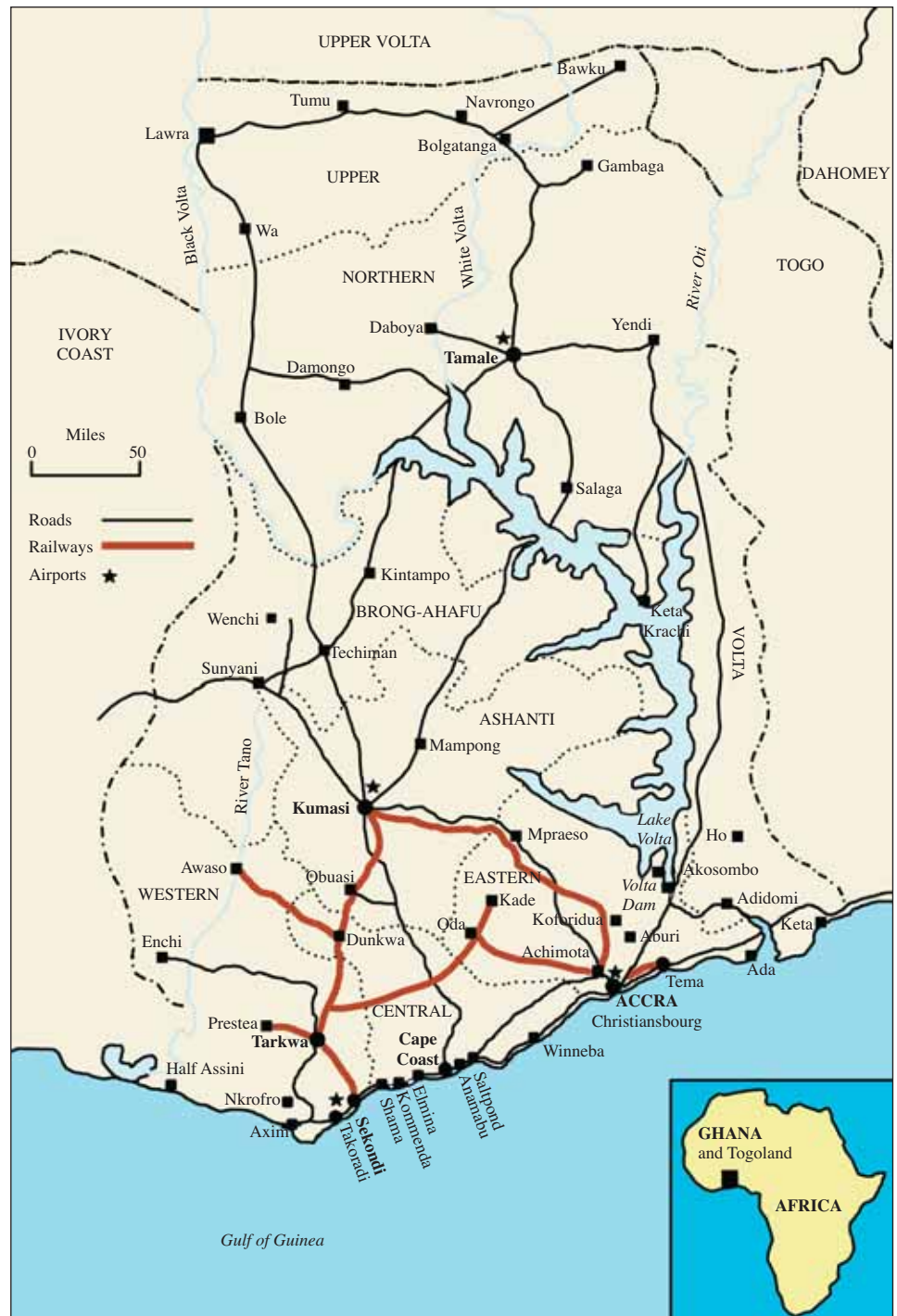
COLONEL W G A LAWRIE MA CENG FICE FIL FRSA

3. GHANA - 1966

AFTER Jordan I was posted as instructor at the French Staff College in Fontainebleau, which would have been fun, but I had to ask to be excused. My wife had just had a serious operation and had been told to do nothing for six months. That was all right. Would I please let them know when I wanted another job. Next day the phone rang again. An officer had dropped dead on the way home. "Please report on Monday as Chairman of the War Office Establishments Committee". This was a strange but powerful body which met every Thursday and I had four majors to do all the paper work.

After three years at the War Office I was ready for anything. My next posting was to command the British Training Team in Libya. I attended the usual courses, let my house and sold my car. At the last minute King Idris said that he liked the present incumbent and didn't want to change. I was quite used to this sort of thing and happy to accept the next offer to come along – Military Adviser at Accra. It was new territory for me, but sounded quiet and peaceful in a pleasant part of the world. Before leaving, the Director of Military Operations sent for me. "Look here, Lawrie, if you get into difficulties in Ghana, its no good sending for the Paras. They won't be available, You'll just have to sort everything out for yourself".

After a comfortable sea voyage to the new port of Tema we were allotted a rather glamorous house with a big garden and had time to look around. Ghana was a prosperous colony, producing gold, diamonds, cocoa, timber and bauxite with a vast new power station on the Volta dam. The servants were terrible but the people were on the whole friendly and cooperative. There were large British Training Teams for the three services. The only fly in the ointment was President Kwame N'Krumah, pleasant enough to meet, but as wicked as any other African leader.



Map of Ghana

He came from a poor Roman Catholic family but did very well at Achimota College whose badge is a piano keyboard symbolising the harmony between white and black people. From there he went to America, working his way through Lincoln College, Pennsylvania, where he took degrees in Economics and Theology with a Ph D in Philosophy. He became a popular preacher in New York and Washington before joining the



N'Krumah's country house, Peduase Lodge

London School of Economics. Here he met left wing Marxists who gave him ideas about Freedom for Africa. In 1947 he was invited to return to the Gold Coast to join a new political party which was campaigning for Independence. He had two spells in prison for stirring up riots but was released in 1957 to become the first President of Ghana.

In 50 years under British administration the Gold Coast had become a happy and prosperous colony with abundant natural resources, but in seven years N'Krumah had brought Ghana to the verge of bankruptcy through reckless spending on unnecessary projects.

He had ruthlessly crushed all opposition by incarcerating all his political rivals, and pushed ahead with his plan to become President of Africa. He had come to power relying on the support of men of the Gold Coast Regiment, who had served abroad during WW 2, but were very dissatisfied when they could find no work at home. He made frequent visits to Communist countries who wanted to increase their influence in Africa and had huge training camps hidden deep in the jungle where his operators learnt the latest techniques from Chinese instructors.

He was determined to throw his weight about and arranged for a meeting of the Organisation of African Unity (OAU), to be held in Accra at very short notice. Huge buildings went up at breakneck speed and vast expense.

Safety precautions were ignored, which led to the collapse of a reinforced concrete floor before it had set, smothering gangs of coolies. Delegates arrived from all over Africa, which provided endless opportunities for chicanery. I recognised Nasser, Haile Selassie and for some reason Makarios. Of course nothing was achieved.

Matters came to a head in 1965 when Harold Wilson called at Accra unexpectedly on his return from a meeting with Ian Smith in Rhodesia. Early one Sunday morning the High Commissioner rang to ask me to meet Harold Wilson at the airport in twenty minutes. This was because my house was the nearest. There were a lot of people on the plane and it turned into quite a party in the VIP lounge with lots of champagne.

N'Krumah was invited to join us and went into private discussions with the Prime Minister. These must have gone

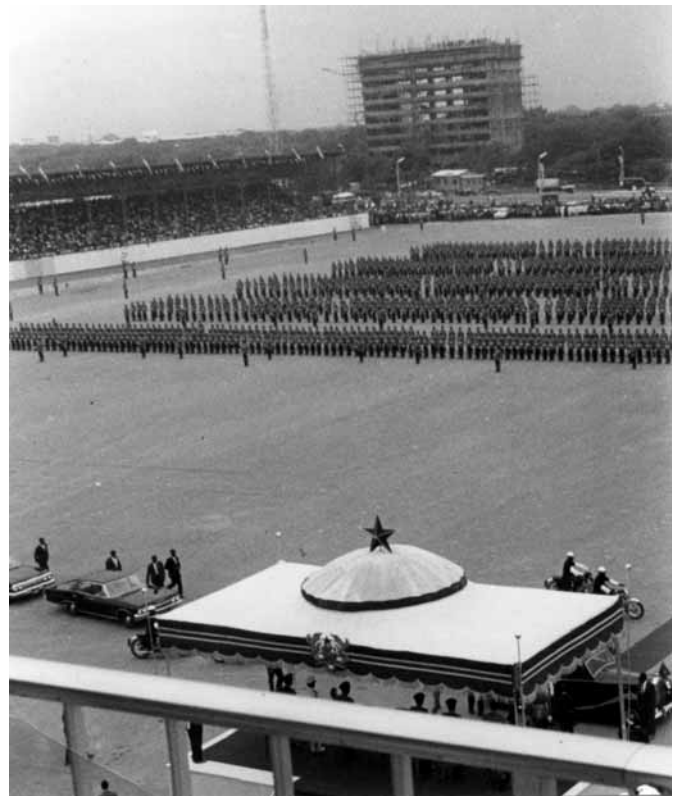
badly, because when they emerged it was to announce that Ghana had broken off diplomatic relations with Britain. A hostile crowd had collected at the airport, shouting anti-British slogans. On the way back to the plane I was asked to walk beside Wilson to protect him from any possible missiles.

All our diplomatic staff had to leave, but the Ghanaians asked me to remain under the wing of the Australian High Commissioner in order to look after the British Training teams. I went to see the diplomats off from Takoradi and asked for instructions. "Get rid of N'Krumah" was the whispered message.

I began my campaign by calling on several senior officers that I knew were loyal to Britain, but they were all too frightened to take any action. Then I heard that Mountbatten was about

to visit Nigeria in his capacity as Chief of Defence Staff. I had had many dealings with him in India and we always got on well, so I suggested that he called in at Ghana en route. This suited him very well. His daughter, Pamela, had married an interior designer called David Hicks, who had been responsible for decorating Christiansborg Castle, the old Governor's House, in pale blue. This was close to the sea and the paint had peeled off and needed repair. So the Hicks came out with him.

N'Krumah was flattered that Mountbatten was coming to Ghana and offered him the use of his new and unused country house at Aburi. This was a vast place about 30 miles from Accra with its own helipad, swimming pool, billiards table and



Independence Day Parade on Black Star Square in 1965.

all mod cons but completely unequipped. I was given carte blanche to buy anything I wanted in Accra and a helicopter to transport it. This was good fun and I collected masses of cutlery, crockery, table lamps, bedding and anything I could find in the shops. In the end it looked pretty good.

My wife and I met the party on arrival and were invited to dinner the first night. I found myself alone with Mountbatten for an hour before dinner and took the opportunity to ask him about India. He was quite certain that he had done the right thing in bringing forward the date of Independence by a year. He was convinced that to delay it would have led to even worse confrontations and bloodshed. In fact Jinnah would have been dead and without him Pakistan would never have come into being. But of course no one was aware of the seriousness of his illness.

I then asked him when he met N'Krumah to tell him how his appointment as Chief of Defence Staff had greatly improved the efficiency of the British armed forces and to suggest that this arrangement would be of benefit in Ghana. He agreed to do this, and we had an enjoyable dinner.

As usual every minute of his day was planned in detail. So when all the lights failed next evening when he was due at a grand dinner, he was pretty livid. All the illuminations round the house had shorted everything. Even the electrically operated gates wouldn't open and men had to be sent for to force them with crow bars.

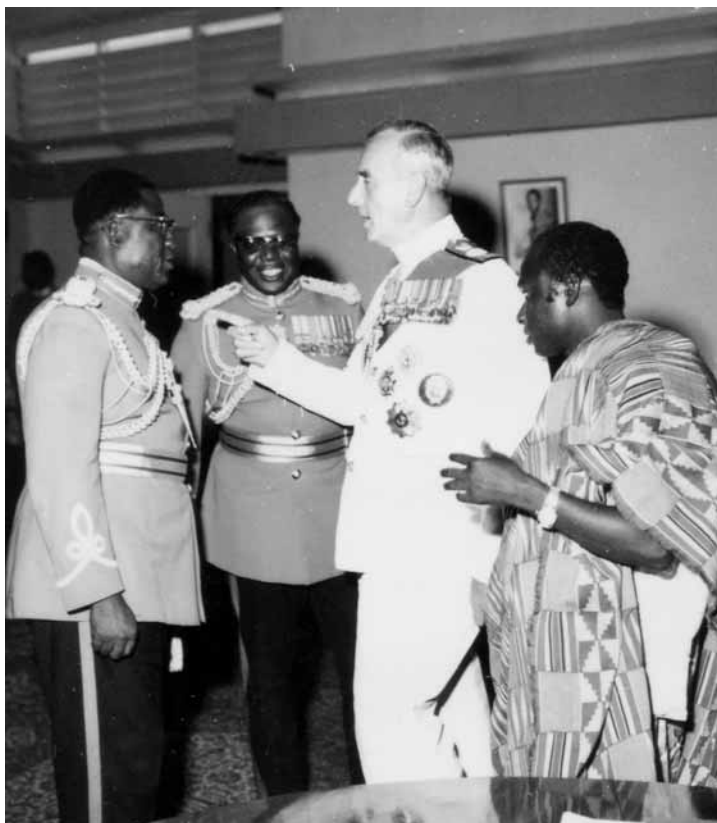
He arrived about an hour late and was not too happy to see the proposed programme for the next day. He was scheduled to fly to Kumasi to have lunch with the local Trades Union leader. When I suggested that it would be more appropriate to meet the Asantehene, the traditional tribal head, he agreed at once and demanded that the programme be changed.

The Asantehene was delighted to meet him and reminded him that in WW2 *HMS Ashanti* was the only destroyer of its class to come through unscathed.

He attributed this to the magic monkey's paw which he had presented to the ship. This was right up Mountbatten's street. He sent off an immediate signal to *HMS Ashanti* in Hong Kong to proceed to Takoradi to receive another monkey's paw from the Asantehene. In due course I went over to Takoradi with the old man in his ceremonial robes, and the presentation took place on the bridge.

Mountbatten was due to meet Kofi Baako, the Ghanaian Minister of Defence. We turned up at a one-room shack in full dress with swords and medals. A black woman was sitting on the steps feeding a baby. She motioned us inside. The room was in total blackness. The Minister sat at a desk naked to the waist, with only the whites of his eyes and his teeth visible in the gloom. He clearly had no idea what Mountbatten was talking about. However Mountbatten later explained his proposal to N'Krumah and the penny dropped. My plot was thickening.

The two senior generals in the Ghana Army, Otu and Ankarah who had been sergeants in the days of the Gold Coast stood in the way of reform, because N'Krumah's communist-inclined protégé, Brig Barwah was junior to them. So they were retired



Lord Mountbatten in Ghana in 1966 talking to Generals Ankarah and Otu with Kofi Baako, the Minister of Defence.

on pension with the Order of the Purple Heart. N'Krumah was now able to carry out his promise to Mountbatten, and appointed Barwah Chief of Defence Staff, putting him above the British trained heads of the three services.

I liked Barwah and was actually planning to make an expedition with him through the jungle following the route of the Second Ashanti War, but as he was one of the few muslims in Ghana, I knew that his appointment would be very unpopular. N'Krumah went off on a long trip to China, and I judged it was time for my next move.

I went to call on General Ankarah, who was quite a character. Although he was a Methodist and read the lessons in church, he had three wives and liked to keep in with his tribal gods by carrying out ritual libation ceremonies. He turned up the radio to stop anyone listening to our treasonable conversation, but did not feel like taking any radical action.

I still felt the time was ripe for toppling N'Krumah, and the chance came when I was asked to meet the graduates from the Ghanaian Staff College, which was run by Canadians. They had kept out of politics and had acquired a global outlook. I talked to two very bright officers, who were to be the Brigade Majors of the brigades stationed at Tamale and Kumasi, far to the north of Accra. They jointly made out a plan for what was described as an exercise in which the two brigades were to march on Accra, and gave it to the DS at the Staff College for comments. It was handed back with many amendments, and the officers felt so confident of its success that they adopted the Canadian plan in toto and set off on the long march to Accra.

Their troops had never been to Accra, so they had arranged

for guides to meet them on arrival. Of course they never turned up, so they launched an attack on a large block of flats, which they believed held N'Krumah's Russian-trained Guards. In fact it was occupied by the personnel of the British High Commission. My PA later told me that she was wakened by a stream of bullets through her window. She got the Australian High Commissioner to take her back to rescue her cat.

The troops were pulled back and pointed in the right direction. I was woken up by the noise of shooting and my telephone began to ring. I believed this was just an exercise and told people so, but when it got louder I drove down the main road into town and soon ran into a battle with units loyal to N'Krumah. They recognized my car and both sides politely ceased fire and waved me through. I passed the still smouldering remains of a KLM bus which had not been so lucky and all the passengers had been killed.

As I got into town crowds of people were milling about, shouting "We want the British" and "Gold Coast come back". Statues of N'Krumah were being torn down and N'Krumah Highway had already been renamed N'Krumah Downway. If I had been allowed to send for the Parachute Regiment they

could have conquered the country in three days. But as it was all I could do was send a telegram to London, reporting that I had done what I had been asked to do.

It took the rest of the day for the two Ghanaian Brigades to storm N'Krumah's residence and kill the 12 Russians who were guarding it. N'Krumah never came back and Arthur Ankarah took over as President and immediately ordered all Russians and Chinese to leave the country.

When I went to call on him I found him wearing a neat blue suit with a handkerchief in the breast pocket folded with four equal points showing. I asked him how he managed this, but he would only say it was a State secret.

Next morning a large black Rolls Royce drew up outside my house with two motor cycle escorts. An ADC got out, handed me a large box wrapped in brown paper and drove away. After tearing away wrapping after wrapping I came to an envelope containing four of these handkerchiefs mounted on cards saying that they had been manufactured by Baffour Brothers of Namprobi, and I have them still.

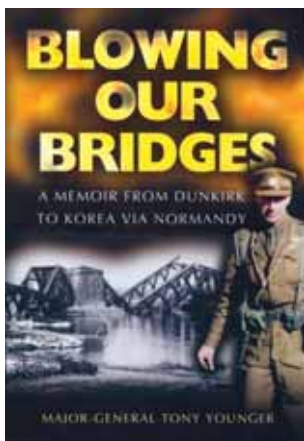
I hope that my success in changing history in the right direction in Jordan and Ghana made up for my failure in India.

Review

BLOWING OUR BRIDGES

A MEMOIR FROM DUNKIRK TO KOREA VIA NORMANDY

BY MAJOR-GENERAL TONY YOUNGER



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THE two words "stress" and "overstretch" are popular today and perhaps rightly so. They would have been even more appropriate fifty or sixty years ago when the events described in Tony Younger's book occurred. They are not, however once mentioned in this modest and thoughtful account of eleven years of soldiering and, if anything, the absence of hype and a dramatic text strengthens the narrative.

The account covers much ground that is now history and encompasses the Army's evacuation from Dunkirk a few months after the author's commissioning, to his command

when barely twenty five, of an assault squadron landing on the beaches of Normandy, and up to his time in Korea when as OC of a large independent field squadron he was also at the tender age of thirty five the senior RE Officer in that theatre of war.

These three landmarks were interspersed with a degree course at Cambridge, Staff College, raising the the Engineer Training Centre for the newly formed Malaysian Army Engineers and various staff and training appointments,

The author enjoyed and writes well of a truly comprehensive package of experience which must have included its share of worries, dangers and crises.

This inevitable aspect of soldiering is not highlighted but the author's calm and straightforward description of events leaves the reader in no doubt that he was master of the varied and demanding situations with which he was often faced.

The book may be titled "Blowing Our Bridges" but there is certainly no suggestion of "Blowing our own Trumpet".

These impressionable years in the author's life not only gave him a wide experience of military matters but equally an opportunity to develop a deep understanding of people and human nature. He writes of others, be they his contemporaries, seniors or subordinates in an honest and generous tone without rancour or cynicism.

This remarkably short book is strongly recommended not only as a vignette of military events during eleven hectic and crucial years of our Army's history, but equally as an account of the observations and achievements of a young Sapper officer who certainly contributed his full share to the making of that history.

JHP

Post Conflict Reconstruction – Why is Transition to Civilian Management so Disjointed?

Report on the Joint Professional Meeting with the Institution of Civil Engineers

LIEUTENANT COLONEL J D KEDAR BSc(Eng) FRGS



Lieutenant Colonel John Kedar is currently SO1 Engineer 1 in HQ EinC(A), having moved on from commanding 42 Engineer Regiment (Geographic) in October 2003. He deployed as a member of the Joint Force Engineer Staff on Op Telic and previously has held posts in the Defence Geographic and Imagery Intelligence Agency, Defence Intelligence Staff, as OC 14 Independent Topographic Squadron and SO2 J3 Land in Cyprus as his “black bag” appointment. Tours as a troop commander in Punta Gorda and as a loan service officer in Muscat remain his most memorable posts.

INTRODUCTION

THE conflict in Iraq has been discussed on the pages of this *Journal* in great detail in recent *RE Journals*, particularly in the December 2004 edition. However, the conflict in Iraq is far from over and only at the end of June 2004 did Iraqis regain control of their destiny and the reconstruction of the nation. Politically in UK we may not have “invaded” Iraq, nor were we a force of “occupation”, although many in this country and Iraq do not agree that line. Indeed it could be argued that this political attitude directly led to the lack of planning for a post war Iraq that most commentators seem agreed upon.

The reconstruction of a state following war is a massive undertaking for which the World’s powers have little current experience. It is not a Royal Engineer task, although the Corps has a major part to play, but requires the coordinated efforts of coalition partners, non-government organizations, industry and many UK government departments.

To examine some of the lessons identified, this year’s Joint Professional Meeting with the Institution of Civil Engineers addressed the question “Post Conflict Reconstruction – why is transition to civilian management so disjointed?” This article reports on the meeting, summarising the presentations and discussion, and draws some key conclusions.

Held at One Great George Street the meeting was jointly led by Douglas Oakervee OBE, President of the Institution of Civil Engineers, and Major General Christopher Elliot CB MBE, President of the Institution of Royal Engineers. Four speakers had been invited to present on a range of topics, all based on experience gained in Iraq.

The programme commenced with an overview of the role of the Corps during the conflict and the range of infrastructure engineering required in the immediate aftermath. It was followed by a presentation on the reconstruction of essential

services infrastructure in Southern Iraq and the Emergency Infrastructure Plan, again from a military perspective. A civilian contractor’s view on delivering projects in Southern Iraq gave an alternative dimension to the debate, leading neatly into the last presentation on the differing military, civilian and government agendas in post conflict reconstruction.

CONFLICT AND THE IMMEDIATE AFTERMATH.

LT COL Guy Wilmschurst-Smith led 64 Works Group RE during the war and was intimately involved in a wide range of tasks, from making safe the Southern Iraq Oilfields in the hours and days immediately after D Day through to camp construction. He arrived in Theatre in January 2003 and was immediately involved in supporting the arrival of the UK Force. His presentation set the scene, describing the wide range of work undertaken by sappers across the Theatre, from geographic to armoured, EOD to amphibious, air support to diving.

The reception, staging and onward integration (RSOI) process saw 29,000 soldiers and associated equipment arriving in theatre, being married with equipment and conducting training in a about half the time available for the Gulf War. The final formation, 7 Armoured Brigade, was ready only 48 hours before the attack. Deployment was a race against time under inhospitable conditions and with predictions of chemical weapons being used against the Force. It naturally required significant engineer effort.

Much of the RSOI engineer effort was contractual in nature, especially in establishing tented camps throughout North Kuwait. Often, this involved using US contracts; it must be remembered that US forces had been preparing for some time and had “brought out” most available contractors. Ports, hospitals and airfields also required significant effort at this stage, with time also having to be found by RE Works Groups to prepare for conflict and post conflict infrastructure requirements.



Kuwait Docks did not enable Ro-Ro unloading at a full tidal range and so, with Engineer and Logistic Staff Corps advice, a contract was let for a Ro-Ro platform.

Three immediate post-conflict priorities were determined; make safe the oil export facilities, secure Umm Qasr port and ensure a water supply system. All are major tasks in an area of Iraq with 4 million population and two-thirds of the oil. With about 1000 oil wells, it was decided to secure key processing and pumping nodes as a key part of the overall Coalition operation. EOD teams, Military Works Force personnel and US marines worked together to achieve this, some 12 hours in advance of other Army units, and secured 10 key installations. These were later handed over to civilian contractors.

The supply of potable water, especially in summer, was fundamental if consent was to be achieved and a refugee crisis averted. This therefore ensured civilians remained in place whilst operations were continuing; in other words water supply helped to meet a military objective. Network analysis determined that two plants and the main sewage treatment plant were vital and consequently were designated military objectives, with 50 tonnes of water treatment chemicals pre-positioned in Kuwait.

As fighting moved north out of the British sector, emphasis changed and the infrastructure aim became *“to work with the Iraqi people, and any other available agency, to establish a stable*

utilities system, run by the Iraqis, sufficient to meet the humanitarian requirement”. This had to be achieved at local level as the main coalition headquarters were still prosecuting warfighting operations elsewhere in Iraq. However, it was intended that the Coalition Provisional Authority (CPA) take responsibility once established.

Royal Engineer engineering work was very much an enabling activity, with emphasis on coordination between all agencies and utilities and the provision of quick fixes and minor spares. The wide range of expertise brought in by TA soldiers in the STREs greatly assisted this, whether oil facilities or reopening the Basra Baghdad rail-line in only six weeks.

The CPA began to take control during the summer at a time when civilian expectations were increasing. It was at this stage, in September, that work on the Emergency Infrastructure Plan (EIP) commenced and Lt Col Wilmhurst-Smith finally left Theatre.

RECONSTRUCTION OF ESSENTIAL SERVICES INFRASTRUCTURE IN SOUTHERN IRAQ.

LT COL Richard Brown deployed in September 2003 as SO1 Essential Services in HQ Multi-National Division South East. His talk centred on the reconstruction of essential services infrastructure in Southern Iraq and the EIP, but opened with a salutary historical note that nation-building attempts by outside powers are notable mainly for their bitter disappointments.

The essential services infrastructure in Southern Iraq was mostly constructed in the 1960s and 1970s with little renewal or investment in the last 20 years. Reconstruction is therefore not solely related to the effect of the war but to the rehabilitation of extremely fragile fuels, power, water and sewerage networks.

There are four pillars of reconstruction: justice, security, governance and infrastructure. The Essential Services Infrastructure Reconstruction Strategy laid out the framework for the latter of these and breaks into short, medium and long-term timelines. The short term was mainly military led and provided relief and repair, under the EIP. Medium term reconstruction and renewal is led through CPA and long-term development relies upon international private investment under Iraqi government initiatives. It is worth noting that Lt Col S Boyd RE also argued a 3-stage approach for restoring utilities (Urgent Action, Achieve



Standby power was provided to key facilities.



Restoring the Umm Qasr to Basrah rail-line



The Iraqi infrastructure was extremely fragile after 20 years of neglect.

Reliability, and Facilitate Improvement) in the May 04 Special Edition of the ICE Civil Engineering Journal. The two are inextricably linked.

The number of stakeholders is considerable, especially in the short-term, with many and varied agendas. The military must enable co-ordination, if for no other reason than to deconflict projects. This was achieved through a weekly Infrastructure Review Board chaired by the Regional Coordinator.

The EIP aimed to stabilise the essential services in S Iraq and thereby maintain consent of the population. Maintaining consent was regarded as a different problem set to that in central Iraq where consent had to be gained, although no less difficult. The plan aimed to deliver quick win projects, to present evidence of progress and thence gain confidence of the Iraqi utilities companies, and to manage population perceptions. The outcome is short-term stability not long-term development.

Central to achieving the EIP was the need to give Iraqi utility companies belief in, and ownership of, the work. This sometimes resulted in solutions that might differ from UK



Helping restore the power infrastructure, in this case repairs to a 400KV Power Line.

experience but the benefits outweighed the risks. This drive for participation rather than intervention must exist throughout post-conflict reconstruction, with Iraqis carrying out the work wherever possible. Involvement of the population brings back peoples livelihoods, which again contributes to stability. Lt Col Brown argued that, in many respects, a fifth pillar of reconstruction, namely Human Security, should be adopted in doctrine.

Perceptions are also important in maintaining consent, especially where requirements outstrip supply. A good example of this need to manage perceptions is in the supply of electricity, for which there is no charging structure, and thus over consumption is a real threat to stability over the hot summer months.

A CIVIL ENGINEER'S VIEW OF DELIVERING PROJECTS IN POST-CONFLICT IRAQ.

TONY Allum is Chairman of Halcrow Group, a major civil engineering company with a successful presence in 27 countries. The Group won a number of post conflict contracts in Iraq and thus Tony Allum was in an excellent position to give his views as a civil(ian) engineer. His experience commenced in May 2003 where, as head of the UK Iraq Industry Working Group he worked with USAID and the US State Department to formulate how to involve UK engineers in the medium term.

UK engineers have been involved in Iraq throughout the country's development, particularly at a time that the original infrastructure was designed and built. As a result UK companies have tremendous knowledge and expertise not always available to coalition partners. This extends to local engineers, many of whom received a UK education and feel comfortable with UK industry.

There was significant optimism as industry saw opportunities in Iraq without understanding the security situation and logistic difficulties in Iraq. Experience has shown much of that optimism to be misplaced as initial estimates for reopening of airports slipped and the security situation worsened. Geography played a part too, with British companies in Baghdad finding the situation very different to those in Basrah.

Halcrow became involved in a number of projects, from



Lt Col Brown's diagram showing the role of the Emergency Infrastructure Plan.



The Prime Minister thanking Halcrow employees for their work in Iraq.

supporting the early Bechtel work dredging Umm Qasr Port to designing bridges and refurbishing public buildings. Refurbishing administration, food distribution, hospitals and college buildings to a satisfactory standard to enable use is an important part of reconstruction, contributing in part to reinvigorating Iraqi institutions. DfID sponsored the refurbishment of 50 such buildings in Basrah, with 100 more in need of the same work. In the case of governorate offices outside Basrah, force protection engineering techniques have also had to be incorporated. Medium term contracts have been based on the dual levels of program management and project management (design and build). UK industry proved well placed as sub-contractors or in joint ventures with US companies and has also won several sector programme management office contracts. Mr Allum believed that the key is to show that UK companies can deliver and noted that “British engineers are the best in the world”.

POST CONFLICT RECONSTRUCTION –

MILITARY/CIVILIAN/GOVERNMENT AGENDAS.

COLONEL Keith White is Chief Operating Officer of Crown Estates and Chairman of the Logistic Liaison Group within the Engineer and Logistic Staff Corps. He provided an excellent view on why post conflict reconstruction is so disjointed.

Post conflict resolution is not just confined to the aftermath of invasion, as in Iraq, but applies equally to intra-national conflicts. Common features to both include insecurity, damage to infrastructure and disruption to social services and supplies, complicated by local populations having high expectations of improvement. Gaps in law and order, administration and social services lead to the need to establish a “steady state” and stability, for which reconstruction is only a part of an overall rehabilitation.

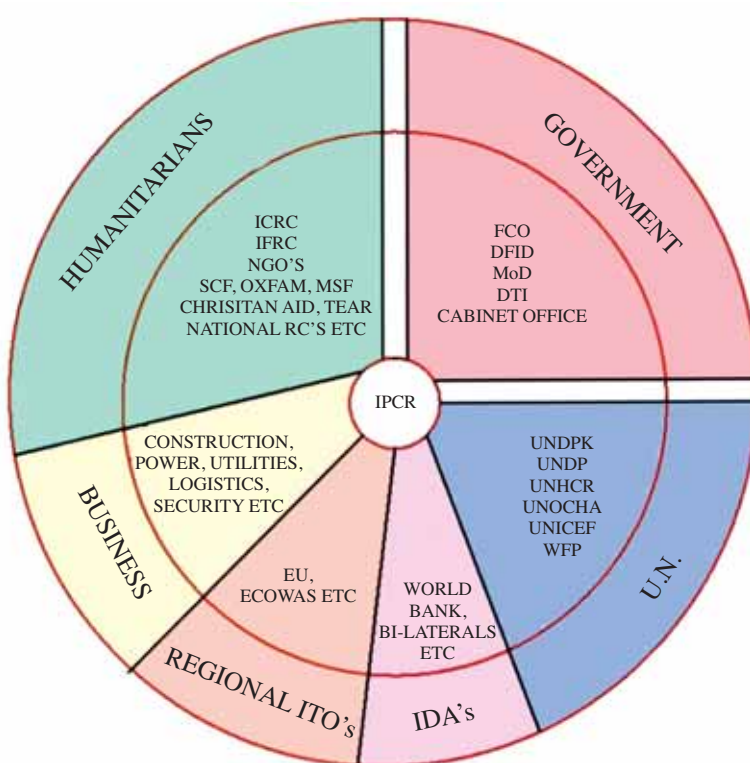
The military agenda in post-conflict recovery is shaped by three factors: government agenda, mili-

tary doctrine and the situation on the ground. The military agenda is therefore fluid, with soldiers having to take on services such as medical care, provision and distribution of water, waste disposal, electrical power and so forth in the vacuum that exists immediately post conflict.

Brahimi noted that force alone cannot create peace; it can only create space in which peace may be built. Peace support operations are consensual but so is reconstruction, and quick win projects by the military to restore some level of essential services brings confidence and consent to both. However, it must be recognized that the military is plugging gaps.

The civilian category includes international, aid, and voluntary organizations on the one hand and business on the other. International companies working in a post-conflict state take risks, but the rewards can be great. The rewards are far greater, however, if these companies sub-contract to local business and employ local labour. Indeed, it is from these beginnings that the economic drivers of the state can be developed both internally and internationally.

The United Nations agenda depends on the mandate given, although will often have common themes from alleviating suffering to UNDP programmes to empower women. Many other organizations, such as the World Bank look to developing the governmental and economic stability to provide long-term reconstruction. NGOs, however, are fiercely independent and generally look to alleviate suffering. Each has particular expertise in this field, for example CARE is a leader in food distribution and Oxfam in water. Often they have enormous local knowledge from work in country prior to the conflict.



Col White's pie-chart showing the diversity of Agencies involved in reconstruction.

Government agendas are pivotal and complex. The requirements of diplomacy, development, trade and defence all have to be balanced within a single government before inter-governmental positions can be negotiated.

The differing agendas of these organizations will have a clear impact on reconstruction. Firstly the civilian humanitarian and development community and the military may, at times, carry out the same activities but the underlying rationale, and approach, can differ significantly. The military look to reconstruction to aid security and consequently react quickly to fill gaps, whereas the development community looks to the long term and will still be there once the military has departed. Secondly the national pressures that dictate the time frames to which military forces operate can conflict with longer-term stability and development objectives. Thirdly, theatre security realities and reconstruction requirements at the tactical level can conflict with international opinion and home country politics.

DISCUSSION.

DISCUSSION was wide-ranging but much focussed on the planning for Phase 4. The Chief Royal Engineer led questioning in this respect by asking the presenters whether the Coalition had underestimated the reconstruction challenge? The panel confirmed this widely held view, but noted that the focus for reconstruction planning was a Coalition Provisional Authority responsibility. The Military's role was seen as meeting immediate requirements "to keep the population alive" and to help achieve the military mission. Not only had planners underestimated the requirement, though, but industry did not appreciate the conditions and logistical challenges in Iraq. It was also agreed that security and reconstruction take time, particularly if to be effective. A question on Sierra Leone led panellists to reflect that occupying forces must not do too much but should enable the State to lead reconstruction. NGOs likewise support and facilitate. Iraq is not a developing country and should be able to take the lead itself reasonably quickly, provided security is in place.

Panellists were asked how transition could be improved in future? Without reservation, improved communication between all parties was seen as essential, with a need for Government to continue to take more interest in coordinating efforts. A civil-military planning team was seen as essential – the author would suggest it must include representatives from all key government departments. This "talk" extends into theatre at formal and informal levels, with companies needing to understand the difficulties to be faced. Tony Allum stressed the need for partnership at three levels: globally, nationally and with local companies.

The President of the Institution of Royal Engineers summed up the meeting by thanking the speakers. He highlighted the complicated tapestry of problems in Iraq, particularly follow-

ing the collapse of the regime. He stressed the importance of involving the local population and argued that provision of adequate security is a catalyst to progress. He was pleased that British companies could compete and win reconstruction contracts in amongst the myriad of organizations trying to bring stability to Iraq. Lastly he added that he too thought that the Coalition was so distracted by the warfighting that it was surprised by the challenge of winning the peace that followed, especially as the war had started to the Coalition's agenda.

CONCLUSIONS.

THE author is not a chartered engineer and thus listened to all presentations with an open mind, looking for trends and lessons. The following four concluding thoughts are drawn from the evening and are the author's views on the main messages from the meeting.

Reconstruction is not just about infrastructure, governance, justice and security. It is about the people and their involvement in and ownership of the process. The 4 pillars of reconstruction ignore the vital element of providing livelihood. Unemployment leads to dissent (even in western cultures) whereas employment and involvement in reconstruction leads to consent and ownership. Employment should not therefore be a desired end state but a pillar in its own right.

The three-step approach to reconstruction should be enshrined in UK, UN and NATO doctrine. Phase 1 is a military lead with the objective of ensuring stability largely through repair. Phase 2, under the leadership of the interim governing authority, is to improve the situation through contracts, preferably with maximum use of local companies. Phase 3, under the lead of the reinstated State Government, is about redevelopment but with assistance from international private investment. These are not neat divisions, but the lead in responsibility and coordination is clear.

The Coalition was not prepared for *Op Iraqi Freedom* reconstruction of Iraq. Lack of engagement and planning, both within the coalition and across UK Departments of State, led to a delay in reconstruction and may have contributed to some of the unrest. Within the bounds of security, Phase 1 and 2 planning for post conflict reconstruction must develop alongside the planning for operations, and cannot be undertaken in military isolation. Phase 3 planning cannot properly start until Phase 2 is underway, as it must involve the State's institutions and government.

Co-ordination amongst all engaged agencies is essential, with the facilitator being from the "three step approach" lead. This may be difficult to achieve but is in the interests of all agencies and more importantly, of the population. Therefore, in addition to being chartered engineers, our MWF officers must also have a wide understanding of the full range of agencies likely to be engaged in post conflict reconstruction, their aims and their capabilities.

Crossing the River Senio, Italy, 1945. The Vital Role of Armoured Obstacle Crossing Equipment in the Final Battles of the Italian Campaign

LIEUTENANT COLONEL R ADDYMAN TD BSc MA



The author was an officer in the Leeds Rifles, Territorial Army. This unit, like many similar units, traces its origin to a rifle volunteer corps raised as a home defence precaution in 1859. During the Second World War the Leeds Rifles provided one armoured regiment, the 45th Royal Tank Regiment, which fought at El Alamein, and one anti-aircraft regiment, the 66th Heavy Anti-Aircraft Regiment RA, which defended centres of population and military installations in the UK and subsequently in north-east India as the 14th Army advanced into Burma. Additionally the Leeds Rifles provided one tank squadron and several anti-aircraft batteries which expanded to become units in their own right. The squadron was "A" Squadron, 45th Royal Tank Regiment (Leeds Rifles) (TA), based in Morley, near Leeds, which expanded to become the 51st Royal Tank Regiment. The Regiment fought with determination and spirit in important actions in Tunisia and Italy. In Italy in December 1944 the 51st became part of the 25th Armoured Engineer Brigade RE, whose vital role in the crossing of the River Senio is described below. The Leeds Rifles presently are part of Imphal (PWO) Company, East and West Riding Regiment, Territorial Army. Ronald Addyman was born in Leeds in 1929. He was called up for national service in December 1947. After training in England he was sent to Libya to join the 4th/7th Royal Dragoon Guards as a tank driver/electrical fitter. He returned home in December 1949. He worked for many years in Leeds hospitals first as an electrician and then as a medical physics technician becoming a chief technician in 1964. He was an undergraduate at Leeds University from 1968 to 1971 afterwards returning to hospital work. He left the NHS in 1973 for posts in education and training. He was Captain and Adjutant of the Leeds Rifles in 1967. He subsequently had a senior appointment in the Yorkshire Army Cadet Force. He is a Leeds Rifles trustee and keeper of the Leeds Rifles Collection. He lives with his wife in North Yorkshire.

His article "The Boer War 1899-1902: Colonel Gascoigne and the Leeds Volunteers" was published in "Soldiers of the Queen" the Journal of the Victorian Military Society in December 2001. He is among the contributors to articles at: www.aboutburtonsalmon.freeserve.co.uk.

ALONG with other British formations that fought in the Italian Campaign during the Second World War the 25th Armoured Engineer Brigade, Royal Engineers, had a distinguished record of service albeit, in the brigade's case, a brief one. The brigade was especially formed for the spring offensive in northern Italy in 1945. In the offensive the brigade had the vital role of providing crossings over the many obstacles in the path of the Eighth Army as it fought its way forward into enemy held territory. In less than four weeks the offensive brought the Italian Campaign to an end. Subsequently, during the year following the Allies victory in Italy, a Narrative of Operations of the 25th Armoured Engineer Brigade, RE was compiled. It was, apparently, one of a number of records of service put together. The narrative was produced by the British Historical Section, Central Mediterranean, in March 1946. It contains an authoritative record of the formation, training and operations of the brigade during the period December 1944 to May 1945. The narrative, or one copy of it, which itself is one of a pair (the other being concerned with the brigade's predecessor) was donated to the Leeds Rifles Collection by Brigadier J N Tetley, DSO TD in 1960 or thereabouts. This article derives

from my recent study of the 90 page narrative and study of the maps and photographs contained in the wallet of the narrative's end covers.

The narrative begins with the information that by December 1944 the Anglo- American high command in Italy had reached the conclusion that any further advance on the Eighth Army front could only be made with the use of more armoured obstacle crossing equipment than already existed in Italy. At about the same time the success of the few flame-throwing tanks in the theatre proved that a substantial number of these would be required for the forthcoming spring offensive. It was also apparent to the Allied high command in Italy that due to requirements in other theatres of operation, particularly in north-west Europe after the Normandy landings, there was no possibility of either suitably trained personnel or the required equipment being sent to Italy. These, it was realized, would have to be provided locally and through the conversion of and where necessary retraining of, existing units.

As a result of the above appreciations the 25th Tank Brigade (Brigadier J N Tetley, DSO TD) was disbanded and the 25th Armoured Engineer Brigade, Royal Engineers, (Brigadier E W H Clarke, DSO) was formed.

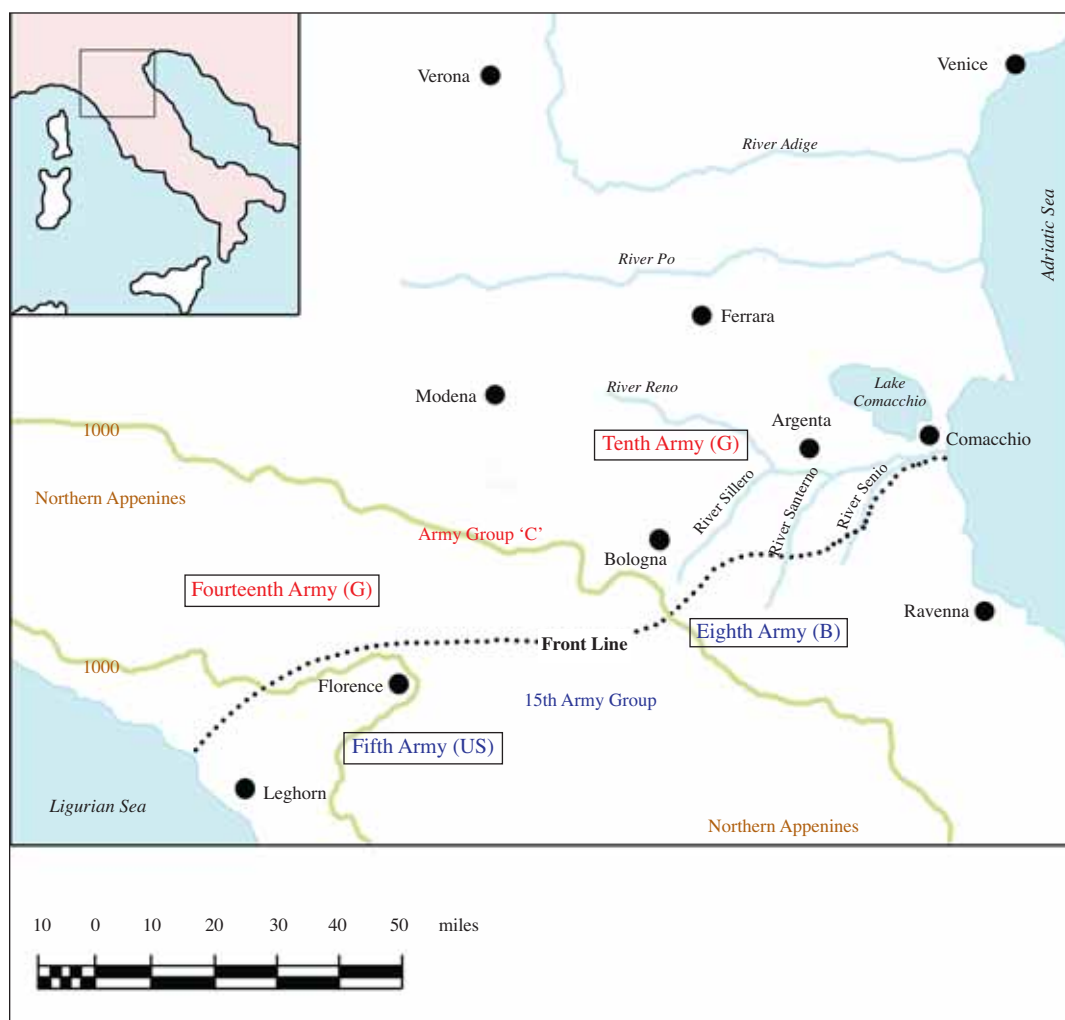


Figure 1 – Northern Italy. The map shows the position of the Front Line in Italy in April 1945 prior to the spring offensive. The general deployment of the two opposing army groups is indicated on the map. Some of the rivers and some of the towns in the region are shown. Major and minor roads are not shown. The high ground of the Northern Apennines is indicated on the map. One contour line is shown at approximately 1,000 feet above sea level. Within this contour the ground rises to 4,000 feet in places. The north Italian plain occupies the upper portion of the map.

Source: After Brian Harpur, 1980. Hodder and Stoughton. See further details this article under "Operations".

Prior to their disbandment as a brigade the three regiments of the 25th Tank Brigade: the North Irish Horse; the 51st Royal Tank Regiment and the 142nd Regiment Royal Armoured Corps, all of which were equipped with Churchill tanks, fought in important battles in Tunisia and Italy. Among the battles were those at Steamroller Farm, El Aroussa, and Tunis in Tunisia and the Hitler and Gothic lines in Italy. Brigadier J Noel Tetley was awarded the DSO after the battle at the Hitler Line. He returned to duties in the UK when the brigade converted to an armoured engineer brigade, RE. He was a Leeds Rifles honorary colonel in the post-war period. Brigadier Tetley was chairman of Tetley's Brewery, Leeds, from 1966 to 1970.

In early December 1944 the North Irish Horse passed to the command of the 21st Tank Brigade which was also equipped with Churchill tanks; the 51st Royal Tank Regiment remained as part of the new formation to provide the flame-throwing and mine clearing element whilst the 142nd Regiment Royal Armoured Corps was disbanded to provide trained and proven personnel for the new brigade.

To complete the formation of the brigade there was available the Divisional Engineers from the 1st British Armoured

Division made ready by the break up of that division and the 1st Assault Regiment Royal Armoured Corps/Royal Engineers which was already providing such armoured engineers as existed in Italy.

The new brigade formed in late December 1944/early January 1945 and concentrated at Viterbo, a small town fifty miles north of Rome. At Viterbo equipment was received as it became available and personnel were grouped together to train in their new role as an armoured assault engineer brigade.

GENERAL SITUATION

THE winter of 1944-45 saw the Anglo-American 15th Army Group (Mark Clark) facing the German Army Group 'C' (von Vietinghoff) across a front line which extended from Comacchio on the east coast of northern Italy, threaded its way across the Apennines and finally reached the west coast of northern Italy twenty or so miles north of Leghorn (see Figure 1). The comparatively static warfare which existed throughout the winter months provided the enemy with an opportunity to build up his defences. These he based on the numerous river lines which he fortified with strong points,

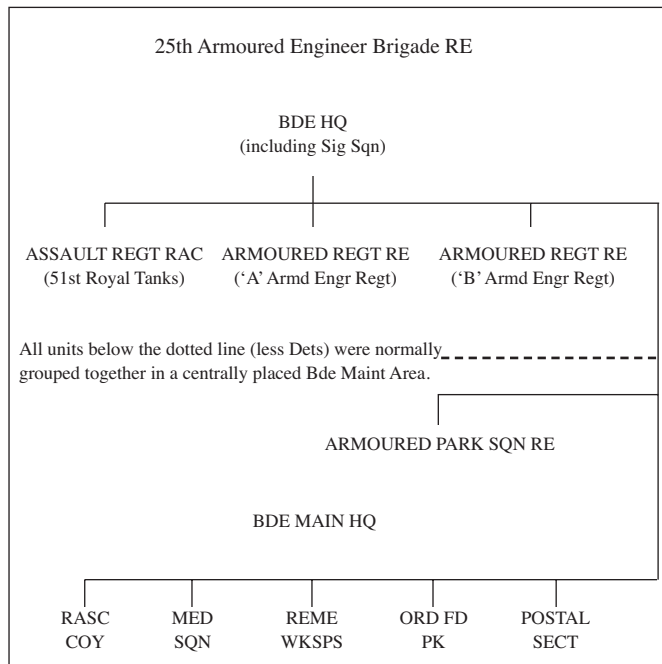


Figure 2 – The basic organization of 25 Armd Engr Bde

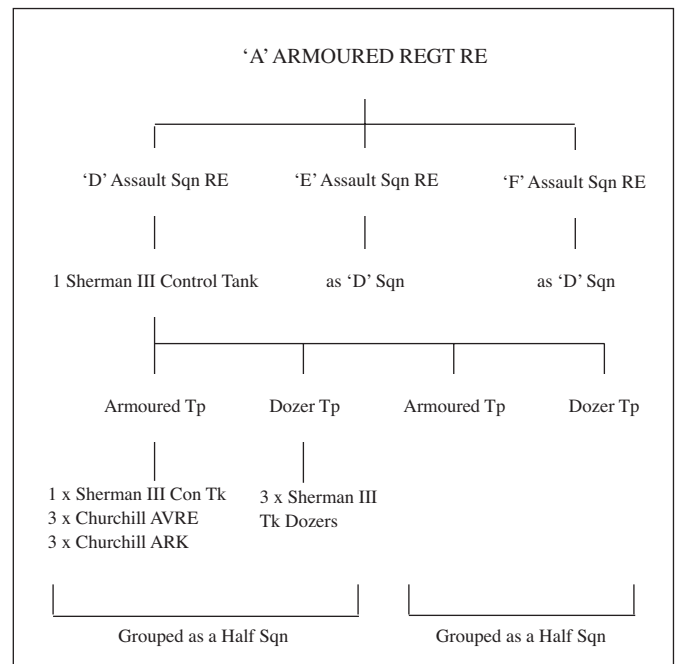


Figure 4 – The organization of ‘A’ Armoured Regiment, Royal Engineers.

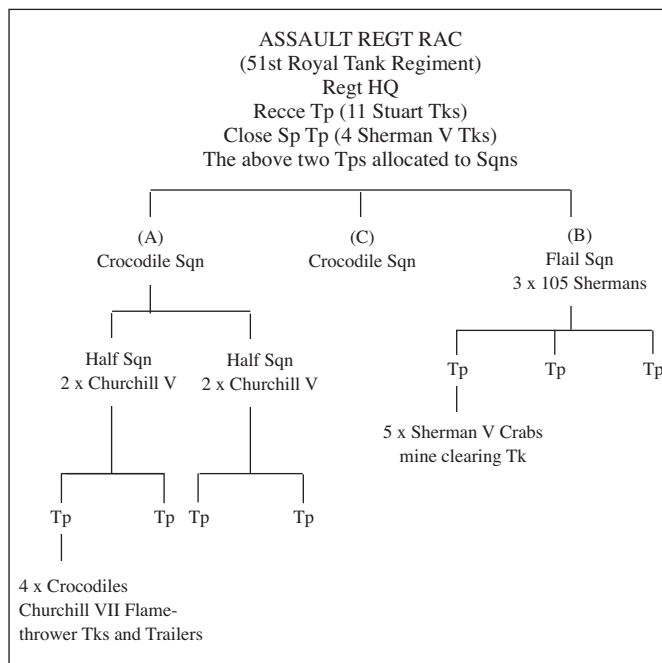


Figure 3 – The basic organization of the RAC Regiment.

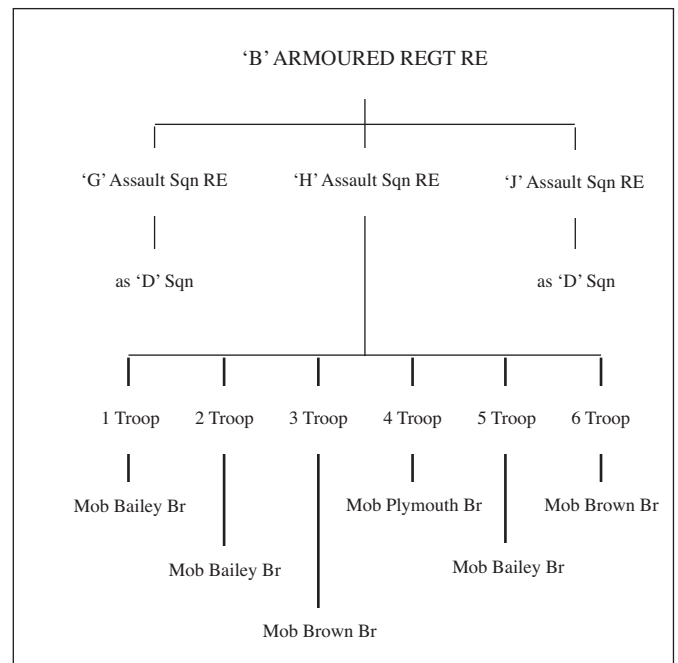


Figure 5 – The organization of ‘B’ Armoured Regiment, Royal Engineers.

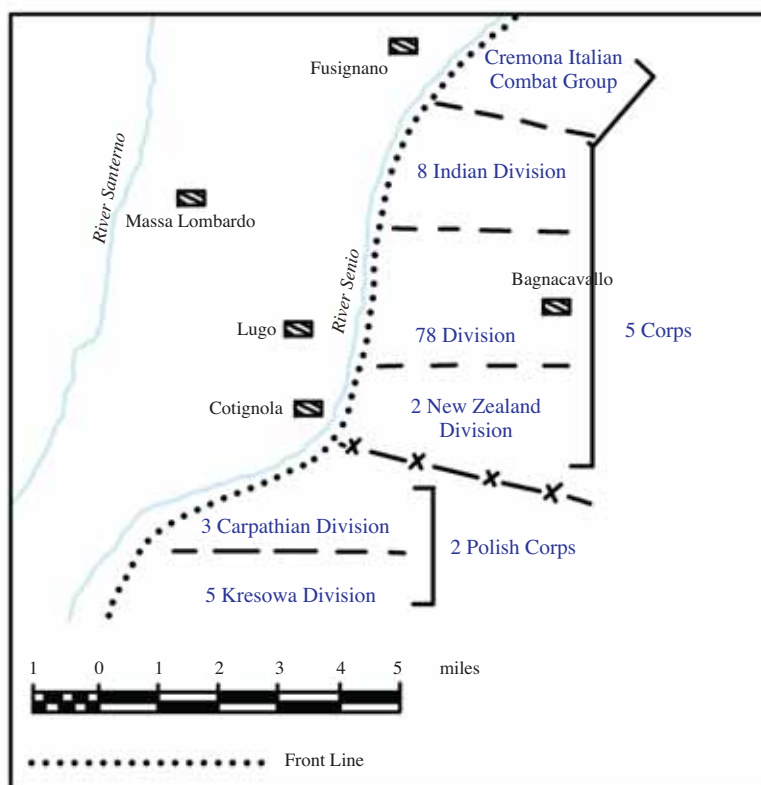


Figure 6 – Map 2 shows the River Senio sector of the Front Line as at 9 April 1945. The dispositions of the Eighth Army's 5 Corps and 2 Polish Corps and their forward divisions immediately prior to the spring offensive are shown on the map. The Eighth Army's two other Corps, 10 Corps and 13 Corps, held other sectors of the front line or were in reserve. The Cremona Italian Combat Group comprised the 21st and 22nd (Italian) Infantry Regiments. (Harpur. p 209)

machine gun and mortar positions, artillery sites and minefields. A river feature most advantageous for the Germans was the rivers' high flood banks rising to thirty feet or more in which the Germans constructed fortified dug-outs. (See Figure 9). Most, or all, of the bridges across the rivers were destroyed by the Germans. Additionally, the Germans supplemented their defences by carrying out extensive flooding especially in the vicinity of Lake Commachio and to the west of the River Reno opposite Argenta. The town of Argenta itself and the local area around it, however, provided a dry gap later famously known as the Argenta Gap. (see Figure 10)

For the American Fifth Army positioned mainly on the high ground of the Appennines the river lines and flooding were not obstacles likely to impede to any great degree their move forward when the spring offensive began. For the British Eighth Army, on the other hand, the rivers were considerable obstacles.

It was because of these that the 25th Armoured Engineer Brigade was formed and provided with equipment which in the event would effect assault crossings over the rivers and other obstacles at a speed which as the narrative states "...bewildered the enemy"

ARMoured OBSTACLE CROSSING EQUIPMENT

ARKs (armoured ramp carriers)

The ARK was a turret-less but otherwise fully mobile Churchill tank with the interior stripped of all unnecessary fittings although the hull machine gun and wireless set were retained. The turret-less Churchill could be driven into a gap

where it could be used as a bridge for other vehicles both tracked and wheeled. At each end of the ARK were two hinged ramps which were suspended from their far end via king posts to quick release fittings which were operated from within the tank. The ARK could be used with two pairs of ramps, one pair of ramps or no ramps at all according to the obstacle to be crossed. If the obstacle gap was deep, or contained running water, a fascine (see below) was dropped into the gap before the ARK was driven into position. If the gap was too deep for one ARK it could be gapped by driving one ARK on top of another. (See Figure 7).

FascinEs

FascinEs were made by the Brigade Armoured Park Squadron from wood fence pickets and brushwood which were bound together with steel cables. The fascinEs were incredibly strong. When placed in a gap they could support a heavy tank. Wooden cradles were fitted to the tank to hold the fascinEs until they were released. (see Figure 8). The fascine-carrying tanks, and other types of AVRE (armoured vehicles Royal Engineers) adapted for obstacle crossing purposes, retained their primary armament although these were sometimes modified for special purposes.

Tank Dozer

These were standard Sherman tanks fitted with a bulldozing blade and the necessary hydraulic equipment. The narrative informs us that a Sherman tank could be converted to a tank dozer in 36 hours by experienced fitters.



8th Indian Division's Ark Crossing over River Senio.

Figure 7 – An armoured troop carrier crossing the Senio in April 1945. The river's western flood bank can be seen in the background. At that time of year, before the mountain snows melted, the River Senio at the point shown was little more than a stream. However, the river and its high flood banks still presented a considerable obstacle for the tanks and heavy vehicles of the Eighth Army and with the normal bridges destroyed by the Germans provisional bridges across the river had to be quickly constructed in order to maintain the momentum of the offensive.

Crocodiles (flame throwing tanks)

These were Churchill tanks in which the hull machine gun was replaced with a flame gun. The fuel and pressurizing equipment were carried in an armoured trailer towed by the tank. The Crocodile was a short range weapon with 120 yards as the maximum and 50-80 yards as the lethal range.

Flails (mine sweeping tanks)

A flail was a Churchill tank with a revolving rotor mounted across the front of the tank. The rotor carried a number of heavy chains which as the tank moved forward beat the ground thereby exploding any mines in its path. When the rotor was mounted on a Sherman tank it was known as a Crab. The Flail's or Crab's main role was to clear paths in minefields. The tank retained its primary armament however and could be used as a fighting tank when not flailing.

Standard Box Girder (SBG) Bridges

These were Churchill tanks carrying twin-girder SBG bridges attached to its front end and held at an angle of 45 degrees to the ground by steel slings connected the top of the bridge and to the rear of the tank. The effective span of the bridge was 30 feet.

Brown Bridge, Plymouth Bridge and Bailey Bridges

These were various configurations of bridges carried by Churchill or Sherman tanks.

Brigade Training

The period available for training was divided into two parts:

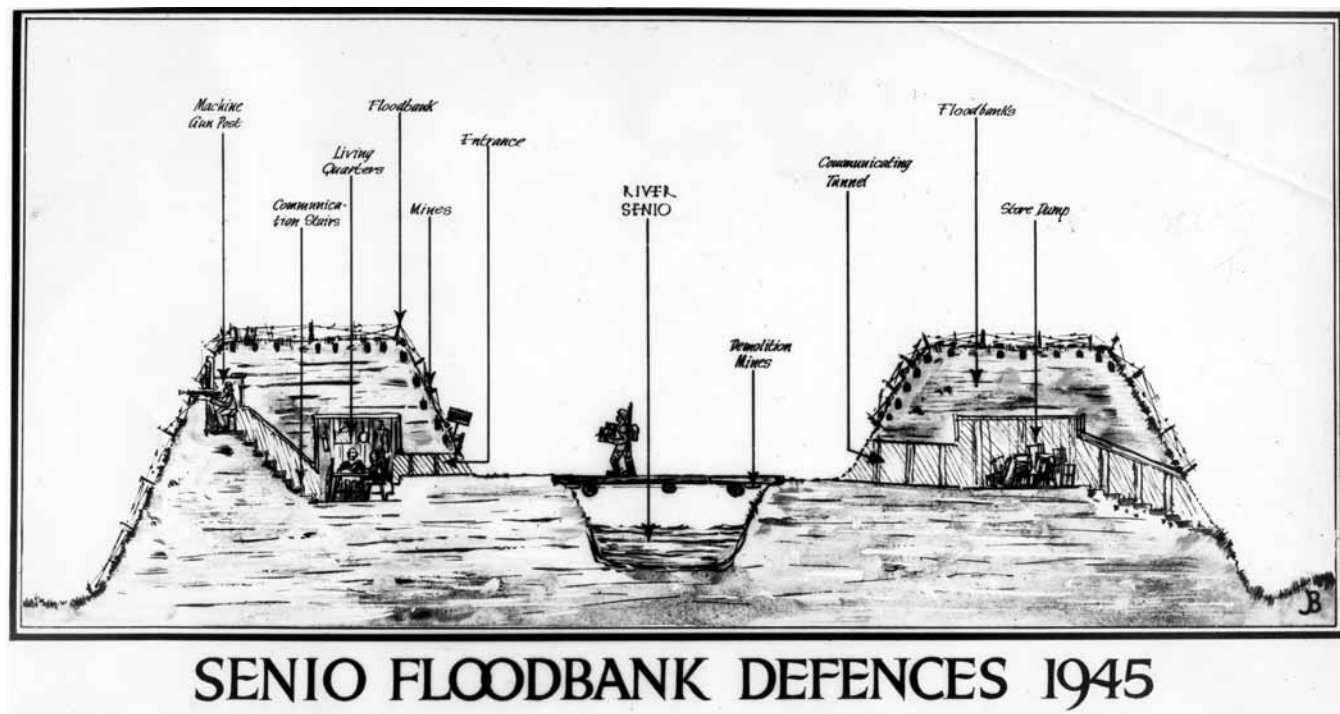
- From early January until 18 February which was devoted to concentration, reorganization and individual training.
- From 18 February to the end of March which was spent in crew and unit training.

Throughout the whole of the training period officers and senior NCOs directed considerable attention to reconnaissance. Subsequent operations showed this to be time well spent as only one of the many attempted crossings was unsuccessful and that was entirely due to there being no reconnaissance. Training included the study of possible tasks by night and day on the ground or as near as possible to the proposed crossing site, the careful study of maps and aerial photographs and finally the observation of possible bridging sites from the air.

During the training period three full scale demonstrations were carried out before high senior officers. The last of the demonstrations was carried out after the brigade had moved to the Army area. Among the senior officers present was General Mark Clark, the commanding general 15th Army Group, and the commanding generals of the Fifth and Eighth Armies, General Truscott and General McCreery. All the equipment to be used in the forthcoming offensive was successfully demonstrated. The brigade commander, Brigadier E W H Clarke, DSO, was congratulated by General Mark Clark on the skill and efficiency shown by the brigade. It might be mentioned here that Field-Marshal Alexander was the Supreme Commander, Italian Theatre, and although the narrative does not mention him attending any of the demonstrations presented by the brigade we might safely assume that he would have been aware of them and would



Figure 8 – Two Churchill AVREs carrying fascines are seen in the above photograph moving up to the front line. The fascines are held in front of the Churchill's turret and are mounted on a wooden cradle fitted to the front of the tank. As the tank driver had no forward view, the tank commander, or other crew member, is guiding the tank along the road. He is, presumably, standing on the tank's turret. The tank's main gun would be pointing to the rear or to the side as if it was a howitzer. Two ARKs can be seen behind the two fascine-carrying AVREs.



SEnio FLOODBANK DEFENCES 1945

Figure 9 – Sketch of a cross section of the Senio flood banks showing the dug-outs constructed by the Germans to defend the river line.

have known of the brigade's vital role in the forthcoming spring offensive.

OPERATIONS

In his book *The Impossible Victory. A Personal Account of the Battle for the River Po*. (Coronet Books, Hodder and Stoughton. 1980. pp 201-206) Brian Harpur relates that in launching the spring offensive in April 1945 General Mark Clark ordered the Eighth Army to breach the Senio and Santerno rivers then turn northerly east of Bologna and force its way through the Argenta Gap as the Fifth Army advanced from positions in the Appennines to positions west of Bologna. Both armies were then to advance northerly across the relatively flat terrain, force a crossing over the River Po and capture Verona. (See Figures 1, 6 and 10)

Prior to the opening of Eighth Army's main offensive, preliminary operations were carried out on the Commacchio Spit by the 56th Division commencing on 2 April. The narrative records that 'F' Assault Squadron, Royal Engineers, in the space of forty minutes, whilst under fire, successfully placed an ARK over a water obstacle in the south of the Spit thus allowing tanks of the North Irish Horse to pass over the obstacle to support the infantry. Other than the actual detail of the work of the Royal Engineers in affecting the crossing the narrative provides little further information regarding the Commacchio Spit operation. However, *The Times* obituary of Brigadier C G Buttenshaw, CBE, DSO, (London April 11, 2003) records that the operation was part of a deception plan. The idea was to convince the German high command that the final attack to end the Italian Campaign would be a landing north of the mouth of the Po accompanied by a coastal thrust along the narrow strip of land separating Lake Commacchio from the sea. The operation was intended to distract von Vietinghoff from the Argenta Gap west of the lake through which the actual attack would come.

For the opening of the offensive the units of the 25th Armoured Engineer Brigade, Royal Engineers, were allocated to formations as follows:

To 8th Indian Division, 5 Corps

Blue Half 'C' Sqn 51st Royal Tanks (flame-throwing tanks)
'F' Assault Sqn 'A' Armoured Regt RE (ARKs, dozers, AVREs)

To 2nd New Zealand Division, 5 Corps

Red Half 'C' Sqn 51st Royal Tanks (flame-throwing tanks)
'E' Assault Sqn 'A' Armoured Regt RE (ARKs, dozers, AVREs)

To 3rd Carpathian Division, 2 Polish Corps

'A' Sqn 51st Royal Tanks (flame-throwing tanks)
'B' Sqn 51st Royal Tanks (mine clearing tanks)
'D' Assault Sqn 'A' Armoured Regt RE (ARKs, dozers, AVREs)
'H' Assault Sqn (part of 'B' Armoured Regt RE),
(Bailey Bridges)

In Reserve

'B' Armoured Regt RE less 1 and 5 Troops 'H' Assault Squadron RE

The splitting of squadrons, both RAC and RE, into half squadrons presented problems. For instance Major E A Simmons, MC, Commanding 'C' Squadron, 51st Royal Tanks, reported as follows:

Some days before the commencement of the Army offensive it was realized that the Squadron would not be fighting as a whole. The plan was that half of the Squadron would be under command of 8th Indian Division and the other half would be under command of 2nd New Zealand Division.

As these two divisions were not neighbours, (the 78th Division was in between), it was appreciated that due to difficulties of

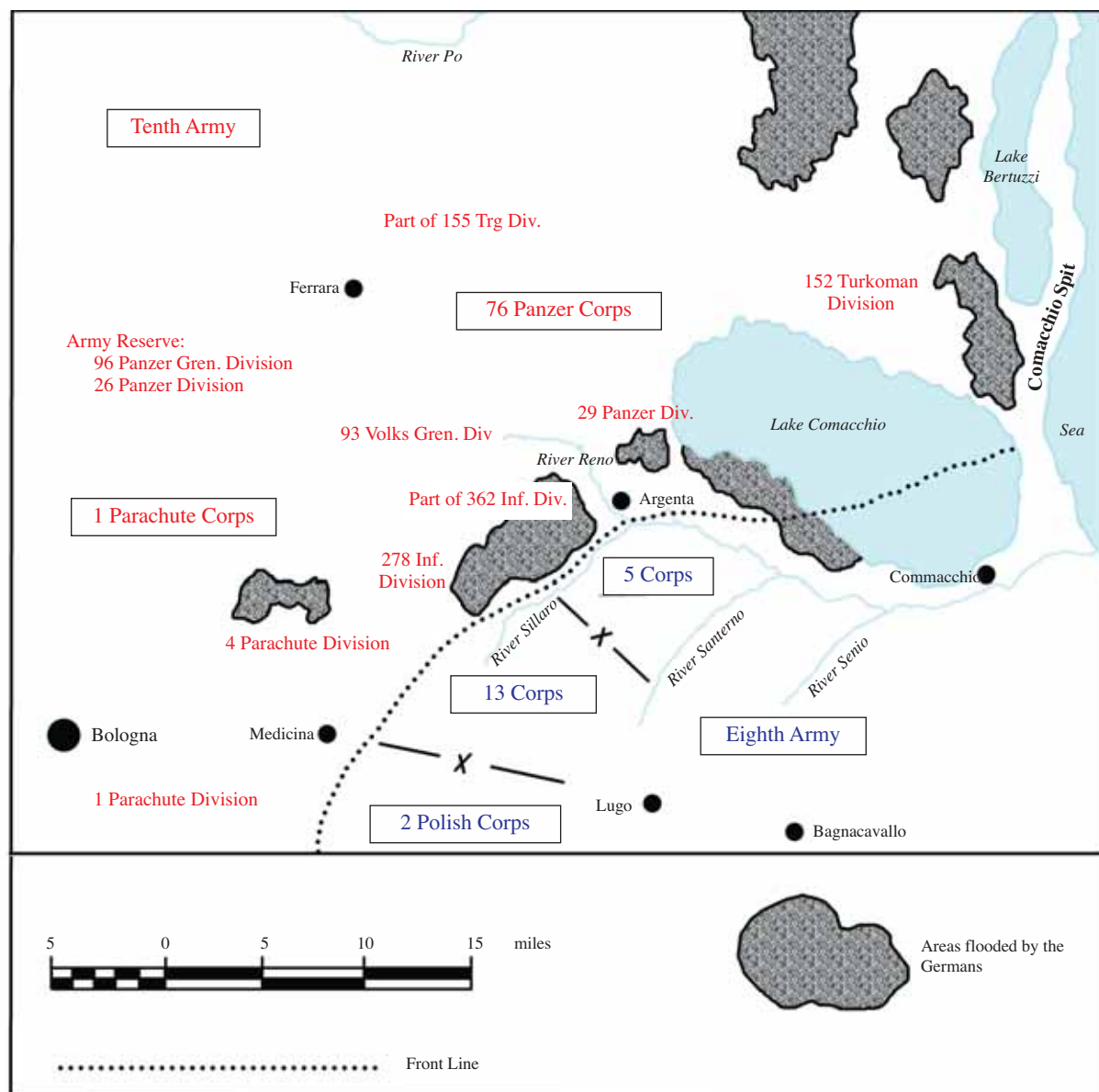


Figure 10 – Map 3 shows the situation on the Eighth Army front on 17 April 1945. The dispositions of the German Tenth Army Corps and their divisions are shown on the map as are the dispositions of Eighth Army's three forward Corps. Note that after crossing the Senio on 9-10 April, General McCreery, the Eighth Army commander, has inserted 13 Corps between 5 Corps and 2 Polish Corps. (Compare with Map 2). Note the position of the Comacchio Spit on the right where a diversionary operation was mounted. Note also the position of the Argenta Gap; through which the Eighth Army would make its main thrust towards the River Po.

lateral communication it would be impossible to control the Squadron from one headquarters. For the same reason it was impossible to service both half squadrons from a common echelon. The complications of splitting a squadron echelon in two when it was not designed for such were considerable. A few of the problems were how to split a cook's truck, one water cart, one technical store vehicle, one technical storeman, one signal electrician and one 'Q' truck.

How these problems were solved, or not, is beyond the scope of this report. Sufficient to say that before the battle there was more worrying over administration problems than in preparing for the actual fighting. (Source: 'Narrative' Appendix 'H')

Somehow though they managed to solve their problems.

THE SPRING OFFENSIVE

For the Eighth Army the spring offensive began at 1345 hours on 9 April 1945 with a British medium artillery barrage of the

German positions on or near the banks of the Senio. In 2 Polish Corps sector the Germans occupied both banks of the river. In 5 Corps sector Eighth Army troops occupied the near bank. During the barrage the Crocodiles, the infantry in armoured troops carriers (Wasps) and the assault engineers advanced to the river line. At 1920 hours all guns ceased firing as the Royal Air Force made a dummy strafing run over the enemy positions. This was the signal for the Crocodiles in 5 Corps sector to start flaming. The Crocodiles fired flaming liquid over the near bank onto the far bank of the river where it ran down into the German's dug in positions setting fire to the timbered constructions inside the dug-outs. The Germans were thus driven out into the open to the advantage of Eighth Army attacking infantry. The spectacle, the narrative records, of tanks spitting out huge jets of flame provided what was probably the most terrifying aspect of the Italian Campaign.

Whilst flaming was in progress the infantry crossed the river gaining bridgeheads on the far bank which enabled the assault engineers to begin operations to place ARKs or other forms of bridge across the river. These operations continued throughout the night and by first light heavy armour had crossed the river at several points in support of forward troops. In 2 Polish Corps sector minesweeping flails had to clear paths up to the near bank under enemy fire before the Crocodiles, the attacking infantry and the assault engineers could approach the river.

The bridge shown in Figure 7 consists of two turret-less Churchill tanks (ARKs) one driven on top of the other. The lower Churchill is resting on the contents of a fascine which was broken down into bundles and spread out by hand. One of the bundles can be seen to the left in the picture near to the lower ARK. The upper Churchill has two hinged ramps at both ends which were lowered into position from within the tank. The flood bank on the eastern side of the river (not seen in the photograph) was surmounted by driving an ARK up to it to act as a ramp. A gap in the western flood bank was made with explosives and subsequently tidied up by an armoured dozer. The crossing was completed during the hours of darkness on the night of 9-10 April and by first light three squadrons of the 12th Royal Tank Regiment had crossed over it in support of forward troops. The bridge was made by 9 and 12 Troops, 'F' Assault Squadron, Royal Engineers, under the direction of Major R L France, MC., the Squadron Leader. (*Source: 'Narrative' Appendix T*) At least three other crossings over the river were made during the night of the attack and four others were constructed the next day.

After successfully crossing the Senio, the Eighth Army pressed forward reaching the Santerno two days later. The 8th Indian division supported by units of the 25th Armoured Engineer Brigade RE secured bridgeheads across the river which the 78th Division used to maintain the attack westwards. Then, in accordance with the Operational Order, the Eighth Army turned northwards to force a way through the Argenta Gap as the American Fifth Army reached the low lying areas west of Bologna. Both armies then began the advance to the River Po. All along the battle front the Germans resisted strongly standing as long as they dare on the many succeeding river lines. On 2 May 1945 the Germans in

Italy capitulated thus bringing the Italian Campaign to an end.

The end of the war in Italy meant that the tasks for which the 25th Armoured Engineer Brigade had been especially formed were completed. After a period of limited training and equipping the brigade supported the advance of the Eighth Army on a three corps front. In 5 Corps sector units of the brigade supported the infantry in the breakthrough of the Argenta Gap and opened up assault crossings and routes which enabled the maximum pressure to be maintained upon the enemy until the River Po was reached. Although not engaged in the actual assault crossing of that great river, bridging and assault equipment operations were assisted by Sherman dozers from the brigade which made gaps in the flood banks of the river whilst sappers from the brigade helped in the construction of rafts to cross the river.

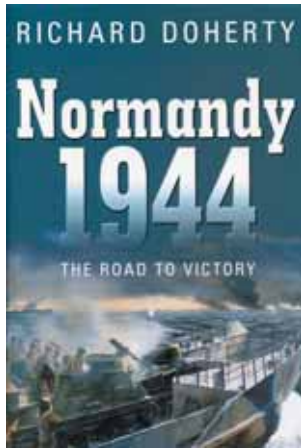
Working in composite regimental groups with troops of various nationalities the brigade performed brilliantly, the narrative records. The Crocodiles played a decisive part in demoralizing the enemy to the advantage of our own assaulting infantry for whom the flames had a great morale boosting effect. The mine clearing tanks saved valuable time and lives by clearing lanes through enemy minefields which threatened to delay the advance. The ARKs, armoured engineer vehicles and Sherman dozers effected assault crossings over a maze of major and minor obstacles at a speed which bewildered the enemy as it enabled our infantry to have supporting arms forward at the earliest possible moment whilst important maintenance traffic was able to follow quickly behind. A great deal of the brigade's work was carried out during the hours of darkness over difficult terrain under enemy fire. An appreciation of the work of the 25th Armoured Engineer Brigade, was expressed in a Special Message to the brigade from the Army Commander, the narrative records.

The brigade subsequently concentrated near Ferrara to sort itself out from the many bit and pieces that it had necessarily become during the fighting. Part of the brigade was then sent to Austria as occupation troops in that country. 'C' Squadron of the 51st Royal Tank Regiment went with 13 Corps to Trieste also on occupation duties. The other units of the brigade were deployed in the area around Ferrara. Eventually the brigade dispersed. Many of the officers and men returned home to be demobbed.

Review

NORMANDY 1944 THE ROAD TO VICTORY

RICHARD DOHERTY



*Published by Spellmount,
The Village Centre,
Staplehurst. TN12 0BJ.
Price £25.00 (hardback),
335pp, 60 illustrations,
14 maps.
ISBN 1 86227 224 7.*

D DAY was the flavour of this summer and Richard Doherty and Spellmount have bravely taken up the challenge of producing their contribution to the flood of publications that have become available to mark the anniversary. Publisher and author deserve great success with this *tour de force* of an account of the battle which, as the subtitle rightly claims, set the Allies on the road to victory.

The author is a prolific writer and broadcaster on military history and his encyclopaedic grasp of the facts and implications is striking, as is the breadth of his research. He appears to have set out to produce a text-book account, allocating a sensible one-sixth to the background and preparations before launching into the action with meticulous attention to detail. His focus, mostly but not exclusively concentrating after the initial landings on the Second British Army sector, varies from broad strategy to selected individual operations as far down as company or platoon level as might illuminate the story with a sense of how things were for the private soldier. These two levels read well but one comes upon them rather as a hiker between pubs: the road one has walked has been what one came for, and the scenery admirable, but the going has been tough and relief is welcome. One of the problems is the shortage of maps to illustrate these in-between levels.

The names of the villages, rivers and other key geographical features necessarily proliferate in the unfolding story; but as so many of these do not appear on the maps only someone very familiar with the area would find it easy to follow.

This is a balanced account. It does not overlook how impossible the whole enterprise would have been without command of the sea and the air. Keeping the U-boats at bay and the invaluable support from naval gunfire was not achieved without sacrifice. Likewise, the critical role of the RAF in maintaining air superiority and interdiction, and its cost, is given its full significance. On the ground, it is the infantry soldier who takes pride of place although the dedicatee is a trooper of the 22nd Dragoons, who was killed on D Day. This is an appropriately symbolic gesture in view of the key contribution of the 79th Division “funnies” on the beaches and in later operations such as Le Havre. The sappers are overall given their full due and their role well covered.

Normandy was unfamiliar terrain to the Allied forces whose recent experience was either in the wider expanses of North Africa or the broken country of Italy. It is salutary to be reminded just how long it took the formations to establish an effective inter-arms *modus operandi* in the rich farmland of Normandy. Doherty discusses this issue in the context of several of the major operations that made up the whole battle of Normandy, particularly *Goodwood* where ideas of massed armour operating with minimal infantry support came to grief. By contrast the close integration of artillery made that arm the scourge of the astonishingly resolute German defence.

This book presents Normandy in a thoroughly straightforward and uncontroversial manner. Richard Doherty has no particular axes to grind and his observations on the personalities of the commanders, on strategy, tactics and weapons and on the relationship of this battle to the rest of the war will be familiar, though not necessarily his conclusions. The book is not a page-turner and perhaps “inspiring”, as the flyer describes it, is a little optimistic except in so far as the whole episode is inspiring. It is nevertheless thoroughly satisfying and would be an excellent companion for exploring Normandy where one would need little else other than a good map to follow the epic of how ordinary men became heroes in the cause of bringing the Nazis to their knees.

GWAN

The Zulu War – Lieutenant J R M Chard VC RE and Who Else?

WARRANT OFFICER CLASS 1 A W KRIEHN



Warrant Officer Class 1 Tony Kriehn joined the Army on the 7th September 1982 as an apprentice Design Draughtsman at the Army Apprentices College, Chepstow. He is currently employed at the Home Office Terrorism and Protection Unit at the National Search Centre, Lodge Hill Camp, Chattenden. Prior to this he was Sergeant Major 5 Field Squadron deploying on Op Palatine 16 and Op Fresco. During this posting he was very fortunate to be able to conduct a recce and battlefield tour of Isandlwana and Rorke's Drift in preparation of the 125th Anniversary of these events from the Anglo-Zulu War. It was later after a presentation on the subject that he asked himself the question "Lt J R M Chard VC RE and who else?" in relation to Royal Engineer involvement. This article (which is in two parts), is the answer he found.

INTRODUCTION

ON the 2nd of December 1878 the steamship Walmer Castle left the port of Gravesend *en route* to South Africa. Amongst the units on board were the 2nd and 5th Field Companies RE. They were deploying on active service against the Zulus, a foe which at that time was reportedly threatening British interests. The protection of the Thames Estuary faded as the steamship entered the waters of the English Channel; the sight of the English coastline was to be the last for some of those aboard.

For one person, Lt J R M Chard RE, the actions he would soon carry out in Zululand would bring him notoriety on his return to England. His name would become entrenched in the history of the Corps of Royal Engineers; it would also, unintentionally on his part, obscure the professionalism and achievements of those other members of the Corps who served in that campaign. The aim of this article is to expose the breadth of operations conducted during the campaign and the extent that other RE personnel and units became involved.

GROUND

LOCATED in the southern part of the African continent on the Indian Ocean, Zululand was bordered by British controlled Natal to its South West with the remainder of the Cape Colony, also under British control, beyond this. To the West was the Boer Republic of Transvaal and in the mountains in the North, Swaziland, whose warriors were of a ferocity equal to that of the Zulus. Running inside Zululand along the border with the Transvaal were the disputed territories, areas of Zulu farmland occupied by force by Boer trekkers. Any invasion by the British would involve crossing either the Buffalo or Tugela Rivers from Natal into Zululand where existing crossing points such as Rorke's Drift would dictate the possible routes of advance. The terrain was rocky, the

road system in both Zululand and Natal was poor and these routes would deteriorate further still with the arrival of heavy seasonal rainstorms at the time of the invasion.

SITUATION

IN 1877, Britain was conducting a policy of confederation amongst its territories in Southern Africa, a system it had employed effectively in other parts of the Empire. Essentially, matters of law, economic trade and defence were controlled by the British. In the case of defence, the territories provided their own soldiers, controlled by British officers, which in turn eased the financial burden of providing troops to garrison the British Empire. It was during this year that Britain annexed the Transvaal Republic, a significant event in the sense that the Boer population now became British subjects and the border conflict involving the disputed territories between the Boers in the Transvaal and the Zulus in Zululand led by King Cetshwayo now became a British problem. In summary the British High Commissioner in South Africa, Sir Bartle Frere, saw this as an opportunity to defeat the Zulus whom he saw as a threat. It would demonstrate to both to the native population and the Boers that Britain should not be challenged militarily, and also that rule under the British would provide them with a safe and secure environment. He tasked Lord Chelmsford, the Commander British Forces, with preparing for an invasion while he obtained the justification. Prior to the Zulu War the British had been fighting a campaign in the Eastern Cape known as the 9th Frontier or Kaffir War. Lord Chelmsford had commanded this operation to a successful fruition and now these troops were moving north into Natal and were an ideal invasion force. Sir Bartle Frere realized that if he did not act quickly this large number of imperial troops would be re-deployed to other campaigns such as Afghanistan.



Map showing location of Zululand in 1879.

Justification was eventually achieved by the issuing of an ultimatum to King Cetshwayo and the Zulu Nation, something they found impossible to agree to. In due course as a result of this failure of compliance, Zululand was invaded on the 11 January 1879.

ENEMY FORCES

THE Zulu Army consisted of approximately 40,000 warriors organized into a well-disciplined regimental system. The Zulu King, Cetshwayo kaMpande, had enforced a policy of all Zulu males becoming warriors, living in barracks and conducting training. They were equipped with assegais (a short stabbing spear) and hide shields, however firearms were also available although these mostly consisted of ageing muskets, which combined with poor marksmanship drills made them generally ineffective. The strength of the Zulu Army lay in its ability to be able to move long distances by foot quickly, without the requirement of a large logistical support element. In battle the Zulus employed the tactic of “horns of the bull”, fast moving regiments flanked to the left and right (horns) encircling the enemy and then the main force (chest) would advance quickly to engage in close quarter combat.

FRIENDLY FORCES

THE invasion force consisted of approximately 15000 troops, a mixture of Cavalry (imperial, colonial and native), Imperial Infantry, Royal Artillery and natives led by colonial white officers and NCOs. Supporting these troops were transport and medical units along with marines and sailors.

The Royal Engineer deployment on the 5th January 1879 was as follows¹:

Headquarters. Colonel Hassard CB CRE; Lt J C Baxter, Adjutant (to be located at Helpmekaar).

No 1 Column. 2nd Field Company RE (OC Capt W R C Wynne, Capt D C Courtney, Lt H B Willock, Lt C E Haynes). Lt T R Main (7th Field Company RE). One Company of Native Pioneers.

No 2 Column. Lt Colonel A W Durnford. 2nd Cpl N Mansfield (7th Field Company RE)²

No 3 Column. 5th Field Company RE (OC Capt H P Jones, Lt J R M Chard, Lt R da Costa Porter, Lt C E Commeline). Lt F H McDowel (7th Field Company RE). Two Companies of Native Pioneers.

No 4 Column. Major Moysey. Sgt and 11 Sappers (7th Field Company RE).

Field Parks. Located at Helpmekaar and Tugela Mouth where a complete bridge equipment of barrel piers was deployed, Assistant Engineers Lt V J Yorke, Anglesea Militia Engineers and Lt Brice were appointed to take charge due to a lack of RE officers.

Cape Town. Brevet-Maj F W Nixon and Lt J Clarke (7th Field Company RE) employed in the defences of Table Bay³.

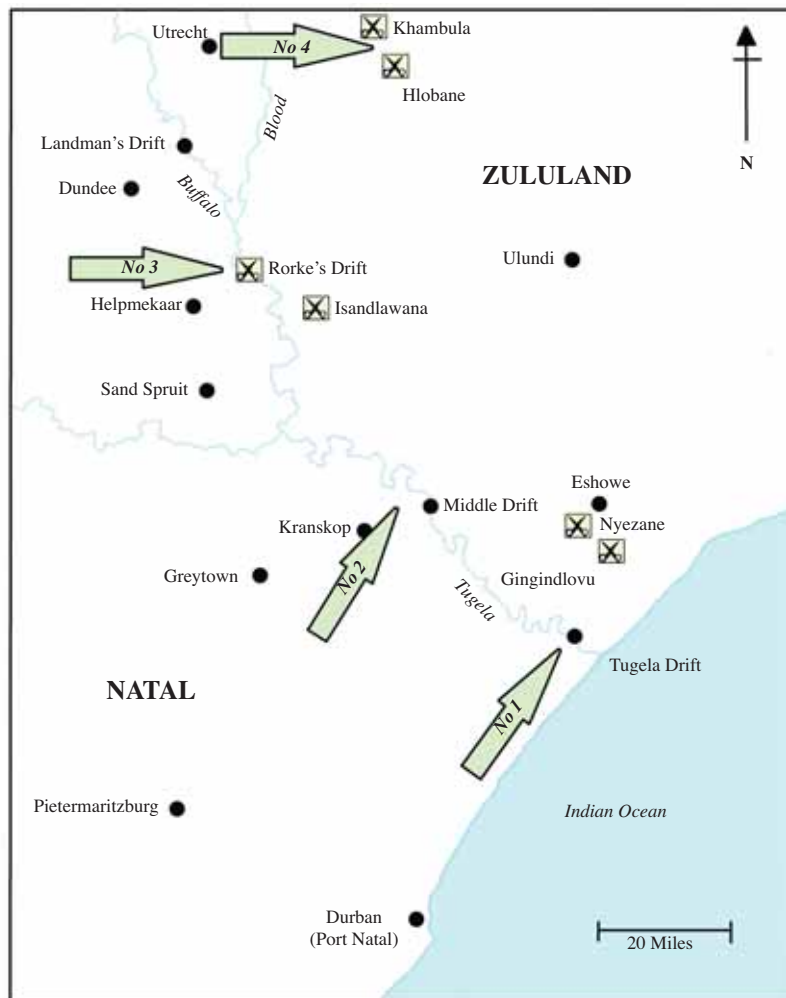
CONCEPT OF OPS – THE 1ST INVASION

CHELMSFORD divided his force in to three main fighting columns that could operate independently. No 1 Column would advance along the coast crossing the Tugela River at the Lower Drift; No 4 Column would cross the Blood River and operate in the North. No 3 Column, in the centre, was to advance across the Buffalo River at Rorke's Drift. The main objective was Ulundi, the capital of Zululand. There were two smaller Columns; No 2 Column would be a reserve to

¹ As detailed by Lt J C Baxter RE to the Editor of the *RE Journal* on the 5th January 1879.

² John Young in his book “They Fell Like Stones; Battles and Casualties of the Zulu War, 1879” states the presence of 2nd Cpl N Mansfield of 7th Field Company RE.

³ An assumption could be made that some or all of the remaining members of 7th Field Company RE were also at Table Bay.



Direction of advance for invasion Columns, Locations of Towns, Forts and Battlefield Sites.

counter any Zulu threat of invasion in to Natal while No 5 Column would provide a presence in the far North to monitor both Boer and Swazi neutrality. RE activity and involvement leading up to and during the first invasion is shown chronologically for each of the Columns⁴ in turn although the reader should bear in mind that events all happened concurrently:

No 2 Column – Commanded by Lieutenant Colonel A Durnford RE.

LIEUTENANT COLONEL A DURNFORD RE

DURNFORD was a seasoned veteran of the South Africa campaigns and definitely not your normal run of the mill RE officer. In 1873 he had lost the use of his left arm from a spear wound whilst commanding a force of colonial volunteers in pursuit of a tribe of Natal Zulus who were refusing to register their firearms. This however did not cloud his personal views and he was to demonstrate on a number of occasions in the following years the moral courage to speak out in support of the native population and the way in which he felt they were mistreated - a stance that did not endear him to either the colonists or his own chain of command. As mentioned earlier,

when the British annexed the Transvaal the border dispute became a crown problem and to enable a decision to be reached, an independent boundary commission was instigated by Sir Bartle Frere. Durnford was tasked to act as one of the arbitrators. The commission concluded that the disputed territories were Zulu and not Boer, a conclusion that Sir Bartle Frere was to hide as it would have caused massive implications with regard to the Boers and their acceptance of British rule - another reason for Zululand to be invaded. Although Durnford was obviously instrumental in the fairness of the boundary commission he immediately turned his experience to the creation of a conscript army made up of colonial Zulus, for the invasion of Zululand.

NATAL NATIVE CONTINGENT

THESE colonial Zulus had been forced to leave Zululand during outbreaks of civil war and now resided in Natal in large numbers, a fact that was not lost on a very suspicious white colonial population. Therefore to negate this threat at the time of invasion and increase the numbers of the British invasion force, Chelmsford tasked Durnford, among others, to create the Natal Native Contingent (NNC), which would total

⁴ No 5 Column is not discussed, as it could not be ascertained that it had Sapper support.

approximately 8000. Assisted by Captain Hime RE, the Colonial Engineer Natal, Durnford sensibly raised a force of three Companies of Native Pioneers. Commanded by one Captain and two Subalterns (Colonial) with four sergeants and 96 sappers (Native). Dress was cap, red jacket and trousers, with a tool slung. 25 men carried Martini-Henry rifles in each Company while the remainder had assegais and shields. The G1098 vehicle was a two-wheeled ox cart containing tools, forges, dynamite and other engineer equipment.

No 2 Column initially deployed to Kranskop near the Middle Drift. Durnford was then ordered to move to Rorke's Drift with his Natal Native Horse (NNH), a mounted unit of approximately 250 non-Zulu natives who were extremely loyal. Also attached to this force were a Rocket Battery of the RA and two Companies of NNC. The remainder of the Column consisting of three battalions of NNC⁵ were to be utilized to counter and deter any possible invasion of Natal by the Zulus.

Durnford's force arrived late on the 21st January and set up camp on the site No 3 Column had just vacated. Durnford like any professional soldier, waited impatiently for orders that would allow him to move his command into Zululand. He did not have too long to wait.

No 3 (Central) Column – Commanded by Colonel R Glyn, 24th Regiment of Foot⁶.

5TH FIELD COMPANY RE

AFTER a long and uneventful journey the 5th Field Company (along with the 2nd) eventually arrived off Durban on the 3rd January 1879. However it was not until the 4th that they were able to disembark at Port Natal and set up camp in tents, all under the watchful eye of CSM J Downs. The next two days saw frantic activity as the Company attempted to unload and organize its engineer equipment and stores, not an easy task as it was mixed with that of other units. Both companies were allocated seven mule wagons, which were not very substantial, and also thirteen riding horses for the mounted personnel.

An order for assistance to repair the ponts at Rorke's Drift was received and a "flying sap" consisting of Lt Chard, Cpl Gamble, Sappers Cuthbert, Wheatley, Maclaren and Driver Robson was detached. The "flying sap" was to initially become a comical event to the rest of the 5th Field Company as it took two hours for their mule cart to move a short distance to collect the tool chests. Eventually they gave up and obtained a new team of mules before proceeding.

Orders were then received for the remainder of the Company to march to Helpmekaar, a distance of 150 miles. The initial 12 miles was by train with the empty wagons following, then the remainder by road. The standard of transportation was poor with horses unshod and saddles not fitted properly. The teams of horses for the wagons were too light, this factor combined with the torrential rain required the physical effort of the Company to help push the wagons up the numerous hills through a molasses of thick mud. It was a long, demanding journey with rations running short. A much-welcomed break was taken at Pietermaritzburg. A parade was held and the CRE, Col Hassard, addressed the Company. On the 16th they set off again equipped with new teams for their wagons although a number of them were to develop mechanical faults and the going was still painfully slow. News reached the Company of an engagement where approximately 50 Zulus had been killed by No 3 Column on the 12th and the Company began to think it was they who would have the better chance of action and not the 2nd Field Company who were due to cross in to Zululand before them. This helped to keep morale up and it was needed as the rain continued to descend, the cooking fuel ran out and wagons overturned requiring re-righting and re-loading.

Lt Chard and his party arrived at Rorke's Drift on the morning of the 19th January. No 3 Column had crossed the Buffalo River and was encamped on the Zulu side, however wagons with stores were still crossing using the one remaining serviceable pont. Chard sited his two tents close to the ponts and the store, as his Sappers were to carry out maintenance on the other pont. The construction and supervision of the ponts up to this point had been the responsibility of Lt McDowel of the 7th Field Company.



The crossing at Rorke's Drift looking from the Natal side. It was here that Lt McDowel RE supplemented the existing pont with the construction of a barrel raft, which No 3 Column was to utilize cross. Lt Chard VC RE sited his tents close to this location. Fort Melville was constructed to the left out of photo shot when the mission station at Rorke's Drift was abandoned.

⁵ Conflicting reports put the force anywhere between 250 and 3000 warriors.

⁶ Lord Chelmsford attached his headquarters to this Column and this was to undermine Glyn's authority

7TH FIELD COMPANY

THE 7th Field Company had arrived in Cape Town in 1876 as engineer support for the frontier campaign. They had been quartered in Cape Town barracks with the 1/24 Regiment of Foot⁷, and saw action during the 9th Frontier War of 1877-78. In preparation of the invasion of Zululand McDowel had found himself preparing the route for No 3 column, with the use of two Companies of Native Pioneers. This consisted of route maintenance and preparation of the banks of Rorke's Drift as well as the ponts themselves. The improvements at the supply depot at Helpmekaar most probably also fell under the remit of McDowel and his Native Pioneers.

When Chard arrived, McDowel was already in Zululand because swamps were delaying No 3 Column's progress and he had been task to deploy forward to oversee route construction and maintenance tasks.

ISANDLWANA

ON the 21st, Chard received orders late in the day from No 3 Column that the RE personnel who had just arrived, were to precede to Isandlwana. The orders did not include Chard so he obtained permission from Maj Spalding, who was now in command of Rorke's Drift missionary station, to move to Isandlwana and check the orders because by detaching his men, he would be unable to maintain the ponts and therefore have very little to do.

With Chard on horseback and Cpl Gamble, Sappers Cuthbert, Wheatley, Maclaren and Driver Robson in a wagon they departed for Isandlwana on the morning of the 22nd January. They were not the only personnel on the move as Durnford had also received orders to move forward to Isandlwana and his men were now preparing to strike camp. As the going was poor Chard rode on ahead and when he arrived at Isandlwana he found the camp in a high state of activity. No 3 Column was now divided in to two with Lord Chelmsford deployed to the East near the Mangeni Falls after receiving information that a large Zulu force was in the area; unfortunately it was a clever feint by the Zulus. What no one realized was that approximately 25,000 Zulu warriors were concealed to the North West in the Ngwebini Valley preparing to attack the camp at Isandlwana. The "stand to" in the camp which Chard witnessed was in response to the lead elements of this force becoming visible. Chard managed to establish that his duties were indeed on the Natal side of the Buffalo River and after observing Zulu warriors to the North on the Nqutu Plateau moving westwards, he decided it would



Isandlwana Hill looking from the direction that the Zulu Army advanced. Durnford was to encounter the left horn to the left of the photo, while the right horn moved along the Nqutu plateau (from where the photo was taken), to attack the right side of the hill and encircle it. The main chest descended down through the area of new buildings to engage the camp. The final battle took part in the general area of the black scar (the result of a grass fire) to the front and left of the hill. Rorke's Drift is beyond, in the direction that personnel tried to escape, now known as the Fugitives' Trail.

be a sensible time to return in case they blocked his route back. As he departed Isandlwana he met Durnford at the head of his NNH and briefed him on what he had seen. He then met his own men, where upon he made them get out of the wagon and walk up the hill with Durnford's wagons and Companies of NNC, while he continued back with Driver Robson and the wagon.

Durnford arrived at Isandlwana at approximately 1030hrs. He was the senior officer present as Glynn has accompanied Chelmsford and he outranked Lt Col Pulleine who had been left in command. He did not, however, remain in the camp for long. He elected to deploy two of his NNH troops to recce the Nqutu Plateau to the North while he moved to engage a Zulu force that had been reported to the east. The Rocket Battery which was under his command followed.

HORNS OF THE BULL

THE Zulu Army attacked in an awesome, terrifying, heaving swarm employing their tactics of the Horns of the Bull; the warriors intent on "washing their spears in blood"⁸. Some colonial and native occupants of the camp took flight. The right horn deceived then engaged Durnford's two NNH troops on the Nqutu Plateau, while below, on the Isandlwana Plain, the Rocket Battery was overrun. Durnford was unaware of the situation developing behind him until he rode straight in to the left horn. His 100 men conducted a fighting withdrawal, the air filled with the noise and acrid smoke of Martini-Henry rifles. The right horn descended from the plateau, and began to encircle Isandlwana. At some point it located Durnford's wagons and the RE personnel with it. They died fighting. The

⁷ Who were to be decimated at Isandlwana.

⁸ This was a ritual to show a warrior's participation in battle, to demonstrate manhood and confirm the King (Cetshwayo) as monarch.

main chest of the Zulu army attacked the camp, the weight of fire from the British initially creating something of an impasse, however the left horn began to outflank Durnford and his men. They withdrew to the camp as the whole of the British force contracted under the immense pressure of the attacking warriors. Withdrawal turned in to a rout, the fighting was vicious but eventually the British succumbed to the overwhelming numbers hacking and spearing them. Durnford made a last stand but to no avail. 2nd Cpl N Mansfield was also killed in action⁹. Durnford was not the only RE officer to die on the battlefield. McDowel had initially left with Chelmsford's force for the Mangeni Falls but he had been sent back to the camp with orders that it should be struck and proceed to Chelmsford's location. He was last seen organizing men to take ammunition to the firing line when a Zulu warrior shot him¹⁰. The battle was over by approximately 1330hrs, the scene was one of carnage, with the Zulu warriors disembowelling¹¹ the fallen and also washing their spears in blood. Approximately 1400 of the British force and 2000 of the Zulu were dead. The Zulu reserve force under Prince Dabulamanzi had not entered in to battle and now moved off to the west in pursuit of their own reward - the small British outpost across the Buffalo River with its stores and cattle beckoned.

RORKE'S DRIFT

ON his arrival back at Rorke's Drift Chard informed Spalding of what he had seen of the Zulu movements. He also said that without the Company of the 1/24 Regiment that had yet to arrive from Helpmekaar, it would be impossible to effectively defend the posts from attack as stated in the camp morning orders. Spalding decided that he would personally move to Helpmekaar to locate the "missing" Company and after consulting an Army List informed Chard "I see you are senior, so you will be in charge, although, of course, nothing will happen, and I shall be back again this early evening".

By approximately 1630 hrs on the 22nd of January events were definitely happening at Rorke's Drift. A force of about 4000 Zulu warriors had begun to lay siege to the mission station. The occupants had only just managed to fortify their position; Chard contributed to the design with the addition of an inner wall of biscuit boxes and a redoubt of mealie bags. The 139 occupants became embroiled in a vicious, savage battle of life or death. As the battle raged, day turned to night, the flames from the burning hospital illuminating the scene as bullets and bayonets beat back the brave Zulu warriors who threw themselves at the mealie bag fortifications. The British withdrew to the inner wall and redoubt where they successfully kept the Zulus at bay. In amongst the battle Robson had been directing his own fire at the warriors ransacking the G1098 wagon but unfortunately the equipment, along with Chard's and his "things" were lost. By midnight the battle had subsided. Chard

led a small detachment to rescue a water cart and then improvised a system to siphon the water out. The fire from the hospital died down; there was sporadic gunfire and then silence.

Dawn brought a scene of carnage; approximately 500 Zulu warriors lay slain around the mission station. At about 0800hrs on the 23rd January the survivors sighted the remnants of No 3 Column. Lord Chelmsford, after witnessing the devastation at Isandlwana, was relieved to see the station was still in British hands

FORTIFICATION (& SQUALOR)

THE first the 5th Company knew of the disaster was when NNC survivors passed them in panic with such comforting statements as "Plenty Zulu Johnny"! Capt Jones, the OC decided to fortify the inn at their present location with a wagon laager and trenches. The atmosphere would have been tense, extra ammunition was issued and the work hard as the Company had been marching all day. A message was received that a wagon train containing approximately 875



The British memorial at Rorke's Drift displaying the names of Sappers Betts and Russell.

⁹ This is according to "They fell like stones; Battles and Casualties of the Zulu War, 1879". However, the Casualty Roll for the Zulu War contained in the Corps Library states he was killed in action at Nyezane on the same date. It is most likely that Isandlwana was where 2nd Cpl N Mansfield perished.

¹⁰ According to private letter of Capt H P Jones.

¹¹ Disembowelling to the British was seen as an act of savagery however the reason for the Zulus carrying out this act was to let the spirits out of stomachs swollen from gases.

boxes of ammunition was vulnerable at Sand Spruit; and on the morning of the 23rd January, the Company marched to its rescue. 12 hours and 29 miles later they arrived, the small force of soldiers at the wagon train were understandably extremely pleased to see them.

Jones took half the Company and proceeded to Helpmekaar arriving on the 26th where Col Hassard was in command¹². They were tasked to construct a protective earthwork and trench. Jones contested the location as he believed it to be poorly sighted¹³ but Chelmsford, who had arrived from Rorke's Drift, insisted it must protect the existing buildings. The remainder of the Company under Porter who remained to construct a stone fort at Sand Spruit, eventually arrived on the 29th but the following day were deployed forward to Rorke's Drift to improve the defences. The station was in disarray with the occupants expecting a further Zulu attack. The living conditions of the soldiers, as with that of Helpmekaar, were appalling as most of their kit has been lost. It was constantly raining. Chard initially took command but was evacuated due to sickness¹⁴. Porter re-assumed command. By the end of February the conditions within the mission station were so bad that Porter and his men were tasked to construct Fort Melvill¹⁵, overlooking the ponds. It was constructed with stone from the mission and sods of earth, a trench encircled it and towers flanked the position. Jones continued to fortify Helpmekaar. Sickness and disease were prevalent both at Rorke's Drift/Fort Melvill and at Helpmekaar; Sappers Betts and Russell died from illness while others were casevaced. Porter and his men eventually departed Fort Melvill at the end of April and found the other half of the Company had already left Helpmekaar. The Company finally re-grouped at Landman's Drift; it had been nearly three months.

No 1 (Coastal) Column – Commanded by Colonel C Pearson, 3rd Regiment of Foot.

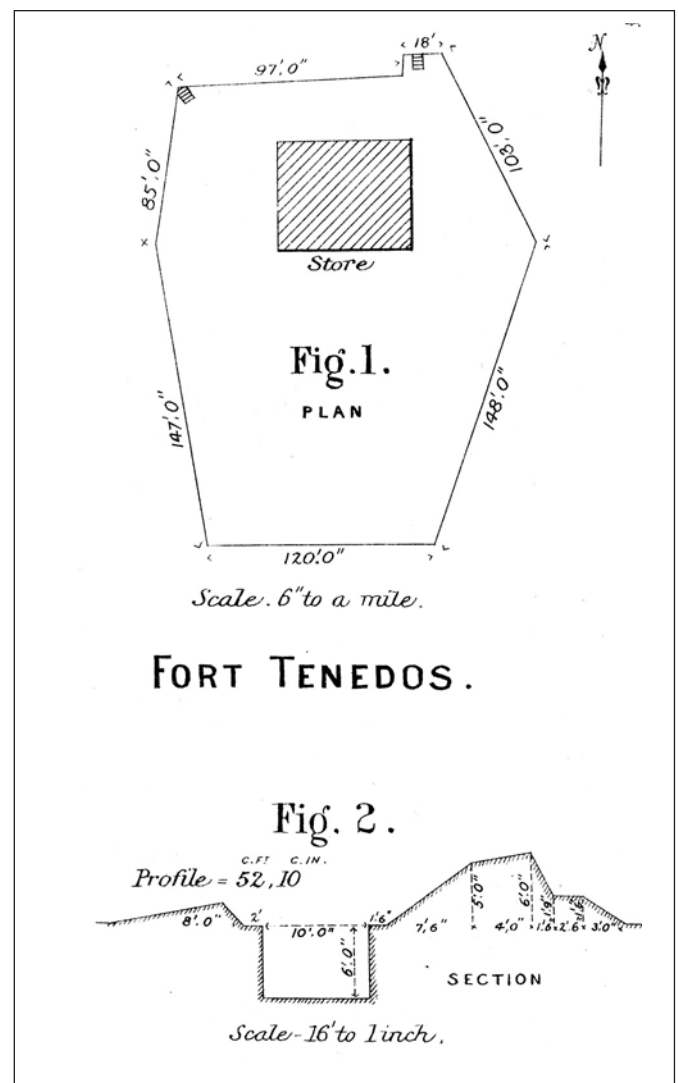
2ND FIELD COMPANY RE

WHEN the 5th Field Company disembarked at Port Natal, so did four officers, seven Sergeants and 113 other ranks of the 2nd Field Company. Along with the 5th Field Company, they were met with two days of intense work unloading engineer equipment. Orders were received by Capt Wynne, OC 2nd Field Company, to join No 1 Column commanded by Col Pearson at the Tugela Mouth. They commenced the 70-mile journey on the 7th, less Lt Haynes and 20 men who remained at Durban to locate pontoon equipment. The Company moved firstly to Saccarine by rail while the wagon train moved by road. The Company then proceeded by foot and wagon, over arduous ground, through heavy rain and flooded rivers arriving at Fort Pearson, a fortified position on the Natal side of the Tugela River, late on the 12th. On their arrival they found that No 1 column had already crossed the

river using a large flat-bottomed pont. Capt Wynne met Lt Main who was one of the subalterns of the 7th Field Company. Main had seen active service in the 9th Frontier War and had been mentioned three times in dispatches. On his arrival at the Tugela Drift he designed and supervised the construction of Fort Pearson, which was an earthwork dominating the Natal side of the river. He improved the approaches to the Drift and supervised naval carpenters in the construction of the large pont¹⁶. He also oversaw the construction of a "flying bridge", which was a barrel raft; unfortunately it sank in the strong current killing three sailors.

FORT TENEDOS

ON the following morning, January 13th orders were received for the construction on the Zulu side of the river of a pro-



Plan of Fort Tenedos (originally named Fort Wynne but changed by Naval Brigade).

¹² Hassard was preparing to act as president for the Court of Enquiry into the loss of the camp at Isandlwana.

¹³ Wynne was to be proved right with the ground becoming waterlogged and the trench surrounding Helpmekaar flooding.

¹⁴ Chard went to Ladysmith to recuperate. Natal newspapers incorrectly reported his death.

¹⁵ Porter was to write a dissertation on military fortifications for the Professional Papers of the Corps of Royal Engineers 1880.

¹⁶ In his recollections Main states how annoyed he was that when London newspapers reported on this they left his name out. Is that not a Sappers lot!

tected storehouse, which would be known as Fort Tenedos. At 1400hrs the Company crossed the Tugela River into Zululand. Cpl Orchard and Sprs Cooksey and Crockett remained on the Natal side to implement repairs to the pont and then administer the reserve depot of stores.

From the 14th to 17th the 2nd Field Company constructed Fort Tenedos. The task itself was too large for the Company alone and therefore seven reliefs were organized utilizing native pioneers and infantry manpower. Tasks involved superintending, profiling, digging, shovelling (infantry task), and sod cutting, sandbagging and revetting.

During the 16th Wynne telegraphed Haynes in Durban to order him to bring only two pontoon rafts, Haynes replied stating that someone had forgotten to load the pontoons on any of the steamers at Durban and therefore Wynne ordered him to rejoin the Company.

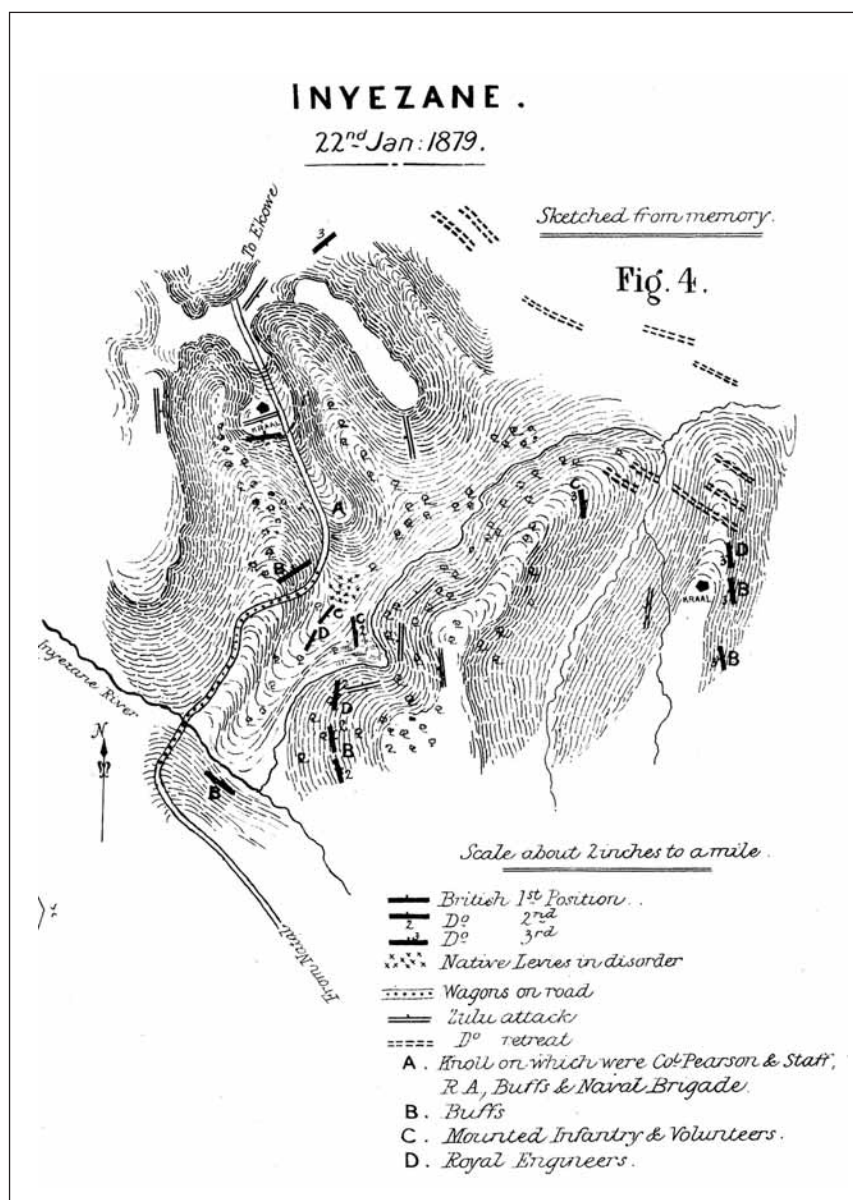
On the 18th No 1 Column advanced into Zululand, Main and the Pioneers were in the advance guard. Yet again it was raining. Sgt Campbell and Sprs Besswarick and Church were tasked to remain and erect a galvanized iron store, which was yet to be completed and the remaining revetting tasks were given to the infantry garrison troops.

The next two days found the Company battling the elements as torrential rain had caused the river Amatikulu to flood making the drifts impassable. Gap crossing recesses were conducted and engineer tasks carried out at a number of locations. These involved the cutting of channels to divert the river and lower the water, the demolition of boulders with gun cotton, the construction of fascines, the reducing of the angle of approach on riverbanks and the widening of roads. Eventually on the 21st of January their luck changed as the river level dropped and the old drift became passable. It is at this phase of the advance that the importance of engineer support was realized and the order of march changed with Sapper personnel detailed to follow the advance guard to respond to urgent route maintenance.

NYEZANE RIVER

AFTER an overnight camp at Kwasambela, four miles from the Nyezane River, the Company found themselves yet again repairing the route utilizing resources such as brushwood, timber, palm branches and sods. They arrived at the Nyezane River at about 0800 hrs just as gunfire could be heard. Unbeknown to them a force of 6000 Zulus had manoeuvred itself into a position to attack the Column. Wynne immediately moved the Company towards the location of No 1 Column. Zulus were sighted moving round to the right and the

Company was quickly positioned to the right of the mounted infantry. As this occurred Zulus concealed to their front opened fire, the Company returning it with their Martini-Henry rifles. Two Companies of the Buffs soon thankfully reinforced the Company to their right, and in conjunction with them they began to advance forcing the Zulus to retreat. At the time of the attack Main had been overseeing route maintenance by his Company of Native Pioneers. As the attack commenced he moved the Company to a small knoll and with other troops from the column they soon became surrounded and under enemy fire, however they remained in this location until the end of the battle. Approximately 400 Zulus were killed with the 2nd Field Company being heavily involved in successfully repulsing the attack. Casualties on the British side were 10 members of the NNC killed with the only Engineer casualty being a weapon sight shot off! This battle was a success but the engagement was overshadowed by the events at Isandlwana.



Copy from RE Journal 1879 of sketch of Nyezane battle by Capt Wynne RE.

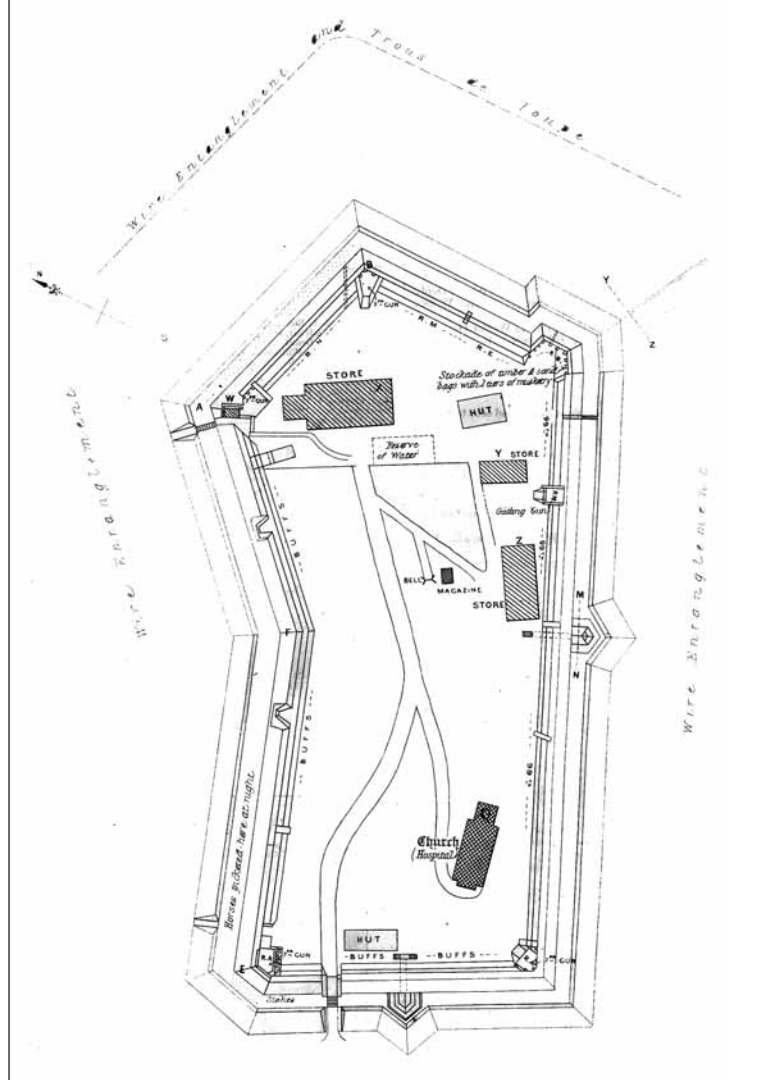
FORT ESHOWE

At about midday on the 23rd January No 1 Column reached their destination, Eshowe was an abandoned Norwegian Mission Station 1½ miles off the main road from Tugela to Ulundi which had been designated as a stores depot. Wynne explained to Pearson that it was not the most suitable of locations from a defensive point of view¹⁷ but the lack of alternative buildings to locate stores ensured it would be developed as Fort Eshowe. Wynne assisted in the recce to arrange water supply, while the Company set up camp. The following day work commenced to clear the surrounding area of bush. It could not be burnt and therefore had to be cut.

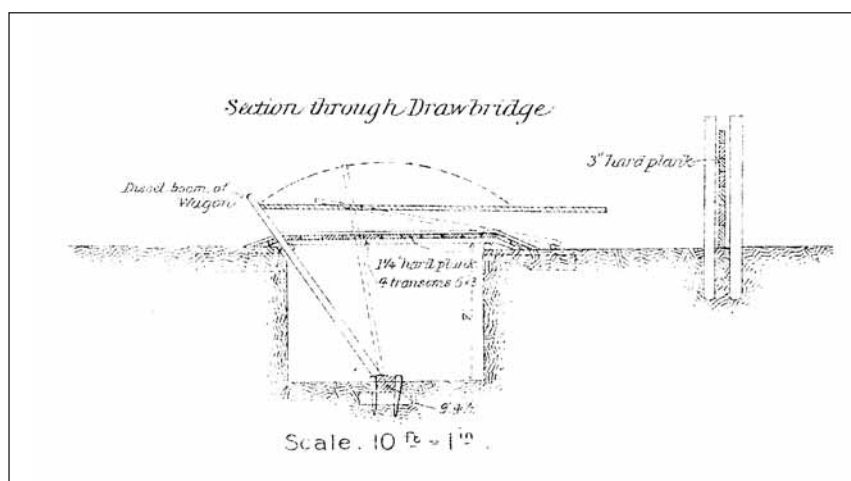
Over the period of the 25th to 28th Fort Eshowe was constructed and as with Fort Tenedos all troops in the column were utilized to assist in the work. At approximately midday on the 28th news of Isandlwana reached No 1 Column, Chelmsford's message informed Pearson that he should expect the Zulu Army to attack and therefore he could either withdraw to the Tugela River or consolidate his present position. Initially withdrawal was mooted as the best option but Wynne was against such an idea. Fort Eshowe's construction which he had designed and was supervising was nearing completion and the thought of trying to withdraw down the tracks they had just had so much difficulty traversing while the Zulu Army attacked them seemed ludicrous. Wynne managed to sway Pearson's decision to that of one of staying. However due to the size of the Fort and the amount of stores available the mounted troops along with the NNC were despatched to Fort Tenedos. The decision was then made to occupy the fort immediately on completion of the remaining works, not an easy task for the four RE officers as there was obviously a great desire by the remaining soldiers to effect some sort of protection and hide behind it and this greatly effected the quality of the construction.

Wynne's exemplary leadership was curtailed on the 30th as he succumbed to chronic diarrhoea. Although weak Wynne was back on the 31st overseeing revetting, excavation of ditches and the construction of a well. The whole fort though was beginning to suffer from the cramped conditions and the constant rainstorms and muddy conditions were a constant problem. The fortification of Eshowe was relentless, parapets, drawbridges, drainage ditches, range markers, loopholing, the clearing of ground around the fort and the denial of dead ground to enemy use. The work continued for weeks, while the Column remained cut off expecting attack at any time. As the fort developed the tasks became more extensive,

Plan of Fort Eshowe ZULULAND



Copy from *RE Journal* 1879 of plans drawn by Lt Main and Willock RE.



Copy from *RE Journal* 1879 of drawbridge access to Fort Eshowe.

¹⁷ The fort was overlooked on both the Northern and Southern sides, while there were areas of dead ground that prevented effective fields of fire.

paving the road outside the camp, fitting lightening conductors to the church and building watch towers from timber scaffolding and stone huts for accommodation. A balloon was even constructed from vegetable parchment with a paraffin lamp for inflation as a means of communication with Fort Tenedos. The 1st of March saw the 2nd Field Company deploying in an infantry role to assist in the attack on a nearby Zulu Kraal. They provided flank protection, observing a number of Zulus during the engagement and receiving and returning fire on a number of occasions.

On the 2nd heliograph signals were viewed from the Tugela. Unbeknown to the members of the Company it was Haynes who was stranded at Fort Tenedos with the rest of the Sapper detachment. He had organized the use of a heliograph to signal Eshowe. Wynne although still suffering from diarrhoea, reciprocated with the construction of a large screen to the north of the fort, however it was not successful. The following day a message received gave hope that they would be relieved on the 13th.

A route reconnaissance was conducted on the 5th with the aim of constructing a more direct route to the Tugela road, a suitable location being selected which would reduce the distance by five miles. The construction tasks consisted of a number of side cuttings of hills and three fords. On a number of occasions the works parties came under enemy fire, the rain was incessant at times preventing work and when work was able to be carried out it was back breaking. Rations were minimal and the men had to endure extreme hardship. Wynne continued to suffer from sickness.

On the 10th Wynne oversaw the construction of a new signalling screen and this time it was successful with messages being passed to and from Tugela. It was Wynne's last contribution as the next day he was put on the sick list, Courtney taking command of the 2nd Field Company. 30 percent of the unit was now sick and men in the fort were dying from such ailments as fever and dysentery. On the 13th another signal was received, the relief had been postponed until the 1st of April. Morale was low however work continued on the new road under the supervision of Courtney and Main, Willock was also now sick. On the 29th fires could be seen from the relief Column commanded by Lord Chelmsford but it was too late for some as the 30th of March saw the 30th death with approximately 200 sick.

GINGINDLOVU

On the 2nd of April the occupants of Fort Eshowe watched the spectacle of the relief Column coming under attack at Gingindlovu by 12000 Zulu warriors. The action was clear to see, the Zulus were tenacious and nearly overcame the British yet again, but the Gatling gun came into its own and the Zulus fell back with over 1000 casualties. Lord Chelmsford with an advance party eventually reached Eshowe on the 3rd; the fort was evacuated on the 4th with the occupants arriving at Fort Tenedos on the 7th. Haynes and his men were now able to rejoin the Company but the

celebration was short lived as Maj Wynne¹⁸ died of his illness on the 9th.

No 4 (Northern) Column – Commanded by Colonel E Wood VC, 90th Light Infantry.

KHAMBULA

At the same time as Nos 1, 2 and 3 Columns were preparing to enter Zululand, No 4 Column had successfully crossed the Blood River on the 6th of January and negotiated their way in to Zululand in the North and had engaged the local Zulu forces. Within the Column were Maj Moysey and a detachment from the 7th Field Company consisting of Sgt Wood and 11 Sappers¹⁹. Moysey was tasked to design and supervise the construction of Fort Khambula, which the Column occupied on the 13th. On receiving news on the 24th of Chelmsford's defeat at Isandlwana, Wood decided to withdraw to Khambula Hill and from the security of the fort conducted a number of successful raids against Zulu locations over the following weeks. No 4 Column was to benefit from much better living conditions than that endured by Nos 1 and 3 Columns. During March Chelmsford was preparing to rescue No 1 Column and as a diversionary act he ordered Wood to attack the abaQulusi Zulu stronghold of Hlobane hoping that it would draw the Zulu army away from Eshowe. The attack on the 28th March was a complete disaster, as the British forces unexpectedly encountered the main Zulu Army of approximately 20000 warriors. The survivors withdrew to Khambula.

The overconfident Zulu Army decided to ignore King Cetshwayo's order of not attacking fortified positions after their defeat at Rorke's Drift and on the 29th launched a ferocious assault on the fort. The sighting and construction of the fort was critical, it was to be a very close engagement. Moysey was not present at the battle as he and a Sapper had travelled to Fort Amiel, where he was supervising its fortification. Sgt Wood and the 10 remaining Sappers were present though and assisted in the defence of the fort. The Zulus were beaten back and lost at least 1200 warriors. The tide was turning!

SUMMARY OF THE FIRST INVASION

In hindsight, the first invasion of Zululand was ill conceived - one might even say it had a touch of arrogance about it, but then hindsight is a wonderful thing. The lack of respect afforded to the combat effectiveness of the Zulu Army by Lord Chelmsford was to damage Britain's military prestige across the world.

After the defeat at Isandlwana there was an attempt to apportion blame. Durnford, although dead, was included in this but the assertion was shown in time to be incorrect; Lieutenant Colonel Anthony William Durnford clearly demonstrated both the physical and moral courage expected of an officer of the Corps of Royal Engineers.

The awarding of 11 Victoria Crosses, one of which went to Lt John Rouse Merriott Chard, can be seen as a cynical ploy, along with the misplaced blame, to divert attention from the

¹⁸ Promoted to Maj with effect 2nd April 1879.

¹⁹ At the outbreak of war Maj Moysey was at Pretoria but joined Column at Utrecht with detachment from 7th Field Company.

disaster at Isandlwana. It worked well as even today Rorke's Drift is very prominent in people's minds if you mention the Zulu War, but very few can expand on the subject. However, Victoria Cross or not, the defenders of Rorke's Drift performed an heroic and disciplined defence of the mission station, against overwhelming odds.

The ability to design and construct fortifications was pivotal in the survival of the British Force. Both the 2nd and 5th Field Companies excelled under extreme mental and physical conditions. Lt Main states in his recollections that

it was Capt Wynne's powerful argument to remain at Eshowe that swayed Col Pearson's decision. This possibly prevented the occurrence of another disaster if No 1 Column had attempted to withdraw. Maj Moysey's role in the design and construction of Fort Khambula should not be understated - the successful defence of the Fort against the Zulu Army was to be a turning point in the war.

Lord Chelmsford was given his chance to re-invade and the Sapper involvement in this second invasion will be shown in a later issue of the *RE Journal*.

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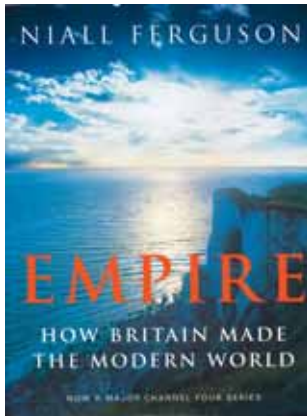
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Review

EMPIRE HOW BRITAIN MADE THE MODERN WORLD

NIALL FERGUSON



*Published by Penguin Books,
80 Strand, London,
WC2R 0RL.*

*Hardback, 392pp, illustrated.
Price about £12.00.
ISBN 0 713 99615*

THIS book has been in publication since last year but its subject – essentially “was the British Empire Good Thing?” – is entirely current. Its publication coincided with a Channel Four series presented by the author that was enjoyable but somewhat superficial and marred by the contrived poses that such programmes devise for their presenters in the mistaken belief that their audiences are tired of being addressed more directly.

The book is in a different league. Its thread of argument is logical and clear, as befits the academic standing of the author, who is Professor of Financial History at New York University and Visiting Professor of Modern History at Jesus College, Oxford. His start point is that

For better or for worse... the world we know today is in large measure the product of Britain's age of Empire. The question is not whether British imperialism was without blemish. It was not. The question is whether there could have been a less bloody path to modernity.

The book chronicles the globalisation of commodity and labour markets, of culture, government and capital markets

and, finally, of war. War, of course also underpins the earlier topics. The sapper contribution to the development of Empire is outside its scope although Kitchener, inevitably, is criticised for his attitudes and conduct in the Sudan and Boer wars. His military and strategic ability in those affairs, and particularly in 1914 goes unremarked. However it is the twentieth century globalisation of war and the consequential disintegration of the British Empire that is the culmination of the story and makes such compelling reading.

One of the many paradoxes that emerge is how much Britain needed the Empire to fight both world wars; about one third of ‘British’ manpower in 1914–18 and nearly one half in 1939–45. And yet it was that very fight that brought the Empire down, victories seen by the author as

...so fine, so authentically noble...In the end, the British sacrificed her [sic] Empire to stop the Germans, Japanese and Italians from keeping theirs. Did not that sacrifice alone expunge all the Empire's other sins?

The lead up to this, throughout the book, is a vivid portrayal of the colourful mosaic of the Empire, backed with the essential statistics and quotations of contemporary opinions. The accomplishments, achieved with astonishingly small military, financial and human resources, stand in contrast with the more embarrassing episodes many of which by today's standards are almost incomprehensible.

But what makes the whole discussion so interesting and so relevant is the final thesis comparing the situation of America today, as the world's richest and most powerful nation, proportionally far more so even than Britain in its heyday. Ferguson makes the point that “...empire is a much a reality today as it was throughout the three hundred years when Britain ruled, and made, the modern world”. The question is, how much should America be in the business of shaping the world of the 21st Century and beyond? Perhaps that will emerge from his sequel to this book, now in publication and similarly the subject of a Channel Four programme.

GWAN

Leadership Matters!

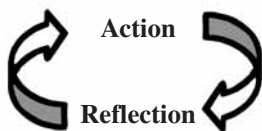
The Power of Self Awareness . . .

CAPTAIN I J SAUNDERS BSc FCIPD



Captain Saunders was commissioned into the Corps in 1972 following a University Cadetship at London University. He spent time with 11 Field Squadron at Ripon (although he was mainly away on interesting projects!) and 57 Training Squadron at Cove. He left the Corps to pursue a career in Leadership and Organization Development working for Rockware Glass, The Rover Group and Allied Dunbar before setting up Transition Partnerships with a group of colleagues. He is a visiting tutor at Warwick Manufacturing Group, Warwick university and has a growing relationship with Templeton College, Oxford University. He works with a wide variety of clients including the DLO and QinetiQ.

What can be done to deliver more effective leadership?



“Do this and don’t do that” approaches to leadership are consistent with a view of organizations as rational mechanisms subject to command and control. Character trait approaches to leadership reflect a view that the personal qualities of leaders are paramount.

In our view these are not enough. The “leadership framework” we offer reflects our perspective that organizations are organic and dynamic expressions of complex relationships. It is intended to stimulate thought and enquiry e.g. questioning assumptions and asking “what’s missing”.

Creating a mandate to lead

Managers often tell us that they have little or no time for reflection or thinking ahead. They are constantly exhorted to “get into action”. Essential for improving leadership is to invest time – in enquiry rather than prescription, reflection as well as action, engagement as a means of achieving control – thereby creating a sense of purpose and direction.

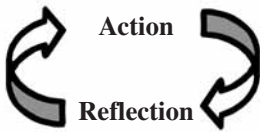
Our experience indicates that, whilst there are many real standards to achieve e.g. product and service reliability, it is not possible to plan such that nothing will go wrong. Whilst many leaders tell us that they understand this dilemma, they still seek to control outputs or ends, instead of inputs, or means, in the rush to achieve targets. This is shown through plans that focus on measures aimed at achieving targets, to the detriment of improved performance.

Leadership is often seen as the “bringer of change”; this can produce stress and anxiety in the leaders and in those they lead. Sometimes this results in a drop in performance rather than improvement and may be followed by even more change, stress and still lower performance. Recognizing the need for maintaining stability, continuity and capability in a changing environment will help to overcome this downward spiral.

To create and maintain their mandate to lead, effective leaders communicate – and foster communication in order to build and sustain productive relationships. This helps to build the trust that is essential to sustain performance in uncertain times.

This mandate – the authority to lead – is acquired as a result of many actions and applies at any and all levels: leadership is distributed throughout the organization.

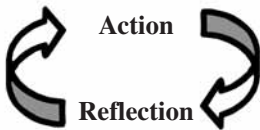
Questions to get started



- How can I find time to reflect more?
- What are my own assumptions about the leadership context?
- How can I increase my self awareness?
- How can I find out what my staff need to perform better?
- How can I find out if my “measures” help or hinder improving performance?

Relate these questions to the framework below.

A framework to link key elements



There are many books, articles and papers which propose simple models of – or prescriptions for – leadership. These include leadership; “born or learned”; as a function of particular individual traits, practices or styles; as a consequence of followership; or contingent upon context. Our view is that, taken separately, these fail to provide sufficient guidance for understanding and dealing with the complex situations that confront leaders today.

We believe that leadership – throughout an organization – is the key to success. It acts as the explicit integrator of strategy and direction, people, and business processes and systems. The effective linking of these elements is key to enabling an organization to be successful. See our previous occasional paper “The Performance Driver Model”.

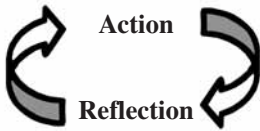
Here we propose a framework that links essential ingredients of leadership – context, practices, styles and self awareness – in useful ways. We encourage people in organizations, especially those with greater responsibility, to find ways to understand the complexity that is effective leadership and to recognize that there are no prescriptions. So if there is no simple answer, then leadership is about continually reflecting on today’s actions and consequences, so as to improve tomorrow’s performance.



Self Awareness

***A real example.** A naturally very assertive – some found him aggressive – director knew that to be effective with a wider range of people he had continually to seek feedback on his impact on others and how he communicated key messages, so that he had the best possible information on which to modify his style and approach for greater success.*

So he regularly asks himself:

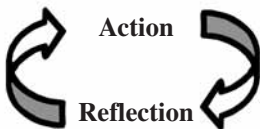


- How and what do I think and feel and communicate?
- What impact does my behaviour and preferred style have on others?
- How do others perceive me and interact with me?
- How do I model appropriate behaviours to meet a variety of needs?
- How do I demonstrate my values?
- How do I discharge roles and responsibilities productively?

Leaders can increase their self awareness by seeking and reflecting upon information from others. This is a pre-requisite for paying real attention to the needs of others, recognizing their differences, and understanding the best way to respond to them.

Leadership Context

A real example. A Managing Director in an international electronics manufacturing business paid careful attention to contextual drivers, scale, speed and precedents. In particular his style was to offer managers in the affected division very broad scope to plan their own future. Unfortunately his awareness of leadership context was not complemented by self-awareness about the impact of his leadership style and, critically, of some leadership practices.



- Where do I find out about the key variables which shape the environment for change – both internally and externally?
- Which of these variables can I quantify? Which can I control?
- Which of these are beyond my control and what do I need to do about them?
- In addressing context, what other leadership ingredients might I be neglecting?

Leadership Practices

A real example. The Chief Executive of a large and complex company was faced with a corporate survival crisis that required substantial change. He illustrated through his own behaviour a complete set of the leadership practices e.g. those outlined by Kouzes and Posner. He also understood the leadership context well and communicated this effectively. He was less successful in dealing with resistance to the change from managers whose own styles were more entrenched.

- What do I think are the critical leadership practices?
- Which of the practices do I find easy or difficult and what happens if I miss one out?
- How do I find out how I am doing on each of these practices?
- How do I deal with people who can't or won't do these things?

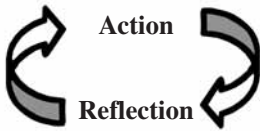
Leadership Styles

A real example. The manager of a management development team in a financial services company showed an extraordinary capability to match his leadership style appropriately to the staff he managed. This enabled him to get the best out of a team of people with

LEADERSHIP MATTERS!

widely differing backgrounds, experience, skills, motivation and aspirations. He linked this competence with complementary skills and understanding in leadership context and practices. Whilst he was self-aware, however, there was room here for development.

- How do I find out what my preferred style is?
- How do I determine what the most appropriate style is for the situation?
- How do I lead people who need me to exercise a style outside my comfort zone?
- How do I coach others who resist developing this flexibility so they become more effective?



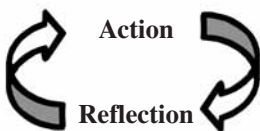
All four elements of this framework are important in their own right. And they are not enough on their own. They need to be integrated for good leadership. Some of this vital integration can be achieved by ensuring missing facets – such as undertaking the practices or particular aspects of style – are present in the team that surrounds a leader. One of the key points about Self Awareness is to recognize that something is missing and then to find the most effective way of dealing with it.

The key role of the leader is to engage everyone in the organization.

The idea of “Servant Leadership” outlined in Greenleaf is really important here. On the same front, an excellent illustration of effective leadership can be found in the Harvard Business Review paper – “Level 5 Leadership” by Collins.

How to apply these ideas

The approach is systemic: its elements have to be taken together. Learning about and becoming a more effective leader requires both **action and reflection**. Time needs to be set aside for both of these. Leaders really do need to be aware of the whole picture.



The diagram shown throughout this paper is a useful illustration of how action and reflection continually interact.

The key actions for applying these ideas are

- invest time for reflection and thinking about important and not urgent matters
- use your natural curiosity to investigate leadership and discover what works
- continually seek feedback in relation to processes and one’s own and others’ effectiveness
- take responsibility for owning and acting upon your own values
- make time to help in the development of others
- model excellence by personal example, let go and so enable others to become leaders – support not control
- learn from other leaders: create a group of peers who learn together
- address each ingredient of the model in turn: self awareness is the foundation
- remember that people and organizations are not machines – learn to differentiate between command and control and systemic thinking

and – most vital of all – allow yourself time to reflect on your actions and plan to act differently as a result.

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Contact us for more information

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A follow-on article “*Reflections on Leadership*” will be published when comments, thoughts and ideas about leadership resulting from interviews with prominent Sappers and people associated with the Corps will be presented.

Journal Awards

The Budget, Investments, Membership, Scholarship, Memorial and Publications Committee
announces the following awards for

articles of special merit published in the December 2003 issue:

ALL RANK AND NO PAY.
THE ENGINEER AND LOGISTIC STAFF CORPS ROYAL ENGINEERS (VOLUNTEERS), WHAT IS IT AND IS IT RELEVANT TO DEFENCE IN 2003
by Major J D Simonds – £100
BACK ON TRACK IN IRAQ
by Major J D Holman – £75
HUMANITARIAN DEMINING – HOW THE OTHER HALF CLEAR MINES
by Captain J D Webster – £50
DISASTER ON PROJECT MERCURY
by Major General Edward Fursdon CB MBE – £50
TORTURE? ME?
by *MII* – £50
MEMOIRS OF A CANADIAN MAPPER
by Warrant Officer E Storey CD CME – £50

Annual awards for 2003 were agreed as follows:

Best Article Of The Year Prize (£120):

Major J V White for
EXPEDITIONARY AIR SUPPORT – OPERATION *FINGAL*, AFGHANISTAN

Arthur ffolliott Garrett Prize

for the best contribution on the technical aspects of logistic engineering (£120):

Major J D Simonds for
ALL RANK AND NO PAY.
THE ENGINEER AND LOGISTIC STAFF CORPS ROYAL ENGINEERS (VOLUNTEERS) WHAT IS IT AND IS IT RELEVANT TO DEFENCE IN 2003

Montgomerie Prize

for the best article on a professional subject (£90 or set of Corps History):

Major J M Stephens for
EXPEDITIONARY WARFARE AND THE CHEAP CAMP

Best Junior Officer Prize (£60):

for the best article by an officer of the rank of captain or below

Captain J D Webster for
HUMANITARIAN DEMINING – HOW THE OTHER HALF CLEAR MINES

Best Warrant Officer or Senior Non-Commissioned Officer Prize (£60):

Warrant Officer E Storey CD CME for
MEMOIRS OF A CANADIAN MAPPER

Awards for articles of special merit published in the April 2004 issue:

DOES BATUS MAKE A DIFFERENCE TO WARFIGHTING OPERATIONS
by Major M Budden MBE – £100
ACCOUNT OF THE CONSTRUCTION OF PIONEER AIRSTRIP AND BRIDGE AT FORT SHEAN, PAHANG, MALAYA
by Kenneth Newham – £100
DHI QAR 2003
by Brigadier B J Le Grys MBE – £50
LICHFIELD? WHERE'S THAT?
by Captain S P Ash – £50
THE FLIGHT DEPARTING FROM GATE 3
by Major S G Tenison – £50
RANDOM THOUGHTS FROM A RETIRED RARE-THINKER
Brigadier J H Hooper OBE SBStJ – £50
REAR BASED INFRASTRUCTURE SUPPORT TO OPERATIONS
by Lieutenant Colonel J F Pelton MBE – £50

Reminiscences of Elgin 1939-40

FORMER SAPPER DUDLEY UTTING



Dudley Utting was born at Norwich on the 7 February 1914. His parents moved to Winchester where he went to school and had a number of jobs in the city before becoming articled to a local architect. The outbreak of war interrupted his studies and on the advice of the RIBA joined the Royal Engineers. On his return to civilian life he qualified in 1952 and as a consequence of the sudden death of the architect with whom he previously worked, bought his way into the practice. He had a flourishing practice in Hampshire specializing in the restoration of ancient domestic buildings. He served for many years as Secretary to the Hampshire Club, Winchester, and his hobbies are salmon and trout fishing, gardening and travel.

“... and therefore I have to tell you now that this country is at war with Germany”.

THOSE ominous words came over the radio to the country and to me where I lived in Winchester, Hampshire on Sunday 3 September 1939.

I was a student of architecture, articled to a local architect. The following day when we boys presented ourselves at the office, he called the three of us together and said “Well; the balloon has gone up. This means the end of any further work here, so you had better all finish the jobs you are working on and I suggest go and join up”. So in a few weeks I had presented myself at a redundant church hastily converted into an Army recruiting centre in Southampton, had a medical and filled up the appropriate forms.

Shortly afterwards I was ordered to report to the Training Battalion RE at Elgin on the 15 December. I rang my father who was in Torquay and told him the news. He said “Elgin, boy, where the hell’s that” I said “I had to look it up. Its way up North, east of Inverness, it will take a month of Sundays to get there”

Armed with a railway warrant, one foggy morning, I and a colleague from the office who had also joined up left on our journey from Winchester which took us to London Waterloo and the night train from Kings Cross to Aberdeen; no sleeper for us. Aberdeen seemed a bleak awesome city. I have never seen granite buildings which elicited such cold and impenetrable features. We then went onwards by train to Elgin. By this time it was getting dark. The lighting in our compartment was a tiny blue bulb and there was no heating. Apart from us two, there were two others and in the dim light I made out that one was a policeman but who was the other? Soon there was a faint rattle of metalwork, and then I saw that the other man was handcuffed. I shifted uneasily in my seat hoping there was not going to be a rough house before we got to our destination.

We eventually arrived, it was late now and cold. Other recruits of which we were unaware had also been on the

train. There had been no restaurant or snack bar, and by this time we were hungry. A Lance Corporal formed us into threes shouting, “Them’s that’s got torches, flash ‘em”. We were marched off to a church hall where they gave us a meal, and issued us with a palliase, three blankets, two plates, (one being a tin one), a tin soup bowl and a china mug, plus cutlery. We were told to doss down where we could and to be up and ready to get on parade outside for 0800 hrs. Reveille was at 0700 hrs and a basic breakfast was provided.

In the kitchen were two large gas cookers, two fire-clay sinks, a couple of large kettles and a cold tap. To wait for these kettles of water to get hot enough for shaving was out of the question so many of us poured warm water into our tin bowls and used that to shave by.

The parade turned out to be a march-off to another hall which by virtue of the trestle tables loaded with clothing was more reminiscent of a jumble sale. This is where we were all kitted out with uniforms, overcoats, battle dress, caps and badges, shirts, boots and socks, and issued with a regimental number, and two identity tags. These latter were both attached by cord hung around ones neck.

When I asked the Sergeant why two identity tags he said – obviously with a weird sense of humour – “One they bury with you. The other they send home to your mother”. I thought was a nice touch, doubtless calculated to inspire confidence, courage, and an eagerness to get into battle. My colleague who joined up with me stood 6 ft 2 ins and broad with it, and could not be fitted with a uniform so had to be content with drilling in his blue lounge suit, for which he was given 1/- (5p) per day allowance. In the meantime however, he was measured for a tailor-made uniform which evinced a certain amount of envy from the remainder of the section.

On Christmas Day we were all assembled in another smaller hall and given Christmas fare. A small bottle of beer was included. The Commanding Officer (I think his name was H A Baker) arrived with two accompanying officers and on a small table was a bottle of sherry and three glasses.

These were duly charged and we were all called to attention. The colonel said "Well here's a happy Christmas to you all, and damnation to Hitler". At this there was a resounding cheer and banging of the table. I confess looking back it was a very emotional moment for us all, so suddenly separated as we were from our loved ones.

The meals generally were pretty awful. The sausages I recall must have been made from reindeer offal. There were disgusting. We had to make up with bowls of Scottish porridge to keep out the cold. The comments as to poor quality of the rations offered to us soon got round the town with the consequence that many of us were invited out in the evenings to the homes of the townsfolk for meals. These kindnesses did therefore confirm the Scots' reputation for hospitality.

Our section consisted of some 30 bods and were were moved to a former soup kitchen which became our barrack room. The camp beds were some 24 inches apart and we were instructed to sleep head to tail. "For the purpose of morale" the Sergeant told us. I said "Don't you mean 'morals', Sergeant?" "alright clever cock, if you say so". And as an aside, said "Take his name Corporal". Outside was a tarmac open space which served as a drill ground. I shall never forget those drill sessions in the early morning, in the dark, bitterly cold, ice everywhere and many recruits ending up on the ground to the amusement of the Drill Sergeant.

This was the start of a 16 week course. First of all we had to learn how to drill, the correct length of step, the correct pace, how to slow pace about the way to handle your rifle, how to slope arms, to present arms and so on. However, we were learning more interesting things but some were a little irksome for those of us who had done nothing more energetic than sketching on a drawing board. We were marched off one day to a remote field and the task given was to dig a slit trench 6ft x 2ft 6ins by ft deep. This took some of us nearly all day and left us with blistered hands but I remember a little 5ft 6ins Sapper who had worked somewhere as a labourer finished his task in two hours.

During our training we were sent out to the Culbin Sands ranges for firing practice. The winter of 1939-40 was particularly cruel and there was a bitter NE wind blowing that day. On another occasion we practiced assault boat landings and light bridging in a local loch. One of our party was a rough Glaswegian who was always getting himself into trouble with the section corporal. In constructing these bridges we used heavy planks which were known as chesses. On being ticked off for some minor misdemeanor this Glaswegian Sapper went up to an officer and said "I've had enough, I want a transfer" "Oh do you?" replied the officer "then you can transfer that pile of chesses from here to over there" which was about 30 yards distant. As there were about twenty this took some time and as we were at the end of the working day we had to wait patiently while he carried out this task.

On one occasion we went out on Findhorn Bay on two pontoons. These were lashed together with a plank between the two on which was fixed an outboard engine. "Any of you buggers know how to run one of these?" says the Sergeant. "I do" I replied (having been a member of the river Hamble Sailing Club). "Right, then sit your arse down and get it going". This was duly achieved but owing to the mass of lashing around

the outboard engine, it was difficult for me to move the steering handle, and in a short while were were circling the bay. After a while the Sergeant clearly getting exasperated by my inability to steer the pontoons properly said "For Christ's sake sapper get a hold of that thing" "You keep going round and round in circles like a dog s.....g razor blades"!

At this gem of invective and descriptive English I burst out laughing which made him more churlish but eventually the lashing became less tight and we managed to get back to the landing stage to the relief of the entire section.

One of the worst experiences of those days were guard duties which we all detested. The army kept a small number of landing craft at Findhorn on the south side of the bay. The army command doubtless thought they might be useful to an enemy if they arrived in that area, so these craft had to be guarded day and night. It seemed to me at the time to be an idiotic waste of manpower. We each had to do two hours on two hours off. When it came for our section to undertake this task it seemed always to be my unhappy lot to have to do the 0200-0400 stint. The guard occupied a small hut where those off duty had bunks, but it was impossible to sleep for more than two hours at a time having regard to the disturbance provoked by the guard going on, or the guard coming off. There was no heating in the hut.

However the criterion in these circumstances was to keep as cheerful a demeanour as possible. some of us were being promoted, and I was curious to know why some had been picked out and others passed over (including me). When discussing this with an officer on one occasion he said "If you want to get on, get yourself noticed".

So I began by asking silly questions "What is the Mk No of that landing pontoon, sir etc. The next thing I knew was in Pt II Orders – Promotion: Spr Utting, R D to be local Acting Unpaid Lance Corporal wef 15 February 1940. Unpaid? I thought, what the hell's the use of that? However, I rejoiced in my one stripe and rang my mother to tell her.

In spite of these privations and inconveniences, we often enjoyed our time off thanks largely to the hospitality of many of Elgin's residents. The Church of Scotland Hut in Elgin was the main venue where meals at reasonable prices and hot drinks were offered us new recruits. It was also the meeting place where we got to know many of the local residents, who offered us hospitality in their homes. This involved invitations to take baths. This was particularly welcome since our accommodation was very basic in requisitioned premises such as Huts and Halls and there were never any arrangements made in the early days for baths or showers. Amongst those who were kind to myself and immediate friends. I remember particularly, John Wittet a local architect, Mrs Bibby of the Haugh, and a lady who owned a bakery and restaurant in the town centre. Four of us were asked to polish the panelling in the restaurant which took some time after which we were regaled with a sumptuous meal. It is true to say that during my 16 weeks in Elgin there were times when I had been invited to various homes seven nights a week.

From time to time we had to attend Church Parades and I attended the Episcopal Kirk. As a result of this I got to know the Dean of Moray, Dr Robertson I think his name was, who like me was a keen fisherman. He used to take me out on Blairs Loch Forres occasionally and we managed to get a few

wild trout. Not large ones, but about two or three to the pound and delicious grilled they were too. I discovered later that the boat cost 12/6d (62½p) a day. It is interesting to note that a day on the River Test in Hampshire nowadays costs £150.00 plus VAT and the limit is two brace!)

A few of us were invited that Spring to sing on the stage of a local cinema with a local choir who were giving a rendering of Handel's Messiah. This we did in spite of the ribaldry directed at us from our mates in the unit.

The time came when our course was coming to an end and we were being moved to Pinefield, a new camp being built to the east side of the town.

Applications were being considered for commissions and this meant a fairly rigorous interview with three senior officers. I did not convince them as to my suitability as a potential RE officer but was recommended to go forward for an infantry commission. My next adventure was being posted to the OCTU at Dunbar in May of that year for a five month intensive course.

I was first commissioned into a Devon TA unit in October 1940, which I did not take to very enthusiastically and applied for a transfer back to the Corps. This was granted and I was posted to Bovington Camp as Garrison Engineer. After postings to Ghana, and India, I finished up as DCRE, South Malaya Sub-District and was demobilized in the summer of 1947 with the rank of Major.

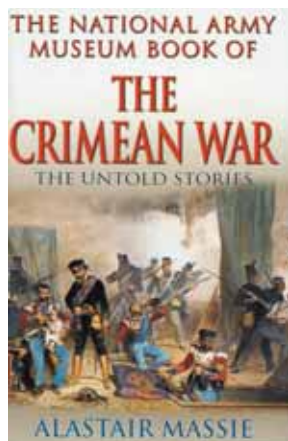
ADDENDUM

THE recent commemoration of the D-Day landings and subsequent hostilities in Europe has caused me to reflect on how lucky I have been to have escaped those horrors. Indeed, looking back I have to express the gratitude I feel to the Corps and in particular, for the interesting and sometimes exciting experiences which the love of travel has since been generated both in this country and elsewhere. Indeed I would never have visited such countries as Ghana, Togo, India, or Malaya or met the many comrades in the Corps who became firm friends for decades thereafter.

Review

THE NATIONAL ARMY MUSEUM BOOK OF THE CRIMEAN WAR THE UNTOLD STORIES

ALASTAIR MASSIE



*Published by Pan Macmillan
(Sidgwick & Jackson),
20 New Wharf Road London,
N1 9RR.*

*Price £25.00 (hardback).
362pp, 58 illustrations,
16 maps.
ISBN 0 283 07355 1*

THIS is the fifth in a series of "The National Army Museum Book of...". The previous one, *Wellington's Armies*, was reviewed in *Royal Engineers Journal* April 2004. They are useful books offering accounts of the wars concerned linked round extracts from letters and journals in the Museum's collection. Dr Massie is well qualified for this task being the Museum's Head of Department of Archives, Photographs, Film and Sound and the editor of an impressive catalogue for their recent temporary exhibition. His text is very readable and he neatly keeps the story moving between the extracts of the letters. The set of six maps, placed conveniently at the beginning of the book, are clear, that of Inkerman unusually helpful for that otherwise very confusing battle. There are also some excellent photographs.

There are many fascinating personal accounts recorded and it is the great value of this book, and the whole series, that they bring to light for the general readership documents that

would normally only be able to be seen by specialists.

Only three sapper letters appear. One from General Burgoyne describes the ground at the Alma. Another, from the young Charles Gordon reports in chirpy style on a French action that he witnessed in February 1854. A third is from Captain Gustavus Crofton awaiting amputation after receiving a leg wound in the trenches on 9 April 1854, from which he subsequently died. There is very little anywhere about the engineer work in the trenches, other than one or two criticisms of the sort to be expected in such a difficult situation. The only mention of the Royal Sappers and Miners, who had performed so gallantly in the long struggle in the trenches earning four VCs, is in connection with the huge project to blow up the docks in Sevastopol after the Russian evacuation, with which they are credited. Strictly speaking the Royal Sappers and Miners had already been renamed Royal Engineers by this time and throughout the war the two corps were effectively integrated. A word of explanation would have been welcome there. The confusion is made worse by one of the correspondents, a soldier of the 18th Regiment, referring to his Royal Engineer commander as 'Major Nicholson of the Mechanics'.

In the nature of things many of the letters have something of a whingeing tone and so overall a feeling of depression pervades the story. The Crimean War was hardly the most glorious episode in British military history but there was much to be proud of and life for the army was by no means all unrelieved gloom, horrifying though certain periods were. Perhaps the book would have benefited from fewer or shorter extracts and more of the author's own pleasant and authoritative style. A little more about the Baltic campaigns and the gallant defence of Kars would also have been welcome.

While this book would not be ideal as the sole account of the Crimean War in the library of the general reader, it would form a valuable supplement and does a fine job bringing to the public the feelings of some of those who took part.

GWAN

The Queen's Gold Medallists Royal Military Academy Sandhurst

JEFFERY LEWINS

(Major Jeffery Lewins has another article on page 88)

THE Queen's Golden Jubilee Year was marked in many ways. One was to give an opportunity of meeting to all those who have been awarded the Queen's Medal on passing out top of their intake at the Royal Military Academy, Sandhurst. Statistics of the medallists promote some reflections on the Corps of Royal Engineers.

The Academy was formed in 1947 after the Second world War as an amalgamation of the old "Shop" or Academy at Woolwich, for Gunners, Sappers and other Technical Corps, and the old Military College at Sandhurst. Statistics were published in the Academy's journal *The Wishstream* at the time of their own Jubilee, in 1997. These statistics included of course the roll of the King's medallists, authorized by King George VI. The Academy has also kindly provided the list of Medallists from 1997 onwards¹.

In the Queen's reign some 140 Gold medals have been awarded. The corps' or arms' of the majority of recipients are listed in the table.

RE	25
Infantry excl Gds and Para	25
RAC incl RTR	16
RA	11
R Sigs	10
Para	8
REME	7
Guards Division	5

Individual winners have included the AAC, WRAC, Int Corps and RMP with the Medal going on three occasions to an overseas cadet. SRH Dennis (RTR) was distinguished in receiving both Medal and Sword.

The 25 medals received by the Corps of Royal Engineers, or some 18 per cent, suggests that Sappers "punch above our weight" in the Army share. Lest we take too much pride in this apportionment, some background is in order. Traditionally the Medal goes to the cadet receiving most marks. In parallel, a Sword of Honour is awarded to the cadet judged "best" of the intake and the Corps is less flattered by those statistics.

Secondly, Sandhurst has seen major changes. In the early '70s, the eighteen-month course was shortened to twelve months and the annual intake raised from two to three. In the first half of Her Majesty's reign, therefore, where some fifty medals were awarded, the Corps received twenty. But in the second half where some 75 medals have been awarded, the numbers going to RE has dropped to five.

The original course curriculum was comprised of one-third

military theory and history, one-third military practice (drill, exercises and sport) and one-third academic studies. In the shortened course, that envisaged recruiting graduate cadets, the academic content is much reduced.

TWO OBSERVATIONS:

THE reduction in academic study perhaps gives less opportunity for the technical officer to obtain a corpus of marks that would favour his position.

But the nature of the course may have an influence on recruitment and choice of regiment or arm for commissioning. If so, we may have to face a conclusion that says commissioning into the Royal Engineers is less attractive than it was and, consequently, that our officer intake is impoverished.

One should not read too much into this. The subsequent careers of Gold Medallists do not invariably lead to Field Marshal's rank. Many, myself included, left in middle age at the rank of major and were grateful for the preparation that enabled them to follow a longer and equally satisfying second career. However our Recruiting Officers might like to comment on these statistics.

THE SANDHURST MEETING

ALASTAIR Drew (medallist 1959) organised a delightful day on 7 Aug 2002 when forty medallists and their companions were privileged guests at the Commandant's Parade and then took lunch afterwards. Messages exchanged with the Palace were read out. I attach my short address, given before I proposed the loyal toast.

ADDRESS AT THE RMA SANDHURST TO THE QUEEN'S MEDALLISTS

"THANK you Alastair for inviting me to propose the loyal toast. It is a great pleasure to see so many well turned out, vigorous and attractive people here. And then of course there are the Gold Medallists who can be congratulated on their choice of companions! We should I think start by thanking Alastair for organizing this unique celebration – not a reunion but a first union. The administrative arrangements have worked well and our thanks must go to all those involved.

I myself am something of a cuckoo in the nest, not strictly eligible to be here. Although I received the first Queen's Commission in Feb 1952, I was actually given the King's Medal. You might be interested to know that some days later, the Academy asked me to give it back. They did offer a Queen's Medal in substitution, but I thought that the letter that accompanied the original from Buckingham Palace warranted me keeping the last medal authorised by His Majesty King George VI. In addition, and you might like to look at the obverse of your own medal, I later noticed that it had

¹ I understand there are some errors in *The Wishstream* account. GG Candish I am told should be shown as commissioned into KOB rather than RA. In my own case, I did not receive the Queen's but rather the King's Medal. All eight of these were all erroneously struck as being RMC Sandhurst. The story of my medal's theft during a burglary and subsequent restoration is better recounted at guest nights.



The last King's Medal - 1952

Parade in 1952 was cancelled in respect of the King's death and we were allowed only last April the privilege of marching up the steps behind the previous Senior Division. I believe our dressing was deplorable and Queen Victoria should have had much to listen to.

But our warmest thoughts must surely go to those young men and women who we saw on parade today. I thoroughly enjoyed my time at Sandhurst and although much has changed in fifty years, much I am glad to say remains. Today we talk about "mission statements" but I am delighted to see that an older encapsulation is still rightly shown as Sandhurst's motto – Serve to Lead.

You medallists here have reached various stages in that demanding obligation of leadership, some able to look back on a career in which leadership was given in civilian as well as service life, some with its call still largely ahead of you. There is a unique bond between us and to express that tie, may I invite all to rise and drink the health of Her Majesty The Queen, whose Gold Medallists you are.

Ladies and Gentlemen, the Queen.

Jeffery Lewins 7 Aug 02

been mis-cast as pertaining to the old Military College. I'd be interested to know if the Royal Mint corrected that error.

May I extend these thanks to the Commandant of the Royal Military Academy who has made such a memorable day possible and through him to the staff who we have been privileged to see. The scene will have brought back memories to all the medallists; to some like me through the mists of time and to you others it must seem just days ago that you yourselves paraded and marched up the Academy steps. Indeed in my case, it was just days ago because my Commissioning

Editorial Note: In recent years, Jeffery Lewins has been a prolific write for *The Journal* on a wide range of subjects and although unusual, and not wishing to set a precedent, we publish this biographical note rather than the usual pen picture.

BIOGRAPHICAL NOTE

Jeffery Lewins was the illegitimate son of a young orphaned musician, one-time secretary to Gracie Fields, and later a bookmaker's clerk. His father was a confectionery cook. When able to marry, his parents overcame the stigma, as it then was, of the bastardy laws by adopting their own child, a device that gave him at least the possibility of becoming "an officer and a gentleman". His father, Fred Lewins, had risen to Sgt in the Machine Gun Corps in World War I with service in Gallipoli. In the World War 2, he rose through the ranks from Gunner to Major when he commanded a Pioneer Company during the Blitz which rescued people at night from V2s in London and re-built their houses by day. He reverted to captain after the war, commanding a prisoner of war camp in Scotland and then serving as staff paymaster in HQ BAOR, then at Bad Oeyenhausen.

When his father was mobilised in 1939, Jeffery was entered into the small boarding choir school of All Saint's, Margaret Street, London, where he developed his enthusiasm for singing, music and acting – and a dislike of boarding schools. He came down with pneumonia, pleurisy and emphysema in 1942 and had complications following triple resection of the

ribs that led to a year in hospital and out of school. Discharge from Bart's a year later was enforced by the anticipation of hospital demands following D-Day. His mother got him into the Brighton and Hove Grammar School (£5 per term), where he received a good education, enjoyed the School CCF (rising to Signals Sgt) and regained enough fitness to start playing games. A place was available at Cambridge but he chose to start his National Service and seek a NS commission. Finishing Mons OCS he was then able to transfer to the regular army and enter Sandhurst. Well prepared academically, he was able to enjoy all aspects that included success in the soccer competition, where he kept goal for Blenheim, potholing and the Polished Bun, and somewhat to his own surprise was awarded the last King's Medal. Service in Korea was followed by entry to Caius College Cambridge under army auspices that let him complete a full three years degree course. Waving the King's Medal before the English Speaking Union selection committee chaired by the economist, Geoffrey Crowther, meant he was awarded a King George VI Fellowship to study nuclear engineering at MIT. That turned into a three-year course for their doctorate as well as a master's degree. So one thing led to another.

Sandhurst and MIT was the making of him. The army's generosity in allowing him such leeway in his career is equally appreciated. He hopes that mavericks may still today be generously treated and exceptions allowed that in time will enrich the Army.

In Pursuit of the Holy Trinity (A Foray into the Divine Mystery of Design, Resource, Construct)

MAJOR C C BENFIELD BENG(H) MSc AMIMEChE



Major Carl Benfield is currently commanding 10 Field Squadron (Air Support), which formed in August 2002, deploying to the Falklands, Sierra Leone and Iraq in its first year. The Squadron finally officially formed on 26 February 2004. This article is based on a presentation given to engineers in MND(SE), Iraq, the intention of which was to explain “best practice” for ensuring the efficiency of construction tasks through maximizing the “design, resource, construct trilogy”.

INTRODUCTION

DESPITE the rather glib title, there are similarities between the real Holy Trinity and the oft-used phrase “Design, Resource, Construct”. Both have a “that’s just how it is” quality. Both appear more complex the further one examines them and both have their elements inextricably intertwined. Whilst I will leave the explanation of the former to the theologians, the explanation of the latter should be bread and water to anyone about to embark on a construction task, complex or simple. A picture being a thousand words, Diagram 1 should help to cut down on waffle and serve as a more useful guide.

TASK PLANNING

THE Corps is currently drafting ME Vol 1 Part III – *Engineer Planning and Organisation of Work*. This will be a must have guide to be read prior to construction tasks, which it breaks down into the following components:

- The Defining Stage.
- The Planning Stage.
- The Mounting Stage.
- The Execution Stage.
- The Recovery Stage.

Hardly rocket science, but sometimes the obvious is well worth stating. Of direct benefit however, is an understanding of how Design, Resource, Construct (DRC) is applied at each of these stages, as for most tasks, these element are undertaken by separate entities either within or without the Military Construction Force (MCF).

DESIGN

THE designer can be anyone: HQ MWF; CRE (Wks); STRE; Construction Supervision Cells (CSC); Clk Wks; QMSI; RE Officers; SNCOs or JNCOs. The top end of

this pack will normally undertake more long-term technical design, leaving the grass roots elements to undertake battle-winning fag-packet combat engineer design.

This scale of capabilities is also reflected in the publications available to the designer: an STRE will normally hold British Standards, CIRIA and CIBSE guides and Building Regulations whilst a JNCO might have a Tactical Aide Memoire.

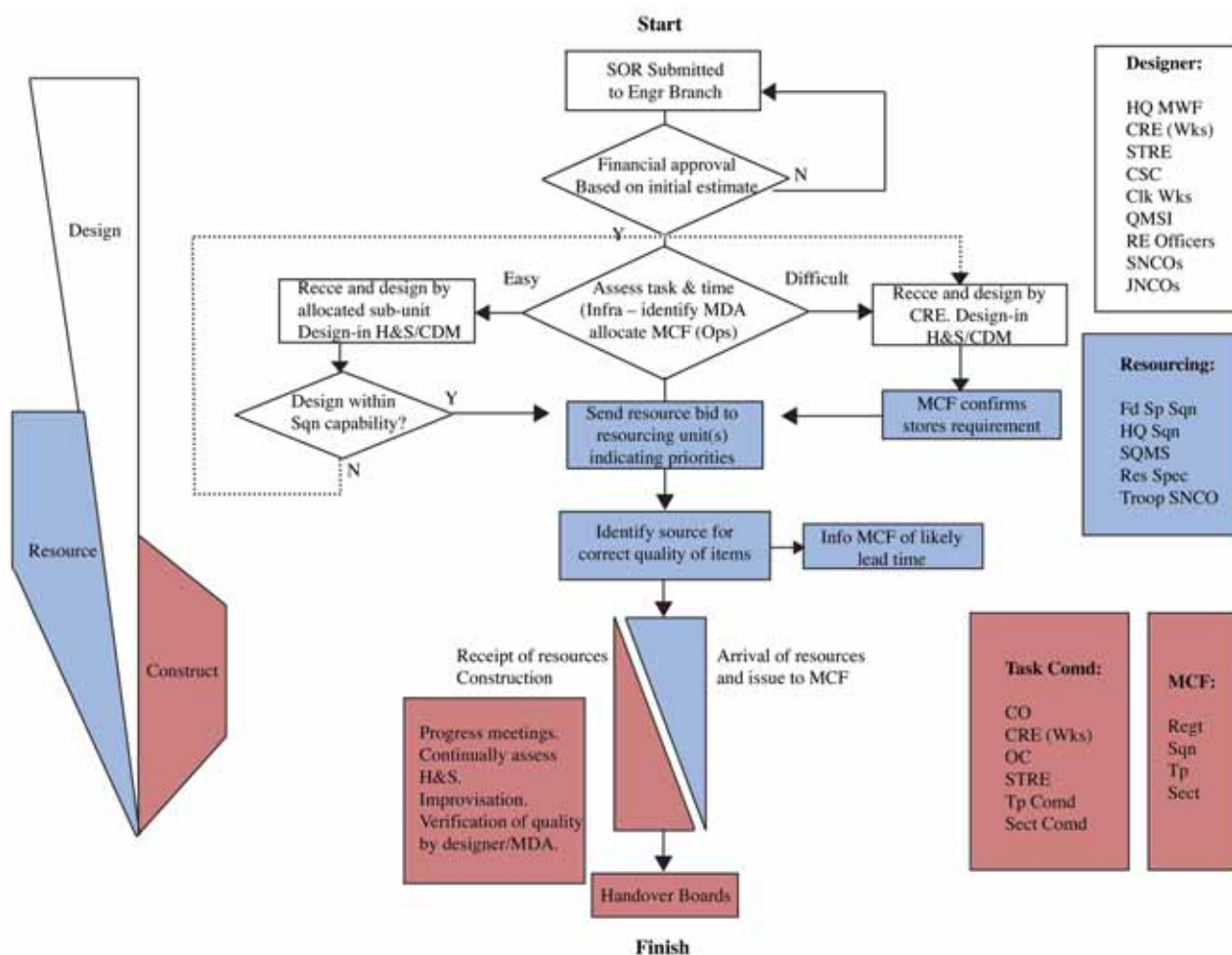
It is also important to nominate the Military Design Authority (MDA) which where possible, should scrutinize all designs. This will normally be a CSC, STRE or CRE, whichever is the highest level geographically available.

The design is initiated out of the client’s statement of requirement (SOR). The client should be encouraged to write the SOR in terms of the effect they wish to achieve rather than a detailed explanation of what they think you should build, although sometimes this is unavoidable especially when the client has a specific technical requirement. The SOR should be scrutinized thoroughly and the client questioned on the fine detail – at this stage they will play an important role in the direction the design takes. Factors such as time for completion, design life, mode of use, location can all usually be modified to reach the best compromise and ensure what is built is actually needed.

Design must primarily be appropriate. There is little point in building the Taj Mahal as a deep trench latrine (although Gulf veterans might dream of the cool touch of porcelain); conversely a temporary shelter will not suffice for a long-term school building in Kenya.

Whilst these are extremes, most projects have examples of the construction being delayed whilst waiting for vestigial items. The design should also use locally available materials, provided they are of reasonable quality, in order to reduce lead times on resources.

This leads me to my third point, which is that design should



Design Resource Construct Flow Chart.

be a continual process; it should be under constant review in order to overcome technical or resourcing issues. A five minute discussion on alternative methods can negate weeks of needless work or frustrating waiting and should be a regular feature of task meetings.

Finally, if at all possible, the design should have a particular unit in mind for construction. For example, few would suggest that the manoeuvre skills of an armoured engineer unit can match the artisan bias of a general or air support organization when it comes to construction, and this difference in capability needs to be reflected in the design.

RESOURCE

ONCE the design is complete, it is up to the MCF to check the materials list and identify changes. This verified list is then submitted, together with an indication of priorities, to the resourcing unit.

As with design, a number of agencies can undertake resourcing: Battlefield 7, SCOC, RLC, Fd Sp Sqn, HQ Sqn, SQMS, Resources Specialist, Troop SNCO. The resourcing unit needs to identify the best place from where to obtain the items. This knowledge normally takes time to acquire, especially for local purchasers in foreign countries.

In my view, our current resourcing system works well for battlefield engineering supplies such as defence stores,

mines, bridges etc, but is not adequate for the simultaneous multi-tasking of several units for construction work. At the top end, the staff at Battlefield 7 have much to keep them occupied, let alone worry about a left-handed u-bend widget. The RLC delivery system is unlikely to recognize such an item, or indeed its importance and consequently delay its arrival to point of need. This one item may mean the difference between 500 personnel occupying a camp with ablutions and air conditioning or them sitting in the dust strapped to intravenous drips to replace lost fluids.

Resources can be procured locally (local purchase), from the UK or global suppliers. Local purchasing can only be conducted by a qualified corporal or above after training on a short course, although ideally, he should also be a qualified resource specialist.

High-cost items and resources that must be procured in UK are best handled by the existing system. This ensures that integrity is retained by use of the tender system, and also that inexperienced personnel do not make expensive mistakes. However, sub-units need to be given the financial authority to procure smaller items – “for want of a nail the battle was lost” rings true, especially when 2 x 4” nails will do just as well as one of the 6” nails the system has been trying to source from UK. Thus as with design, resourcing needs to be flexible in order to ensure task timelines are adhered to.

Examples of DRC work carried out by 10 Fd Sqn (Air Sp)



Air conditioned radar cabin – Tallil.



Air-conditioned kennels for explosive detection dogs.

CONSTRUCT

CLEARLY a lot has happened before the construction phase begins, and just as with a standard DIY painting job, if the preparation is right, the task should be straightforward. With a detailed understanding of the plans, the right tools (which may have to be hired), and an idea of how things should progress (a cascade diagram), there should be few occasions when work has to be rushed, and in peacetime, never a reason work is unsafe.

The Military Construction Force (MCF) can comprise of any organization but will normally be no more than a squadron or smaller; in exceptional cases, up to a Regiment. The task commander is the appropriate person for the force in question. Local contractors can also be used for part of or even the entire task, although this aspect will not be covered in detail here. The MCF ideally needs to have had some work-up training before real tasks begin. It is common throughout the Corps for artisans to practise their craft infrequently leading to considerable skill fade. Another key to successful construction is the holding of regular meetings in which designers, resources and constructors gather together to maintain health and safety, avert problems and design solutions. Whilst these may be lengthy for complex or simultaneous tasks, they are an essential management function.

During the construction phase, the designer (and preferably the MDA), should inspect the work at regular intervals to ensure that quality is being maintained. This minimizes corrective work. Ideally the designer should plan in key visits with the MCF before work begins.

I have found it useful at Squadron level to separate planning (greater than 48 hrs out) and operations (less than 48 hours) run by separate individuals with the former being given to the most technically competent. In the case of air support, this will be a garrison engineer. The benefit of this is that the planner is released from the daily trivia of coordinating last minute transport, manpower and resource fixes to ensure that the next task is planned to run as smoothly as possible.

CONCLUSION

THE DRC concept is achievable, provided the limitations of those providing each function are understood from the outset. Constant re-appraisal of the design is essential, as is the flexibility to overcome the unexpected. Above all, constant communication and understanding between agencies will help ensure that the final product is not only on time and budget, but also that it meets the SOR.

Moments of Corps History

The Royal Engineer Air Squadron

AN OCCASIONAL SERIES EDITED BY CAPTAIN J E BORER

Since Sapper has become more pictorial with the advent of the digital camera, it has become obvious that although most Corps occasions of note are recorded officially, there are hundreds if not thousands of other photographs in existence that record the events from a different and sometimes a more personal angle. In addition the volumes of Corps History, although they do have some photographs, describe many occasions that are bound to have been recorded on film by the participants. This occasional series is intended for readers to air those photographs in your possession that may have some Corps significance, but have hitherto never been published. This first offering is from a period of my own service with the Corps. It did not rate a mention in Volume X of Corps History, although it did make amendment one.

By mid 1967, sufficient officer and NCO pilots had been trained to allow each of the Divisional Engineers (1st, 2nd and 4th) and also FARELF, to have an RE Air Troop manned by RE-badged pilots. This was designed to improve the aviation support for teeth arms provided by The Army Air Corps. Although in general the system worked, it did mean that more aviation support personnel were required, aircraft spares had to be decentralized and flying supervision suffered. All this quickly became unacceptable and so the idea of the Army Air Corps being reorganized from a small cadre with temporarily attached personnel, to a properly organized Corps in its own right was born.

From the Corps point of view, the change occurred in January 1970. 10 Flight AAC became 653 Aviation Squadron within the 3rd Division Aviation Regiment. The pilots were multi capbadged (including AAC) but two were RE (Capt Tony Howgate and Sgt Ron Young). The technical staff was, as usual, from REME, but the rest of the personnel apart from ACC and RAPC, were found by the Corps. They were led by the SSM, WO2 John Welby and the SQMS, SSgt David Bridgewater. The Sigs NCO, Sgt John Borer and Sgt "Taffy" Edwards the MT Sgt doubled as Flight Sergeants for the two flights. All the drivers, signallers, aircraft handlers, fuel-bowser operators and observers were also RE. The rest of the regiment was similarly founded and organized: 663 Sqn (Household Cavalry), 664 Sqn (Para Regt), 665 Sqn (Infantry) and 666 Sqn (RAC). RHQ, 653 and 663 Sqs were based at Netheravon in Wiltshire, 664 at Aldershot, 665 at Colchester and 666 at Topcliffe in Yorkshire.

Each squadron had two flights. One had six Sioux helicopters armed with skid-mounted GPMGs for recce, and the other had four Scout helicopters. One was for missile resupply since the other three each carried four SS11 air to ground missiles. These were fired by Air Gunners who were also multi capbadged, but tended to be RA and RAC. The GD aircraft was also used for VIP taxi-work and CASEVAC. Between formation and Easter 1973, the squadron served in Wales, Scotland and Cyprus and also did two tours in Northern Ireland, being based at RAF Aldergrove and Shackleton Barracks, Ballykelly. For these tours the armament was removed. The Scouts were used as VIP taxis and for troop insertions onto operations. The Sioux were also used as taxis, but mainly for recce and observation for which they were fitted with *Nitesun* searchlights and *Skyshout*, a powerful loudspeaker system. On two particular successive days one of our aircraft illuminated a riot in Belfast to assist the RUC and the Commandos on the ground on day one and on the following day it was in roughly the same airspace playing Christmas Carols to the shoppers below! The squadron had been issued with two armoured landrovers and on non-flying days (due to servicing or the weather), we formed a two-vehicle mobile patrol which went to assist any unit of 39 Inf Bde in Belfast that needed extra vehicles and manpower. In 1973, the experiment

was deemed to have worked and the Army Air Corps as we know it today started to be formed. Those in the squadrons at the time were re-badged, although some, (notably the author!), were informed in no uncertain terms by REMRO that Centurion AVREs, ARKs and bridgelayers awaited them in Osnabrück!



This photograph, which took two days to set up, is the only one of the whole squadron together and was taken in June 1972 from the top of the Netheravon Control Tower. The OC was Maj John Drew AAC (centre) with the SSM, WO2 Welby, behind him to his right. The author, Capt John Borer, is central in the group in front of the Landrover with the light coloured roof. The officers are wearing black armbands to mark court mourning for Prince William of Gloucester.

573 Field Company in Tunisia 1943

CAPTAIN M MORELAND OBE MA DL RN (RETD)

ARTICLE WRITTEN BY JANE MORELAND



Mike Moreland joined the Royal Engineers in 1942 aged 18 and was commissioned in October 1941. He was sent to Egypt in 1942 where he joined 573 Field Company which had lost many officers and men in the withdrawal from Benghazi to the El Alamein line. He became a platoon commander and was the reconnaissance officer for the reinforced Company on the night of 23rd October 1942 for Bottle Track, through the enemy minefields on the 2nd New Zealand front.

The Company was then allocated to 10 Corps for the remainder of the North African campaign before landing at Salerno, where his platoon built one of the first Bailey bridges on the mainland of Europe. After a year in Italy, he was sent to the School of Military Engineering at Ripon. His war service ended in Singapore in September 1946 where he had command of an Army Troops Company.

Mike left the army to complete his Cambridge degree course. After a period of employment with a consulting engineer, he joined the Royal Navy at the end of 1948, from which he retired as Captain in 1973. Since then he held the post of Director of the Somerset Red Cross, was elected for three terms as a County Councillor, was a member of the Regional Health Authority for ten years and then made a Director of one of the first NHS Trusts until retiring in 1992. He is still actively involved in the care industry as a Trustee Director of a charity running nursing and care homes for the elderly.

THE sixtieth anniversary of the fall of Tunis in May 2003 provided an opportunity for veterans Mike Moreland and Jack Stace of 573 Army Field Company Royal Engineers to revisit Tunisia and the Eighth Army's route during the Second World War.

573 Army Field Company was a Territorial Army unit stemming originally from one of the old Coast Defence Searchlight Companies. Pre-1939, in Devon and Cornwall, these sapper units had manned coastal defences but these became the responsibility of the Royal Artillery by the outbreak of the Second World War. Three Army Field Companies were formed from the old TA sapper units, nos. 571 and 572 from Devon and 573 from Cornwall, and one Army Field Park Company, numbered 570.

After the decisive battle of El Alamein the company cleared mines and rebuilt the pulverised roads into Libya before making their way to go forward again with 10 Corps in Tunisia in the spring of 1943.

Rommel had withdrawn fast but planned to hold off the advancing Allied force at the Mareth Line in southern Tunisia, where Monty expected to have to punch his way through in another Alamein-style operation. It was a strong defensive position on the Wadi Zigzaou, where steep sides created extremely difficult terrain. The infantry found itself pressed up against the cliffs, unable to break through, and casualties were high.

Notwithstanding the fact that they made up the highest percentage of fatalities in all of the North African campaign, the infantry still held the engineers in high regard. One of them asked Mike what his group was doing. "Oh, we're sappers, working on the track, digging up mines". To Mike's astonishment the soldier shook his head, "I wouldn't have your job for anything".

Mines clearance was one of the engineers' main jobs in 1943, requiring a high level of skill and concentration.

To clear tracks for tanks through a known minefield there was a well-rehearsed drill. This was a three-stage procedure to make a gap about 18 feet wide. A recce party would go first, then a control party laying tapes in lanes followed by the main working party with three mine detectors working in echelon. Each sweeper was backed by a mine marker and a de-fuser and lifter. Finally a pilot vehicle would be used to prove the track clear.

As reconnaissance officer, Mike usually went first. "They weren't that difficult to spot in daylight if freshly laid because the soil or vegetation would be disturbed. You'd see if there was trouble ahead, if you found a vehicle blown up. You could usually sense if there was trouble around. Leaving a road surface was always hazardous unless following in the clear tracks of another vehicle as road edges were often heavily mined. They mostly used Teller mines and a lot of anti-personnel S mines, which if you trod on them, leapt up in the air with a jack-in-the-box effect. They were meant to jump six to eight feet high and give a horizontal blast of ball-bearings. The Germans were also expert at booby-trapping their mines, which meant that, even if you took the igniter out of them, you couldn't lift the mine because it would have another detonator underneath attached to a wire pegged into the ground".

Once the mines had been lifted, a pilot vehicle was essential for checking that the way was indeed clear and driving it was a hazardous job. "We used South African long-nosed Ford three-tonners. We nicknamed them the banana wagons because we thought the slatted sides should have Fyffes written on". Remarkably, there was no shortage of volunteers to drive the heavily sandbagged trucks through the gaps.



Mike Moreland inspects a Teller mine cover at a house in Matmata.

10 Corps was poised to lead the Eighth Army through the Mareth Line. But with the infantry pinned down, Montgomery soon realised that it was an impossible bottleneck. The Corps was diverted inland to Fom Tatouine and around the western side of the mountains of Matmata with 1st Armoured Division. They followed Freyburg's New Zealanders who were already racing northwards in a left hook, aiming to regain access to the coastal plain through the Tebarga Gap.

One of Mike's priorities on this 150-mile outflanking manoeuvre was to reconnoitre for birs which contained fresh water. As the Germans wired and booby-trapped everything they left, it was reasonable to assume they would also foul the tanks. Mike came to a bir where he cautiously tasted the contents. They seemed clean but on his return he found a notice, "Do not drink – bilharzia". The Allies soon broke through the Tebarga Gap so Mike's platoon could set up a water point fed by the good springs at El Hamma, but he fretted about that notice for many months.

The next bottleneck was the Gabes Gap, where the steep-sided hills of Jebel Fatnassa provided an excellent defensive position for Axis guns. 4th Indian Division and in particular the 1st/2nd Gurkhas demonstrated their skillfulness in mountainous terrain, taking the position with hand-to-hand fighting. Mike went up to the pass on a reconnaissance. "One lasting memory I have, and that's of Johnny Ghurka holding up his handful of German scalps. It's the only time I ever saw it but it was right here, in this pass. It must have been then that the tale of the Ghurka and the German started. Imagine, the German was up there somewhere looking over the top of the ridge. The Ghurka crept up with his *kukri* knife and went (swipe) like that. And the German said, "Missed me that time, Johnny!" And the Ghurka replied "Now you just shake your head and see!"

The Eighth Army broke through the Gabes Gap at Wadi Akarit and hard opposition finished at Mahares. From this point their advance was rapid. 573 Field Company spent this time opening up tracks across country, at some distance from the road. The land was less cultivated than it is now, with scrub and dense hedges of prickly pear, which the sappers frequently had to hack through by hand with machetes or axes.

Being a sapper involved keeping a constant eye out for sources of engineering supplies. Anything like timber, trees, oil drums or old girders were incredibly useful, especially for building causeways across the wadis. Wherever they went, they made a note of where things were and built up a good record. Nonetheless progress proved monotonous. "It was always tracks, tracks, tracks. Taking a track across the desert scrub, there was no mechanical equipment to do it with. And then maybe there would be mines. If there were mines of course you had to deal with them first. Otherwise, it was just pushing on across country and marking out a route".

To make life more difficult, the engineers were frequently fired on. Mike went to collect a reinforcement officer who was waiting at the Corps headquarters back at El Hamma. "The Germans always had what we used to call "the evening stonk", when after their meal they would go back to their guns and fire at everything they possibly could. I'd picked Eric up and we'd just turned off the road going down a track. We were in a wadi area just below the hill, so we were hidden from view. But on the way down – *phoe-wof-wof-wof* started all around us. You either had to stop, leap out and lie flat down in the sand or put your foot down and go as fast as possible and that's what I think I did. That was Eric's introduction."

Direct engagements were rare but they did manage to bring down a Messerschmitt ME109. The plane was dive-bombing a 25-pounder gun which was just ahead of the platoon. As it came in low and bombs fell, everyone grabbed whatever firearms they had, mostly rifles. "You could see these black bombs in the air, coming down, and I thought, "Oh God". I fired my pistol. We had a sapper who was very good with a Bren gun. I can remember seeing him leaning it against the radiator of the lorry and these tracer bullets going off. He got it." They painted a little swastika on his section truck.

"We sappers were always frustrated that we didn't have very much by way of weapons. Very rarely did we use them but if by chance there was a German aircraft around, everyone just got their rifles or their pistols out. It was always, how many rounds can I get off?"

They worked their way northwards, approaching Enfidaville.



The coastal plain at Enfidaville from the hilltop town of Takrouna.

A leaguer outside the town provided an uncomfortable night. "I remember putting my bed-roll down in a sandy spot under the stars. I put my mosquito net up, hanging off an olive tree. The following morning I was bitten to death. I was on a flea trail. I can only think the Italians had been there before."

Enfidaville was the final defensive position on the coastal plain, where the tail of the Atlas mountains forms the last barrier before Tunis. Alexander was creating a pincer movement towards Tunis by battling inland through the hills and the Medjerda valley. Montgomery's struggle at Enfidaville was successful in so far as it drew Axis attention towards the coast and away from what would be the successful operation. "We knew the main thrust was going round the side. We had to pretend we were preparing tracks all the way up through those olive groves, easily observed by the enemy then holding the Takrouna fortress. We were under fire – the *nebelwerfer* had got going, it really was horrible. The Company lost more casualties here than all the way along from Alamein."

They sweated and toiled on the tracks for five days on end while the moaning minnies launched from the hideous new German guns fell all about them. There was no knowing where the next mortar or 88mm shell would land. One shell scored a direct hit on the Company – killing four men and wounding another two. The sappers were physically and emotionally exhausted and were ordered to withdraw for rest.

Monty couldn't break through at Enfidaville. Whilst the Eighth Army battled on, Horrocks's Sixth and Seventh Armoured Divisions drove victorious into Tunis, catching the Germans there unawares, then chasing the retreating Axis troops into the peninsula of Cap Bon.

The Americans, who had joined the war in Operation Torch, played an important part in the victory in Tunisia despite their initial panic of inexperience. Jack Stace had seen the chaos they had left behind when he and another sapper were sent to Kasserine to provide expertise in mine detection to an American engineer company. "They didn't seem to have any mine detectors at that time, the Americans. We had thought that we were very poorly equipped as engineers, Eighth Army in particular. Seeing how much bridging the Americans were doing here, we naturally expected them to have all the right equipment, especially mine detectors."

But of course it was the engineers with the Eighth Army who had developed the mine detector. Mike and Jack recalled that the British models were pretty unreliable. "Then there was one designed by the Poles and made in South Africa, which we copied. It was heavy but quite

good. When the Americans did bring one out it was extremely sensitive, impractical really as you found little fragments of nothing. If you got a sound from it you got used to thinking, "No, that isn't anything". But this detector became very useful when the Italians started using wooden mines around Tunis. You needed something like the American model to detect the detonator which was the only bit of metal in the whole thing."

Sixty years on Mike still laughs at his first encounter with the enthusiastic but gullible Americans. "It was not just the floor of the banana wagon that we lined with bags of sand, in fact we did this with a lot of our vehicles. We had re-filled all the sandbags in our small wagon somewhere near Tripoli. I had a splendid driver called Stoddart who was a Geordie. After we had got through the Gabes Gap, I went out on reconnaissance and I bumped into some Americans. I was the first person from the Eighth Army they'd seen and they immediately said, "Have you got any souvenirs?" I shrugged, "Er, no." But Geordie Stoddart quickly piped up, "What about a bag of genuine Alamein sand?" And he sold a bag to the Americans for some ridiculous price!"

The other key player of course was the First Army which also joined in Operation Torch. After many months in the desert, the Eighth Army soldiers were very cocky and full of themselves. The desert had made them terribly scruffy. Their vehicles were dust and sand blasted, their skin weather-beaten and their clothes were tattered by all the sweat and sand. Montgomery had countermanded orders irrelevant for a desert army and there were rarely NAAFI supplies of essentials like soap or boot polish anyway. There wasn't much food, either. They were as lean and fit as they would ever be, sun-tanned and enjoying terrific good health. They looked down their noses at the new arrivals but their desert experience was not enough to win the day in this more mountainous terrain in the north of the country.

After Enfidaville, Monty's interest in Tunisia waned. 573 Company continued clearing mines for a while and were allowed to go up to Tunis for a jolly before returning to Tripoli. "We went in with a raiding party to get ourselves a cask of

wine. It was pretty awful, raw stuff but that night we had a bit of a camp fire and the cooks put it in a great cauldron to warm it up with a bit of sugar. It was our first celebration."

In the seven months since Alamein the men had covered nearly 2,000 miles. It was May 1943 – the war in North Africa was over and the Allies were victorious. Having played their part in Africa, it would be just a matter of months before the sappers of 573 Field Company would find themselves in even more difficult terrain in Italy.

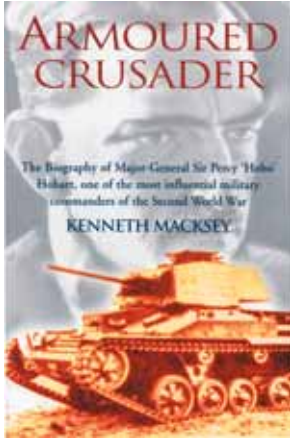


Jack Stace and Mike Moreland.

Review

ARMoured CRUSADER THE BIOGRAPHY OF MAJOR-GENERAL SIR PERCY "HOB0" HOBART

KENNETH MACKSEY



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THE moving ceremonies in June reminded us that assault engineer squadrons led the D Day assault across the Normandy beaches 60 years ago as part of 79th Armoured Division.

The use of specialised armour to defeat the various obstacles forming the Atlantic Wall, allied to the bravery and determination of the soldiers pressing on in the face of well-organized cover by fire, ensured exit from the beaches and penetration up to several miles inland across the British and Canadian sector on D Day. There were relatively low casualties, and 79th Armoured Division units were then used successfully in the subsequent reductions of major obstacles and strong points across the Low Countries and Germany.

The new edition of Kenneth Macksey's biography of General Hobart, who raised 79th Armoured Division – and had previously raised both 7th and 11th Armoured Divisions, which were the first two such divisions, landed in Normandy after the sea assault – is therefore as timely as it is welcome.

His sources are impressive – Hobart's own papers and letters made available by his widow, together with her own memories, plus interviews with, and correspondence and papers from, many of the leading figures in the development of armoured warfare and in war-fighting; from Basil Liddell Hart to Lord Montgomery.

The Hobo had spent much of his professional career arguing for modernization and mechanization, and above all for armoured formations, against entrenched views and lethargic

conservatives. He was an uncompromising man of strong and deep convictions, expressed clearly and forcefully. He suffered fools badly and was never afraid to say so, whatever their position or rank. Consequently, his path was never smooth for long, and by early in the Second World War he had been sacked from command of his division and retired. His triumphal return to raise and train armoured divisions and to play such a significant role in the war and its successful conclusion is a dramatic story, well told by Macksey.

Hobart was commissioned into the Royal Engineers and went to join the Bengal Sappers and Miners in 1906 (a real *corps d'elite* – of the then establishment of 18 officers, nine became generals and three brigadiers, while four were killed). In the Great War, he won an MC and was wounded in France, and won an immediate DSO and was captured (and rescued by armoured car) in Mesopotamia.

He emerged from the war ("the worst generalised most bloody war of all time") with clear views of the importance of technology, mechanization, mobility and manoeuvre warfare using combined arms. He was on the first remarkable post-war Staff College course which included many of the officers who had just fought successfully and were to go on to leading positions in the next war (Gort, Maitland Wilson, Freyberg, Alanbrooke).

He transferred into the Royal Tank Corps just before he was posted as a member of the Directing Staff at Quetta, and from then on he was an unrelenting exponent of armoured warfare. He wrote penetrating and influential papers on armoured warfare in conjunction with other arms and air support, commanded 2nd Royal Tank Corps in 1931 (already 45 years old), became Inspector of the RTC and tank brigade commander in 1933, fought for his views in the War Office, was appointed to raise what became 7th Armoured Division in Egypt, only to be sacked the following year by Maitland Wilson.

It seemed like the end of his career, but the brightest days were to come, as his views, so trenchantly argued for so long, became the dominant theme of modern warfare and played a notable part in the evolution of the strategy, forces and tactics which brought victory.

In many ways, 79th Armoured Division was the most appropriate culmination of the Hobo's professional life – a Sapper who became a leading armoured thinker and commander, and led the formation which employed the skills of both to enable mobile armoured warfare to triumph. Macksey's book is an enthralling read.

JMcK

Murder Involved

“NOMINAL”

This article is based on notes supplied by Major Tom Spring-Smyth and Lieutenant (later Lieutenant Colonel) Jay Coulson, two of the Sapper Officers involved. They refer to events that took place over 50 years ago when U Aung San, the Prime Minister Designate of Burma, was assassinated. The story is not just of historical interest – after all, it is not every day that a Sapper Officer is involved in murder – and its relevance to today’s world is that the Prime Minister’s daughter, at that time only a small child, is Aung San Suu Kyi, currently under house arrest in Rangoon.

THE Chief of Police came into the Company office and addressing Jay Coulson said:

“Mr Coulson, I really think you should have a police 24 hour armed guard”

“Why on earth should I need that?” replied Jay. “I’m perfectly safe here in the Company Lines”.

“I need to keep you safe until after the trial. After all, you are a prime witness”.

“But the men in the Company are all Sikhs and it would be a brave man who tried to get in here and nobble a witness” intervened Major Tom Spring-Smyth, OC 7 Field Company.

“Major, I don’t think you realize the seriousness of the situation. This is a murder trial and the victim was the Prime Minister Designate. His assassins won’t be put off by a few soldiers, even if they are from the Bengal Sappers!”

Reluctantly, the OC gave way.....

How on earth did this situation arise? For this, we have to go back to early 1947 when Great Britain was in the process of handing over power to an independent Burma. Though the war had ended in the Far East in August 1945, there was still a lot of reconstruction work going on throughout the country, the Sapper units being assisted by formed bodies of Japanese POWs. There was also considerable unrest from small groups of dacoits and communists under the banners of Red Flag and White Flag who were in open rebellion. Up to nine battalions of infantry were involved in Central Burma under Brigadier Jerrard, commanding 98 Indian Infantry Brigade, with Major (later Major General) Logan Scott-Bowden, a much-decorated Sapper officer, as his Brigade Major.

“Scotty”, as he was universally known, had a fierce reputation and ate subalterns for breakfast. One morning in Spring 1947, Jake Trantam, a platoon commander in 7 Field Company was ordered to report to HQ 98 Brigade to be briefed for an operation involving a search for buried weapons. He entered the BM’s office, saluted and waited while the BM finished writing. Scotty looked up, saw a subaltern in front of him and immediately barked “Don’t you usually salute when you come into someone’s office?” Jake, not having the faintest idea who this fiercely moustached officer was, replied, though rather less forcefully, “I do, and I did, Sir”. In the subsequent operation, he was attached to Flush Force, part of the Brigade, and they arrested some 400 hostile Burmese attending a meeting in a large cinema built of grass on bamboo frames. The occupants were defiant and would not come out. The platoon surrounded the building

and threatened to set it alight unless they came out with their hands up. They came out.

7 Field Company was one of the units, the others being 19 Field Company (Bombay) and 54 Field Company (Madras), selected to form part of a proposed garrison of Burma. They had landed in Rangoon at the beginning of March 1947, having been re-formed under Tom Spring-Smyth as an all-Sikh Company the previous autumn, not without gloomy forecasts from senior officers that it would not work out, “Sikhs being Sikhs” etc. There had been three murders in the Sikh platoon while in the Middle East!

Luckily a superb Subedar was posted in, Ujagar Singh MBE. He came from the Hoshiarpur District of the Punjab and was a very independent spirited soldier. The OC reported that “We had a very frank exchange of views about the task ahead – weak points and plus points. We spoke with complete openness. He was the guru. We agreed that, to keep the jawans (soldiers) out of mischief, training, work and recreation had to be most rigorous, demanding and so tough that the soldiers would go to bed absolutely exhausted. This worked. At an early conference with my VCOs (Viceroy’s Commissioned Officers), I told them that in the event of serious trouble I would be sacked and I would ensure that they would go as well. We could not allow the first all-Sikh Field Company to fail. It was a matter of honour”.

The post-war rundown of the Indian Army had begun and no one wanted to leave so the best tradesmen could be selected, nobody under 6ft tall was accepted and only those men with the best education and best reports were taken. Captain Rizwanullah Khan, a very smart, keen and efficient officer became 2IC, and Jay Coulson and Bob Minter were platoon commanders, joined shortly afterwards by Peter Park, an excellent hockey player, just what was needed in a Sikh unit, who was sadly killed a few years later in Korea.

On arrival in Burma, the Company began a dreary round of building store houses and Romney huts for the post-war Burma Army, as well as involvement in Internal Security under Jake Trantam. They also proceeded to beat the Infantry Battalions at hockey, and even soccer where they dominated the touch lines with vehicle horns and gas rattles, perhaps the birth of football hooliganism?!

Meanwhile, on the political front, things were not going well. British and Indian forces were being gradually withdrawn to UK and India, leaving a serious law and order problem, while rival politicians juggled for power. Major General U Aung San, commander of the Burmese Army, who had come over to the winning side in the nick of time before the war ended, had entered the fray and become leader of the Executive Council,

and thus Prime Minister (Designate). In mid July 1947, 200 Bren Guns destined for the Police had been issued by the Ordnance Depot on signature to a police party sent to collect the weapons. On the evening of the same day the Brigadier A/Q thanked the Commissioner of Police over a drink at the Pegu Club in Rangoon for sending his men to collect the arms that morning. The Commissioner was aghast as he was sending the real collection party the next day!

Tension in Rangoon was high and it was only too evident that conspirators were at work. What was really alarming was the knowledge that they now had more weapons than the army. Rumours abounded and on 19th July, just as he was going off for lunch, Brigadier "Bulger" Duke, the Brigadier General Staff (BGS) at 12th Army Headquarters (a Sapper officer) was handed a message containing what he thought was yet another rumour. He thought no more about it and stuffed it in his pocket. Sadly it was no rumour but a warning of an imminent coup. That same day, a gang of youths burst into a Cabinet meeting and firing Tommy guns, killed most of the Ministers present including U Aung San. He was the father of Aung San Suu Kyi, then a baby but destined to make her own mark in Burma's history.

That night OC 7 Field Company was summoned to Army HQ at about 2300hrs to an 'O' Group at which only the GOC, General Sir Harold Briggs, and the BGS were present. He was asked if he could put up a very strong barbed wire fence that night, right round the central block in Rangoon which contained the city lock-up. Tom Spring-Smyth answered "Yes, provided the Ordnance Depot can be opened at once and I have authority to draw whatever stores I need. I alerted the Company from Army HQ and they were on parade by my return to camp. We completed the task by about first light with a Double Apron fence, dannert wire and a massive gateway using 10in by 10in teak gateposts. The Sikh sappers, all over 6ft tall, drove the angle-iron pickets straight through the tarmac. By this time the main suspects, who included Ba Maw, a pre-war Prime Minister who joined the Japanese, and U Saw, another pre-war premier and again a Japanese ally, had been arrested and were in the lock-up. They were known to have no love for Aung San."

With the loss of arms and the murders, there was quite a flap. Together with 64 (Madras) Company and 19 (Bombay) Company, 7 Field Company put up a barbed-wire obstacle right round Burma Army HQ and its attendant camp, one and a half miles in total. Sappers were trained to man Bofors guns and drive armoured vehicles, such was the unbalanced state of our own forces, many units having already been withdrawn from the country.

A breakthrough in the investigation came when part of Victoria Lake near U Saw's house was searched and the missing Bren guns were found, stripped to their component parts and loaded into 44gal steel drums, topped up with oil and sealed lids (with sealing washers bolted down). It was important to find further evidence and on 4th August Brigadier Nash, commanding South Burma Area, called a meeting at short notice attended by OC 7 Field Company, the Brigade Major (Major L Scott-Bowden DSO MC RE) and a Burmese Naval Officer. He told them that, before the case for the prosecution could be completed, it was vital to find the number-



U Saw's Bungalow.

plate used by the assassins' jeep on the journey to and from the Rangoon Secretariat, and a Tommy gun magazine which was missing from one of the weapons used for the murders. There was strong evidence that they had been thrown into the lake. When it is realized that Victoria Lake is large enough to accommodate a sailing club, the task seemed formidable, although it was assumed that the missing articles would be somewhere in the vicinity of the house. Nevertheless, 12,000 yards of lake some 10 feet deep would need to be searched.

After discussing the problem for some time and considering various plans from damming part of the lake and draining it, to flying in drag nets from Calcutta, nothing seemed satisfactory until Scotty (Scott-Bowden) suggested using plumb lines, of which he had had some experience when making reconnaissances of the Normandy coast before D-Day. Whereas this was all right for telling whether the bottom was rocky or sandy, the real problem was having to deal with sediment. However, it did suggest prodding by poles, similar to prodding for mines, might provide the best solution. Only when something solid was struck would someone have to dive down and investigate.

The list of stores required included two tripartite Bailey piers, Folding Boats, rope, buoys, anchors, etc., and 400 one inch bamboos of minimum length 16ft and as much one inch water-piping as possible. These all arrived on site the following morning, 5th August. A platoon of 7 Field Company was detailed for the job and Major Rhodes, OC 19 Field Company arranged for eight good Mahratta swimmers who volunteered to dive into the murky waters.

Part of the lake was at once marked out in strips 60 ft wide, using ropes and buoys, and a tripartite pier was brought into position with the ropes passing over the bow pontoons. Sappers were then ordered to sit on both gunwales, shoulder to shoulder,

MURDER INVOLVED



Prodding the bed of the lake with Bamboo.

and each was given a bamboo or a length of piping. With a man at each end of the pontoon pulling on the ropes the pier went slowly sideways down the lane with the Sappers prodding carefully at the lake bed. The men with the pipes soon got tired and after a bit bamboos only were used.

All sorts of objects were struck by the bamboos and were duly retrieved by the Mahrattas whose officer, Lieutenant Young, was also diving. These objects were very unexciting; the lake must have been a convenient dumping place for junk for years and a huge pile of bits and pieces, ranging from Jap helmets, car tyres and cans to broken flower pots, grew on the bank. If any object was missed by the first line of prodders it was hoped the second line would find it. The speed across the water had to be slow enough for the prodders to be thorough. The instant anything was struck the pontoon was stopped and a Mahratta diver would go down using the striker's bamboo as a guide.

The dawn to dusk search went on until, at 1345 hrs on Tuesday 12th August 1947, Sapper Jit Singh located an object which was brought up by one of the Mahratta divers. It was the missing number plate, RC1814 on one side and RB4140 on the reverse. This was immediately handed over by the platoon commander, Lieutenant J S Coulson, to a Rangoon Police officer. The search continued and next morning a Sapper from 19 Field Company brought up a Tommy gun magazine containing two live rounds from below a Pagoda House Shrine built on piles a few yards from the water's edge by U Saw's house. The evidence was crucial and the men received a well-earned "Shabash" from the GOC, as well as an expression of thanks from U Aung Chein, the Commissioner of Police.

7 Field Company left Burma the following month, leaving Jay Coulson and Jit Singh behind as material witnesses. They managed to avoid having an armed police guard but had to live in an old REME workshop where they played with the lathes and other tools for the next month. Jay lived in the Burmese Officers' Mess where he soon acquired a taste for sliced green chillis!

No time was wasted in bringing the suspects to trial and a special Tribunal was set up in October 1947 to try former Premier U Saw and eight Myochit Party members. The trial

took place in the main Court House in Rangoon and was conducted with great formality. Jay Coulson and Jit Singh provided vital evidence and at the end of the trial U Saw was condemned to death.

Could the assassination of U Aung have been prevented? Attempts were made to blame the BGS for not taking immediate action when he was given the tip-off but with the political ferment at the time, and endless rumours and uncertainties, he did not place much credence on this particular piece of information. And anyway, could he really have prevented it? Certainly once the dreadful deed was done, the whole show could have gone up in flames. That it did not must be due entirely to the prompt and very resolute action by General Sir Harold Briggs and Brigadier "Bulger" Duke, his BGS.

Now, in 2004, the wheel has come full circle. Aung San Suu Kyi, General Aung San's daughter, who has been in and out of house arrest since 1988, is leader of the National League for Democracy (NLD). Her Party won more than 80 per cent of the vote in the last election, held in 1990, but the military junta ruling Burma (now Myanmar) imposed direct rule and abolished the post of President. They continue to run the country but the regime is showing growing flexibility and there are signs of a thaw. Suu Kyi was awarded the 1991 Nobel Peace Prize and may yet become leader of her country, nearly sixty years after her father was so cruelly deprived of his rightful place in history.



Lieutenant "Rusty" Young RE and the 19 Fd Coy Bombay Sappers.

Memoirs

LIEUTENANT COLONEL J F ALLEN MBE

Born 2 April 1920, died 1 June 2003.



JOHN Forrester Allen, who died on 1st June 2003, came from Anglo Irish stock, and enjoyed all the characteristics typical of that background. He was charming, amusing, with a great sense of humour, and an assumed casualness which concealed a serious purpose. He was a kind man who cared for his soldiers and for his friends.

John was born in Dublin in 1920, and educated at St Andrew's and Trinity Colleges. He was articled to his family firm of Quantity Surveyors, and his first job was with the Military Engineer services in Belfast. In 1943 he was commissioned into the Royal Engineers, and served with the Bengal Sappers & Miners at Roorkee, and at GHQ in Delhi. After partition, he returned to the UK as adjutant of the Highland Division Engineers, and then in 1949 joined the Gurkha Engineers in Malaya, at the Engineer Training Centre in Kluang.

At this time the Regiment was in a formative stage, and first as a troop commander, and then as 2IC of the GE Training Squadron, he was involved in the task of turning riflemen into sappers. At this stage sappers in Kluang were frequently employed as infantry, searching for terrorists in the jungle, which gave John valuable experience of these operations and of the Brigade of Gurkhas generally. In 1951 he went to the Brigade of Gurkhas Training Depot at Sungei Patani, as 2IC of Boys Company, which was a tied GE appointment, because of the trade training done there. 1953 saw him in Hong Kong as 2IC of 68 Squadron, and 1954 back in Malaya as OC of the GE Training Squadron. He

reverted to the home establishment in 1954.

This was when John had his first association with officer selection, as Deputy President of the Commissions Selection Board. He also became the first GE Liaison Officer, providing a point of contact for Gurkhas at the SME, and for officers on leave or who had left the Regiment. By 1957 he was back in the Far East, this time as Deputy Commander of the Works Services organisation building the new Depot at Dharan Bazaar in Nepal, at a cost of £2.7m.

From Nepal he returned to Malaya in 1959 as OC 67 Squadron, which represented his finest hour with the Regiment. At the end of the Malayan Emergency, 17 Division had to retrain in conventional warfare, and required a training area. The area selected was Kota Belud in North Borneo, and 67 Squadron was tasked with opening the area up, and creating the necessary facilities. It was a spectacularly successful project, and much of this success was due to John's skill in liaising with all the people who mattered in the territory. His success was marked by the naming of the new airstrip "Allenfield", and the well deserved award of the MBE.

In 1961 he became Regimental 2IC, at a time when the Regiment was expanding to its maximum strength of 1400, with field squadrons in UK, Hong Kong and Borneo, and a huge training establishment in Kluang. This was to be his last tour with the Regiment, although after a spell with Movement Control in BAOR, he returned to the Far East in 1964 as CRE 17 Division and Land Forces Borneo. He was responsible for engineer projects in Sabah, Brunei and Sarawak, and at any one time had two independent Gurkha field squadrons under his command.

The last seven years of his service were spent in UK as Deputy Commandant and Chief Instructor of a Training Regiment, and on the staff of the Regular Commissions Board. He retired in 1971. In retirement he became an RO, involved with recruiting, first in Newcastle-upon-Tyne, and then at Chatham. He retired finally in 1985, and returned to Northumberland, where he lived until his death.

John was a talented sportsman. He started sailing dinghies in Dublin Bay at the age of 10, and subsequently sailed offshore, becoming a member of the RORC in 1948. He had a yacht on the Medway when at Chatham. At one time he had a pilot's licence, and also did some gliding. He was a useful golfer, and carried away a good deal of silver at Brigade of Gurkhas meetings in Malaya. Perhaps his outstanding talent was fishing, which is how he spent his retirement. His best catch was a 25lb salmon from the Tyne.

In 1944 John married Lt Maureen Metcalfe ATS in Preston, and thence to India. Maureen's military experience helped her to become very much part of the Regiment. Deirdre was born at Torphins in 1949, and the twins, Patrick and Michael, in Kluang in 1951. John's Irishness was reflected in his family life. On one occasion he attempted to deal with his noisy twins by giving them each a shot of John Jameson. This was successful for a while, until the previous noise was replaced with the sound of riotous singing. Maureen has now moved to Dorset to be near Patrick and his family.

JHE

LIETENANT COLONEL E L V WALL

Born 30 November 1934, died 11 February 2004, aged 69.



EDWARD Wall was best known in the Corps for his expertise in the field of equipment and his advocacy of its role in solving engineering problems on operations. In later years he made an outstanding contribution to the development of the Museum through the activities of the Friends organisation.

Edward Llewellyn Vernon Wall grew up in the countryside of Herefordshire and retained a deep affection for the area throughout his life. His father served in the Corps in the First World War and was awarded the MC for his part in the fighting withdrawal following the German assaults of 21 March 1918. Edward was educated at Rugby School and, after Sandhurst (Intake 14) went on to Fitzwilliam College, Cambridge.

His first experience of unit life was at Nienburg with 45 Field Park Squadron where he quickly demonstrated the energy and professional motivation that was to characterise his approach to all the appointments he held during his service. He moved out to Malaya in 1961 on secondment to the Federation Engineers. This was possibly the most fulfilling part of his life. He loved the area, enjoyed the company of the Malaysian officers and soldiers with whom he shared a mutual and lasting respect and learned how to use the mechanical equipment with which the Malaysian Engineers were so well endowed. After being let loose for a year building airstrips and roads near the Thai border he was sent to Kluang to command the Training Detachment, co-located with the Gurkha Engineers. He received a well-earned AMN (Ahli Manku Negara, roughly equivalent to the MBE) for his efforts. Happily he was able to attend last year's 50th anniversary celebrations of the formation of the Malaysian Engineers.

Staff College followed (1966–67): the last of the old Technical Staff courses after which he went on to Camberley,

earning the rare distinction of "*ptsc, psc*". From there he went to Bulford on the staff, learning about light scales, before going back to Germany to command 25 Field Squadron in Paderborn.

This wide experience made him a natural for the staff of the then OR7, dealing with operational requirements for sapper equipment and entertaining his colleagues in their shared office with the vigour of his grappling with the MOD system and the highly-coloured language that he employed. Edward was adept and often successful in arts of persuasion but tended to be economical with diplomacy. He was however, invariably well ahead of those with whom he dealt on professional matters and he was particularly good at doing his homework before expressing his opinions.

These qualities he took on to his next appointment as Senior Instructor Bridging at Chattenden. The Medium Girder Bridge was just coming into service and he lost no time in becoming the Corps expert in this equipment. He also had the vision to appreciate the importance of sales outside Britain and cooperated closely with Fairey's to promote it. There is little doubt that the smooth introduction of the MGB into service owes much to Edward's professionalism and determination.

The reward for this success was a happy accompanied tour in Australia working on standardisation and tropical testing. He returned to England on promotion and, after a spell back in the Ministry buying kit for the Corps, went into Defence Sales to sell it for the country. He retired in 1986 to take up a job in International Military Services. Edward's forthright approach in negotiations could make its mark in two ways. JP remembers discussions with the Air Force of one client country in which he remarked on the lack of effort by some of the officers on the other team. The meeting broke off immediately while tempers cooled. Yet, at the signing of contract he was singled out by that country's Chief of the Air Force for thanks for his hard work, diligence and honesty.

After International Military Services ceased to trade in 1989, Edward set up his own business as a broker of military sales deals working through world-wide contacts including in Malaysia: MORAL (Military Operational Requirements and Logistics). This gave him some frustration but produced a steady livelihood and ample job satisfaction.

While MORAL absorbed a great deal of his energy, there always seemed to be plenty left over for the other interests in his life. Much of this was devoted to the Royal Engineers Museum through FoREM of which he was founding Secretary and later Chairman. The many initiatives he took, normally with much arm-twisting, will be of lasting benefit to the Museum: battlefield tours, the medal roll project and the acquisition of large equipments, to name but a few. Aside from this he was also a lifelong collector of stamps and, typically, he added a charitable aspect to this with his help to the Stamps for the Blind. For beneath a blunt and sometimes confrontational manner lay an undemonstrative sympathy, which found expression in constant help for his neighbours and support of many charities not least the REA.

The centre of his life, however, was his family. The loss of his eldest son Anthony in tragic circumstances hit particularly hard but he is survived by his wife, Gillian, his second son, two daughters and seven grandchildren.

MRW JEK GWAN JP JDM

COLONEL K M ROBERTSON

Born 7 September 1917, died 4 May 2004, aged 86.



KENNETH Macaulay Robertson was born in Murree in the Punjab, where his father worked as an irrigation engineer. He spent his early years there and then returned to England to attend Sedbergh school. After leaving Sedbergh he went to the Royal Military Academy at Woolwich. His engineering training included completing a degree at King's College Cambridge in two years instead of the usual three years.

He was commissioned in 1937 in the Corps of the Royal Engineers. He was on active service in the 1939-45 war, first in North Africa and then in Burma. A very modest person, he told others little about his wartime experiences. The record shows, however, that he played a crucial role in saving the lives of wounded and sick soldiers during the Chindit campaign in 1944.

He commanded 54 Field Company RE within 14 Brigade Special Forces (Chindits). The Chindits relied on air transport for their operations behind enemy lines and when the monsoon rains flooded most of the airstrips, another way of evacuating casualties was urgently needed. First, Ken

Robertson organized a seaplane base at the southern end of Indawgyi Lake. When air evacuation from here was suspended, 54 Company constructed the "Chindit Navy" to take 400 casualties by river down the Indaw Chaung to Kamaing. Ten "dreadnoughts" were constructed, each consisting of five rubber inflatables lashed together, with bamboo rafts either side, and powered by outboard motors. The evacuation did not end at Kamaing. From there 54 Company used American motor boats to transport 1,800 casualties up the Mogaung river to the airstrip at Warazup.

After graduating from the Staff College in Camberley in 1946 Ken was Chief Instructor, and for a while, Commanding Officer of the Engineer Training Centre, Kluang, Malaya. He was involved in operations against Malayan insurgents as well as training British, Malayan and Gurkha engineers. He was stationed in Germany in the early 1950s, during which time he designed and was in charge of building Queens' Bridge at Well in the Netherlands. This bridge, which spanned the River Maas, was a joint Dutch-British project, built to benefit both the civilian population and the military.

Between 1955 and 1957 he was Deputy Assistant Adjutant and Quartermaster General at the School of Military Engineering at Chatham. One of the proudest moments of his career came on 24 October 1956 when he commanded the Guard of Honour during the visit made by Her Majesty the Queen, Colonel-in-Chief of the Corps of the Royal Engineers, to mark the centenary of the amalgamation of the Corps of Royal Engineers with the Royal Sappers and Miners. Following further service in the UK and abroad, Ken retired in 1968, his final posting being Colonel AQ HQ Northumbrian District in Catterick. He worked for civil engineering companies after army retirement and for the British Standards Institute in London.

In civilian life he kept to his principles of service, including serving as a County Councillor, governor of the Gordon Boys School, President of the Friends of the Woodbridge Tide Mill and member of the parochial church council for his local church in the Suffolk village where he settled after retirement. His ingenuity meant that he was a DIY expert without equal! He always enjoyed designing and making useful things throughout his life. He remained adventurous, riding a 50 cc motorbike across Europe in his 40s, and cycling around Greece on a fold-up bicycle in his 60s.

In 1946 Ken married Catharine Gethen. Ken and Catharine gave their three children strong and loving support always, and much enjoyed visits by their four grandchildren. Sadly Catharine died in 1989. Ken gallantly kept his home going and continued his public service until ill health meant that he had to go into a nursing home in 2001. He died peacefully on 4 May 2004.

HR

Memoir in Brief

Major John Dudley Harte who died on 16 Jan 04 aged 87, joined the Corps as a sapper in May 1939. On the outbreak of war, he went to France with his unit, 103 (Glasgow) Army Troops Coy (Supplementary Reserve), as part of the BEF. In May 1940, he was posted to 142 OCTU and commissioned in November of that year. As the result of an injury, he was placed in a low medical category and posted to 3 TBRE, later becoming an instructor at the SME (Ripon). He passed the Junior Staff College Course at Sandhurst and was posted to the War Office, firstly to AG7 and later to the EinC Directorate as DADES. He attained the rank of Major before his demobilization in 1946.

Before the war he was a claims assessor with a group of insurance companies and intended to follow a legal career. After the war, he trained in medicine, qualifying as a doctor in 1952. After various hospital appointments, he became a general practitioner in Bedford from 1954 to 1980, being at one time the Provost of the Beds and Herts Faculty of the College of General Practice. He acquired postgraduate qualifications in Public Health, Occupational Medicine and Medical Jurisprudence. He set up the first occupational health department for hospital staff within the NHS. He was appointed a deputy coroner in 1962 and was HM Coroner for Bedfordshire from 1979 to 1992.

Correspondence

BORIS OF KATHMANDU

(In reply to Lt G P Webb's letter in the December 2003 Journal)

From: Major (retd) E R B Hudson

Sir, – Yes, I met Boris twice, but not in the 70s. In 1957 I was 2IC of a sapper works unit supervising the construction of the Gurkha Depot at Dharan, Nepal and was invited to visit Kathmandu by Major Bunny Burnett, the Assistant Military Attaché.

During my visit Bunny threw a small dinner party, where I had the pleasure of meeting Boris Lissanevitch and his Danish wife Inger. Amongst the other guests was Major Jimmy Roberts of 2GR who had just returned from leading the first “ascent” of Macchapachli, the seventh highest mountain in the world.

Needless to say the dinner was an hilarious affair (by chance the ambassador happened to be absent from post). I shall never forget lying full-length on the embassy dining room carpet with a rolled up copy of the *Times of India* playing “Are you there, Moriarty?” with the gorgeous Inger.

There is a myth that Boris never left Nepal after he was invited to take up residence there by King Mahendra after WW2. Not so. Boris flew to Hong Kong in 1961 to purchase tons of food and equipment for the banquet that King Mahendra wished him to prepare for the State Visit of Queen Elizabeth. Boris also had to fly to Calcutta and to the frontier town of Raxaul to expedite delivery; happily the goods arrived two days before the banquet was due to be held.

The only other occasion Boris left Nepal was when he flew to Bangkok in 1972 to stay with the manager, and his wife, of BOAC in Thailand. Boris was their guest at a BOAC reception at which I was present, wearing my hat as the company's Marketing Consultant in Chiang Mai. So once again I had the pleasure of meeting Boris of Kathmandu.

Boris was a Russian naval cadet who had already seen five years active service and been wounded by the age of 15. Stateless, he was a leading dancer in Diaghilev's Ballet (when Diaghilev died, Boris had to break the news to Pavlova, who fainted in his arms), formed a dancing duet (“Kira and Boris”) with his first wife (they had dancing engagements all over the Orient), friend of kings and maharajas, founder in 1936 of the 300 Club in Calcutta, hotelier in Kathmandu – and a good deal more. I have never met anyone who visited Kathmandu whilst Boris was alive who had not met the Legend of Kathmandu. He died in 1985. Yours sincerely – Roy Hudson.

COME ON ED, GIVE ME A BREAK!

From: Brigadier J H Hooper

Sir, – I don't know whether this contribution of mine should be headed “Come on John, Give me a Break” or “Come on Ed, Give me a Break” but having read John Pelton's article “Rear Based Infrastructure Support to Operations” about four times I still do not know what the hell he is talking about. I have referred to the “Explanations of Abbreviations” etc which, frankly, does not begin to help. I freely admit that I am not the brightest light in the Royal Engineer galaxy of talent (a couple of watts at best I would say). I also admit that a certain amount of jargon is essential to reduce ambiguity in technical matters but if you are going to have a page devoted to “Explanations of Abbreviations” let's have it complete so that the likes of me are in with half a chance. Incidentally, I always thought that “RE” was the abbreviation for Royal Engineers (plural) but I see we now have “REs”, (who they??).

Yes, yes, yes, I know I retired twenty years ago and was never seriously switched on Sapper even when serving and you and your predecessors have very kindly printed a lot of my rubbish so who am I to criticise. But, but, but if the *Journal* is to be of value and to help those of us less gifted (Hooper well to the fore here), for goodness' sake let's have these uplifting and edifying articles in a language which we less gifted can understand.

Really, David, read the article and assure me that you fully understand it. I could go on and quote sentence after sentence which is sheer jargon and no sense. Oh my Lord! I have just realized it was the April issue and it was all an April Fool's joke. Silly me. But I see there is a Lt Col J F Pelton in the “Stud Book” and a photo of the man himself at the head of the article. Now I am confused. Yours Sincerely – John Hooper.

Whilst the editorial staff do not necessarily agree with Brig Hooper (Lt Col Pelton's explanations were in the footnotes), he has hit on one of our perennial problems. Authors PLEASE, either explain your abbreviations and acronyms in the text, use the fully expanded version each time, or do not use them at all! - Ed

JUNGLE AIRSTRIPS, MALAYA, 1954

From: Major H G Bell MBE

Sir, – I enjoyed reading Kenneth Newham's article in the April 2004 issue of *The Royal Engineers Journal*; it was far more factual than the article that I had written on the same subject but not sent for publication.

To add to the photographic record of that work I enclose two photos, one showing the unit loads ready for taking to site by helicopter, the other showing a helicopter arriving at Fort Shean. The assembly workshop for the tractor (described by Kenneth Newham) can be seen in the lower right hand corner of this photo.

After the successful completion of Fort Shean, 78 Malayan Field Park Squadron went on to make several other airstrips at jungle forts, including Fort Legap, Fort Kemar and Kampong Aur. Fort Legap was particularly interesting since it involved

dismantling a D4 bulldozer and then taking the parts by dugout canoe forty miles up-river to the site. Each canoe was about fifty feet long hewn from a single tree trunk and could take a load of about two tons. Propulsion was by outboard motor far more powerful than anything the Army had at that time.

We took two REME fitters with us to help assemble the bulldozer after some good old-fashioned work with blocks and tackles enabled us to lug the heavy pieces up a hill to where we were to build the airstrip.

Work involved knocking the tops off two small hills to fill in the col between them. When completed, the pilot of the first Pioneer aircraft to land there said it was like landing on an aircraft carrier.

The three years that I spent in Malaya formed one of the most interesting and challenging periods of the twenty one years of my service in the Corps. Yours sincerely – H Graham Bell.

