

The role of the Royal Artillery during the Anglo Zulu War

John McAdam, FRGS

Sir Henry Bartle Edward Frere's ultimatum to King Cetshwayo kaMpande expired at midnight on the 10th January 1879. A few hours later, before dawn on the 11th January, the invading British force crossed the border into Zululand in three separate and widely spaced columns, but all heading for the Royal homestead at Ulundi [oNdini].

During the Anglo Zulu War of 1879, the Royal Artillery was divided into three distinct divisions of Horse, Field and Garrison batteries. These batteries were organised into brigades and it was possible to identify the type of battery by its letter or number designation or both. For example, the Horse Artillery were designated 'Lettered Batteries and Brigades', e.g. (N/A). Field Artillery Batteries were 'Lettered', whereas their Brigades were 'Numbered' e.g. (N/2), and Garrison Batteries and Brigades were both numbered, e.g. (2/7). N/A Battery (N Battery A Brigade) was therefore Horse Artillery, (N/2) was Field Artillery and (2/7) was a Garrison Battery.

The principal armament used by the Royal Artillery in the Anglo Zulu War was the Field Gun and both 7 and 9-pounders were deployed. Although the Royal Artillery Field Batteries were generally equipped with 9-pounders, they changed to the lighter 7-pounders for the invasion of Zululand. These guns weighed only 200 lbs and were originally designed as mountain guns; they were mounted on the bigger 9-pounder carriage, which was more mobile and considered better suited to conditions on the South African veldt. The only Royal Artillery unit to use 9-pounders in the Anglo Zulu War was N/6 who were equipped with the standard 9-pounder, RML weighing 8 cwt. Since the gun was invented, the projectile was always loaded from the front end, rammed home and fired by igniting the powder charge from the rear end and this was called a muzzleloader. This practice was both dangerous to the gunners and counter productive in its operation and the mid 19th century was a period of transition, where breech loading in both hand guns and artillery was being gradually introduced. With a muzzleloader, it was necessary for one of the gun crew to 'serve the breech' by placing his thumb on the vent hole during the sponging out after each round was fired. This prevented a draught, which could cause the smouldering fragments left in the barrel after firing, to burst into flames and possibly cause premature ignition of the next round.

The barrels of the artillery pieces were also being changed from smooth bore to rifled bore to improve their efficiency and they were thus described as either Rifled Muzzle Loaders (RML) or Rifled Breech Loaders (RBL). The field guns ranged in calibre from 6,7,9 and 12-pounders and were designed and manufactured by the British firm of Armstrong competing with Whitworth, and the lighter 4 pounder by Germany's Krupp. Armstrong designed his steel Mk IV 7-pounder RML gun, with three rifling grooves but these were plain, following the French system, and not stepped as in the shunt system. He also developed an RBL where the ammunition was loaded through a hollow breech screw. The breech was closed by means of a vent piece, which was dropped into a slot or opening in the top of the breech. The vent piece was then pressed home against the chamber by means of a breech screw and fired. These Armstrong designed field guns were 'built up' in construction, whereby wrought iron coils were shrunk on to an inner tube. The barrels were mounted across an axle and supported by two large wheels and these Colonial, or Kaffraria carriages as they were known, were originally designed for the heavier 9-pounder field guns and were specially adapted for the lighter and more manageable 7-pounders. These mountain carriages, which had to be specially adapted for the Anglo Zulu War were originally low with a narrow track, which meant they were unstable and turned over easily when towed on the rough veldt. On the other hand, they could negotiate the narrow bush paths, which would have been impassable to the carriages with a standard track width. This complete unit, which included the ammunition box similarly supported was towed by three mules in tandem fashion and could also be stripped down and carried on the backs of mules for mountain work. When in the firing position, the gun would be detached from the unit and manhandled into its firing position with the ammunition box and mules at a safe distance behind the gun.

The ammunition or projectiles fired by the Field Gun varied, dependant on the deployment of the attacking Zulu and the distance they were from the British firing line. At 2,000 metres the field guns would load with shells that burst into shrapnel. These shells had projecting lugs that slotted into three grooves within the bore. In the shunt system, each groove was stepped with a deeper and a shallower part in the groove and on loading the shell ran easily down the deeper parts of the groove. At the chamber, the shell was shunted across to a stepped up part of the grooves, which gave it a tighter fit and therefore a greater spin producing improved accuracy. In normal circumstances, 150 rounds of shell would be issued to each 7-pounder gun. When the Zulu came to within 500 metres, it was necessary to change from shell to case shot and this is a totally different type of projectile where a thin metal case exploded showering the enemy with small lead balls mixed with sharpened pieces of metal, often compared with today's nail bomb. It is interesting to note that at siege of Eshowe between 23rd January and the 3rd April 1879, the Royal Artillery ran very low on case shot. This shortfall was rectified when it was realised that Morton's jam tins exactly fitted the bore of the 7-pounder. The infantry were thereby ordered to give up their empty Morton's jam tins to the gunners, who improvised brilliantly by manufacturing their own case shot.

The Gatling gun was another formidable weapon in the Royal Artillery arsenal and was the invention of an American, Richard Joseph Gatling, who developed his rapid-fire gun for the American Civil War. It was a multi-barrelled machine gun firing a 0.45" Boxer cartridge similar to the infantry's Martini-Henry rifle, but was nevertheless considered to be an artillery weapon. The marriage of the 0.45" Boxer cartridge and the Gatling gun proved to be just as incompatible as with the Martini-Henry rifle, in that the extractor mechanism tended to pull the ferrous cap off the brass cartridge case. This caused the expended empty cartridge case to stick in the breech and jam the firing mechanism. Mounted on both Colonial and Kaffrarian carriages for ease of transportation, the Gatling gun could be easily deployed and was used against massed Zulu charges at close range, with devastating effect.

Rockets deployed in the Anglo Zulu War were Hale's pattern of 9 and 24-pounders. They were an improvement on the earlier Congreve type which were only stabilised in flight by a long stick as opposed to the new improved Hale's rocket which was spin stabilised by rotation, effected by three metal vanes in the exhaust nozzle. The steadying effect of rapid rotation only appeared some time after firing by which time the damage was done, as far as accuracy was concerned. While possessing great potential, rockets were still considered unreliable and were often known to turn around in flight and head back towards the firing point. The Hale's rockets were fired from both tubes and troughs. The Army troughs, which fired 9-pounders, could be accurately described as open drainpipes mounted on a simple stand and were fired by means of a friction tube in one of the exhaust nozzles or a slow fuse. The tubes, firing the heavier 24-pounder, were more common with the Naval Brigade. They were much less dangerous to use aboard ship, where care had to be taken to prevent uncontrolled sparks and flames igniting rigging and inflammable stores in confined spaces. The rockets maximum effective range was 1,200 metres, but accuracy was poor although the field manuals stated they could be used bombarding towns and shipping. They were also recommended against cavalry, only because they frightened the horses and savages and other unsophisticated opponents for much the same reasons, although the Zulu treated them with utter contempt.

The British invasion of Zululand on the 11th January 1879 was originally to be in five separate columns, attacking from different points of the compass but all heading for the Zulu capital of Ulundi (oNdini). The Royal Artillery available to Lord Chelmsford was spread between these five columns, which for tactical reasons was reduced to three columns, but the initial deployment was thus:

No. 1 Column: Referred to as the 'Coastal Column' or the 'Right Flank Column', was commanded by Colonel C.K. Pearson who had Section 11/7, with two 7-pounder guns and one rocket trough, under the command of Lieutenant W.N. Lloyd. They also had a Naval Brigade detachment of two 7-pounders, two 24-pounder Rocket Tubes and one Gatling gun, under the command of Commander H.J.F. Campbell RN. The Royal Navy was originally equipped with 12-pounders, but these were exchanged for the more manageable 7-pounders at Fort Pearson before they joined No: 1 Column.

No. 2 Column: Commanded by Lieutenant Colonel A.W. Durnford RE. Was originally ordered by Lord Chelmsford to remain at Rorke's Drift to defend against a possible invasion of Natal, but this order was rescinded and Durnford and his No. 2 Column joined No. 3 Column at Isandlwana. No. 2 Column only had a Rocket Battery consisting of three rocket troughs under the command of Major F.B. Russell RA. with one bombardier of the same 11/7 Battery and eight infantrymen on loan from Colonel Glyn's 24th Regiment of Foot.

No 3 Column: Referred to as the Central Column, to which Lord Chelmsford and his staff attached themselves, was commanded by Colonel Richard T. Glyn, (24 Regt. of Foot). Lieutenant Colonel A. Harness RA of N/5 commanded the Royal Artillery detachment within this column and they had six 7- pounders and two rocket troughs. Although these two rocket troughs were attached to N/5 during the entire campaign, they were seldom mentioned in contemporary accounts of the Anglo Zulu War of 1879.

No 4 Column: Referred to as the Left Column, it was commanded by Colonel Evelyn Wood VC, (Later to become Field Marshal Sir Evelyn Wood VC), had four 7-pounders under the command of Major E.F. Tremlett of 11/7 Battery with a section of two additional 7-pounders under the command of Lieutenant F. Nicholson RA. The Rocket Section, consisting of two rocket troughs, was commanded by Lieutenant Arthur J. Bigge.

No 5 Column: Commanded by Colonel H. Rowlands VC, had a detachment of the 80th Regiment with one 4-pounder Krupp and two 6-pounder Armstrong guns. In preparation for the invasion, three Gunner subalterns at Woolwich were specially selected for service in South Africa in order to train and command gun detachments provided by the infantry, such as the 80th Regiment and Cape Volunteer regiments. They were Lieutenants Bigge, Nicholson and Slade who were contemporaries and great friends of the Prince Imperial at the time when he was granted an honorary appointment with a battery at Aldershot, immediately after he completed his training at Woolwich.

Colonel Durnford's No. 2 Column was ordered forward to Isandlwana and was effectively absorbed into Colonel Glyn's No. 3 Column and Colonel Rowland's No. 5 column was divided, with the greater portion joining Colonel Evelyn Wood's No. 4 (Flying Column). This effectively re-calibrated the invasion force from an original five columns to three, namely No's 1, 3, and 4.

To supplement the strength and efficiency of the Royal Artillery regiment, the Royal Navy put ashore the Naval Brigade with their field guns, Gatling guns and rocket troughs and tubes to stand shoulder to shoulder with the British soldier and fight the Zulu warriors to great effect. The disaster at Isandlwana produced a rapid reaction in Britain and reinforcements were soon on their way to South Africa. The British government felt that with its great Empire and Colonies around the world, a military defeat by the Zulu nation could encourage others within

the Empire to seek self determination, through military might. Captain R. Bradshaw RN commanding HMS *Shah* was ordered home to England, but on hearing the news of defeat at Isandlwana, on his own initiative he loaded part of 8/7 battery and one company of Connaught Rangers and sailed for Durban. His decisive action earned him the approval of Parliament and commendations from their Lordships of the Admiralty.

Colonel Pearson's No. 1 Column crossed the Tugela River into Zululand at the Lower Drift, close to the Ultimatum Tree, where an impressive earthwork named Fort Pearson had been built on the Natal side of the river. On this day, the 22nd January 1879, the Zulu impi were attacking and wiping out the camp at Isandlwana. Lord Chelmsford's orders to Colonel Pearson were to advance 35 miles to occupy the Norwegian mission station at Eshowe and there co-ordinate with the other two invading columns which were also heading for the Zulu capital of Ulundi [oNdini]. On the march, the column was split into two divisions and en route the column rested in the Nyezane valley, while the wagons crossed the river. The Royal Artillery, comprising one section of 11/7 with two 7-pounder field guns and one rocket trough. To strengthen his command, the Royal Navy supplemented No. 1 column with a naval detachment drawn from HMS *Active* and HMS *Tenedos*, after which the new fort was named. They were originally equipped with large 24-pounders which were totally unsuitable for the terrain and were therefore exchanged for more manageable 7-pounder field guns, which in fact, took no part in the battle of Nyezane. The Royal Navy hand-cranked Gatling machine gun was very effective in the hands of Midshipman L.C. Coker RN who was praised by Colonel Pearson. The column commander had ordered Coker to bring his Gatling gun to bear on a hill now occupied by the Zulus; three hundred well-aimed rounds drove them back into the bush. Commander Campbell RN also praised boatswain Cotter for the effective way he handled his 24-pounder rocket tubes, firing off eleven rockets, instantly expelling the Zulu from their kraal with direct hits.

Colonel Pearson's No. 1 Column proceeded as ordered and camped at Eshowe with the same guns, rocket troughs and tubes as at Nyezane. The Zulus made only one half-hearted attack and the garrison replied with one sortie, using only one of their 7-pounders. The guns were well placed in the walls of the fort and ammunition, 150 rounds per gun, was in good supply, except for case shot. This problem was solved when it was realised that Morton's jam tins fitted the 7-pounder bore perfectly and the gunners manufactured their own homemade case shot.

No1 Column was now under siege at Eshowe and isolated 35 miles inside enemy territory and with the serious reverse at Isandlwana, would remain so for three months. Two columns made up entirely from the Royal Naval Brigade were eventually formed to relieve the fort. The 1st Brigade consisted of two 9-ounders, two-24 pounder rocket tubes and one Gatling gun, while the 2nd Brigade had only two 24 pounder rocket tubes and one Gatling gun.

At the battle at Gingindlovu on the 2nd April 1879 the artillery unit was made up entirely of the Royal Naval Brigade from H.M. Ships, *Shah*, *Tenedos* and *Boadicea*. Their two 9-pounders Field Guns and two Gatling guns were posted at the corners of the British camp, the latter opening up at 1,000 metres, firing 300 rounds per minute of 0.450" Snider. The 9-pounders then joined the fight with shell and case with equally devastating consequences.

Colonel Richard Glyn's No. 3 Column, with Lord Chelmsford and his staff in company crossed the Buffalo River at Rorke's Drift on the 11th January 1879 and Lieutenant Colonel A. Harness RA commanded the Royal Artillery detachment. They were first called to action to give covering fire with their 7-pounders, should the Zulu attack this column as it crossed into Zululand. Unopposed, the column slowly moved north and their first major engagement was against Sihayo's Kraal, although the Royal Artillery arrived too late to take part in this engagement.

No 3 Column then advanced further into Zululand up the Batshe valley and camped at the foot of Isandlwana Hill, where Lord Chelmsford sent out reconnaissance patrols to find the approaching Zulu army and bring it to battle. Before dawn on the 22nd January 1879, Lord Chelmsford took over half the column, which included four 7-pounder field guns of N/5 battery and headed for Mangeni Falls. He left the camp at Isandlwana under the command of Lieutenant Colonel Henry Pulleine with the remaining section of N/5 Battery of two 7-pounders and a rocket battery of three rocket troughs. The rocket battery, under the command of Major Russell, with all its equipment carried on mules, then accompanied Colonel Anthony Durnford when he left camp with his Basuto mounted infantry to cover Lord Chelmsford's rear but were unable to keep up with his fast moving detachment. When firing was heard to their left, they immediately turned in response and took up a position at an isolated conical hill but were almost immediately engulfed and killed by the attacking Zulu. Major Stuart Smith RA, the 2 i/c, had returned from Lord Chelmsford to Isandlwana and immediately took command of the remaining two 7-pounders of N/5 Battery with fifty men, including Lieutenant H.T. Curling RA who survived Isandlwana. The 7-pounder field guns opened fire with shell, on a rapidly advancing Zulu but as the range became less than 300 yards, they soon had to change to case shot. A plaque has been set into the ground at Isandlwana marking the supposed position of the forward 7-pounder field gun, which battlefield archaeological evidence is currently investigating.

The Zulu advance was so rapid that few rounds were fired before the order to retire was given. The guns with limbers moved off with such urgency that there was no time for the gunners to take their allotted seats and some were obliged to run alongside. The intention was for the 7-pounders to take up a new position closer to the camp, but the Zulu were already in the camp and the guns had to continue straight through the beleaguered position without stopping, losing many more gunners en route. Their intention was then to take the road to the west and rear of the camp and thereby escape to Rorke's Drift, but the guns became stuck in a ravine and overturned. The

drivers, who alone remained, were pulled from their mounts and assailed by the Undi Corps, as were the horses as they hung in the ravine, still in their traces. There was no time to spike the guns and N/5 Battery lost Major Stuart Smith, 61 NCOs and men with 24 horses, 30 mules and 534 round of ammunition. The rocket battery had lost Major Russell and six men with all its equipment, but miraculously Lieutenant H.T. Curling RA survived to tell the tale.

Colonel Sir Evelyn Wood VC commanded No. 4 Column, which was attacking Ulundi [oNndini] from the north-west corner of Zululand in the heart of the disputed territory. One feature of the landscape had caught Colonel Wood's attention and this was Hlobane Plateau, a great lozenge shaped mountain five miles long by one mile across and rising 1,000 feet above the plain. Because of the rocky, boulder strewn terrain on and around Hlobane, Colonel Wood had split his force and dispatched Lieutenant Colonel Redvers Buller with only three hundred mounted troops including 11/7 Battery's Rocket section of only two rocket troughs, commanded by Major E.G. Tremlett RA. Conflicting reports state that Lieutenant Bigge, a close friend of the Prince Imperial when at Woolwich, commanded a rocket trough, but there is no evidence that any artillery was used in the near disastrous battle on Hlobane Plateau.

The following day, 29th March 1879, Colonel Evelyn Wood VC. marched his No. 4 Column to the top of a nearby hill at Kambula, which he strongly fortified and quietly waited for the Zulu army to attack. The strength of the Royal Artillery was; 11/7 Battery (minus one section) of four 7-pounders and a Rocket Section of two rocket troughs, commanded by Major E.G. Tremlett RA. Lieutenant Nicholson, who was mortally wounded early during the action, commanded two 7-pounders positioned in the redoubt. The Zulu army were quietly and efficiently forming up in their traditional 'Horns of the Buffalo' formation, when Colonel Evelyn Wood dispatched Lieutenant Colonel Redvers Buller and a troop of irregular horsemen to taunt the Zulu right horn, the iNgobamakhosi and the uVe, into a premature attack. The Zulu took the bait and the attack was so fierce, causing the 7-pounders to overheat, due to continuous firing of shrapnel and case that cold water had to be poured onto the breeches of the field guns to prevent premature ignition. After his capture, Cetshwayo explained that it was only with the greatest difficulty that his warriors could be persuaded to face the artillery. He explained that one round of case-shot killed ten headmen of his own regiment, and wounded many other Zulus.

On the 3rd April 1879, Eshowe was eventually relieved, after a 40 day siege and the surviving part of Lord Chelmsford's No: 3 Column with Lieutenant Colonel Pearson's No.1 Column retired to the Tugela River. With British reinforcements flooding into Durban from Great Britain, Lord Chelmsford reorganised his army, preparatory to his advance on Ulundi [oNndini]. Lieutenant Colonel Sir Evelyn Wood's No 4 Column was retained intact but redesignated the 'Flying Column'. This was to advance in tandem with a new column commanded by Lord Chelmsford himself called the 2nd Division. They would both link up with a new column called the 1st Division, which replaced Lieutenant Colonel Pearson's old No. 1 Coastal Column. On the 4th July 1879, Lord Chelmsford's reorganised army crossed the White Mfolozi river and formed a large rectangle in the middle of the Mahlabatini plain, surrounded by a large cluster of Amakhanda with Ulundi [oNndini] at its centre. The Artillery Batteries at Lord Chelmsford's disposal for this final confrontation were: N/5 Battery of two 7-pounders, N/6 Battery of six 9-pounders, 11/7 Battery (less one section) of four 7-pounders and half of 0/6 acting as the ammunition column with only two Gatling guns. For the battle, the field guns were placed on all sides of the British square with overlapping fields of fire to counter the Zulu impi from whichever direction they chose to attack. The guns formed up just outside the infantry line or in gaps left for them within the line. When the Zulu launched their first wave, the cavalry moved clear and the field guns open up at a range of over 2,000 metres. The action was short and ammunition expenditure low, although some field guns used all their case shot and had to fall back on 'reversed shrapnel', which had a similar devastating effect. After the battle it was discovered that many Zulu dead were accounted for in groups, less than 30 metres from N/6 Battery 7-pounders. The Gatlings positioned at the corners of the square achieved great success, although they frequently jammed, caused by the extractor ripping off the ferrous cap from the brass case. The *London Evening Standard* reported, 'When all was over and we counted the dead, there lay, within a radius of five hundred yards, 473 Zulus. They lay in groups, in some places, of 14 to 30 dead, mowed down by the fire of the Gatlings, which tells upon them more than the fire of rifles'.

An interesting statistic is that 11/7 Battery was represented in all the major battles of the Anglo Zulu War of 1879, with the exception of Gingindlovu and Rorke's Drift. A truly remarkable achievement for Royal Artillery, Battery 11/7.

Acknowledgements.

Morris. Donald, *The Washing of the Spears*
Knight. Ian, *Great Zulu Battles [1838-1906]*
Hall. Major D.D. *Artillery in the Zulu War 1879*