

NZART ID: 36, Arm Type: Rifle, Date of Draft: (V1) 3 August 2012, Compiled by: Phil Cregeen

Pattern: 1853 Enfield Rifle(Enfield Long Rifle/ 3 band Enfield) Introduced in to NZ Service:1858, Withdrawn 1880-85

Makers: Enfield; Tower; London Armoury Co; also Leige (2nd Type), Belgium; and Windsor, USA (2nd Type).

Calibre: .577 in, 25 bore, Bore: 3 groove uniform or progressive depth rifling RH twist 1turn in 78in.,

Barrel length: 39.0 in. OA Length: 51.75 in. Weight: 9 lb 3 oz. (4.1 kg)

Type of Action: percussion muzzle loader, single shot

Magazine: None, Sights: rear sight bed to 400, leaf to 900 yds. or 1000 yds., foresight barleycorn on fixed block.

Bayonet: Pat 1853 Socket. (NZAR # 58)



In the mid 1800s contemporary analysis of battle casualties indicated that it required 3,000 rounds to put one man out of action using smooth bore muskets, and that their accurate range was no better than 75yds. With other European countries adapting rifles Britain had to do something. In 1851 the 0.702 calibre Minie rifle was put into production as a replacement service arm for the Pattern 42 Musket and 28,000 were initially ordered. This rifle followed the same basic design as the Pattern 1842 smooth bore musket with the exception of rifling (4 grooves 1 in 78in twist) and a ladder rear sight. It saw only limited issue although it was used in the Crimea at the battles of Alma and Inkerman. The accuracy of this rifle, although an improvement on the smooth bore was found to be wanting due to difficulty aligning the conoidal bullet, which had no parallel sides, in the bore and thus causing instability in flight. (1)

During 1852 trials were conducted to determine the best design for a new service rifle using rifles submitted by various private gun makers as well Lovell on behalf of the government. The result was a new rifle created at Enfield in 1853 incorporating ideas and improvements from the various rifles submitted. It had a bore of 0.577in. and a barrel length of 39.0 in. with 3 groove uniform rifling with 1 in 78 in. twist firing a hollow based cylindro-conoidal bullet. The barrel was secured in the stock by 3 barrel bands which also held the ram rod and the lock was greatly improved on previous designs incorporating a swivel to reduce friction. Initially made with a fixed rear sight for line infantry and ladder rear sight for rifle regiments this was dropped in 1854 in favour of the ladder sight graduated to 900 yds. The bayonet for this rifle also incorporated a new feature and that was the French designed locking ring used for the first time on the Pattern 53 socket bayonet. As a result of delays and modifications the Pattern 53 Enfield was finally introduced into service in 1855. During its service life there were a further 15 modifications as well as other improvements developed by Hay, Lancaster and Whitworth and special smoothbore versions for Indian troops following the 1857 mutiny and various pattern of carbine.

There are four main variants all were termed Pattern 1853 Enfield Rifle, (frequently referred to as the “Enfield Rifle” or by collectors as “3 band Enfield” to distinguish it from the 2 band Short Rifle) although changes did not all occur at the same time and implementation varied between manufacturers:

1st Type: screw clamp bands, convex sides to rear sight bed and leaf to 900 yds, narrow ram rod channel and locks dated 1853-55.

2nd Type: solid bands with spring clips, straight sided rear sight block and leaf to 1000yds, stronger hammer, wider front band and stronger ram rod with jag tip, locks dated 1855-58.

3rd Type: screw clamp bands, wider rod slot and stronger rod, progressive depth rifling (depth .011 to .013” deep at the breech end reducing to .005” to .007” deep at the muzzle) and butt shortened by 1 inch (LOC 45 dated 5 Dec 1859), locks dated 1858-63.

4th Type: Baddeley bands with recessed screws, (LOC 292 dated 3 June 1861) nearly all Enfield manufacture and most were converted to Snider. (2)



1st & 3rd Type



2nd Type



4th Type

Barrel bands

When the Pattern 53 was first adopted the method of manufacture was still as previous in that components were manufactured by contractors in Birmingham and shipped to the store in the Tower from whence they were issued to “setters up” for completion as required. This changed in 1857 when the Royal Small Arms Manufactory at Enfield started producing rifles using special purpose built machinery commissioned and imported from the USA. This had the potential to produce 1,200 identical rifles per week, with interchangeable parts. To produce the 63 components of the rifle required 680 machines to undertake 719 separate machining operations. In the first full year 1858 26,739 rifles were manufactured at Enfield. Rifles manufactured at Enfield, London Armoury and Windsor were considered interchangeable.

For the first time all British soldiers could be armed with a common, quality long range rifle. The School of Musketry was established at Hythe in 1854 to instruct Officers and NCOs in the drill required for the new rifle as well as teaching long range shooting skills. Such was the accuracy of the Pattern 53 Rifle that it led to a new sport of target rifle shooting, the formation of the National rifle Association in 1859 and the popularity of the Volunteer Movement. Many “Volunteer rifles” based on the Pat. 53 were made by private gun makers.

In the late 1860s a large quantity of Pattern 53 rifles were converted to breech loader by the Snider principle. (See NZAR # 7 & # 87)



Rear sight 1st Type



Barrel band, nose cap, ram rod & fore sight 1st type

New Zealand Service

The Pattern 1853 rifle first saw service in New Zealand with British troops stationed here. One example is the 65th regiment who served in New Zealand from 1846 to 1865 and received their Pattern 53 Enfield in 1858, the regiment being headquartered in Wellington with detachments stationed at Wanganui, Taranaki and Auckland. The Enfield rifles seeing action in the 1860 campaigns in Taranaki and the Waikato.(3)

In 1861 a number of Enfield rifles in the hands of the 65th suffered from burst barrels, as many as 12 in one company in 6 months as reported in the Taranaki Herald of 12 March 1861. The newspaper speculated that this was due to poor quality of materials and the damaged rifles were to be sent home to the Tower, however the most probable explanation is that the bullets were not properly seated on the powder when loaded thus causing excessive pressure. In combat it proved to be an effective rifle with targets being hit from 400 to 800 yds. (3)

The numbers of Imperial troops varied as hostilities with local Maori dictated and reached a peak of 10,000 men in the early 1860s. However the burden of paying for the Imperial troops almost bankrupted the Colonial Government and from 1865 a self reliant policy was adopted, where colonial forces took over the fighting role and Imperial forces were gradually withdrawn. The last Imperial regiment to leave being the 18th Regiment in February 1870.

In 1865 the New Zealand Colonial Government placed an order for 5000 Enfield Long Rifles and Bayonets with its London agent. Unfortunately there were no surplus arms available in England and the agent recommended that the order be placed for the superior 25 bore Hay Pattern Enfield Rifle. The New Zealand Government continued to buy more Enfield Rifles and Carbines as available including Long & Short rifles, Artillery and Cavalry carbines.

In August 1869 a comprehensive return of arms and ammunition (no Snider Enfield's listed) was prepared for the Select Committee. The return showed the arms and ammunition on issue and in store in the Colony of New Zealand to the Armed Constabulary, Militia, Volunteers and Native Auxiliaries. These included over 20,000 serviceable 25 bore Enfield rifles and carbines (including Hay pattern medium rifles, the principal arm, Long, Short (sword) rifles, Artillery and Cavalry Carbines). There were over 3 million rounds of Enfield Rifle ammunition.

By 1882 only 914 Enfield Rifles (type not specified) were on issue with a further 10,553 held in stores. This had reduced to 256 Enfield Rifles held in stores by 1884 and none held in 1885 (4).

Marking



Lock marked crown VR, 1854 Tower



Proof marks



Butt tang marked for 65th Regt.



Butt tang marked for NZ Militia

NZ Marked Pattern 53 observed to date

NZ Marked			
Arm	NZ Marked	Maker	Dated
Pat 53 Rifle	B NZ 576	Tower	1862
Pat 53 Rifle	B NZ 973	Tower	1862
Pat 53 Rifle	NZ 1935	Tower	1862
Pat 53 Rifle	NZ 3945	Tower	1856
Pat 53 Rifle 2nd Type	NZ 1231	Tower	1856
Pat 53 Rifle 2nd Type	NZ 129	Tower	1856
Pat 53 Rifle 3rd Type	B NZ 630	Tower	1862

Acknowledgements:

Information and photos-John Osborne, Phil Cregeen,

References:

(1)The Pattern 1853 Enfield Rifle by Peter Smithurst

(2).577 Pattern 1853 Rifle Musket & Snider-Enfield by I D Skennerton

*(3)1853 Enfield rifle marked to 65th Regiment of Foot by Tim Ryan & Bruce Cairns
NZAHAA Gazette June 2008.*

(4) AJHR 1869 H 4a