

Trentham Rifle Ranges



Heritage Management Plan

June 2011

New Zealand Defence Force

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for

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Cover image: Competitors in the 1923 National Championships standing on Sommerville Range, Trentham. (National Rifle Association of New Zealand)

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Executive summary

The Trentham Rifle Range complex is a place of great heritage significance to both the New Zealand Defence Force (NZDF), which has managed the land on behalf of the Minister of Defence since 1900, and to the sport of target shooting, which has occupied the place, more or less, since 1892.

The construction of rifle ranges at Trentham was the initiative of the New Zealand Rifle Association (NZRA), later to become the National Rifle Association (NRA), which leased some swampy land from farmer Alexander McCulloch and in 1891 began laying out Sommerville Range (named after Joseph Sommerville, the man who designed and supervised its construction). The range opened the following year. In 1900, the Defence Forces, seeking a place to build a large range, bought the land from McCulloch and set about expanding facilities; by 1910 it had constructed a 1,000 yard range (Seddon) and a 900 yard (Collins) range, along with a series of shorter ranges. The NZRA was taken over by the Defence Forces in 1900 and renamed. Later, even after the two organisations were again separated, they maintained a good rapport. However, eventually, tensions over the future direction of the ranges did cause some ructions in the relationship; the story of the ranges is very much one of two organisations finding a way to co-exist on the same piece of land.

There were periods when the ranges were shut to civilian use (World Wars I and II and in 2000, when safety concerns nationally led to temporary closure). The smaller ranges have – bar one – been closed, with Allen Range completely rebuilt in recent years. Collins Range has largely gone, with just its mantlet, gallery and target shed left and the majority of the range floor occupied by a golf course. The area behind the gallery is now used by the Heretaunga Pistol Club. Sommerville has lost nearly two-thirds of its original length to the golf club. Sommerville and Seddon had large bullet stops built behind the targets, while the latter had 50 new target mechanisms designed, built, and funded by the NRA.

Despite these changes, the sport of shooting has remained firmly based at Trentham. It is the home of the NRA and a collection of Wellington shooting clubs, along with the Heretaunga Pistol Club. The NRA and its predecessors have hosted the national championships every year (that it possibly could) from 1900 onwards. While the NZDF has not always used the ranges consistently, particularly in more recent years, the complex remains an important facility and is of course sited alongside one of the country's most important military camps.

The ranges at Trentham are laid out roughly in a west-east direction, with firing from the camp side towards the hills to the east. The design and layout of the ranges is strictly controlled by the geometric requirements of safety templates that are used to manage the risks to the surrounding areas. Each range is composed of a series of characteristic features, comprising firing mounds, range floor, mantlet and gallery, target frames and a bullet stop, each of which are built to standardised templates. The basic features and safety template requirements give the ranges a great deal of commonality.

Changes over time have had a variety of impacts on the fabric of the different ranges. In the case of Collins Range, the former range floor has been entirely subsumed by the adjoining golf club, and the range today has been re-built behind the gallery, with new timber structures sheltering the shooting positions. Sommerville Range has been severely truncated by the golf links; safety concerns have led to its use being discontinued, and as a result the old Hythe-pattern target frames are still extant. The gallery area of Seddon Range has been extended and the target frames replaced with modern cantilever-type hoists.

The heritage significance of Trentham Rifle Ranges is considerable. The historical association of the sport of target shooting with the ranges is manifest, and it is doubtful that more than a few sports in New Zealand have been so intimately associated with one place for such a lengthy period. Fittingly, the NRA still makes its home at Trentham. The history of military use of the place is similarly significant. Training has taken place there since 1902 and ever since World War I, when the mobilisation camp was built there, troops have lived alongside the ranges and used the facilities.

The significance of the ranges' physical remains is mixed. Little remains of the ranges as they were prior to World War II, beyond the range floors and possibly some of the firing mounds. The galleries of the three ranges date from World War II, as do the Hythe-pattern target frames at Sommerville (a design from an earlier era); a particularly notable feature of the galleries is the surviving graffiti, put up by markers sheltering during bouts of shooting, and recording the details of troops from all over the country and overseas (particularly American forces). This is an unusual and precious historic resource in itself.

This Heritage Management Plan identifies the heritage values of the ranges, provides an assessment of their significance and sets out policies for their on-going use and management to help retain those heritage values. The second part of this Plan provides advice on repairs and maintenance work.

As long as the ranges have an ongoing use, the core heritage issues are the preservation of the important physical fabric, particularly the galleries and the graffiti on the gallery walls, the old target shed at Collins Range, and at least a representative sample of the Hythe pattern target frames at Sommerville Range. Of equal importance is the retention of the ranges on their current alignment and with minimal encroachment on their present extent.

The ranges currently in use are kept in good order with regular maintenance that focuses on the technical requirements of the use of the ranges. Vegetation is encroaching on Sommerville Range, particularly in the gallery area. A modest amount of ongoing maintenance will be required to keep the physical structures of the galleries in good condition for the future. Particular care must be taken in the course of ongoing maintenance to preserve the remaining graffiti.

Part 1: Heritage Analysis

1. Introduction

1.1. Purpose

This Heritage Management Plan has been produced to provide guidance for the future conservation of the Trentham Rifle Ranges, recognised by the New Zealand Defence Force (NZDF) as a place of great heritage significance. It includes an analysis of the heritage value of the place, policies to help direct management of the place and a work plan to guide future repair and maintenance.

1.2. Commission details

This Plan was commissioned by Kate Jack, Environmental Officer, Environmental Services, Defence Shared Services, NZDF.

The Plan was written and compiled by Michael Kelly, heritage consultant, and Russell Murray, conservation architect, in association with Miranda Williamson, who undertook much of the historical research.

1.3. Acknowledgements

The authors wish to acknowledge the contribution of the following:

Steve Lamb, Trentham Range Warden, and Harley O'Hagan, Senior Environmental Officer, Property Group, Defence Shared Services, who accompanied the authors on a site visit to the three ranges and provided expert advice during the preparation of the plan.

André Doyle, Secretary of the National Rifle Association of New Zealand,¹ and Lachlan Wallach of the Heretaunga Pistol Club, both of whom kindly contributed historic images for the authors' use, made extensive comments on the draft and helped clarify and correct some significant matters.

1.4. Management and legal status

The Trentham Rifle Ranges occupy Pt Sec 936, Upper Hutt, a reserve for the purposes of a rifle range, under the Reserves Act 1977. Control and management of the land is vested in the Minister of Defence. The NZDF manages the land on behalf of the Minister.

¹

The place is not listed on the Upper Hutt City District Plan nor is it registered by the New Zealand Historic Places Trust (NZHPT).

1.5. Location



The Trentham Rifle Ranges are outlined in red. From left to right, Seddon, Sommerville and the remnant of Collins. (Image courtesy Google Maps, November 2010)

1.6. Changes to this plan

This Heritage Management Plan should be periodically reassessed (at 10 yearly intervals, or shorter periods as appropriate) to ensure that it remains relevant to the requirements of the place.

2. History

2.1. History of the Trentham Rifle Ranges

History

The establishment of Trentham Rifle Ranges is closely associated with the history of the National Rifle Association (NRA) and its predecessors, and the activities of the New Zealand Defence Force (NZDF) at Trentham.

Rifle shooting

Rifle shooting was a major sporting pastime in New Zealand in the 19th and early 20th centuries. Many men, and more than a few women, knew how to wield a rifle, particularly outside the cities. There were a number of factors to explain this: New Zealand was still a raw country with a frontier mentality, conflict between Maori and Pakeha was common between 1845 and the early 1870s, there were relatively few diversions for the public, including organised sports, and all things military were held in very high regard by the population.

It is no coincidence that the history of the NRA stretches back to the New Zealand Wars, when an annual national shooting competition was inaugurated by Governor Gore Browne for militia and volunteers in 1861. Rifle associations had been formed by the Militia Act of 1858, although they would not become purely sporting organisations for some time. The NZRA was then formed after the conclusion of the wars (the NRA states that it was formed in 1878², while another sources says 1879³) and the annual competition moved around the various member districts until 1902, when it was permanently sited at Trentham. Throughout this period, and well into the early 20th century, most of the NZRA's members were Defence Force volunteers. There was therefore a strong tie between the Defence Forces and the NZRA, which was taken to its fullest extent at Trentham. These ties would become very important when the range and the NZRA itself were under threat of being closed.

A permanent home

In 1891, the NZRA identified a piece of land at Trentham, north of Wellington, as a possible site for a rifle range. The land was owned by Alexander McCulloch, a farmer and later a Justice of the Peace. He inherited the land from his father Robert who

² André Doyle, Secretary, NRA, to Harley O'Hagan, Senior Environmental Officer, Property Group, Defence Shared Services, 6 April 2011.

³ *Evening Post*, 27 February 1902



Major Joseph Sommerville, 1897. *The Cyclopedia of New Zealand, Wellington Provincial District*

received a Crown Grant in 1865.⁴ It was hardly favourable for farming. Wet even in summer, it was not known as 'McCulloch's Swamp' for nothing. McCulloch was happy to lease the land to the NZRA and in early 1891, Major (later Colonel) Joseph Sommerville of Whanganui⁵ arrived to lay out the range. The land was on the eastern side of the valley at Trentham, proximate to the railway and backed by hills. The area, although windy at times, was nothing like as breezy as Wellington. The difficulty was the way the hills made the breeze swirl and to this day it remains the greatest challenge to shooters at Trentham.

The first range was named after Sommerville, a farmer who like many other members of the NZRA was also a volunteer in New Zealand's armed forces. He later became the Executive Officer of the NZRA. Collins Range was named for Captain Robert Collins, then Treasurer of the NZRA, who was responsible for locating the site and was the main driver of the rental agreement and the construction of works for the range.

The range opened on 11 March 1892, and in the absence of the Premier's wife, the ceremonial shot was made by Magdalen Reeves, the wife of Minister of Justice William Pember Reeves, who hit a bull's-eye from 500 yards.⁶ A large crowd came out on a special train for the event, and Minister Reeves and the Mayor of Wellington Francis Bell also gave speeches.⁷ The 'wind all day was very boisterous'⁸ which made shooting difficult but the competitors pronounced themselves happy with the new range. The NZRA hoped it would become the home of rifle shooting in New Zealand and donations of £203.10.0 from members and assistance from Alexander McCulloch was sufficient to get more development work done. However the championships of 1893 was beset with poor weather and as a result many members decided that Trentham was

⁴ Grant no. 2400, Issued 19 September 1865. Pt Lot 63, Hutt District.

⁵ *Evening Post* 30 November 1891

⁶ Trentham Rifle Range Centennial Committee 1992, *Trentham Rifle Ranges 1892-1992*, National Rifle Association, Wellington (back page)

⁷ *Otago Witness*, 17 March 1892

⁸ *Hawkes Bay Herald*, 12 March 1892

totally unsuitable for rifle shooting. The NZRA only held its championship at Trentham once more (in 1895) as it continued to move the event around the country. The onset of financial difficulties forced the NZRA to suspend the event in 1900, although the war in South Africa was a considerable distraction.⁹

As noted above, the country's Army was largely a voluntary one and it had a symbiotic relationship with NZRA. In view of this, when the parlous state of the former's finances became known, it is no surprise that senior members of the NZRA encouraged the government's purchase of the land occupied by the ranges.¹⁰ In fact, they tried to get the government to buy it in 1892 but there was no interest at the time.¹¹ There was political pressure too. William Field, MP for Otaki, asked the Minister of Defence on 10 October 1900 if the Government would take steps to acquire the Rifle Range at Silverstream. But the government's interest in the ranges extended beyond helping the NZRA. The longer range of the new .303 rifle, changes in military tactics resulting from experiences during the early stages of the South African War, and a lack of trained troops with firearms skills, had prompted the Defence Forces to find a replacement for the small Polhill Gully Range in Wellington. The obvious site was McCulloch's property at Trentham, and in 1900 it was offered to the Crown. The price was £4200 and the area involved was some 486 hectares in extent. The transaction took place on 10 November 1900¹² and, with the sale of his farm concluded, McCulloch and his family left Trentham in April 1901 and moved to Palmerston North.

In his annual report to the government in 1901, the Acting Commandant of the New Zealand Forces noted: 'During the past year a range at Trentham has been acquired by the Government for the use of the Wellington Volunteers. It is an excellent range for both long-range small-arms and artillery practice.'¹³

The purchase of McCulloch's property was crucial in securing not only the future of the ranges but also the NZRA's prospects at Trentham. With the latter's finances still in a poor state, the Defence Forces took the organisation over, partly as an acknowledgement of the value the NZRA gave to the volunteer force. The handover took place in 1901 and the NZRA was renamed the New Zealand Defence Rifle Association (NZDRA). With

⁹ *Evening Post*, 27 February 1902. The account puts the raising of contingents to fight in South Africa as the principal reason for the event's suspension.

¹⁰ Doyle to O'Hagan, 6 April 2011

¹¹ *Wanganui Chronicle*, 8 March 1906

¹² CT WN 30/25, Land Information New Zealand

¹³ *Appendices to the Journals of the House of Representatives*, 1901 H-19.

Trentham now available for use, the Defence Forces decided to base the NZDRA there, establishing the facility to this day as the primary focus of sporting shooting in New Zealand. Just what facilities were then offered at the range is not known beyond the fact that there was the one range (Sommerville) with a trench for 25 targets,¹⁴ and one range building.

Although the land at Trentham had been purchased by the Crown, and money spent on upgrading facilities e.g. the construction of additional targets, it was not until 1903 that the land was declared a reserve.¹⁵ The Gazette notice read:

Whereas the Trentham Rifle Range Reserve . . . has been acquired by His Majesty as a public reserve for the purpose of a rifle range, but has not been granted or vested in any particular manner:

Now, therefore, His Excellency the Governor of the Colony of New Zealand, in exercise of the powers in this behalf conferred upon him by the "Public Reserves Act 1881," doth hereby approve that the Right Honourable the Minister of Defence shall have the control and management of the said reserve.

In 1906 a long distance (1,000 yards) range was completed.¹⁶ This was named after the Premier, Richard Seddon.¹⁷ In 1907, Arthur Ballinger, a great marksman, won the championship belt for the third time. It entitled him to keep it and he donated it back to the NZDRA to be used as the main competition prize in perpetuity.¹⁸ Now known as the Ballinger Belt, it is one of the country's most famous sporting prizes.

By 1909 Collins Range was in use and the NZDRA (by then known as the Dominion Rifle Association [DRA]) sought a configuration of the ranges that included 2 x 25 1,000 yard targets at Seddon and Sommerville and 1 x 25 600yd target range (Collins). Over the next five years more small ranges were added and by the beginning of World War I, Allen, Liverpool and a mini range had been built.

¹⁴ 'History of Rifle Associations at Trentham', NZDF (author and date not known) p.2

¹⁵ Ibid. p.2

¹⁶ *Nelson Evening Mail* 26 February 1906. There was a range overseer called Seddon.

¹⁷ *Wanganui Chronicle*, 8 March 1906

¹⁸ *Trentham Rifle Ranges 1892-1992* p.10

Maintenance at what was still a fairly new facility was a significant issue. When the 1909 championships loomed, the list of required repairs and maintenance was lengthy and included the asphaltting of trenches, making up of the parapet, making up and levelling of ground, greasing Ralston targets (imported from Glasgow in 1905), painting of buildings and the flag-staff, water supply and latrines, to name but some of them.¹⁹ This work was costed at a not inconsiderable £2200,²⁰ and it is not known if some or all of it went ahead.



Shooters at the national championships, c.1910. (S.C. Smith Collection, Alexander Turnbull Library G-022779-1/1)

It heralded a period where every year brought calls for repairs and improvements to the ranges. Grazing sheep and stray cattle undermined earthworks (of which there were many – by 1913 Somerville had 10 different mounds, Seddon seven), there were slips and erosion, roads needed repair, targets became indistinct through weathering of paintwork, drains filled up, target hoists required maintenance etc. In 1910, work was proposed to extend Seddon and Somerville Ranges through the provision of more targets and more firing mounds.

More land was taken for the rifle range – in 1909 and 1910. In 1911 there was a further change to the DRA, when it became responsible for fostering rifle shooting in general, with the Defence Forces assisting in organising annual competitions.

¹⁹ Executive Officer, NZDRA to Secretary, Council of Defence 18 November 1908, Rifle and Firing Ranges, Trentham, 1908-1913 AD 4/43, Archives NZ

²⁰ Memo, District Engineer to Secretary, Council of Defence, 29 January 1909, AD 4/43



Spectators on a damp day in front of clubhouses, range buildings and tents during the 1912 championships. (*Weekly News* 7 March 1912, courtesy of NRANZ)



Sommerville Range, 1916, with the newly built mobilisation camp in the foreground. To show how much of this range has gone, the gabled building at the right rear of the camp is the present Clocktower Building, now on the western side of Messines Road and at least 200 metres from the present edge of the range. (Alexander Turnbull Library, F-049277-½)

With gathering tensions in Europe, annual training camps had been held at Trentham but with the arrival of World War I, Trentham was transformed. A huge mobilisation camp – the main Expeditionary Force Camp – was constructed alongside the ranges, initially in tents and then in semi-permanent timber structures. Use of the ranges picked up markedly and more work was done to repair and maintain them. In 1917 the target

trenches and marker galleries at Sommerville and Seddon were concreted. There were more repairs the following year.

During the war the DRA's activities ceased but it was reactivated in 1919. Just four years later there was another upheaval. Prompted partly by economic pressures and partly by Defence's determination that DRA competitions should be run along service lines, the National Rifle Association (NRA) was formed. There were then two groups in competition but political intervention saw the DRA's assets moved to the NRA and a new service-based organisation, the New Zealand Army Rifle Association (NZARA) formed.²¹ During the Depression, the government ceased funding to the NZARA and eventually it folded, leaving the NRA as the only national body for rifle associations.²² It also left the NRA free to pursue its aspirations at Trentham, which it did with vigour.



Competitors awaiting the start of competition in the national championships, 1 March 1923. They are standing on Somerville Range with Collins Range's targets in the background. At the far left is Collins' target shed, which still stands. The other buildings shown here have gone. This is a companion image to the front cover. (Image courtesy of NRANZ [1 of 3 from a panorama])

During World War II, Sommerville, Seddon and Collins Ranges had new mantlets and markers' galleries built in reinforced concrete. The precise date this work was done is not known²³ but the earliest graffiti in the galleries dates from 1941. The target hoists were of an earlier 20th century standard design – the Hythe pattern target frame.²⁴ Only Sommerville Range now has these hoists, but the World War II era mantlets and galleries remain on all three ranges. The Hythe pattern was presumably derived from a design formulated at the Hythe School of Musketry (later the Small Arms School),

²¹ 'History of Rifle Associations at Trentham' p.2

²² 'History of Rifle Associations at Trentham' p.2

²³ Correspondence files for the period covering World War II could not be located in Archives New Zealand.

²⁴ Pers. comm. Steve Lamb, Trentham Range Warden, 7 April 2010

established in Kent in 1853. One source describes the frames as originally being built 'of malleable iron ... normally supplied by McQueens Ltd of Galashiels who hold the original drawings.'²⁵ Whatever their origin they were already a relatively old design by the time of World War II.



Shooters at a NRA meeting at Trentham, 9 March 1951. (Alexander Turnbull Library, G-114/268/01)

The ranges were in heavy use during World War II. They were used not only by local troops but also by the likes of US Marines, stationed in Wellington and Paekakariki. Recreational shooters were shut out during the war, but after it ended war, the NRA asked to use the ranges again. Permission was denied by the Defence Force. The NRA then approached the Minister of Defence and the NRA was allowed to use the range for its 1947 championship.²⁶

The NRA was granted a licence for the Seddon Range on 1 January 1951 for a five year period, at no charge, with a right of renewal for a further five years. At this time, the NRA used Seddon a great deal, Sommerville sometimes and Collins occasionally. The latter two were mainly used by Army Schools, Territorials and Cadet Units. So the

²⁵ http://www.mod.uk/NR/rdonlyres/35FDfBC1-0889-4191-83935751D20A0A3F/0/JSP403_Vol2_Ch15_GalleryRange.pdf p.7

²⁶ 'History of Rifle Associations at Trentham' p.2

move to effectively hand over Seddon to the NRA reflected the Army's needs. In 1957, the NRA's licence was renewed and a further five year licence was issued in 1962. A new licence for both Seddon and Sommerville Ranges was drawn up in 1967 but the NRA refused to sign it. Instead, Cabinet approved a 10 year period for use of the ranges, with a possible five year renewal, but at the NZDF's convenience. This was signed in November 1968.

From the time of the ranges' inception, the hills behind the ranges had been used as a backstop to capture bullets, but in 1951 it was discovered that those hills did not rise steeply and quickly enough to catch all fired bullets.²⁷ This only came to light after a change to range safety regulations in 1945 stipulated that the ground behind a range must rise at an angle of no less than 30° from the horizontal. The hill behind the ranges rise at a level considerably less than 30°. However, nothing appears to have been done about this anomaly until another review of safety undertaken in 1964 concluded the same thing.²⁸ An observation was also made that the bullets that carried over the hill were landing in private land. The adjacent landowners suggested that the government buy their land on the Trentham side of the hill, but this was politely declined. The suggested solution was to build an artificial stop butt immediately behind the targets, as was done in Britain.

In December 1964 the Army's engineer of works was instructed to design a bullet stop for Sommerville Range. The dimensions required were listed as 334 feet (102 m) long, 22 feet (6.7 m) wide at the bottom, 5 feet (1.5 m) wide at the top and a slope of 2 in 3.²⁹ Work was completed at Sommerville in early 1966 but shooters were quickly punching big holes in the stop, even before grass had a chance to grow.³⁰ The bullet stop was made from spoil taken from the construction site where General Motors was building a car plant (which still stands today off Messines Road). The bullet stop consisted of 'metal liberally sprinkled with boulders. A two feet mixture of clay and soil [was] then...placed on the mound to seal the metal.'³¹

²⁷ Memo, Commander Army Schools Trentham, 28 September 1951, File 204/149 Part 3, Rifle Ranges – Trentham: general 1951-1965

²⁸ Range Inspection report, Trentham Camp, 19 May 1964, File 204/149 Part 3, Rifle Ranges – Trentham: general 1951-1965

²⁹ Chief of Staff, CMD to Engineer Works, 18 December 1964, File 1/8/100 Pt.1, Rifle Range – Trentham (Area 5) 1956-1970

³⁰ Commandant, Trentham Camp to CMD 3 March 1966, File 1/8/100 Pt.1

³¹ Commandant, Trentham Camp to CMD 7 March 1966, File 1/8/100 Pt.1

At the same time as safety was under discussion, the future of the ranges came under scrutiny. With pressure on land at Trentham, questions were raised about whether all three main ranges were needed. The Army indicated that it wanted to build high-density housing and a new road and to that end was proposing to redesignate Collins Range and some of Somerville Range floor (beyond the 600 yard mound). Naturally this did not sit well with the NRA. It proposed that the 25 targets at Collins be moved to Seddon as an extension of that range and that control and management over Seddon handed to the NRA.³² This approach provoked scepticism within the Army but it was part of an on-going argument between the NRA and Army that was often reprised. The NRA contended that as public subscriptions paid for some of the facilities, it (the NRA) had at least a partial claim over the ranges. For its part the Army was happy to acknowledge it had a 'moral' obligation to provide for the NRA. However, nothing dramatic was planned in the near future so the Army prepared a lease similar to those prepared in the past. This time, as described above, the NRA refused to sign it.

The 1968 range reports also revealed that no firing was allowed on Collins Range for safety reasons, specifically the danger posed by firing on Somerville Range forward of the 100 yard mound. Whether this helped prompt the intention to end active use of Collins Range is not known but it must have been a factor. The following year, the Heretaunga Pistol Club (HPC), which had used Collins Range once already in 1969, approached the Army for permission to use the range to host the national pistol shooting championships and thereafter use it as a permanent facility.³³ With Collins Range out of action, it was not an impediment to Army activity, particularly as the HPC wanted to use the area behind the gallery, not the range itself. This request was refused on safety grounds.

Early in 1970 the HPC tried again, disputing the safety factors and assuring the Minister of Defence that it had no intention of using Collins Range when Somerville was in use. The Minister asked Army to reconsider the situation and it again turned down the application. Then, for reasons not revealed in the files, but understood to be because the Minister of Defence intervened on behalf of the HPC,³⁴ the Army did a *volte face*. An agreement to use the south-eastern corner of the range, behind the gallery, was prepared. The lease was for a 10 year period with a two year right of renewal (since amended to a licence for an indefinite period.) A key requirement of the lease was that

³² Secretary, NRA to Min. of Works, 14 October 1965, File 204/149 Pt.4

³³ Memo Mr Bailey, MP to Min. of Defence, 28 August 1969, File 204/149 Pt.4

³⁴ Lachlan Wallach, HPC to Harley O'Hagan, 31 March 2011

the club was responsible for undertaking any construction work necessary to make the range suitable for its needs. The target frames may have been removed from Collins Range at this time.

Correspondence files do not reveal exactly how or when Collins Range floor and part of Sommerville's ended up being used for a golf course. The Trentham Camp Golf Course is first mentioned in 1974 in Army files seeking a surplus building for use at the course. The golf course, once exclusively used by military personnel, is now open to the public.

The reorganisation of the rifle ranges mooted in the mid-1960s took shape in the early 1970s. Unhappy at the revoking of part of the range, the NRA was keen to take up an offer to move somewhere else. It settled on Milne's Farm, a piece of land in Whiteman's Valley but the asking price and its general lack of suitability from a town planning perspective ruled it out.

At the same time, with the end of the initial 10 year lease looming, the NRA attempted to muster enthusiasm from a collection of sporting groups that used the ranges, among them model aeroplaning, go karting and archery,³⁵ to seek a commitment from the Army to keep the ranges open and viable. It proposed rearranging the existing ranges to ensure a permanent and stable home for their sport and the creation of a National Shooting Centre.³⁶ The response of officials was as guarded as ever but the main emphasis in dealings with the NRA was an unwillingness to commit the Minister of Defence and the Army to a permanent arrangement, in case circumstances changed. Although Army trainees used Sommerville regularly, an overriding concern for the Army was the possibility that the Trentham ranges would eventually become untenable because of their close proximity to residential areas.³⁷ Eventually, the Minister of Defence decided the land at Trentham was too valuable to have a multiplicity of uses on it and that retaining a rifle range at Trentham served a number of useful purposes, not the least of which was acting as a buffer to Wi Tako (now Rimutaka) Prison. He concluded that the Army and the NRA should 'continue in a combined use of the area

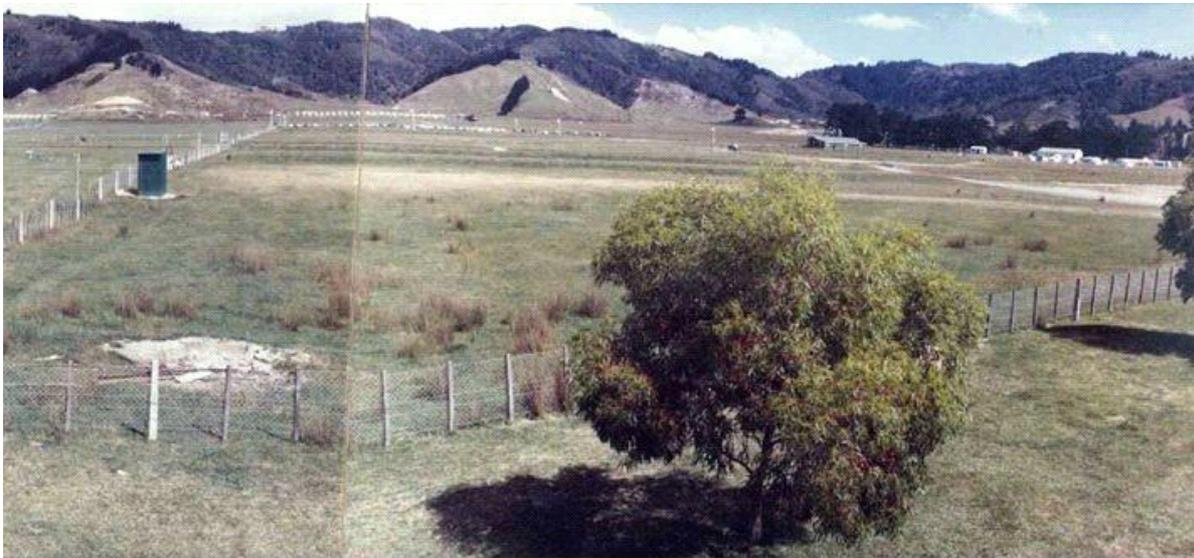
³⁵ The Min. of Defence and Secretary of Defence both considered the presence of these other sports a complicating and unnecessary factor in negotiations with the NRA.

³⁶ *Evening Post* 9 October 1975

³⁷ 'Defence Brief on Trentham Rifle Ranges', 11 March 1976, File 204/149 Pt.5, Rifle Ranges Trentham General 1973-1978

for as long as the Army remains in occupation.³⁸ This, for the meantime, settled the matter.

By 1979, the following groups used the ranges under the auspices of the NRA. They were: Police Shooting Association, Wellington Rifle Club, Karori Rifle Club, Hutt Rifle Club, Upper Hutt Rifle Club, Petone Rifle Club, Onslow Rifle Club, Heretaunga Pistol Club, Black Powder Shooters Association, Antique Arms Association and various scout and youth groups. The Army was lobbied on a regular basis by some of these organisations to allow clubrooms to be built on the range, and also by outside groups wanting to get access to the range. It continued to resist further civilian use of the ranges.³⁹



Seddon Range, 1982, prior to its major overhaul by the NRANZ and NZDF. (Image courtesy of NRANZ [1 of 3 in a panorama])

By the early 1980s, the construction of Messines Avenue through the rear of Sommerville Range and the extension of barrack accommodation reduced the length at Sommerville Range to 600 yards and put strains on the NRA's ability to run its annual championships. Reduced to only one 1000 yard range with 25 targets, its solution was to expand Seddon Range and build new target hoists. An agreement was reached with the Ministry of Defence in 1984 and funded 50/50 by the Ministry and NRA. The work was extensive, with a lot of the planning and work done by the Ministry of Works and Army engineers.

³⁸ Min. of Defence to Prime Minister, 22 January 1976, File 6/7/131 Pt.3, Trentham Rifle Range Reserve – Wallaceville Research Station 1971-1976

³⁹ Minute for file, 6 January 1980, File 204/149 Pt.6, Rifle Ranges Trentham General 1973-1980



Seddon Range, 1984. The old Hythe pattern frames await removal as the area is prepared for new target hoists. Note the hillside partially removed to accommodate the extended range. (NRANZ)



The new target hoists being erected on a new concrete platform. (NRANZ)

The gallery was roughly doubled in size and the Hythe pattern targets replaced with new cantilever frames. These sat on a new enlarged platform. The cost of the infrastructure was \$41,120 with an additional cost of \$40,000 for the new target hoists (\$800 each), which was borne by the NRA.

Part of a hillside was removed to accommodate the extension, firing mounds were extended, new drains installed and a new road constructed to give access to the target area. To make way for the widening, at the other end of the range the NRA headquarters had to be moved (as well as the Petone Rifle Club buildings).

Work was sufficiently completed to accommodate the 1985 championships but the history of the NRA states that the whole project was not fully completed until January 1988. A new lease was signed, for 12 years, and, in the eyes of the NRA, it put 'an end to a long period of uncertainty about the rights and duties of all parties dating back almost to the formation of the Reserve.'⁴⁰ This new arrangement also avoided the need to use Sommerville Range, which was from then onwards exclusively used by the Army.⁴¹

Only war prevented civilian use of the ranges throughout its history, but in 2000 it fell silent for another reason. Rifle associations were told on 28 November 2000 that a new British safety manual had shown that Trentham, among other ranges, was unsafe and would have to close immediately. The distance a ricocheted bullet could travel into the air was far higher than previously known and it placed a risk for the people who lived behind the hills on the eastern side of the range.⁴² The Army relented to allow the 2001 championships to go ahead but then shut the range again.

Seddon Range remained closed for nearly two years until the Army gave the go-ahead for shooting to resume, persuaded by the NRA that, based on bullet strike data recorded and analysed, that the range danger area (RDA) fitted within the range reserve and conformed to JSP 403,⁴³ and also that the level of risk associated with the Cone of Fire was acceptable. Redeveloping the Seddon Range mantlet and bullet stop to comply

⁴⁰ *Trentham Rifle Ranges 1892-1992* p.5

⁴¹ *Trentham Rifle Ranges 1892-1992* p.6

⁴² *The Dominion*, 16 December 2000

⁴³ Ministry of Defence [UK] JSP403 (Joint Services Publication (JSP) 403 – Handbook of Defence Land Ranges Safety, Volume II – Design Construction and Maintenance of Small Arms, Infantry Weapon Systems and 30mm Weapon System Ranges).

with the requirements of JSP 403, which was finished in 2008, cost the NRA \$212,090.00.⁴⁴ This did not include cost of voluntary labour supplied by NRA members.

Sommerville Range remains closed and will only reopen when the Army decides what approach to take to make it operable again.

2.2. Architect / designer

The first range, Sommerville, was laid out by Colonel Joseph Reginald Sommerville (1844-1911), a farmer from Whanganui, who like many other members of the NZRA was also a volunteer in New Zealand's armed forces. He joined the Alexandra Cavalry in September 1891 and was later Captain of the Alexandra Mounted Rifles. He became executive officer of the NZRA and held the position for 20 years. An avid promoter of rifle shooting as a recreational pursuit, he was described as the father of the sport.⁴⁵

Captain Robert Collins (1848-1924), who laid out Collins Range, was an accountant by trade. He was the long-standing commander of the Wellington City Rifles, a corps noted for their marksmen. Collins was later the executive officer of the Dominion Rifle Association.⁴⁶

The Trentham Ranges are today most strongly representative of the World War II era. Their present configuration (Collins Range excepted) follows the standard design and safety templates of the time.

2.3. Chronology of events, including modifications

- | | |
|------|---|
| 1861 | Governor Gore Browne presented a belt as a prize for the best shot in the country, to be decided at an annual competition for militia and volunteers. |
| 1878 | New Zealand Rifle Association was formed. |
| 1891 | The NZRA identified a piece of land in Upper Hutt, owned by Alexander McCulloch, as suitable for a range. |
| 1892 | Major Joseph Sommerville, executive officer of the NZRA, finished laying out a range at McCulloch's farm. It was named Sommerville |

⁴⁴ Doyle to O'Hagan, 6 April 2011

⁴⁵ *Hawera & Normanby Star*, 11 March 1909

⁴⁶ The Cyclopeda Company Ltd, 1897, *Cyclopeda of New Zealand* [Wellington Provincial District], The Cyclopeda Company, Limited, Wellington p.333

- Range and used for the first time at the national championships on 11 March that year.
- 1893 Poor weather at the national championships turned some NZRA members against the new range. The NZRA only returned once to Trentham before 1900 – in 1895.
- 1900 The NZRA was in a financially poor state and no national competition was held. The government bought McCulloch’s farm, about 486 hectares, for £4200.
- 1901 The Defence Force took over the NZRA and renamed it the New Zealand Defence Rifle Association (NZDRA).
- 1903 Trentham Rifle Ranges declared a public reserve for shooting purposes, with control and management vested in the Minister of Defence.
- 1906 Seddon Range completed.
- 1907 Arthur Ballinger won the championship belt for the third time. It entitled him to keep it and he donated it back to the NZDRA to be used as the main competition prize in perpetuity.
- By 1909 Collins Range was completed.
- 1914 The outbreak of World War I saw considerable land at Trentham turned over to a mobilisation camp, which later became Trentham Military Camp. The Army took over the ranges for the duration of the war.
- 1919 The Defence Rifle Association was reactivated.
- 1923 The National Rifle Association was formed, to differentiate members’ interests from that of the Defence Forces.
- c.1940 During the early part of World War II, Sommerville, Seddon and Collins Ranges had new mantlets and markers’ galleries built in reinforced concrete. The target hoists provided were of an earlier 20th century standard design – the Hythe pattern target frame. Much use of the revamped ranges was made by local trainees and marines from the United States.
- 1951 The NRA was granted a full five-year lease (of Seddon Range) for the first time. The Army retreated to Sommerville and Collins ranges to conduct its training.
- A safety issue with the height of the hills behind the range arises from a

- 1945 revised range safety regulation.
- 1957 An extension to the NRA's lease was granted.
- 1962 A further five year lease was granted to the NRA for Seddon Range.
- 1964 The safety of the range with regard to bullets flying over the hills behind the range was raised again. This time a bullet catcher was ordered to be built for Sommerville Range.
- 1966 The bullet catcher for Sommerville Range was constructed largely from spoil from the General Motors construction site.
- 1968 A 10 year lease with a possible five year renewal was signed by the NRA and Defence.
- By this time firing on Collins Range had ceased due to safety reasons and this partly prompted its eventual abandonment.
- 1970 The Heretaunga Pistol Club signed a 10 year lease to use the area behind the gallery at Collins Range for a short range facility. It remains an occupant of the range.
- By 1974 The Trentham Camp Golf Course was established, using Collins Range floor and, later, part of Sommerville Range floor (the western half).
- 1975 A National Shooting Centre at Trentham was promoted by the NRA.
- 1976 The Minister of Defence decided that the ranges should stay in Defence hands and that the Army and NRA should jointly use them.
- Early 1980s The Army built a new road (Messines Avenue) between the camp and ranges, and built new accommodation, taking land previously occupied by Sommerville Range and reducing its length considerably.
- 1984 With the loss of Sommerville's full length and to ensure it can continue to run its championships, the NRA pushed to have Seddon Range extended to 50 targets from 25. The Army agreed and major works were required including new target frames, bullet catcher, an extended gallery and firing mounds, drainage and a new road. Work did not finally finish until 1988. Work was funded 50/50 by Ministry of Defence and NRA, with the target hoists designed and built by the NRA at their cost.
- 1 March 1984 NRA signed license to occupy Seddon Range for a period of 12 years.
- 2000 The range closed for almost two years for safety reasons. Sommerville has yet to reopen.

- 2002 The range reopened after NRA convinces NZDF that safety requirements are being met.
- 2008 Work on upgrading the Seddon mantlet and bullet stop ended. The cost of over \$202,000 was borne by the NRA.

3. Description

3.1. Setting

The Trentham Range complex occupies a large block of open land, trapezoidal in shape, at the south-east side of Trentham, set against the low hills separating the Hutt Valley from Whiteman's Valley. Nearby is Trentham Army Camp, which has a vast collection of buildings and facilities spread out over a wide area, and a wide variety of related facilities, such as Defence Shared Services, located in other buildings nearby.

The general setting of the ranges is flat open land, formerly a marsh, rising up to the low hills at the south that divide Trentham from Whiteman's Valley. Originally farmland, the Trentham area is now extensively developed for the Trentham Army Camp, and today hosts a mixture of residential, light industrial and institutional land uses.

The ranges are constrained within well-defined boundaries and physical features. The south-eastern edge is defined by the low hills, which originally served as the bullet stop feature for all the ranges. To the west, a safety margin separates Seddon range from Rimutaka Prison, and the low hills beyond that.

The northern extremity is marked firstly by the substantial open drain ("Heretaunga Drain") which intercepts surface water descending from the hills before it reaches the Camp and secondly by the perimeter of the adjacent golf course, which over time has substantially encroached into the area formerly occupied by the ranges, consuming around half of the original extent of Sommerville Range and nearly the entirety of Collins Range.

The ranges are predominantly open space and the most obvious visual feature is typically the range land itself; this survives more or less at its original extent at Seddon Range. The range land at Seddon and Sommerville Ranges is marked by an extensive complex of drainage ditches that help prevent the land reverting to its former marsh condition. The land hosts a significant population of pukeko and other wetland birds.

3.2. Design and construction

None of the range structures are as they were when the ranges were first built. The most significant changes to the ranges were carried out in the World War II era, when the galleries and mantlets were rebuilt; the ranges today are strongly representative of that

period. Further changes came in the 1960s and later as the golf club was allowed to encroach onto the ranges themselves, and the adoption of new safety standards required the construction of major bullet stop features.

Safety requirements

Firing ranges are strictly designed to a safety template, a collection of geometric constraints determined by ballistic and safety issues to do with different kinds of ammunition, firing requirements and different personnel and skill ranges, that completely determines the configuration and general appearance of the ranges. The standard template used for Collins, Sommerville and Seddon ranges was PAM [?]. The equivalent contemporary template in use by NZDF today is the British military standard JSP403.⁴⁷

The safety template is particularly pertinent when considering the operation of adjacent range areas, where firing on one range may preclude the safe use of parts of another; this can be seen at Trentham where parts of Sommerville Range cannot presently be used.

The position of the Trentham ranges in relation to the hills, and the comparatively shallow slope and low height of the hills, coupled with the nature of the firing that takes place on them means there has always been some risk of stray rounds ending up in Whiteman's Valley; the on-going emphasis on improving safety at the ranges is designed to minimise that risk.

Common features

Each of the ranges has a number of core features in common, and although each range has been modified to greater or lesser extent, these features are generally still present. These features are:

Firing mound

An elevated position at a specified distance from the targets, usually given in yards. The mounds for Collins Range have been subsumed into Trentham Golf Course. In earlier decades, there were generally firing mounds every 100 yards. There are some metricated firing positions at Trentham.

⁴⁷ JSP 403 - Volume 2 - Design, Construction, and Maintenance of Small Arms, Infantry Weapon Systems and 30MM Weapons Systems Ranges, Chapter 15 deals with gallery ranges in particular

Range floor

The space between the firing position and the targets, generally consisting of an open field that is kept closely cropped and free of obstructions. Firing lanes are marked out at the mantlet, generally spaced at 4 m centres.

Mantlet, and Gallery (or Butt)

The mantlet is a protective earthen embankment built up against and over the roof of the gallery, and it also functions as a secondary bullet stop. The face of the mantlet is fashioned to a specific slope for this purpose. The gallery is in each case a sheltered reinforced concrete structure set within the mantlet, formed as a walkway with an overhanging cantilevered roof to protect personnel operating the target frames from bullet fire. The gallery is a simple linear extrusion in form, built in reinforced concrete to a standard profile.

Each gallery at Trentham is backed by a drainage ditch that runs water from the hills away from the galleries; at Sommerville Range, the old Hythe pattern target frames are set down in the ditch, and at Collins Range, the ditch has been covered over and incorporated into the structure of the modified range. The ditch is a necessary geometric feature for the operation of the Hythe pattern target frames, which need to be set down so operators can attend to the targets when lowered.

Target frames

These are the mechanisms by which targets are raised and lowered for the shooters. There are two main styles in the Trentham ranges, the old Hythe-pattern target frames installed at Sommerville Range during World War II and the more modern cantilever frames (installed at Seddon Range in the 1980s), which are easier and safer to operate. The old style frames are considered operationally redundant as they are difficult to use and are now seized up through not being used; NZDF advise they are not able to be put to practical use in any refurbishment of the ranges.

Bullet stop or bullet catcher

The bullet stop is typically a large earthen bank behind the gallery, commonly faced with sand drawn to a specific slope angle to minimise the risk of ricochets and other hazards. The hills behind the ranges served as the original bullet stop feature for the complex; over time, more appropriate bullet stops have been built up at Sommerville and Seddon Ranges to improve safety both for the ranges and the adjoining areas. These bullet stops are significant civil engineering structures in their own right, although more

work remains to be done to make these features compliant with current safety templates.

The bullet stops require regular maintenance to ensure slope angles are maintained, hazardous features that arise are repaired, and bullets are extracted out of the stops at regular intervals to minimise the risk of contaminating the environment with the heavy metals found in the rounds.

Stop butts

May be located either side of the bullet stop as additional protection against stray rounds heading off the sides of the ranges.

Target shed or store

A place to store targets for use on the range, located at the gallery end of the range. In the case of Collins Range, this is a separate stand-alone shed; for Sommerville, small sheds are built in to the gallery, and Seddon has both small built-in sheds and a standalone shed for this purpose.

Safety flags

These flags are raised when the range is in use and indicate the safe limits of approach for pedestrians and vehicles.

The flagpoles set out along the length of Seddon Range are used to indicate wind direction; flags are usually raised for shooting competitions.

3.3. Collins Range

Collins Range is the most modified and least complete of the three old ranges. Its original extent can no longer be discerned as the entirety of the former range floor has been subsumed by the golf club and road, although the gallery remains intact for its entire 160 metre length. The range originally consisted of 25 firing lanes, of which 23 are presently marked. About half of the extent of the range is in use at present.

As it stands today, the range has effectively been shifted to the south and it now provides for short-range shooting. The mantlet remains, more or less unaltered. The gallery, built on the standard cast in-situ concrete pattern, survives in its entirety, but has been converted to be the firing position for 25, 50 and 100 metre firing ranges, with new bullet stops built to the south for each part of the range.



Collins Range, east end of gallery, looking west.

Part of this conversion has included the construction of new light timber structures behind the gallery to provide sheltered firing positions – over about half of the length of the gallery – and the installation of precast concrete covers over the open drain. Over time around half of the old military graffiti on the gallery walls has been painted over – attributed by the HPC to the Army applying green paint to sections of the wall prior to their taking over the range. This was subsequently painted white by the HPC. The surviving graffiti, almost wholly in pencil, is the most extensive and varied of the three ranges and suggests the great deal of historically interesting material that has likely been lost. It includes marks from a wide range of military and other forces and personnel, with dates going back to the early 1940s.

The original (or early) target shed is a distinctive small building situated beside the mantlet at the east end of the gallery. This is a plain gabled timber-framed box, roughly 6 m x 4 m in plan and clad and roofed in corrugated iron, with a nicely made braced and ledged door. It bears instructive marks from receiving many stray rounds over the years, and illustrates why later sheds were more sensibly constructed within the shelter of the mantlets.

3.4. Sommerville Range



Sommerville Range, east end of gallery, looking west.

Somerville Range has a trapezoidal site, largely due to the encroachment of the golf course over the original range floor, which was some 600 m long. As it stands today, the range is approximately 450 m long to the point of the trapezium and around 120 m wide. There is a 300-yard firing position.

The range is not presently in use due to a number of significant safety issues. It has 25 marked firing lanes. At the gallery end, the gallery and bullet stop are somewhat overgrown. The gallery, a substantial structure around 170 m long, is built to the standard cast in-situ concrete profile, with a deep drainage ditch along the south edge and recessed spaces within the mantlet, one of which has been converted to an ad-hoc bucket toilet.

The two most distinctive features of the range are the assembled collection of old Hythe-pattern target frames and the old graffiti on the gallery walls. These target frames are very interesting pieces of metalwork, their design dating back to before World War II, and include hand-wrought elements in their construction.

While much of the gallery walls have been painted, the surviving graffiti, almost entirely in pencil, is centred on the World War II period, with dates from the early 1940s onwards; many of the marks are from American forces stationed in the area through the early years of the war. There is graffiti from later eras too, predominantly from the armed forces, and police and other users are represented too.

To revive the use of this range, the requirements of the current safety template are so extensive that the current intent of NZDF is to entirely re-construct the range, placing the gallery and bullet stop in a completely different location and resulting in the total disruption of the existing structure (alternative proposals exist for using the existing mantlet as part of a 25 m range).

3.5. Seddon Range



Seddon Range, west end of gallery, looking east.

Seddon Range may be considered the least modified range in the complex, and it is by far the longest, with a 1,000 yard firing mound at the northern end near the main 'Heretaunga Drain'. The range has more or less maintained its original size, although it was effectively widened with the addition of 9 shooting lanes at the east side in 1984. Overall, the range is over 900 m long and nearly 200 m wide, with broad safety strips separating it from Rimutaka Prison at the west and Sommerville Range at the east.

The range is divided into 50 lanes, 40 marked and in current use, and 10 lanes at the western side unmarked and not presently in use. The main access road runs along the western boundary of the range.

The gallery, around 190 m long, is a substantial in-situ concrete structure, built to the standard profile and with a drainage ditch running the length of the gallery. A large timber-framed target shed, of indeterminate age, is set at the western end of the gallery. At the eastern end, the modern (1984) extension of the gallery is made of precast concrete elements, and this part of the mantlet is formed up over concrete flood control blocks. Here, there is a flight of steps to the top of the mantlet and a small target store recessed into the gallery.

The gallery has a considerable amount of military graffiti, nearly all in pencil; the majority of dates centre around the World War II period and the following years of CMT.⁴⁸ There is also a fair amount of contemporary graffiti, both military and civilian, largely to be found towards the eastern end of the gallery.

The target frames are the modern cantilever type, made of galvanised steel, with concrete counterweights, and are set along the south edge of the drainage ditch.

The current safety template requires an extension of the height of the bullet stop, in the order of two metres, to permit more general use of the range (the existing bullet stop is considered adequate only for the current use of the range by skilled sharpshooters who can be relied on to consistently hit the targets). The sheer physical size of the bullet stop makes any extension a major civil engineering task.

This range is predominantly used by the NRA, which assists the Army with ongoing maintenance; the NRA has their headquarters building just over the drainage embankment at the north end of the range.

⁴⁸ Dates in the 1920s almost certainly refer to the birth dates of some young soldiers.

4. Significance Assessment

4.1. Statement of cultural heritage significance

Historic

An importance to the course, or pattern, of New Zealand's history; this could include an association with key events, ideas or people or an association with an event or person of significance to the New Zealand Defence Force.

Trentham Rifle Ranges is a place of great historic importance for three main reasons.

Firstly, it has been the home of sporting shooting in New Zealand since the early 1900s - arguably even earlier. It has been the venue of national competitions since 1892, the home of the NRA's national headquarters, and the place where the country's oldest sporting trophy has been competed for since 1892.

Secondly, since the Army first started coming to Trentham in 1900, the ranges have been used for training purposes. The NZDF has been responsible for the overall management of the ranges, a task carried out in conjunction with the NRA and its predecessors. The latter have made their own vital contribution to the care of the ranges, donating labour and funding to their upkeep. Both organisations have worked alongside each other and although the relationship has had its ups and downs, it represents a remarkably long period of co-operation and mutual support, which shows no sign of ending any time soon.

Thirdly, with the loss of other ranges in the district, it is now the home of Wellington's shooting clubs, many of whom have their clubrooms at Trentham. It reinforces Trentham's role as the home of shooting.

Community

A strong association with a particular community or cultural group for social, cultural, symbolic, commemorative or spiritual reasons. This includes the significance of the place to one (or more) of the three services of the New Zealand Defence Force and their past and present personnel.

Trentham is the spiritual home of competitive shooting in New Zealand. It is the only place where the Ballinger Belt, one of the country's truly great sporting titles, is competed for. The NRA headquarters are located at the edge of Seddon Range, as are

other local clubrooms. Generations of shooters have used and competed at Trentham and it still draws competitions nationally and internationally. Historically, the importance of the ranges to competitive shooting and to the NZDF is hard to overstate.

Landscape

A strong association with other built, cultural and / or natural features in the surrounding landscape that together contribute to the historical integrity or distinctive sense of place.

The ranges are a notable feature of the general Trentham landscape on the eastern side of the valley. They are a buffer between Rimutaka Prison and the military camp. They are obvious landmarks from Messines Road and are a near perfect fit – physically and functionally – with the military purposes that most of the rest of the area is put to.

Creative / technical

A high degree of creative or technical achievement, including design, engineering accomplishment, invention, workmanship or the innovative solution of structural or technical difficulty.

The ranges are structures entirely defined by highly specific technical requirements. They are in every sense fit for purpose, and this gives them considerable technical value. Seddon Range has been regarded as a world-class shooting venue.

Characteristics

A high proportion of the key characteristics and / or original features usually associated with the particular type of place.

The rifle ranges are highly specialised structures and purpose-designed for shooting. As the ranges stand today they are little changed from their 1940s configuration. With the exception of the loss of the floor of Collins Range and part of the floor of Sommerville, the ranges substantially retain their essential characteristics.

5. Heritage inventory

5.1. Degrees of Significance

For the purposes of this plan three degrees of significance are used to delineate the status of the spaces and fabric of the Trentham Ranges; these are as follows:

2 Exceptional Significance

The space, elevation or element is original or early fabric.

1 Some Significance

The space, elevation or element is not original, but is nevertheless an appropriate modification, or has some importance.

0 Nil or negative significance

The space, elevation or element is of no importance, or is intrusive or historically inaccurate.

The following inventory pages identify the significance of each major element and the related fabric of each range.

As a collection, the Trentham Ranges have a ranking of 2 – Exceptional Significance. This has some implications for the management of the ranges where heritage values are to be protected. This issue is dealt with in Section 6 of this Plan.

5.2. Collins Range

Overall rank – 1



Aerial of Collins Range, showing the approximate boundaries of the place.
(Courtesy of Google Maps)

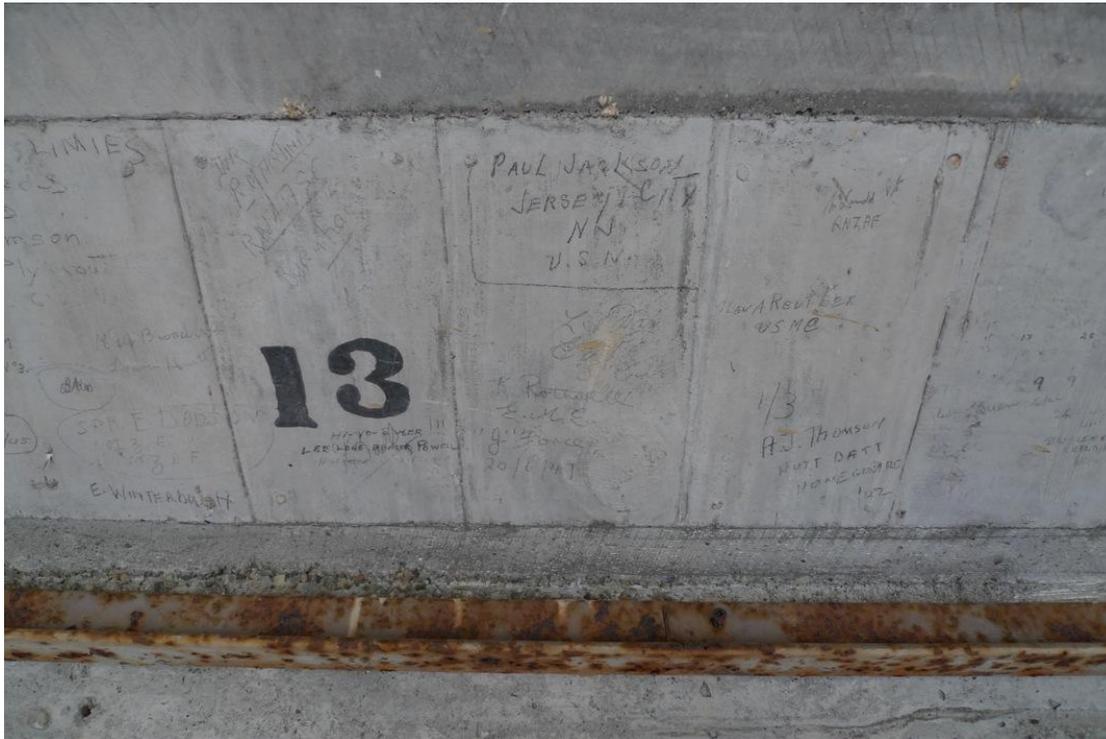


Mid-point of gallery, looking to the west – note partly painted concrete walls and modern timber gallery structures.



Target shed.

Element	Fabric	Rank
Firing mounds	Not extant	-
Range floor	Lost to golf club	-
Mantlet	Earth embankment	2
Gallery	In-situ concrete gallery, including, drainage ditch and fixed seating	2
	Pencilled military graffiti to gallery structure	2
	Modern paint finishes over graffiti	0
	Modern timber firing shelters and seating	0
	Modern store shed	0
	Concrete covers over drain	0
Modern range	Gravelled range area	0
Target frames	Not extant	0
Bullet stop	Modern bullet stops	0
Target shed	Old timber structure clad in corrugated iron	2
	Modern shed (relocated)	0



Example of surviving graffiti at Collins Range, 2010

5.3. Sommerville Range

Overall rank – 2



Aerial of Sommerville Range, showing the approximate boundaries of the place.
(Courtesy of Google Maps)



Eastern end of gallery, looking to the west – note, original markers' seats, partly painted concrete walls, old target frames and encroaching vegetation.

Element	Fabric	Rank
Firing mounds	300 yard mound extant	2
Range floor	Partly lost to golf club	2
Mantlet	Earth embankment	2
Gallery	In-situ concrete gallery, including recessed store rooms, drainage ditch, fixed seating and remnant electrical and communications fixtures	2
	Pencilled military graffiti to gallery structure	2
Target frames	Hythe pattern target frames	2
Bullet stop	Modern bullet stop	1

5.4. Seddon Range

Overall rank – 2



Aerial of Seddon Range, showing the approximate boundaries of the place.
(Courtesy of Google Maps)

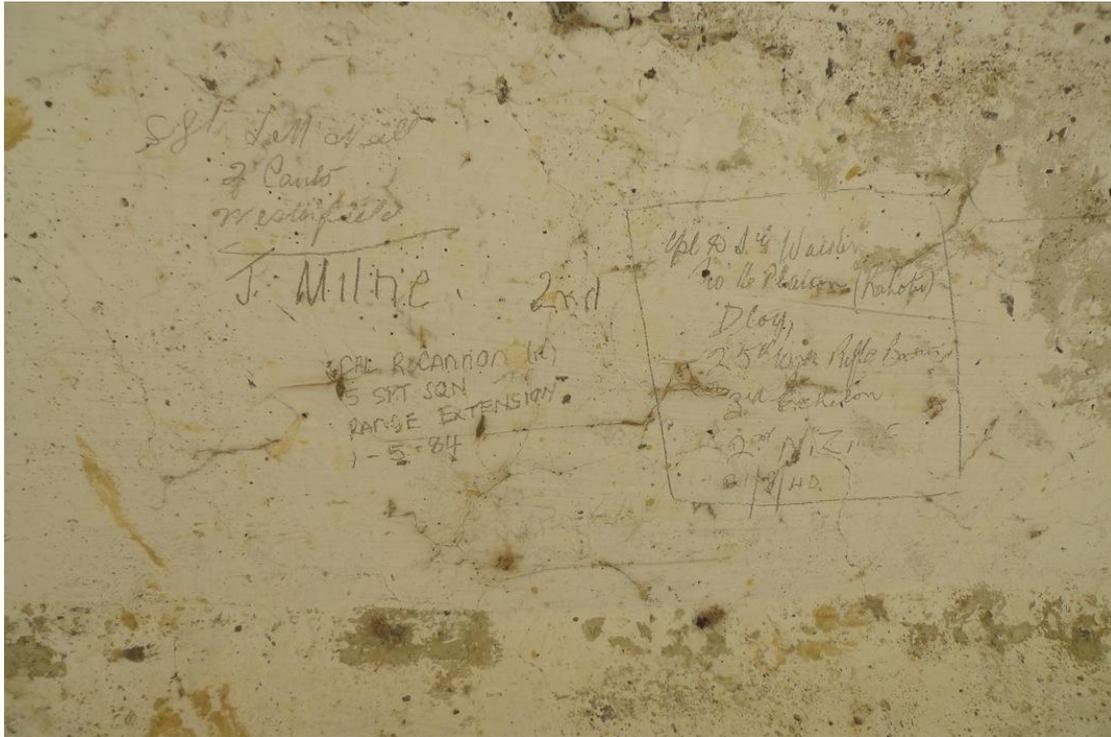


View from east end of range looking west along mantlet. Note lane markers, gallery, target frames and bullet stop.

Element	Fabric	Rank
Firing mounds	1,000 yard mound extant	2
Range floor	Intact, including drainage	2
Mantlet	Earth embankment	2
Gallery	In-situ concrete gallery, including recessed store rooms, drainage ditch, fixed seating and remnant electrical and communications fixtures	2
	Modern pre-cast concrete gallery section, including access steps to mantlet	1
	Pencilled military graffiti to gallery structure	2
	Modern paint finishes over graffiti	0
Target shed	Timber building at west end of gallery	1
Target frames	Modern cantilever target frames	1
Bullet stop	Modern bullet stop	1



Junction between modern precast gallery and old in situ concrete at lane 9.



Example of surviving graffiti, Seddon Range, 2010.

6. Influences on Conservation Policy

6.1. Requirements of the owner

The NZDF is in the process of re-evaluating its use of the ranges. One – Allen Range – is not part of this plan and Sommerville is not currently in use. Seddon Range remains in regular use but is almost exclusively used by the NRA and its member shooting clubs.

With regard to Sommerville, the NZDF has two planned approaches for substantial changes to its layout.

The original proposal is to turn it into a Range Complex, making full use of the available 300 metre length and also providing a 25 metre pistol range. To make room for the pistol range, the existing target gallery would be demolished and rebuilt in a more westerly location. The range as a whole would be reduced in width from its current 25 firing lanes to 10 and would be oriented further to the south of its current location. However, funding shortages have now made this outcome less likely.

The alternate proposal is a purpose-built Field Firing Area (FFA) to be erected centrally on the existing range and used solely for pistol practice. Erecting the FFA on the range would not interfere with any part of the existing range infrastructure, would cost little and can simply be removed if the original proposal goes ahead.

In the short term at least, the FFA proposal provides a good heritage outcome for Sommerville Range. The Range Complex proposal would effectively destroy the heritage values of Sommerville Range and have impacts on the heritage value of the overall complex.

6.2. Requirements of the occupier

The NRA and its associated clubs in Wellington are the lessees and principal users of Seddon Range. Their use of the range is part of an on-going arrangement with the NZDF, and the NRA hopes and expects that arrangement to continue long into the future. The NRA regards Trentham as the spiritual home of New Zealand shooting and it considers that the NZDF also recognises and respects that.

The NRA regards Seddon Range as having a global reputation as a challenging and demanding place of competition. It stresses that to maintain this recognition the range and its infrastructure must be regularly updated and improved in line with technical

improvements in rifles, ammunition and target systems, partly through the use of new electronic technology for target operation and scoring and the like. As part of this the NRA sees the maintenance of close and cooperative relations with all range users as a number one priority. Without more detail on what might be proposed and how it might be implemented, the possible impact of this on existing heritage fabric is not known.

The HPC would like to continue to use the area behind the Collins Range without restrictions which inhibit the enjoyment of its sport or contravened the rights granted by their licence. As part of that, it considers it 'probable that from time to time we may seek Army approval to carry out modifications essential to our approved use.'⁴⁹

6.3. Compliance with the Reserves Act

The land was established under the Public Reserves Act 1854 and has been subject to the Reserves Act since 1977. This Act requires that all reserves be classified by the Minister of Conservation for the purpose for which they are held, which include the "...use, benefit, enjoyment, safety, or defence of the people of New Zealand or the inhabitants of any district or locality therein."

However, pending classification, reserves continue to be held for the purpose for which they were set apart and the administering body continues to control and manage the reserve under the appropriate provisions of the Reserves Act. In relation to Trentham Rifle Range the administering body is the Minister of Defence.

There are presently no particular statutory requirements for the management of land reserved for defence purposes.

6.4. Compliance with the Government Heritage Policy

As a government department that comes under the auspices of the Policy for Government Departments' Management of Historic Heritage 2004 (Government Heritage Policy), the NZDF is required, among other things, to undertake the following:

Provide for the long-term conservation (including disaster mitigation) of historic heritage, through the preparation of plans, including management plans for historic reserves, maintenance or conservation plans, and specifications. (Policy 5 – Planning (a))

⁴⁹ Lachlan Wallach, HPC to Harley O'Hagan, 31 March 2011

Care for [its] places of historic heritage value by monitoring their condition, maintaining them, and, where required, repairing them. (Policy 7 – Monitoring, maintenance and repair)

The preparation of this plan meets Policy 5 and puts in place the means to meet Policy 7.

6.5. Building Act 2004

The following matters in the Building Act 2004 are of particular relevance to existing buildings and structures and may apply to certain works undertaken at the ranges.

The meaning of “building” includes structures like the ranges, and is defined in Sections 8 and 9 of the Act:

- (1)(a) ...a temporary or permanent movable or immovable structure (including a structure intended for occupation by people, animals, machinery or chattels), and...
- (c) includes any 2 or more buildings that on completion of building work are intended to be managed as one building with a common use and a common set of ownership arrangements

Repair and Maintenance (Schedule 1 Exempt Building Work)

A building consent is not required for “...any lawful repair and maintenance using comparable materials.” However, all building work is required to comply with the New Zealand Building Code, including structural strength and durability requirements.

NZBC Clause B2 specifies minimum lives for different building elements – 50 years for structure, 15 years for secondary elements that are difficult to replace, and for linings and other easily accessible elements, five years. However, for heritage buildings, and in particular for such robust structures as the ranges, it is generally appropriate to aim well beyond the minimum 50-year life for all elements.

Principles to be Applied (section 4)

Assessment of building work subject to the Act is required to take into account, amongst other things,

“...the importance of recognising any special traditional and cultural aspects of the use of a building,” and “...the need to preserve buildings of significant cultural, historical or heritage value” (sub-sections d and l); also

“...the need to facilitate the efficient and sustainable use in buildings of materials and material conservation” (sub-section n)

Historic Places (Section 39)

When a territorial authority receives an application for a project information memorandum or a building consent for a registered historic place, historic area or wahi tapu, it must inform the New Zealand Historic Places Trust. The Trentham Ranges are not registered by the NZHPT so any building consent application will not trigger a formal notification to NZHPT.

Building Consents (Section 40 - 41)

Where a building consent is required, it is an offence to carry out building work not in accordance with a building consent (except for exempted work set out in Schedule 1 of the Act).

Section 41(c) allows for some specific kinds of work, such as emergency repairs, to be carried out without a prior building consent approval, but a Certificate of Acceptance is to be obtained for such work directly after completion.

Alterations to Existing Buildings (Section 112)

Alterations to existing buildings generally require a building consent. Schedule 1, clause (ag) exempts the following building work:

“... the alteration to the interior of any non-residential building (for example, a shop, office, library, factory, warehouse, church, or school), if the alteration does not—

- (i) reduce compliance with the provisions of the building code that relate to means of escape from fire, protection of other property, sanitary facilities, structural stability, fire-rating performance, and access and facilities for persons with disabilities; or
- (ii) modify or affect any specified system.”

For non-exempt work, the Act requires that the altered building will –

“...comply, as nearly as is reasonably practicable and to the same extent as if it were a new building, with the provisions of the building code that relate to:

- (i) means of escape from fire; and

- (ii) access and facilities for persons with disabilities,
- and continue to comply with the other provisions of the building code to at least the same extent as before the alteration.”

Alterations that do not comply with full requirements of the building code may be allowed by the territorial authority if they are satisfied that:

- “(a) if the alteration were required to comply ... the alteration would not take place; and
- (b) the alteration will result in improvements to attributes of the building that relate to (i) means of escape from fire; or (ii) access and facilities for persons with disabilities; and
- (c) the improvements referred to in paragraph (b) outweigh any detriment that is likely to arise as a result of the building not complying with the relevant provisions of the building code.”

Significant changes to the range structures are likely to require Building Consent approval; however, the nature of the ranges is such that achieving compliance with the Building Code is not likely to be onerous.

Change of Use (Section 115)

An owner of a building must not change the use of a building –

- “(b) ...unless the territorial authority gives the owner written notice that the territorial authority is satisfied, on reasonable grounds, that the building, in its new use, will—
- (i) comply, as nearly as is reasonably practicable and to the same extent as if it were a new building, with the provisions of the building code that relate to—
 - (A) means of escape from fire, protection of other property, sanitary facilities, structural performance, and fire-rating performance; and
 - (B) access and facilities for persons with disabilities (if this is a requirement under section 118); and
- (ii) continue to comply with the other provisions of the building code to at least the same extent as before the change of use.”

No change of use in the terms of the Building Act is presently envisaged for the ranges.

Dangerous, Earthquake-prone and Insanitary Buildings (Sections 121 – 132)

A dangerous building or structure is one likely to cause injury or death, whether through collapse or fire. An earthquake-prone building is one that will have its ultimate capacity exceeded in a moderate earthquake and is likely to cause injury or death through its failure. An insanitary building is offensive or likely to be injurious because of its condition or lack of appropriate facilities.

A territorial authority can, if it judges a building to be dangerous, earthquake prone or insanitary, require work to be done to reduce or remove the danger.

The existing seismic capacity of the range structures is not presently known; however, as low lying and intrinsically robust concrete structures, the main risks from a seismic event are likely to be associated with ground displacement more than shaking (as seen at the West Melton range outside Christchurch). The range structures have not been assessed as a hazard to date by the Territorial Authority and are not otherwise known to be intrinsically dangerous or insanitary in the sense of the Act.

6.6. Risks

Loss of purpose

For any place, the loss of a sustainable use or purpose poses a significant risk, as identified in article 7 of the *ICOMOS New Zealand Charter*. It generally leads to a lack of support and income, cessation of maintenance, deterioration, vandalism, and eventual demolition.

The ranges have had a viable use since they were built. Despite some losses of land, that use has enabled the place to be kept generally in a good state of repair and thereby ensured its long-term survival. However, should circumstances alter i.e. a change in operational policy by the NZDF, safety issues, a lack of funding, or the NRA no longer functioning as a viable entity, other risks will materialise.

Natural processes

The general effects of water on concrete, timber (weatherboards, framing timbers etc.) and metal fabric (corrugated iron roof, spouting etc.) lead to decay and corrosion, which can significantly reduce the structural integrity of structures over time.

The best way to manage this threat is to adopt a cyclical preventative maintenance programme.

Vegetation

The ranges are set in open country and where the ranges are maintained for operational use, vegetation growth is not a significant risk. However where maintenance is not being undertaken at Sommerville, vegetation is encroaching on the gallery area.

Visitor impacts

The built structures at the ranges, although regularly used, are generally very robust so wear and tear is not a major risk. Collins Range is used by the Heretaunga Pistol Club, which has built new structures abutting the old but in general terms its activities have not affected heritage fabric.

Management impacts

The heritage values of this place could easily be undermined or extinguished with poor or inappropriate management. Such management might include poor planning, delays in commencing important maintenance work, undertaking inappropriate remedial work or maintenance, the erection of inappropriate new structures, wholesale changes to the ranges, or the failure to act on or appropriately manage known risks.

Information loss

The possible destruction of important archival sources such as old documents and photographs, and the loss of unrecorded oral history sources constitute a threat. The knowledge held by the many people associated with the ranges is an important information source that should be utilised and secured for the future.

DSS and Trentham Camp's collection of archival sources should be properly stored, with scans made of key documents and images and stored digitally, and all hard copies kept in a fire-resistant, museum-quality environment.

Natural disaster

The ranges are, physically very robust places, consisting predominantly of earthworks and reinforced concrete structures, and are more or less invulnerable to severe weather, flooding and the like. The most physically vulnerable elements are the timber-framed target sheds at Collins and Seddon ranges, followed by the target frames, all of which are at some risk of damage or loss in the event of disaster. The surviving graffiti at the ranges is also vulnerable to disaster and should be properly recorded sooner rather than later (see 7.8).

7. Conservation Policy

7.1. Introduction

Trentham Rifle Ranges is demonstrably a place of high heritage value. It is a place that has been used for exactly the same purpose since its establishment in 1892 and it has a high national profile. Despite that constancy of use, the ranges have been altered considerably over time due to changing operational requirements, the specialised nature of target shooting, improvements in technology and ever increasing safety measures. Along with those changes has come a reduction - by more than half - in the former extent of the ranges.

Taking all that into account, it is clear that while the value of the place lies partly in the remaining heritage fabric value, the overall arrangement of the ranges and their situation in the Trentham landscape is just as important. The nature of the ranges' evolving use will continue to require changes to the facilities over time and the policies in this plan recognise that, while providing for the conservation of key fabric.

The policies outlined in this section set out the core requirements for the ongoing management of the ranges in a way that best protects heritage values while maintaining the ongoing operational use of the ranges.

7.2. Conflict between heritage values and operational requirements

The Heritage Management Plan recognises the importance of the various features of the ranges. It also recognises that the ranges must suit ongoing operational requirements in order to have a viable ongoing use, and that the ongoing use is essential to the maintenance of the range's heritage values.

The balance of operational requirements and heritage values must be carefully weighed where these matters potentially conflict. In every case, the first point of reference is to determine what the minimum necessary scope of change is and to measure that against its impacts on heritage values as part of the decision-making process.

7.3. Conservation standards

The setting of appropriate conservation standards for this place is the philosophical underpinning of the Heritage Management Plan. This section sets the stage for the conservation policies that follow.

All work carried out at this place should meet the appropriate conservation standards for the place. In particular, work should follow the conservation principles set out in the

ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value (see Appendix II). In summary, these principles include:

Repairing the place with original or matching materials, **retaining as much as possible of the original fabric**. (Repairs to a technically higher standard than the original are allowable where the life expectancy of the element is enhanced.)

Restoring lost features where there is clear evidence of the original form and detail.

Maintaining the place to a high standard so that it is always weatherproof, tidy and functional. Maintenance should be carried out regularly and according to a plan.

Modifying the place with alterations or additions only where such change is essential to continued use, where the change is the minimum necessary, and where there is no loss of heritage value. Reversible change is preferable to irreversible change.

Identifying new materials used in maintenance, repair and new work to distinguish them from the old.

Keeping records of all work.

7.4. Extent of physical intervention

Refer back to the heritage inventory in Section 5 of this Plan for the identification of heritage values for the various spaces and building fabric of the ranges. The appropriate conservation processes, as set out in the *ICOMOS NZ Charter*, for the various assigned cultural heritage values are as follows:

Cultural Heritage Value 2

This means the element or space is of considerable cultural heritage value. Modification should be allowed only for the purpose of safeguarding the building, or to meet statutory requirements. Any such modification should be carried out only if no other reasonable option is available; it should be as discreet as possible and the minimum necessary.

Allowable processes of change include **maintenance, stabilisation, repair and restoration**.

Cultural Heritage Value 1

This means the element or space is of some cultural heritage value. Adaptation, or removal and reuse may be allowed for the reasons given above and to effect distinct functional improvement.

Allowable processes of change include **maintenance, stabilisation, repair, restoration and adaptation.**

Cultural Heritage Value 0

In spaces of little or no cultural heritage value, the adaptation of the spaces, and modification of the fabric, may be carried out to effect any improvement that may be necessary for the ongoing use of the place. Work should never be carried out in a way that adversely affects adjacent spaces or elements of higher heritage value. Wherever work is undertaken in these spaces, consideration should be given to reinstating original finishes or other fabric where these are known and where appropriate.

Impact on heritage fabric

The implication of the conservation standards set out above is that some existing elements of the ranges with a Cultural Heritage Value of 2 are potentially at risk of loss from operational changes to the ranges.

In particular, the Hythe-pattern frames at Sommerville Range and the gallery and its associated graffiti would be lost if the proposed Range Complex was developed. In this case, consideration must be given as to how to minimise the (significant) effects of such a loss on heritage values, for instance preserving some or all of the old frames off site along with exhibiting a record of the graffiti (or possibly relocating the relevant parts of the gallery).

7.5. Processes of Change

Maintenance

The ranges are currently maintained to a particular programme focussed on operational requirements and safety. Some additional maintenance is required to help protect heritage values and ensure that future deterioration of significant material and features is minimised. Funding should be allocated on an annual basis to ensure this is done every year. Conducting regular preventative maintenance should ensure that substantial remedial work is not required after the repairs described in this plan are carried out.

Stabilisation

This is the arrest of the processes of decay, and is generally the most favoured conservation option because it involves no removal of existing material.

Repair

This is the making good of damaged or decayed material. This process will be used where stabilisation is not possible. Repair of material should be with original or similar materials and to the same standards as original. A technically higher standard of repair may be justified where the life expectancy of the material is increased, the new material is compatible with the old, and the cultural heritage value is not diminished. New material should be identifiable.

Adaptation

Adaptation refers to changes required solely to meet continued use requirements. The conservation of a place of heritage value is usually facilitated by it serving a useful purpose, and maintaining a viable use may sometimes require some change. In case of the ranges alterations and additions are only acceptable where they are essential to continued use. In particular adaptation should not detract from the significant qualities of the place, it should be reversible, and the disturbance of significant material should be kept to a minimum.

Impact on heritage value

The proposed adaptation of parts of the ranges that have a Cultural Heritage Value of 2 should be considered as 'essential to continued use'. Some heritage fabric may be removed or altered as a matter of necessity to allow for the ranges to continue in their current use. (See 7.2 above).

7.6. Disaster provisions

The two target sheds should be secured against fire through the installation of a smoke alarm system connected back to the camp alarm system to give early indication of trouble.

The most significant disaster risk to the fabric of the ranges is otherwise a major earthquake and any ground displacement that could affect the integrity of the galleries and earth structures. There is little to be done about such an event, but a contingency plan should be put in place to secure the structures from additional damage after the event (such as heavy rain or fire).

Impact on heritage value

None.

7.7. Setting

The setting of this place is of the greatest significance; it is a key element in its heritage value and establishing its character. The historic orientation of the ranges to the wooded hills and the open vistas to and from most directions are vitally important to any appreciation of the ranges, as is the understanding of the various structures and elements of the ranges within that context.

The setting must be maintained, with trees and structures kept to the periphery of the ranges and views to, from, and through the ranges retained.

Impact on heritage value

None.

7.8. Future developments

Tenure

Although there have been notions in the past that tenure of the ranges might move from the NZDF to the NRA, there seems little chance of that happening in the short or long-term. The NZDF wishes to maintain its control and management of the ranges through the land designation under the Reserves Act, while the NRA is unlikely to ever be in a position to purchase the ranges, let alone maintain it to the necessary level by themselves. The present lease arrangement is likely to continue for the foreseeable future. The arrangements between the HPC and the NZDF are also unlikely to change in the near future.

Stabilisation

The graffiti on the range galleries is a significant relic from an important period in the country's history, not to mention the history of Trentham Military Camp and its ranges. This graffiti will require stabilisation, possibly in the form of a permanent protective cover such as perspex, at some point in the future. Otherwise, without conservation treatment, the graffiti will probably disappear.

Recording

Even before stabilisation begins, the graffiti should be recorded to ensure that a permanent record exists should anything happen to it. This will require the services of a professional photographer, taking high resolution images on a set section per image. Measurements can be provided by using a, say, 100 metre cloth tape, fixed taught in position and included in each image.

Restoration

No proposal has been outlined thus far involving restoration of any features lost from the ranges. There is no operational reason to consider any restoration and it is not likely that this will ever happen.

Adaptation

Sommerville Range: The NZDF's intention to make changes to Sommerville Range would potentially constitute a major adaptation of the place. While the alternate Field Firing Area proposal could proceed without affecting heritage values at all the proposed Range Complex would have significant effects on heritage values.

As outlined above, the work for the Range Complex would involve a major rearrangement of the range, with the loss of the existing gallery and mantlet, the construction of a new gallery and mantlet in a different location, the construction of a new 25 metre range and the rearrangement of the range itself with a reduction in the number of firing lanes, and a new alignment.

Seddon Range: The NRA has long-term plans to introduce electronic scoring and target-handling technology to this range. There are no specifics at this stage and the likely impact is not known, although it should be low-key.

Collins Range: The HPC has indicated at least two modifications it would like to make to its facility. It is seeking permission to cut a new entrance to our range through the gallery wall and mantlet to provide for a safe access (as required by the Army) and to provide disabled access. It has already had approval to erect spectator seating along the gallery wall between the existing gallery seats.

Impact on heritage values

The Range Complex proposal for Sommerville Range, including the loss of the gallery and the reorientation of the range would constitute a major impact on heritage values. The final design would have to be tested against the heritage values identified in this plan and sanctioned if it could be demonstrated that a) the impact on heritage values can be kept to the reasonable minimum or b) if no other course of action was possible to achieve the desired outcome.

The HPC's approved proposal for new seating at Collins Range would have little or no impact on heritage values. The construction of a new entrance to the range via a hole cut in the gallery would be an unacceptably significant loss of heritage value. Other means of providing alternative access should be explored.

7.9. Public involvement

No public involvement in the ranges is considered necessary or desirable beyond the input of the present occupiers, the NRA and the HPC.

Impact on heritage value

None.

8. Recommendations

8.1. General recommendations

Conservation policy

Appropriate action is taken to comply with all Conservation Policy statements as set out in Section 7.0 of this Plan.

Repair

Repair work described in Appendix I is carried out.

Maintenance

The regular operational maintenance currently in place is continued, and is augmented with specific maintenance targeted at maintaining heritage values, as set out in Appendix II.

Adaptation

Any adaptation is undertaken only with the purpose of improving the usefulness of the place and change is confined to those structures or elements denoted as of little or no significance, and as little change as possible is made.

Statutory requirements

Any work undertaken on the ranges complies with the Reserves Act 1977 and Building Act 2004 and all other relevant statutory requirements.

Setting

The setting of the ranges is maintained, with trees and structures kept to the periphery of the ranges and views to, from, and through the ranges retained.

Risk mitigation

A sustainable use of the ranges is maintained and that between the NZDF and the lessees, arrangements are made to continue to provide adequate funding for ongoing care and maintenance.

Remedial and regular maintenance is undertaken to ensure that threats from natural processes are not allowed to develop.

Any opportunities to improve the level of knowledge of this place should be investigated and undertaken.

The place is secured from damage or loss in the event of fire, earthquake or other disaster.

8.2. Specific recommendations

Stabilisation

The condition and appearance of the graffiti on the range galleries is stabilised, possibly in the form of a permanent protective cover, to ensure its long-term survival.

Repair and restoration

At least some of the Hythe-pattern frames at Sommerville Range are retained and restored in a suitable new location, should changes to that range be effected.

Recording

The surviving graffiti at the ranges is professionally photographed to ensure it is properly recorded should it be removed or demolished, or affected by a natural disaster.

Risk mitigation

Vegetation encroaching on Sommerville Range gallery and mantlet is removed as part of remedial work at the range.

Smoke alarm systems are installed in the two target sheds at Collins Range to help secure them against the risk of fire.

DSS and Trentham Camp's collection of archival sources are properly stored, physically and digitally, with hard copies kept in a fire-resistant, museum-quality environment.

Review

This Heritage Management Plan is reviewed at 10-yearly intervals (or shorter intervals if appropriate), with the input of all affected parties, including the public at large.

9. Sources

Primary Sources - unpublished

Archives New Zealand

204/149 Rifle Ranges – Trentham General Pt. 3,1951-1965
204/149 Rifle Ranges - Trentham General Pt.5 1973-1978
204/149 Rifle Ranges - Trentham General Pt.6, 1973-1980
1/8/100 Pt.1, Rifle Range – Trentham (Area 5) 1956-1970
AD 4/43, Rifle and Firing Ranges, Trentham, 1908-1913
6/7/131 Trentham Rifle Range Reserve – Wallaceville Research Station Pt.3, 1971-1976
Crown Grant no. 2400, Issued 19 September 1865. Pt Lot 63, Hutt District

Land Information New Zealand

CT WN 30/25, Land Information New Zealand

Primary Sources - Published

New Zealand Gazette

The Cyclopedia Company Ltd, 1897, *Cyclopedia of New Zealand* [Wellington Provincial District], The Cyclopedia Company, Limited, Wellington p.333

Newspapers

Evening Post 30 November 1891, 9 October 1975
Hawera & Normanby Star, 11 March 1909
Hawkes Bay Herald, 12 March 1892
Nelson Evening Mail 26 February 1906
The Dominion, 16 December 2000
Wanganui Chronicle, 8 March 1906

Secondary Sources

Published

JSP 403 - Volume 2 - Design, Construction, and Maintenance of Small Arms, Infantry Weapon Systems and 30MM Weapons Systems Ranges

Trentham Rifle Range Centennial Committee 1992, *Trentham Rifle Ranges 1892-1992*,
National Rifle Association, Wellington

Unpublished

'History of Rifle Associations at Trentham', NZDF (author and date not known)

Other

World Wide Web

http://www.mod.uk/NR/rdonlyres/35FDFBC1-0889-4191-83935751D20A0A3F/0/JSP403_Vol2_Ch15_GalleryRange.pdf

Oral

Pers. comm. Steve Lamb, Trentham Range Warden, 7 April 2010

Part II: Condition and work plan

This section of the Heritage Management Plan sets out recommendations for specific repair work to elements of the ranges and provides guidance on the additional ongoing maintenance needed to maintain heritage values.

1. Condition and recommended repair work

The three ranges were found in good overall condition on site visits made in 2010. Regular operational maintenance has been kept up for Collins and Seddon ranges, and the range floor of Sommerville is also looked after, albeit to a lesser extent.

The intrinsically robust nature of the range structures means that maintenance requirements for heritage purposes are not especially onerous, and few faults requiring attention were noted. Setting aside the range floor, mantlets and bullet stops, all of which are kept in good condition by the current operational maintenance regime (excepting the bullet stop at Sommerville Range, which has been left to vegetate), this leaves the galleries, target sheds, target frames and drains as the main areas of interest.

In each case the gallery spaces are oriented to be well protected from the prevailing weather conditions and the sheltered spaces are dry and relatively free from the effects of weathering.

The repair work is divided into three priority categories as follows:

Priority I – urgent work

This work is to be completed within 12 months of the date of this Plan, or sooner if noted specifically

Priority II – necessary work

This work is needed or will soon be needed to keep the structures in good order, and is to be completed within 2 years of the date of this Plan to prevent observed faults turning into much larger problems

Priority III – important work

This work is either of lesser overall significance, or can be safely deferred for a period, but should be attended to within 3 years of the date of this Plan.

Collins

No account is taken of the modern steel-clad target shed or timber-framed gallery structures – these can be changed on their current footprints or removed with no adverse impacts on heritage values.

The old target shed is in good condition, although the door requires some minor maintenance and painting to keep it in good order.

The gallery and drain is in good condition, with no evidence of significant water entry into the gallery structure, and no evidence of deterioration to the concrete work, although the timber supports beneath the covers are decaying, placing the future of the covers in doubt. The surviving scorer's benches are in reasonable condition, although the old steel brackets show varying degrees of corrosion, and some treatment is recommended to extend the service life of these brackets for as long as possible.

Recommended work:

1. Clear debris out of the gallery drain.
Priority – I
2. Apply corrosion treatment to the steel brackets supporting the scorer's benches (and other old metalwork as appropriate).
Priority - I
3. Repair and paint door to target shed.
Priority – II
4. The door to the old ad-hoc toilet space at the west end of the gallery should be secured with a sliding bolt to prevent damage from the wind etc.
Priority – II
5. It is understood from the HPC that the pre-cast concrete covers over the drains will be replaced in timber.

Sommerville

Sommerville Range has received the least maintenance of the three ranges in recent times. The gallery and the drain nevertheless are in good condition, with no evidence of significant water entry into the gallery structure. One section of the in situ concrete has

displaced slightly from its neighbours, probably suggesting settlement over time. This displacement should be monitored to confirm that it is not an ongoing problem.

Aside from maintenance work to cut back the encroaching vegetation and ensure the drains stay clear, the main heritage issues at Sommerville Range are the slow deterioration of the Hythe pattern target frames, which should receive in-situ corrosion treatment to slow the rate of deterioration, and the similar degradation of the steel brackets supporting the scorer's benches.

Recommended work:

1. Cut back encroaching vegetation to keep roots away from the concrete gallery and drain structure.
Priority – I
2. Apply corrosion treatment to the steel brackets supporting the scorer's benches and the Hythe-pattern target frames.
Priority – I
3. Clear debris from the gallery drain to ensure the drain is operating properly.
Priority - I

Seddon

The target shed is in shabby condition and requires at a minimum general pre-painting repairs and painting, as well as remedial work to the joinery. It was not possible to inspect the interior, so the condition of the structure is not known.

The gallery and drain is in good overall condition. There are a few areas where water has been seeping through the concrete structure of the gallery – both in the 1940s structure and the 1984 structure, which may suggest some localised drainage issues to be attended to – before the seepage leads to deterioration of the concrete and turns into a costly repair issue.

Recommended work:

1. Apply corrosion treatment to the steel brackets supporting the scorer's benches.
Priority – I
2. Carry out minor carpentry repairs and re-paint target shed
Priority - I

3. Clear debris from the gallery drain to ensure the drain is operating properly over its full length.

Priority - I

4. Investigate sources of moisture driving weeping within the concrete walls of the gallery and remedy (may possibly involve some excavation at the face of the mantlet).

Priority – II

2. Maintenance plan

Maintenance of heritage buildings and structures

Maintenance is identified in the *ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value* as an important aspect of the management of heritage buildings. Clause 16, Maintenance, states "...a place of cultural heritage value should be maintained regularly and according to a plan."

Planned maintenance is extremely important for the longevity and protection of heritage buildings and structures. A regular programme of maintenance means that minor faults are identified and attended to at an early stage and the need for major repairs in the future is minimised or eliminated. A well maintained heritage building is likely to be better used and enjoyed than one that is neglected, it will survive longer and is likely to suffer less damage in the event of fire, major storm, or earthquake.

Maintenance work should follow the conservation principles set out in the *ICOMOS Charter*. In summary, this means:

Repairing the building or structure with original or matching materials, retaining as much as possible of the original fabric. Repairs to a technically higher standard than the original may be justified where the life expectancy or stability of the element is enhanced.

Identifying new materials used in maintenance and repair so they can be distinguished from the old (this can be done very subtly).

Maintaining the building or structure to a high standard so that it is always weatherproof, tidy, functional and secure. Maintenance should be carried out regularly and according to a plan.

Keeping records of repair and maintenance work.

General Principles

Maintenance and repair work should retain the authenticity of the heritage building or structure as far as possible. Authenticity is dependent in large

measure on the retention of as much as possible of the original building fabric and the evidence of early building techniques that survive.

Procedures

To ensure proper standards of care are met, clear procedures for carrying out maintenance and repair work should be established. These are –

Programme

A regular programme of checks and maintenance work should be followed. An outline maintenance programme for the Ranges is set out in the following section.

Maintenance log

A maintenance log should be kept with a description of all work carried out, including the date, the people who carried out the work, the cost and any additional requirements for maintenance work noted; a photographic record should be kept of any significant work. This information can be bound in to the maintenance log. A specimen log sheet is attached at the end of this appendix.

Specifications and drawings prepared for any work on the building or structure should be kept with the log as this document will form the basis for all like work in the future.

Personnel

It is important to use only suitably qualified and well-briefed personnel for maintenance and repair work and to ensure that the appropriate skills are brought to the site for the work required.

Once the repair work is complete, the quarterly inspection and maintenance work should be carried out by the property owners. Annual inspections should be carried out by a qualified person with a background in building (trade or design) and with suitable experience in the type of work required. The 10-yearly inspection should be carried out by a conservation architect, with the assistance of other specialists where needed.

Building work should be carried out by suitably experienced tradespeople with appropriate skills for the task at hand, working to a clear brief and under the supervision of an appropriately qualified person. A list of known-good tradespeople that can be called on for repairs should be kept on site with the maintenance log.

Major maintenance and repair work should be fully documented, to a standard suitable for obtaining a building consent. This may require the services of a conservation architect and other professionals such as a structural engineer.

Finance

Provision should be made for the regular costs of the checks and planned maintenance works, with a reserve kept for large jobs that occur intermittently and an operating account kept to arrest leaks, clear drains, effect minor repairs and the like.

Maintenance requirements and issues

The ranges are intrinsically durable structures, consisting of drained open fields, earth embankments, reinforced concrete galleries and steel target frames. Basic operational maintenance is currently carried out on all the ranges except Sommerville and includes activities such as keeping the range floors clear of tall growth and debris, keeping the access roads in order, maintaining the mantlet slopes and maintaining the bullet stops, including periodic sifting to remove bullets and debris.

Some modest additional maintenance is needed beyond the basic operational maintenance for the ranges to ensure the structures are kept in good and sound condition for the future.

The key issues to address in the ongoing maintenance of the range structures include:

Preserve remaining graffiti

The range structures are not to be cleaned or over-painted where this results in damage to the remaining pencilled graffiti.

Water entry

The main issue pertinent to the long life of any building or structure is the control of unwanted moisture. This means making sure water is kept out of the fabric of the place, and that any leaks that may develop or other moisture issues are attended to promptly before deterioration or decay can take hold. This is most pertinent to the two target sheds, which as light timber structures are particularly vulnerable to decay arising from water entry, but is also relevant to the galleries, where water penetrating the concrete can potentially give rise to significant repair issues in the long term (see below).

Regular maintenance checks are the best way to see that any problems are identified early on and remedied quickly.

Vegetation

It is important to ensure old buildings and structures have good external access to light and air to ventilate properly. To this end, vegetation must be kept away from the exterior fabric of the building or structure as far as possible, particularly at ground level. This objective aligns well with the normal management of the ranges.

Concrete degradation

The principal built fabric of the ranges is the in-situ concrete galleries. The galleries are constructed of relatively slender concrete with steel reinforcing and are by and large in damp settings. Although far from the sea, there is nevertheless a risk of salts slowly penetrating through the concrete, assisted by moisture, and causing deterioration of the reinforcing, leading to spalling concrete and other damage.

While there is little evidence of such decay at present, the small areas that currently exist must be monitored to ensure that the problems are localised and not widespread; corrosion treatment of exposed reinforcing and concrete repairs may be appropriate in some of these situations. Monitoring is best done as part of a regular maintenance programme.

Metal decay

Exposed metal deteriorates over time, particularly in moist conditions. In the context of the ranges, the main metal elements of concern are the old Hythe pattern target hoists at Sommerville Range and the metal brackets supporting the scorer's seats at all three ranges. While these elements remain in-situ, they should be periodically treated to arrest or slow the rate of deterioration.

Timber decay

Timber elements associated with the ranges consist of the timber-framed target sheds at Collins and Seddon Ranges, the wooden scorer's benches found at all three ranges, and the modern timber-framed gallery extension at Collins Range. The principal fabric of heritage interest lies in the two target sheds and the benches.

Regular maintenance of these elements will keep them in good condition for the future.

Maintenance schedules

The following maintenance schedules outline a programme of regular checks and work that should be carried out over a recurring ten-year period to help protect the identified heritage values of the ranges. Note that these schedules are intended to supplement the routine operational maintenance of the ranges.

Should the need for any repair or maintenance work not identified in the schedules become apparent upon inspection, such work also needs to be carried out along with the scheduled work in order to protect the fabric of the building.

Three major inspection cycles are recommended:

- Quarterly inspection;
- Annual inspection
- 10-yearly inspection

The quarterly inspection and work list is preventative and is to ensure any minor defects are picked up quickly and resolved before they turn into problems involving loss of fabric and requiring more significant repair work. A more thorough inspection and work list is to be carried out annually, and a major

inspection, including a full structural and condition review, should be made every ten years.

The ranges should also be inspected carefully after a major storm or extended period of severe weather and after an earthquake or other disaster to ensure that suitable temporary works can be put in place to minimise further damage, and any significant damage can be identified and repaired before it gives rise to more serious problems.

These maintenance schedules should be modified over time as needed to reflect the condition and ongoing requirements of the structures.

Schedule 1 - Quarterly Check List

Housekeeping	
Sweep out galleries	
Clear gutters and downpipes	
Clear drains	
Checks/maintenance	
Inspect for signs of deterioration or trouble:	
Inspect target sheds for signs of water entry, repair as needed	
Inspect gallery structures for signs of water entry	
Complete a maintenance log sheet for the work carried out.	

Schedule 2 - Annual Check List

All the tasks on the quarterly check list and additional checks and jobs.

Housekeeping	
Sweep out galleries	
Clear gutters and downpipes	
Clear drains	
Checks/maintenance	
Inspect target sheds for signs of deterioration or trouble:	
Check target shed roofs for loose sheets or flashings	
Check gutters and downpipes	
Check cladding and wall framing for signs of deterioration	
Check paint for deterioration, touch up where needed	
Check joinery for deterioration or damage,	
Ease joinery and lubricate hardware	
Inspect gallery structures for signs of deterioration or trouble	
Check for water entry and concrete damage	
Monitor displacement of concrete at Seddon	
Apply protective coating to metal seat brackets (and old target frames at Sommerville)	

Complete a maintenance log sheet for the work carried out.

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Schedule 3 – 10-year Checklist

All the tasks on the annual check list, and additional checks and tasks. This inspection should be carried out in conjunction with updating the Heritage Management Plan.

Housekeeping	
Sweep out galleries	
Clear gutters and downpipes	
Clear drains	
Checks/maintenance	
Inspect target sheds for signs of deterioration or trouble:	
Check target shed roofs for loose sheets or flashings	
Check gutters and downpipes	
Check cladding and wall framing for signs of deterioration	
Check paint for deterioration, touch up where needed	
Check joinery for deterioration or damage,	
Ease joinery and lubricate hardware	
Inspect gallery structures for signs of deterioration or trouble	
Check for water entry and concrete damage	
Monitor displacement of concrete at Seddon	
Audit condition of graffiti (compare with photo record)	
Apply protective coating to metal seat brackets and old target frames	
Complete a maintenance log sheet for the work carried out.	

Schedule 4 - After a storm, period of severe weather or earthquake

As soon as possible after the event, carry out a special check of the fabric of the ranges to ensure all is secure, and to carry out any temporary works that may be needed to prevent additional damage.

In the event of apparent structural damage, arrange an inspection from a structural engineer to determine the extent of damage and the repairs that may be necessary.

Specimen MAINTENANCE LOG SHEET

Date:

Description of Work Done:

Materials Used:

Tradesman/contractor details:

Cost:

Before and after photos (attach):

3. Materials for repair and maintenance work

Concrete

20 MPa and other grades where specified by engineer.

Concrete and reinforcing repair systems

Use only complete systems from a single supplier, and obtain a project-specific specification for each situation from the supplier before commencing work.

Steel corrosion treatment

Introduction

The use of lanolin to protect the metal components in the galleries is recommended. Lanolin is the substance secreted by sheep to provide a protective coating on their fleeces to combat harsh weather. There are at least two manufacturers of lanolin-based products in New Zealand. One of these is Prolan Heavy Grade Lanolin Liquid. This product has various attributes that would appear to make it ideal for use with metal. They are:

- 1) Performance: It penetrates into metal and inhibits oxidation and corrosion by preventing moisture and oxygen from contacting the surface of the metal.
- 2) Finish: It leaves a slightly moist but not tacky surface; in areas where there is an excess of product applied, it can be buffed to a dry finish. Once dry it will not attract dirt and grime.
- 3) Appearance: It is opaque in colour and once on the surface it takes on a brown-rust colour that reflects the underlying colour of the metal.
- 4) Application: It is very easy to apply, except at very low temperatures i.e. it can be applied straight from the container unless it is very cold, in which case it might require heating up. In warm temperatures it can be sprayed on.
- 5) Reversal: It can easily be removed if required, by citrus cleaner or hot steam.

Lanolin has the added value of being non-toxic and non-carcinogenic, and not particularly odorous (although it does have a certain sheep's wool aroma).

This plan therefore recommends that Prolan Heavy Grade Lanolin Liquid is used as a protective coating and rust preventative on metal fabric.

The treatment is as follows:

- 1) Pre-application, remove any rust and corrosion with a wire brush. It is only necessary to remove the corrosion; leave the substrate unaffected. It is important that scale rust is completely removed, but that there is no penetration to bright metal.
- 2) As soon as is practicably possible, i.e. in sections, the prepared surfaces should be coated with Prolan Heavy Grade Lanolin Liquid. Some experimentation with methods of application may be required but the Heavy Grade seems better suited to being applied by cloth rather than brush or spraying, particularly in colder weather, as the spray nozzle may clog up. Use the product liberally as it will penetrate the metal and can always be wiped off later if required.
- 3) The amount of liquid required is not substantial. A litre should be enough for each gallery.

Fixings

Types to NZS 3604, section 4 Durability (and NZBC B2), size, number and form as set out in the fixing schedules of NZS 3604, sections 6 – 10. Note all new fixings are to be grade 316 stainless steel, except those in direct contact with aluminium, which should be grade 304. Paint or powder-coat where visible.

Timber

All replacement timbers should be from recycled stock where visible. New timbers, where not visible and in whole lengths (i.e. not pieced in to existing timbers) can be in treated radiata pine. Treat all cut ends and joins etc. with suitable timber preservative (e.g. Metallex) and prime all areas that will be concealed before fixing in place. Profiles and sizes to exactly match in to existing, all fixings to be fully concealed to match in to existing.

Any new exterior joinery that may be needed (sashes or door leaves) should be made up in redwood or western red cedar, colour matched for clear finish on the interior face and paint finish on the exterior face. New frames may be made in H3.2 pine clears or finger-jointed material.

Glues

Waterproof adhesives compatible with the timber species.

Flashings

Copper, 0.90 mm for general use.

Timber preservative

Metallex or equal liquid preservative, clear for treating dry timber, under 18% EMC– apply liberally to all cut ends and as a superficial treatment as needed.

Note – cut all rot back to sound timber before applying preservative.

Protim FrameSaver, for treating wet timber over 18% EMC.

Timber consolidant

Use suitable epoxy consolidant (Everdure or similar) where appropriate for repairing non-structural defects where timbers can be safely be left in place.

DPC/DPM

Bitumac 877 / Moistop 748 or similar heavy duty bituminous materials.

Drainage

100 mm perforated field drain in proprietary filter sock, lay in trench bedded in clean no-fines drainage metal. Outlet well away from buildings and structures that could be affected by run-off. Provide clean-out sump or access chamber at each end of drain to enable it to be flushed out periodically.

Paint

Use only complete systems from a single manufacturer for each area and major finishing element. In each case, obtain a project-specific preparation and painting specification from the paint manufacturer, with requirements for each substrate and paint system clearly delineated.

Appendix I – Measured drawings

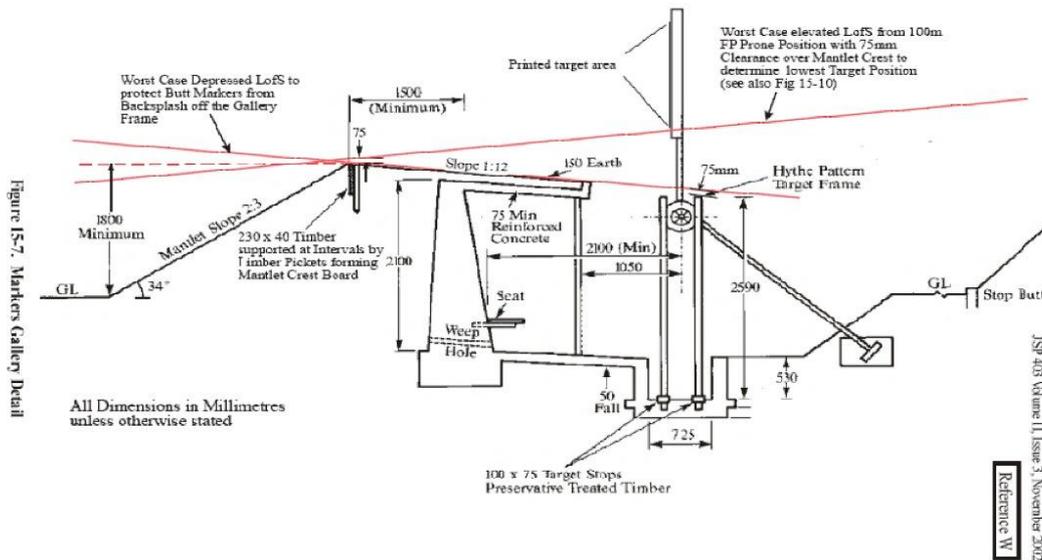


Figure 1 – typical cross section through gallery showing critical geometry (from JSP403, image supplied by NZDF)

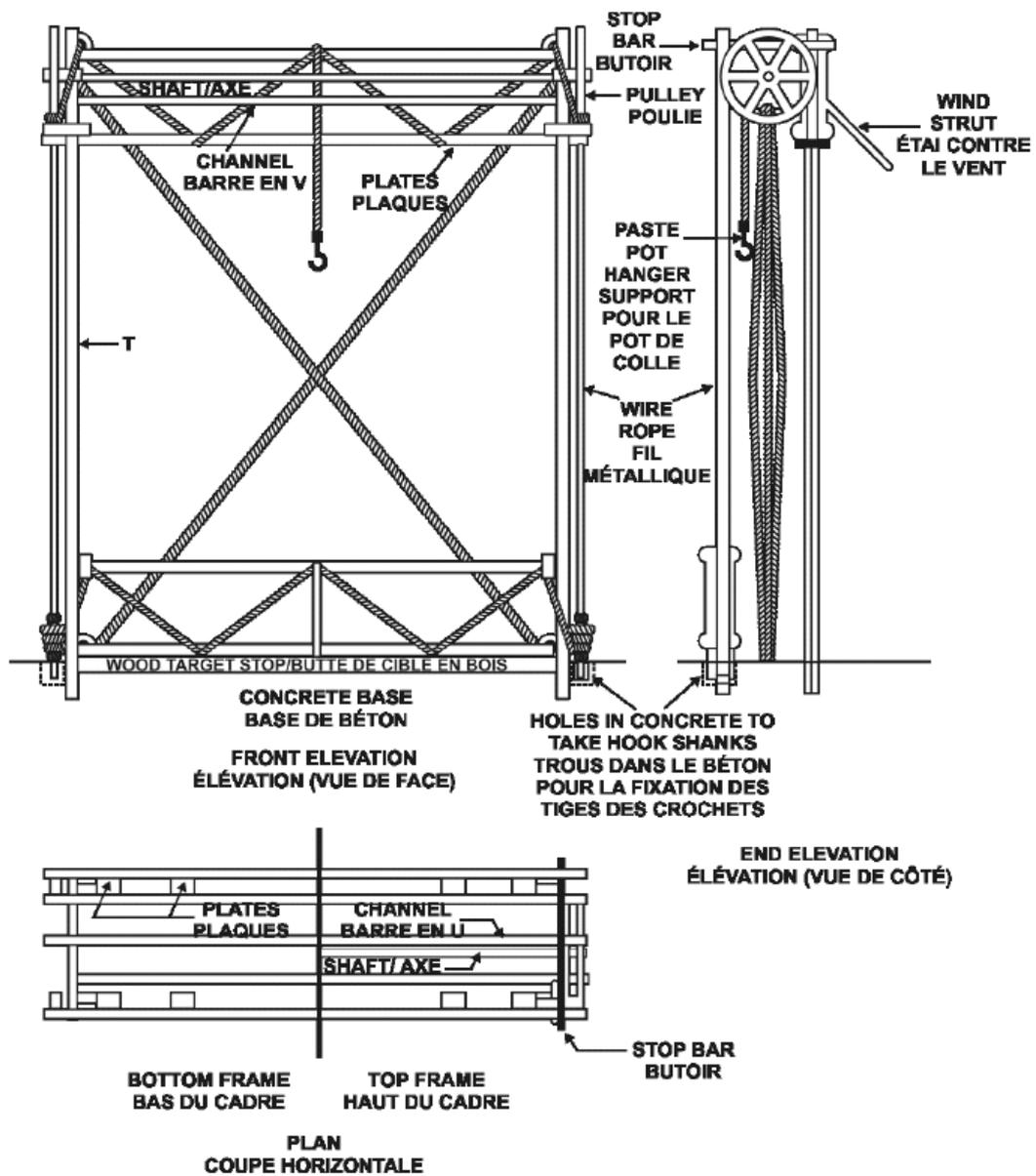


Figure 2 - A plan of the Hythe pattern target frame, taken from a Canadian bilingual manual (Canadian National Defence, 'Range Construction and Maintenance, B-GL-381-002/TS-000, dated 2009)

Appendix II – ICOMOS New Zealand Charter

ICOMOS NEW ZEALAND

Charter for the Conservation of Places of Cultural Heritage Value

Preamble

New Zealand retains a unique assemblage of places of cultural heritage value relating to its indigenous and its more recent peoples. These areas, landscapes and features, buildings, structures and gardens, archaeological and traditional sites, and sacred places and monuments are treasures of distinctive value. New Zealand shares a general responsibility with the rest of humanity to safeguard its cultural heritage for present and future generations. More specifically, New Zealand peoples have particular ways of perceiving, conserving and relating to their cultural heritage.

Following the spirit of the International Charter for the Conservation and Restoration of Monuments and Sites (the Venice Charter 1966), this charter sets our principles to guide the conservation of places of cultural heritage value in New Zealand. It is intended as a frame of reference for all those who, as owners, territorial authorities, tradespersons or professionals, are involved in the different aspects of such work. It aims to provide guidelines for community leaders, organisations and individuals concerned with conservation issues. It is a statement of professional practice for members of ICOMOS New Zealand.

Each section of the charter should be read in the light of all the others. Definitions of terms used are provided in section 22.

Accordingly this charter has been adopted by the New Zealand National Committee of the International Council on Monuments and Sites at its Annual General Meeting on 4 October 1992.

1. The Purpose of Conservation

The purpose of conservation is to care for places of cultural heritage value, their structures, materials and cultural meaning. In general, such places:

- i. have lasting values and can be appreciated in their own right;
- ii. teach us about the past and the culture of those who came before us;

- iii. provide the context for community identity whereby people relate to the land and to those who have gone before;
- iv. provide variety and contrast in the modern world and a measure against which we can compare the achievements of today; and
- v. provide visible evidence of the continuity between past, present and future.

2. Indigenous Cultural Heritage

The indigenous heritage of Maori and Moriori relates to family, local and tribal groups and associations. It is inseparable from identity and well-being and has particular cultural meanings.

The Treaty of Waitangi is the historical basis for indigenous guardianship. It recognises the indigenous people as exercising responsibility for their treasures, monuments and sacred places. This interest extends beyond current legal ownership wherever such heritage exists. Particular knowledge of heritage values is entrusted to chosen guardians. The conservation of places of indigenous cultural heritage value therefore is conditional on decisions made in the indigenous community, and should proceed only in this context. Indigenous conservation precepts are fluid and take account of the continuity of life and the needs of the present as well as the responsibilities of guardianship and association with those who have gone before. In particular, protocols of access, authority and ritual are handled at a local level. General principles of ethics and social respect affirm that such protocols should be observed.

3. Conservation Practice

Appropriate conservation professionals should be involved in all aspects of conservation work. Indigenous methodologies should be applied as appropriate and may vary from place to place. Conservation results should be in keeping with their cultural content. All necessary consents and permits should be obtained.

Conservation projects should include the following:

- i. definition of the cultural heritage value of the place, which requires prior researching of any documentary and oral history, a detailed examination of the place, and the recording of its physical condition;
- ii. community consultation, continuing throughout a project as appropriate;

- iii. preparation of a plan which meets the conservation principles of this charter;
- iv. the implementation of any planned work; and
- v. the documentation of any research, recording and conservation work, as it proceeds.

GENERAL PRINCIPLES

4. Conservation Method

Conservation should:

- i. make use of all relevant conservation values, knowledge, disciplines, arts and crafts;
- ii. show the greatest respect for, and involve the least possible loss of, material of cultural heritage value;
- iii. involve the least degree of intervention consistent with long term care and the principles of this charter;
- iv. take into account the needs, abilities and resources of the particular communities; and be fully documented and recorded.

5. Respect for existing evidence

The evidence of time and the contributions of all periods should be respected in conservation. The material of a particular period may be obscured or removed if assessment shows that this would not diminish the cultural heritage value of the place. In these circumstances such material should be documented before it is obscured or removed.

6. Setting

The historical setting of a place should be conserved with the place itself. If the historical setting non longer exists, construction of a setting based on physical and documentary evidence should be the aim. The extent of the appropriate setting may be affected by constraints other than heritage value.

7. Risk Mitigation

All places of cultural heritage value should be assessed as to their potential risk from any natural process or event. Where a significant risk is determined, appropriate action to minimise the risk should be undertaken. Where appropriate, a risk mitigation plan should be prepared.

8. Relocation

The site of an historic structure is usually an integral part of its cultural heritage value. Relocation, however, can be a legitimate part of the conservation process where assessment shows that:

- i. the site is not of associated value (an exceptional circumstance); or
- ii. relocation is the only means of saving the structure; or
- iii. relocation provides continuity of cultural heritage value.

A new site should provide a setting compatible with cultural heritage value.

9. Invasive Investigation

Invasive investigation of a place can provide knowledge that is not likely to be gained from any other source. Archaeological or structural investigation can be justified where such evidence is about to be lost, or where knowledge may be significantly extended, or where it is necessary to establish the existence of material of cultural heritage value, or where it is necessary for conservation work. The examination should be carried out according to accepted scientific standards. Such investigation should leave the maximum amount of material undisturbed for study by future generations.

10. Contents

Where the contents of a place contribute to its cultural heritage value, they should be regarded as an integral part of the place and be conserved with it.

11. Works of Art and Special Fabric

Carving, painting, weaving, stained glass and other arts associated with a place should be considered integral with a place. Where it is necessary to carry out maintenance and repair of any such material, specialist conservation advice appropriate to the material should be sought.

12. Records

Records of the research and conservation of places of cultural heritage value should be placed in an appropriate archive. Some knowledge of place of indigenous heritage value is not a matter of public record, but is entrusted to guardians within the indigenous community.

Conservation Processes

13. Degrees of Intervention

Conservation may involve, in increasing extent of intervention: non-intervention, maintenance, stabilisation, repair, restoration, reconstruction or adaptation.

Where appropriate, conservation processes may be applied to parts or components of a structure or site.

Re-creation, meaning the conjectural reconstruction of a place, and replication, meaning to make a copy of an existing place, are outside the scope of this charter.

14. Non-intervention

In some circumstances, assessment may show that any intervention is undesirable. In particular, undisturbed constancy of spiritual association may be more important than the physical aspects of some places of indigenous heritage value.

15. Maintenance

A place of cultural heritage value should be maintained regularly and according to a plan, except in circumstances where it may be appropriate for places to remain without intervention.

16. Stabilisation

Places of cultural heritage value should be protected from processes of decay, except where decay is appropriate to their value. Although deterioration cannot be totally prevented, it should be slowed by providing stabilisation or support.

17. Repair

Repair of material or of a site should be with original or similar materials. Repair of a technically higher standard than the original workmanship or materials may be justified where the life expectancy of the site or material is increased, the new material is compatible with the old and the cultural heritage value is not diminished. New material should be identifiable.

18. Restoration

Restoration should be based on respect for existing material and on the logical interpretation of all available evidence, so that the place is consistent with its

earlier form and meaning. It should only be carried out if the cultural heritage value of the place is recovered or revealed by the process. The restoration process typically involves reassembly and reinstatement and may involve the removal of accretions.

19. Reconstruction

Reconstruction is distinguished from restoration by the introduction of additional materials where loss has occurred. Reconstruction may be appropriate if it is essential to the function or understanding of a place, if sufficient physical and documentary evidence exists to minimise conjecture, and if surviving heritage valued are preserved. Reconstruction should not normally constitute the majority of a place. Generalised representations of typical features or structures should be avoided.

20. Adaptation

The conservation of a place of cultural heritage value is usually facilitated by it serving a socially, culturally or economically useful purpose. In some cases, alterations and additions may be acceptable where they are essential to continued use, or where they are culturally desirable, or where the conservation of the place cannot otherwise be achieved. Any change, however, should be the minimum necessary and should not detract from the cultural heritage value of the place. Any conditions and alterations should be compatible with original fabric but should be sufficiently distinct that they can be read as new work.

21. Interpretation

Interpretation of a place may be appropriate if enhancement of public understanding is required. Relevant protocol should be complied with. Any interpretation should not compromise the values, appearance, structure or materials of a place, or intrude upon the experience of the place.

22. Definitions

For the purposes of this charter:

adaptation means modifying a place to suit it to a compatible use, involving the least possible loss of cultural heritage value

conservation means the processes of caring for a place so as to safeguard its cultural heritage value

cultural heritage value means possessing historical, archaeological, architectural, technological, aesthetic, scientific, spiritual, social, traditional or other special cultural significance, associated with human activity

maintenance means the protective care of a place

material means physical matter which is the product of human activity or has been modified by human activity

place means any land, including land covered by water, and the airspace forming the spatial context to such land, including any landscape, traditional site or sacred place, and anything fixed to the land including any archaeological site, garden, building or structure, and any body of water, whether fresh or seawater, that forms part of the historical and cultural heritage of New Zealand

preservation means maintaining a place with as little change as possible

reassembly (anastylosis) means putting existing but dismembered parts back together

reconstruction means to build again in the original form using old or new material

reinstatement means putting components of earlier material back in position

repair means making good decayed or damaged material

restoration means returning a place as nearly as possible to a known earlier state by reassembly, reinstatement and/or the removal of extraneous additions

stabilisation means the arrest of the processes of decay

structure means any building, equipment, device or other facility made by people and which is fixed to the land.