

Okehampton Artillery Range



Wickhams Target Trolley Shed

ARP

**Okehampton Artillery Range, Devon
Report & Photographic Survey**

Prepared for
Defence Estates
Building 7
Wyvern Barracks
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Notes on Sources

Primary sources on Okehampton Artillery Range are in the form of a few files within the Public Record Office and these are a small part of a much larger collection of documents relating to army camps, ranges and barracks. The history of Okehampton Camp and Artillery Range is such that documentation is covered by War Office (WO) files.

Large scale Ministry of Public Buildings & Works (later PSA) building drawings and site plans held as an archive at Okehampton Camp are a key source.

Files and manuals preserved at the Firepower Museum, Royal, Woolwich Arsenal are another key source.

Acknowledgements

Particular thanks are due to Colonel (Retired) Pyman, the Camp Commandant of Okehampton Camp, to Lieutenant Colonel (Retired) Clarke (Commandant Dartmoor Training Areas) and the staff and personnel of Okehampton Camp. Also Dr Tom Greeves, MA, PHD and E Hain.

Historical Summary

From 1873, by permission of the Duchy of Cornwall, the south-western part of Dartmoor, began to be used by the army for large-scale maneuvers with units arriving from various parts of England by rail. These were the so-called 'Autumn Manoeuvres' (but actually taking place in August). A headquarters was established on Roborough Down, tented camps were erected at Yannadon Down, Wigford Down and Saddlesborough while maneuvers were conducted on Ringmoor Knoll. After two seasons it was found that some definite arrangement with the Duchy should be made, and the Duchy in turn, required the War Department to arrange compensation payments to the tenants, occupiers and commoners¹.

Before 1885 volunteer (militia) units belonging to the 5th Devon Regiment had their (eight-day) summer camp close to one of the towns which furnished the regiment with men, but after this date a fixed place was established between Hay Tor and Saddle Tor. By the turn of the Century, the estimated population of the temporary camp was estimated to be in the region of 3,500 rank and file, most being in camp for a fortnight. Large marquees were provided for a canteen and the YMCA, there was also a hospital, post-office and transport offices as well as lines of bell tents for the men.

A committee had been set up under Major-General F Eardley-Wilmot, FRS, to look at problems connected with field artillery under service conditions as regards to training. On 23 June 1875, two members of the committee visited Dartmoor in search for an acceptable site for a practice camp. They liked Okehampton because of its suitability as a camping area in the park, a good water supply and it is only a quarter of a mile from the railway station with good connections to Exeter and Plymouth. Furthermore the northern part of the moor itself would be more than suitable as a practice range².

The first annual event began in the summer of 1876 when the Royal Artillery pitched a camp above Okehampton at Halstock Down for a three-week period. A few years later this annual event was increased to six weeks. In 1886 the Drill Ground Act was passed by Parliament which gave powers to

¹ Western Morning News 15-11-71

² The History of The Royal Artillery Vol.1 (1860-1899)

the War Department to acquire land for artillery and rifle ranges. Four years later the Public and General Act was passed which extended these powers and by 1895 the War Department had acquired all the necessary leases for land required for a permanent camp. Also the northern quarter of Okehampton Forest amounting to 15 square miles was now leased with firing taking place between May and September. The camp occupies a 90 acre site within Okehampton Park at the foot of Black Down Hill, while the firing zone extended from Sourton Tors in the west, to Watchet Hill in the east. Firing took place firstly on Halstock Down, with targets positioned near East Mill Tor and on Okement Hill.

Soon after the Boer War, trenches similar to those dug in Natal were constructed on Dartmoor to determine how they had been such successful defense against artillery. Vestiges of the defensive works have been identified near the Sand Pit (SX 595 924).

No special difficulty seems to have arisen until 1892 from which time the WD tenure became beset with complications, new and additional claims followed on from an increase in range practice and the use of improved field guns necessitated the clearance of a larger area. The importance of practice at long ranges was forced upon the army by the increased power of the rifle and by the experience during the Boer War, so the enlargement of the range was deemed imperative.

Around 1895, after considering the possibility of enlargement in various directions, the Commandant strongly urged the purchase of East Okement Farm. The use of a longer range (No. 3) from Watchet Hill would also enable some excellent positions for a Brigade Division but the farm was in a dangerous position. The purchase although it did not enlarge the range itself, it enabled it to be used for better uses and was given the highest priority. The three ranges were required for firing the 9-pounder gun which had a range of about 5,500 yards.

The new range had only been used for one season, when in 1897 the inhabitants of the small village at Belstone situated a short distance beyond Watchet Hill, combined together to veto the use of Watchet Hill, as to be too noisy for their comfort. They pointed out that the top of Watchet Hill lay outside the line beyond which the agreement the Government had promised not to disturb pasturage rights.. The Government was already paying a yearly commission for 'visionary rights' on the moor, but after receiving the complaints from the villagers, firing from this position was stopped.

By 1901 and after further attempts to come to an agreement, without success, the question of purchase was raised at Government level and a sum of £150,000 was to be entered into the estimates for 1901 for the acquisition of 25,130 acres. The purchase never happened however and the firing point for range No.3 was moved further south to Scarey Tor.

Splinter-proof shelters were erected at various points on the Okehampton Ranges, existing rough tracks were repaired and improved, and new tracks built to enable the horse-drawn guns to be moved about. Warning notices were placed around the outer limits of the range to prevent people from walking into the danger zones at times when the red flags were flying signifying that firing was in progress.

Targets were of three main types:

- ❖ Static
- ❖ Moving
- ❖ Disappearing

Static targets were at first quite basic consisting of boarding cut to the shape of soldiers, and fixed in position by a spike into the ground, some figures were short to represent men kneeling in the act of firing, while others were longer to represent standing men. Artillery targets were constructed of canvas screens 6ft by 5ft representing a single gun. An appearing and disappearing target consisted of

a row of canvas 'soldiers' attached by top and bottom wires which were fixed to a wooden crutch (which is able to move from a horizontal position to near vertical) at either end of the row. The first crutch was operated by another wire controlled by a range officer, with this and the top wire slack, the figures were horizontal and out of view, but by pulling on it (top wire taut), the soldiers suddenly appeared³.

Okehampton became the HQ of the School of Gunnery (normally at Shoeburyness) in the summer months, and as such was the UK's most important practice camp. Batteries from all over England arrived by rail complete with their own horses and guns, each battery consisted (in 1901) of five officers, 166 men, with six guns and at least 89 horses for the fortnight stay. Normally three batteries were in camp at any one time. The Royal Horse Artillery had the 12-pounder and the Field Artillery had the 15-pounder. Each unit was allowed 600 shells with 90 being allocated for the training of raw recruits.

Around 1901, the War Office commenced negotiations for the purchase of further land, this time at Willsworthy on the western side of the Moor. Reddaford Farm and later, Lane End and Tavy Cleeve, were purchased outright to form the nucleus of what was to become a field firing range for small arms of 3,200 acres.

Thus by the early years of the 20th Century military occupation of Dartmoor was to remain virtually unchanged for some thirty years. Consisting of the large area of commons and forest known as Okehampton Ranges of over 30,000 acres in the north as well as the smaller Willsworthy Range embracing Standon Down, Nattor Down, Rattlebrook Hill and Hare Tor in the west.

The coming of the First World War actually saw a slight decrease in the use of the range, but by 1922, a further lease was granted by the Duchy for the War Office to continue firing into the Forest. Nine years later a new agreement had been reached with the committee of Okehampton Commoners.

Leading up to the outbreak of WW1, agricultural tractors were being trialed as gun tows and after the war, purpose-built mechanical transport began to replace horses. Correspondingly the roads reaching into the moor were improved.

During the 1930s the War Office acquired a further 560 acres of Lydford Common for use as a danger zone while in the north a further 4,000 acres were leased during 1939 to enlarge the Okehampton training area. Later in 1942 the Duchy agreed that the War Office under Defence Regulation 51 should hold the remainder of the Forest north of the Tavistock-Two Bridges-Moreton road.

Meanwhile, mobilisation at the start of WW2 brought many soldiers to Dartmoor, to use its extensive facilities. The threat of invasion resulted in the formation of the 13th Moorland Battalion of the Home Guard. Virtually the whole moor north of the Tavistock-Moretonhampstead road was requisitioned for military training. With the preparations for D-Day, the British moved out to be replaced by Americans of the 4th and 29th Divisions, destined to assault the beaches of Normandy's right flank.

Fixed wing aircraft (such as the Piper Cub) used a landing strip on Halstock Down⁴, for communications and flight training in air observation for officers. Typically this included find-and-report exercises while on cross-country flights, the trainee observer having a compass and map to report 'enemy' positions to hidden checkers. Another exercise (this time for soldiers on the ground), included unexpected tear-gas "bombing" of troops while undergoing firing training on the moor⁵.

³ 40 WOPO/6

⁴ E Hain recalls planes using the triangular field north of the camp, but a file (WO 78/4935) at the PRO contains an OS map which shows an airfield on Halstock Down.

⁵ The History of the 110th Field Artillery

Joint exercises conducted between various American units such as those of the 29th Artillery and others belonging to the infantry were common place, in many instances using live ammunition. One such exercise conducted in 1944 (Exercise Fire), was held three times, once for each battalion of the 115th Infantry. This included a night march of 25 miles from the barracks near Tavistock, through Princetown and Post Bridge, to an engagement on Dartmoor. The idea being to close in and attack an artillery position when it paused from firing.

During 1943 different types of rations were evaluated by troops (29th Rangers and the 99th Norwegian Independent Battalion) training on the moor, and in particular the 'D' ration was under investigation. The studies included evaluating the palatability, health and nutritional values of the ration bars during 11-day field exercises, each company testing a specific type of ration or combination, after which a soldier's weight, health, performance and opinion was recorded. It was observed for example, that at about mid-day the GIs would shave the 'D' ration bar into small pieces and make a hot chocolate drink.

Post-war, a debate originating before WW2 concerning Dartmoor becoming one of the first National Parks, continued. A Public Enquiry opened on 16 July 1947 and lasted two days. At this meeting in Exeter, the boundary of the proposed National Park had been outlined in the yet to be published 'Hobhouse Report'. Representing the military a spokesman stated that Dartmoor was the only suitable ground for modern battle training of both infantry and artillery. One regiment of 24 guns would visit for a fortnight at a time between May until the end of September. The 5.5in gun firing a 100lb shell would be the largest to be used. The system of flags would be overhauled and would always be lowered immediately firing had ceased (see Appendix 2)⁶.

On 8 March 1948, some eight months after the Public Enquiry, the Services' requirement for training areas on Dartmoor were announced, these were in fact similar to the original draft agreement (Appendix 9) but the areas east and west of Okehamton Range were virtually relinquished. The area involved was given as 33,250 acres.

In March 1952 a new agreement between the War Office and the Okehampton Commoners Committee was signed. It was to run for a period of 21 years as from 1948 and the Disturbance Allowance raised from £200 to £250 per annum. Other conditions included the restriction of weapons to the upper limit of 25-pounder guns and a prohibition of tanks, but not self-propelled guns and gun-tractors or light vehicles up to 3-tons capacity. The ranges might also be used for practice in road-making, bridge-building and demolition, also for small-arms, mortar and grenade practice. Firing might take place on any six days in a week, but not bank holidays⁷.

Beneath the surface of Dartmoor are the remains of over 100 years of military firing: solid shot, shrapnel, smoke and illuminating carriers and some unexploded high explosive rounds. These occasionally surface due the action of rain water. Dartmoor Training Areas hold an impressive collection of munitions found on Okehampton Artillery Range. This provides not only a visual survey of the development of munitions but also a testimony of the important role that Dartmoor plays in the training of the United Kingdom's Armed Forces.

⁶ RH Worth: Dartmoor 3rd Impression, 1981, Appendix 9.

⁷ An Outline History of Services Training Areas on Dartmoor

Black Down Flag Pole & Semaphore Station

At the top of Black Down is a hinged tabernacle flag pole from which warning signals were hoisted, and the remains of a semaphore station. The flag pole probably dates from 1979 and is on the site of an earlier one, it is a counter-weight type with an 18ft high mast of standard design. Judging by the amount of corrosion, it is probably at the end of its life. For locations of similar flag poles, see Appendix 9.

All that survives of the semaphore station is its cruciform concrete base and holdfast blocks.

- ❑ Flag Pole NGR: SX 58133 92258
- ❑ Semaphore NGR: SX 58150 92230

Camp Boundary Stones

Two concrete War Department boundary stones were found, No. 7 close to Anthony Stile and the other (No. 6) at the southern-most corner of the former camp boundary. Both form part of the drystone boundary wall. The face of No. 7 is eroded, No. 6 survives in excellent condition but is close to falling over.

- ❑ No. 6 NGR: SX 58326 92483
- ❑ No. 7 NGR: SX 58610 92528

'F' Range Moving Target (straight run)

This target system survives as a cutting running N-S, it is associated with a small redoubt, an electric light shed and a target carrier shed⁸ both of which are demolished but remain as small piles of rubble.

Many 0.5in solid rounds have been recovered in this area suggesting that it was used for the Boyes anti-tank rifle.

- ❑ NGR: SX: 5812 9117 (southern limit)
- ❑ NGR: SX 5825 9212 (northern limit)

'F' Range Moving Target (curved run)

This target system was operated by cables and survives today as a cutting forming the track bed which follows a shallow curved course. Bends have a small vertical steel pin with a tube which is able to rotate by two bearings (at either end of the tube) fixed to the pin (SX 58019 91499). This is assumed to allow the cables to bear on as they follow the bend. The southern end of the track bed divides into two tracks and terminates at a point that is identified by a number of small pulleys which are staked into the ground.

One possible use (1920s) is that of a sleigh made from two pieces of rolled corrugated iron sheeting on which canvas figures are attached, pulled by a limber. Kite balloon wire was used to ensure that the sleigh continues in the right direction without skidding. With this system, at each turn was a slipping block to negotiate bends - which could be the steel pin and tube described above⁹.

⁸ WO 78/4935

⁹ 40 WOP/6

- NGR: SX 5801 9141 (southern limit)
- NGR: SX 5818 9181 (northern limit)

'F' Anti-Tank Range

This range (now closed) was used for firing of the rifle-launched 94mm Energa Grenade until it was withdrawn from service in the 1970s. Latterly it was used for the Light Anti-Tank Weapon (LAW), a tube launched recoilless hollow charge projectile.

There are two open-plan gun emplacements positioned at 100m and 200m from an angled metal target which has now been removed. The firing points consist of 'T'-shaped concrete standings with an emplacement having vertical sides built on to the foot of the 'T'. This is made from thin-section horizontal timber planks held in place by vertical posts. On three sides is an earth embankment which finishes at the arms of the 'T'.

The 'F' Range target plates have been removed for re-use on 'H' Range.

- 100m Bay NGR: SX 58317 92026
- 200m bay NGR: SX 58275 92107

H1 Moving Target Range

Prior to the BAT Range, there was a moving target anti-tank range with a 'V'-shaped layout, it consisted of two 3ft wide track beds aligned roughly N-S and E-W. Where both tracks meet (at the foot of the 'V') was a target carrier shed built of limestone blocks. This was destroyed by gunfire before 1958 but the rubble survives. After 1959, the E-W track bed was widened and re-used as the BAT range¹⁰.

- Target Carrier Shed (rubble) NGR: SX 5948 9107

H1 Battalion Anti-Tank (BAT) Range

This range was used firstly by BAT, then MOBAT and finally WOMBAT weapons – these were 120mm recoilless guns firing high explosive Squash Head (HESH) and HE Anti-Tank (HEAT) and practise rounds. The weapon also had an aiming rifle fixed co-axially to the main armament.

Using part of a site of the earlier 'V'-shaped moving target railway, the new BAT range was laid out in May 1959 (Contract No. 22/45-W730). A straight section forming part of the track bed of the old railway was widened from 3ft to 6ft and a 2ft 6in gauge railway laid. At either end of the straight section, the track forms a 40ft radius loop to allow continuous operation. A set of points at the western end enables the carrier to be stored inside a shelter. Protecting the carrier along its route is a 4ft high and 9ft wide banking, made from a borrow pit on the north side. This hides the carrier from view, allowing just the 'tank' to be seen moving along the bank.

The straight section forming the target area is 375ft long, in section along its length it begins (in the west) at 1507ft, peaks at 1509ft before falling to 1506ft above sea level at the eastern end.

The target carrier was a Wickhams trolley with a Jap side-valve petrol engine.

The target shelter was originally planned to be built at the eastern end of the railway track, just east of the old carrier shed which had been destroyed by gun fire¹¹. The remains of this shed were to be

¹⁰ drawing No. 2524

¹¹ drawing Nos. 2524, 2515 & 2527

used as spoil behind a retaining wall which protected the new shed, but a change in design took place in April 1959 and it was built at the western end instead.

The target shelter is similar to the original design in terms of size and construction materials but is without a retaining wall. Wall construction is of a mixture of reinforced concrete, dense concrete block and a brick pier supporting a reinforced concrete slab roof. Except for the front elevation, a drystone limestone block blast wall surrounds it.

❖ internal dimensions are 16ft by 19ft for two target carriers.

□ Target Carrier Shed NGR: SX 5926 9110

Medium Anti-tank Weapon H1 Range

Two firing and one conducting officers emplacements were built c1969, originally in a line to accommodate the 84mm MAW, but now the conducting officers' observation point has been re-positioned to allow a better view of the new 94mm MAW. They are open-type emplacements constructed of horizontal thick-section balks of timber held in place by vertical posts. The weapon emplacements also have angled sections of timber offering additional protection. An earth bank surrounds all emplacements on three sides. The target consists of an angled steel plate placed against the earth embankment that protects the BAT range target carrier and also serves to detonate rounds that miss the plate. Another target lies on the ground, both of these were removed from 'F' Range¹².

□ Bay NGR: SX 59337 91443

□ Observation NGR: SX 59326 91453

□ Bay NGR: SX 59314 91441

Experimental Parapets & Infantry Redoubt

On East Mill Tor, close to the 'F' datum point is a series of experimental parapets and redoubts consisting of four trenches and banks placed in a straight line. Further north (about 480m) there is a single infantry redoubt¹³.

The locals pronounce this site as 'the Riddow Pitts'.

□ NGR: SX 59883 89290

East Okement Farm Shelter

This is a small blast shelter for the tenant farmer, located very close to the rear (west side of farmhouse) wall of East Okement farmhouse. It is constructed of a double skin of granite block walls with an arched roof made from concrete with course (granite) aggregate. The structure is now detached from the farmhouse, but originally access to the shelter was from the kitchen.

□ NGR: SX 60431 91229

Hitching Circles & Redoubt Pit

Just south of the firing point for Range No. 3, located at the northern point of East Okement Road (to the west of Cullever Steps) and close to East Okement River, are three hitching circles and a redoubt pit. This is where the road changes direction to take on a meandering route (almost like a figure of

¹² drawing A/077/69

¹³ WO 78/4935

eight) consisting of three semi-circular (in plan-view) tracks with two in a clockwise and one anti-clock (or vice-versa). These are almost flat and partly raised above the sloping ground about 18m in diameter. Their function is thought to aid the un-hitching and hitching of an artillery piece from or onto its horse carriage. Today the road has been straightened, leaving the circular elements abandoned. Close by located between Irishman's Wall and East Okement Road is a large redoubt pit. NGR: SX 60937 92042

War Department Boundary Marker Stones & Telephone Point

Between Halstock Down Road and the River Okement are a series of War Department Boundary Marker Stones. Two were found, both of which are suffering from weather erosion. Stone numbers could not be found on either only 'WD'. At Cullever Steps is a concrete telephone safe with a steel door.

- ❑ Boundary Marker Stone NGR: SX 60760 92067
- ❑ Boundary Marker Stone NGR: SX 60828 92373
- ❑ Telephone Point NGR: SX 60604 92190

Oke Tor Range Warden's Shelter & Pony Stable

On the top of Oke Tor is a small shelter built of blocks of granite and a single-pitch roof of concrete. Close by is a modern factory-made BTH stable bolted to a concrete raft.

- ❑ Range Warden's Shelter NGR: SX 61283 89968
- ❑ Stable NGR: SX 61260 89949

Observation Post 3

Located at Curtery Clitters, just north of 'E' datum point is OP 3. It is the only surviving timber-framed OP with thick-section timber posts and beams and wall cladding. Roof and outer wall cladding is a mixture of concrete and drystone granite block, the whole structure is covered with a thin layer of earth and grass. Along the front elevation is a half-height reinforced concrete blast wall with hand rail.

- ❑ NGR: SX 59091 89728

Observation Post 6

Located at the head of a target railway system, this is a former target carrier shed, converted into an OP. It is constructed of granite block side walls and a rear wall of cast-insitu concrete which has been set into an earth bank. There are RSJs supporting a reinforced concrete roof which is covered with a large earth and grassed mound on three sides. There is a half-height concrete wall inside with metal hand holds for easy access.

- ❑ NGR: SX 60292 89843

Observation Post 7

Just north of the CAL datum point is OP 7. This is constructed of a reinforced concrete box-frame in three sections. Independent of the frame along the front elevation is a half-height reinforced concrete blast wall. The structure is covered with earth and grass with granite block retaining walls around three sides.

- NGR: SX 60561 89288

Observation Post 15

Located on Okement Hill, just north of the 'Q' datum point is OP 15. It is of an identical design to OP 17 and consists of a natural stone walled shelter with a reinforced concrete roof supported by RSJs. The front elevation has a half-height reinforced concrete blast wall which is independent of the main structure. The OP is covered in earth and grass (only a thin covering remains on the roof probably as a result of wind erosion) with granite block retaining walls around three sides.

- NGR: SX 60254 87767

Observation Post 16

Close to Okement Head is OP 16 of unique design, to the west is 'O' datum and to the north is 'L' datum. It consists of a tunnel-like natural stone structure covered in earth and grass with granite block retaining walls. The front elevation has a half-height concrete blast wall with an entrance gap separating it from the main structure. From the structure, a railway descended towards East Okement Farm.

- NGR: SX 60820 88196

Observation Post 17

Located on the eastern slope of Okement Hill is OP 17, it is of an identical design to OP 15. It consists of a natural stone walled shelter with reinforced concrete roof supported by RSJs. Along the front elevation is a half-height reinforced concrete blast wall which is independent of the main structure. The OP is covered in earth and grass (now only a thin covering on the roof probably as a result of wind erosion) with granite block retaining walls along three sides.

- NGR: SX 61234 88768

Observation Post 22

Built by W.J Avery under the authority WO Southern 25/129 (FW3) dated 17 September 1923 and completed during March 1924 at a cost of £462¹⁴. This was an observation post for 16 officers under instruction. It is now used as range control and stock clearer shelter and as such, it has a dividing wall inside to create separate office and stable accommodation. In September 1998, the OP was faced with granite by 511 STRE under the guidance of Wilf Hatchings. An additional window was added in March 2002.

- NGR: SX 60098 91124

¹⁴ WO 78/4935



Plate 2: Black Down Flag Pole



Plate 3: Black Down Flag Pole Counter-Weight



Plate 4: Black Down Semaphore Station Concrete Base



Plate 5: Okehampton Camp Boundary Marker Stone



Plate 6: 'F' Range (Straight) Target Carrier Cutting



Plate 7: 'F' Range (Curved) Target Carrier Cutting



Plate 8: 'F' Range Pulley (£1 Coin Provides Scale)



Plate 9: 'F' Range Cable Bearer & Target Carrier Trench



Plate 10: 'F' Anti-Tank Range, 200 and 100m Positions



Plate 11: 'F' Range 100m Gun Position



Plate 12: H1 Range Showing One Arm of 'V'-Shaped Target Carrier Cutting



Plate 13: H1 Medium Battalion Anti-Tank (BAT) Range Conducting Officers & Gun Position



Plate 14: H1 Medium Battalion Anti-Tank Range Showing Gun Position



Plate 15: H1 Range Target Plates (Ex 'F' Range)



Plate 16: BAT Range Points



Plate 17: BAT Range Route of Railway Track to Turning Circle



Plate 18: BAT Range View Looking Towards Target Carrier Shed



Plate 19: BAT Range Railway Cutting



Plate 20: Experimental Redoubt (one of four)



Plate 21: Experimental Redoubt (one of four)



Plate 22: Shelter at Rear of East Okement Farmhouse



Plate 23: Hitching Circle Close to Cullever Steps



Plate 24: Hitching Circle Close to Cullever Steps



Plate 25: Concrete Telephone Safe with Steel Door



Plate 26: War Department Artillery Range Boundary Marker Stone close to Halstock Down Road



Plate 27: Oke Tor Range Warden's Shelter



Plate 28: 'Q' Datum Indicator Sign



Plate 29: Observation Post 3



Plate 30: Interior View of Observation Post 3



Plate 31: Target Carrier Shed/Observation Post 6



Plate 32: View Looking out of Target Carrier Shed/OP 6 of Railway Cutting



Plate 33: Observation Post 7



Plate 34: Observation Post 15



Plate 35: Observation Post 16



Plate 36: Observation Post 17



Plate 37: Observation Post 22

Appendix 1: Statement of Original Licences & Lease. Source: WO 32/7201				
<i>Area</i>	<i>Owner</i>	<i>Rent & Period of Lease</i>	<i>Date from</i>	<i>Terms & Conditions</i>
North Quarter of Forest of Dartmoor & Common of Devon 25,000 acres	Duchy of Cornwall	£100 per year for a period of 21 years	29-09-1885	Lease is subject to rights of tenants & commoners.
North Quarter of Forest of Dartmoor & Common of Devon 25,000 acres.	War Office	£50 per year for a period of 21 years	29-09-1885	This is a sub-lease to WW Symington which terminated on 20-09-06
Common of Devon & Forest of Dartmoor, 6,000 acres	Duchy of Cornwall	£40 per year for a period of 31 years	01-12-1891	Licence subject to rights of commoners
Camping Ground, Okehampton Park 90 acres	Marion Luxmoore, Elizabeth Cunningham, Geroge John Dunville Lees, Haumer Hilton Jones & Edward Birchall	£150 per year for a period of 999 years	25-03-1892	None known
East Okement Farm, 242 acres	Duchy of Cornwall	Two 60 year leases (30 acres and 212 acres) assigned to Mr E.G Camp under indentures dated 15-04-1871 and 07-09-1871 terminating on 25 March 1931. Transferred in 1878 to Mr S Symington. Rent at £25-14s per year until 25-03-11, and then £40-9s a year until end of lease	25-03-1871	Transferred to Secretary of State for War on 24-10-1895 for £1,000. In addition the WD paid the Duchy £10 per year from 25-03-97 in respect of certain covenants in the original leases that are allowed to be postponed.
Quarrying Licence	Duchy of Cornwall	Original licence assigned to Messrs Freeman & Sons for £65 per year	11-08-1885	Transferred to Secretary of State for War on 01-09-1896 – to be held until the Artillery licence expires on 30-11-22
Moor Brook – Licence for water extraction	Duchy of Cornwall	£5 per year for 24 years	29-09-1898	None known
Compensation				
Compensation for Disturbances	Belstone Commoners & Tenants	£59-1s-3d per year, agreement dated 17-04-1894	01-01-1891	In addition a further £8 per year was paid (only when asked for) by Mrs Scholl
Compensation for Disturbances	Bridestowe & Sourton Commoners	£50 per year, agreement dated 17-04-1894	01-01-1892	None Known
Compensation for disturbances	Okehampton Commoners	£100 per year for 7 years	1901	None known
Clearance of Stock	Mr Symington	£2 per day (ranges 1,2 & 3)	29-09-1885	An additional payment of 15s a day for stock clearance had been paid since 1894 to cover a larger area. These are wages not rent, but for convenience was paid out of the Rent Vote and amounts to between £200 to £300 per year.
Compensation for disturbances	Okehampton Hamlets Commoners	£150 per year for 7 years	1901	None Known

Appendix 2: Extracts from the draft Agreement between the Services, the Ministry of Town and Country Planning and Devon County Council July 1947

- ❖ No lands south of the Tavistock-Two Bridges-Moreton road within the proposed National Park to be used by the Services in any manner which will cause interference with the rights of the general public or statutory undertakers. The Services to have the right of general manoeuvre over the whole area and use blank ammunition.
- ❖ Okehampton and Willsworthy ranges to be kept as before the war, the public to be excluded.
- ❖ Reservation of about 2,000 acres on the eastern side of Okehampton area and, about 1,500 acres on the western side subject to not being required by the water authorities. Public to be excluded during actual firing only.
- ❖ Five gun sites in west of area to be agreed, a 6th at Laughter Tor subject to provisos.

Royal Marines and Army to have joint training and firing rights in Merrivale area west of River West Dart. Public to be excluded.

Merrivale area east of West Dart available for Army training without live ammunition firing. Public not excluded.

Appendix 3: Okehampton Artillery Range Observation Posts

<i>Observation Post</i>	<i>Location</i>	<i>Status</i>	<i>National Grid Reference</i>
OP 1	New Bridge	Demolished	SX 597 904
OP 2	Bog Hill	Demolished	SX 588 896
OP 3	Curtery Clitters	Extant	SX 590 91 89728
OP 4	Black-a-ven Brook	Demolished	SX 593 892
OP 5	Dinger Hill	Demolished	SX 588 889
OP 6	East Mill Tor Target Carrier Shed	Extant	SX 60292 89843
OP 7	Island	Extant	SX 60561 89288
OP 8	Deep Ford	Demolished	SX 608 894
OP 9	West Ravine	Demolished	SX 605 887
OP 10 (N)	East Mill Tor	Demolished	SX 599 899
OP 10 (S)	East Mill Tor	Demolished	SX 599 897
OP 11	South of Sammy Arnold's Lane	Demolished	SX 599 890
OP 12	South of East Mill Tor	Demolished	SX 599 885
OP 13	Blackhaven Head	Demolished	SX 596 883
OP 14	Blackhaven Spur	Demolished	SX 598 880
OP 15	Southern end of Circular Road	Extant	SX 60256 87761
OP 16	Okement	Extant	SX 60820 88198
OP 17	East Okement	Extant	SX 61232 88768
OP 18	Steeperton Tor	Demolished	unknown
OP 19	Oxhead	Demolished	SX 613 873
OP 20	Dinger Tor	Demolished	SX 586 881
OP 21	East of Black Tor	Demolished	SX 572 901
OP 22	East Okement Farm Corner of Wall	Extant	SX 60098 91124

Appendix 4: Okehampton Artillery Range – Range Archaeology			
<i>Description</i>	<i>Site</i>	<i>Notes</i>	<i>National Grid Reference</i>
‘D’ Range Moving Target			
Section of 20in Gauge Railway	East Mill Tor	Extant	SX 60338 90416
Target Carrier Shed (OP 6)	East Mill Tor	Extant	SX 60291 89840
‘F’ Range Moving Target (Straight)			
Moving Target Carrier Shed & Start	Black Down	Shed Demolished, cutting extant	SX 58238 92150
Electric Light Shed	Black Down	Demolished	SX 5822 9155
Moving Target Cutting (finish)	Black Down	Extant	SX 5812 9117
Redoubt	Black Down	Demolished	SX 5822 9154
‘F’ Range Moving Target (Curved)			
Moving Target Cutting (start)	Black Down	Extant	SX 58146 91758
Moving Target Cutting (finish)	Black Down	Extant	SX 57992 91439
Pulley	Black Down	Extant	SX 57987 91437
Bearing	Black Down	Extant	SX 58019 91499
‘F’ Range (Anti-Tank Range)			
100m Firing Point	Black Down	Extant	SX 58317 92026
200m Firing Point	Black Down	Extant	SX 58275 92107
Target	West Mill Tor	Demolished	unknown
Signalling Station			
Tabernacle Flag Pole	Black Down	Extant	SX 58133 92258
Semaphore Station	Black Down	Concrete base only	SX 58150 92230
Camp Boundary Stones			
No.6 (southern-most corner of camp)	Black Down	Extant	SX 58326 92483
No.7 (Anthony Stile/quarry)	Black Down	Extant	SX 58610 92528
H1Range			
Anti-Tank Target Railway Track Bed (start)	Rowtor	Cutting Extant	SX 59336 91360
Anti-Tank Target Railway Track Bed (finish) & Target Carrier Shed	Rowtor	Cutting extant, shed Demolished	SX 59485 91080
Conducting Officer’s Emplacement	Rowtor	Extant	SX 59326 91453
Emplacement	Rowtor	Extant	SX 59337 91443
Emplacement	Rowtor	Extant	SX 59314 91441
Metal Target	Rowtor	Extant	SX 59327 91137
BAT Range (H1 Range)			
Target Carrier Shed	Rowtor	Extant	SX 5926 9110
Moving Target Railway East Loop	Rowtor	Extant	SX 5945 9100
Moving Target Railway West Loop	Rowtor	Extant	SX 5930 9109
H2 Range			
Hard targets were placed in the area of Sammy Arnold’s Lane (west) and fired at from the north by WOMBAT 120mm recoilless anti-tank weapons	East Mill Tor	Unknown	SX 597 894
Range 1			
Unknown	Halstock Down	Unknown	Unknown
Range 2			
Unknown	Halstock Down	Unknown	Unknown
Range 3			
Redoubt & hitching circles	Belstone Common (Higher Tor)	Extant	SX 60937 92042
WD Boundary Marker Stone	Halstock Down Road	Extant	SX 60760 92067

Appendix 4: Okehampton Artillery Range – Range Archaeology			
<i>Description</i>	<i>Site</i>	<i>Notes</i>	<i>National Grid Reference</i>
WD Boundary Marker Stone	Halstock Down Road	Extant	SX 60828 92373
Concrete Telephone Safe	Cullever Steps	Extant	SX 60604 92190
Airfield			
Cleared surface and crop mark	Halstock Down	Unknown	SX 5980 9250
Telephone Exchange	Halstock Down	Demolished	SX 60107 92433
800 Yard Range ‘A’			
Remains unknown	Higher Tor	Unknown	SX 6170 9090*
800 Yard Range ‘B’			
Remains unknown	Higher Tor	Unknown	SX 6194 9088*
800 Yard Range ‘C’			
Remains unknown	Higher Tor	Unknown	SX 6201 9100*
Trenches			
Zig-zag trench formation	St Michael’s Bungalow	Earthworks Extant	SX 59119 93657
Square trench formation	Black Down	Earthworks Extant	SX 57922 91977
Curved trench formation	Black Down	Earthworks Extant	SX 57943 92012
Remains of structure	Hangingsstone Hill	Rubble only	Unknown
Miscellaneous Archaeology			
Various huts are marked on OS 1:10,560 (1965) maps, some of these may survive as foundations ¹⁵ .	Kitty Tor, Wild Tor, Quintin’s Man, Yes Tor and Oke Tor	Unknown	SX 6129 8993 (Oke Tor)
‘S’-shaped track running E-W	West Mill	Double row of stones	SX 5890 9070
Curvilinear bank	NE slope of East Mill Tor	Earthwork	Unknown
Earthwork	Northern slope of West Mill Tor	Earthwork	SX 585 915 (approximately)
Earthworks	South side of Longstone Hill	Earthwork	SX 568 902 (approximately)
Aircraft crash sites	Steeperton Tor Okehampton Moor Hangingsstone Hill	Aircraft remains	Unknown
* position taken as firing point (approximate)			

¹⁵ Information supplied by Dr Tom Greeves, MA, PHD

Appendix 5: Okehampton Artillery Range Datum Points		
<i>DP</i>	<i>Location</i>	<i>National Grid Reference</i>
B	'D' Range, Arnold's Road	SX 6046 8887
CAL	'D' Range, Arnold's Road/Circular Road	SX 6060 8899
D	'B' Range, Dinger Tor Road	SX 5871 8942
E	'B' Range, Curtery Clitters	SX 5920 8950
F	'C' & H2 Range, Circular Road	SX 5990 8930
G	'B' and 'C' Range, Arnold's Road	SX 5960 8870
H	H2 Range, Arnold's Road/Circular Road	SX 5993 8872
L	Circular Road, OP 16	SX 6076 8836
O	East Okement Head, Circular Road	SX 6065 8820
P	East of Op 14, Circular Road	SX 6020 8807
Q	Okement Hill Road	SX 6035 8750
R	North of Kneeset Nose	SX 5847 8710
S	South of Okement Hill Road	SX 6080 8668
S (north)	'C' Range, New Bridge Road/Circular Road	SX 5951 9012
T	Jackman's Bottom	SX 5911 8620
W	Black Ridge	SX 5960 8595
Datum points were used as reference points by the Royal Artillery, they are marked on the ground by 0.5in thick steel triangles (sides about 18in long) with the respective letter raised on one side, supported on 5ft poles. Surveyed in by triangulation, using the Calibration (CAL) datum point as the base. List based on UK Training Areas 1: 25,000 OS Dartmoor Ranges Map, Series GSGS 5294. Dated 28 September 1989		

Appendix 6: Okehampton Artillery Range Roads, Tracks, Fords & Bridges	
Tracks & Roads	
<i>Name</i>	<i>Route</i>
Yes Tor Road	Gives access to Yes Tor from West Mill Tor Road
Black Down Road	Gives access across Black Down to West Mill Tor
West Mill Tor Road	Gives access from Moorgate to Dinger Tor Road
Dinger Tor Road	Gives access to Dinger Tor from West Mill Tor Road
Rough Tor Road	Connects West Mill Tor Road with Circular Road
Quarry Road	Connects West Mill Tor Road with Halstock Down Road & Halstock Road
New Bridge Road	Connects Dinger Tor Road with Circular Road
Sammy Arnold's Road	Connects Dinger Tor Road with Circular Road
Halstock Down Road & Halstock Road	Circular route around Halstock Down
East Okement Road	Outer route around East Okement Farm, connects Halstock Down Road with Circular Road
Circular Road	Main circular route from Rowtor in the north to Okement Hill in the south
Splinter Road	Connects Circular Road with Steepton Tor Road
Okement Hill Road	Connects the southern-most part of Circular Road with Steepton Tor Road via Okement Hill
Steepton Tor Road	Connects Okement Hill Road with Circular Road via Oke Tor & Steepton Tor
Note: the use of the word 'road' has been taken from the map 'Artillery Range Roadworks' DCRE Devon drawing No 508/1 dated 12-04-49. It is acknowledged that many of these roads are in fact better described as tracks.	
<p>Most of the tracks are formed by granite, with large setts placed alongside the edges to contain the smaller stones. Parts of other tracks lie on the underlying granite to provide the metalled surface. Where tracks go over peat, timber has been used to maintain the surface. Culverts, covered by flat granite stones are constructed at intervals. Some are simply cut into the ground while others are carefully constructed with dressed granite. The Circular Road and the Yes Tor tracks were tarmaced in the 1940s (possibly by American civil engineer troops?). Most stream crossings are by way of fords, all are well constructed with granite blocks with the water course at Okehampton Moorgate constructed of black bauxite blocks. There is a further ford west of Oke Tor formed of granite slabs but this was probably constructed to facilitate the extraction of tin or peat. Water is kept from the roads by the surfaces having either a slight tilt or camber to allow the water to flow into small ditches alongside the road metalling. These collect the water and take it to culverts. The majority of Dartmoor's heavy rainfall is however, caught before it reaches the roads, this is achieved by a carrier drain of ingenious design that zig-zags alongside but at some distance from the upper limits of the road. It then meanders its way down the slope to a point closer to the road at the bottom of the incline. Here the water is allowed to drain into calverts.</p>	
Fords & Bridges	
<i>Name</i>	<i>Notes</i>
Moorgate SX 5919 9312	Ford and adjacent 'Irish' bridge. Constructed in 1999 by Specialist Team Royal Engineers and Squadron (V) Royal Engineers with assistance from a Chagford stone wall expert (Wilf Hutchings)
Cullever Steps SX 6057 9210 SX 6062 9210	Two concrete bridges spanning the two branches of the East Okement. a) metal beams infilled with profiled concrete sections which act as permanent shuttering and a concrete wearing surface. Clear span 4m, width 3.07m. b) concrete slab supported on concrete pad stones with concrete wearing surface. Clear span 5.7m, width 2.9m
Middle Ford SX 5985 9121	The bridge at Middle Ford, which is designed to carry light vehicles, consists of steel girders supporting a timber road

Appendix 6: Okehampton Artillery Range Roads, Tracks, Fords & Bridges	
Fords & Bridges continued	
<i>Name</i>	<i>Notes</i>
New Bridge SX 5963 9033	On the circular road. Constructed of open-jointed natural stone set on pad stones with stone piers. The wearing surface is bitumen. 1.4m clear span, width 5.1m
Oke Tor SX 607 897	On the access track to Oke Tor lookout. Constructed of natural stone which forms an arch over the stream. The wearing surface is made up of rubble and fine materials. Clear span 4.1m, width 4.3m.
Deep Ford SX 607 892	Ford
White Bridge SX 600 919	Located on the approach road to East Okement Farm. It consists of four metal beams supported on concrete pad stones, ten timber beams are bolted to these to act as the wearing surface. Clear span 2.3m, width 3.07m.

Appendix 7: Telephone Points (Based on a survey carried out on 19 September 1990)			
<i>Telephone Point</i>	<i>National Grid Reference</i>	<i>Telephone Point</i>	<i>National Grid Reference</i>
Anthony Stile	SX 587 926	OP 10	SX 599 897
Black Down Flag	SX 583 924	OP 11	SX 599 891
'F' Range Firing Point	SX 583 921	OP 15	SX 603 877
Black Down Hut	SX 577 919	Winter Tor	SX 610 912
Creepers Hole	SX 587 921	OP 22	SX 601 911
Red A Ven	SX 580 916	East Okement Farm Track	SX 602 909
Arty	SX 589 922	OP 6	SX 603 898
Fab (Hels) 1	SX 59256 92415	OP 7	SX 606 893
Fab (Hels) 2	SX 596 923	'D' Range Firing Point	SX 603 904
Gravel Pit	SX 597 923	OP 17	SX 612 887
Cullever Steps	SX 606 921	Deep Ford	SX 608 891
Row Tor	SX 594 916	'D' Range CQB	SX 607 889
H1 'A'	SX 595 915	Oke Tor	SX 613 899
H1 'B'	SX 594 914	'E' Range Track	SX 615 888
West Mill Tor	SX 588 910	Steeperton Tor	SX 618 887
PB 15	SX 588 908	'E' Range	SX 614 886
Yes Tor	SX 581 901	OP 19	SX 613 873
Fordsland Ledge	SX 576 888	Hangingstone Hill Track	SX 616 866
'A' Range	SX 576 879	Hangingstone Hill	SX 617 861
Kitty Tor	SX 567 874	Quintins Man	SX 621 839
'B' Range 'A'	SX 591 907	Holming Beam Hut	SX 592 764
'B' Range 'B'	SX 591 903	Holming Beam Firing Point	SX 596 769
OP 3	SX 591 897	Beardown Tor	SX 603 774
OP 5	SX 588 888	Rough Tor	SX 606 798
Dinger Tor	SX 586 881	Brimbrook	SX 587 875
New Bridge (H2 Sentry)	SX 596 903		

Telephone tapping points have a socket for connecting field telephones to the military telephone network. They are used for providing safety communications during training. The socket is contained within a concrete box with a hinged steel door. Since the 1990s these have been replaced, when necessary, by a short metal post on which the socket is mounted. Some cable junctions are marked on the ground by a concrete slab, inscribed with the number of the signal squadron responsible for maintaining Dartmoor's telephone network until the 1950s.

Appendix 8: Okehampton & Willsworthy Range Notice Boards

<i>Type</i>	<i>National Grid Reference</i>	<i>Type</i>	<i>National Grid Reference</i>
Right	SX 591 932	Front	SX 577 824
Left	SX 603 929	Front	SX 571 824
Right	SX 605 926	Left	SX 566 823
Right	SX 604 922	Left	SX 566 833
Front	SX 601 920	Left	SX 565 839
Right	SX 607 911	Front	SX 562 843
Front	SX 610 909	Left	SX 559 847
Front	SX 613 903	Front	SX 554 856
Front	SX 618 897	Left	SX 555 859
Front	SX 623 885	Left	SX 556 860
Left	SX 625 882	Left	SX 559 865
Front	SX 628 875	Left	SX 561 864
Left	SX 630 869	Left	SX 567 868
Left	SX 630 865	Front	SX 566 873
Front	SX 630 862	Right	SX 568 879
Front	SX 628 856	Right	SX 569 886
Left	SX 624 849	Right	SX 569 892
Front	SX 622 845	Left	SX 570 899
Right	SX 622 834	Left	SX 570 904
Right	SX 622 830	Front	SX 570 909
Right	SX 611 828	Front	SX 570 918
Right	SX 606 828	Right	SX 572 918
Right	SX 598 827	Front	SX 582 922
Right	SX 589 826	Front	SX 587 926

The range boundary was marked by 2 metre high red and white poles placed at 300 metre intervals or closer when needed for better visibility. The locations of warning signs were marked on Ordnance Survey 1:25,000 maps. They were positioned on the most commonly used access routes. This marking system existed from the 1950s, but it is not known how this area was marked prior to this. After 1996, the interval between boundary posts was reduced to 100 metre and small warning signs placed on each pole. The large warning signs were removed to reduce visual intrusion. This list is based on a survey carried out in the early 1990s when there were 48 notice boards present within Willsworthy and Okehampton ranges.

Appendix 9: Okehampton Range Danger Area Flag Poles

<i>Location Name</i>	<i>National Grid Reference</i>	
St Michael's Bungalow*	SX 5901 9368	Counter-weight
Watchet Hill*	SX 6170 9315	Counter-weight
Halstock Hill	SX 60110 92601	Counter-weight
Blackdown	SX 5811 9222	
Rowtor	SX 5941 9180	Counter-weight
Yes Tor*	SX 5808 9015	
Steeperon Tor*	SX 6187 8889	
Hangingstone Hill*	SX 6168 8619	
Quntins Man	SX 6212 8379	
Kitty Tor*	SX 5669 8729	
Rattlebrook Hill	SX 5539 8527	
unknown	SX 5702 8435	
<p>By 1925, the date of publication of the first military Bylaws for Okehampton Range, warning of firing was given by hoisting red signal flags on Yes Tor and at St Michael's Bungalow. In addition red, white or blue flags were hoisted at Watchet Hill to indicate which range(s) were in use with a red flag at Blackdown for No.1 Range and a red flag at Hangingstone Hill if firing was taking place on its northern slopes. Another set of Bylaws were published on 9 June 1936 but no copies are known to exist. These were replaced on 12 June 1940 and cover No.1 (Western) Range, No.2 (Centre) Range and No.3 (Eastern) Range and various combinations of combined ranges. The main warning signals were still hoisted at Yes Tor and St Michael's Bungalow with flags for particular ranges at Blackdown and Hangingstone but the Watchet Hill flag pole had seven combinations of flags to denote which range(s) was in use. In practise however, the warning signals remained hoisted for most of the war.</p>		
<p>List shows warning signals required by the Okehampton Range Bylaws 1963 and 1980. Those marked with * are required to show a red light in respect of firing at night.</p>		

Appendix 10: Okehampton Artillery Range Clearers Huts & Stables			
<i>Location Name</i>	<i>National Grid reference</i>	<i>Range Clearer Hut Type</i>	<i>Stable Type</i>
Black Down		Prefabricated steel lookout erected in September 1996	Prefabricated steel unit on concrete slab.
Steeperton Tor	SX 6123 8991 SX 5760 8882	Built against rock outcrop - granite stone walls. Concrete single-pitch roof with permanent corrugated steel shuttering. Three windows	Prefabricated steel unit on concrete slab
Hangingstone Hill	SX 6181 8891 SX 6172 8610 SX 5809 9015	Prefabricated steel unit clad with natural stone. 2 Windows	Prefabricated steel unit clad with natural stone
Yes Tor		Built against rock outcrop – concrete structure with granite stone walls. Corrugated steel single-pitch roof. No window	
Oke Tor	Lookout SX 61283 89968 Stable SX 61260 89949	Built against rock outcrop –with granite stone walls. concrete single-pitch roof. No window.	Prefabricated steel unit on concrete slab.
Quintins Man		Built against rock outcrop prefabricated steel lookout with 4 windows	Prefabricated steel unit on concrete slab.
Kitty Tor		Prefabricated steel unit with external timber cladding	Prefabricated steel unit on concrete slab.
Fordsland Ledge		Prefabricated steel unit with external timber cladding	Prefabricated steel unit on concrete slab.
<p>Most of the range clearers huts and stables were demolished in the late 1980s and 1990s because they were either considered to be defacing the Tors, or they were beyond economic repair. Some were replaced in the 1960s to drawing AWOSW 3/63 which were timber-framed lined on the inside with ‘Sundeala’ boarding and on the outside with shiplap timber. By the late 1990s even these have been replaced, this time with free-standing steel portable BTH buildings that can be lifted into position by helicopter and bolted to concrete rafts. They are used primarily for shelter, range clearers occupy these shelters for several hours during live firing</p>			

Appendix 11: Sources

Drawings & Maps from Okehampton Camp Archive

2524	BAT Range - Plan & sections.
2525	BAT Range - Proposed shelter for target carriers 18-07-58
2717	BAT Range - Amendments to 2524 19-04-59
2727	BAT Range- Loop at east end of Target Run 1959
2727/1	BAT Range - Loop & west end of target run
2737/1	Loop at east end of target run 02-06-59
AWOSW B/63	Proposed shelter for range warden's pony 10-04-63
AK1/2	Proposed look-out posts for Dinger Tor 00-11-66
A/077/69	Two firing and one conducting officer's gun emplacements 19-03-69
?	Quintin's Man Look out post and shelter

UK Training Areas 1:25,000 OS Dartmoor Ranges Map Series GSGS 5294. Dated 28 September 1989

Files from the Public Record Office, Kew

WO 32/7196	Training Ranges: inclusion of Watchet Hill, Okehampton as artillery range 1900
WO 32/7200	Proposed purchase of land & extinguishing of commoner's rights regarding Watchet Hill 1901
WO 32/7201	Training Ranges: Acquisition of Forest of Dartmoor and Common of Devon from Duchy of Cornwall: (cancelled) with map 1901-1902
WO 32/20944	Dartmoor National Park Committee: Service representation 1950-1963
WO 78/3547	Okehampton Survey Maps of Camp & Artillery Range 1893-1896
WO 78/4935	14 maps and Plans: Mostly printed with colour showing artillery ranges at Salisbury Plain, Okehampton, Grain Island, Catterick, Trawsfynydd, Redesdale & Bovington 1919-1933.

Files & Manuals from Firepower Museum, Royal Woolwich Arsenal

40 WOP/6	Field Artillery Training 1902 & 1922
417/65	Artillery Practice 1903-1912 – The Annual Practice of Batteries, RFA, RHA, Militia and Companies of RGA

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