

**Knepp Rifle Range:  
Topographic Survey**

**By Justin Russell and Bill Flentje, May 2019  
Survey by John Cook**



**Knepp Rifle Range:  
Topographic Survey**

**By Justin Russell and Bill Flentje, May 2019 V2  
Survey by John Cook**

**oskrpt 002**

Front cover: 100 Yard firing point and beyond, looking south from the target area  
Back cover: Stop-butt mound

## CONTENTS

- 1.0 Introduction and acknowledgements
- 2.0 History of Knepp rifle range
- 3.0 Results of the topographic survey
- 4.0 Newspaper archive
- 5.0 Bibliography

## FIGURES

- Figure 1: Location of Knepp rifle range
- Figure 2: Location of Knepp and Steyning rifle ranges in context with other early Rifle Volunteer ranges in Sussex
- Figure 3: 1875 25" Ordnance Survey map
- Figure 4: 1875 25" Ordnance Survey map detail
- Figure 5: 1879 6" Ordnance Survey map
- Figure 6: Hachure plan of the target area and stop-butt
- Figure 7: Profile through the target area and stop-butt
- Figure 8: 2018 Google Earth image
- Figure 9: Photographs of the stop-butt mound
- Figure 10: Photographs of the target area
- Figure 11: Photographs of the eastern shield/mantlet
- Figure 12: Photographs of the western shield/mantlet
- Figure 13: Photographs from the 100 and 500 yard firing points
- Figure 14: Photographs of an iron target from Preston Hills/Shoreham rifle range, in Kent

## **1.0 Introduction and acknowledgements**

- 1.1 This report has been created for Sir Charles Burrell and the Knepp Estate, as a record of the surviving earthworks that relate to the rifle range within the grounds of the estate. A brief historical element is included here, to give context to the site.
- 1.2 The rifle range lies on the western route of the River Adur, aligned approximately north/south, with the target area at the northern end at TQ 15170, 21820 within Charlwood Wood (Fig. 1). The southern most point, the 900 yard firing point, lies at TQ 15250, 20990, just north of Swallows Lane.
- 1.3 The initial site visit took place on the 10th March 2019, by Sue Faires and Justin Russell. The topographic survey was conducted on 20<sup>th</sup> April 2019, by John Cook and Justin Russell. The equipment used for the survey included a Leica GS18 receiver and CS20 GNSS controller, to set up station points and a Leica TS16 total station using a CS20 controller for the survey. The photographs in used in this report date from the 10<sup>th</sup> March visit.
- 1.4 I am extremely grateful to Sir Charles Burrell and Jason Emrich for allowing access to the site for the survey. My thanks also go to David Buckett and Sue Faires for their help in setting up the project and for John Cook for donating time and expertise to conduct the digital survey. Bill Flentje, collaborator in this project, provided all the historic research and interpretation of the sources available.

## 2.0 History of Knepp rifle range

- 2.1 The Rifle Volunteer movement, which began in 1859, stimulated the creation of nineteen corps within Sussex. The 18<sup>th</sup> Sussex, with their administrative centre at Henfield, was formed in May 1860, drawing men from areas including West Grinstead, Ashurst, Steyning, Nuthurst and Southwater. For the initial three years, it seems that the rifle range at the Holt, Steyning was the main location for musketry training by the 18<sup>th</sup>, as well as hosting the first of the annual shooting matches (Sussex Express, October 1861).
- 2.2 By 1863 however, Sir Percy Burrell, Captain Commandant of the 18<sup>th</sup>, had constructed a range on his own land at Knepp, so that those volunteers in the northern extremities of the 18<sup>th</sup> catchment area would not have to suffer the inconvenience of travelling to Steyning (Fig. 2). The Knepp range offered a greater distance at which to practice musketry than Steyning (900 yards rather than 800 yards) and the location of the firing points and target on the river flood plain, ensured the site was level (at Steyning the targets were on higher ground than that of the firing points). These factors, not to mention the close proximity to the Captain's residence, seem to have made Knepp the predominant range for the 18<sup>th</sup> over the next few years.
- 2.3 The rifle range was inaugurated in June 1863, with Lady Burrell firing the first shot, at 100 yards (and scoring a bull's eye) and on October 3<sup>rd</sup> of the same year, the annual prize shooting was held here. The Horsham, Petworth, Midhurst and Steyning Express and the West Sussex Gazette, both reporting on the event, describe the butts in glowing terms, suggesting they "cannot be surpassed by any in the county" and that "we cannot see how it is possible a better plan could be formed for shooting practice". A marker's shelter was built into the bank on the right of the targets, with a single iron target placed at the base of a deep cutting in the slope. The considerable amount of material excavated from this cutting was deposited at the top of the slope, above the target, to form a crescent shaped stop-butt mound.
- 2.4 Sir Percy Burrell resigned his commission in 1873 and the following year the annual shooting match of the 18<sup>th</sup> Sussex returned to Steyning, which seems to have kept a low profile in the local press, since the Sussex Express article in 1861. Rifle practice and shooting matches continued at Knepp for a few years after this, though the reporting of matches and practice at Steyning is on the rise.
- 2.5 The Rifle Volunteers, from their inception, used the P53 Enfield rifle, a .577 calibre muzzle loaded weapon. This was replaced in 1870 by the Snider rifle, essentially the same weapon but converted to fire a breech loaded metallic cartridge. In 1875 men of the 7<sup>th</sup> Horsham Rifles were competing at Knepp with Martini Henry rifles (the next generation of rifle) for the first time, four years before Martini Henrys began to officially be adopted by the Volunteer Force.
- 2.6 On 21<sup>st</sup> August 1877 in the Horsham, Petworth, Midhurst and Steyning Express a report follows the 7<sup>th</sup> Horsham Rifles competing for marksmen badges, "at the West Grinstead range, on Sir Walter Burrell's estate" (Sir Percy having passed away the previous year).
- 2.7 The final reference to the range comes in relation to the annual shooting match of the 18<sup>th</sup> Sussex on the 4<sup>th</sup> September 1877, referenced in the write up in the Southern Weekly News (15<sup>th</sup> Sept). The Knepp Estate was now in the hands of Walter Burrell, Percy having passed away in 1876. After just fourteen years of

use, there are no further reports of the rifle range at Knepp and it is likely it closed at this time.

- 2.8 The rifle range appears on the first edition 25" Ordnance Survey map of 1875, with firing points marked at 100, 150, 200, 250, 300, 400, 500, 550, 600, 700 and 900 yards (Fig. 3). It is recorded in newspaper articles from 1875 and 1876 that distances of 750 and 800 yards were also fired from, though these are not marked on the map. The target area is shown in great clarity, with a crescent shaped stop-butt mound at the top of the valley slope, a lower shelf cut into the slope and a main cutting deeper in the slope with the iron target at its rear, at the foot of the artificial slope (Fig. 4). Only one target is shown, yet two 'shields' (more commonly known as mantlets) are marked. A shield/mantlet is a bullet proof and safe location where the marker sits, indicating the position and value of each shot, via a system of flag signals. The 1863 newspaper article in the West Sussex Gazette indicates that a 'snug little box' on the right of the butts had been made for the marker, usually an iron, brick or wood lined structure set within an earth mound. For a rifle range with only one target (the implication of this being that only one person at a time can shoot) it would be unusual for there to be two mantlets. Given that flag marking involved making the flag visible above and to the left and right of the mantlet, it would seem logical that the visibility of the flag might be hindered by the slope into which the mantlet was built. To resolve this, the second mantlet may have been constructed on the western side, allowing the marker to display the flag more freely. A flagstaff is shown placed in the centre of the crescent shaped stop butt, for the purpose of flying a danger flag to indicate when the range was in use.
- 2.9 The rifle range also appears on the 1879 6" map (Fig. 5), though the data used for the map would have been drawn from the same 1875 survey as the earlier map – perhaps the range had been discontinued at this stage, as the lack of newspaper articles from the period suggest. Certainly, by 1896, the 25" Ordnance Survey map shows the earthworks of the stop butt but makes no reference to the range itself, confirming it has fallen into disuse.

### 3.0 Results of the topographic survey

- 3.1 The target site, now reclaimed by the woodland that it was originally built into, is remarkably well preserved, having not suffered from disturbance since closure in the late 1870s. The stop-butt (the natural or artificial steep slope behind every rifle range target), is designed to catch any bullets that miss the target and at Knepp it is made up of three elements: the mound, an upper cutting/step and the lower cutting. The stop-butt mound, on the top of the slope forming the river valley, is approximately 24m in length at its top and 34m in length its base, aligned east to west and standing at a height of 2.2m (Fig. 9). The mound material was extracted during the creation of the upper and lower cuttings into the slope, to provide extra height and safety for the range. The western edge of the stop butt mound merges with the natural slope of the river valley, which turns to the west at this point. The upper cutting/step in the slope immediately south of the stop-butt remains, 1.5m below the original ground level, but due to natural ground slippage, enhanced by animal burrowing, the shape is somewhat amorphous and difficult to distinguish in its original form. The lower cutting, however, survives in very good condition, with sharp tapered sides to the west, north and east. Cut obliquely into the valley slope to a depth of 5m, the eastern side of the cutting extends for approximately 42m to the south, while the western side of the cutting extends only 17m before the natural slope of the valley dissipates. The width of the cutting at its top is 16m, while at the base it measures 9m.
- 3.2 The target would have originally been placed at the base of the steep slope formed by the lower cutting, immediately south of the stop-butt mound and at the northern extent of the level area formed by the cutting (Fig. 10). Targets used on ranges of this date were formed of cast iron panels bolted together (generally two or four made up one complete unit) and secured by stakes into the ground. The surface was painted with the necessary target shape (usually a bull's eye or a series of concentric circles) and any bullet impact would leave a mark in the paint, allowing easy identification. There was no sign of the original target left *in-situ*, the likelihood being that any recoverable metalwork was removed from the site at closure of the range. However, it cannot be ruled out that the target remains in place and has been covered by natural processes of slippage, vegetation and leaf mould accumulation. Fig. 14 shows the type of target that would have been used at Knepp. This example from the Preston Hills/Shoreham rifle range in Kent features four panels bolted together.
- 3.3 During the survey a rapid assessment of the stop-butt was made for any bullets, but none were found - nor were recovered any of the small lead fragments characteristic of bullets disintegrating on impact with the iron target.
- 3.4 In the eastern side of the cutting slope, approximately half way along its length, is the original shield/mantlet location, as referenced in the 1863 newspaper article. As built, this would have been formed of an open fronted box, with unrestricted views of the target and a substantial mound covering the rear of the structure to the south, providing protection from bullets fired on the range. An established tree now occupies the open front area of the mantlet and none of the original form of the structure survives on the surface, other than a distinct 'inlet' into the eastern cutting of the target area. Fig. 14 shows the mantlet (of brick construction) at the Preston Hills/Shoreham rifle range in relation to the iron target.
- 3.5 The western shield sits directly opposite the eastern counterpart across the cutting, though as it is placed beyond the end of the natural slope of the valley side, it forms a discrete mound, rather than being built into the slope (Fig. 12).

Once again, no details of the structure can be seen on the surface. As with the target, it is likely any metalwork was removed post-decommissioning of the site, potentially resulting in the deformation of the shield/mantlet structures.

- 3.6 As part of the survey, the firing points (as marked on the 1875 25" Ordnance Survey map) were given modern OS coordinates and transferred into the GPS equipment, so that their exact locations could be examined for potential earthworks. Nothing was noted to survive at any of the firing points. At distances of 300 yards and under, firing took place from standing position only, so anything other than a simple marker post at the point would have been unnecessary. At greater distances, however, it is possible that in their original form, the firing points were built as low banks, of approximately 2m in length, no more than 0.5m in height (Steyning rifle range had firing point banks of this form). A bank provides not only a well drained and relatively dry spot in relation to the potentially wet valley floor, but also a somewhat raised viewpoint, above tall grass and other vegetation – both useful when firing from prone position. The 100, 150 and 200 yards firing points are all located in an area of otherwise undisturbed ground and the lack of evidence of earthworks perhaps confirms that they may never have existed as mounds. Beyond the 200 yard firing point, the re-cutting of the Adur river course (circa 2012) and the associated ground works may have obscured the firing points at distances greater than 300 yards, but they equally may have suffered from silting or indeed other forms of disturbance in the 140 years since closure of the range (Fig. 13).
- 3.7 In the newspaper article from the 13<sup>th</sup> October 1863 (Horsham, Petworth, Midhurst and Steyning Express), the author suggests that the range may well extend to 1000 yards. This however seems unlikely as the 1000 yard firing point would need to be placed in the field south of Swallows Lane, the consequence of this being that the lane would have to be closed to traffic during training and matches. There are no references to firing from 1000 yards in any of the tabulated match results.
- 3.8 Only a handful of rifle ranges from the early years of the Rifle Volunteer movement survive in both East and West Sussex. Fig. 2 shows where these ranges were originally located. Some ranges, such as those built for the Horsham and Eastbourne corps have disappeared entirely, consumed by modern development. Other ranges, such as those at Arundel, Welcombe Bottom and Steyning, fared better and continued in use through to the post-Second World War period, though existing in an evolved form.
- 3.9 The unspoilt nature of the target area at Knepp can be partially put down to the fact that it was closed prior to the introduction of the Lee-Metford (and later Lee-Enfield) rifles. These rifles and the .303 bullet they used required a new system of targetry to be developed (iron plates were replaced by 'penetrable' wood and canvas targets) and many rifle ranges had to be redesigned to accommodate this, or were closed owing to the insufficient danger area they possessed. Sites at Goodwood, Kingley Vale and Pease Pottage, Crawley were all discontinued preceding this changeover but only Pease Pottage has any notable earthwork associated with it, and this is in a poor state of preservation. The Knepp target area, therefore, represents a very rare survival of a Victorian butt complex within Sussex.

## 4.0 Newspaper archive

### 4.1 23<sup>rd</sup> June 1863

#### Horsham, Petworth, Midhurst and Steyning Express

WEST GRINSTEAD.

THE 18<sup>TH</sup> SUSSEX RIFLE VOLUNTEERS

THE INAUGURATION OF THE RIFLE BUTTS ADJOINING WEST GRINSTEAD PARK.

These butts, which we should imagine, cannot be surpassed by any in the county, have been erected with great care, and at considerable expense, under direction and superintendence of Adjutant Taylor, and in the manner in which the work is completed certainly reflects great credit upon the adjutant, and we believe, Mr. C. Bowell, the head gardener at Knepp, rendered his valuable assistance. The butts are erected close to a piece of land adjoining the park, and rising suddenly at the back about 25 feet, and this has been raised by clods of earth to very nearly double the height. The extent of the range is 900 yards, and the grounds from the butts to the extreme and opposite is as level as it is possible to conceive a piece of ground to be. With a little artificial assistance a safer lodgement has been made for the marker in the bank, within a very short distance of the butts. The inauguration took place between three and four o'clock by Lady Burrell firing the first shot at 100 yards, from a rifle which had been carefully adjusted by Adjut. Taylor upon a rest he had constructed himself. Lady Burrell was fortunate in making a bull's eye. The honourable Mrs. Pipon and Mrs. H. Padwick, jun., also fired a shot each from the same rifle and rest, and scored a centre each. Sir Percy Burrell, M.P., offered a few remarks to the volunteers present upon the success of the Ladies' shooting, and expressed a hope that they would be as fortunate in their practice. Major Pipon, in addressing the volunteers, remarked that they were assembled together by the kind invitation of Sir Percy and Lady Burrell, for the purpose of inaugurating the butts, which Sir Percy had erected entirely at his own expense, in order that the corps might have an opportunity of practising with the rifle without getting far from their homes. This fact alone, irrespective of the liberal manner in which they were invariably treated by Sir Percy, he was sure, be sufficient to convince them in the great interest felt by both Sir Percy and Lady Burrell to the volunteer movement generally, and more particularly with regard to the 18<sup>th</sup> Sussex, which Sir Percy had under his command. He was quite certain every volunteer present would say with him that they (Sir Percy and Lady Burrell) were entitled to the best thanks of all of them. He sincerely hoped that God might spare them both for many years to come, and that Sir Percy might live to command the 18<sup>th</sup> Sussex as long as the corps was in existence. He would now ask them to give three hearty cheers for Sir Percy and Lady Burrell. This request was most zealously and cheerfully complied with by both the volunteers and all who were present. Amongst the company were Sir Percy Burrell, M.P., and Lady Burrell, Major Pipon and the Hon. Mrs. Pipon, Captain Bunny, Captain Brian Bartelott, Major Keith, the Hon. Mr. and Mrs. Denman, Capt. and Mrs. Dickens, Lady Pelly, Lieut. Padwick, Lieut. Bridger, Adjutant Taylor &c., &c. The volunteers practised at several different ranges, and shot pretty fairly, considering the little practice they had had. A booth was erected upon the ground, and the volunteers were then furnished with refreshments. The brass band of the 18<sup>th</sup> Sussex were on the ground, and played at intervals throughout the afternoon.

4.2

**25<sup>th</sup> June 1863****West Sussex Gazette**

WEST GRINSTEAD.

THE HENFIELD AND WEST GRINSTEAD RIFLE CORPS.

THE INAUGURATION OF THE RIFLE BUTTS AT KNEPP.

The members of this corps have up to the present time experienced great inconvenience in not having had butts handy their homes (sic) to practice rifle shooting. It was to obviate this inconvenience that their Captain, Sir Percy Burrell, M.P., erected these butts near to Knepp Castle. The whole of the work was carried out under the superintendence of Adjutant Taylor, who has certainly completed it in a manner that reflect upon him the highest credit. We cannot see how it is possible a better plan could be formed for shooting practice; close behind the butts the ground rises suddenly about twenty-five feet, and this has been raised to nearly double the height by stacking up clods of earth. On the right hand side of and near to the butts a snug little box has been made in the bank for the marker. The extent of the range is 900 yards, and the ground is as level as the volunteers can desire it. (Edited due to repetition).

4.3

**13<sup>th</sup> October 1863****Horsham, Petworth, Midhurst and Steyning Express**

PRIZE RIFLE SHOOTING AT KNEPP

The 18<sup>th</sup> Sussex Rifle Volunteers, of whom Sir Percy Burrell, Bart., is the captain commandant, held their annual day for prize shooting on Thursday last, at the butts at Knepp. It was a wet and unpleasant afternoon, and the visitors were consequently not very numerous. Ensign Harry Pechell and Lieut. W. Bridger, were present at the shooting. These butts have recently been formed at a very considerable expense by Sir Percy Burrell, and there is a most excellent range up to 900 and we are not certain we may not say 1000 yards. The first prize shot was for a silver cup presented by the Captain, to be shot for by first and second class who have fired their 90 rounds in class firing. This was won by Private Comber, after shooting off a tie with Sergeant Bowell and Corporal Bowell. Ranges of 600 and 300 yards. Five shots at each distance. 35 competitors.

	600 yards	300 yards	Total
Sergeant Bowell	3	5	8
Corporal Bowell	3	5	8
Private Comber	2	6	8

In shooting off the tie, Private Comber won the cup.

PRIZE 2<sup>ND</sup>. - Value two pounds, presented by Lieut. W. Bridger. Five shots at 550 yards, for members who had fired their 90 rounds and had fired in the first class.

	550 yards
Privt. Mitchener	5
Privt. Martin	4
Privt. Vincent	3

There were nine contended for the prize.

PRIZE 3<sup>RD</sup>. - purse of two pounds, presented by Ensign Pechell. Five shots at 300 and 350 yards, open to first and second class men who had fired their 90 rounds in class firing. Won by Corporal Bristow. 35 competitors.

	350 yards	300 yards	Total
Corporal Bristow	6	6	12
Private Mitchener	6	3	9

There were two others scored eight and four seven each.

PRIZE 4<sup>TH</sup>.- A consolation prize presented by Lady Burrell, open to non-commissioned officers and privates who have not won any of the previous prizes. Five shots at 150 and 200 yards. 27 competitors. Won by Private H. Venn.

	200 yards	100 yards	Total
Private Venn	7	8	15
Sergeant Thorns	7	7	14
Private Otter	5	8	13
Sergeant Howell	4	6	10

PRIZE 5<sup>TH</sup>.- A prize of one guinea, presented by the ladies. 5 shots at 500 yards. 35 competitors. Won by Private Grant.

	500 yards
Privt. Grant	6
Sergt. Howell	5
Privt. Mitchener	4
Corpl. Howell	3
Privt. Otter	3
Privt. Botting	3
Privt. Comber	3

PRIZE 6<sup>TH</sup>. – Monet prize collected and divided into three, 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> 5 shots at 400 and 500 yards.

The volunteers of this course were treated to a dinner by the captain at his own residence at Knepp about a week previous to the shooting when a fat bullock was killed for the occasion. This arrangement was made in consequence of Sir Percy not being able to be present on the day of the shooting.

#### 4.4

#### **25<sup>th</sup> September 1866**

##### **Chichester Express and West Sussex Journal**

WEST GRINSTEAD. – SECOND BATTALION SUSSEX RIFLE VOLUNTEERS. The Battalion Prize Shooting for this year took place in West Grinstead Park, on Tuesday and Wednesday last, at the Butts near Knepp Castle, commencing at 10.30 a.m. Mr Young, of the Burrell Arms Inn, had a commodious booth erected in as convenient a position as possible, and provided luncheon therein for the volunteers to partake of, as they felt inclined, each day.

##### FIRST DAYS SHOOTING

No. 1. – First Prize, £8; 2<sup>nd</sup>, £4; 3<sup>rd</sup>, £3; 4<sup>th</sup>, £2; 5<sup>th</sup>, £1. Open to all non-commissioned officers and privates who have fired their 60 rounds in class firing during the year. Ranges 200, 500 and 600 yards. Five shots at each distance. Entrance 1s. 6d.

This prize was subscribed for by the officers of the battalion. The prize was won by Privt. Taylor, Horsham; 2<sup>nd</sup> Sergt. Bowell, Henfield; 3<sup>rd</sup>, Privt. Geere; 4<sup>th</sup>, Privt. Wady; 5<sup>th</sup>, Sergt. May.

No. 2. – A cup presented by Lieut.-Colonel Barttelott, M.P., and a second and third prize of £1 5s. and 15s., presented by the Adjutant of the battalion, to be shot for by three non-commissioned officers or privates of each corps in the battalion, for the best attendance at drill from the 1<sup>st</sup> December, 1865, to the 31<sup>st</sup> August 1866. Seven shots at 400 yards. Each competitor to add one mark for each battalion drill, one mark for four or more position drills, and one mark for every three company drills attended.

The first prize was won by Sergeant Knight, and the second by Sergeant Hews, of the Storrington corps, and a purse of 15s. by Sergeant Little of Horsham. Sergeant Knight had eight points added to his score, and Sergeant Hews ten, and Sergeant Little six.

No. 3. – A cup, presented by Major Pipon; open to efficient members of the 2<sup>nd</sup> Battalion. Seven shots at 500 yards; entrance 1s. Winner of a first prize at any county or battalion meeting to give one mark to all other competitors.

The prize was won by Private Cripps, who scored 19. Capt. Padwick, Col.-Sergt. Sanders, and Privt. Stenning won the prize by the rules of scoring adopted.

#### SECOND DAY.

No. 1. – THE BATTALION CHALLENGE CUP, to be shot for by five Non-Commissioned Officers and men of each company belonging to the 2nd Battalion, which subscribed £5 to the Battalion Cup, fired at ranges 200, 500 and 600 yards. The cup to be held for one year by the highest scorer of the company which shall hold it, and if won two years in succession by the same company, to become property of that company, to be disposed of as they see fit. Score: -

#### 6<sup>th</sup> Sussex (Petworth)

	200 yards	500 yards	600 yards	Total
Private Daintrey	32334	03242	23233	39
Sergt. Knight	33343	34242	20303	39
Private Aylwin	32334	22003	42430	35
Col.-Sergt. Sherwin	44220	40333	42200	33
Sergt. Death	23240	34302	00322	30
				Total 176

#### 7<sup>th</sup> Sussex (Horsham)

Sergt. Little	34334	44232	33303	44
Sergt. Collett	44323	03032	24403	37
Corporal Deudney	43234	00032	00002	23
Private Taylor	32424	22040	23433	38
Private Hill	22332	02233	40230	31
				Total 173

#### 8<sup>th</sup> Sussex (Storrington)

Sergt. Hews	24240	00303	20000	20
Private Crowhurst	23224	02333	32200	31
Private Carpenter	00000	03222	00000	9
Private W. Hammond	23432	22303	40302	29
Private Charman	32232	00023	03422	28

- 4.5 **1<sup>st</sup> February 1873**  
**Morning Post**  
 18<sup>th</sup> Sussex Rifles – Captain Sir Percy Burrell, Bart, resigns his commission, Willaim Blackford Woodward Esq., to be captain, vice Burrell, who resigns.

- 4.6 **14<sup>th</sup> September 1875**  
**Horsham, Petworth, Midhurst and Steyning Express**  
 HORSHAM (7<sup>TH</sup> SUSSEX) FIRST CLASS FIRING  
 Owing to the absence of a sufficiently long range at Horsham, the shooting (by permission of Sir Percy Burrell, Bart.), took place at the range at Knepp. The atmosphere was perfectly quiet, and just the very thing for rifle shooting. The trial was to obtain the marksman's badge, and to obtain this honour it is necessary to score a total at the four ranges of 22, and as the shortest score made was 23 (Corporal Peskett) they were all successful, and entitled to the marksman's badge. This badge is only held from year to year, which makes it necessary to have the annual trial. The following were the scores:

	650 yards	700 yards	750 yards	800 yards	Total
Capt. Hubbard	6	10	8	2	26
Sergt. Charlwood	15	14	4	0	33
Sergt. Penfold	7	2	3	12	24
Sergt. Attree	6	11	8	3	28
Corp. Richardson	4	10	14	8	36
Corp . Powell	8	13	8	11	40
Prvt. Weller	5	10	10	12	37
Prvt. Burroughs	13	4	8	8	30
Prvt. Arnold	0	8	17	8	33
Prvt. Littlefield	5	6	8	6	25
Corp. Peskett	6	0	10	7	23
Sergt.-Inst. Keys	11	11	6	4	32

SHOOTING WITH THE MARTINI HENRY. – After the shooting badge Captain Hubbard presented the volunteers present with a prize of £1 divided into three 10s., 7s., and 3s.; five shots each, 700 yards range. This was the first time of the volunteers shooting with the Martini rifle, and considering this, it was tolerably good practice. Private Arnold scored 12 points, and took the first prize; Sergt Attree with a score of 11 took 2<sup>nd</sup>; and Sergt. Charlwood the 3<sup>rd</sup> prize with a score of 10. The party then repaired to the Burrell Arms Inn (Mr Sherlock's) for refreshments.

- 4.7 **7<sup>th</sup> November 1876**  
**Horsham, Petworth, Midhurst and Steyning Express**  
 HENFIELD.  
 18<sup>TH</sup> (HENFIELD) RIFLES. – The members of the 18<sup>th</sup> Sussex who have passed into the first class met at the Knepp range, West Grinstead, on Saturday afternoon, to fire for the honour of wearing the marksman's badge. The minimum score that entitles a member to wear it was 22 at the various distances, as will be seen by the subjoined register, so that out of the eight competitors seven have succeeded in obtaining the badge, the greatest number we remember having done so;

	650	700	750	800	Tl.
Col.-Sergt. J. F. Martin	00343	00004	40302	00334	33
Sergt. L. Penfold	04039	30020	42244	20202	34
Corporal J. Holloway	22003	02320	43033	00000	27
Corporal J. Woolgar	03202	24434	30304	02442	46
Corporal G. Roberts	00003	42433	03002	23004	33
Corporal A. Richardson	33243	03030	03233	33024	45
Private F. Chalcraft	23302	03243	23200	24030	34
Private A. Stepney	00002	00300	000000	00000	5

4.8

**21<sup>st</sup> August 1877****Horsham, Petworth, Midhurst and Steyning Express**

7<sup>TH</sup> SUSSEX (HORSHAM) RIFLES. – The shooting for marksmen's badges took place at the West Grinstead range, on Sir Walter Burrell's estate, in good shooting weather. The following are the scores. Ten shots at each range.

	700	800	Total
Qr.-Mr.-Sergt. Collett	12	21	33
Col.-Sergt. Charlwood	31	23	54
Sergt. A. W. Richardson	19	13	32
Corporal Powell	7	27	34
Sergt. Instructor Keys	23	23	46
Corporal Norman	15	11	26
Corporal Richardson	25	8	33
Corporal Slaughter	31	27	58
Corporal Sengrave	16	18	34
Corporal Leader	21	11	23
Corporal Boorer	19	10	29
Private Weller	7	12	19
Private Arnold	21	16	37
Private Ansell	19	16	35
Private Dewdney	17	10	27
Private Tugwell	33	0	33
Private Potter	22	27	49

The above members of the corps are those only who have completed their third and second class firing entitling them to shoot in the first class, and the result of the shooting qualifies Corporal Slaughter, who made the highest score, to be returned s the best shot of the company for the year. Who got marksmen's badges? Volunteers tell!

4.9

**15<sup>th</sup> September 1877****Southern Weekly News****18<sup>th</sup> SUSSEX RIFLES' PRIZE MEETING**

The annual prize competition of the 18<sup>th</sup> Sussex Rifles took place at their excellent range at Knepp, West Grinstead, last week. The weather was exceptionally fine, but there was a varying wind, which accounted for the bad shooting. Sir W. W. Burrell M.P., and Captain Raymond Burrell were present, while a considerable number of ladies graced the scene by their presence. The Beeding band attended, and played some favourite tunes. Captain Woodward very kindly provided dinner on the ground, to which about 40 sat down. All the competitions were not concluded and the seventh was not begun. Results; - *First Competition.*

-For recruits only. 150 and 200 yards; 5 shots at each range. 1<sup>st</sup> prize, £1 10s, given by Lieutenant Huddart; 2<sup>nd</sup> prize, 10s; 3<sup>rd</sup> prize, 7s – 1<sup>st</sup>, Private Willaim Woolgar, 58 points; 2<sup>nd</sup>, Private Witten, 44 points; 3<sup>rd</sup>, Private Jenkins, 43 points. *2<sup>nd</sup> Competition*, Prizes given by Sir Walter W. Burrell, Bart, M.P. 7 shots at 500 yards. Any position. 1<sup>st</sup> prize, £2.; 2<sup>nd</sup>, £1 10s; 3<sup>rd</sup>, 15s; 4<sup>th</sup>, 10s; 5<sup>th</sup>, 5s.-1<sup>st</sup> Private Chalcraft, 33 points; 2<sup>nd</sup>, Corporal Woolgar, 30; 3<sup>rd</sup>, Private Blann, 30; 4<sup>th</sup>, Captain Woodard, 27; 5<sup>th</sup>, Private G. Brockhurst, 25. - *Third Competition*, -Given by Captain C. Raymond Burrell, 200, 500 and 600 yards; 5 shots at each range; any position.-1<sup>st</sup> prize, £2; 2<sup>nd</sup> prize, £1; 3<sup>rd</sup> prize, 15s; 4<sup>th</sup> prize, 10s; 5<sup>th</sup> prize, 7s. 6d; 6<sup>th</sup> prize, 5s; 7<sup>th</sup> prize, 2s. 6d.-1<sup>st</sup> Chalcraft, 53; 2<sup>nd</sup>, Bugl. Chowne, 48; 3<sup>rd</sup>, Corporal Woolgar, 47; 4<sup>th</sup>, Corporal Roberts, 47; 5<sup>th</sup>, Sergeant Penfold, 41; 6<sup>th</sup>, Captain Woodard, 40; 7<sup>th</sup>, Private A.A.S.Lewis, 39. – *Fourth Competition*. – Silver Challenge Cup, presented by Captain Woodard. 5 shots at 200 and 500 yards. Class firing position, TO become the property of the competitor who shall win it two years in succession. Prizes of #31, 10s and 5s, added for the highest individual scores. 1<sup>st</sup> the cup, Corporal Woolgar, 41; 2<sup>nd</sup>, Private W. Woolgar, 39; 3<sup>rd</sup>, Private J. Chalcraft, 38. – *Fifth Competition*. – Prize given by Mr William Borrer, Cowfold. Seven shots at 600 yards; any position. Bulls'-eyes, 2s. 6d. each; centres, 1s. 6d. each; outers, 1s.

	Bulls	Centres	Outers
Corporal Woolgar, 12s. 6d.	3	2	2
Private Chalcraft, 10s. 6d.	2	3	1
Surgeon Lewis, 8s.	0	4	2
Captain Woodard, 7s.	1	1	3
Corporal Roberts, 6s.	2	0	1
Corporal Holloway, 8s.	1	1	4
Corporal Chowne, 6s.	1	1	2
Private William Woolgar, 6s. 6d	0	3	2
Private Sam Reeves 5s. 6d.	1	0	3
Private Stepney 4s.	0	2	1
Private George Brockhurst 3s 6d.	1	0	1
Sgt. Instructor W. Swinger 3s. 6d	1	0	1
Colour-Sergeant Martin 3s 6d.	1	0	1
Private Tidey 2s. 6d.	1	0	0
Private Huddard 2s.	0	0	2
Corporal Foster 2s	0	0	2
Private Charles Martin 2s.	0	0	2
Private J, Shrubbs 1s.	0	0	1
Private A. Wittes, 1s	0	0	1
Private Blann, 3s.	0	0	3

*Sixth Competition*. – Silver Challenge Cup, presented by the Tradesmen of the District. This Cup must be won two years in succession to become the property of the winner. Prizes of £1, 10s., and 5s added for the highest individual scores. 200, 500 and 600 yards. 5 shots at each range. Any position. 1<sup>st</sup> and Cup, Corporal J. Woolgar, 52; 2<sup>nd</sup>, Private A.A.S.Lewis, 50; 3<sup>rd</sup>, R. Chowne, 49. – *Eighth Competition*. – Silver Challenge Cup, of the value of 15 guineas, presented by the ladies of the district. Seven shots at 500, and 600 yards. The cup becomes the property of the competitor who shall win it three times or twice in succession. Prizes of £2, £1 and 10s were added for the highest individual scores. Any position. 1<sup>st</sup> (the cup), Corporal J. Woolgar, 40 points; 2<sup>nd</sup>, Captain Woodard, 36; 3<sup>rd</sup>, A.A.S.Lewis, 25. – *Ninth Competition*. – Given by Capt. W. Woodard. A teapot for the highest score made in three minutes. Competitors to run around a post 20

## Knepp Rifle Range

yards distant from the firing point after each shot. Range 400 yards. Open to all comers. Corp. Woolgar, 27 points.

## 5.0 Bibliography

Beckett, I.F.W.1982. *Riflemen Form: A Study of the Rifle Volunteer Movement 1859-1908*. Pen and Sword, Barnsley

Hawes, A.B. 1859. *Rifle Ammunition, Notes on the Manufactures Connected Therewith, As Conducted in the Royal Arsenal, Woolwich*. Nabu Public Domain Reprints, 2010

Hodgson, Major B.T. *Record of the Fourth Battalion Royal Sussex Regiment from 1859 to 1913*. (1914) Hazell, Watson and Viney Ltd, London. (West Sussex Records Office).

Russell, J. 2012. *Preston Hills Rifle Range, Level 2 Historic Building Record*. Archaeology South-East.

Russell, J. 2017. *Steyning Rifle Range: History and Record of Existing Features*. Steyning Downland Scheme.

The War Office, 1858. *Regulations for Conducting the Musketry Instruction of the Army*. Her Majesty's Stationery Office, London

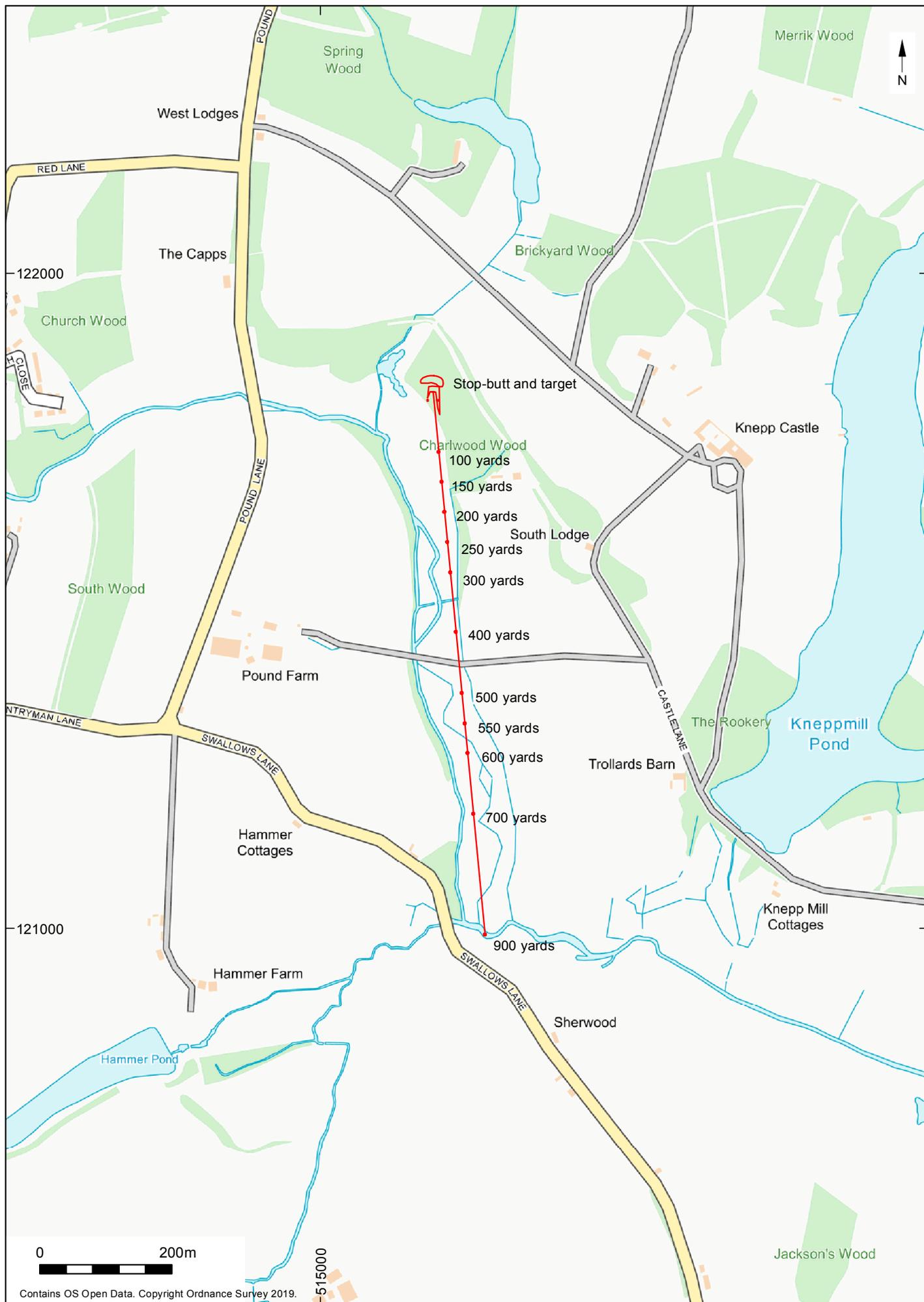


Fig. 1: Location of Knepp rifle range



Fig. 2: Location of Knepp and Steyning rifle ranges in context with other early Rifle Volunteer ranges in Sussex

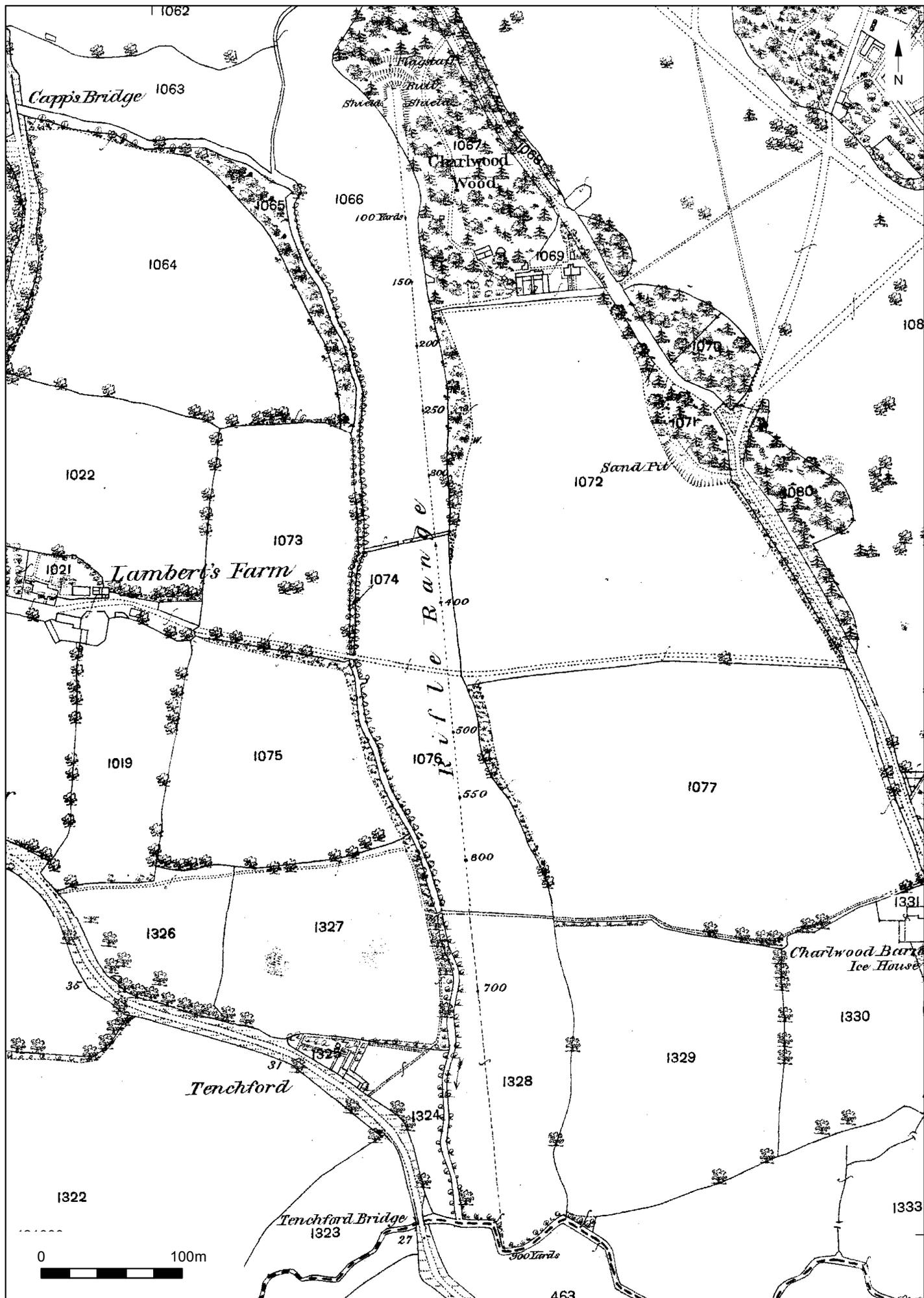


Fig. 3: 1875 25" Ordnance Survey map

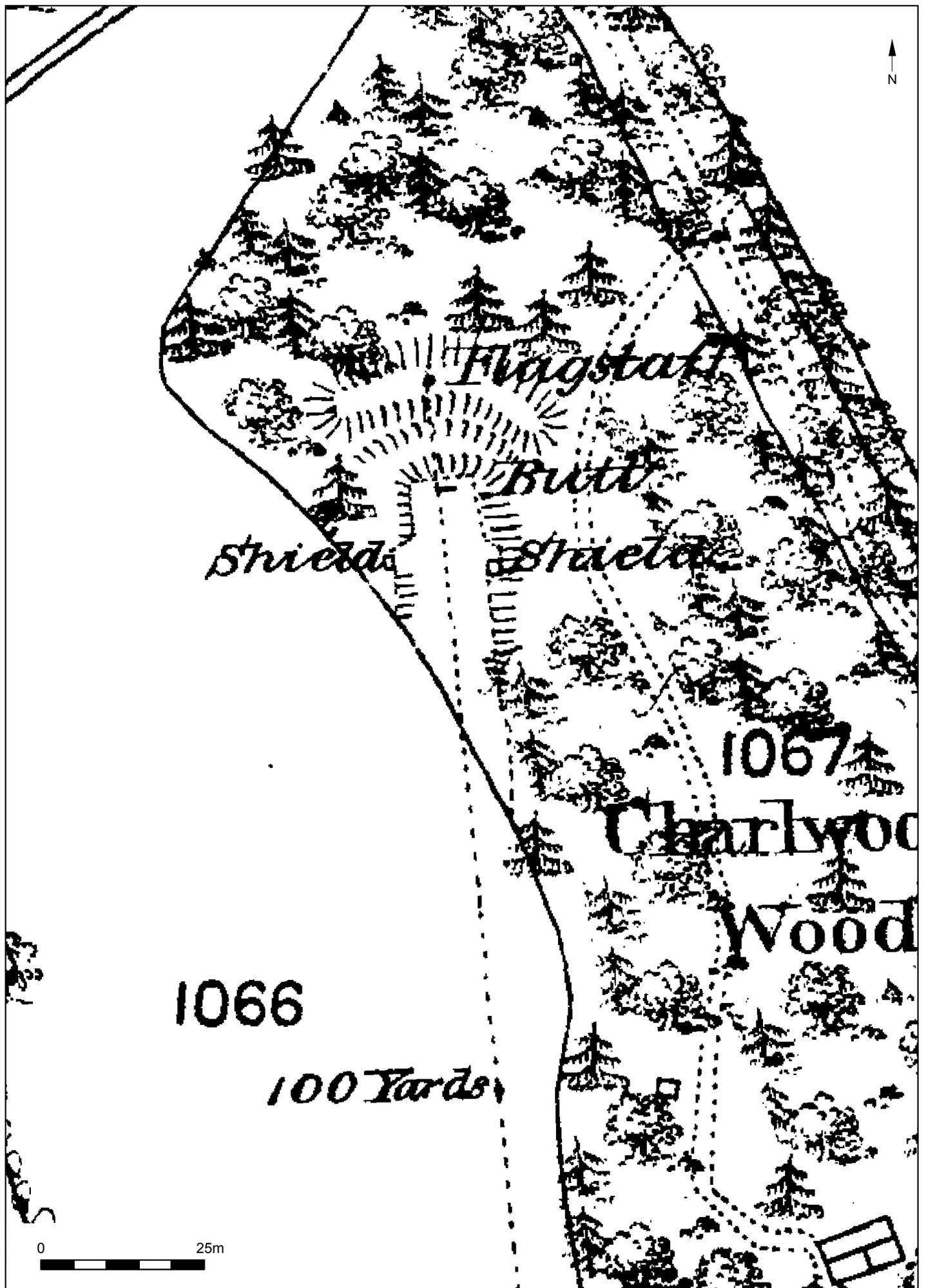


Fig. 4: 1875 25" Ordnance Survey map detail



Fig. 5: 1879 6" Ordnance Survey map

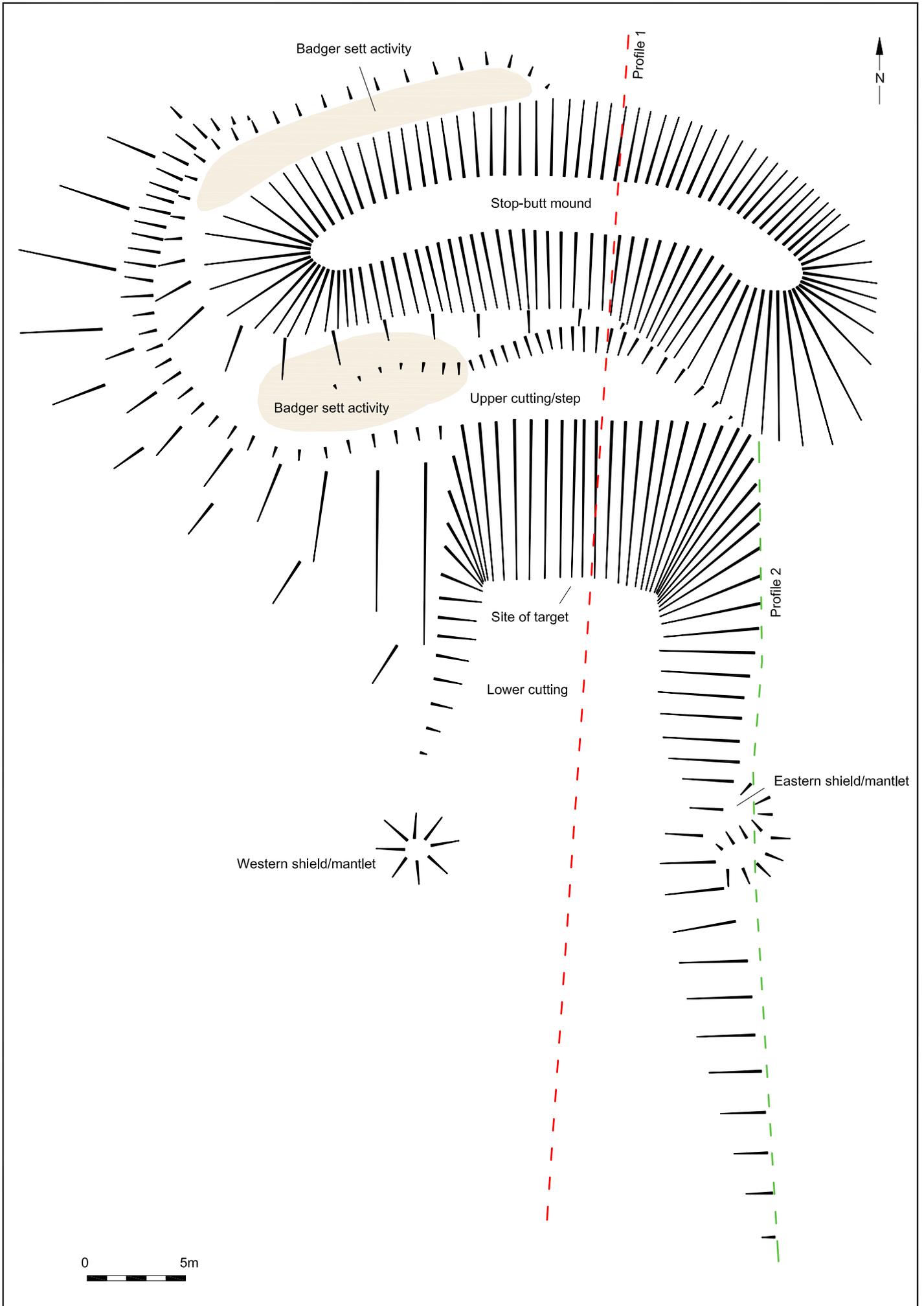


Fig. 6: Hachure plan of the target area and stop-butt

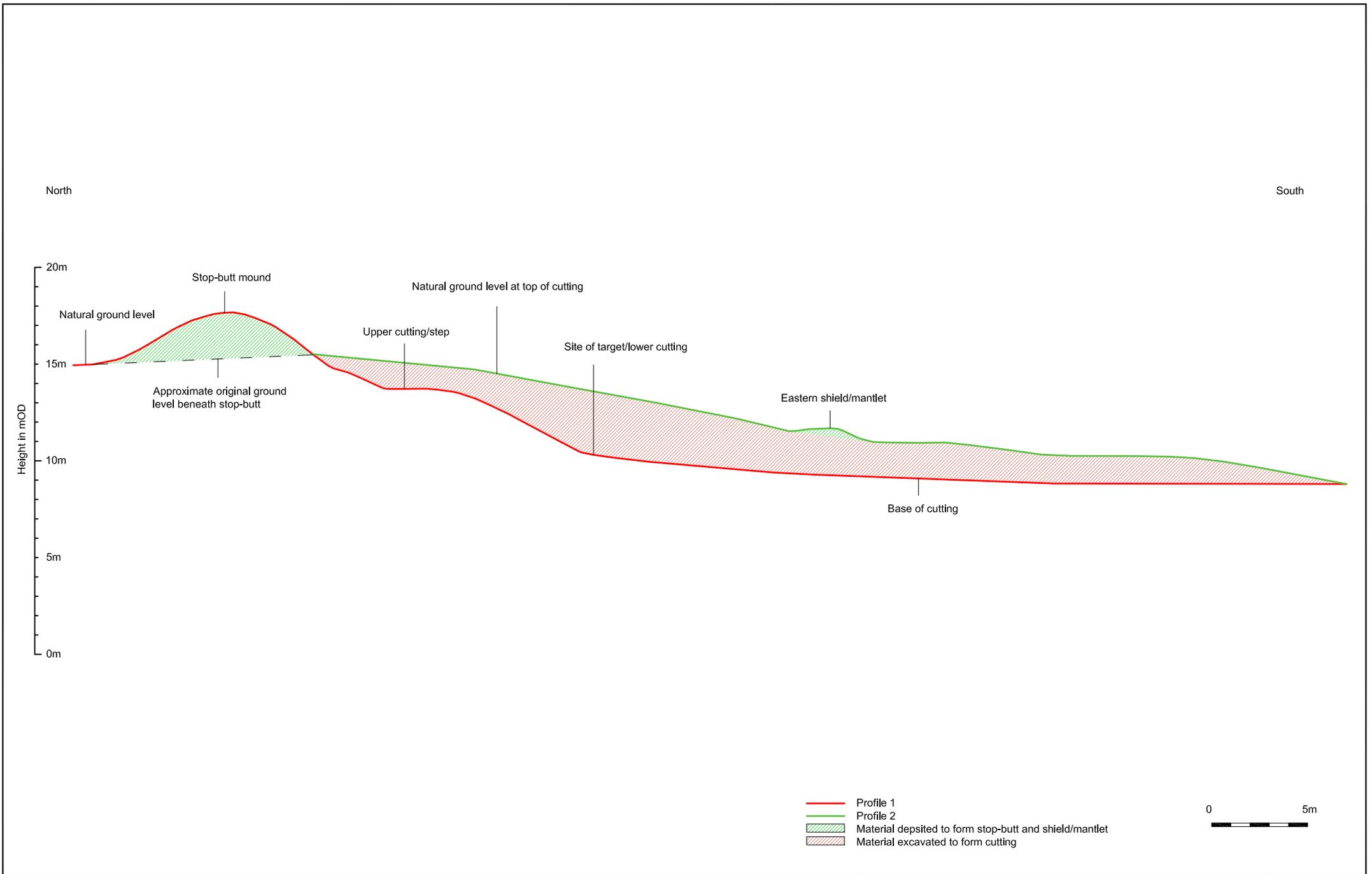


Fig. 7: Profile through the target area and stop-but



Fig. 8: 2018 Google Earth image



Stop-butt mound looking north-west



Stop-butt mound looking west



View of target area from stop-butt mound looking south, with the upper cutting/step in the foreground



Target area, looking north to upper cutting/step and stop-butt mound



Target area looking north-east from the top of the cutting slope, with the eastern shield/mantlet in the foreground



Eastern shield/mantlet looking south-east



Western shield/mantlet, looking west



Eastern shield/mantlet looking south



View of target, looking north, from 100 yard firing position



View of target, looking north, from 500 yard firing position

Fig. 13: Photographs from the 100 and 500 yard firing positions



Example of an iron target of the type used at Knepp, from a rifle range at Preston Hills/ Shoreham in Kent. Note there are four panels, each with a gridded surface



Rear view of the iron target at Preston Hills/Shoreham, showing a brick mantlet in the top left

Fig. 14: Photographs of an iron target from Preston Hills/Shoreham rifle range, Kent

