

## APPENDIX IX

### DARTMOOR AND THE SERVICES

PUBLIC INQUIRY, 16TH JULY, 1947

*Evidence presented by Richard Hansford Worth, M.I.C.E., F.G.S., on behalf of the Devonshire Association for the Advancement of Science, Literature and Art (founded 1862), and the Dartmoor Preservation Association (founded 1887)*

**I** AM a chartered civil engineer, I was admitted an associate member of the Institution of Civil Engineers in 1893, and some years later transferred to the class of member. I am a fellow of the Geological Society of London and a member of the Mineralogical Society.

During the past sixty years I have used every opportunity to study Dartmoor, and my professional work has given me special occasions to that end. I published my first paper on a Dartmoor subject in 1889.

I have examined the map deposited with the Devon County Council at Exeter, for the purposes of this inquiry, which I hereafter will refer to as the "deposited map". Upon this map five adjacent areas are indicated as sought for occupation by the Forces on Dartmoor for training purposes.

These areas are as follows. (1) Coloured blue on the map, described as "War Department owned land". (2) Coloured red on the map, described as "Artillery Range Area, Annual Agreement with the Duchy of Cornwall". (3) Coloured green on the map, described as "Extensions to Artillery Range". (4) Coloured yellow on map and striped red, described as "R.M. and Army user with live ammunition". (5) Coloured yellow on map, described as "Army user with no live ammunition (No Exclusion of Public from this Area)". It is added that (3), (4) and (5) with the NW. and SE. gun sites are proposed new acquisitions. The areas of the land are: (1) Blue, 5.5 sq. miles; (2) red, 23.7 sq. miles; (3) green, 6.5 sq. miles; (4) yellow, striped red, 18.6 sq. miles; (5) yellow, 9.2 sq. miles; making a total of 63.5 sq. miles.

I have omitted certain gun sites or parts of gun sites which lie outside the coloured areas.

By implication the whole of the blue and red areas are to be regarded as previously occupied for military purposes, but this needs qualification, the red area certainly was not wholly in occupation as an artillery range, nor even as part of the danger zone to the south of the former range. We are not told strictly what manner of use is intended within this red area, nor whether the public is to be admitted as heretofore when actual firing is not in progress.

The blue area is unaltered in boundary, but we are not told whether its past user is to be continued without alteration, nor whether the public is to be admitted when operations are not in progress. If there is to be a change to a more burdensome user of these lands, that, as against the commoners and the general public alike, is a new acquisition; and full information upon this question should we submit, be before this inquiry.

The two green areas, both numbered 3, are described as extensions of the Artillery Range, but here again no discrimination is made between the actual range and the danger area attached thereto, and the same questions fall to be answered as in respect of the red area.

The yellow area, striped red, No. 4, is stated as intended to be devoted to user with live ammunition by the R. Marines and the Army. On the south this area is for a length of two miles bounded by an unfenced main road, for a further length of half a mile either by a rough stone fence adjoining the road or by a leat or water course running parallel to the road and but some 50 ft away from the same. It is obvious that for safety there must be a neutral zone between the actual exercise ground and the road, but no indication of this is afforded. I have been told that the Devon County Council has been assured that no live ammunition will be used within 500 ft, or 500 yds, it seems uncertain which, from the road, but that is no part of the scheme as presented on the deposited map, which is the sole basis of this inquiry. I say that, from my personal knowledge of the exercises which were carried out on Dartmoor during the past war, 500 yds would not be sufficient safety zone on these boulder-strewn hillsides; and that, for this and other reasons, which I will later present, no live ammunition should be used south of a line drawn from a little north of Great Mistor to a little north of Great Staple Tor.

And I further say the loss of this grazing ground, over the whole area of the land coloured yellow and striped red, is a loss to which the commoners should not and need not be subjected, nor should or need the public unrestricted access to the same area be denied.

The statement appeared in the public press that the exercises with live ammunition were to be carried out over the same land (coloured red) which is proposed to be used as an artillery range; and there is certainly sufficient suitable ground within that area. The statement was officially corrected on the 2nd January 1947; but it had received support from a map issued by the Devon County Council to those attending a conference at Exeter on the 11th April 1947.

The first opportunity of obtaining knowledge of the actual detail and extent of the present suggestions came with the advertisement in the public press of 27th June 1947, when it was made known that a plan had been deposited at the offices of the Devon County Council at Exeter, which might be inspected by those interested. It may not have been appreciated that among those interested as commoners were all the men of Devon, saving only the inhabitants of Totnes and Barnstaple. The time allowed for the preparation of any evidence in opposition to the scheme, as then, for the first time, declared, has thus been no more than nineteen days, and we submit that the task of preparing such detailed evidence as should be presented at this inquiry has been rendered unduly difficult. I ask indulgence if my evidence is not presented in due logical order.

This proposed area for practice with live ammunition (yellow striped red) includes 6.6 sq. miles of the watersheds of the West Dart, the Cowsic and the Blackabrook, within the watershed of the former Devonport water-supply, now, by the extension of the Borough of Plymouth transferred to that authority. As a water engineer I cannot think that battle practice by bodies of troops over and within the watershed utilized for a public domestic supply can be other than a grave potential danger. We have no knowledge what precautions, if any effective precautions are indeed possible, are intended to be taken. Or in what way the intakes and leats are to be protected from physical damage; or safe access to the works by the officials and workmen of the water-supply undertaking assured.

I leave the question of threatened antiquities and of Wistman's Wood to later evidence on the general matter of antiquities and objects of scientific interest.

The yellow area, numbered (5), is stated to be for Army occupation with no live ammunition, the public is to have access. There are within this area important antiquities, and I will later suggest modification in the boundary of the area, and the addition to it of a small part of the red and eastern green areas, with a view to bringing within it yet other antiquities. But I realize, from previous experience, that, while such modification will preserve the public access to the antiquities, it will not and cannot ensure the preservation of the antiquities. Here again a part of the red could be attributed, in substitution, to these military purposes, and the north part is clearly indicated.

As to the gun areas, for their size and number they either involve the certain destruction or the greatest danger to the greatest possible number of antiquities. I will revert to this under the heading of *Antiquities*.

## COMMONERS' RIGHTS

Rights of common on the Forest of Dartmoor and the Commons of Devon are held by so many classes, and people so many in number, that Mr. Stuart Moore advised that the question of sufficiency of common could hardly be raised by would-be enclosers. The evidence upon which this dictum was found set out in the first publication of the Dartmoor Preservation Association, *Short History of the Rights of Common upon the Forest of Dartmoor and the Commons of Devon*, by Mr. Stuart A. Moore, with an introduction by Sir Frederick Pollock, Bart., and a contribution by Mr. Percival Birkett, Plymouth 1890.

For present purposes I put in, as a part of my evidence, a reprint of a paper from Vol. 76 of the *Transactions of the Devonshire Association*, which was written as a key to the documentary evidence collected by Mr. Stuart Moore.

Summarized, the following have rights of common within the Forest and on the Commons of Devon, which lie without but contiguous with the Forest (but not all lands contiguous with the Forest are necessarily Commons of Devon).

(1) The holders of the Ancient Tenements enclosed from the Forest, who pay nothing for depasturing their sheep and other cattle, and who have the privilege of turf-paring, of cutting of fuel, and for taking stones, paying nothing for the same. This class has been materially reduced by the purchase by the Duchy of Cornwall of ancient copy-hold tenements.

(2) The Venville tenants, living in vills next to the Forest of Dartmoor, and paying for their privileges certain fixed rents, either singly or collectively. These have the right to agistments for their beasts from the rising of the sun to the setting thereof, but not by night; none the less they might depasture by night also on payment of a fixed additional sum. And they may take coals, turf, furze and stones for their own use.

(3) The "Foreigners", being all the other inhabitants of Devon, except those of Barnstaple and Totnes. These had free pasturage in the Commons of Devon, so only that they would depose that their cattle came not into the Forest, but they might depasture the Forest on making certain fixed payments; they might also, for a fixed payment have pits for the digging of turfs.

Naturally, the nearer the commoners were to Dartmoor, the greater the advantage they might derive from their rights therein, but cattle have been brought in the past for considerable distances to the rough hill pasture, which is still an important feature in the agricultural economy of Devon. There are also parochial and manorial common lands, to some extent formerly part of the Commons of Devon, which also play their part in Devon agriculture.

All the encroachments now proposed by the forces are to the reduction in area of these various rights of common, and the diminution of the enjoyment of such areas as are still to be permitted to be depastured, whatever arrangements may be made for driving the commons to remove cattle from danger when the Services' operations are in progress, and permitting them to return when such operations are discontinued for the time.

During the past war, in connection with the battle-training on Dartmoor very considerable lengths of barbed-wire entanglements were erected on Dartmoor, to the destruction of many sheep which perished miserably involved in the wire. Much of this wire still remains. Shelter trenches were also dug on

many commons, in numbers; some of these have been refilled, but very many remain open and dangerous. There is no assurance that such dangers will not be brought into existence on the battle-training areas now proposed; nor, indeed, any statement as to the manner of user which will be made of the lands, except that, for its safety, the public will be excluded from the areas where live ammunition will be used.

The Dartmoor farmer is a hardy, industrious man, to whom his common rights are often the essential of success; and he stands to lose heavily, often irretrievably by the loss of limitation of those rights. The nation, also, will lose, especially when we are, as now, driven to the utmost of our capacity in the task of lessening the burden of importing food. For this reason we urge this further necessity of locating the battle-practice areas within the area which is assigned to artillery purposes. To do otherwise is to squander national resources.

#### ANTIQUITIES

Dartmoor has the greatest collection of antiquities of the Early Bronze Age which is to be found in the British Isles. No mere museum collection, but the homes, the graves and the monuments of men who, at the dawn of the age of metals in our country, lived and worked among its hills in surroundings little altered since their day. It may be described as an irreplaceable document, happily preserved to our times. It has not been reserved to the present threat to bring to our minds its value, and its value to future years. The Archæological literature of Dartmoor had its origin in the last decade of the eighteenth century, in the days of Polwhele, Bray, Sweete and their associates. It was a humble beginning, clouded and overshadowed by mythical scholarship and Druidical nonsense. But it marked the origin of an intelligent interest in the past; an interest which has lived to outgrow its youthful error, and to make the archæology of Dartmoor an essential contribution to the study of human origins.

In the summers of 1827 and 1828, four members of the Plymouth Institution explored Dartmoor; they were Henry Woollcombe, Hamilton Smith, John Prideaux and Samuel Rowe. Their observations were sound, their interpretations certainly mistaken, and they incumbered themselves with Arkite Worship, additional to the Druids.

In 1848, the Rev. Samuel Rowe published his work entitled *A Perambulation of Dartmoor*.

With the formation, in 1862, of the Devonshire Association, the opportunity came for a more organized exploration of the Moor, and a more regular publication of results. In 1877 the Association appointed a Dartmoor Committee, which published three reports. In 1878 it appointed a Barrow Committee, which has not confined its operations solely to Dartmoor, but which has published sixty-four reports, and has at the present two in the press. One hundred and thirty-five Dartmoor graves have been described, planned and illustrated.

The Dartmoor Exploration Committee, appointed in 1893, has, at intervals, published thirteen reports, and still continues. A part of its work has been the thorough excavation of one hundred and twenty hut-circles, and the somewhat less thorough examination of eighty more. In addition to the work of the Committees and Recorders, other members of the Association have written many papers on the pre-history of Dartmoor. I myself have issued full descriptions of the sixty-one stone rows, a class of monument in which Dartmoor

is peculiarly rich; and, coming to a later age, I have prepared and issued detailed descriptions of the tin mills (most of which now remaining are of Elizabethan age) the known number being forty-three. The stone cricles, retaining circles and menhirs have all received attention and record, but the work is not as yet finished. Thus I hope to have shewn that others as well as myself have valued the archæological record of Dartmoor sufficiently to give their time and labour to the attempt at complete record. It is not we local workers who alone value the treasure-house of Dartmoor and recognize its importance to the science of Archæology.

#### GEOLOGY

Not only local workers, but also geologists and mineralogists from other counties than Devon and other lands than Britain, have studied the granite of the Dartmoor highland, and its associated rocks. Its geology, like its archæology, is part of the essential evidence in a far wider story than that of Devon. It is probably true that in geology that tale has been less completely told than in archæology; but in neither study has the evidence been exhausted.

#### BOTANY

In botany Dartmoor presents an especial feature, its ancient oak woods, of which Wistman's Wood, on the banks of the West Dart is the best known, and on the whole the most important. Black Tor Beare, on the West Okement, differs in that the more part of its trees were cut in or about the year 1620, so that few of the present trees are probably more than three hundred and twenty years old; but one at least is a specimen as striking as any in Wistman's Wood. Piles Copse, on the Erme has probably been cut at an even later date, but that also gives valuable evidence of the effect of the Dartmoor climate on the growth of the oak. Wistman's Wood is commonly accepted as unique.

#### WILD LIFE

The effect of a prolonged and large-scale invasion of a land which hitherto except for the artillery range, has enjoyed for centuries that peace which follows the exclusion of agriculture and husbandry, must be marked. There will probably be other witnesses who are better qualified by detailed and specialist knowledge to speak on this matter.

I have thus sketched the value of Dartmoor to students of various sciences with a view to avoiding repetition in the further evidence which I offer.

#### GUN AREAS

The gun areas have unfortunately been so placed that in many instances their use must cause irreparable damage.

It is understood that from each and every gun area the direction of fire will be toward the red area, and that it is intended the projectiles shall always fall within that area. This matter has never been made quite clear.

(a) The northernmost gun area, in the valley of the Lyd, is situate at a level of 1,000 ft above O.D. and would presumably be used for eastward and north-eastward fire, in which event the range would be over a hill or hills from 700 to 900 ft above the guns and an error in elevation might easily lead to the shell falling on those hillsides. I do not decry the ability of the gunners when I suggest

the possibility of error, since it must be remembered that this is to be used as a training ground, and error is natural to beginners. This particular gun area is shewn as occupying a space of half a mile long by quarter of a mile wide of the valley of the Lyd, at a point which is the most frequented by the inhabitants of Lydford and the visitors to that resort; and the firing will be across the tors, "Great Links", "Arms", and "Brae", and over the valley of the Doe Tor Brook, which some years ago was specifically excluded from the area now coloured blue. This spells ruin to Lydford.

(b) A gun area at the western extreme of the blue area, partly within and partly without that area. This might well be set further east so as not to interfere with the ancient track from Lydford to Willsworthy. There is no reason why it should not be set wholly within the blue area, thus avoiding any fresh take from what is now free land. This area measures one half mile by a little under a half mile.

(c) A gun area east of Cudliptown, Marytavy, on Whit Tor and Lanson [Langstone] Moor. This is most unfortunately placed. It covers the whole site of White Tor Camp, a prehistoric camp of great interest, and of a type unique on Dartmoor. The existence of the camp and of the gun area are not compatible. It also covers the site of a prehistoric pound and hut-circles. Further it includes the longstone or menhir, from which the adjacent Moor takes its name, also a kistvaen, and part of a stone row associated with the menhir. This has already been an unfortunate neighbourhood; during the late war the forces sprayed the face of the menhir with machine-gun fire, and wrecked a fine stone circle lying a little to the east on the same moor, reducing some of the stones to fragments, breaking and uprooting others. It was, before this destruction, the most finely sited circle on Dartmoor.

The only remedy for the wholesale destruction which the construction and use of this gun area involves is to shift the whole area to the north until it lies clear of the camp, the menhir and stone row alike; and to prohibit the use of mechanical traction in a manner which might interfere with either of the objects of antiquity. We know what the services can do with early camps; they used a camp on Roborough Down and an outwork connected with it as ready-made banks and obstacles for the purpose of tank practice over banks.

The Whit Tor Camp and the pound will be found figured and described in detail in the sixth Report of the Dartmoor Exploration Committee, *T.D.A.*, vol. 31, pp. 146-55. In which is a map showing that there are numerous minor remains in addition to those mentioned. The menhir to which I have referred will be found, described and illustrated in the *T.D.A.*, vol. 72, p. 197 and Pl. ix [p. 270 and Pl. 60A of this book]. While the kistvaen is described, planned and illustrated in the fifty-fifth Report on Barrows, *T.D.A.*, vol. 68, p. 49, and Pl. ii.

(d) Gun area on Roose Tor and Great Staple Tor. Extreme length north to south rather over three-quarters of a mile, extreme width east to west rather less than three-quarters of a mile.

This, again, is an unfortunate selection, some attempt seems to have been made to avoid the summit rocks of Roose Tor and Great Staple Tor, but the attempt is far from sufficient, and both rock masses are involved, while the guns are set south of the tors, which, with a northward direction of fire involves the rocks being subject to the blast. A number of hut-circles are also

involved in the area. The only possible method of avoiding damage is to shift the gun area to the north-east, clear of both tors. Also this gun area is within the limits of the battle practice with live ammunition; and we know the manner in which such rocks have been regarded by the services as targets made and appointed for their purposes, witness the summit rocks of Ugborough Beacon, and also Little Mis Tor.

Great Staple Tor is one of the most noteworthy rock masses on Dartmoor. It will be found illustrated on Pl. x, fig. 22, of my Presidential Address to the Devonshire Association, vol. 62. A copy of this address I hand in, to which I will hereafter refer as "Presidential Address". [Reprinted above as the first chapter of this book.]

About the middle of the illustration last mentioned will be seen a curious arrangement of rock, consisting of a flat slab, looking rather like a hand or paw, resting on a round stone which is precisely over the edge of another rock. This natural grouping is instructive to the geologist, and was early, and incorrectly identified, as a 'tolmen', the supposed handiwork of the Druids. This false identification we owe to the Rev. E. Bray, who entered it in his notebook in 1802-3.

(e) Gun area on Mis Tor and Little Mis Tor. Greatest length, north to south, one mile, greatest width five-eighths of a mile. Here an attempt has been made to exclude the summit rocks of Great Mis Tor, but they are by no means effectively cleared, and Little Mis Tor is disregarded. The guns will mainly be south of Great Mis Tor, which will be subject to the blast. The one possible remedy is to move the gun area to the north and east. It is to be noted that this area is also within the limits devoted to battle practice with live ammunition, so that the mere shifting of the guns is a quite inadequate provision for the safety of the summit rocks.

There are special reasons why the summit rocks of Great Mis Tor should be guarded from harm, apart from the general principle that such summit rocks are a chief characteristic of Dartmoor scenery.

There is on the summit of the Tor a rock basin, known as Mis Tor Pan, which is on the boundary of the Forest, and also on the boundary of the adjacent Common of Walkhampton. This rock-basin is, first of all, in the nature of an historic document, it is mentioned in a Charter of Isabella de Fortibus, Countess of Albemarle and Devon, and Lady of the Isle, whereby, in 1290, she confirmed the charter of her mother Amicia, Countess of Devon and Lady of the Isle, granting certain lands to the Abbey of Buckland, Mistorpanna being one of the bounds of such lands.

In 1608, in a survey of the Forest, "*a rocke called mistorrpan*" is given as one of the bounds; and Mistorpan is mentioned in 1702. From my earliest recollection the same name attached to this rock-basin. This certainly places the basin in the category of ancient monuments, and as such it should be scheduled, but it lies in Duchy lands.

The basin is also an interesting geological exhibit; it has a long history of record. Bray, in 1802, gives its dimensions, he is followed by Rowe, in 1828; Ormerod, in 1858; Sophia Dixon, in 1875; and myself, in 1929. No other rock-basin has so full or so long a record. Mis Tor Pan will be found described and illustrated in the Presidential Address, pp. 78, 79; and pl. xv, figs. 33 [pp. 29-30, Fig. 5, and Pl. 15A of this book].

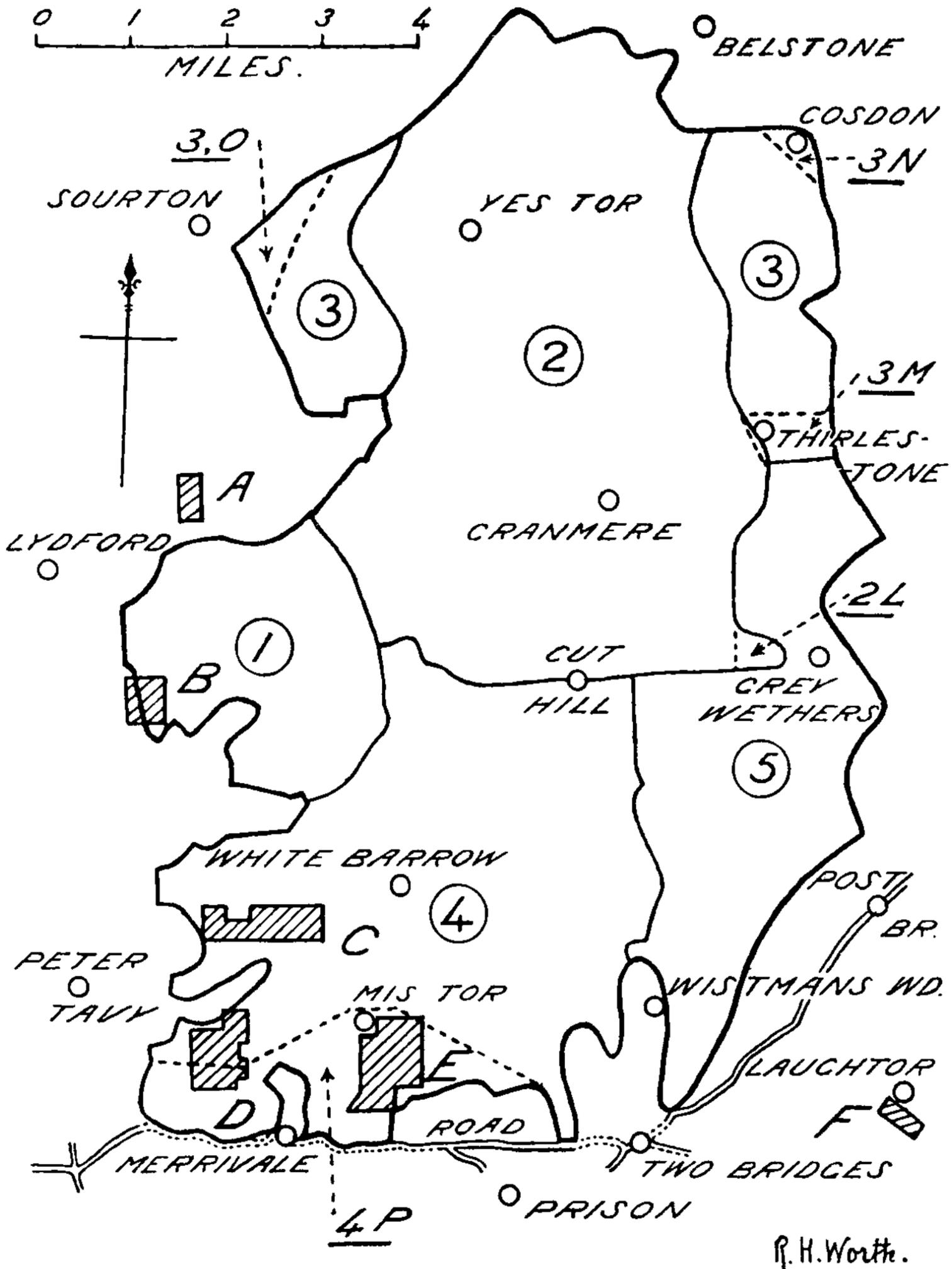


FIG. 130

Whole area sought to be acquired by Services is bounded by Strong full line. Sections appropriated to various specific purposes are bounded by lighter full line. Numerals within circles are the official numbers attributed to the sections on the Deposited Plan.

*Suggested Amendments* (other than the drastic reduction of the whole area) are shewn in dotted line, and each identified by a numeral accompanied by a letter, thus: 2, L, Sittaford Tor; 3, M, Thirlestone; 3, N, Cosdon; 3, O, Sourton Tors; 4, P, Mis Tor and Staple Tor (as to these see text).

*Gun-sites*, hatched and lettered A, B, C, E, F. (These letters do not appear on the Deposited Plan.)

There is another interesting geological feature at Mis Tor, the weathered, rounded block, left precariously poised on its native mass, and standing near the rock-basin. A description will be found in the Presidential Address, pp. 74-5, and an illustration, pl. xi, fig. 23 [Pl. IIA above].

For the safety of the public, and the preservation of Mis Tor and Staple Tor, I suggest that the southern boundary of the land coloured yellow and striped red should be removed to pass 100 yards to the north of the rocks of each tor, and should lie in a straight line between those points, passing thereafter westward through a point lying 100 yards north of the summit of Cocks Tor, and eastward to the south end of Holming Beam Plantation. All the land cut off from the land striped red to the south of this new boundary might be coloured yellow, and be available for exercises without live ammunition, the public having access thereto.

(f) Gun area on Laughter Tor. The selection of this site would appear to have been singularly unfortunate. There is certainly no reason why it should take into its area a menhir and part of a stone-row, or why it should break across the road from Dunnabridge to Postbridge, yet it does all three. The remedy would be to move the area a little west and a little north; and this remedy should certainly be applied. The menhir is described and illustrated in *T.D.A.*, vol. 72, p. 197, and pl. iv, fig. 2 [p. 270 and Pl. 56B above].

While we certainly wish to press that the matter of placing the battle practice areas, with and without live ammunition, in the artillery ground, coloured red on plan, should be more fully inquired into, I have already suggested a variation of the boundary of the practice area with live ammunition, as a mitigation of the evils which would follow the present scheme; and there are modifications of the boundaries between the red, green and yellow areas on the eastern side, which we believe could be made without real disturbance of the scheme, and which would lessen the loss of amenities.

There is no apparent reason why the south-east angle of the red area at Sittaford Tor should jut out abruptly for half a mile, except that this follows the boundary of the land held under an annual agreement from the Duchy of Cornwall. If the boundary between red and yellow were here altered to pass due south from Little Varracombe, thus throwing into the yellow area the tongue which now juts out to Sittaford Tor, it would give the public access to that tor, which affords a good landmark and an excellent outlook. There is a logan stone among its rocks, and the Grey Wethers circles are near, so that it is not infrequently visited. The transfer of this area from red to yellow would be a gain to the public and could be no loss to the forces.

Farther north, where the boundary between the yellow and green runs east and west above Hew Down, it would be an advantage were that boundary set half a mile farther north, and the boundary between green and red straightened, so as to give access to The Thirlestone and Watern Tor.

The Thirlestone is our most marked example of lamellar pseudo-bedding in granite, and of importance as a geological feature, it is figured in the President's Address, pl. iv, fig. 11, and described on p. 67 [pp. 18, 28, and Pl. 3B above]. The total area of land used by the services would not be affected by these changes.

At the south end of the yellow land, where an embayment free from service use runs up from Two Bridges to the weir across the West Dart, an attempt is apparently made to exclude Wistman's Wood from the service area, but the

clearance provided is doubtfully sufficient. This might be enquired into, the necessary deviation of the boundary would be slight. As to the ancient oak-woods see the President's Address, pp. 58, 59, and pl. i, figs. 4 and 5; as also *T.D.A.*, vol. 54, pp. 291-342 [pp. 9-10, 74-98, and Pl. 21-3 above].

There are certain monuments of importance for which it is difficult, if not impossible, to make due provision, except by the abandonment of battle practice areas outside the lands coloured red.

One of these, in the area coloured yellow and striped red, is Bear Down Man. It should be possible to prevent the spraying of this menhir with machine-gun bullets, but I doubt this would be accomplished over any lengthy period. The forces insist on using menhirs as targets. Bear Down Man is strikingly placed, and its loss would give rise to justifiable bitterness. It is described and illustrated in *T.D.A.*, vol. 72, p. 191 and pl. ii and iii [p. 265 and Pl. 54 above]. White Moor Stone, and White Moor Stone Circle are two other monuments which this scheme will bring into danger. They are situate in the eastern green area.

White Moor Stone is described and illustrated in *T.D.A.*, vol. 72, p. 192, and pl. iv, fig. 1 [p. 266 and Pl. 56A above]. The Circle is described and planned in the fourth Report of the Dartmoor Exploration Committee, *T.D.A.*, vol. 29, pp. 147-8, and inset plan.

The Grey Wethers, already mentioned, are two stone circles closely associated, and situate in the area coloured yellow. They have been described and planned more than once; the last detailed reference will be found in *T.D.A.*, vol. 71, pp. 326-7 [pp. 258-60 above]. They will not be in danger from artillery or rifle fire, but the difficulty which attends the protection of ancient monuments in areas used by the services is that a mechanized army in passing leaves a trail of destruction in its wake.

It should be possible to give some protection by declaring and marking safety zones around stone monuments, and excluding mechanized vehicles from those zones. But even this will hardly serve to save stone rows and circles, or kistvaens; perhaps, defined tracks might be delimited for the passage across or around these, even as fords are the crossing places of rivers.

There are two other important antiquities which would be in grave danger were the present plan of the scheme strictly adhered to, two Tinnars Mills in the Walkham valley. These are especially interesting. One is, in fact, the only blowing house which still has sufficient of the furnace left to clearly indicate its structure. The suggested alteration of the south boundary of the area coloured yellow and striped red would preserve these mills from injury. In the alternative, moving the boundary of this area to a 100 yards east of the river bank should be effective. But in this valley there are many hut-circles for which no effective protection can be given. Full illustrated descriptions of these tin mills will be found in *T.D.A.*, vol. 63, pp. 361-7, pl. xx, xxi, xxii [pp. 309-10, Fig. 93, Pl. 68B above].

It has been impossible to prepare a complete list of the antiquities which are threatened by this scheme. For every antiquity mentioned I have given a reference to literature concerning it. Nothing has been cited which has not been thought worthy of past description and record. All are objects which we have valued long before the present threat arose, the loss of which will be a real loss to the science of archæology, and a loss not merely local.

## ADDENDUM

Further regarding the two areas coloured green on the Deposited Plan. The eastern area extends north to include the summit of Cosdon. This appears to be with a view to adjusting the area to boundaries founded merely on ownership. It is obvious that there is no valid reason for disturbing public rights and amenities, except that of necessity; and the extension of the eastern green area to the summit of Cosdon is certainly not founded on any necessity connected with the use of the red area for artillery purposes. Without any disadvantage to service user the boundary might be drawn a quarter of a mile further to the south-west in the manner which I have indicated by a dotted line; thus leaving free access for the public to the summit of this noted hill, with its prospect across north Devon.

Similarly as regarding the western green area, there is no advantage to the services in absorbing the summit of Sourton Tors—nor in closing the ancient track known as the Kings Way, which I have indicated by a dotted line. This Hill, also, gives a fine prospect across north Devon, it is easy of access from the road, the rock masses which crown it are at once fine, and unusual in that they are not granite; and I suggest that it would be right, and obviously right, to place the boundary of the forces user to the east of the Kings Way, and parallel to that track, at a distance of 150 yards.

Of particular interest is the geology of Sourton Tors, which has been the subject of several workers' investigation, myself among others; and in the interest of amenities and science the hill summit should remain open to the public.