A Condition Survey of the Archaeological Sites of Merrivale Range, Dartmoor Training Area

County:	Devon
District:	West Devon
Parish:	Peter Tavy, Dartmoor Forest
NGR (Centre):	SX 577793
Surveyed:	Aug-Oct 2010
Contractor:	S Probert
Client:	Landmarc/Defence Estates

CONTENTS

LIST OF FIGURES

.

A CONDITION SURVEY OF THE ARCHAEOLOGICAL SITES OF MERRIVALE RANGE, DARTMOOR TRAINING AREA, DEVON

1 INTRODUCTION

The MoD lease at Merrivale covers approximately 3319ha of which the vast majority is open moorland, the remainder being enclosed pasture on the southern and western fringes. Some 137 archaeological sites have previously been recorded within the area of which 116 were visited, the remainder being duplicate records and natural features. A further three sites, 1065165, 1219085 and 1528847, were added to the database during the course of this assessment. Thirty sites, mostly attributable to the Bronze Age, though some dating to the medieval period, are Scheduled as Ancient Monuments and protected under the Ancient Monuments and Archaeological Areas Act of 1979.

1.1 Previous Work

Earlier archaeological survey work in this area is divided into systematic, though somewhat limited in scope, surveys by the Ordnance Survey Archaeology Division between the 1950's and late 1970's and area investigations by the Royal Commission on the Historical Monuments of England (RCHME) between 1987 and 1994. Many of the more prominent and alluring monuments, particularly on Peter Tavy Great Common, attracted the attentions of the Dartmoor Exploration Committee in the 1890s. Perhaps the only excavation carried out with modern techniques was at Upper Merrivale tin mill, 439629, in the early 1990s.

The area has also been transcribed from aerial photographs (Butler 1991) and several monument classes were visited by the English Heritage Monument Protection Programme.

An Archaeological Baseline Condition Survey was commissioned from English Heritage in 2004, reporting in March 2005 (English Heritage 2005). This was undertaken in adherence to work already completed under the aegis of the **Revised Action Plan** (RAP) (2001) that resulted from the **Willsworthy Integrated Land Management Plan** of 1998. The RAP has articulated a number of actions aimed at defining the nature of the archaeological resource and promoting its conservation. Namely to:

51 Review the current maintenance condition survey programme for scheduled sites and revise if desirable.

52 Produce and revise a threat assessment for all Scheduled Ancient Monuments and ensure that measures are in place to prevent damage.

56 Extend threat assessment to cover non-scheduled sites.

57 Develop a system for regular condition surveys of non scheduled sites.

60 Gather detailed information on potential vehicle damage to archaeological sites.

1.2 Archaeological Summary

Merrivale's prehistoric landscape is typical of that found on the fringes of the high moor with small settlements, burial sites and ritual monuments alongside the Neolithic enclosure on the summit of Whittor. Very well-preserved medieval settlements and field systems lie in the enclosed land on the western fringe of the area while Prison Farm, on the southern edge, is an exemplar of later enclosure activity.

Industrial activity in the form of tin streamworks and processing sites are concentrated on the valley bottoms with later shafts and openworks on the higher valley sides and ridge crests. The higher areas also display widespread evidence of peat extraction; the remains of a peat processing plant lies at Walkham Head, while the trackbed of a tramway servicing a naphtha plant at Princetown runs through the Blackabrook valley.

The area of the lease cuts through several earlier land holdings such as the former Royal Forest of Dartmoor and Prison Farm, the edges of which are marked by boundary stones.

Historic military activity is marked by denuded craters in former impact areas, and a series of mortar positions north of Roos Tor.

.

2 ARCHAEOLOGICAL CONDITION SURVEY AUGUST-OCTOBER 2010

2.1 Background and Methodology

Baseline Condition Surveys have been completed for each of the five Dartmoor Training Areas. This report fulfils action 57 of the RAP and constitutes the second stage in the process of monitoring and threat mitigation at Merrivale by providing updated condition assessments and, therefore, depth to the baseline survey. As with the other training areas it is intended to be repeated at five-yearly intervals.

During the course of the 2010 survey, conducted between August and October, each site was visited. Photographs were taken of each site or, more often, an element of the site or its location. The location and direction of each photograph was recorded and is available digitally on the accompanying CD. The site and its immediate surroundings were assessed for damage, military use and potential threats. Details were recorded on a standard DE condition form. These forms are synthesised in the appendix to this report and are also available as .doc and .pdf files on the accompanying CD.

As the 2005 EH survey was conducted to OSTN02 using Trimble GPS recording to an accuracy of 0.01m a resurvey of the archaeological landscape was deemed unnecessary.

All monument reference numbers referred to in this report are those assigned by the National Monuments Record.

2.2 Land Use Change at Merrivale 2005-2010

The area is not used exclusively for military training; the moorland is primarily a pastoral area. The most striking changes in land use have occurred within this latter sphere, principally the dramatic reduction in livestock levels on the higher parts of the moor. This has led to a regeneration of vegetation and a diminution in both the number of worn tracks and active poaching scars around several of the monuments. Stocking levels on the moorland fringes appear unchanged as witnessed by the continuing, albeit low level, stresses on the archaeological resource.

There also appears to have been a reduction in the use of larger vehicles, with activity seemingly limited to smaller all-terrain vehicles resulting in a lesser impact on the surface of the moor.

3 SUMMARY OF FINDINGS

3.1 Introduction

The findings of the 2010 survey are summarised in Fig. 1 (actual numbers of monuments) and Fig. 2 (percentages). The number of stable monuments forms

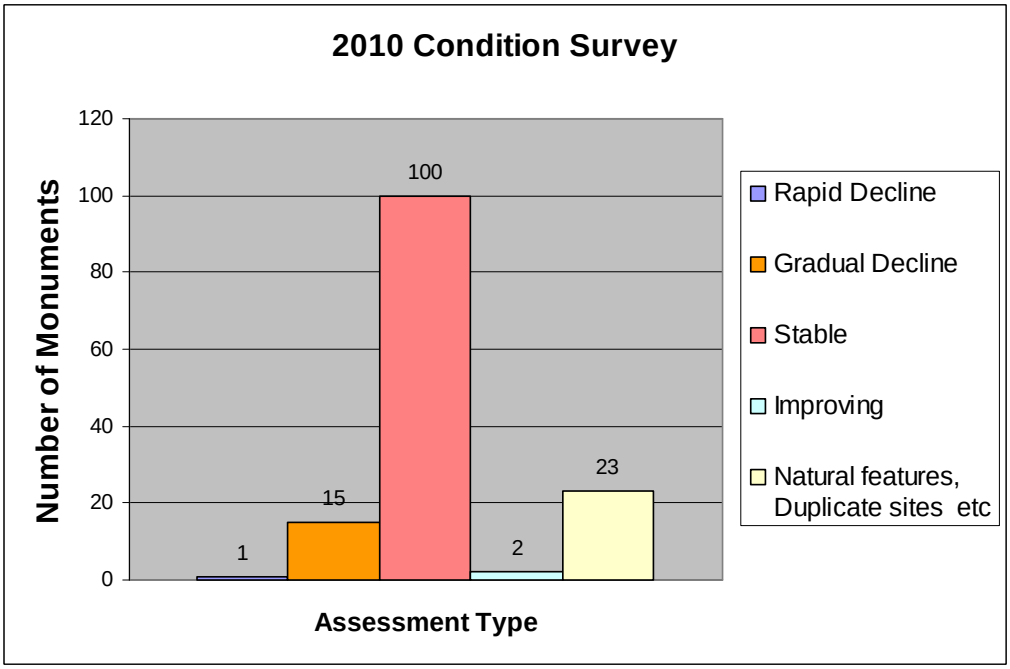

Fig. 1 Actual findings of the 2010 condition survey

the bulk (100 monuments 71%) of the sample while those in gradual decline constitute only 15 or 11%. Monuments whose condition is considered to be improving form 1% of the dataset.

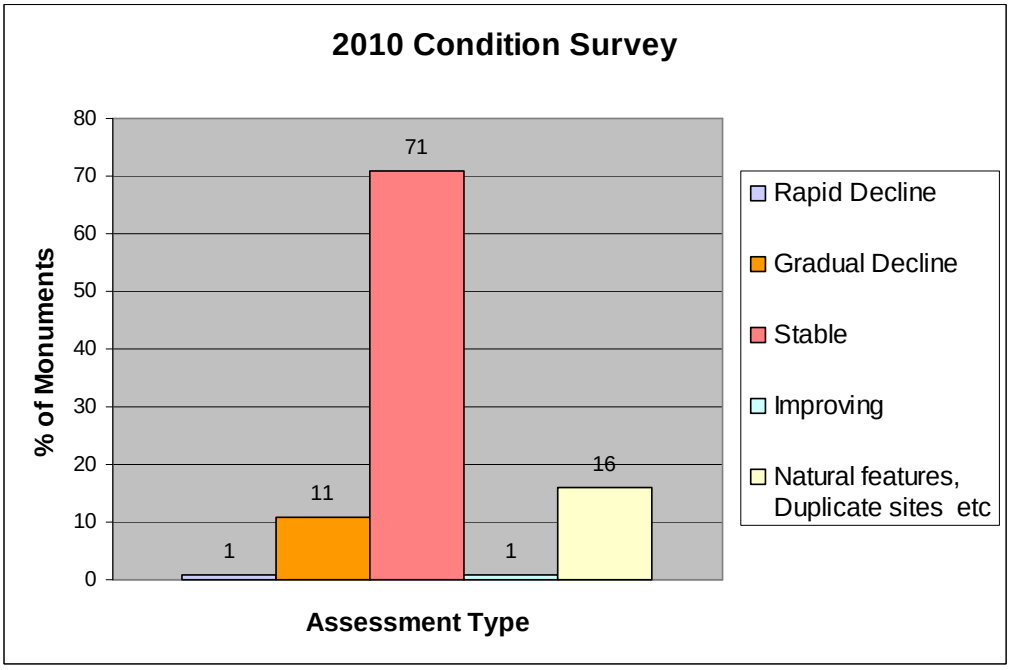

Fig. 2 Percentage findings of the 2010 condition survey

3.2 Rapid Decline

The only monument in this category, the former Prison Leat 1065830 (Fig. 3), is suffering from a lack of maintenance since its relatively recent abandonment. In several places the banks of the now dry channel have been eroded by livestock and walkers to create new crossing points in this often substantial feature. Several sections of the revetments lining the channel have also started to collapse.

Fig. 3 Prison Leat, 1065830. Livestock poaching north of the Lych Way crossing.

Given that this feature is nearly 6km long and redundant a program of monitoring and restoration is impractical. It is anticipated that the rate of decline will gradually slow and a state of stability will be achieved in the fullness of time.

3.3 Gradual Decline

The features in this category are subject to several differing factors:

3.3.1 Gradual structural decay

Many of the more recent structures have a significant masonry element that is vulnerable to vegetation and the elements. The remains of the mine buildings at Wheal Prosper (439709) and the excavated blowing house (439629) below Roos Tor are particular examples where the drystone walls and revetments are subject to sporadic collapse. This process is inevitable and has occurred on a very small scale. Given the Dartmoor environment it is expected that without a detailed monitoring and maintenance programme these features will continue to decline, albeit at a slow rate. As with the former Prison Leat, described above, stability will probably be achieved at some point in the future.

The encroachment of bog is also considered detrimental to two sites, (440664 and 443977), where their eventual immersion may undermine or disrupt the structural elements. Preventative action in these cases is impractical as would be a diversion of the River Cowsic which threatens the fringes of the prehistoric settlement, 439581, lying on its right bank below Conies Down.

The majority of the stones of the former Cut Hill stone row are in a stable condition but the westernmost lies on an eroding pillar of peat in an area of bare ground (Fig. 4). A restorative action for this stone is difficult to prescribe and its gradual decline is probably the only feasible result.

Fig. 4 Cut Hill stone row (1405946). The westernmost of the exposed stones lies on a pedestal of peat.

3.3.2 Livestock and vehicle damage

Despite an overall decline in the amount of livestock on the moor in general the stocking levels on Peter Tavy Great Common appear unchanged. Upright stones such as those of the Langstone Moor stone circle and the Longstone itself are attractive to livestock as rubbing posts.

Fig. 5 Langstone Moor stone circle, 439606. Stone used as rubbing post by livestock inhibiting regrowth of vegetation. Cattle hoof print above red section of scale bar.

The resulting damage varies from bare patches around the stones (Fig. 5) to sizeable holes such as that around boundary stone 1403757 (Fig. 6).

. **Fig. 6** Boundary stone 1403757. Despite the large water-filled hollow at the foot of this stone it remains secure in its socket.

At present all the affected stones remain stable but monitoring should continue with a view to remedial action in the medium term. Human intervention is not suspected to be a contributing factor in the gradual decline of these particular features.
Smaller areas of livestock poaching occur on several monuments, in particular the remains of the small cist (439738) on the eastern flank of Whittor (Fig. 7) and on the northern fringe of White Barrow. These examples appear to result from sheep seeking shelter and are probably transitory.

Fig. 7
Cist 439738. Minor livestock damage to former burial chamber

As stated above the use of the larger off-road vehicles has apparently ceased on Merrivale Range. Historic trouble spots such as where vehicles have crossed the reave (439794), east of Whittor on a broad front, have regenerated fully (Fig. 8)

Fig. 8 Reave 439794.
The reave, running top to bottom, remains heavily rutted by old vehicle tracks but the turf has regrown since traffic was diverted.

However the southern end of this feature still suffers from vehicular and foot traffic channelled into a single crossing point Fig. 9. This crossing lies on an unmetalled extension of the military track, itself on the course of the earlier Wheal Prosper mine track, which also bisects the stone row running north from the Longstone. It should be a priority to divert present traffic, both military and civilian, to the south and around the Longstone.

Fig. 9 Reave 439794. Current vehicle and foot erosion.

3.3.3 Vandalism

Lynch Tor occupies a striking location with panoramic views to the south and west. As such it acts as a magnet to visitors. The stony matrix of the large prehistoric cairn, Limsboro, (440633) built around the tor has been rearranged to form a number of shelters (Fig. 10) and smaller, secondary cairns.

Fig. 10 Limsboro. 440633. The fresh faces on the exposed stonework above the scale bar indicate the recent creation of a small shelter in the west side of the cairn.

While this is the most obvious example of vandalism most of the other stony monuments in this area have also suffered disturbance with loose stones being rearranged to form new features. Fortunately most of this activity is on a very small scale (Fig. 11).

Fig. 11 Cairn 439603. Loose stones have been assembled to create a new feature on this Bronze Age monument. Fortunately this site lies away from the main tracks and damage is unlikely to escalate.

Whatever the scale of activity, it is in contravention of the Ancient Monuments and Archaeological Areas Act of 1979. New features should be identified and dismantled with the assistance of the Dartmoor National Park Authority and English Heritage.
Lynch Tor, Great Mis Tor and several of the more prominent archaeological monuments also serve as repositories for civilian litter.

3.3.4 Summary
Of the 15 monuments in this classification six are suffering from, or threatened by, natural processes which it would be impractical to counter. Those subject to livestock damage will need further assessment and treatment in the medium term while a track diversion to the south of the Longstone is a priority action. Unfortunately it is envisaged that the problem of vandalism and littering will continue and will require constant monitoring and rectification.

3.4 Stable
The majority of the archaeological resource, 100 sites, consists of monuments in a stable condition. In general the state of survival and condition of most features are determined by their location and distance from the main footpaths. Those on the higher, more remote parts of the moor and away from the major routes through the area are less likely to suffer from human or livestock

intervention. The stable sites are mainly in a good state of preservation with no obvious threats to their long term stability.

3.5 Improving

The appearance of two monuments in this classification is an indirect result of the reduction in the numbers of livestock on the higher moor. Both sites previously exhibited distinct poaching scars, Beardown Man 439571 (Fig.12), still possesses a small, water-filled erosion hollow at its base but the vegetation in the larger hollow around the stone is regenerating.

Fig. 12 Beardown Man 439571. Regeneration of previously extensive erosion hollow.

The previously recorded poaching scars on the small military earthwork on Cocks Hill, 1064625, are also regrowing.

It is anticipated that if stocking levels remain low several more sites may be included in this category in subsequent assessments. In particular, the Conies Down Stone Row 439578 (Fig.13), suffers from a low degree of stock damage that may cease or regenerate in the short term.

Fig. 13 Conies Down Stone Row 439578. Erosion hollow at the base of one of the few remaining upright stones.

4 COMPARISON OF FINDINGS 2005 AND 2010 SURVEYS

The numbers and relative quantities of each condition type in the 2005 and 2010 surveys can be seen in Figs. 14 and 15 respectively.

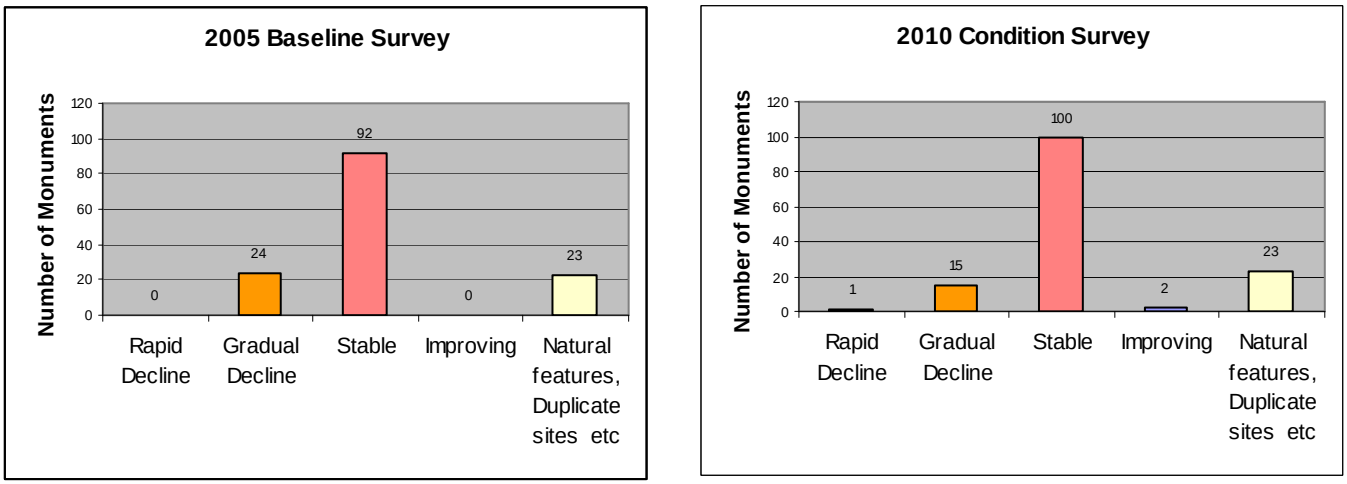

Fig. 14 Actual results of the 2005 Baseline survey and 2010 resurvey.

The monuments form a relatively fluid dataset with a number of condition assessments changing between the 2005 and 2010 surveys. Several sites previously deemed in Gradual Decline have been reclassified as Stable while the reverse is also true for three sites. The removal of the Prison Leat, 1065830, from Stable to Rapid Decline is an even more extreme example. All this is the result of what is perhaps best described as 'bedding in' of the data, the 2010 survey confirming or negating assessments that could only be speculation in the 2005 reference set.

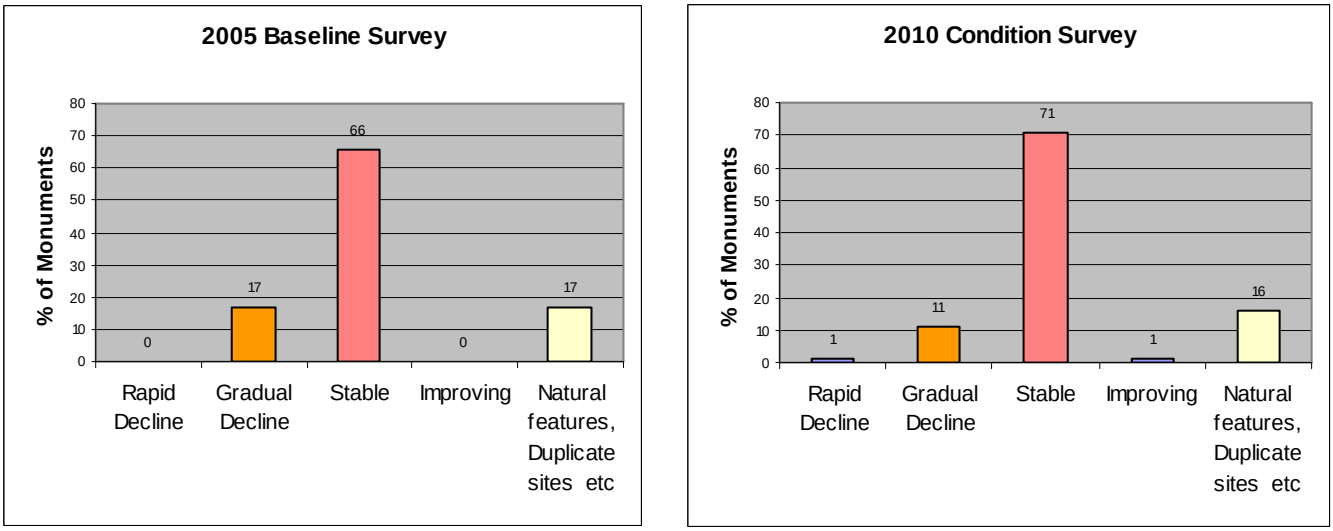

Fig. 15 Relative results of the 2005 Baseline survey and 2010 resurvey.

The 2010 reassessment suggests that the number of sites suspected of being in Gradual Decline in 2005 was overstated, the size of this category being reduced from 24 to 15.
The ability to compare the site photography has also enabled the creation of a more objective dataset which itself has facilitated the population of the Rapid Decline and Improving categories, neither of which were present in 2005. All three monuments in these classes are derived from the 2005 Stable category.
In broad terms both surveys present a solid core of Stable sites; the major difference being a slight movement of monuments across the x-axis from Gradual Decline in 2005 to Stable and Improving in 2010.
The 2010 survey has qualified the 2005 data, removing the inevitable speculation and ambiguity. Subsequent assessments will be capable of quantifying changes in the state of the heritage resource.

5 CONCLUSION

The survival and state of most of the monuments at Merrivale are largely determined by their location. In very general terms most of the stable sites and those regenerating lie on the higher, more inaccessible areas away from the foci of human intervention and where livestock levels have been reduced in recent years.
The most continuous and widespread damage to monuments results from livestock activity. Best classified as incidental this damage is manifested as poaching on and around features by animals seeking suitable rubbing posts and shelter. Most of the damage is on a very small scale though the Longstone, 439621, and a small boundary stone, 1403757, possess substantial erosion hollows that require further monitoring.
Damage caused by human intervention falls into two types, intentional and incidental. The former is perhaps the most worrying and is evident around most of the stony monuments in the area. The hilltop cairns attract visitors and provide a ready source of building materials for the construction of new cairns and shelters. Several of the small medieval or later industrial structures also show signs of relatively recent episodes of interference. Incidental human damage is currently restricted to footpath and track erosion, in particular across the stone row and reave immediately to the north of the Longstone. Apart from the example above vehicular damage has apparently ceased.
Several monuments are threatened by the encroachment of bog and one site by the possibility of riverbank erosion. There are no feasible solutions to this type of threat. In similar vein, the reduction in stocking levels has led to the regeneration of low shrubs on much of the range and several sites are becoming overgrown. Bracken, hugely disruptive to sub-surface deposits, is largely absent from the range, only being noticed in the vicinity of one site, the abandoned medieval settlement 439894.
There is a degree of gradual decline in the Merrivale archaeological resource. Elements of this decline are inevitable and will continue, in most cases at a very slow pace, for the foreseeable future. However the majority of the

monuments are stable and two are improving with the probability of achieving stability in the short term. As such the range is best described as stable. If the current stocking levels are maintained and vandalism is promptly rectified there appears to be no reason why this status cannot be maintained.

Simon Probert
03 December 2010

6 BIBLIOGRAPHY

Butler J 1991 *Dartmoor Atlas of Antiquities* Vol 2 The North

English Heritage 2005, *Merrivale Training Area Monument Baseline Condition Survey.* NMRC Swindon

RPS Clouston 1998, Willsworthy *Training Area, Integrated Land Management Plan*