

Recording the Iron Mines of Exmoor

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Abstract

This paper reviews the Royal Commission on the Historical Monuments of England's (RCHME) archaeological survey of West Exmoor, concentrating on the evidence for the iron mining industry as revealed by the survey.

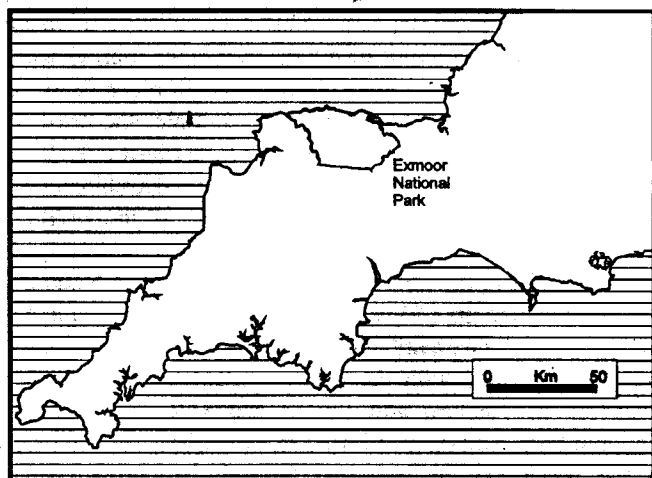


Fig. 1. Exmoor National Park. Location.

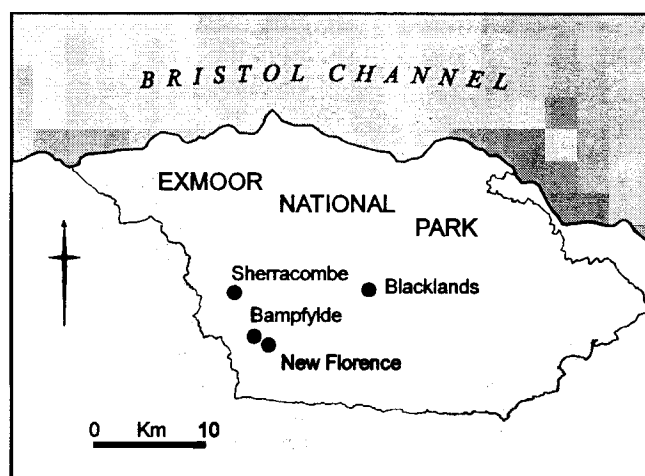


Fig. 2. Location of sites mentioned in text.

INTRODUCTION

The archaeology of Exmoor has, until recent years, been largely overlooked at the expense of other south-western moorland landscapes. The appointment of an archaeologist as recently as 1991 by the Exmoor National Park Authority (ENPA), was in part a recognition of this failing. Exmoor was, therefore, a logical priority for survey when the RCHME was formulating its forward survey programme in 1992. It was decided to carry out a six year archaeological survey of Exmoor, covering the area of the National Park and dividing it into two, three-year blocks: west and east. The western half of the Park, surveyed during 1993 - 1995, is the subject of this paper. Fieldwork was designed to record monuments and landscapes from prehistory up to 1945, and as such will be the first comprehensive archaeological survey of Exmoor, intended to raise the level of the archaeological record to a consistent, high, base-line standard. The industrial remains within the Park form a significant part of the current work. This paper uses a selection of mining sites (Fig. 2) to illustrate the methodology and findings of the fieldwork. It is not intended to be a comprehensive survey of West Exmoor's iron mines or a detailed discussion of industrial processes, rather an illustration of their potential, revealed through the field evidence.

THE EXTRACTIVE MINES OF EXMOOR

Exmoor's principal extractive industry was iron and sites associated with this activity form the bulk of the field evidence on Exmoor. By their nature iron mines tend to leave a reasonably predictable form of field evidence, devoid of complicated processing areas. The remains are therefore, typically, associated with locating deposits (prospecting), extracting the ore by shafts, adits or openworks, and

transportation off the moor for processing elsewhere, for example in South Wales. The bulk of iron mining took place on Exmoor in the mid to late 19th century, and was carried out usually by mining syndicates often at the instigation of the large landowners themselves, such as Frederick Knight (Orwin 1929, 115-152). The scale of their operations is likely to have obscured or destroyed the mining activity of earlier periods: presumably shafts were deepened, adits lengthened, and earlier openworks filled in with spoil. However, as this paper will demonstrate, only a thorough investigation of the field evidence will reveal how comprehensively these earlier remains have been obliterated. It would be rash indeed at this stage to discount the possibility of evidence from earlier operations surviving amongst the remains of 19th century mining. Early iron mining which clearly did take place on Exmoor is more easily identified through associated processes such as smelting. Smelting provides evidence for earlier post-medieval, medieval or even prehistoric activity; and although such sites are rare, they form a valuable component of Exmoor's industrial heritage. One such site exists at Sherracombe (Fig.3) on the southern edge of the moor (discussed below). These remains are often slight and complex and exist in stark contrast to the substantial 19th century mining sites. Their slight and often subtle surface features require more detailed and careful recording and analysis.

PREVIOUS WORK

The vast majority of iron mines on Exmoor are well known. This is for three reasons: firstly, the work of previous fieldworkers such as Peter Claughton; secondly, because of the substantial nature of the field remains; thirdly, because of the upsurge in mining on the moor in the mid to latter part of the 19th century, which is recent enough to often be

remembered and reasonably documented. Even if well known already, many of the sites are inadequately recorded: most earlier fieldwork has approached Exmoor's industrial archaeology from perspectives other than archaeological ones, a metrically accurate plan coupled with thorough description and interpretation were not necessarily of the highest priority, even though they should form the starting point for more detailed research. The founding of the Exmoor Mines Research Group in 1992, has provided a focus for the study of Exmoor's industrial remains, and is also beginning to redress the balance. The publication of *Exmoor's Industrial Archaeology* (Atkinson (ed) 1997) marks a significant step forward.

THE WEST EXMOOR PROJECT : APPROACH AND METHODOLOGY

One of the objectives of the Exmoor project is to identify previously unrecorded industrial sites. These remains tend to be visually unspectacular, consisting of isolated adits, trial workings and prospecting trenches. The most rewarding area has been on the Exmoor coast near Combe Martin, where extensive dispersed surface workings have been identified and recorded, associated with the small-scale exploitation of iron, and presumably conveniently located for the transportation of the ore from Exmoor via the sea. Much of the fieldwork is directed at the accurate depiction and interpretation of known sites. Indeed, this is RCHME's unique contribution, and will form the basis of a quality record on which future work can be built. The aim of the project is to achieve a metrically accurate depiction of most sites at a scale of 1:2500, through the use of the latest

surveying technology including EDM (Electro-Magnetic Distance Measuring) and GPS (Global Positioning System), where appropriate. In some cases, however, the survey work is tailored to enhance or supplement existing depictions of sites. For example, the Ordnance Survey (OS) 1st and 2nd edition 25" mapping often depicts the actual mine sites adequately, but perhaps omits the less obvious aspects or parts of a complex. In other cases the OS mapping is considered an adequate and complete depiction of the field remains. Large-scale survey, at 1:1000 scale or larger, may be carried out to record complex remains, like the processing areas and extensive water management at Bampfylde (Fig. 4) or to record exceptional preservation, such as the adits and tramway system at Blacklands, Withypool (Fig. 5). In such cases the field evidence can sometimes be seen to raise questions which challenge the evidence of other sources such as contemporary illustrations. In other cases more detailed recording must be left to others. For example, the crusher house at Bampfylde, undoubtedly one of the finest industrial buildings in North Devon, still awaits a detailed architectural investigation, which is beyond the remit of the present project.

The results of the fieldwork are deposited in the National Monuments Record (NMR) in Swindon, where completed plans and reports are available for public consultation. Copies are also deposited with the County Sites and Monuments Registers in Taunton and Exeter and with the Exmoor National Park Authority (ENPA) in Dulverton. Information in the NMR can be searched through its computerised database. The results of the survey can be used to inform the next level of investigation, which sadly is beyond the scope

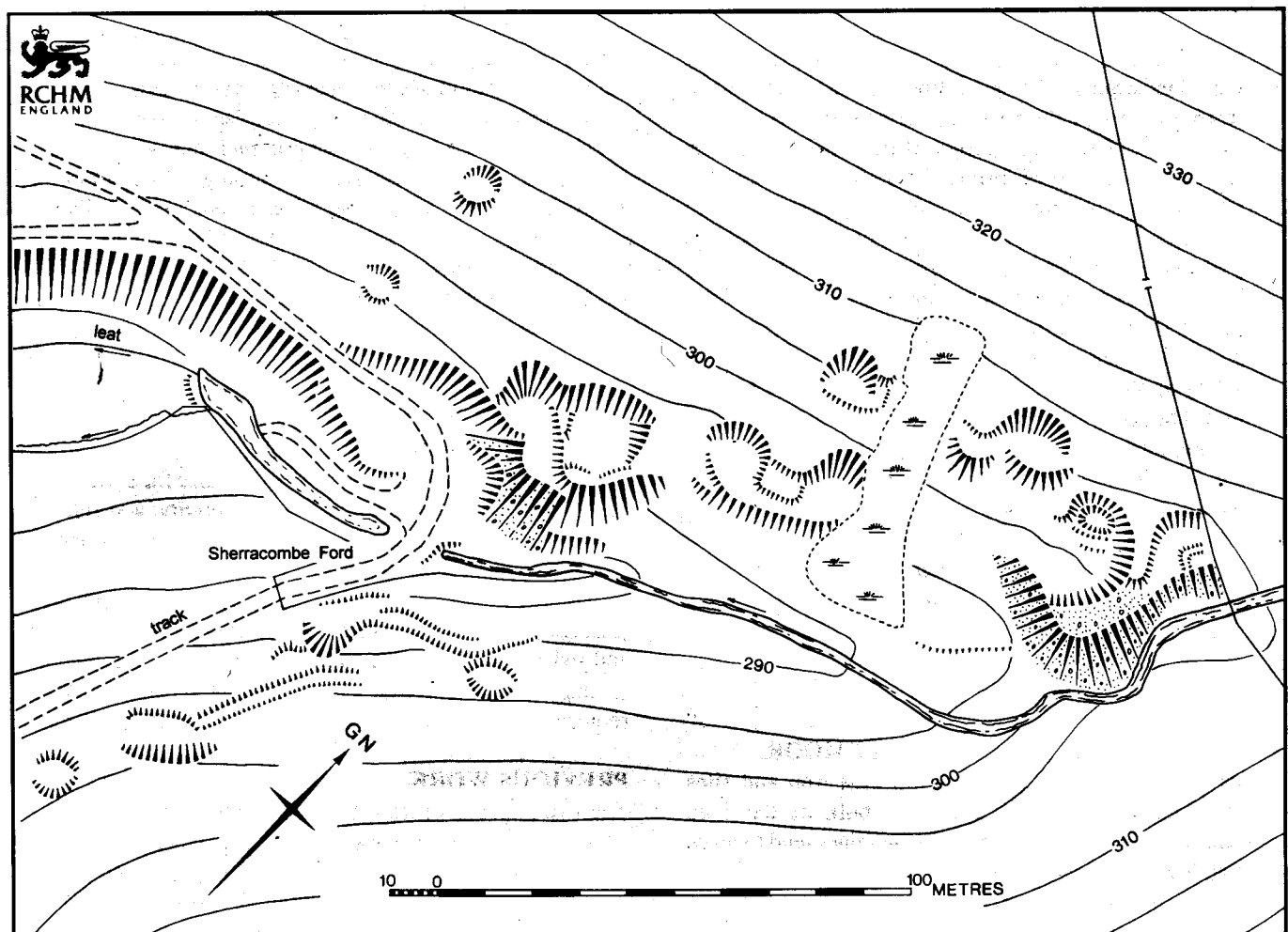
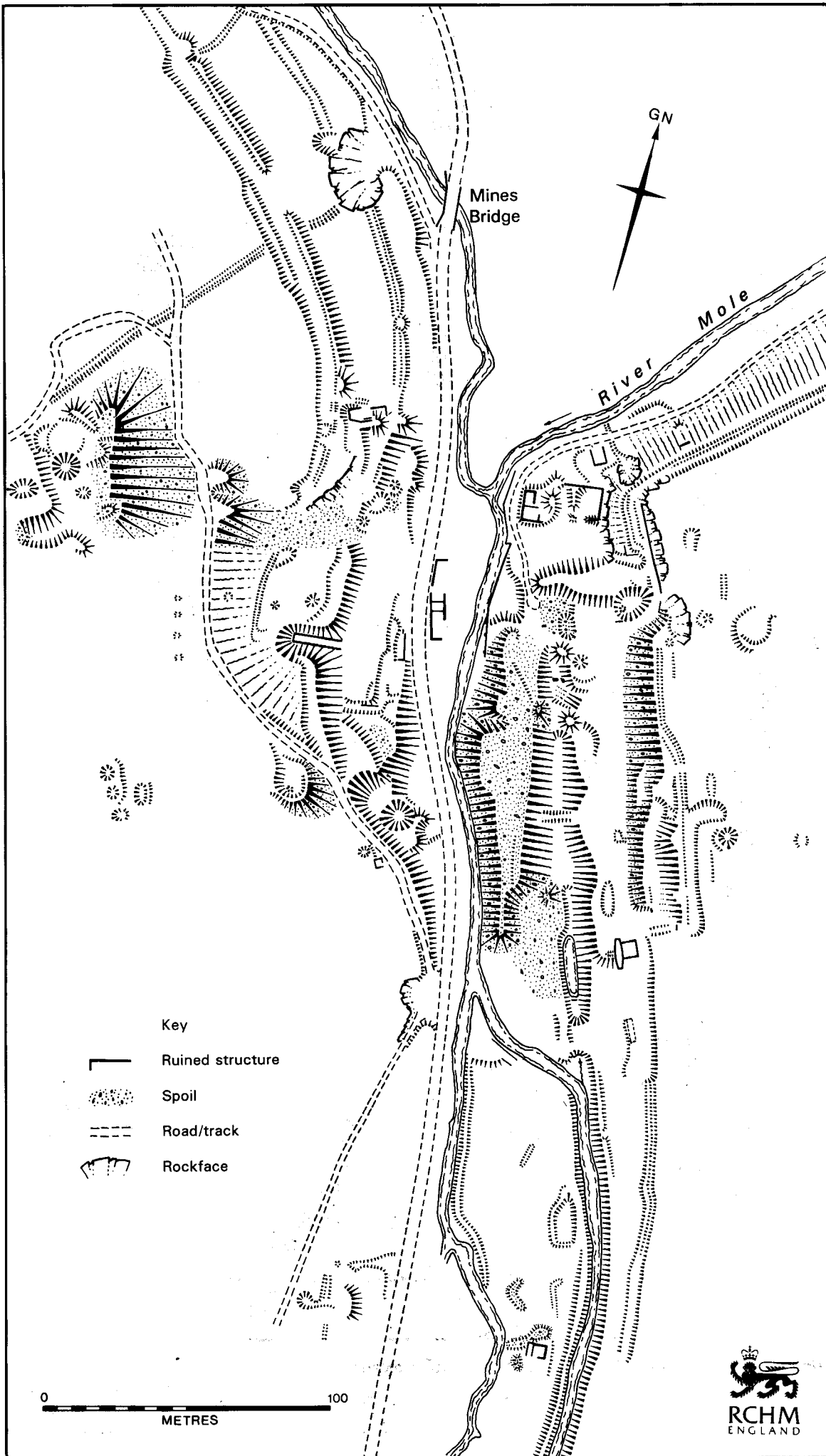






Fig. 3. Sherracombe (SS 72003670). RCHME survey (Crown copyright).



- Key
-  Ruined structure
 -  Spoil
 -  Road/track
 -  Rockface

0 100
METRES



Fig. 4. Bampfylde
(SS 73903270)
RCHME survey.
(Crown copyright)

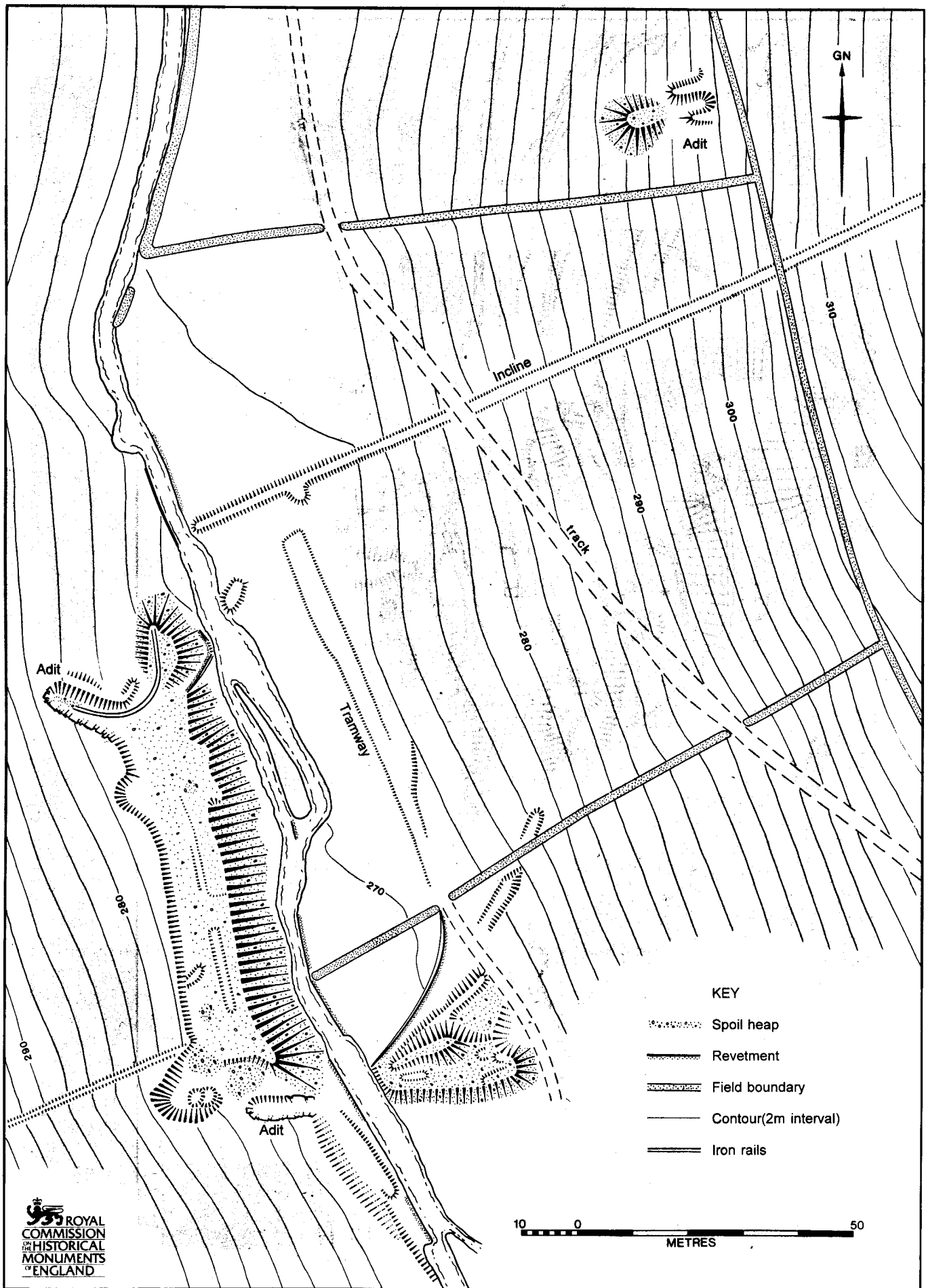


Fig. 5. Blacklands Mine, Withpool (SS 84173685). RCHME survey. (Crown copyright)

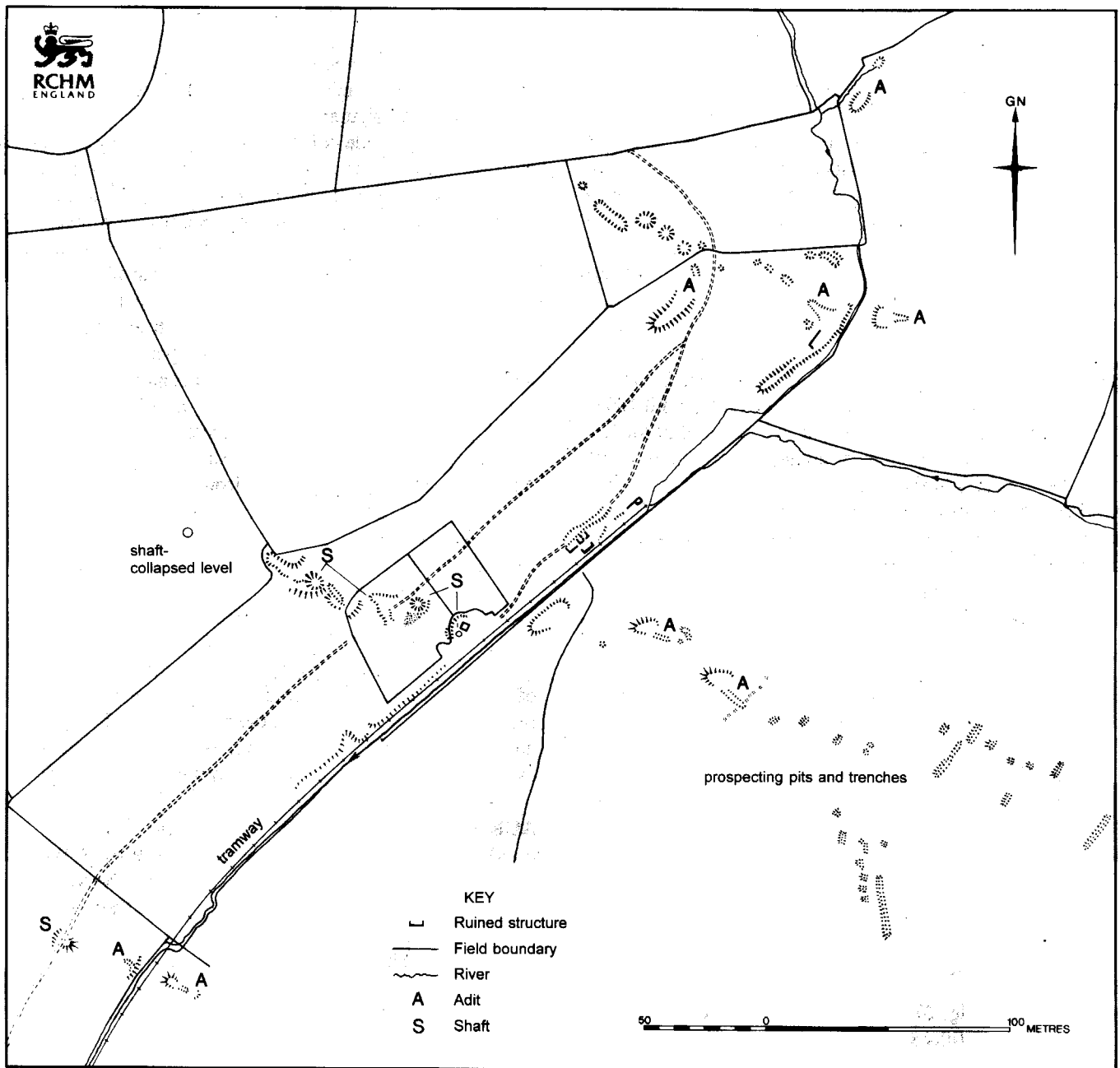


Fig. 6. New Florence Mine (SS 75203215). RCHME survey, based on OS 25" 1st edition, with additions. (Crown copyright).

of the present work.

On Exmoor the user can be sure of the overall quality of the record, and hence that such enquiries are valid and meaningful. ENPA is also receiving survey information into its Geographical Information System (GIS), and this will allow the data to be interrogated as part of a whole range of management criteria, facilitating the better curation of Exmoor's industrial heritage.

CASE STUDIES

1. Sherracombe (Fig. 3)

The evidence for 'early' iron mining on Exmoor has long been sought, and remains largely elusive, although a collaborative project between the ENPA and the National Trust is currently addressing the problem. Some early iron smelting sites are, however, already known: at Sherracombe on the southern fringe of the moor near Yarde Down, are the remains of slag heaps and a processing area. The site was surveyed by RCHME in 1996 at a scale of 1:1000. The plan shows a swathe of working platforms and slag heaps strung out along the valley side. The remains of at least two buildings survive as earthworks. Away from the centre of the complex some

smaller and more isolated platforms may be associated with charcoal burning, suggesting the production of fuel on site for smelting. These remains are consistent with the picture of a thin network of medieval iron smelting sites positioned around the edges of Exmoor, exploiting the nearby woodlands. No doubt one of the factors in the siting of such complexes was the proximity of the mines themselves, but the transportation of ore over short distances would not have been unlikely, and was preferred to the hauling of charcoal, which despite its lightness, was a fragile commodity. Of course, the central question at Sherracombe remains unanswered: what date is the complex? It is hoped that the Early Iron Working project now underway to examine these sites will begin to answer this crucial question, and provide a more informative distribution map of such sites.

2. New Florence (Fig. 6)

The New Florence Iron Mine, lying within Radworthy Cleave, a remote, wooded and steep-sided combe on the southern edge of the moor is typical of the area's iron mining remains. The bulk of the mining took place in the latter half of the 19th century when the Florence Iron mine was opened

in 1871 (Dixon 1983, 209). There is some documentary evidence for earlier mining on the site, but this does not seem to be represented in the field remains.

The workings were on two principal lodes, North and South, running approximately west-south-west to east-north-east. There are, in addition, a number of outlying adits and pits which appear to be more than exploratory workings. A building complex also survives, and the remains of a tramway system. A plan and cross section of 1874 (Dixon 1983, 211) shows the extent of the workings at that date on the southern lode. The plan, which also shows the tramway, accords well with what is visible in the field.

The Florence Iron mine was liquidated in 1879, but re-opened the following year as the New Florence Iron mine, and began production at an unprecedented scale. In 1888 it went into liquidation again, and was mothballed until 1893. The OS planned the site in 1888, at the very end of the life of the mine. Several piecemeal attempts were made to re-open the workings in the 20th century. The South-Western Mining Syndicate was registered in 1918 to search for minerals at New Florence, but little appears to have been done. In 1942 engineers from the Canadian Army re-opened some of the workings. Flooding was an insurmountable problem, and according to local information, led to fatalities and the abandonment of the project.

The RCHME survey was carried out at 1:2500 scale and drew heavily on the 1st edition OS 25" mapping of 1888, which was found to depict most of the principal features when they were just falling into disuse. The OS mapping therefore forms a valuable source; both as a historical record of the surface features of the mine when it ceased production, and as the basis of a modern record of the site. The 1888 map was supplemented with a modern survey of features omitted by the OS: for example on Barcombe Down to the east of the main complex, is an extensive area of prospecting pits and trenches which were not recorded at all in 1888. It is considered that there is further scope for detailed recording on the site.

3. Blacklands (Fig. 5)

Blacklands near Withypool lies within a steep, partly wooded combe, and is a wonderfully well preserved example of a short-lived intensive mining operation which ran between 1875 and 1881. The RCHME survey, at 1:500 scale, focused on the central part of the complex where the remains of two adits, a shaft and a massive elongated spoil mound run from north to south along the valley side.

The topography of the site evidently caused considerable problems. Apart from the usual difficulty of draining the workings (the adits issue water even in the Summer), the river posed an additional complication, hence the awkward shape of the spoil mound. In addition, the river was canalised within a revetted cutting to prevent it both from undermining the spoil mound, and meandering across the floor of the valley. The river also posed a natural obstacle in the transportation of the ore from the site. The most convenient access point by road was some 400 m to the east. To reach this point a tramway was installed from both adits via bridges across the river and thence up an incline of 1 in 3 to the road, climbing some 85 m. Blacklands typifies the natural obstacles which were encountered on Exmoor in the extraction of iron ore: flooding, remote and difficult topography and transportation.

4. Bampfylde (Fig. 4)

By far the richest industrial landscape on West Exmoor lies within the steep, wooded valleys around Heasley Mill, encompassing the mines of New Florence, Crowbarn, Bampfylde and Britannia. The most extensive and important of these is Bampfylde, which although principally concerned with the extraction of copper, was later tentatively mined for iron. Copper had been mined at Bampfylde since the medieval period, but the surface remains principally date from the mid to late 19th century. They are exceptional for several reasons: firstly, on Exmoor they provide a rare example of a processing complex, with attendant structures. Secondly, there is a very elaborate water management system with at least 5 water wheels. Thirdly, the high quality of the supporting documentary and cartographic evidence. Within the context of this paper, even if the copper mining is excluded, Bampfylde (Fig. 4) is unique. It provides the only example of a 19th century crusher installed specifically to crush iron ore to measure the viability of mining Bampfylde's iron deposits.

CONCLUSIONS

The West Exmoor survey has looked at the archaeology of Exmoor's iron mines, with the principal objective of enhancing the archaeological record. From this will hopefully flow: firstly, a heightened awareness of this particular aspect of Exmoor's historic landscape; secondly, better management of it; thirdly, further research. Such an approach should remind all those concerned in the recording of the industrial heritage that the archaeology of such sites is a valuable, often overlooked resource, that offers considerable potential.

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