

The Conservation and Management of the Industrial Landscape within Dartmoor National Park

Deborah Griffiths

Abstract

The nature of Dartmoor National Park and its archaeology are outlined and the significance of National Park status is discussed with reference in particular to the management and conservation of industrial remains. The ethos of monument management is considered including the legal situation and current examples of some of the type of problems encountered when dealing with industrial sites are provided, such as damage caused by erosion and visitor pressure. Examples of remedial action by the NPA, carried out jointly with larger conservation and heritage agencies are also discussed.

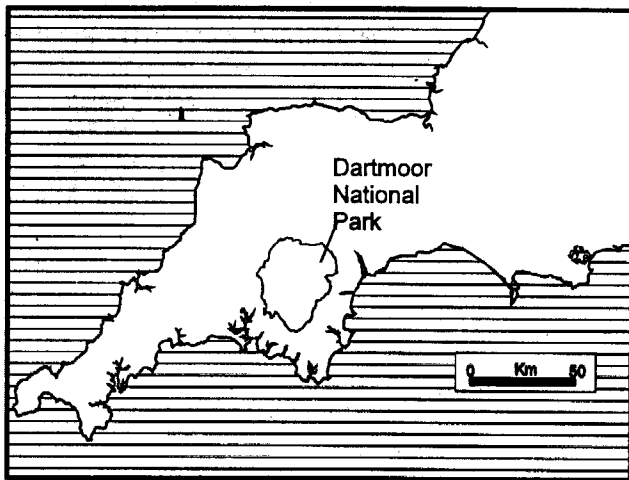


Fig. 1. Dartmoor National Park. Location.

The Dartmoor National Park covers an area of 369 square miles (955 km). It is dominated by the central granite plateau which has an average elevation of 365 metres, and which sports a typical moorland vegetation of heathland grasses, heather, bracken and gorse. The lower slopes of the Moor are occupied by enclosed farmland and rivers, with their source high up on the moor, have carved themselves steep valleys, now mostly wooded. In geological terms the granite mass is surrounded by a zone known as the 'metamorphic aureole', where the rocks were baked and distorted by the molten granite and where a variety of minerals, including copper, silver, iron and lead are to be found. Within the granite itself, of course, can be and was found cassiterite, tin ore and kaolin (china clay).

Dartmoor was one of ten National Parks created in the eight years following the passing of the 1949 National Parks and Access to the Countryside Act. The twin purposes of the designations were the preservation and enhancement of the *natural beauty* of the areas and the promotion of their enjoyment to the public (my italics). This perpetuated the myth that National Parks were areas of natural wilderness 'uncontaminated' as one author put it at the end of the last century, 'by the hand of man' (Collier 1876). But of course this is not the case; on Dartmoor, human activity has been constant since at least the Mesolithic period and the County Sites and Monuments Register, with over 11,000 entries for the area, bears witness to the fact that this activity has left its mark on the landscape. The position which archaeology has held as poor cousin to nature conservation has now officially been rectified; with the passing of the Environment Act in 1995, when the purposes of National Parks was re-defined as the 'conservation

and protection of natural beauty, wildlife and cultural heritage and promoting opportunities for the understanding and enjoyment of their special qualities' (my italics).

Dominating the industrial archaeology of Dartmoor are the remains left by the extraction and processing of tin ore:- extensive areas of tin-streaming on the valley floors of the rivers and streams; craggy landscapes created by openworking and areas pock-marked by shafts. With these come all the familiar paraphernalia of wheelpits, leats, reservoirs, processing mills, workshops and houses. These features, interrelated as they are, comprise a series of major industrial landscapes, or perhaps indeed one large complex industrial landscape. The tin industry on Dartmoor is at least 800 years old and therefore has a chronological depth as well as geographical extent. On the fringes of the Moor, the 19th century dominates, with the remains of mines established for the working of copper, silver, lead, arsenic, and iron. China clay has been extracted since the beginning of the 19th century, and although the scale of the modern workings has given the industry somewhat of a bad name in some quarters, important remains survive from the 19th century.

All the land within the Dartmoor National Park is privately owned (the Duchy of Cornwall is the principal landowner), but some areas are less private than others. Much of the central moorland, 37,037 ha to be precise, is commonland where hundreds of commoners exercise their rights to graze thousands of sheep, cattle and ponies, traditionally in the summer months only, but now throughout the year. The presence of stock contributes (particularly in the winter) to erosion and animals not infrequently resort to archaeological features to relieve an itch or seek shelter. Since the passing of the Dartmoor Commons Act in 1985, there has been a *de jure* right of public access on foot and on horseback. Dartmoor receives 10 million day visits a year, and this inevitably takes its toll upon the landscape:- wear and tear on the surface of the ground and damage to monuments whether this be intentional or innocent. The Dartmoor Commons Act also, incidentally, precludes the erection of fences on the common, other than in exceptional cases; in any case, public opinion is set against it. All these factors combined, make it very difficult to 'manage' the archaeology in conventional ways and many would argue that this is a good thing. The beauty of Dartmoor lies in its quality of apparent wilderness and in the blend of the natural and the human. However, nature is, by and large, renewable and human artefacts are not.

Although the archaeology on the open moor is effectively protected by the status of the land from the normal threats -

development, afforestation and agricultural improvement are virtually absent - they are, as has been mentioned, subject to damage from human and animal activity and to the natural processes of decay: what an early 19th century observer described as the inevitable results of 'time and tempest' (Bray 1834, 53), and Dartmoor has more than its fair share of time and tempest. Many features have already decayed to a stable level, but others, most particularly buildings and masonry structures of the last century, which have still substantial amounts of walling surviving, have reached a point where the failure to intervene will result in the loss of much historic fabric. This puts us in a bit of a dilemma: we have to decide whether that intervention is justified in order to prolong, for the sake of conservation - and possibly public interest - structures which no longer have an economic purpose (and which are no longer sustainable) or whether it is not justified, because time and tempest are stronger forces, intellectually as well as factually. However, having now recognised the value and importance of conserving the 'cultural heritage', within National Parks we will be expected to continue to do something about it. Many sites of industrial archaeological importance have or will be afforded legal protection through scheduling (under the Ancient Monuments and Archaeological Areas Act, 1979): the Monuments Protection Programme (MPP) run by English Heritage is currently evaluating on a national scale, various past industries. On Dartmoor, for example, 54 areas and structures have been identified as being of national importance and worthy of 'protection': a number are substantially upstanding ruins, whose expected life span in their existing form, if left alone, must be short. In a recent article, David Stocker, the English Heritage inspector responsible for that part of the MPP concerned with industrial sites, wrote: 'What point is there in designating something [as being worthy of protection] if no management future can be envisaged for the site?' 'After all, if everything we designate merely crumbles away because there is no practical way of keeping it going, then the designation itself is devalued (not to mention our credibility [as archaeologists] as a profession)' (Stocker, 1995).

Most of the conservation work undertaken by the DNPA on commonland involves the re-pointing and repair of masonry. At the smaller end of the scale are minor repairs and consolidation; for example at the remains of a small building belonging to the 19th century tin mine at Whiteworks, near Princetown, where a combination of natural decay - the effects of water washing out and removing the original mortar, and the rotting of the original wooden lintels - and the activities of visitors - removal of stones to make barbecues (and worse) - rendered the surviving upstanding remains vulnerable. At the Black Tor Falls tinmills, the amount of public attention (this is a favourite picnic spot and letterboxing area) was eroding the vegetation which held the walls together. Some discrete repointing and the re-establishment of the vegetation have returned some stability to the structures, but the amount of pressure sites such as this receive, will probably necessitate further regular conservation work. Another example is the one upstanding wall belonging to the carpenter's shop at the Birch Tor and Vitifer Mine. This was being used as a convenient place by campers to hang potholing equipment, and the loose stones forming the tops of the walls were again being wrested from their original positions to secure guy lines and demarcate camp fires. Nearby, the 19th century remains of the wheelpit, Miners Dry and dormitory associated with the Golden Dagger Mine, all focuses of public attention, have also been consolidated. Tree and scrub removal is also sometimes

necessary to preserve the archaeology of a structure and prevent damage from root activity and possible windblow.

Most of this sort of work is undertaken by the Dartmoor National Park Authority, rather than by the owners, whose relationship with the monuments is distanced by the 'public' nature of the land, or other agencies. Under an agreement with English Heritage, 50% funding is available for conservation works to scheduled sites, but few of the smaller industrial sites have achieved that status. There is a conscious attempt to make the works as discrete as possible, limited to what is strictly necessary, and to take cognisance of the other conservation values present, floral and faunal. Attempting to carry out this sort of work on the open moor is far from easy. In addition to the conventional worries of getting the specifications right and finding the right contractor, are the difficulties of getting not only the agreement of the landowner to the works being undertaken, but also that of a myriad of other interested parties, commoners, local communities and other organisations, such as English Nature, or the Environment Agency. Access can be a significant problem; some sites are totally inaccessible by a vehicle of any sort and in other cases the likelihood of damaging the ground renders the use of a vehicle impossible. If the ground is hard enough to support a vehicle, it is usually either too cold or too hot (as was the case last summer) to carry out works which involve re-pointing or establishing vegetation.

More sizeable projects are also undertaken. A very thorough re-pointing was carried out by the National Trust in 1991 at the engine house at the silver lead mine of Wheal Betsy. This, the most complete surviving example of its type on Dartmoor, was built in 1868 to house a 60" steam pumping engine. Away from the commons, on private land, a major project to consolidate the crumbling remains of the 18 structures which comprised the 19th century gunpowder manufactory at Powdermills, near Postbridge, is currently in its fourth phase. The work is being carried out by the DNPA in partnership with the owners, the Duchy of Cornwall and English Heritage, the last two named providing 80% of the funding. At Shaugh Bridge, in south-west Dartmoor, are the remains of a 19th century china clay processing area; here the DNPA has recently concluded a management agreement with the owner which will allow for the conservation of the structures by a combination of vegetation control and masonry consolidation and which will secure public access to the site. Detailed archaeological recording of sites such as these, before works begin, is of course essential. Much of this work has been undertaken by Exeter Archaeology and the RCHME; and the input of specialists, such as John Smith from the Cornwall Archaeological Unit on China Clay, and Kenneth Brown on engine houses, is invaluable. (e.g. Pye & Robinson, 1990; Pye & Westcott, 1992; Smith & RCHME, 1996)

The cost of the Powdermills project is in the region of £100,000, a reminder that the conservation of the industrial past, especially where it comprises large and numerous upstanding remains, does not come cheaply. Unless the economic climate changes, or unless we can successfully tap European funds (which are chiefly directed towards economic benefit rather than conservation), projects like these will become increasingly less easy to carry out. This can lead to some difficult choices. The engine house (built 1853) at Wheal Exmouth, a silver lead mine on the eastern edge of the moor, is an unusual building, which, because it lay in the view from the then Viscount's Exmouth's family home, was constructed in a classical style, incorporating domestic features, such as highly glazed windows and doors. As sufficient funds could

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Plate 1. Trees growing from walls of tin mill at Outholme, SW Dartmoor.

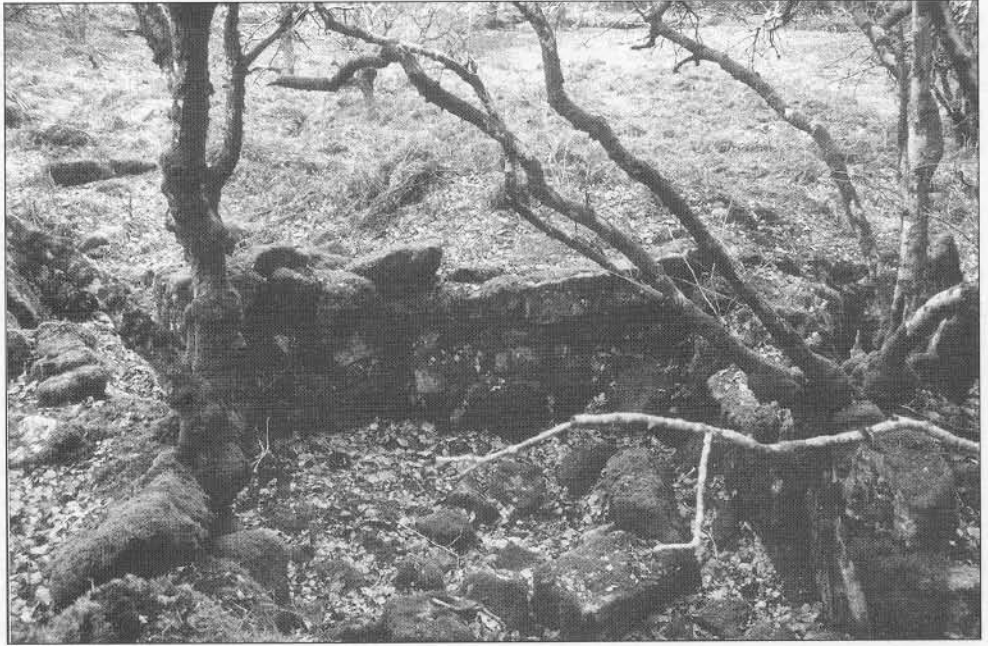
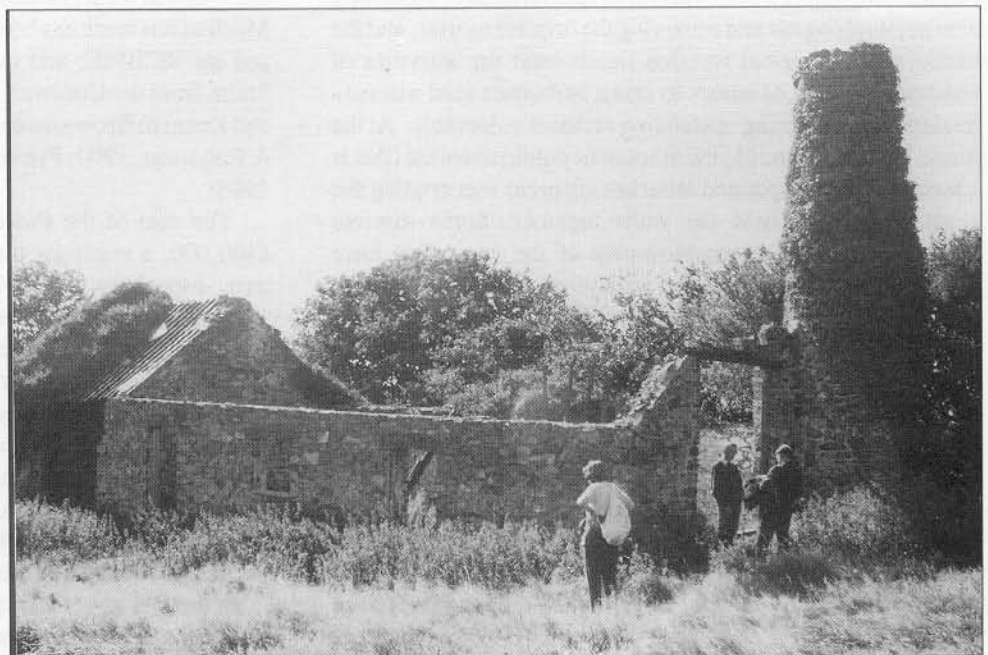


Plate 2. Powdermills near Postbridge during consolidation, 1992.

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Plate 3. Mary Tavy Miners' Dry.



not be raised to consolidate this grade II listed building as a ruin, planning permission was granted for its conversion to a house, on the basis that conversion could retain its original architectural detail and appearance. On the other hand, permission to convert the almost complete remains of a miners' dry at Wheal Bennet, near Mary Tavy on the west side of the moor, also a grade II listed building, was refused, because of the rarity of the building and because it was felt that its industrial character would be destroyed by its conversion to domestic use. This view was upheld on appeal, but the building is now roofless and crumbling and all attempts to save it have so far failed. Listed status may protect, but it cannot always conserve.

As well as undertaking practical works, the DNPA is also able to enter into management agreements (under the Wildlife and Countryside Act, 1981) with owners and occupiers of land which are of conservation interest, and a number of areas where agreements have been concluded contain sites of industrial archaeological interest; for example at the medieval tin mill at Blackaton Ball; near Widecombe, and the nearby multi-period landscape at Challacombe, where tin streaming, openworks, wheelpits, buddles etc. jostle together with the remains of medieval fields and prehistoric enclosures. These agreements contain prescriptions for the positive management of an area, which can control grazing regimes, or facilitate vegetation control or repair. They attempt both to address a range of conservation interests - archaeological, wildlife and landscape values - and meet the needs of the farmer, in order to secure an holistic approach to landscape conservation. The agreements can also include provision for public access.

In 1993, almost all of the Dartmoor National Park was designated an Environmentally Sensitive Area (ESA); and farmers are able to enter into agreements with MAFF (the Ministry for Agriculture, Fisheries and Food) and receive payment for managing their land in an environmentally friendly way. Farmers who enter into the scheme are not only required not to damage features of archaeological or historic interest, but also to obtain advice on their management. Capital grants of up to 80% are available for the 'restoration' of historic features. It is too early to judge how this will benefit the industrial archaeology of Dartmoor. The requirement to obtain advice on management is without doubt making farmers more aware of the archaeology on their land and is generating some interest. However, it is understandable that most are making use of their capital grants to undertake works, such as hedge or stone wall repair, which are of more immediate benefit to the working of the farm than those which conserve redundant features of the past.

Much of this paper has dwelt on the importance of money in the conservation and management of industrial archaeology on Dartmoor, and on the work of public bodies to achieve this.

In a recent address to the Trevithick Society, Sir Neil Cossons said: 'Most preservation activity is spurred by groups of enthusiasts, people who have a sharply focused interest and a tremendous zeal and enthusiasm for a particular slice of the past'. One such group is the Kelly Mine Preservation Society (KMPS), which, in the mid-1980s, took out a lease on the processing area of the iron mine, near Bovey Tracey. The mine was first opened in 1797, but was especially important in this century, when the ore - micaceous hematite, also known as 'shiny ore', - was used in the manufacture of rust-resisting paints. It closed down in the mid 1950s, leaving abandoned *inter alia*. a machine shed, complete with Californian stamps, drying shed with wheelpit and mess hut. What began as the restoration of the machine shed, in order to protect its contents, has blossomed into a project to restore the whole site: launders, compressors, trucklines and a waterwheel have all been re-created to a high quality; this founded on a shoestring budget and a dedicated enthusiasm.

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