

# Safety, Presentation and Management of Disused Mines

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## **Abstract**

*This paper draws attention to some of the contentious issues surrounding the management of disused mines. It demonstrates that the interests of the many parties involved in deciding the future of redundant mines can be diverse and often conflicting, with safety, economics, development, planning and ecological considerations frequently being given greater priority than preservation. The problem of dissemination of information by industrial archaeologists is highlighted and some suggestions to improve matters are offered.*

Most industrial archaeologists enjoy exploring abandoned industrial sites and, whenever they can find the resources, are keen to research or otherwise investigate them, to take whatever steps they can to ensure their continued existence, and to tell everyone just how interesting they are. Unfortunately, we are part of a very small minority of people who feel this way about industrial sites, something which underlies many of the problems we experience in our attempts to secure the appropriate management of our sites, given that very few of us have the financial resources to make those decisions alone.

It is essential therefore, to think about some of the other people whose views (often very different from your own), will influence the future management of your sites and with whom you will have to work.

These will almost certainly include site owners and existing site users, potential site developers, (including, on occasions, landfill site developers), contractors, sub-contractors and sub-sub-contractors, planning officers and conservation officers, technical services officers and the committees to whom they report, funding agencies, potential site management agents (including countryside officers, wardens and rangers), engineers, architects, land reclamation officers and landscape architects, health and safety officers, the National Rivers Agency, English Heritage, local people and potential visitors, ecologists, geologists and other industrial archaeologists.

If you look at your sites through the eyes of these other individuals or groups it should immediately become apparent that many of the problems which we experience in relation to the management of industrial sites stem from differences of perception.

## **DANGEROUS STRUCTURES**

Almost any redundant industrial structure over two metres tall is likely to be viewed as in danger of collapse. In some cases this may well be true, in many others it is patently not the case, yet the solutions advanced by engineers and architects often rest on the premise that the cheapest and most effective approach is to undertake partial, if not total demolition. Since most people do not realise that site details are important, they are also not aware that a bit of lopping here or there may have a serious impact on the integrity of the whole site.

## **DANGEROUS DROPS**

Quite small drops or changes in level underfoot seem to be of enormous concern to site operators - who apparently think that most people can't cope with differences in level greater than a standard step. Although there will be sites to which we invite

the public where we must undertake measures to ensure the safety of those people who are unlikely to be able to respond adequately to the dangers they present, it is simply impracticable to treat everywhere in this fashion.

## **UNDERGROUND ACCESS**

Adits, shafts, openworks and the like. Whilst some people spend many happy hours exploring such features, most sensible folk think they are threatening and dangerous and are (perhaps justifiably) worried that their kids will wander in to them and be maimed or killed.

## **EXISTING USERS**

We tend to forget, that when we see a streamwork, a farmer may see nothing more than a stream gully in an area of poor grazing land which could be upgraded by infilling and re-seeding; what we think of as a particularly interesting engine house, others may view as a handy supply of apparently unwanted building stone; our foundry pattern store is likely to have been adapted for use as someone's car repair workshop.

## **DEVELOPMENT POTENTIAL**

Most industrial sites and structures became redundant over a century ago, and have been treated as negative assets ever since - since their environmental, cultural, scenic, geological, archaeological, ecological or amenity value are generally not taken into account. Who can blame landowners and developers for taking up opportunities to turn a profit from these dormant sites, especially given that there are government grants available to help with the expensive cleaning up and safety works? Can we justify the retention of what to almost everyone else will seem little more than time-expired piles of crumbling stonework, overgrown humps and hollows and tens of thousands of tonnes of probably toxic material which few people ever visit? Evidently not in Camborne-Redruth or Hayle or Gunnislake or a string of other places once rich in industrial sites. Given some thought, archaeological features could probably have been retained to relieve the bleak sterility of the endless collections of bent tin sheds and the ill-laid-out housing estates which have next to nothing to do with the landscape histories of the areas they occupy.

## **DEVELOPMENT POTENTIAL**

We may consider promoting the conversion or adaptation of important structures to ensure their survival, an approach which has been tried on a number of engine houses, watermills and railway stations but is also presently being mooted for

massive engineering complexes like those at Hayle or Perran Foundry. Unfortunately, the former too often end up looking just like houses once the conversion work and provision of garaging, lawns and washing lines have been carried out, whilst the latter sites are so massive and problematic that any initial good intentions tend to evaporate during the development process, and what results is often no more than token conservation.

### **ONGOING USE**

The preservation of aspects of redundant elements of working landscapes is even more problematic - the most obvious example of this type in Cornwall being sites relating to the china-clay industry, an industry whose appetite for land is enormous, and whose attitude towards its own past is pragmatically cavalier.

### **ACCESS RESTRICTIONS**

We all enjoy visiting sites, but we are not quite so keen on the idea of other people visiting sites in our own back yards. If there were an interesting engine houses at the bottom of your garden, would you want it conserved and presented as part of a heritage cycling trail? Additionally, some land owners are very reluctant to grant access or to allow conservation works because they feel that this would almost certainly compromise their freedom to restrict access in the future.

### **ECOLOGY**

What you think of as mine dumps are seen by other groups as valuable sites for tunnelling bees or for lizards and adders, your ivy-clad engine house is a nest or roost site for birds; silted ponds provide important wetland habitats, whilst the survival of the lichens on your 18th century foundry wall may, to many people, outweigh the need for physical conservation works to the site. Bryophytes, birds and badgers have lots of powerful friends, and it doesn't matter how archaeologically important are the sites they occupy, or how necessary or urgent might be the conservation works you have identified, if this involves the ejection of something furry, feathered or green and rare you are likely to have an uphill fight on your hands.

### **MINERAL CONTAMINATION**

Unfortunately too many people have learned just enough industrial archaeology to recognise a calciner when they see one and think that they were for making arsenic and are therefore amongst the most dangerous archaeological sites in the countryside. Most were, however, built to clean sulphides (mostly iron) from dressed tin and in many - but not all - cases the concentrations of toxic sulphides are, after a century of exposure to the weather, relatively low. Nevertheless the mineral concentrations on some of these sites present real problems, but unfortunately, only two engineering solutions are presently offered to us (others, under development are only at the pilot stages yet). The first involves total excavation of the site down to bedrock, the second, its secure burial. In both scenarios the archaeology is, effectively, lost for ever. Action levels for some contaminants have yet to be set, but in Cornwall, the concentrations of some minerals found in ordinary soil would probably warrant the treatment of substantial areas of the county.

### **POLLUTION**

The western hillslopes of Caradon Hill present a magnificent

scene of former industry, dominated by the bristling chimneys of the engine houses and the massive white spoil dumps produced by half a century of copper mining. But the dumps are white because they have not revegetated. Nothing grows there because they are contaminated with residual heavy minerals. Rain falling on them has produced extensive rills and gullies which are feeding pollutants into the nearby stream, and it is inevitable that here, as elsewhere, the NRA will eventually attempt to upgrade the water quality by proposing large-scale remedial works. At present, few organisations have any idea that we find mine dumps of any interest whatsoever.

### **MISUNDERSTANDING OUR INTERESTS**

How many times have you been told: 'we've conserved the engine houses for you, what on earth are you moaning about?'

### **SHAFTS**

Engineers and local politicians love mine shafts. Capping proposals can attract up to 100% Derelict Land Grants, and such projects keep engineers busily employed, create local employment (amongst contractors) and enhance public safety. They also cause enormous destruction to archaeological features. Effective low-cost, low-impact solutions are now being used by the National Trust, but it is difficult to see such approaches being taken up by the local government engineers who plan most shaft safety works.

### **HERITAGE SITE DEVELOPMENT-RELATED H&S**

You might think that getting your sites into the hands of responsible managing agencies would be the safest option. To be sure, this approach can work well, but this is not always the case, for appropriately-resourced managers are not always appropriately informed managers. At Geevor, Cornwall County Council were persuaded to rescue the site from demolition on its closure. Over the past few years, an extensive programme of safety works has secured some dangerous shafts and created the potential for future underground access, but health and safety specialists and buildings inspectors have also drawn up extensive demolition and alteration programmes which have proved very difficult to resist.

Their approach was based on the wish to make the site as safe as possible, whether or not this compromised its integrity. It also seemed to take the view that the site was far too complex for most visitors to cope with, that visitors were incapable of looking after their own safety to any degree when on site and that what they really wanted was a cafe and gift shop in pleasant 'historic' surroundings - not too much walking about, no dirt, no mess and no complexities. Strangely, this is not the view expressed by most of the visitors to the site. It goes without saying that heritage sites must make money to survive.

Clearly, the above are only some examples out of many I could have selected. Underlying all of them, however are two basic problems which we must find ways to overcome.

Firstly, industrial archaeologists have few resources at their disposal, and have to convince other people to use their cash in ways they want them to. This isn't always possible.

Secondly, our concerns and interests are very poorly understood by the public at large or by other professionals. This is our fault, and our fault alone. We spend far too much time talking to each other, far too little time explaining our interests and concerns to the public or to decision-makers in language they understand. If other interest groups can manage

to get across the importance of newts and mosses, it ought to be possible to do something similar for industrial sites. We persist in talking technical gobbledegook and come across as marginal, amateurish eccentrics.

If we are truly concerned with the long-term survival of these sites we profess to be so interested in, how can we ensure their appropriate management? The following should by now be self-evident:

**One.** Learn to communicate with ordinary people in the wider world. This will be difficult, because you will have to spend less time writing highly technical articles to other industrial archaeologists in journals which have, at best, circulations in the low hundreds.

**Two.** Get together with other industrial archaeologists and use your considerable collective knowledge to provide useful, sensible guidelines, or helpful case-studies for potential site managers

**Three.** Take a professional approach to your contributions to the debate about site management. Try to understand why other people take the decisions they do then put forward alternative, workable solutions in language other professionals understand.

**Four.** Recognise that there are a wide spectrum of management solutions available, and that although some necessarily involve large organisations and large budgets, others can be achieved by small groups of volunteers. Instigate projects.

**Five.** Link up with other interest groups, including ecologists and local people, who can mobilise far more support than industrial archaeologists can on their own.

What we as industrial archaeologists do not yet seem to have grasped is that our primary responsibility is to actively seek the conservation and good management of the surviving stock of industrial sites - too many involved in our discipline have failed to understand that we must all be involved in this task. When the next generation of industrial archaeologists asks you why they have so few sites left to study, how will you reply?

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