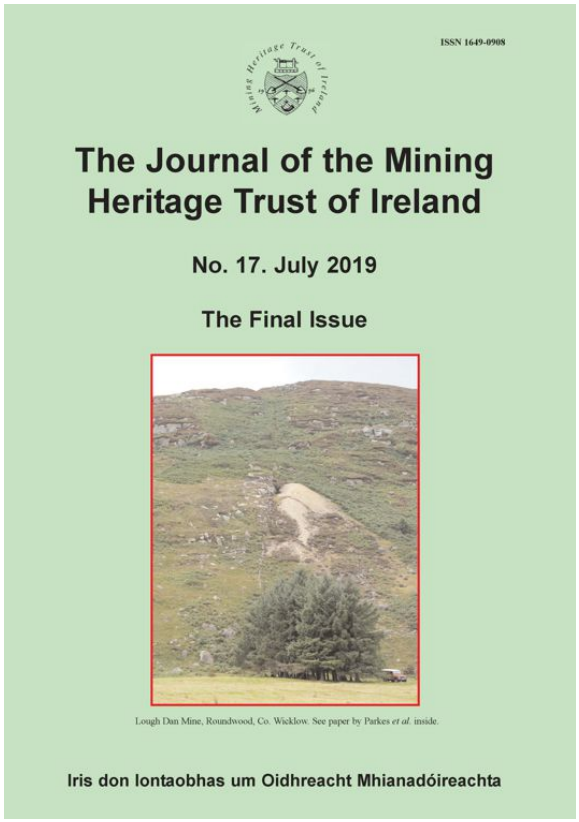

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AVOCA - THE LIFE AND DEATH OF AN IRISH MINE

by Nick Coy

Abstract: Many aspects of Ireland's Mining Heritage are slowly disappearing, mainly due to abandonment and neglect. More recent Irish mines like Tynagh, Lisheen and Galmoy will have no visible trace on the landscape so it is important that where significant mining remains do survive that we should do everything possible to protect that heritage. Unfortunately we seem have learned nothing from the experience of other parts of the world like Cornwall who see the value of such protection. The current situation at Avoca demonstrates, all too clearly, that we have learned nothing and continue to obliterate that visible part of our National Mining Heritage.
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INTRODUCTION

We all accept that birth and death are inexorable aspects of life. Mining is no exception, ore bodies are discovered, worked until exhausted and "die" in a manner of speaking. For many people who have been associated with or worked in a mine, memory also sometimes dies. When R. J. Cruise, from the Geological Survey, visited Avoca in 1887, he could find no one who could tell him about the mines at Ballymurtagh and Ballygahan, that had operated in the valley a relatively short time before (Hull et al. 1888: 31). This is not an uncommon phenomenon in areas where mines have closed. Some writers claim that it is based on a form of anger on the loss to the individual or local community. We must also accept that disinterest is also a common factor. As with people, some things in life are deemed to be worthy of remembrance for their uniqueness or impact on the world, others are not.

The mines at Avoca in County Wicklow are a case in point. They are not the oldest, but they are probably the most significant in Ireland, under a range of headings. They produced more copper, had the broadest range of minerals and were operated (on and off) from the 17th to the 20th century, and perhaps even longer. They produced coinage which is something unique in Irish copper mines and they also had the largest number of Cornish style Beam Engines working throughout the 19th century. The Mines of Avoca probably had the greatest impact on Irish mining than any other mine, before or since. More recently they had a significant role in the rebirth of Exploration and Mining in Ireland in the mid 20th century. Pat Hughes and Mike Mc Carthy, founders of the Northgate and Tara Exploration Groups which went on to discover the Tynagh and Tara Mines, told me that Avoca was part of their motivation to return to Ireland from Canada in the 1960s. The social history of Avoca is equally unique and fascinating. Whatever one's view is of mining and its significance to the country, Avoca has left an indelible mark on the Wicklow landscape and its social history. It still had the most visible and unique surviving surface aspects of 18th, 19th and 20th century mining after its closure in 1982.

WHEN DID IT START ?

Some writers have suggested that the origins of mining on the Avoca belt, pre-date the Christian era. (Platt 1973: 76). Finding evidence of such early activity is problematic as subsequent large scale mining would have destroyed much of what went before. In earlier times, mineralisation had to be seen at surface or in outcrop. Many of the Avoca mineral bodies were visible at surface making discovery more likely. There are also some coincidental facts that might give some substance to the many theories. For example, the Avoca mineral belt is the only place in Ireland where the two ingredients of bronze, i.e. copper and tin, can be found in close proximity (Hull et al. 1888: 26). While there is no proof that bronze was ever produced in the area, it makes interesting speculation. In the 17th century, iron smelting was carried out at a number of sites from south to central County Wicklow. One of the larger furnaces was at Ballinaclash, which is located about three miles from the Ballard- Ballycapple Iron deposits of the Avoca belt, known as the "Clash Pits". Iron ores deriving from weathered and oxidised sulphide outcrops were important at least from the twelfth century (Platt 1973: 76).

We know from written records that mining at Avoca was certainly being carried out during the early years of the 18th century, and grew into a major industry by the 19th century, employing up to 2,000 people. The development of steam power during the Industrial Revolution was most evident in the number of Cornish Beam Engines working in the valley. The Engine houses and chimney stacks that have survived, form the largest such group to be found anywhere in the country.

The end of the 19th century brought an end to large scale mining in the valley, but the miners never abandoned the area entirely and some activity went on into the early years of the 20th century. The newly formed state mining company Mianrai Teoranta, reopened the mines in the 1940s due to wartime shortages of raw materials. This was later followed by the reopening of the mines in 1956 by Saint Patricks Copper Mines and next by Avoca Mines Limited in 1969. However the curtain finally came down in 1982 when the mine closed for the last time.

NEGLECT AND MISMANAGEMENT

After the mines closure in 1982, all of the mining, milling and processing equipment was sold off, the mill and other buildings

were demolished and the area generally abandoned. Fortunately, the surviving substantive remains of 19th century Beam Engine Houses remained, largely untouched, primarily because they had no scrappage value. The open pits were left and some shafts and adits were sealed off. With the closure, the property reverted back to the state and the Department of Finance, as the mine had been heavily underwritten by the state from the Saint Patrick's era, right through to the closure. The state however, looked on this inheritance as a poisoned chalice, and have acted accordingly ever since.

The reasons for the final closure of the mine are manifold, but the principal reason was continuing financial loss. It is somewhat ironic that part of the reason for the mines demise was its own history and longevity. The centuries of mining, prior to the advent of 20th century ore treatment technology, required manual separation of the copper mineral from its host rock. Someone with a hammer had to chip the mineral from its barren country rock by hand. High grade copper is the most recognisable and grades of up to 6% copper were desirable if not essential, in the earlier centuries of activity. Lower grades of say 1 or 2% copper were not so visible or considered rich enough and were often lost in the process. The "old men" as they have been called, removed the higher grade mineral, leaving behind large quantities of what would now be considered ore, as a copper content as low as 1% Cu is considered mineable with today's milling and flotation technology.

To compound the problems for the 20th century miners, the old boys dumped their waste rock back into the old worked out stopes and levels. Modern mining required ore to be mined in blocks, rather than chasing veins as the earlier miners did. Diamond drilling now enables the mining geologist to determine the depth, grade and extent of what lay below. Blocks of ore are removed en mass, crushed and chemically separated. At Avoca, a situation arose which made accurate ore grade evaluation almost impossible, as the old men's waste rock diluted the value of fresh ore which surrounded it. It was as if the old boys had taken the eyes out of the ore bodies and left behind the lower grade copper ore and all of their waste.

When Avoca Mines Limited planned the reopening of Avoca in 1968, their bottom line to achieve profitability was to have a constant ore grade in the mill of at least 1% copper. The monthly mine reports show that achieving this grade rarely happened, for all the reasons outlined above, combined with the occasional unpredictable drop in the price of copper on the world metal markets. Miners are optimistic by nature, it is an essential part of their makeup, but by 1982 even the most optimistic were beginning to see the writing on the wall. Closure became inevitable.

So the valley went quiet and almost everyone went away. Acid mine drainage, which was a feature of the operation for centuries, and effected fish life in the Avoca river, now became a public issue and fishing organisations began demanding that the government should do something to remedy the situation. The state responded by having a series of studies carried out, mainly by academics. Some extraordinary remedial proposals were mooted and tried. Landscaping the area with topsoil and other schemes failed to make any real impression and a proposal to neutralise the mines outflow with limestone raised more potential problems than it would solve. So the many reports and studies line the bookshelves in the Exploration and Mining Division of the Department, gathering dust. No magical solution has been found. But the department had a budget of □ 3,000,000 to spend and in their wisdom decided to landscape what was probably the most authentic and most visible section of the mine at Tigroney on the East bank of the river (DCCAE 2019). Here you could see hand sorted rock from the 18th century, the portals of two of the most significant adits, one being the oldest, called the Deep level. Two large and impressive steel ore bins and a wall of unique timber stockwork (sometimes called matchstick work) (Figure 1).

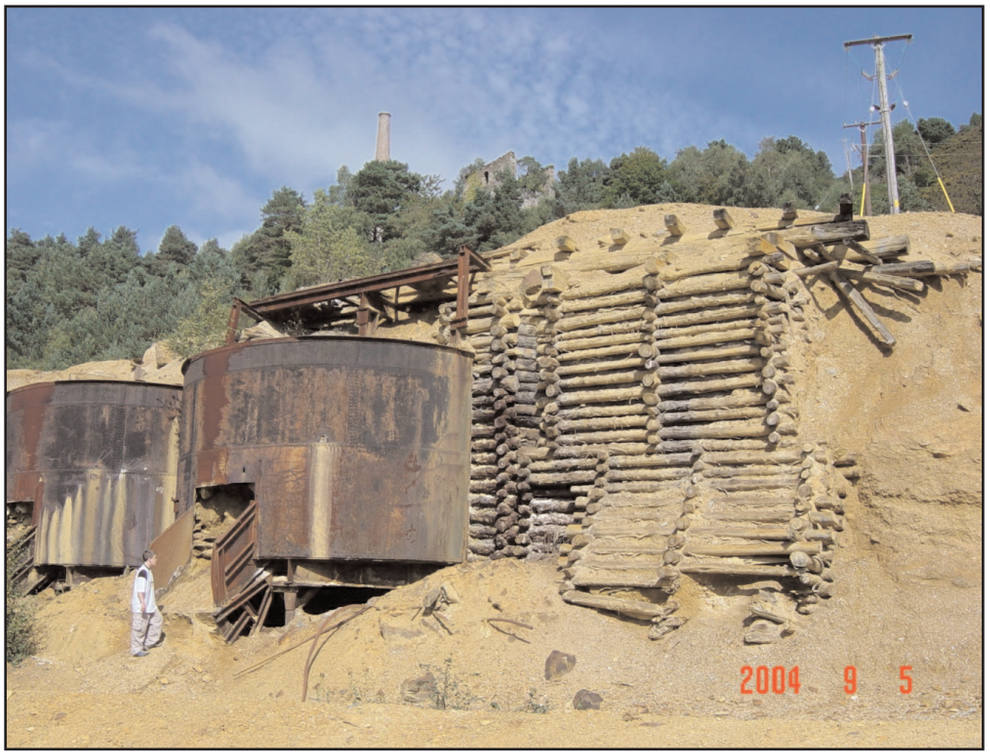

Figure 1. Two large and impressive steel ore bins and a wall of unique timber stockwork (sometimes called matchstick work).

The 19th century Williams Beam Engine House, the finest such structure in Ireland, lorded over the site. One might be forgiven for thinking that the historical and mining integrity of the area would be in safe hands as Ireland's Heritage is a byword in all our current tourism promotions. However the omens were not good.

In the summer of 2017 a film crew arrived to document the area for one of the most successful BBC television series on train journeys presented by Michael Portillo. In spite of having all the necessary requisites in place, EMD informed the film crew that they could not film at Tigroney. There was no

Figure 2. The ore bins were repainted and look quite like two domestic oil tanks.

reason given for this decision. This area had been walked over for centuries and thousands of visitors had attended Heritage Day walks there since 1996. There was even more irony in this inexplicable decision, as the only reason the railway line passed through Avoca in the first place, was the presence of mine itself. As a consequence Mr Portillo and his crew decided to abandon the plan. A wonderful opportunity to show Avoca's unique heritage to the world, was lost. While other state and semi-state organisations in Ireland were spending large sums of money on campaigns to advertise our heritage to the world, EMD looked a gift horse in the mouth.

Some months later the Department started to "rehabilitate" the Tigroney site. Fears and concerns were expressed by the Mining Heritage Trust of Ireland and others as to the possible damage to the heritage of the area. The Department advised that an archaeologist would be employed to supervise the project and protect the integrity of the site's heritage. After several months of excavation and earth-moving, the primary motive of which seemed to be the complete obliteration of the ochre coloured spoil, a unique and visual feature of the geology of area. The site then took on the appearance of a grassy motorway embankment. The ore bins were repainted and look quite like two domestic oil tanks (Figure 2).

The unique larch timber stockwork was destroyed and replaced with a generic wooden feature with no semblance to the original (Figure 3). The entrance to the Deep level has also been boxed off. Unfortunately, the site now looks as interesting as a motorway flyover. To compound matters, a large government sign on the site now warns that trespassers will be prosecuted.

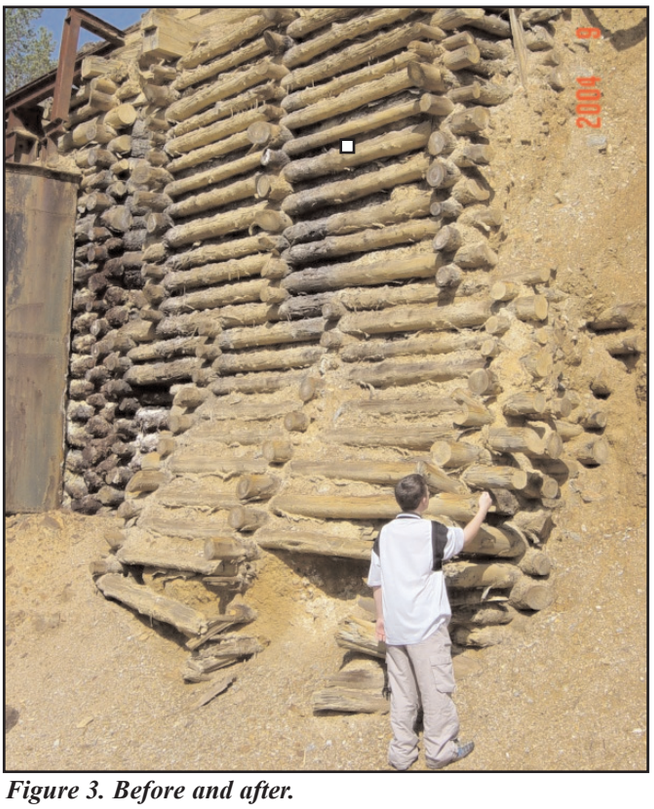

Figure 3. Before and after.

Figure 4. A large Heritage Week crowd.

EPILOGUE

For over twenty five years, I have had the pleasure of leading walks over East Avoca for National Heritage Week. On many occasions large crowds turned up and were duly impressed by the unique visual aspects of the area and its mining and social history (Figure 4).

As the area is now been effectively vandalised by the Department, I see no further point in taking visitors to this once unique spot. The people of Cornwall who have a long history of rehabilitation of their many historic mine sites, have advised others in similar circumstances not to turn mining heritage sites into "golf courses with engine houses". EMD went one better and created a motorway embankment with an engine house (Figure 5).

In any event, mother nature is slowly greening over many other areas of the old mine, without human intervention, as ivy is also reclaiming the old mine buildings. While this is somewhat inevitable, it is not, like the department's efforts, a brutal and insensitive destruction of the sites. It proves, if proof were needed, that as a nation we have learned nothing about the value of significant parts of our national heritage. Ireland has a relatively small industrial heritage, when compared to our neighbouring island, but it would seem that future generations will only see that heritage in pages of journals like this one as there will be nothing left to see on the ground. Perhaps EMD should have taken cognizance of the famous landscape historian W. G. Hoskins (1955: 178) who wrote

Figure 5. "Motorway embankments and engine house".

> "Abandoned metal mines are perhaps the most appealing of all industrial landscapes, in no way ugly, but possessing a profound melancholic beauty".

Note : the views and opinions expressed in this article are entirely those of the author and not the MHTI.

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