

NEWSLETTER

NUMBER 9

DECEMBER 1998

Cumann Oireacht na Mianadóireachta

CONTENTS NEWSLETTER 9

- 2. CHAIRPERSON'S REPORT: EDITORIAL..
- 3. MHSI FIELD MEETS & ACTIVITIES Sligo area; Killaloe quarries and Clare (plus notes and item on Killaloe slate quarries), National Heritage Day (Silvermines, Bunmahon & Avoca).
- 8. NEWS FROM AROUND THE COUNTRY Bunmahon, Clontibret, Allihies, Wicklow.
- 10. VIEWS AND REVIEWS Letters to the editor; Reviews; Obituary Pat Wynne.
- 15. SOCIETY NEWS AND POLICIES FLHS, Sustaining Members, Inventory Weekends, National Heritage Plan.
- 20. OFFICERS MHSI 1998.

MHSI PROGRAMME OF EVENTS 1998-2000

(**Bold print** indicates finalised programmes; further details will be sent to members of events in ordinary print; *italics* indicates non-MHSI activities)

1998

From now until 31st Jan. 1999: ENFO, Dublin: Meteorite "HITS"

1999

20th January: Public Lecture: "Making an impact at the end of an era" (meteorite impact and the extinction of the dinosaurs). Irish Geological Association. 8pm, Davis Lecture Theatre, Trinity College, Dublin 2. Repeated at 7:30pm on Jan 21st at the Dept of Geology, UCG.

23rd-24th January: Visit to the steam Museum Kew. Further details will be sent.

29th-31st January: 9th Irish Environmental Researchers' Colloquium: "Focus on Rural and Urban Environment into the New Millennium". Contact TEAGASC (Ms. E. Spillane), Johnstown Castle, Wexford (053-42888).

13th February: AGM of MHSI in GSI Beggars Bush (details enclosed with this Newsletter).

26th-28th February. 41st Annual Irish Geological Research Meeting. Contact Dept of Geology, Trinity College, Dublin 2.

13th-14th March: Workshop in Silvermines to conduct survey of mining remains.

May/June (see enclosure with alternatives): Visit to the Isle of Man, visiting Laxey, Foxdale, Bradda Head and possibly other sites.

8th - 9th May: (*Irish Geology Week*) Bunmahon, Co. Waterford. "Copper Coast" launch. (Further information page 8 within: full programme in next issue).

Early June: Field Meet in Donegal.

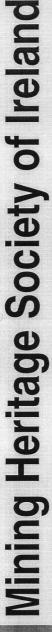
24th-27th June: NAMHO conference in the Forest of Dean..

9th – 10th October: Field Meet in Connemara visiting Sheeffry and other local lead mines.

10th November: Mine Tourism conference in GSI, Beggars Bush.

2000

12th February: AGM of MHSI in GSI Beggars Bush:



CHAIRPERSON'S REPORT

EDITORIAL

The main issues concerning the Society are dealt with the accompanying in Chairperson's Statement. unpredictable 1998's appearances of Newsletters have been explained in circulars to members. The benevolence of Computheo (the god who presides over computers) is invoked for 1999 to ensure that numbers 10, 11 and 12 will appear by April, September and December. Their pages are open to you. Contact-

Des Cowman, "Knockane", Annestown,

Co. Waterford.

(& fax by arrangement) 051-396157; E-mail: dcowman@iol.ie

It seems only like yesterday that the MHSI was established in 1996, and though we have come far in that time and learnt much, the time has now come for us to move up a gear in the range of actions and initiatives undertaken by the Society. At the outset, we realised that, however interested we were in mine heritage, many of us knew precious little about the subject in detail, its diversity or even the scale of the problems confronting us on a number of fronts. Three years on and we are much wiser! The Fieldmeet programme has achieved its objectives of developing awareness of the sheer scale and diversity of mine heritage in Ireland: even if we still might not know much about the details of any given site. The Society is thriving, it has organised a variety of events, published a semi-regular newsletter and has now embarked on a publications programme.

But this is not the time for complacency and hence we are initiating a series of new pro-active initiatives to move the Society forward: developing its technical advisory role; introducing a refocussed field programme; and initiating conservation actions. In our advisory role, the following actions have been taken:

- * A written and oral submission has been made to include mine heritage features in County Wicklow in the County Development Plan (October). This item is described further under "News from around the Country".
- * As noted in the same place a Conservation grant has also been sought for Tankardstown engine houses in County Waterford.
- * A written submission has been made to the Department of Arts, Heritage, Gaeltacht and The Islands in connection with the National Heritage Plan (November 16). A copy of our submission appears elsewhere in this newsletter:
- * Discussions have been initiated with the Architectural Heritage Section of Duchas-the Heritage Service on heritage mine building conservation and other issues. During a far ranging and most productive meeting on November 8th, agreement was reached in principle for MHSI to be recognised as the expert body on Mine Heritage in Ireland, and to contribute information to the National Architectural Inventory while acting as the custodian of the main databases. We look forward to a rewarding and productive relationship with the Heritage Service in the years to come.
- * In October we responded to requests for advice from Duchas.

We are introducing a new range of Field programmes, including "Inventory Weekends" and General and Specialist field meets, all of which are described elsewhere in this newsletter. We also include a provisional programme up to the end of 1999 which incorporates all these activities, albeit some of them have still to be confirmed. Nonetheless, you now have a range of dates to pencil into your long range planning diary.

MHSI FIELD MEETS

THE SLIGO AREA, 19TH-20TH SEPTEMBER

Following Eamonn Grennan's car we ascended Ben Bulben and then hiked across its sun-drenched plateau to the cable system, still largely intact after almost half a century. Below us sparkled the waters of Glencar Lake and spread dramatically before us in the noonday sun lay Sligo Bay. Following the cable line we were able to work out how the mechanisms worked from this phase of operation when barytes was sent down to Glencar for processing (we were later to visit the only barytes beach in Ireland!).

The worked-out vein was a gash in the cliff before us and all around lay the mechanisms, buckets rails, buildings and other plant preserved by the remoteness of the area. The mine itself was accessible at two points, one of which was described by the intrepid as "hairy". We then followed the vein that had been worked open-cast in the 1970s, the barytes then being processed on the site. There was no evidence left of the two earlier phases of mining here in the mid-19th and early 20th century. As the sun sank westwards we hiked back to the cars, somewhat disappointed to be then informed by Kevin O'Hagan's GPS that 5.3 miles was all that we had covered.

However, the day was not yet over and we made our way around to Gleniff Mills, Ballinatrillic, in a spectacular fold in the north side of Ben Bulben. There the local community (there isn't even a village) was restoring a barytes processor dating from the late 19th century and reused again between 1928 and '31. It was difficult to make sense of the range of platforms and channels there, even with the aid of Eamonn's drawing of the works. Even more enigmatic, however, was the complex of leats, sluices and dams servicing the works to which he led us in the midge-filled dusk. We returned to Sligo feeling the pleasant aches of a well-spent day.

On Sunday morning we assembled at Ballisodare to view what remained of Abbeytown mine (not to be confused with the mine of the same name near Ballyshannon). About one million tons of lead and zinc had been extracted here in the1950s and '60s, according to Eamonn. However, there was very little left of this operation as quarrying had eaten back into the workings and it was impossible now to see where the main incline had been. Nonetheless the active limestone quarry provided its own points of interest. From there we headed east arriving in a secluded glen, Creevalea, on the Sligo-Leitrim border.

There against the background of a massive furnace Pat Hughes outlined the iron-working history of the area beginning with Coote's operation in the early 17th century and bringing us through the various phases up to the 19th century. Its final phase, according to Pat, was 1826 to 1838 and included an attempt to smelt iron using local turf. However, a photograph of

The furnace at Creevelea, with Pat Hughes in the foreground

Creevalea borrowed from a local house and dated 1905 showed what looked like almost contemporary buildings and other signs of a more recent operation although there is no local tradition of this. An inspection of the area did, however suggest building work long after 1838. We left this intriguing site somewhat puzzled.

Our final stop that Sunday afternoon was at the coal mining district of Arigna. First we saw a video with some excellent footage taken underground just before the mine closed in June 1990. There was also an archive film of the railway that ran for much of its length beside the road serving the mine and the local community. Next stop was the village hall with a nice display of mining memorabilia including some very good

photographs. From there Michael Layden escorted us past his coal processing works (based on now on imported coal - "bringing coal to--"!) to the last mine

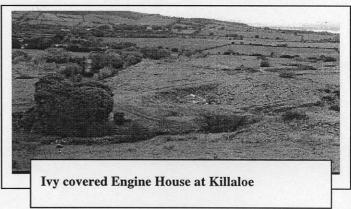


Liscannor stone quarry on top of the cliffs of Moher

imported coal - "bringing coal to--"!). to the last mine to close, still strewn with the remains of that operation. As the shadows lengthened across Lough Allen, learned discussion took place about the different kinds of coal and methods for extracting each. And so it was time to turn our sunburned faces home with happy thoughts of a great weekend.

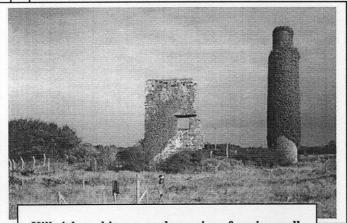
KILLALOE QUARRIES AND CLARE, 10th-11th OCTOBER

Our previous trip had finished overlooking the most northern Shannon lake. We reassembled in county Tipperary overlooking its southern Lough Derg where we met geologist Aubrey Flegg and local historian Michael Joy. The tour they brought us on of Killaloe Slate Quarries encompassed so much new information that it has been compiled as a chronology in the item which follows, with social notes to follow in the next Newsletter. Neither item will mention the sheer spectacle of it all!. A previously unrecorded engine house was also found at Killaloe.



From there a gallop across county Clare took us to the Cliffs of Moher to see the quarries there worked to the very edge of the sheer drop down to the sea. First however, in Paddy Maher's Stone Shop we saw an extremely well made video giving something of the history of the well-known Liscannor stone with its distinctive "worm-casts". Paddy's on site commentary disposed us well to avail of the excellent value he offered in mineral samples and artifacts in his very distinctive shop (we encourage you all to visit this).

We socialised that evening in Ennis and at a respectable time in the morning headed for Kilbricken leadsilver mine. John Morris had done his work well here and thanks to the chronology, notes and maps he had prepared we were able to make some sense of the various mounds, channels and walls in relation to the



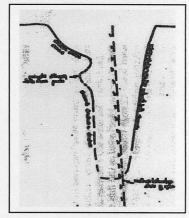
Kilbricken chimney and remains of engine wall

surviving mine buildings. A happy two hours was spent there before he hastened us away to Ballyhickey. While the water-filled open pit there (now apparently used as a swimming pool in Summer) made sense, the lovely tapering chimney didn't, particularly in relation to the remnant of a very thick wall that stood between it and the open-cast.

Carrahin lead mines unsatisfactory historical record was alluded by John as we walked up the drive to the ruins of Carrahin House. On the right of it were two open casts, attractively fringed in autumn shrubbery which threw no light whatsoever on this nineteenth century reworking of an older discovery. However,

everybody had a good potter around. The next opencast, Miltown, was more limited, being just a single waterfilled pit, well fenced off. Testing of rock in nearby ditches proved inconclusive though the records indicate that where may have been mining her from the late Middle Ages.

A late afternoon unscheduled stop for the really determined was to Ballyvirgin. The hazards of a long neglected boreen were overcome but not so the wilderness of bog and furze that surround the ivy-covered prominence which presumably hides a chimney. Even the most determined of us could not penetrate the vegetative fortification that surrounds whatever other remains there are. Ballyvirgin (pronounced locally -virkin) remained intact. And on that note we went our different ways.



NOTES ON KILLALOE SLATE QUARRIES - A CHRONOLOGY AND DESCRIPTION (Compiled by John Morris)

Section of Ballyhickey opencast as mapped by divers working for Irish Base Metals in 1978.

Sources (unless otherwise noted): Dr. A. M. Flegg (AMF) and Mr. Michael Joy (MJ), MHSI Field excursion, October 10th, 1998.

- First records of workings date back to the time of Brian Boru (AMF). Mentioned in the Annals of the Four Masters slates used on roofs at Kincora (?) (AMF)
- 18thC. Grant of lease to Francis Rolliston, a Cromwellian settler.
- 60 men working on site. Transport along Shannon . Derryhea. (Arthur Young: "Tour of Ireland") (MJ). Old quarry at Derrycastle
- Corbally quarry opened by the Mining Company of Ireland. (Kinahan) Slate shipped from Garrykennedy to the railheads at Killaloe or Nenagh. This trade stopped only with the advent of trucks in the early 20thCentury (AMF). Slate yard and Mine House (restored) by harbour.
- Operated by an English company, the Imperial Slate Company. Also operated at about this time by the Royal Irish Mining Company (MJ)
- 1864 1914/5. Killaloe Slate Co. Ltd formed in 1864. Share Certificate issued in July 1899 (JHM collection). Bronze Medal awarded to the Loughtea Slate Quarry at the Dublin International Exhibition of 1865 (property of Mrs. Felicity MacDermot). Manager at that time Delahunty (from Wicklow originally). 10,000 tons of dressed slate produced per year at a waste: produce ratio of 6:1 = 60,000 tons of rock lifted per annum. 700 men and boys employed. (Reference Kane 1844)
- Welsh miners village at Corbally (now derelict, but still relatively intact). Occupation dates of 1839 and 1847 noted (MJ).
- Transport cost. Cartage 3/6 per ton to Nenagh or Killaloe. Shipping 1/6 per ton through Garrykennedy.
 Coal, turf and porter imported, slates and oats out. Horses carried slate down from quarries but heavier loads of coal back up to quarries.
- 1914/5. 1 ton of slate per horse to customers as far away as Rathdowney and Urlingford (MJ). Quarries closed due to diversion of manpower into the British Army at the start of the 1st World War. "Lamentations" upon closure.

- 1923 1956. Operated by Mr. J. B. O'Driscoll. Strike in 1949, from which the quarries never fully recovered. Closed in 1956, though a minor amount of re-working waste tips, with dressed slate sold through the Company that still existed on paper.
- 1991- 1992. Unsuccessful attempt by Capco and Penrhyn Quarries to open a new site west of the old quarries at Killoran. Automated dressing introduced. Slate from a much drier site dried out to easily and not as easily split as wet slate (cf. Trinity Slate, Newfoundland Process, 1997).
- October 1998, MHSI site visit. Both quarry sites owned by Mr. Finn O'Driscoll.
- <u>Curragh Quarry</u>. 100- 150 feet deep. Miners path entrance to base. Pumped 24 hours per day throughout 1912 1956 period of operation. Large iron buckets for lifting slate blocks: 1 intact. Best quality slate from a narrow cutting at west end of quarry. Potatoes grown in 4 fields above quarry, now forested. 2 types of slate produced: striped (= siltstone beds in slaty pelite) and unstriped (= slaty pelite). See GSI memoir for list of quarrymen's terms: e.g. "bellies" = cleaved joints; "ends" = vertical joints; "jump" = throw of fault. Magazine, still intact, built 1950s in two halves, detonators one half, fuse cord in the other? Other concrete buildings still relatively intact (need roofs).
- Corbally Quarry. Mine/Estate manager's house, occupied until 1950s. Foundations of Police Barracks just opposite. Photos/video of various buildings and 19th C walls and buildings at SW end of Quarry (compare reasonably well with 1846 engraving of quarry from Wilkinson: The geology and Ancient Architecture of Ireland.). Manual slate dressing until 1923, until ESB installed for diamond saws (blocks still split manually). Had to work 2 or 3 sides of block to get it to split as compared with only 1 or 2 sides for Bangor slates = less labour. Two Blondin (diesel) engines installed in late 19th C: very powerful, unnecessary for working "slig". Met a group of divers who noted that the pit is 45m deep: intact wooden crane platform found near bottom, along with other equipment.
- Engine House. No previous record. Heavily overgrown with ivy, but otherwise in surprisingly good condition, even remains of roof timbers. Remains of boiler house and flue leading up hill side to a square profile chimney (again relatively intact). Engine size about 24 36" on basis of size of house: floor filled in to ground level, but possible that cylinder block/cataract pit just below surface. Winding engine? (JHM and DC)
- <u>Killoran.</u> 1990 2. Vacuum pads + mechanical splitters. Diamond wheel on block (cf. Trinity Slate).

NATIONAL HERITAGE DAY (6th Sept.)

Man proposes and God disposes: and the aftermath of Hurricane Danielle certainly wreaked havoc on this year's Heritage Day events. Rob Goodbody, ever cheerful in adversity, did not take umbrage at the zero attendance for his proposed tour of Ballycorus, but at least he was able to spend the afternoon in comfort indoors! A different story, however, down in Tipperary - obviously a much tougher bunch than the denizens of Dublin! (JHM)

Silvermines. (John Morris)

They are a tough breed in Tipperary - even the horrors of the tail end of Hurricane Danielle didn't deter 25 or so hardy individuals from attending a very entertaining and informative trip around Shallee and Silvermines by Eamonn de Staffort and Martin Critchley. Our tour started around the old Calamine workings at Silvermines: the extensive remains of the 1950s buildings and calamine processing plant; the ventilation shaft; some old open casts and adits; an engine house ruin. However, the bulk of our collective head scratching centred upon the use of a very large building simply marked as the site of the 19thC Calamine Workings. The 4 walls of this very large building, with low arches along part of one wall, and an ornate entrance arch, are in reasonably good condition. The size of the processed spoil heap beside the building, partially supported by a retaining wall, and the ruin of an adjoining boiler/engine house and chimney stack, strongly suggest that it was used for processing, but how is not clear. For example, there is no clear connection between the boiler house and the main building, at least at present ruin level. Hopefully

this tale of ignorance will induce somebody more knowledgeable to write in and tell us how this complex operated! A sad footnote on past safety practices: Eamonn told us how, on foot of his requests to the then owners in the 1960s, to make safe the chimney, they did so - by blowing it up!

From there, we moved on to Shallee, the site of the proposed National Mine Heritage Centre just west of Silvermines. There we were able to examine the mine buildings and core stores dating from the 1960s, as well as some of the open stopes. Passing through an amphitheatre with a picturesque waterfall, we entered into a great cavern the floor of which is partly flooded to form a subterranean lake. Images of Bilbo Baggins and his travails with Gollum in the depths of the Misty Mountains sprang to mind - but no suspicious objects loomed up out of these particular depths. Finally we looked over the ivy festooned, but remarkably intact Engine House - even though its interior is largely infilled by a 20th century concrete ore bin! Eamonn wished us all well on our journeys home and noted, mischievously, that this would probably be the last free tour anybody would have over the site before it opens as the Mine Heritage Centre.

Bunmahon (Des Cowman)

A blue sky made all the more spectacular the surf that thundered onshore. About thirty intrepid souls, including Spanish and German visitors, ignored the dire forecast and took their chances on the exposed cliffs. First, however, they had a preview of the material collected in the Heritage Museum (see below) before walking past the miners' cottages, the ruined dressing floors and uphill to the Knockmahon shafts. There, the blue sky was suddenly replaced by vicious black clouds just where there was least amount of shelter. Somehow cars were



The engine house complex at Tankardstown which it is hoped will qualify for a conservation grant (see below).

fetched from back at the village and a wet cavalcade drove to Tankardstown where a reprieve was granted, enabling us to inspect the site and then drive round to the winding engine at Tankardstown North. A lively discussion took place and retrospective explanations given for the parts we'd had to miss.

Avoca

A large contingent from Wexford turned up in foul weather conditions to do Nick Coy's tour of Tigroney and Cronebane. About forty-five people heard Nick speak of the newly discovered flat rods in Tigroney and how they worked. Williams engine house was duly inspected and from there the trail lay uphill through the tip heaps, past the sites of Farmers and Baronets shafts, to the Cronbane open cast. Above, against the overcast sky, the yellowed waste heap of "Mount Platt" had majesty of its own.

Most of the attendance knew nothing about mining and expressed their fascination at a world of technology and endeavour that was entirely new to them. Many expressed views on the spectacle of the refuse disposal site across the valley at what was once Ballymurtagh mine.

NEWS FROM AROUND THE COUNTRY

BUNMAHON, Co. Waterford (Des Cowman)

Having been alerted by John Morris of the possibility of a Conservation Grant for the cliff-top engine houses at Tankardstown, Bunmahon Heritage Society acted very quickly to make a submission under the aegis of MHSI. This was possible thanks to the ready agreement of local farmer Nicky Hayes to lease the site as well as to county engineer, Kenneth Walsh, who managed to come up with detailed costings in just twenty four hours. We'll know some time in January how our submission has fared, but this application marks a significant advance in the practical activities now being undertaken by the MHSI.

A successful application has also been made to Waterford Development Partnership for Leader funding to develop Bunmahon Heritage and Resource Centre (see Newsletter 8) and a grant of £5000 has been allocated to the Heritage Society. Meanwhile some corporate funding has also been acquired for the project which will be formally opened at the end of Irish Geology Week, on 9th May. Some of the plaques for the Mining Trail are already in place and it is expected that all will be ready for May.

Meanwhile, in another exciting development Waterford County Council's planning consultant, John Walsh, has come up with a marvelous proposal for some waste ground beside the Mahon River. He proposes a geological park with various types of local rock presented in "beds" with as far as possible their associated flora. Centre-piece, however, will be an elevated mound on which will stand a miniature version (about 15 feet long and proportionately wide and high) of Tankardstown pumping engine. The county council has indicated that they intend to commence work on this before Christmas and there are ambitions to have it finished by May. Note that weekend of 8/9th May -there'll be a lot to see in Bunmahon!

ALLIHIES, Co. Cork (John Morris)

In parallel with the Bunmahon conservation grant application, a mighty effort was made by the Allihies Parish Cooperative and the MHSI to include a similar application to undertake conservation work on the Man Engine House at the Mountain Mine. This is arguably the jewel in the crown of all Cornish Engine houses in Ireland. It is the only Man Engine House ever constructed in Ireland and one of only an estimated 25 or so such Houses ever constructed world wide out of an estimated total of 3,000 Engine Houses of all types. It is probable that this building is one of, if not the most intact examples of such an Engine House left standing anywhere in the world, and consequently it is of major National and International heritage value. It is therefore extremely sad to have to note that the conservation initiative came to nought due to access permission problems. We wish to record our thanks to the County Archaeologist, Cornwall County Council, Mr. Nicholas Johnson, for his letter of support on the initiative to conserve both the Allihies and Tankardstown Engine Houses. An article on Man Engines will feature in a later newsletter.

CLONTIBRET, Co. Monaghan (John Morris)

Conroy Diamonds and Gold plc announced in a recent press release (August 21st) that, as part of their gold exploration activities in the Monaghan - Armagh region, they intended to re-enter, de-water and re-examine the underground workings at the historic Lisglassan - Tullybuck antimony mine. The extant mine workings date from the period of operation by the Mining Company of Ireland in the early 1820s, although the mine was briefly reopened in 1917 and again in 1956. It was during the latter interval that gold was discovered to be associated with the antimony mineralisation and ever since, gold has been the focus of exploration interest. Both shafts were re-timbered in 1956 and both were open until they were covered over during land clearance activities between c.1985-1995. The location of both shafts is, however, very accurately known

and re-entering each should be relatively straight forward. Professor Richard Conroy has very kindly agreed to permit access to record and photograph these historic workings as and when his Company undertake the proposed work.

Co. WICKLOW (John Morris)

With a great deal of fleet footwork, the Society completed and submitted observations on incorporation of mine heritage features into the County Development Plan. These include the Avoca Mines, upon which separate submissions were made by the Vale of Avoca Development Association and the Geological Survey of Ireland, as well as features in Glendasan, Glendalough/Van Diemens Land and Glenmalure. Thanks to Rob Goodbody for helping with the drafting of the written submission and to Matthew Parkes for following this up at an oral hearing in the County Buildings, Wicklow on Nov. 4th.

Further activities involving Avoca include the "Celtic Copper" Project and Minet. The former will begin with a conference cum workshop comprising representatives from all three partner groups in this Transnational LEADER project, from Anglesey, Avoca and Cornwall. It will be held in Cornwall over a four-day period in either late January or early February, 1999. The Minet project is to be inaugurated with a meeting of all partners, including GSI on behalf of Ireland, in Cornwall on January 22 - 23, 1999. Further details of both will follow in Newsletter 10.

VIEWS AND REVIEWS

LETTERS TO THE EDITOR ·

Mineral Collecting (A view and a review)

I refer to the letter in the last Newsletter from Stephen Moreton. According to it, mineral collectors are a harmless, misunderstood breed who really enhance the subject of mining history. My experience of 30 years in active mine exploration and preservation is completely the opposite. Mass organised mineral collecting has been responsible for major damage to surface and underground mining features and loss of access. How?

- 1. One of the reasons for setting up NAMHO (and I should know because I helped set it up) was due to increasing loss of access to mine sites throughout the country. This was often found to be due to mineral collectors going into mines without owners' permission and further upsetting them by carting off rucksacks full of rocks. The owners did not distinguish between collectors and explorers and very often the result was a blown-in entrance.
- 2. I can name two areas where there were once especially nice formations of sphalerite crystals underground. Magpie Sough in Derbyshire and a stope in Smallcleugh Mine in Cumbria. Both are now sad ruins as a result of ... yes you guessed it! Mineral collectors went in and hacked both sites to pieces in their search for specimens.
- 3. A few collectors are using explosives to remove minerals and I have seen several cases where not only have they wrecked stopes but also made the workings more unstable as a result. The other danger is the fumes left behind by the explosives these can lie in poorly ventilated areas and wait to trap the unwary.
- 4. Go in some of the mines around Nenthead and you will see the result of mineral collectors' "complementing mining heritage"! Large areas of the Smallcleugh horse level are difficult to negotiate because pack walls have been pulled down in search of minerals. Stopes are littered with old newspapers (collectors use them to wrap up specimens) and smashed up rock. Go to any reasonably accessible mine site and look at the surface tips. They have been pulled about and

- boulders rolled down to uncover specimens who cares about rusty metal and wooden artifacts as long as they can get a nice crystal.
- 5. I once challenged a mineral collector who had struggled from a mine in Wales with a huge bulging rucksack. He was in the process of sorting through his booty and threw away about half of what he'd brought out. I asked what he was after and he admitted that he wanted "microspecimens" or small perfect crystals. So I asked why he needed all the rest he was taking away and he said he was going to sell them to a mineral shop to pay his petrol expenses for the trip. Not for him an amateur hobby he had the means to make it pay and who cares about anyone else seeing what he could have left behind.
- 6. Snailbeach Mine in Shropshire is a scheduled monument and environmental concerns had led to the tips being covered over. A small area of the tip had been left for people interested in minerals and seeded with specimens of lead and sphalerite. Lo and behold it was not long before a mineral collector turned up in a van with pallets (!) so he could take away all the good stuff en masse. He could not be stopped as the area was strictly speaking made available for collecting but what an advert for "caring" collectors!
- 7. Mineral collectors form themselves into clubs which have the erosive power of glaciers. They descend on sites and all are hacking away to their hearts' content. Result is that they clean out visible surface remains of mineral on the tips. The next group then have to dig down to uncover more and the result is that tips become spread out and this destroys any chance to interpret how they have been developed over periods of working. A few years ago mining history clubs found that collectors were joining as members to get the publications and learn where sites were. There was even a period where authors refused to give grid references, as this was the only way to protect important mining sites from collectors.
- 8. So mineral collectors found 14 new minerals! If they have only recently been found, then presumably the "new mineral" is just some mutant form with a crystal the size of a pinhead.

I do not condemn picking up the odd specimen - everyone does it including myself. However, my specimens are small and still on my shelf. What I condemn are the collectors who go for mass removal - the ones who hunt in clubs or take away rucksacks full. In my opinion, mine sites scheduled as national monuments should be regarded as no-go areas for mineral collectors. The minerals are part of the site and should be left for everyone to see. Anyone stealing them (and it is stealing!) should be subject to a huge fine.

Adrian Pearce, Shropshire.

I presume that Adrian Pearce's letter was written to provoke a reaction and I hope this is one of many. His choice of phrases makes interesting reading: "Mass organised mineral collection --- the erosive power of glaciers --- hunt in clubs --- take away rucksacks full". I would ask him not to coat us all with the same brush. Some of us do care and we are not small in number! As my friend, the late Roger Harker once said "Minerals underground can't be appreciated by people above". I think he was right!

As far as collectors are concerned, no matter what they collect (whether tins, stamps or coins), they sometimes sell off spares to enable them to get other material. There is nothing wrong with this; amateur collectors have done it since collecting began. There are also people around who sell for a living (as the old miners did!) who are not all bad people either.

Nevertheless, I do concede to Adrian that there are a number around who are greedy and selfish such as those who looted Snailbeach. Once these are known, however, they don't get help from other collectors. Furthermore, I agree with him that explosives have been used in some mines. I had the unpleasant

experience myself of nearly being blown up one day by a number of brainless idiots. Anyone using explosives in mines should be reported immediately to the police.

On the other hand, Adrian presumably set up a club because of increasing loss of access to mine sites. Now what do a lot of clubs do when they are protecting mines and mine sites? They close them to the general public. If Joe Public wants to visit these mines he must first join the club that restricted him in the first instance. Mining clubs do not hold the franchise on mine or mineral information. Much of this can be obtained from mine museums or geological survey offices, many of whom pride themselves on their mineral displays. Most of the material, however, has been donated by mineral collectors both amateur and professional. Furthermore, I can assure Adrian that not all new minerals are "just some mutant form with a crystal the size of a pinhead". If he has seen any mineral magazines over the years he would know the size and beauty of many of the new discoveries. He should concede that this is a valid area of exploration and research.

Ike Wilson, Cheshire (Mineral collector since the age of five!)

FROM USA

Keith Murray, a resident of Connecticut, recently came across the MHSI home page while searching the Web for "Luganure", and forwarded to us the following email message (JM).

"My family, the Murrays, worked in the Luganure mines in the 1800's. My great great grandfather, William, worked in the mines until he died in 1869 at age 55. All of his five sons worked in the mines as well, including my great grandfather, Alfred. When the mines closed around 1880, the boys and their mother went to work in the iron ore mines in Cleator, England. Eventually, the brothers found their way to Williamstown, Pennsylvania, where Alfred was joined by his son John in the coal mines. Alfred was married in England to Jane Tutty, whose family was also from Wicklow and worked in the mines at Avoca before going to Cleator around 1871.

"Other branches of my family also have connections to the mining industry, such as my great great grandfather, Archibald McDonald, foreman of the Pine Forest Colliery in St. Clair, Pennsylvania, but I have not yet traced their exact locations back in Ireland.

"I am very interested in your organization and perhaps even becoming a member. Although I live in America, I have recently made my first trip to Ireland (to visit the Luganure mines) and plan on at least two trips a year in the coming years. There is still much research to be conducted on my family history, and the mining industry holds a particular fascination. I am always interested in any information regarding the historical context in which my family lived. I will eventually take all I have learned about my family history and write it up in a book to pass on to family and subsequent generations.

I have written several web pages regarding my family history. Please feel free to browse them at: http://users.aol.com/murrk/family.htm."

Keith has, subsequent to his initial message, decided to join MHSI! - welcome, and we look forward to meeting you whenever you are next in Ireland. If you can help his researches, please contact him:

Keith Murray 74 Circular Avenue - Apt. 2B, Bridgeport, Connecticut 06605, USA

RE CORNISH ENGINE HOUSES OF WEST CARBERY- GLANDORE

Ken Brown writes further to his article in the last Newsletter on this rather enigmatic site, having subsequently discovered two references to it in the 1880 volume of the *Mining Journal* (p. 303 & 1064). The first (13th March) is mainly promotional and is headed optimistically "Glandore Copper, Iron and Manganese Mines".

The second (18th September), however, contains the crucial information about the purpose of the engine house and its background. A number of private individuals had tested here from 1877 and in June 1879 they formed themselves into a limited company with £15,000 capital in £100 shares. The names Dr. Siemens (then proprietor of a steelworks) and Mr. Laird of Birkenhead (the shipping magnate?) are mentioned as promoters. The mine captain was Edward Daniell "late of Berehaven and Ballycummisk". The hope to raise "metallic manganese averaging about 40%" which would be suitable for steel-making. They anticipated that their shaft would hit this at 50 fathoms.

By September 1880 the reported that they had sunk to 28 fathoms and had driven a number of cross-cuts. They had a 24 inch cylinder engine for winding, crushing and pumping on site. The remains of the present engine house certainly indicate the crushing function and the fact that it was double acting suggests the other functions. Assuming it was actually installed it may not have operated for long as Dr. Siemens expectations were seemingly not fulfilled.

REVIEWS

"Take A Second Look Around County Down". Noel Kirkpatrick, 1992, Alkon Press, 68 Belfast Road, Comber, Co. Down BT23 5QP (ST£5-95.)

I was first brought into contact with the late Noel Kirkpatrick's work last year, through his book "Further Afield and Look What I Found", which details his explorations in Ulster outside Down, including caving with Hugh Holgate in Co. Fermanagh. He had also written two other volumes, the first "In The Shadow of the Gantries", (ST£4-99) tells of his childhood in east Belfast, followed by the one being reviewed. It then transpired that there was another caving reference in "Second Look", so it was also acquired, though Jenny Watt's Cave is not inspiring.

However in Noel's ever-inquisitive wanderings, he included visits to the lead mines at Conlig. His report bears interesting testimony to their condition in the 1940s to early 1950s and includes pictures of the engine houses, chimneys, etc. He even essayed a partial descent of the McBurney shaft and tells of what remained in it. His explorations covered old quarries, shipwrecks and diving adventures. Close to Annalong harbour he describes in detail his short diving through trip of an "extinct volcano" twelve metres down on the sea floor. Explain that one!

This is a fascinating snapshot of time.

EurGeol Gareth Ll. Jones

Two items in Archeology Ireland on early medieval mining

That there was extensive metal working in Ireland at various times between the 7th and 12th centuries is evident from the surviving artefacts of the period. While it is not improbable that some of the raw material was mined in Ireland, there is no specific evidence of it. The matter has arisen because of a recent letter to

the editor of Archaeology Ireland, (Vol. 12, No. 2, Summer 1998), p. 40-1 by Dr. Niamh Whitfield of London W14.

Referring to "early Christian" Ireland she states that there is "new evidence --- about the mining not only of gold but of other metals as well". This letter is a sequel to her article in the same journal (Vol I., No. 4 winter 1993, Pp 21-3) entitled "The Sources of Gold in Early Christian Ireland". This new evidence has come from a recent translation of an eight century law tract with a ninth century commentary. It lists fines for mining somebody else's silver, iron, copper, tin and gold. It also refers to the offence of digging into cliffs in search of copper and iron. The correspondent states that this supports the "conclusive proof" which Giraldus Cambrensis provides that gold (and by inference other minerals) was being mined in Ireland in the 12th century before the Normans arrived.

However, the example given from Giraldus provides no such proof and indeed ignores something else he wrote: "The different kinds of minerals too, with which the hidden veins of earth are full, are not mined or put to any use ----. Even gold ---- is brought here by traders". One must maintain scepticism about this source and wonder, for instance, how he knew about "hidden veins". Perhaps it was a tradition passed down over the centuries since the law tracts were written and commented upon. However, there must be a question about these also in view of the reference to tin (assuming it is correctly translated). The fact that there is no mineable tin in Ireland suggests that these laws referred to hypothetical rather than actual situations.

It could be argued, on the other hand, that awareness of mineralisation and the enactment of laws to protect ownership implied at least the intention to work them. Supporting this would be the comment by the ninth century Welsh monk Nennius stating that around Loch Lein (presumably Killarney) there were bands of tin, lead, iron and copper. While tin poses a problem, iron and copper certainly occur there. Awareness of this in the 9th century shows at least that somebody had the ability to identify them and recognise their importance. The next phase should have been to test them but we have no evidence of this. For instance, there seems to be no reference to any copper working until the late middle ages.

Giraldus Cambrensis whose comments on 12th century possible mining in Ireland are, at best, ambiguous

There has been the assumption, however, that silver was mined in pre-Norman Ireland without any clear evidence.³ Not until eighty years after Giraldus' time is there a specific reference to silver extraction (with lead, presumably, as a waste material) when two small scale operations were mentioned in 1264 each involving only four miners each.⁴ Indeed the only sustainable evidence there is for any sort of early Christian mining is for iron which may have come from hard pan under bogs. The fact that there is

¹ Giraldus Cambrensis, *The History and Topography of Ireland*, (trans. O'Meara), Penguin 1982, p. 202. Dr Whitfield's article also refers to "gifts of Irish gold " to Henry II. The text (p 32) however states "I could --- have sent have sent your highness some small pieces of gold, falcons or hawks with which the island abounds" but decided to send him this written description instead.

² Quoted by Brash, (next reference), p. 527

³ Brash, R., entitled his article in *R.S.A.I. Journal*, vol. 1874 (p. 509-534), "Precious Metals and Ancient Mining in Ireland". While his article does give a range of references in the annals to metal working, despite the title he has not one specific reference to mining. More recently Michael Ryan, apparently in ignorance of Brash's research, attempted to do the same thing but again failed to come up with any definite Irish source of silver - "Some Archaeological Comments on the Occurrence and Use of Silver in Pre-Viking Ireland" in *Studies on early Ireland: Essays in Honour of M.V. Duigan*, p. 45-50.

⁴ Pipe Roll Edward I in *Reports Deputy Keeper of Public Records*, Report 38, Dublin 1906, app. II, p. 29. The locations were "Oulys" (Oola, Co. Limerick?) and "near Waterford".

substantial remains of smelting in ring forts and monastic sites does suggest iron extraction at this period⁵. The same sort of evidence does not apply to other minerals.

In her article relating to gold Dr. Whitfield does sound cautionary notes ("Importation cannot be ruled out") but poses the supposition of gold mining in the form of rhetorical questions at the end of her article. It is unfortunate that her subsequent letter should have gone so much further than that in the absence of more substantive evidence.

PAT WYNNE, AN APPRECIATION

The sudden and untimely death of Pat Wynne on 2nd January 1998 came as a great shock to his many friends and colleagues in the Irish Mining Industry. Pat was the third generation of a family that has been involved in the mining industry for over a century. The Wynne family might be aptly described as an Irish Mining dynasty, an achievement unlikely to be emulated.

Around 1860 Albert and Wyndham Wynne, both engineers, went to live in Germany and became involved in Lead mining. Albert's son and Pat's father, John Brian Wynne, was born in 1876 and after qualifying as an engineer he too became involved in the family mining operation in Germany. They later tried unsuccessfully to branch out into silver mining in Mexico and gold mining in the Horseshoe Mine in British Columbia.

Around 1890 the family moved back to Ireland where they purchased part of the Hugo Estate lands containing the Glendalough Lead Mines from the Mining Company of Ireland and also the Tigroney mine at Avoca. These mines were operated intermittently by various consortia until the late 1950s.

The last mining carried out by the Wicklow Mining Company (Canada) Ltd in the Glendasan Mine was organised by J B Wynne and managed by Pat Wynne from 1953 up to their closure in 1956. J B Wynne died in 1977 at the great age of 100.

Pat Wynne was born in Glendalough in 1919 after graduating from Trinity College Dublin and later the Cambourne School of Mines (1947) he worked in the Avoca Mines before taking up a position with a Nigerian Tin Mine.He later returned to Ireland to work in the Glendasan Mines and after their closure he took up a position with the Indian Copper Corporation. He returned home in 1959 where he continued to live in his beloved Glendalough.

Pat is survived by his widow Una and his son Graham, a mechanical engineer who also graduated from TCD and now works in Project Management in the Oil and Gas Exploration and Production industry in Calgary in Western Canada.

The female members of the Wynne family were just as formidable and innovative as their male counterparts. Three sisters of J B Wynne, Emily, Winifred and Veronica were responsible for establishing the Avoca Handweavers, a local industry now known worldwide and synonymous with quality and design. They were also superb linguists and expert horticulturists.

⁵ Both medieval written references and archaeological evidence have been conveniently drawn together by Scott, B.G., in *Early Irish Ironworking* Belfast 1990, pp. 177-9 and pp. 211-3

Pat was a gentle and kindly man who quietly helped others. From long conversations with him, his pride in his family and his heritage was very obvious. He was always welcoming and happy to sit and talk giving generously of his time and knowledge. His untimely passing leaves a void that will not easily be filled.

Nick Coy

SOCIETY NEWS AND POLICIES

FEDERATION OF LOCAL HISTORY SOCIETIES.

The Society has joined the Federation of Local History Societies(FLHS) recently, and we shall endeavour to notify members of Federation events and meetings when possible. At present, a report of MHSI activities and events is being compiled for the Federation's annual Local History Review. This should bring awareness of the Society to a larger group of people, and establish better links with groups whose mining heritage is a concern shared by both themselves and this Society. The Federation can be contacted through the Honorary Secretary, Frank Taaffe, Ardreigh House, Athy, Co. Kildare.

SUSTAINING MEMBERS

Following the decision at the 1997 AGM in Feb 1998, the Society has been seeking sustaining members mainly from the companies involved in current mining and exploration and quarrying, and other corporate bodies. We are pleased to announce that joining Shannon Development as sustaining members are:

Minorco Services Ireland Ltd. Conroy Diamonds and Gold plc. Irish Marine Oil plc Tara Mine Ltd. Era Maptec

<u>INVENTORY WEEKENDS:</u> Mine Heritage "Time Teams".

Various influences have contributed to the concept of "Inventory Weekends", not least from casual observations made at a mine during the East Clare Fieldmeet on Oct 11th. There, people with various skills and interests focussed on different aspects of the site, and, as a result, an unusual cobalt mineral and a newt colony were discovered. These discoveries created considerable interest and conveyed an important message: the "holistic" context and substance of historic mine sites goes much further than mine heritage features, building design and function, and mine history per se. We are fortunate in this

Society to have members drawn from many different backgrounds and interests - a pool of talent and knowledge which could contribute enormously to our knowledge and understanding of historic mine sites: as a specific component of industrial heritage, as a component of the natural environment, both biological and geological, and as part of the social and economic histories of local communities. By drawing together teams of such individuals whose cumulative expertise, knowledge and interests span these fields, we could create a very powerful force not only to document historic mine sites in a way not

previously envisaged, but also to provide the backbone of the National Mine Heritage Database.

We, as a few individuals on the Committee, cannot do this alone. If this vision is to be realised, you, the members, will need to participate: YOUR SOCIETY NEEDS YOU, YOUR SKILLS, KNOWLEDGE, EXPERTISE - AND, NOT LEAST, YOUR ENTHUSIASM. We have enclosed a skills profile form with an addressed envelope to encourage you to volunteer to participate in this new scheme by notifying us of your skill(s) so that we can build up a pool from which teams could be drawn. So lets hear from the ecologists, historians, surveyors, conservationists, archaeologists, mineralogists, geologists, mine building design experts etc., etc., out there.

The "Inventory Weekend" process is outlined below, with the intention of conducting the first such prototype weekend in March 1999. This is not an exhaustive or exclusive list: only a starting point which will undoubtedly be refined and developed as the process develops.

Objective:

For any given mine heritage site, conduct a systematic, on site documentation of all extant mine heritage remains and its current ecological character; complete the inventory site record card and add to the database; and collate the results of the survey into an "Historic Mine Site Profile" - ideally to a pre-determined format which might be readily publishable in a pamphlet format.

Method:

- * To organise a systematic programme of "Inventory Weekends" at a pre-determined selection of sites/districts in different parts of the Country.
- * One person to be nominated coordinator for that weekend. The frequency of such weekends is entirely dependent upon the number of people willing to commit to the process. In an ideal situation, there is no reason to preclude two or more concurrent "Inventory Weekends" at different sites on the same weekend. However, as

you can see from the 1999 programme, we are planning a much more modest level of activity.

- * Team basis for the site inventory blending a variety of disparate skills, knowledge and expertise of amongst others, ecologists, botanists, mine building specialists, surveyors.
- Standardised contact points for specific information sources:
- GSI field sheets and Cole's memoir (until republished): John Morris or Matthew Parkes
- Abandoned Mine Plans: Gerry Stanley, GSI
- Base maps: Eamonn Grennan
- Historic records/publications: Des Cowman
- Monuments register/ archaeological information: Billy O'Brien
- Site Inventory (computerised records) -Martin Critchley
- Site inventory (paper records) John Hamilton
- Local History Society contacts list from the Federation of local History Societies (advertise our proposed action programme in their newsletter, seeking their support, as appropriate)
- * Advertise for members to have their names listed on a centralised register of skills, from which key "Weekend Group" members might be drawn. These will form the core group of volunteers. Skills categories: surveying, archaeology, botany, mine buildings design, ecologists, mineralogists, historians.
- * Advertise the weekend programme to all members well in advance and encourage them to volunteer to participate. A minimum number of participants with key skills will be necessary to make the process viable, but others should be encouraged to participate and thereby develop their skills.
- * Coordinator of each specific "Inventory Weekend" to be responsible for:
- assembling, as far as possible, a team with requisite span of skills.
- collating an information folio from some or all of the following, readily accessible sources: e.g. GSI field sheets, Abandoned Mine Plans, Cole's memoir, base maps, any existing publications.

- organising access to site(s) in the given district; arranging group accommodation; making contact, as far as is possible, with local history societies, museums etc. to enlist their support and access to relevant information, if any, and also to ensure no conflict of interest.
- responsible for collating information into required format for "Site Inventory Database" and "Site Profile" archival record database.

NATIONAL HERITAGE PLAN – SUMISSION MADE TO DÚCHAS

(Managing the National Heritage in the New Millenium A submission by the Mining Heritage Society of Ireland)

The Mining Heritage Society of Ireland (MHSI) is the national expert body concerned with the study and conservation of the mining heritage of Ireland. MHSI is a Society whose interests and membership are all-Ireland. The membership includes individual and family members, of which up to about one third are based in the United Kingdom, and a large number of institutional members, such as local community groups and local authorities, each of whom have significant membership numbers. We also have a number of sustaining members from within industry and statutory bodies.

In making this submission on the future management of the national heritage, and the preparation of a National Heritage Plan, the Mining Heritage Society of Ireland (MHSI) wishes to coperate fully with Dúchas, within the Department of Arts, Heritage, Gaeltacht and the Islands, and with the Heritage Council, in order to make our contribution to the totality of the National Heritage. As the national organisation concerned with the rich mining heritage of Ireland, MHSI has a important role in providing information and expertise on the technical and specialised area of mining heritage issues.

The following observations and proposals are made according to the relevant terms of reference.

1. Natural Heritage - Geological features

1.1 MHSI consider that it is important that the work on site protection being undertaken within the Geological Survey of Ireland is completed as soon as possible, in particular the 'Mines and mineralogy' Theme. (The Irish Geological Heritage Programme is the partnership developed between National Parks and Wildlife, Dúchas and the Geological Survey of Ireland to assess geological sites within various themes on a national network basis).

1.2. Given the character of mining heritage it is essential that the Plan take full account of the all-Ireland nature of much of the natural and cultural heritage. Full collaboration with appropriate bodies in Northern

Ireland, and actions developed within the developing context of the new political structures are necessary. Flexibility in the Plan to respond to new opportunities is essential.

1.3 Mineral collecting at old mine sites is recognised as an important research activity. However, there are some areas of concern, particularly where such actions are for commercial purposes. These include the removal of the finite mineral resource in 'integrity' sites,

particularly in sites where the specimens are considered of critical scientific value, or where the overall context or important data is lost on removal in uncontrolled conditions. Restrictions on collecting may be required in some key localities,

Our estimate of the total costs for the consolidation and conservation of a selection of the most important mine heritage buildings nationally, is approximately £900,000.

though this can best be addressed through partnership agreements, education and the notification of collecting as an inappropriate activity in site management plans for certain sites. MHSI cites the Code of Conduct for Mineral Collectors developed by NAMHO (National Association of Mining History Organisations - of which MHSI is a member) as an example of a responsible approach.

2. Archaeological Heritage

Our observations on archaeological sites and landscapes relate to prehistoric mining and quarrying heritage, and are comprehended within section 3.

3. Architectural, Artistic and Historic Heritage As a nation without the major deposits of coal and iron that drove the 19th century industrial revolution in Britain and Europe, Ireland still has an important history and heritage of mining for metal ores and for non-metallic deposits. The remains of the former mines and quarries constitute a very significant component of our industrial heritage. These range from stone axe 'factories', through Bronze ---'mining landscapes' are a Age copper mining sites in Kerry, early component of the national iron foundries and works to the 19th heritage, and should be and 20th century mining complexes at viewed in their integrity. Silvermines, Allihies and Avoca.

- 3.1 Whilst engine houses are potent visible symbols of former mining, they are only a component of the mining heritage. It is important that attempts to conserve some former mining landscapes for their mining heritage comprise the whole context, including dressing floors, buddles, leats, whims, wheel pits, spoil heaps, open pits and stopes as well as the buildings such as engine houses, gunpowder magazines, processing plant and mills. Therefore 'mining landscapes' are a component of the national heritage, and should be viewed in their integrity.
- 3.2 MHSI, as the national expert body on mining heritage, wishes to work in partnership with Dúchas to achieve recording and conservation of the national mine heritage.

- 3.3 MHSI supports the role and objectives of the Heritage Council, including for example, the newly announced 'List of Buildings at Risk'. The suite of mining heritage buildings falling into this category will be reported to them by the Mining Heritage Society of Ireland. However, the context of these buildings in a mining landscape is equally important, as noted in section 3.1.
- 3.4 MHSI supports the Dúchas National Inventory of Architectural Heritage, and the principle of standardising the criteria and standards for such inventory work. In general, the maximum of information interchange, with a minimum of duplication of effort are required, with so many aspects of national heritage needing attention. The MHSI's own inventory of mine heritage was only designed and constructed after consultation with other industrial heritage organisations. Current contacts have been established with Dúchas architectural staff, to further this co-operation. In many areas of national heritage, this partnership and cooperation is considered by MHSI as the only modern, appropriate way for future working

between official bodies and voluntary societies and community groups.

3.5 MHSI supports the establishment by the

Geological Survey of Ireland of a Mine Heritage Fund, for the purposes of emergency conservation work by community groups, on highly significant mine buildings. Additional money to supplement the fund from other sources such as the Department of Arts, Heritage, Gaeltacht and the Islands, is necessary to make meaningful advances in such work.

3.6 Our estimate of the total costs for the consolidation and conservation of a selection of the most important mine heritage buildings nationally, is approximately £900,000. This is based upon an average "spend" of c.£15,000 to consolidate and conserve a representative selection of 60 buildings to represent the totality of all facets of the National Mine Heritage, ranging across, for example, metal, coal, iron, baryte, calcite, and slate mining, quarrying and

----we suggest that

Conservation and

amenities, heritage,

nationally.

educational and leisure

facilities, both locally and

consideration be given to the

establishment of a "Land-Fill

development of related public

Tax" to provide a source of

revenue for Mine Heritage

processing facilities. We consider this a minimum level of expenditure.

- 3.7 We draw specific attention to the current bid being made by Cornwall County Council for "Cornish Mine Technology" as an listing of UNESCO World Heritage Site. The "site" concept will not only include technology features per se, but also their social and cultural dimension, as well as the diaspora of people and technology world-wide. International sites to exemplify this diaspora will almost certainly be added with time, including selected districts in Ireland. The MHSI is offering full support to this bid and we seek similar support from Duchas. Equally it is important that Ireland now move to conserve important examples of Cornish Mine Technology buildings and integrity sites in Ireland in order to provide substance for future inclusion as an adjunct site for the World Heritage Site.
- 3.8. Restriction of existing very limited building conservation funding schemes to buildings in public ownership only is a very significant constraint, as many Mine Heritage buildings lie on privately owned sites. As a consequence, many important and sometimes unique features of National or International Heritage value may be lost to posterity. We cite the Mountain Mine Man Engine House at Allihies, Co. Cork and the

remains of the Iron Foundry at Creevelea, Co. Leitrim as specific examples. We therefore suggest that a less restrictive scheme be considered for comprehending such Heritage features. This could, for example, take the form of a Public-Private Partnership system, perhaps akin to the REPS scheme or the tax rebate based system for privately owned, listed buildings open to the general public.

3.9 Open pits created by mining and quarrying are a contextual component of Mine Heritage and, properly rehabilitated, can provide valuable educational and recreation facilities. More contentiously, they are also very frequently used as Land Fill sites. In such cases,

we suggest that consideration be given to the establishment of a "Land-Fill Tax" to provide a source of revenue for Mine Heritage Conservation and development of related public amenities, heritage, educational and leisure facilities, both locally and nationally. By so doing, the destruction of one contextual component of mine heritage would be directly contributing to conservation of other components, locally and nationally.

4. Natural and Cultural Landscapes

The natural landscape of Ireland with its varied geology has exerted considerable control over the human modification of it to form cultural landscapes. Mining and quarrying are arguably the oldest industries in Ireland as evidenced by the naming of periods of human activities after mined materials: Stone Age, Bronze Age, Iron Age. The former centres of mining at Allihies, Silvermines, Avoca, Glendasan/Glendalough and many others, including more modern sites such as Tynagh and Gortdrum are the cultural landscapes of mining heritage, which has been significant in the development of the nation.

4.1 In terms of landscape protection, the National Parks are valuable for some specific elements, such as the Bronze Age and 19th century mining sites within Killarney National Park. However, most sites fall outside of the National Park areas,

and do not receive this level of protection.

4.2 MHSI is able to advise others on the conservation of the national heritage, where the influence of mining aspects on human development are involved. Examples might include Bronze Age copper mining in the SW, and the more recent historical mined landscapes such as Avoca in Wicklow, Allihies in West

Cork, Bunmahon in Co. Waterford and Silvermines in Tipperary. MHSI is currently involved in various partnerships with other groups in the analysis, recording and protection of such Cultural Landscapes. It is likely that this

function will increase in future years, with more detailed site specific inventory work being undertaken.

- 4.3 In the case of modern exploitation of mineral deposits MHSI recommends the conservation of a small accessible component of the mineralisation for future study and public education, best done through the GSI/Dúchas partnership to designate geological NHAs.
- 4.4 MHSI wishes to emphasise that historic mine sites are new and developing ecosystems in their own right. Consequently the ecology of such sites needs to be appraised as an integral part of the existing natural and cultural landscapes, in particular before any form of site re-habilitation is undertaken which might result in the destruction of such ecosystems.
- 5. Documentary and Archival Heritage
- 5.1 The GSI is a recognised repository of National Archives, relating to geology, including the Historic Mine Records. MHSI has, and is developing, its own mine heritage archive.

Oral Hearings

MHSI has summarised the essential elements of our submission into this document, but representatives are available to present more or explanatory information at oral hearings, should they be held. We can also provide further discussion of any issues raised herein, if required.

MHSI's web page site is WWW.ERA.IE/MHSI

OFFICERS OF THE MINING HERITAGE ASSOCIATION OF IRELAND 1998.

CHAIRPERSON: Dr. John Morris, Geological Survey of Ireland, Beggars Bush, Dublin 4. (work) 01-604-1473; E-mail (home) johnmorris@clubi.ie

SECRETARY: Dr.Matthew Parkes, Geological Survey of Ireland, Beggars Bush, Dublin 4. (work) 01-604-1493; E-mail (work) parkesma@govtec.ie

TREASURER: Dr. Martin Critchley, 26 Woodcliff Heights, Howth, Co. Dublin.

(work) 01-676-6266; (home) 01-8392401

Fax 01-6619785; E-mail (work) mcritchley@era.ie

EDITOR: Des Cowman, "Knockane", Annestown, Co. Waterford.

(home & fax) 051-396157; E-mail (home) dcowman@iol.ie