

Newsletter



Mining Heritage Trust of Ireland

No.70 Autumn 2015

SPECIAL FEATURE

**Conservation Projects in the Cornish Mining
World Heritage Site
Ainsley Cocks**

UPDATE

Remediation Works at the Avoca Mines

FORTHCOMING EVENTS

**NAMHO 2016, Dublin
11th IMHC, Linares, Spain, 2016**

ACTIVITY REPORTS

Annual Members' Medley & Dinner

ISSN 1649-0894

Lontaobhas Oidhreachta Mianadóireachta na hEireann

DATES FOR YOUR DIARY

2016

January 29th - 30th, Tynagh Mine, A Celebration. To celebrate the 50th anniversary of the opening of the Tynagh Mine, the IAEG, IMQS, IGI, DCENR & GSI have come together to organise a special conference to be held in the Loughrea Hotel, Galway. Further details including how to register will be forthcoming.
<https://www.facebook.com/events/511514422362913/>

Feb 19, Glens of Antrim Historical Society lecture on “A century of the limestone industry in Glenarm” by Gerard Muldoon. 8:30pm in St Mary’s Parish Centre, Cushendall. <http://antrimhistory.net/lectures-20152016/>

March 10-12, Raw materials exploitation in prehistory: sourcing, processing and distribution. Faro, Portugal. <http://www.rawmaterials2016.com/>

May 6-11, A celebration of the tinworking landscape of Dartmoor in the European context – prehistory to the 20th century. Tavistock, Devon. <http://dtrg.org.uk/>

9-12 June, Mining History Association Annual Conference, Telluride, Colorado, USA.
<http://www.mininghistoryassociation.org/>

17th-19th June, NAMHO 2016, ‘Mining and Social Change’, Dublin City University. Our AGM will be held during the NAMHO weekend. See p. 8 for more details

July, date tba. It has been suggested that we run a field trip to Lambay Island off the north coast of Co. Dublin, to visit a couple of sites of interest: a Neolithic stone axe quarry and a medieval copper mine. Access to the island is strictly controlled and is currently only possible via Skerries Sea Tours. As an organised trip here requires careful planning including the cost of boat transfers, it will only run if there is sufficient interest to make it viable. Please contact Martin Critchley by the end of January 2016 to express an interest, stating your availability through July and a weekend date for the trip will be arrived at by mutual consensus and the information published in our winter newsletter (NL71).

20-28 August, National Heritage Week. Will members please let us know of any planned mining heritage activities and we will advertise these in our winter newsletter (NL71).

6-11 September, 11th International Mining History Congress, ‘Mines: History and Influence in Industrial and Social Development of Mining Communities’, Linares, Andalusia, Spain. See p. 9 for more details. **Martin Critchley is willing to lead a field trip to the historic Almadén quicksilver mines (province of Ciudad Real) which is part of the Heritage of Mercury World Heritage Site (inscribed in 2012), after the History Congress only if there is sufficient interest from members. Please contact Martin by the end of January 2016 if you would like to participate and a mutually agreed date can be set.**

A full programme of MHTI events for 2016 will be published in our Winter Newsletter (NL71)

Check with organisers of meetings before making any travel bookings in case of change of dates or arrangements. MHTI lists events in good faith but is not responsible for errors or changes made. For MHTI field trips please register your interest, without commitment, so the organiser can keep you informed.

MHTI MEMBERS' BUSINESS

Meeting about the Newtownards Mine Site

On 1 October 2015, a meeting was held at the Carrickdale Hotel between Martin Critchley and Sharron Schwartz, MHTI, and Mark Kelly and Mike Young, Geological Society Northern Ireland Regional Group (GeoSocNI), to discuss the status of the Conlig-Whitespots mining heritage site. The meeting originated in an exchange between MHTI and GeoSocNI following the Newtownards Mine exhibition and lecture weekend of May last. The intention had been, and still is, to convene a meeting of all stakeholders to discuss how the site might be better managed and conserved. The purpose of this preliminary meeting was to set out the background. Below are the minutes of this meeting. Please contact Martin or Sharron if you would like to be involved in future meetings.

The site

The old mines of Conlig and Whitespots lie between Newtownards and Bangor, Co. Down and were major producers of silver-lead ore in the nineteenth century. The site is a designated ASSI and contains several buildings that are Scheduled National Monuments because of their valuable industrial heritage, including a rare mine windmill (one of only two extant examples in the UK), pumping houses and shafts. The site also has spoil heaps that contain unusual minerals of geological interest (e.g., Moles and Nawaz, 1996) and piles of tailings that contain potentially toxic substances. The history of the site has been described by Woodrow (1978) and by Schwartz and Critchley (2013). The site is believed to be owned jointly by Ards and North Down Borough Council (ANDBC), the Clandeboye Estate, and perhaps others. The site lies within ANDBC Landscape Character Area 102 – Holywood Hills, (Northern Ireland Landscape Character Assessment 1999) and Local Landscape Policy Area, Clandeboye (Designation BR24). The details of the ASSI (designated 1999) are summarised in the Northern Ireland Earth Science Conservation Review (NIEA, 2003). The review concluded that:

- The grounds for designation were largely based on its mineralogical and metallogenic importance, with an additional reference to the unusual diversity of plant species that grow on the spoil heaps and tailings area.
- The site is a designated Area of Special Scientific Interest (ASSI) but without active management deterioration will compromise its scientific and cultural interest. Scrambler bikes have caused serious erosion of the spoils which constitute the major remaining scientific resource and measures should be taken to prevent further damage. The spoils should be isolated and refreshed periodically by turning to expose new material. As Ireland's most important 19th century mining area, a case can also be

made for the preservation of the surviving mine buildings on the site, particularly the chimneys at the North and South Engine Houses, the Windmill and the Bog and Conlig Shafts' engine houses. This supremely important element of the industrial, scientific and cultural heritage is unlikely to be repeated on this scale ever again and should not be lost to future generations.

Current condition

MHTI confirmed the opinion expressed in the Earth Science Conservation Review that the site is Northern Ireland's most important 19th century mining site and of exceptional archaeological and heritage value. However, the condition of the site has declined steadily over the last 20 years and current problems include:

- the buildings are continuing to deteriorate and most are covered in ivy, which damages the stonework and is likely to accelerate degradation possibly leading to their collapse;
- interpretative signage has been vandalised;
- rubbish is widespread.

More general environmental effects are:

- Concerns over the reported presence of toxic metals (notably lead) within and across the site and the potential for its exposure to various receptors (human (health), vegetation, animals, controlled waters etc.);
- Mobilisation and dispersion of toxic substances (lead) through site activities such as motocross.

Stakeholder responsibilities

The landowners are responsible for

- prevention of land, surface water and groundwater contamination;
- Prevention of harm to human health;
- fulfilling their obligations as the owner of a Scheduled Monument (with DoE);
- fulfilling their obligations as the owner of an ASSI (with DoE).

The Ards and North Down Borough Council is responsible for (in addition to its responsibilities as a land owner):

- the management of the site as a Country Park.

The DoE is responsible for

- fulfilling its obligations with regard to the Scheduled Monuments;
- fulfilling its obligations with regard to the ASSI.

Geological Survey of Northern Ireland together with the Minerals Branch of DETI is responsible for ensuring the public safety of the underground workings only. They have recently fenced off some of the open mine shafts.

Other stakeholder interests:

- Nearby residents and recreational users of the Park affected by potential contamination arising from contaminating substances within the site.
- Motocross participants wish for free access. Recently access to the site for scrambling has been limited to official competitions and unofficial access is now prohibited by ANDBC.
- Responsible attitudes shown by local motorcycle club
- MHTI and The Geological Society are concerned that the site should be protected and maintained as an important site of geological and archaeological interest and heritage, as provided for by the designations.

Management issues and opportunities

The principal problems and necessary remediation measures are:

<i>Problem</i>	<i>Remediation Measure</i>
Preservation of buildings:	Appropriate Surveys - need to remove vegetation and carry out repairs/ structural work;
Obscuring of minerals of geological interest in the soil heaps:	the ESCR recommended that the spoil heaps should be refreshed by turning over;
Environmental and human health concerns:	Site and risk (source-pathway-receptor) specific assessments required before suitable mitigation measures can be proposed and put in place;
Poor site amenity:	improving the community space by removal of rubbish, replacement of interpretative boards and generally smartening it up. Non compatible site use, e.g., motor bikes - spread and mobilisation of contaminants, Health and Safety

There are important cultural links between the old mines of County Down and elsewhere in Ireland by virtue of their links with the original Cornish metal mining industry, the technology of which spread throughout the world and helped to drive the Industrial Revolution. The heritage and cultural importance of the industry is celebrated at the UNESCO Cornish Mining World Heritage Site, where the development of the local mining heritage contributes significantly to the local economy. The WHS comprises 10 sites, each similar in extent and historical importance to Conlig-Whitespots. There is therefore potential at Conlig-Whitespots to develop and exploit the site in a similar way as a heritage, educational and tourist facility (indeed, the site has recently been used as a location for *Game of Thrones*). There are many other old mining sites across Ireland so there may be potential for mutual support and development through cross-border collaboration within a European grant programme or a north-south initiative. Many of these Irish sites, including Conlig-Whitespots were developed by Cornish mining engineers, so there is scope for

linking culturally with the WHS and the world-wide Cornish mining diaspora.

Funding for remediation and development

Possible sources of funding for remediation and enhancement include:

Funding by the responsible stakeholders, ANDBC and DoE.

Other NI government sources

- DETI: Built Heritage Programme (CD 31/3/16)

Heritage Lottery Fund (HLF)

- Start-up Grant (funds scoping studies up to £10,000)
- Parks for People
- Townscape Heritage
- Our Heritage
- Heritage Grants

EU funds. As one component of a trans-national project, various EU sources of funding might be relevant for funding site renovation, including:

- Horizon 2020: as a partner in the 2017 rural phase of the project 'Cultural heritage as a driver for sustainable growth';
- Tourism funding from the ERDF (60% project funding), page 7, topics:
 - * the protection, promotion and development of natural and cultural tourism assets and related services
 - * small-scale cultural and sustainable tourism infrastructure
- INTERREG and PEACE programmes would previously have been relevant but the current series of programmes appear less relevant.

A scoping study by a professional consultancy to assess the problems, review the potential options and consider the wider development opportunities could be undertaken for less than £10,000. MHTI and The Geological Society would be willing to draft or contribute to the specifications for such a study.

Conclusions

- MHTI and GeolSocNI agree that the standards required of a Scheduled Monument are not being maintained at Conlig-Whitespots.
- As a minimum, action is needed to protect the buildings and spoil heaps (mineral specimens) from further decay, to protect human health (on-site users, off-site receptors), soil and groundwater from pollution, to smarten up the Country Park facilities and replace vandalised signage.
- There is scope not only for remediation but enhancement and development of the site as a sustainable heritage attraction.
- There is scope for north-south project collaboration with other mining heritage areas, e.g., Co Wicklow.
- Funding for remediation appears to be available in principle from the HFF and various EU funds.
- Informally find out the positions of the responsible stakeholders, following which we can consider planning a stakeholder meeting.

The Avoca Mines Remediation Works, County Wicklow: An Update

West Avoca

The 'remediation' works at West Avoca were approved, with conditions, by Wicklow County Council in the autumn of 2015. The works concern the capping of two shafts: Whelan's and Air Shafts which, when capped, would be covered over by topsoil and surrounded by low stone walls or 'collars' (to recreate the historical form of abandoned shafts). One of the conditions of the planning permission, which was sought by the MHTI, is that a suitably qualified archaeologist is on-site during the works. The works commenced in October 2015.

However, during a site visit by two MHTI members in October, it was observed that a third shaft has been capped: New Western Shaft, which was not mentioned in the planning application. Moreover, no concrete cap was visible on Whelan's Shaft and whether or not this has been remediated is unknown. Rather disquieting, is that both the newly capped shafts do not include any form of ventilation. The board of the MHTI is very concerned that the lack of ventilation could reduce the air quality of the underground workings and cause dangerous build-up of any methane and other gases which might enter the workings from the unlined landfill in the Pond Lode open pit. Moreover, this flies in the face of best practice elsewhere which recommends ventilation to avoid impacts on a mine's hydrology – where changing ground water levels might cause air pressurisation and subsequent 'blow-outs'.

Close to the New Western Shaft is a shaft inclined southwards on the dip of the ore body that could have been a footway or ladder shaft. This was still open at the time of inspection by the MHTI from a neighbouring field, at the invitation of a local landowner. As far as we are aware, planning permission to cap New Western Shaft was not applied for by the Department, and hence not granted by Wicklow County Council. If this is indeed the case, then the works here may have been undertaken without authority.

During the extraction of the spoil surrounding the New Western Shaft, a number of mining related artefacts were discovered. Some of these have been discarded on site, the most important of which is a square wooden beam with an axle bearing at one



The Incline Shaft near New Western Shaft as viewed from a neighbouring field



The recently installed concrete cap at Air Shaft, which, in common with that at New Western Shaft, does not include any form of ventilation, a highly questionable procedure not in keeping with best practice methods as undertaken elsewhere



Presumed axle bearing cut off from wooden beam at New Western Shaft and discarded in nearby gorse. A 2 euro coin is given for scale

end. More seriously, the artefact has been damaged by cutting through the retaining bolts which attached the bearing to the wooden beam. The form of the wooden beam suggests that it may have been a pumping rod and the axle bearing could have been part of the angle bob mechanism at the shaft head, or even part of a balance box. Alternatively it could be part of a horse whim mechanism. If its discovery has not been recorded by the archaeologist who was supposed to be on-site, the vital contextual information relating to this artefact and its relationship to the shaft will have been lost, making an interpretation of the site difficult, if not impossible. The MHTI has complained to Wicklow County Council about this damage and have requested a copy of the on-site archaeological report of the works. We have also raised our concerns about the apparent unauthorised capping.

Tigroney, East Avoca

In May 2015, CDM Smith on behalf of the Minister for Communications, Energy and Natural Resources (DCENR)

applied for planning permission in relation to remediation works at Tigroney, West Avoca. The MHTI made a submission to Wicklow County Council in relation to the proposed works (see newsletter No. 69). Despite our submission, Wicklow County Council approved the works with a number of conditions. These include that the methodology of spoil capping is approved by the Council engineers, that a methodology is submitted for the conservation works on the ore bins and that there is a resident archaeologist on site during the works. As part of the planning application, CDM Smith disputed the MHTI's concerns about the growth of native copper in the 850 level despite the evidence of its existence given by the MHTI.

Site Access

The Avoca mines site, undoubtedly the jewel in the crown of Irish mining heritage, represents a wonderful opportunity to present a unique asset to the wider public and act as a driver for local economic regeneration in a deprived rural area. Over the years, the site has been used for highly popular guided walks as part of Heritage Week and a local commercial operator has seen the value of the site as an opportunity to encourage and expand tourism in the valley. Indeed, the long term aim of the community, led by the former VADA organisation, and more recently, the Avoca Heritage Committee, is to open the mine site to heritage trails as a vital asset in encouraging local community regeneration and to foster a sense of pride of place.

However, the potential benefit of this unique heritage asset to the rural economy has been continually thwarted by a blanket ban on access by the Department for Communications, Energy and Natural Resources (DCENR). It is understood that one commercial operator was actually threatened with legal action

if he took visitors onto the site (even although he was fully insured and indemnified as a licensed Irish tour operator). Having vociferously discouraged all forms of on-site tourism, ostensibly on the grounds of health and safety, it is therefore somewhat incredible that the Department has allowed not just one, but two, TV companies access to the site for filming purposes. The first was for an episode of the blockbuster *Vikings* TV series, produced by Irish and Canadian companies (Octagon Films and Take 5 Productions). The second was for an episode of the critically acclaimed *Penny Dreadful*, a British-American horror drama television series created for Showtime and Sky. Filming for the latter took place in and around the Cronebane opencast. These highly popular TV dramas will be beamed into the homes of millions of people worldwide.

It is therefore somewhat naive to believe that this will not generate significant public curiosity about the film sets which will undoubtedly lead to increased visitation to Avoca, only for tourists to find the sites off limits. According to the consultants, CDM Smith, the Cronebane opencast has highly dangerous rock faces and the spoil tip (Mount Platt) is so unstable that it should be removed. Moreover, levels of on-site toxicity preclude any entry by the general public. How then, can the Department justify permitting filming on the site and yet ban genuine (and insured) local tourist operators? We do not know if the Department received any payment for granting permission for the filming, but if they did then surely they have a moral obligation to see that some of this income is re-invested in the heritage, in particular urgently required consolidation works to the extant mine buildings listed in the County Wicklow Record of Protected Structures for which they, as the landowner, have a duty of care?

Draft County Development Plan

A draft of the County Development Plan for County Wicklow (2016-2022) has been issued. The MHTI welcomes the fact that the designation of mine buildings at Avoca has been improved with regard to the list of proposed buildings in the Record of Protected Structures (RPS) – although the support pillars for the rope driven pumping system at Sroughmore have not been included, which is a regrettable oversight given their uniqueness in the Irish industrial landscape. However, we are dismayed that the spoil heaps (previously included in the RPS) have been excluded. We understand that the exclusion of the spoil heaps was due to pressure brought to bear on the Council by the Department for Communications, Energy and Natural Resources. The exclusion of the spoil from the RPS will give the Department carte blanche to remove spoil, cover over spoil heaps and even to remove the iconic 'Mount Platt' waste tip.

However, experience from other mining regions suggest that this is a highly questionable strategy. Firstly, many spoil heaps impregnated with heavy metals are proven to be harbouring rare or unusual biota such as metallophyte bryophytes (mosses and liverworts) some of which lie within areas of Calaminarian Grassland, a habitat listed on Annex I of the EU Habitats Directive. Secondly, spoil heaps are also important from a mineralogical and archaeological viewpoint, providing



Signs erected by the Department at Tigroney warning members of the public to keep off the mine site



Penny Dreadful film crew near the Cronebane Opencast with Mount Platt in the background. Photo, Marie and Andy Merrigan, the Avoca Heritage Committee

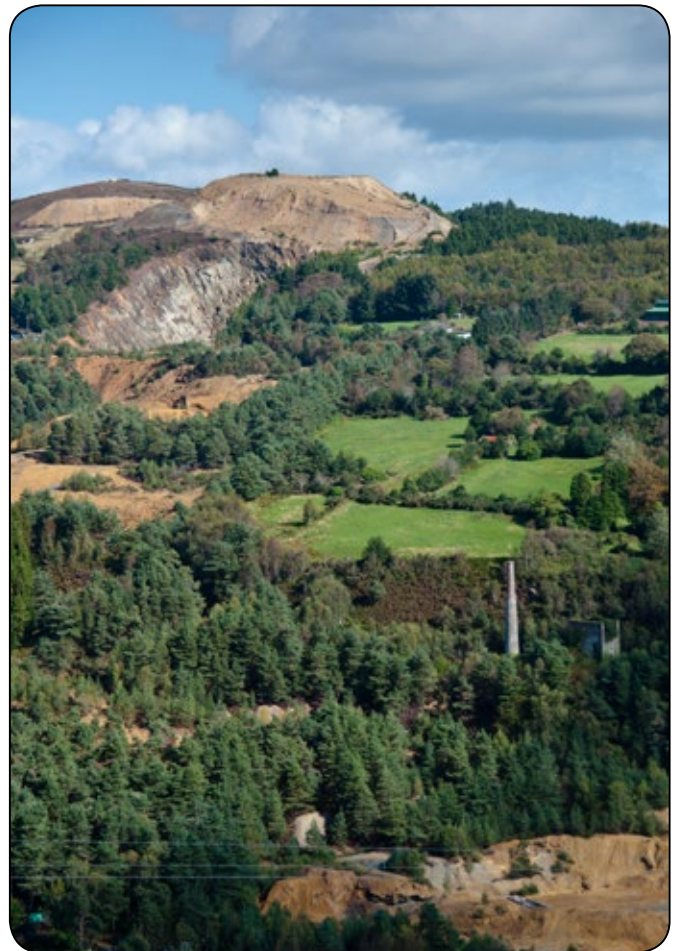


The Penny Dreadful film crew with heavy machinery atop Mount Platt which CDM Smith alleges is 'unstable'. Photo, Marie and Andy Merrigan, the Avoca Heritage Committee

important contextual evidence of past mining activity and therefore worthy of preservation in their own right. Indeed, attention usually alights on the most iconic and visible features such as headframes, engine houses, mills, smelters, mine offices and workers' housing, often at the expense of ancillary features such as mine spoil heaps and tailings dams.

More importantly, the MHTI would argue that wastes from the mining industry are more than just visual, physical, or chemical presences on the landscape; they embody powerful and important cultural meanings as well, a fact that is embraced and understood by a significant proportion of the local community at Avoca. Yet, this seems to have been completely lost on the Department. We will make our position regarding the spoil heaps abundantly clear: these are an integral part of the historic mining landscape and should be protected under the National Landscapes Strategy. Indeed, we intend to make a submission to Wicklow County Council to redefine the curtilage of the mine buildings to include the spoil.

Martin Critchley and Sharron Schwartz



The landmark Mount Platt and Cronebane opencast are iconic elements of the historic mining landscape of Avoca. Spoil heaps are more than just visual, physical, or chemical presences on the landscape; they embody powerful and important cultural meanings too

EVENTS AND NOTICES

Members' Medley

This year's Members' Medley, held at Collin's Barracks, was very well attended and an enjoyable afternoon was had by those who turned out. Proceedings were kicked off by Martin Critchley who provided an illustrated presentation detailing the remediation works being undertaken at the Avoca Mines in County Wicklow before opening the floor to a very animated discussion. Next up was Nick Coy who gave us a highly entertaining talk, well illustrated with a collection of historic slides about Irish mineral deposits and mines that never made it, drawing on his experience working across the country as a mineral prospector.

Paul Rondelez then treated us to a fascinating trawl through medieval and early modern archival sources, illustrating the copious material relating to Irish mines and mining that is barely known and underused by historians. He suggested a new 'from the archive series' in our annual journal making use

of these important and overlooked sources, which was very well received.

Following a break for refreshments and time for members to inspect various mineral specimens, artefacts and mining literature, we welcomed Brendan Morris, Head of Mining and Technical with the Vedanta Resources Group that operates the Lisheen Mine. Brendan gave a highly informative and detailed lecture about the mine which is due for imminent closure. Alastair Lings then wrapped up proceedings by providing a slide show of the events and field trips held by the MHTI during 2014.

Members then retired to the Nancy Hands pub for a splendid social evening of drinks followed by dinner. Thanks to all those members who attended, to our speakers and to Nigel Monaghan for arranging the venue.

NAMHO 2016, Dublin

Next year's NAMHO Conference is being hosted by the MHTI on the 17-19 June 2016 to coincide with our 20th anniversary and the 1916 centenary celebrations. The meeting will be based at Dublin City University, which is handy for the airport in the north of the city.

As this coincides with our 20th anniversary, we hope that MHTI members will wholeheartedly support this conference which will be an opportunity to showcase the good work undertaken by the MHTI over the last two decades.

Registration will open late Friday afternoon. In the evening the conference will be formally opened and there will be two lectures by keynote speakers on mining in Ireland and 20 years of the MHTI, followed by a buffet dinner.

On Saturday there will be a day of lectures with the theme *Mining and Social Change*. The conference dinner will be in the evening, followed by musical entertainment.

On Sunday we have organised field trips to the copper mines of Avoca, Wicklow, which have been much in the news lately due to consolidations works, and the silver-lead mines of the Wicklow Uplands, where recent research and survey work has made major new discoveries.

Post conference (Monday 20th) we hope to be able to offer visits organised to working mines, but there will be a very limited number of spaces available. Information will be made available for those wishing to travel to and explore, other mining areas in Ireland.

Abstracts for papers (300 words) are sought on the theme of *Mining and Social Change* which include the following topics:

- Regional identities
- Migration
- Urbanisation
- Industrial housing
- Education
- Gender and the mining industry
- Self improvement societies/social philanthropy
- Sport and leisure
- Industrial action
- Mines and quarries during the Troubles
- Changing attitudes in favour or against mining

The deadline for abstracts is Friday 26 February 2016.

Please send these to Sharron Schwartz: sschwartz@era.ie.

Details of how to register for the conference will be made available online in due course. You are responsible for booking your own accommodation. We recommend that available at Dublin City University: <http://dcusummeraccommodation.ie/> Further information will be published in our Winter newsletter (NL71).

Organising a conference of this magnitude requires a willing and hard working team of people to make it a success. We are looking for members to help out with its organisation, to act as stewards during the conference and as guides on field trips. If you think you are able to help, then please get in touch with any of our directors.

11th International Mining History Congress, Linares, Andalusia, Spain, 6-11 September, 2016

The International Mining History Congress (IMHC) is an event to encourage and coordinate the functioning of periodic international meetings where persons and organisations wishing to promote mining history can gather to discuss matters of common interest. Previous congresses have been held in historic mining areas of Germany, Japan, USA, Australia, Greece, Cornwall, Mexico, India and South Africa and have facilitated wide networking among mining history enthusiasts on all continents.

The Colectivo Proyecto Arrayanes, a nonprofit voluntary organisation devoted to the conservation and valorisation of mining heritage, prepared a formal application to develop the next congress in the Linares – La Carolina lead mining district, and finally has been entrusted by the International Committee to organise the event with the support of the Linares Town Council from 6th-11th September 2016.

Mining, as one of the most ancient industries, has shaped cultural landscapes and influenced the evolution of civilisations in many parts of the world. Human settlements, traditions, cultures, beliefs, economic and social systems have been characterised by the impact of mining throughout history.

The theme of the 11th Congress is *Mines: History and Influence in Industrial and Social Development of Mining Communities*. Papers are welcome on all aspects of mining history and will be included in following themed groups:

- Growth and decline of mining activity. Impacts of mining history on past, recent and future generations
- Relationship between the development of mining, and mining related, industry and technology

- Gender topics in mining activity through the centuries
- Mining heritage as a resource for cultural, social and economic development (including tourism)
- Mining history in the light of human, landscape and industrial aspects
- The evolution of Health and Safety legislation with respect to mining
- Mining personalities
- Labour issues and its bearing on the success of mining operations
- The relevance of foreign investment and the introduction of new technology for mining development
- Mining – a linkage between the cultures

Several MHTI members will undoubtedly have visited the Linares and La Carolina Mining District as the Colectivo Proyecto Arrayanes was involved with both the MINET and Europamines projects. The breadth of industrial monuments and heritage in the region is astounding and several trips will be run to various sites and features during the congress. Post conference visits to the UNESCO World Heritage Sites of Granada (Alhambra Palace) and Córdoba are being offered.

Bookings are now open and paper abstracts sought. Accommodation in particular is filling up fast and we would encourage you to book this at your earliest convenience.



The San Vicente shaft head complex



The Cornish-type engine houses at Pozo Ancho

To find out more, visit the website: www.mining2016linares.com

SPECIAL FEATURE

Conservation Projects in the Cornish Mining World Heritage Site *Ainsley Cocks, Research and Information Officer*

King Edward Mine workspaces open for business

King Edward Mine (KEM), near the village of Troon in Cornwall, has an important place within the Cornwall and West Devon Mining Landscape World Heritage Site ('Cornish Mining World Heritage Site'). KEM is unique as the only purpose-built metalliferous mine training facility with on-site underground access in the UK.

The site was initially developed as a training school following its acquisition by the now internationally renowned Camborne School of Mines in 1901. Created utilising part of South Condurrow Mine (1864-1896), KEM was to successfully function in this capacity until 2005. Since 2001 KEM has also operated as a popular mining museum and has secured the support of many enthusiastic volunteers over the years.

Recently a workspace development and conservation project has been underway to restore the range of historic buildings at the northern end of the site and this is now essentially complete. The former mine Count House, Blacksmiths' Shop, and the Miners' Dry and Mess Room form a complex of mostly Grade II* Listed buildings. Listed buildings at this designation grade constitute only 5.5 per cent of the total estimated number of c.375,000 Listed buildings included on the Historic England register. In addition to the above the complex also forms part of the 'Outstanding Universal Value' - or international

significance - of the World Heritage Site. This is in recognition of the important role played by KEM in the development of the Cornish mining industry.

KEM was purchased from its former owners the Pendarves Estate by Cornwall Council (CC) in 2009, and is now leased to the managing charity, King Edward Mine Ltd., to run as a mining heritage attraction. The KEM Workspace Project is the first of two significant capital schemes on site part financed by the European Regional Development Fund Programme (ERDF - 2007 to 2013), that will secure its long-term future. Investment in the project by Cornwall Council has levered a grant of over £1m (€1.3m) from ERDF Convergence into the project's first phase. The construction company Midas Group Ltd. has been undertaking the works, which include the Count House and Carpenters' Workshop complexes housing nine affordable workspaces for local businesses.

The second phase, due to commence shortly, will focus on the conservation of the core buildings which comprise the museum element of the site. This will include replacing the roof of the Boiler House and refurbishing it as a new exhibition space, and the creation of a much-needed café within the former mine Assay Office. Truro based architects PDP Green Consulting are the leading on this phase of the project.

The extensive works at KEM will also have the benefit of



Left to right - the former Mess Room, Count House and Blacksmiths' Shop at King Edward Mine near Troon, Cornwall; all recently conserved as part of the ERDF funded workspace creation project. Image, Graham Gaunt, Photowork

“King Edward Mine was already an award-winning heritage attraction before the council joined the efforts of the mine’s team of volunteers to help safeguard the site’s long-term future.

The redevelopment of King Edward Mine has been a priority of the council, recognising the heritage significance of the site and its potential to contribute to the socio-economic wellbeing of the local area.

Tamsin Daniel, CC Culture Programme Officer

removing a number of structures from the Historic England ‘Heritage at Risk’ register. This records features of historic importance Listed as Grade II* which are under serious threat from neglect or other issues. The Count House, Blacksmiths’ Shop, Miners’ Dry, Weighbridge Stores, Assay Office, Brass Machining Shop, and the Boiler House to the Winding Engine House will all be thankfully removed from the register once the project is concluded at the end of 2016.

Tamsin Daniel, Cornwall Council Culture Programme Officer, is extremely excited about the improvements at KEM:

“King Edward Mine was already an award-winning heritage attraction before the council joined the efforts of the mine’s team of volunteers to help safeguard the site’s long-term future. The redevelopment of King Edward Mine has been a

priority of the council, recognising the heritage significance of the site and its potential to contribute to the socio-economic wellbeing of the local area.

“The site benefits from its proximity to Camborne and the A30, with easy access to beautiful walks and cycle rides on the Great Flat Lode that passes through the mine. Its location and the affordability of the new units have attracted quite a diverse range of tenants, from Cornwall Wildlife Trust’s Upstream Thinking Project team, to Kernowspa, a luxury skincare and home fragrance company.” A few units remain available for rent currently but it is anticipated these will be fully leased shortly.

The World Heritage Site team very much welcomes the current conservation work, following the construction of the new winder and compressor houses funded through the World Heritage Site’s ‘Discover the Extraordinary’ project in 2010.

Deborah Boden, World Heritage Site Co-ordinator, says:

“The World Heritage Site team was pleased to instigate and fund the process of business planning for the site in 2010, and the World Heritage Site Partnership is delighted that this Convergence funded project is delivering an economically sustainable future for the mine and supporting its dedicated volunteers.”

September 17th was chosen as the day to celebrate the official completion of phase 1 and KEM volunteers and project partners were delighted to welcome Prince Edward to tour the mine and officially open the new business units. With phase 2 to commence shortly, the future for the site is positive and congratulations are extended to everyone associated with this fantastic project.



His Royal Highness, Prince Edward, speaking with volunteers Frank Kneebone (left) and Nigel MacDonald at the opening of the King Edward Mine Work Units on September 17th. Image, A. Cocks

The Luxulyan Valley wins £3.5 million grant from Heritage Lottery Fund

Much celebration has followed the recent Heritage Lottery Fund (HLF) announcement of a major grant to benefit the Luxulyan Valley, near St Blazey in Cornwall. The Luxulyan Valley and the nearby eighteenth century port of Charlestown are part of the Cornwall and West Devon Mining Landscape World Heritage Site ('Cornish Mining World Heritage Site'), as inscribed by UNESCO. The Luxulyan Valley forms part of the 'Outstanding Universal Value', or international significance, of the World Heritage Site, through its important associations with copper and tin mining in the nineteenth century.

Much of what is seen within the Luxulyan Valley today can be ascribed to the efforts of one man, Joseph Thomas Treffry (1782-1850). While there is significant evidence of industry in the valley dating from before the nineteenth century, it is the large scale landscape changes wrought by Treffry during the early to mid-1800s which demand attention. Treffry was to radically reshape the industry of mid-Cornwall during the early years of the nineteenth century, developing metalliferous mines, granite quarries and china clay interests, while creating infrastructure to enable the transportation of minerals and materials to and from his purpose built harbours at Par and Newquay. Such was the transformational nature of his achievements that he was to acquire the moniker 'the King of mid-Cornwall', and his scope of vision could be claimed comparable with that of Brunel.

The Luxulyan Valley Heritage Restoration Project aims to carry out extensive conservation and interpretation of the valley's

We loved the ambition of this project, from conserving the Treffry Viaduct and Velvet Path to getting the local community involved through volunteering and training opportunities. There's no doubt it has the potential to deliver real and lasting benefits to both the natural and industrial heritage of the area

Nerys Watts, Head of HLF South West

industrial and natural heritage and will be underpinned by an activity programme that will engage new audiences, improve accessibility and provide inspiring training and volunteering opportunities for the local community. A permanent exhibition at the Wheal Martyn China Clay Museum, at the nearby town of St Austell, will also highlight the importance of the valley.

At the centre of the project is the Treffry Viaduct - a spectacular granite-built combined bridge and aqueduct constructed from 1839-1842 to convey a horse-drawn tramway and river water to power an inclined plane. In recent years this impressive feature has developed serious leaks requiring the stopping of the flow to prevent damage. An ambitious plan will address



The Luxulyan Viaduct, spanning the spectacular Luxulyan Valley in Cornwall. Image, A.Cocks



The Carmears water wheel pit which, together with the Luxulyan Viaduct, are impressive feats of nineteenth century engineering constructed through one man's vision to exploit the industrial minerals of mid-Cornwall. Image, A. Cocks

this problem through the installation of bespoke stainless steel troughs, lain beneath the level of the tramway trackbed. The project will also include the repair of sections of the associated leats (man-made water courses), where required.

The recent HLF bid from Cornwall Council and Cornwall Heritage Trust - the owners of the valley and viaduct respectively - has now secured earmarked HLF funding of £3.4m (€4.7m). This grant confirms that the project meets HLF criteria for funding, and that the HLF considers the project to have sufficient potential to deliver high-quality value for money outcomes. Now the announcement has been made, the project has two years to submit fully developed proposals to secure a firm award. Development funding of £246,800 (€340,277) has been granted to help Cornwall Council and Cornwall Heritage Trust progress plans to apply for the full earmarked funding.

The future sustainability of the valley is also to be addressed through the construction of a separately funded hydroelectric turbine, powered by water from the repaired leats, which will fund ongoing conservation and continue the water powered theme of the valley. The Treffry Viaduct and leats are shortlisted as a conservation priority in the current Management Plan for the World Heritage Site (2013-2018) and the HLF support will now ensure this work is delivered. Deborah Boden, the World Heritage Site Co-ordinator, commented: "The Luxulyan Valley has an important place within the World Heritage Site and we are grateful for all the hard work by the many project partners that worked with us on the bid and made the HLF award possible. The project will enable the leat waters to flow once more, supporting the production of renewable energy

from a hydroelectric turbine, and also provide much needed opportunities for the local community to engage with this fantastic industrial landscape."

Nerys Watts, Head of HLF South West, said: "The Luxulyan Valley is a little-known but stunning part of the Cornish landscape. We loved the ambition of this project, from conserving the Treffry Viaduct and Velvet Path to getting the local community involved through volunteering and training opportunities. There's no doubt it has the potential to deliver real and lasting benefits to both the natural and industrial heritage of the area."

The Cornwall Council Cabinet Member for Housing and Environment, Joyce Duffin, said: "This is fantastic news. The Luxulyan Valley is a hugely important part of Cornwall's industrial and natural heritage, and is of national and international significance. To be given the funding green light by the Heritage Lottery Fund is a major boost." Philip Hills, Cornwall Heritage Trust Chairperson, added: "This is wonderful news and ensures the future heritage of the Treffry Viaduct and long-term sustainability of the Luxulyan Valley as a whole."

The Luxulyan Valley with its many structures and leats are an essential part of Cornwall's industrial history and congratulations are extended by the World Heritage team to all the project partners that have worked so hard to achieve this excellent and much-deserved outcome.

**See: www.cornishmining.org.uk
www.cornwallheritagetrust.org**

IRISH NEWS AND PUBLICATIONS

End of the road for Irish metal mine (29/11/2015)

Lisheen, Europe's largest producer of zinc, is facing imminent closure. Falling global prices for the metal due to an economic slowdown in China and surplus supply on world markets, means the country's second largest mine is shutting down with the loss of 370 jobs.

Zinc prices have fallen by almost 30 percent this year to six-year lows and earlier this month dropped temporarily below the \$1,500 per tonne threshold.

"Mining operations will cease at the end of November, and the milling operations will cease during December," owners, Vedanta Resources Group said in a statement, and there are no plans for further production. Set in a region with few other employment opportunities in rural southern Ireland, Lisheen Mine has been in operation since 1999. Its closure will leave Tara, owned by Swedish company Boliden, as the only active zinc extraction point in Ireland, accounting for 150,000-200,000 tonnes a year. Tara, Europe's largest zinc mine, is expected to continue production until 2019.

Ireland was the 10th producer of zinc in the world, as well as the largest in Europe, with 300,000 metric tonnes of zinc mined in 2014 and the country was responsible for 2.2 percent of global output and 28 percent of European output in 2014. The closure of Lisheen will almost halve Ireland's zinc output and reduce global supply by 1.2 percent.

<http://www.bangkokpost.com/news/world/779425/tumbling-zinc-prices-hit-corner-of-rural-ireland>

Report details quarry deaths

The Health and Safety Executive for Northern Ireland have recently published their Annual Report for 2014-2015. The section on the Extractive Industries (p.50-51) covers Abandoned Mines: "there was one collapse of an abandoned mine workings in the Portrush area - no one was injured as a result." Three tragic deaths at quarries are recorded (p.138), the first since February 2010.

<http://www.hseni.gov.uk/about-hs.../corporate-publications.htm>

Interesting mining heritage slideshow

Slides from the talk by Alex Donald on "New Approaches to Monitoring Northern Ireland's Mining Heritage" at the GeoDATA seminar in Belfast on 5 November 2015 are available on the BGS website. Most of the images relate to Co. Antrim.

https://www.bgs.ac.uk/news/docs/GeoDATA_2015.pdf

Trenching results, Inishowen, Co. Donegal (11/11/2015)

Connemara Mining has announced the results of the trenching programme carried out at Inishowen, County Donegal. Trenching was conducted over the high gold grade soil samples obtained in July 2015. This was done in an attempt to identify a subsurface source of the anomalous quartz rock found scattered in the surrounding fields. Channel sampling of the exposed bedrock obtained good grades indicating 0.80m at 7.95g/t Gold and 1.1m at 1.78g/t Gold. This includes a 12cm vein at 30.1g/t, 10cm at 16.85g/t and 10cm at 10.45g/t Gold.

The veins were narrow, averaging 10 to 12cm wide; however such veins have been known to swell. Judging by the size of gold bearing boulders removed from the foundations of a nearby building it is possible that they could swell to as much as 80cm. In this geological environment it is normal that veins do not occur by themselves so multiple veins are expected to be found over the course of further exploration.

The next steps involve detailed mapping and prospecting over a 4-6 sq km area, expanding the soil sampling to see how far this gold anomaly extends and conducting further trenching. A shallow drill hole programme is being considered to generate information on dip and strike direction. The whole programme will commence in early 2016.

John Teeling, Chairman, commented "This is a very good result. It is rare to find high grade gold. Now we need to find out how big is the area containing the gold. We need more information on the extent of these veins as well as tracing their width. Based on boulders in the area we are confident that at least one vein will swell. The next phase will begin early in 2016."

http://online.hemscottir.com/servlet/HsPublic?context=ir.access&ir_option=RNS_NEWS&ir_client_id=6312&item=2254651671969792

Very rare manuscript for sale

The latest catalogue of P&B Rowan, booksellers, Belfast, lists for sale an extremely rare item: *Particulars of the Extensive Slate and Slab Quarries and Mills Situate in the Island of Valentia, County Kerry, Ireland, together with the Costly Machinery, now in Active Work*. The catalogue states that no other copy has been located and that it was issued in the 1860s for private circulation, before the issuing of a prospectus. The asking price is £550.

https://www.ilab.org/eng/booksellers/1983-p_b_rowan.html

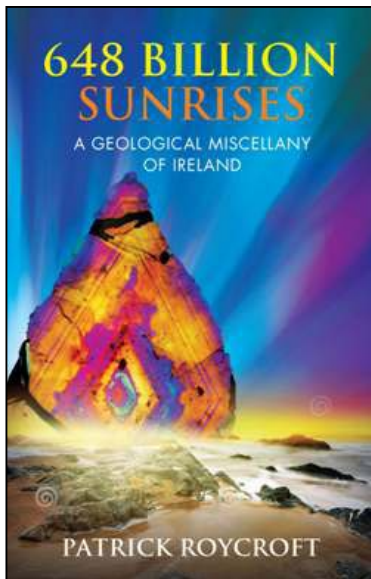
Thanks to Petra Coffey and Matthew Parkes for this information.

New Publications

If you are looking for a good read to fill someone's Christmas stocking, here are three new books that look just the ticket!

648 billion sunrises, a geological miscellany of Ireland

by geologist, Patrick Roycroft



Is the Sugar Loaf a volcano? Have meteorites ever struck Ireland?

Are there emeralds on the Emerald Isle?

648 Billion Sunrises is a general introduction to the geological wonders of Ireland written in a fun, informative and accessibly humorous way. The author uses famous geological cases, biographical sketches, historical contexts, his own experience as a practising geologist, and brand new research done especially for this book to provide insight into this popular field. Presented in miscellany format, *648 Billion Sunrises* engages the general reader with diverse topics of popular interest, with chapters including:

In the Beginning: A Short Geological History of Ireland
When Is Not a Volcano a Volcano? When It's a Sugar Loaf
Ireland's Jurassic Park
The Aliens Have Landed: Meteorite Strikes
Irish Gemstones
Are Ireland's Gold Artefacts Really of Irish Gold?
Geology: A Fatal Attraction

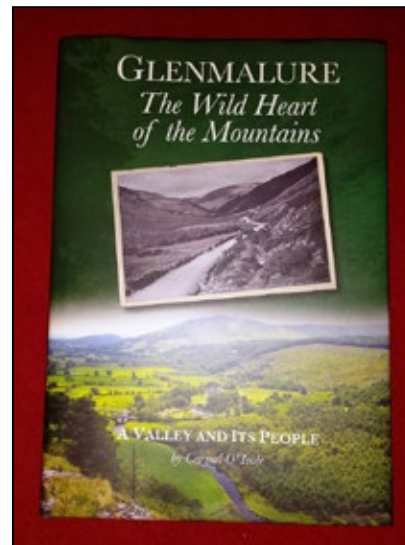
This illustrated book is a versatile read that can be read cover to cover for a general overview of Irish geology or opened at any page for a titbit of geological information.

Aimed at the general public with an interest in Irish natural history, *648 Billion Sunrises* is accessible to the reader unfamiliar with geology while also providing the technical detail to engage the student or academic.

Orpen Press, Dublin
November 2015
ISBN 978-1-909895-68-3, paperback
€16.99

Glenmalure the Wild Heart of the Mountains: A Valley and its People

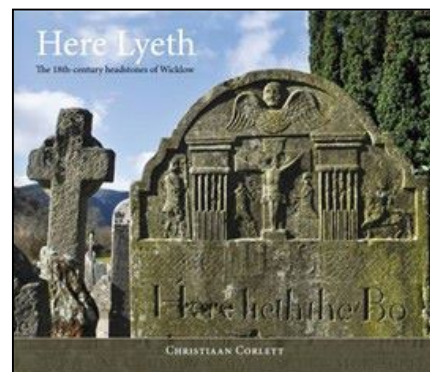
by local school teacher, Carmel O'Toole



Despite poor weather more than 300 people crammed into a marquee outside the Glenmalure Lodge on 5th December for the launch of local school teacher, Carmel O'Toole's book, *Glenmalure The Wild Heart of the Mountains*. Chapters include the Battle of Glenmalure (1580), the An Oige hostel, accidents in the mountains, mining and sheep farming in the valley and much more. Available for purchase at Dubray Books, Bray, and Bridge Books, Wicklow, at €25.

Here Lyeth - The 18th Century Headstones of County Wicklow

by archaeologist, Chris Corlett



Published by the Heritage Office of Wicklow County Council, and launched at the Glendalough Hotel on 9 December by Cllr John Ryan, Cathaoirleach of Wicklow County Council with a talk from the author, this beautifully illustrated book explores the small number of stone cutters who were responsible for the majority of 18th century headstones that can be found throughout the graveyards of County Wicklow. As well as being an important source of genealogical information, many headstones are also important from an art historical perspective. This book examines the evolution of headstones in the county during the 18th century and explores the religious carvings that developed during this period, as well as some of the social issues that they reflect. The retail price is €20.

OTHER NEWS

The end of an era

UK Coal Holdings is shutting down its remaining underground operation next month, marking the end of a 300-year industry that once employed over a million workers. While open cast coal extraction will continue in the country, the closure of Kellingley Colliery in northern England marks the end of underground mining, an industry that helped make Britain an industrial power and top exporter.

Over 20% of the nation's energy needs are still met by coal, which is mostly imported. Since 2000, U.K. power generators Electricite de France SA to RWE AG have bought more of the fuel from abroad, where coal from Australia to Colombia is cheaper, according to the Confederation of U.K. Coal Producers. Britain's coal industry is not alone. The global sector is suffering from rock bottom prices, oversupply, and weak demand. Metallurgical coal prices have dropped below \$90 per metric ton, their lowest levels in a decade, pushing producers to slash output. Thermal coal, mostly used for power generation in emerging markets, is trading at \$42 per short ton, as countries try to switch power generation to lower-emission options like natural gas or renewables.

Hatfield colliery near Doncaster was expected to be the last

The closure of Kellingley Colliery in northern England marks the end of underground mining, an industry that helped make Britain an industrial power and top exporter

of England's 3 remaining coal mines to shut, and the NUM invested £4m of members' money there in the hope that state aid could further extend its life. But the doubling of the carbon floor price by chancellor George Osborne in April meant that, when the mine's contracts ended, there was no buyer, leading to its closure in June. Two weeks later, Thoresby in Nottinghamshire closed, too. Local MP Nigel Adams says, "The closure of Kellingley is a tragedy for everyone who works there," and blames "successive governments' decarbonisation policies along with cheaper coal imports". <http://www.mining.com/last-standing-underground-coal-mine-in-the-uk-to-close-next-month/>.

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[COUNTRY CODE FOR IRELAND IS +353, AND THE FIRST ZERO OF AREA/MOBILE CODE IS OMITTED]