



Participants on the 5th Industrial Archaeology Workshop in front of Reșița's last Blast Furnace, considered to be the symbol of the town.  
Photo: Irina Iamandescu

**Inside:**  
Conference reports  
on the conservation  
problems of the  
20th century,  
coal mines and the  
World Heritage list,  
and Big Stuff.

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## Industrial heritage in time of de-industrialization – the Mountainous Banat region in Romania

The area of southwest Romania known as the Mountainous Banat is the oldest industrial region in the country, with industrial heritage that is remarkable for South-Eastern Europe dating from the eighteenth century.

The rich metal resources such as copper, iron, silver, gold or lead ores, and abundant water and wood, were known and used from the Roman period. An early industry developed using water and charcoal as energy sources which later developed into a strong mining and metallurgical center. After mineral coal was discovered in Steierdorf Anina in 1790, the industrial development grew even more strongly and continued so up to the communist period.

Approximately 25% of all the listed industrial monuments of Romania are preserved in this area of around 8500 km<sup>2</sup>. Besides individual items such as the metallurgical complexes in Reșița, mining heritage, hydro-technical systems, railways, worker's dwellings etc., what strikes the visitor is the coherence of the industry in the territory and the subtle connection, achieved throughout centuries, between industry and the landscape that can be thus recognized as cultural landscape.

Immediately after the privatization of most of the industry in the 1990's, the de-industrialization process started abruptly with the shutting down of the last two blast furnaces in Reșița (founded in the 1960's on the same site as the very first 1771 furnaces), continuing with the demolition of one of the furnaces in 2004 and concluding with closure of the Anina coalmine in 2006.

The regions' general economic relapse combined with the shortage of alternatives to industry, the lack of an efficient legal protection as well as of a specific regional strategy for the integrated use of the industrial monuments, the low level of information regarding listed buildings, all represent major additional risks for the industrial heritage.

A recent project called "Industrial Heritage in Mountainous Banat – European Value and Integration Potential" carried out by the University of Architecture and Urbanism "Ion Mincu", took a first promising step. It initiated a research and documentation program highlighting both the tangible and intangible values of industrial heritage and proposing methodological guidelines for future research. Emergency recording and several surveys were made as essential primary protection measures. A first industrial heritage guide of the region was edited and we hope a few industrial cultural routes will begin this year.

In terms of raising awareness, a conference tour in Reșița and Anina and a special session dedicated to the Anina coalmine and its future were held in the framework of the 5th Industrial Archaeology Workshop last April. The presence of many participants from abroad, some of them presenting mining sites from their countries (Poland, Italy-Sardinia), was important for making local public (including regional authorities) conscious of the European value of their industrial heritage and of the fact that conservation and reuse of huge industrial monuments can and should be done.

Fortunately, through the efforts of a volunteer association in Reșița and of the local office of the Ministry of Culture, the demolition project of the last blast furnace in Reșița has, at least for the moment, been stopped and the closing down project for the Anina coalmine was modified in order to save the above-ground structures.

Starting from the above premises, the recently created Romanian Association for Industrial Archaeology plans also to develop new projects to be added to the initiatives of local entities such as the Agency for Environment Protection, the Eftimie Murgu "University" or the Cultural Tourism Association in Timișoara.

Hopefully, heritage owners as well as regional and central authorities, initially rather reserved in the face of these initiatives and definitely not sharing their enthusiasm, will eventually join the efforts for the study, conservation and reuse of a significant industrial heritage that could become one of the driving forces in the re-launching of the region.

## ■ TICCIH in China (I)

The Harmony of Civilisations and Prosperity for All, Beijing Forum, 1-4 September  
TICCIH President Eusebi Casanelles was invited to this year's Beijing Forum, a discussion event organised each year by the Chinese government. He joined the panel session 'The Inspiration of Human Heritage on the Progress of Civilisations'. The aim of this fourth annual forum is principally to promote academic study of the humanities and social sciences in the Asia Pacific Region.

## ■ TICCIH in China (II)

Partly as a result of these contacts, the first Chinese international conference on industrial heritage is being planned in association with TICCIH for September 2008. It is being prepared by TICCIH's correspondent in China Professor Que Weimin of the World Heritage Research Centre in Beijing University, and is to be held at the Museum of Industrial Civilisation in Chengdu.

This is the capital of Sichuan Province, with five natural World Heritage Sites including the Duijiangyan Irrigation System (2000), an ancient example of irrigation engineering and the protected first industrial heritage site in China. There are also typical industrial heritage museums and sites nearby such as the Museum of Industrial Civilization, the Museum of Printing, the Museum of Traditional Paper Making, the Museum of Shu Brocade, and the city has an interesting operating industrial heritage such as local mini train, which has been running since the 1930s.

The three main themes at the meeting will be  
I. Definition, protection and management of Industrial Heritage

II. Case studies in Industrial Heritage

III. Industrial Heritage in developing countries

IV. Transfer of technology

For anyone who has not visited China, this is a fantastic opportunity to see industrial processes which may not exist anywhere else in the world and to visit sites of tremendous historical interest, as well as to study industrial and commercial links between China and the rest of the world, and to contribute to establishing TICCIH and the conservation of the archaeology of industrialisation in this still industrialising country.

The deadline for proposals for papers is the end of February, and more detailed information is on the TICCIH website.

## ■ Patrick Martin recognised

US national representative and professor of industrial archaeology Patrick Martin has received the highest award bestowed by the North American *Society for Industrial Archeology* (SIA). The 2007 General Tools Award was for distinguished service to the society. He has been the SIA's executive secretary, editor of the society's journal and, overall, an organizer of meetings and tours nationally and internationally, and the SIA's representative to TICCIH since 2000.

Michigan Tech where Patrick is teaches is the headquarters of both the society and its academic journal *Industrial Archaeology*. He has directed the university's industrial archaeology programme of graduate education and research for fifteen years and the PhD program since 2005.

The General Tools Award was established in 1992 by Gerry Weinstein, the chair of General Tools Manufacturing, and the Lillian Rosenberg Foundation. The award consists of a citation, a sculpture called the "Plumb Bob" and a cash award.

## ■ TICCIH and ICOMOS: CIV VIH – International Committee on Historic Towns and Villages

TICCIH has been asked to nominate a contact to maintain links with the International Committee on Historic Towns and Villages (CIVVIH). This scientific committee was founded by the ICOMOS Executive Committee in 1982. The goals of the Committee are to further the knowledge and the principles for the conservation of historic towns, villages and ensembles; to promote the integration of

conservation in the planning process; to raise interest in the conservation of historic towns, villages and ensembles; to facilitate the exchange of experience in relevant areas; to encourage training, research and publications in relevant areas and to provide technical assistance in relevant areas. The Committee meets annually and publishes its proceedings. Web site //ciwih.icomos.org/

Meanwhile Helen Lardner, the TICCIH correspondent in Australia, has agreed to be our representative on ICOMOS' Scientific Committee for 20th century heritage.

## ■ Honorary members

The TICCIH Board at its recent meeting in Freiberg agreed to make Dr Werner Kroker TICCIH's third honorary member, joining Dr Barrie Trinder and Professor Henry Cleere. Professor Kroker was one of the founding members and organiser of, among other things, SICCIM, the Second International Conference on the Conservation of Industrial Monuments, held in Bochum, Germany in 1975.

## ■ Latest TICCIH Board meeting

The Board met in October in Freiberg, Germany, where the 2009 TICCIH Congress will be held. The conference organisers confirmed the conference dates as 30 August to the 5 September 2009, with pre- and post-conference tours. Meanwhile, new conference proposals have been received from China (see above), Poland (mining, September 2008), Sweden (international cooperation in higher education, September 2008), France (workers' villages, October 2009) and Brazil (2010), as well as confirmation of the joint meeting with ICOHTEC in Finland in 2010. The Secretary has prepared guidelines for organisers of TICCIH conferences.

Although TICCIH has submitted a draft of the 'Guidelines' for industrial heritage that ICOMOS requested, we've not yet had any response.

A formula for calculating the fees for national associations and societies, proportional to the number of their members, has been agreed and can be found on the TICCIH web site. The Treasurer presented copies of the annual accounts, a summary of which can be also be examined at [www.mnactec.cat/ticcih](http://www.mnactec.cat/ticcih)

Finally, Stuart Smith and Olga Deligianni were reelected as Secretary and Treasurer respectively.



Patrick Martin with students at West Point Foundry.  
Photo: Larry Mishkar

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TICCIH is the world organisation for industrial archaeology, promoting conservation, research, recording and education in all aspects of industrial heritage. It holds a triennial conference and organises interim conferences on particular themes. Individual membership is £20, corporate membership £40, and student membership £10  
Payment to TICCIH, Lloyds TSB Bank plc, 27 Fore Street, Redruth, Cornwall TR15 2BJ, UK; Account No: 1351659, Bank Sort Code: 30 97 00.

There is an on-line membership form on the web page.

The TICCIH Bulletin welcomes news, comment and (shortish) articles from anyone who has something they want to say related to our field. The Bulletin is the only international newsletter dedicated to industrial archaeology and the conservation of the heritage of industrialisation. The TICCIH Bulletin is published four times a year and is sent to all members. If you have not received an issue, please contact the editor for a replacement. Back issues can be downloaded as a pdf file from the TICCIH web site.

Opinions expressed in the Bulletin are the authors', and do not necessarily reflect those of TICCIH.

Thanks to all the contributors Eleanor Flegg, Axel Föhl, Dr. Stephen Hughes, Larry Mishkar, Krsta Paskovic, Miljenko Smokovina, Norbert Tempel, Marc Vidal and David Worth.

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■ The town of Portlaw, County Waterford, lies on the north bank of the Clodiagh River just 13 miles north of Waterford City. The historic fabric of the town is remarkable in that it owes its existence to the development of a flourishing cotton mill by the Malcomson family between 1825 and 1867. The cotton-producing facility at Portlaw provided employment for hundreds of people, used the latest technology, and matched the scale and output of the mills across the Irish Sea in Lancashire, England. Most remarkably, the mill continued to thrive throughout the years of the Great Famine, which reduced the population by up to 25% between 1845 and 1852, protecting the town's inhabitants from one of the bleakest episodes in Irish history.

The Malcomson family was one of several Quaker industrial families of the time who combined commercial enterprise with a strong paternalistic concern for the welfare of the workforce. The town of Portlaw, adjacent to the mill, was planned as a model village inspired by the ideas of social reformers like Robert Owen. The living conditions in Portlaw were therefore considerably better than elsewhere in Ireland at the time. The children were educated in a fine school building, hours at the factory finished earlier in the summer months, and cultural and self improvement programmes were encouraged. The Malcomsons introduced their own currency tokens, known as 'leather money', which was redeemable within a 30 mile radius of Portlaw. The overall picture is one of a progressive and integrated social structure where the workers were sheltered from both the poverty typical of nineteenth century Ireland and the exploitation so often associated with industrialisation. There is even evidence that the Malcomsons extended their benevolence to those living outside their area during the Great Famine and accepted refugees into their division, paying the resultant increase in the Poor Law rate.

The model village at Portlaw was probably influenced by the development of model villages at Bessbrook, County Armagh (1846),

## Portlaw, a model industrial settlement in Ireland

Eleanor Flegg

and Saltaire, Yorkshire (1850), while having clear parallels with some of the cotton-producing company towns of North America. The streets radiate from a central square in a manner known as a polyvium, associated with the Baroque tradition of great European cities like Rome and St Petersburg. The use of the polyvium is unusual both in the Irish context and in that of model towns of the period, which were almost invariably constructed on a gridiron plan.

The houses, although small and plain by today's standards, are well designed functional structures showing a concern for ventilation and natural light. Their distinctive 'Portlaw roofs', built on a gentle curve created by lightweight trusses boarded and finished with layers of tarred cloth, are the most striking architectural feature of the town. It has been suggested that the great nineteenth century architect John Skipton Mulvany may have played a significant part in the layout of the town and of the design of the dwellings themselves. While this is unproven, Mulvany was responsible for a number of large scale houses on the periphery of the town, inhabited by various members of the Malcomson family, and he also designed the school and the gate lodge to the mill complex.

The collapse of the Malcomson empire in the late 1860s and the liquidation of the mill in

1874 sent Portlaw into a spiral of decline, briefly revived in the mid-twentieth century when a tannery operated in the old mill building. Currently the graceful school building has fallen into extreme disrepair and the outline of the mill pond, filled with industrial waste from the tanning factory, is barely discernable. The great curved factory gates are much in need of maintenance and the little gate lodge has been sadly vandalised. Portlaw, however, retains a sense of dignity unusual in a small rural town. The wide straight streets of the polyvium remain while the mill workers' houses, distinguished by their curved roofs, are mostly still inhabited.

The conservation of Portlaw is a complex issue. Physically it involves a ruined mill and associated artefacts, workers' housing, most of which is still inhabited, a remarkable street plan, and several important architectural designs. While preventing the loss of further fabric is an immediate issue, it is also hoped that the protection and preservation of historic buildings will be followed by developments that will regenerate the economic fortunes of the town. If sensitively developed, Portlaw shows much potential as a tourist site.

In 2003 the Heritage Council published a Conservation Plan for Portlaw 1, and the town has recently been designated an Architectural Conservation Area. At the time of writing, Waterford County Council are about to commence Compulsory Purchase proceedings at the factory site. In the town itself, a derelict building has been renovated by the community to create a local archive. This project was chronicled on a TV programme called Community Challenge which was broadcast on RTE in November 2006.

The full text of the Portlaw Conservation Plan can be downloaded from the website of the Heritage Council of Ireland at [www.heritagecouncil.ie/publications/portlaw/development.html](http://www.heritagecouncil.ie/publications/portlaw/development.html)

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A view a hundred years ago of the centre of the 'polyvium'.

Photo: Heritage Council of Ireland



One of two Robey Uniflow steam engines installed during the tannery phase, and still on the site.

Photo: Heritage Council of Ireland

When I became a member of the Inland Waterways International in 2003, my perspective on what Serbs have traditionally called "nautical tourism" gained a whole new dimension: industrial heritage as a specific component of the attraction of our inland waterways.

However, my first genuine immersion in the milieu was at the conference organised by TICCIH UK in Wrexham, Wales, preparing for worldwide recognition of Thomas Telford's

## Canals on the river Danube and the World Canals Conference 2009

Ing. Krsta Paskovic  
(Blue Links Europe, expert)

Pontcysyllte aqueduct. This was followed by the World Canals Conference 2007 in Liverpool, which gave me the opportunity to visit the Anderton boat lift. These visits and the discussions with international delegates underlined the importance of correctly treating objects of industrial heritage, but also the value which can be derived from them. As a result, the industrial heritage dimension of structures on our inland waterways is now firmly on my own agenda, and will guide the

future actions of associations working in Serbia.

It was in this context of international exchange that colleagues and I drafted a programme for a study tour of important structures with a view to organising the World Canals Conference 2009 in Serbia and the Middle Danube region. We feel that visitors will derive maximum benefit from the event if we combine the canal heritage of Vojvodina with the more spectacular archaeological sites on the Danube. It became apparent to us that little has been done to date to make the public aware of these structures, even less for them to be interpreted sensitively and open to visits by the public. It is fortunate at least that the public water management company Vode Vojvodine has continually maintained them, so that the canal system is virtually a linear park, while the locks themselves have some of the most attractive gardens in the Vojvodina region of the Republic of Serbia.

The most emblematic locks of the hydro-system Dunav-Tisa-Dunav are Bezdán lock (designed in 1847 and completed in 1856), which is believed to be the first lock in Europe to be built using waterproof cement, Mali Stapar lock (1794-1802), which is preserved with its original mill, and Becej lock (1896), the first in Europe to have its own electric power station. From the modern era, we have the huge locks on the Danube hydropower schemes of the Iron Gate - Djerdap 1 and Djerdap 2. The Djerdap or gorge or Iron Gate had a special name for transport "Sipski pulling" in 1916 (pulling with the help of locomotives) of "Sipski" canal. Unfortunately the tracks laid for these locomotives are now submerged in the Danube (underwater industrial heritage). There are also the special archaeological ruins of the Trajan bridge. To make this known and



Steam engine brewery Uster 1897, exhibited since 1997.

Dr. Hans-Peter Bärtschi

recognized as one of the opportunities of the Middle Danube region, the Danube Propeller association organised a study trip on 19-20 October 2007 for journalists and members of the WCC 2009 organising committee.

We visited all the main structures in the Vojvodina region. In addition to journalists, there were hydraulic engineers, architects, landscape architects, historians, archaeologists, cartographers, tourism and nautical specialists. The aim of this trip was to confirm that only minimum funding is required to develop the majority of these structures for effective multifunctional uses. Only Bezdán lock needs more substantial investment to restore its navigability. Returning from Bezdán we also visited the lock at Backi Monostor (built in 1801) and the historic water pumping station in Centa.

Archaeologists Gordana Karanovic and Rifat Kulenovic from the Belgrade museum of science and technology and Spomenka

Urošević, architect and curator from Zrenjanin, also took part in this trip. In early 2008 there is a plan to make a further visit to important structures at Djerdap and elsewhere along the Danube. Fellow members of the WCC 2009 organising committee and I have are determined to ensure that the industrial heritage in the Middle Danube region is duly recognised at the conference, and the preparatory work is being conducted accordingly.

This means carrying out a number of more detailed studies and organising a series of workshops on industrial heritage in the build-up to September 2009, where we plan to invite TICCIH representatives from several countries which have industrial heritage related to inland navigation, to cooperate and participate in organisation.

As president of the Danube Propeller association, member of IWI and TICCIH, and with the support of David Edwards-May, vice-president of IWI and leader of the EU Blue Links group of experts, I hope to bring these plans closer to the concerns of TICCIH, and this is an appeal to members to kindly help us to make this conference live up to our expectations. It is true that the planning of such an event is an enormous challenge, for a variety of reasons, but if there is a little more understanding and support, I believe that we can succeed. This is a once-in-a-lifetime opportunity to draw worldwide attention to the unique heritage of the inland waterways of the Middle Danube region.

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## Publications

### Education and Industrial Heritage: textiles, tobacco, rope, wood and ships

Maria Repousi and Olga Deligianni (ed.), (Greek), 2007

■ This is a book of practical exercises and activities, aimed at school children at secondary level, which is intended to promote awareness of the industrial environment and its history. Each teacher can expand and develop the exercises according to the group they are teaching.

It was produced by the Centre for Environmental Education in Naoussa, Northern Greece, which has run a programme on the study of industrial heritage and conservation in Greece since 2002 for networks from kindergarten to secondary school. The choice of the industrial heritage was not made by chance, since Naoussa used to be one of the largest industrial centres in Greece, based on the water-powered textile industry.

The Centre's initiative for the educational school programme is for the children to get acquainted with their past, from the study of the buildings, machines, tools, products and people that worked in them. Six different industrial centres were chosen for each chapter: Edessa, the city of water, Thessaloniki, a centre of production and industry, Kavala and Xanthi, cities of tobacco, Naoussa, the city of water-powered textile industry, Piraeus, shipping and transport in the great port, and finally Pieria, a centre of forest industries.



In each chapter there is a short general description of each industrial area, as well as a description of the historical events that led to growth of its economic activities, and a small list of bibliographical references. Each chapter continues with different exercises, each of which has a small icon that indicates the age of the students for whom the activity is suitable (kindergarten, primary, middle or secondary school children). As mentioned above, each teacher can then decide, bearing in mind the level, the strengths and the interests of their class, which activities are compatible and interesting for the children.

The book is accompanied by a DVD presenting the different themes of the book along with interviews and memories of people who were working in Greek industry. It is co-written by seventeen different specialist authors coming from different backgrounds including archaeologists, architects, environmentalists, pedagogues and teachers.

By providing teachers with a handbook of this sort, the authors hope to change attitudes toward industrial history in a region profoundly marked by industrialisation, and provide an understanding of the heritage of industry to children at a relatively early age.

## Europe

### Early Birthplaces of Europe

■ "Early Birthplaces of Europe" is an international project to promote insights into the beginnings of industrialisation using the example of the early industrial production of iron around 1800.

It is funded under the European Union's Culture 2000 programme and runs under the leadership of the Rheinisch Industrial Museum (RIM), and the Rheinland Regional Council in Germany.

Early nineteenth century blast furnace technology was characterised by the international transfer of technology against a background of regional peculiarities. The web page published by the project has examples of iron production from the partner countries – Germany, Belgium, Poland, Spain and Great Britain - show pioneering performances, parallel developments and a successful transfer of technology. A number of original drawings and paintings on the web site depict blast furnaces, their setting, design and construction.

[www.early-birthplaces.eu](http://www.early-birthplaces.eu)

## South Africa

### ICOMOS Scientific Council in Pretoria, on 8th October 2007

Dr David Worth represented TICCIH at the meeting of ICOMOS' Scientific Council. This report is based on his notes to the TICCIH Board

■ This was the third meeting of the ICOMOS Scientific Council. Although the text for the *Guidelines* on industrial heritage which TICCIH has been discussing with ICOMOS general secretary Dinu Bumbaru, was not discussed, several other 'doctrinal texts' were tabled for the Scientific Council to recommend to the ICOMOS Advisory Committee. The 'Presentation and Interpretation Charter' proposes areas of importance in communicating values, and presented a basic toolkit for facilitating this. It is now to be put for recommendation to the next General Assembly in Quebec in October 2008. The second text, a 'Cultural Routes Charter', was presented by Sofia Avgerinou-Kolonias of Greece, and is already further advanced.

The activities of the World Heritage Programme, and the contribution of ICOMOS 'experts' was discussed by the meeting. The criteria for participating in a site visit (or 'mission'), or for undertaking a desk-based assessment, are a demanding combination of expertise, availability, and a sense of ethical responsibility. The ICOMOS Executive Committee and World Heritage Panel asks the relevant International Scientific Committees (ISC) to nominate experts for desk-based assessments, and although an adviser to ICOMOS and not an ISC, TICCIH has this role, suggesting the names of experts for the assessment of industrial sites (see Stuart Smith's article in TICCIH Bulletin #38, Winter

2007 for a list of recent site assessments).

The Treasurer-General's report shows that ICOMOS' two main income streams are members' subscriptions and payment received from the World Heritage Centre for advising on World Heritage sites (up to a maximum of 40 in any one year). Two new International Scientific Committees were proposed in the areas of 'Astronomy and Space Travel', and 'Tropical Architecture'.

Finally, the work of the work group investigating "How can ICOMOS enhance its relevance in Africa?" is also pertinent to TICCIH. It was noted that nine National Committees in Africa had recently been disbanded due to lack of members and inactivity. Five members of ICOMOS is the minimum requirement for forming a National Committee (seven for TICCIH), and in many African states, finding five people actively involved in heritage would be a problem.

The next ICOMOS General Assembly will be held in Quebec, Canada, from 26th September to 5th October 2008, and the theme will be "Finding the Spirit of Place".

## France

### 120<sup>th</sup> birthday of the Eiffel Tower

Marc Vidal

■ This year has seen celebrations to mark the 120<sup>th</sup> anniversary of the most famous iron structure in the world. Work began on the construction of the Eiffel Tower in 1887 so that it would be ready to form the grand entrance arch to the Universal Exposition of that year, a world fair organised to commemorate the centenary of the French Revolution.

The French engineer Gustave Eiffel originally presented his project for a tower to the city council of Barcelona, as part of the 1888 Universal Exhibition in the Catalan capital. The organisers thought it was a curious construction which did not fit in with the style of the city.

After Barcelona's refusal, Eiffel presented the idea to the team responsible for the Paris exhibition where, a year later, it was erected.



The idea was to take it down once the exhibition was over, and only popular enthusiasm prevented it being dismantled.

The tower was inaugurated on the 31st March, 1889 and was opened to the public on the 6th May that year. Around 200 workers assembled the 18,038 pieces of iron using two and a half million rivets, following the designs of the structural engineer Maurice Koechlin.

The closeness of the river Seine and the nature of the subsoil meant that the foundations to each of its four legs had to be about 30 m deep. Each of the supports rested on eight hydraulic jacks, so that in fact the tower has 32 feet. In contrast to modern skyscrapers, the structure of the tower is visible, with only two intermediate platforms and a high-level viewing terrace. Despite the enormous precautions taken by Eiffel for his workforce, including the obligatory use of harnesses, one died during the installation of the lifts.

At the start of the 20th century Parisians showed their dislike of the tower to the point at which the government of the day gave instructions for it to be taken down. Only its large and powerful antenna, which enabled the Allies to intercept messages from the Germans during the First World War, saved it from destruction.

## United States

### Conservation of industrial architecture: American grain elevators

■ When Le Corbusier saw the pure cylindrical forms of the massive concrete grain elevators in Buffalo, New York he's supposed to have enthused "The first fruits of the new age!" Although the city still has an active grain industry, 15 of these heroic monuments stand empty along the Buffalo River, largely forgotten by the community that invented them and once drew its economic sustenance from them.

Among them is the quarter mile-long "Concrete Central" elevator which, when built in 1918, was the largest in the world. The grain elevator was invented in Buffalo in 1842, and did much to promote the city's emergence in the 19th century as one of America's principal grain storage, processing and transport centres. Grain elevators were later built all over the world, pioneering the use of reinforced concrete.

Many city residents and architectural groups have been concerned for more than 40 years with the preservation and reuse of the elevators, calling them prime examples of the city's history and industrial heritage, where thousands of local people worked for more than 100 years.

The public conversation around the history, preservation and reuse of the impressive structures is one of many steps that it is hoped will lead to their addition to the National Register of Historic Places. That would make the used and vacant elevators eligible for the Federal Historic Preservation Tax Incentive Program, one of the US federal government's most successful and cost-effective community revitalization programs.

## BigStuff 2007 - Beyond Conservation – Industrial Heritage Management

Gleanings from an international conference about large-scale industrial monuments

**Norbert Tempel**

LWL-Westphalian Industrial Museum, Dortmund

■ The international conference "BigStuff 2007" was held in the German Mining Museum Bochum and the Henrichshütte Hattingen (a former blast furnace plant belonging to the LWL Westphalian Industrial Museum) from the 11th-14th of September 2007, supported by the German section of TICCIH. The event was the continuation of the very successful "BigStuff 2004" meeting in Australia. The conference in the Ruhrgebiet was particularly devoted to buildings and industrial heritage objects. For this reason difficult conservation conditions, especially on open-air sites like pithead towers and blast furnaces etc, were subject to comprehensive interdisciplinary discussions. Debates were not only (but also) about the "best recipes" for surface treatment, but also addressed a whole range of themes regarding the treatment of these difficult plants. All in all, around 130 experts from over 20 countries used the talks and national reports for information, and discussed their own problems in workshops and in front of posters. The conference had a very broad international resonance. It attracted participants from Australia, Taiwan, Japan, Canada, the USA and various European countries. The international flavour of the conference was also underlined by the fact that it was given completely in the English language.

The international guests were introduced to the importance of this theme in the Ruhrgebiet on two excursions to active as well as to listed industrial plants. Talks and workshops were tailored to mesh with each other, and thus lead to comprehensive and intense discussions. The results of these discussions can be summarised as such, with reference to the main themes of the conference.

### Tailoring our understanding of large projects: action planning for large industrial sites

At the start of the project the factual significance and the value of remembrance should be laid down first of all. After that, the project should be "simplified" to the level where it agrees best with available resources. Finally we should accept that changes are inevitable. That said, changes can be made actively (conservation, restoration, care) and passively, the latter where nature once again takes control of "BigStuff".

### Site management: On risks and chances

Our dealings with industrial monuments demand that we decide why and for whom we are acting. Site management should basically be aimed at aspects which can be passed on as "values for future generations"; alongside physically palpable monuments and objects, immaterial things like knowledge of the work and living conditions etc should be taken account of and included in a conservation management plan. The plan should contain a very broad spectrum of studies, documents, objects to be protected and preserved, opened or explained. This demands interdisciplinary



Casting some more Big Stuff.

Photo: Norbert Tempel

cooperation. All those involved, above all those responsible for making decisions, must be involved in this process at an early stage with the management. Heritage is not just a one person show but a collective decision!

### Repair and conservation: irreconcilable opponents?

Repairs are often necessary when "BigStuff" is made accessible to the general public on a permanent basis. Seen from a distance, repairs should blend in with the existing structure almost imperceptibly. Seen from close-up, however, it should ideally be possible to distinguish the original state from the repairs.

### Entrusted to our care: what does it mean?

The general public must understand the reasons which have led to a certain presentation of "BigStuff"; the general public can best be included by things like information on events, dialogue and allowing all active persons and affected groups to participate.

### Pathways through heritage – Necessary and encumbering

Furthermore visitors should be informed how to find their own way through "BigStuff", because all visitors want to have their own individual experience. For this reason signed paths should be arranged as flexibly as possible to allow people to get their bearings at any time. They should never be a one-way street or force people to "have to see everything". Important objects which everybody tends to visit should be clearly signed (toilets! cafe! shop!)

### "Restored to working glory" – To work or not to work?

The central question is: "How do we animate technology for people?" There are several reasons for practical demonstrations: maintaining knowledge, training, entertainment and showing how things work. Sometimes the original uses will simply be continued, perhaps even on a commercial basis. If we dispense with practical demonstrations, objects are reduced merely to their aesthetic statement.

### Conservation of "buried treasures"

The conservation of "buried treasures" is an integral part of "BigStuff". This includes knowledge about production processes and the skills of individual workers, as well as knowledge of the political and economic background; documentation plays a key role in conserving buried treasures. Some things can, however, only be passed on from hand to hand (sensitivity is needed here).

At the end of the conference, participants took their farewell with a statement on the concept of the Congress and corresponding thoughts about the network. The statement in short reads:

"BigStuff is a trade mark, an idea and a common interest. It unites all actors concerned



Interdisciplinary techniques at the 'Big Stuff' conference.

Photo: Norbert Tempel

with conserving BigStuff, and is interested in pragmatic solutions.

*BigStuff is an opportunity for people to exchange ideas and opinions about preserving large technical plants, and to learn from one another.*

*BigStuff makes practical contributions in a variety of very different areas: urban planning, recreation, tourism, business, leisure ...*

*For this reason it is vitally necessary to unite highly different professional groups under the BigStuff trademark. All participants concentrate on the problem at hand and not simply on their own professional groups. Treatment methods are only a part of BigStuff. In general, solutions should be sought beyond the area of conservation in the narrow sense of the word.*

*Conservation in this sense is as much a cultural science as a natural science. The challenge in conserving BigStuff is so large that international co-operation is indispensable.*

The participants agreed to meet again for the next conference in 2010. The proposed themes for BigStuff10 range from the question about guidelines for managing and monitoring BigStuff to the key words, "BigStuff – Climate change – Sustainability".

All the results of the BigStuff 2007 conference will shortly be available as a download at [www.bigstuff07.net](http://www.bigstuff07.net)

## The Seminar of International Mine Experts

Nord-Pas de Calais, France

### Dr Stephen Hughes

Royal Commission on the Ancient & Historical Monuments of Wales

■ On the 9-11 October a Seminar of International Mine Experts was held in the Nord-Pas de Calais Coalfield in northern France. The meeting was convened by the Bassins Miniers UNESCO project and the delegates included the TICCIH Life President Professor Louis Bergeron, the TICCIH Secretary Stuart Smith, the former Secretary General of ICOMOS Jean-Louis Luxen, the author of the TICCIH/ICOMOS International Collieries Study Stephen Hughes, the Director of the German Mining Museum Rainer Slotta, Professor Messimo Prietta from Florence and other colleagues from Belgium, England, Italy and France.

The first paper examined the TICCIH/ICOMOS

Collieries Study and in particular the criteria evolved for the inscription of World Heritage Collieries and the broad range of subjects under which collieries could be considered of importance.

The criteria used for the inscription for the World Heritage Colliery of Zollverein at Essen were examined as were the World Heritage Coalmining and Iron-making Landscapes at Blaenavon and Ironbridge. The examples of internationally important coalmining landscapes at Sorachi, on Hokkaido, in Japan and around Huber and Scranton in Pennsylvania, U.S.A. were also considered.

A subsequent paper considered the way in which the ideas of World Heritage criteria had evolved in scale from single monuments to industrial landscapes with Ironbridge (1975) and Blaenavon (2000) which are industrialised landscapes some 4-5 kilometres across. Subsequently, the scale and nature of industrial landscape designation had changed again with the inscription of Cornwall which represented a mining landscape some 160km long but presented as a mosaic of ten mining areas. There are of course even longer linear sites in other areas of World Heritage such as the Canal du Midi, Hadrian's Wall, the Loire Valley or the Rideau Canal.

The proposed Nord – Pas de Calais Coalfield designation represents an equally long area, that the experts agreed could be justified as a continuous and wider area but with modern retail parks omitted. Among the unique aspects of this area seem to be the almost 200 colliery spoil-tips. However, this must remain a landscape with a sustainable future.

A second apparently significant aspect of this particular landscape was that no less than 600 settlements survive with 75,000 houses built by the colliery companies, 45,000 of which have already been sympathetically upgraded. The companies also provided 11 hospitals, 71 churches and chapels and 200 schools. Areas of the coalfield had sunk as a result of mining and pumping-stations had to be maintained to minimise the risk of flooding. Twenty-five colliery headframes remain and the line is linked by a complex web of former colliery railway formations or 'cavalliers', many being re-used for passenger tramways or for walking and cycling or biological corridors.

It is proposed that the World Heritage Bid for the Coal Basin/Bassin Minier should be based on its overall character and not on specific monuments. It was also suggested that the bid could represent the effects of warfare on an area of settlement. During World War I the Front was near Lens and three-quarters of the mining equipment was either taken away or

over-exploited by the German army of occupation.

There was much discussion of the intangible legacy of a coalmining landscape, with examples given of celebrations by the coalfield population which today numbers some 1,200,000 people. The coalfield is also representative of the mass migrations of population, with many miners arriving from Poland, Ireland, Wales and other countries across Europe.

The international experts concluded that there was a case for putting the entire coalfield forward for World Heritage nomination as representative of the European mining heritage of the nineteenth and early twentieth centuries. There was also a case for a pan-European bid especially as this coalfield extended into Belgium with its iconic mining settlements of Le Grand-Hornu and Bois du Luc.

Discussions took place at the three very impressive former mining complexes of Delloye (Lewarde Mining History Centre), Loos-en-Gohelle and Oignies. There was discussion and concern about how such a large area could be sustained and yet maintain its authenticity. One of the spoil-heaps had been remodelled to form a sky-slope and others had been re-profiled to form panoramic viewpoints. Not every colliery complex could be maintained as a colliery museum without a measure of re-use. However, a proposed adaptation of the splendid colliery complex at Oignies as a truck-stop with the imposition of a huge glass-box on top of one of the twin gabled buildings did seem a step too far to some of the experts. Overall, some very stimulating discussions took place on the heritage of coalmining landscapes. All the experts left impressed by the scale of the achievement in retaining the integrity of much of the mining settlements and with the potential of the coalfield for achieving World Heritage Status as representing a wider European context of mining and also the effects of catastrophic war in the history of mankind.

## World Heritage Sites of the 20th Century', ICOMOS International Scientific Committee on 20th Century Heritage, Berlin, 9-12 September, 2007

### Axel Föhl

Speaker of the national working group of state industrial archaeologists

■ With the background of six significant Berlin "Moderne" housing developments from the 1920's on the German section of the tentative UNESCO list for the world heritage, and with an eye on the fact that the 20th century and especially technologically important objects suffer a distinct under-representation in this list as a whole, ICOMOS International together with the Berlin heritage conservation authority held a 3-day conference on 9-12 September in the "World Heritage Sites of the 20th Century".

Right in the centre of historical Berlin, a couple of meters away from the famous "Rote Rathaus – Red Townhall - " of 1869, international delegates and experts met in the impressive central hall of Ludwig Hoffmann's "Town House" of 1902-1911.

Five basic categories tried to encompass the

considerable bulk of the heritage of the last century.

1) Modern dwellings formed a significant part of the revolutionary early 20th century's social reforms by providing affordable and aesthetically satisfying housing for the masses. With an eye on the interbellum period of 1918-1939 European examples were presented. Central Europe and Russia formed an Eastern stronghold, while examples from the Netherlands and Corbusier's dwellings in the West of the Continent balanced this Europe-centred look across the field of housing.

2) Another part of reform in town planning was the provision of sufficient green spaces within the growing industrial cities. So communal parks from Spain, Poland and Berlin stressed the historical importance of this part of the urban heritage.

3) Industrial Heritage. Using the metropolitan example of subterranean mass transport, the metro systems of London, Paris, Moscow and Berlin were examined. After an introduction by the author of this report, London regrettably formed an unforeseeable gap due to the fact that Mike Ashworth, London Underground Heritage Officer, could not be in Berlin in person. His example-rich contribution on London's treatment of a daily working monument however will appear in the conference publication. Paul Smith from the Paris Ministry of Culture gave an oversight of the state of affairs concerning the Paris Metro with its signal and influential above-ground design by, amongst others, Hector Guimard (1867-1942). Here the link between a subway transport system and the image of a metropolitan city became quite distinctive.

Natalia Dushkina from the Moscow School of Architecture illustrated the famous splendours of the 1930s Moscow metro system but also pointed to the dangerously growing rate of neglect that endangers the specific and outstanding artistic value of the Moscow underground stations.

Here we have the opportunity to stress the importance of the Russian architectural contribution to the world heritage of the 20th century as a whole. This field was only recently illuminated once more by the "Save Europe's Heritage" report "Moscow Heritage at Crisis Point" of 2007 (with a contribution by the author of this report about the avant-garde industrial architecture of Moscow) as well as by the April 2006 DOCOMOMO/ICOMOS Moscow conference on the same topic.

The fourth metro contribution presented Berlin as an example – like London – of a process of cooperation between the Berlin heritage authority and BVG – the Berlin metro carrier.

The conference sections of the second day included one on the specific building materials and building techniques of the 20th century with all the problems of reinforced concrete as a key material. A second section presented strategies for popularizing and propagating this part of the built heritage. In this section the activities of the "Wüstenrot-Stiftung", a private initiative decisively centred on the preservation of the Modern heritage were presented. Amongst other projects, the foundation paid for the repair of Erich Mendelsohn's famous Potsdam "Einstein (observatory) Tower" from 1921, a landmark of modern architecture.

A very rich program of exhibitions, excursions and film shows framed the Berlin conference that clearly underscored the significance of the historical period of the Modern Movement as exemplified by European built witnesses of this



The former Oignies Colliery (9-9), proposed for partial adaptive re-use as a truck-stop.  
Photo: Dr Stephen Hughes

time. Together with the ensuing publication it can be hoped that this call will direct the attention of heritage protection agencies worldwide more intensively towards this underrepresented field of our past.

## Rijeka's industrial heritage conferences

### Miljenko Smokvina

Croatian TICCIH correspondent

■ The III International conference on industrial heritage was held this autumn in Rijeka, on the Croatian coast. It is a biennale event, the first was held in 2003, and is organized by a PRO TORPEDO, a local industrial heritage NGO. 30 volunteer members, some of them TICCIH members, were responsible for the events. All three Rijeka conferences have been supported by the city of Rijeka, the Croatian Ministry of Culture, the University of Rijeka and others.

Rijeka is the main sea port of Croatia, and the most developed industrial town in the region. Unfortunately many of these industries in last years fell on hard times, and a few of them eventually went bankrupt. In the last few hundred years, many important industries were started in Rijeka, among them the main sugar refinery for the whole Austro-Hungarian empire, the world's first torpedo factory, one of the best cigarette paper mills in the world, a rope factory, a special steels foundry, an electrical generator factory, and more; none are now working and became industrial heritage.

The citizens of Rijeka are quite aware of the value of its industrial heritage. A survey of several hundred Rijeka citizens, from school children to retired population, showed that they know a lot about Rijeka industrial heritage, and

that want to preserve part of their and the town's glorious industrial past.

It is for this reason that PRO TORPEDO, a society for promoting and protecting Rijeka's industrial heritage, was founded, and it is the first organised industrial heritage association in Croatia, with the International heritage conference among their main activities.

Every Rijeka conference has its slogan and main topic. The first in 2003 was organised on occasion of 150 anniversary of Rijeka Torpedo factory, the second two years later was called "Rijeka the City on Water and Sea" and the topic of the third conference this year was "Rijeka, historic crossroad between the Mediterranean and Europe". Each conference lasts two days, from Friday morning to Saturday afternoon. There are scientific sessions, one is related to the theme of the conference, one is connected to shipbuilding and torpedo heritage, and one deals with general industrial heritage problems. On the first conference in 2003 there were almost 120 participants, from 12 countries, and were presented 40 papers, and after the conference was published the conference Proceedings, a 535 pages book. The number of participants was bigger for the II Conference and there were more than 150 participants for the third one, which was held on 12 and 13 October 2007, with 58 papers and posters.

26 of the papers were by Croatian authors, while from other countries there were: Austria 3, Czech 1, Germany 2, Holland 1, Hungary 3, Italy 5, Latvia 1, Poland 5, Serbia 3, Slovenia 2, United Kingdom 1, United States of America 3, and one from UNESCO.

The scientific part of conference concluded with a "Round table" discussion organized about "State of Art in Industrial Heritage in Croatia". Many conference participants found this the most interesting and inspiring part of the Rijeka meeting, discussions are frank, lively and provocative, stimulating and are opening

new thoughts among Croatian and world industrial heritage experts. One of the discussions was between "classic archaeology" experts and "industrial archaeologists" over the importance of aesthetics values of IA sites, and the value of its original significance. There was a lot of discussion concentrated on the goals of urban property developers, their plans to have "clean land" and the necessity to fight this position and to preserve industrial heritage remains. The moderator of the session was the Chief Conservator from the Croatian Ministry of Culture, and he explained the process of preserving port warehouses in the Port of Rijeka.

Besides the scientific meeting, the Rijeka conference offered participants a visit by boat to the port, a bus ride around the surroundings and a visit to local industrial heritage sites. This year included a ballet performance in the Croatian National Theatre in Rijeka. The growing number of participants and papers, and limited available space in City Hall, where all the conferences until now have been organized, are opening possibilities to organize the next event in some other premises (perhaps the University). But the principle and concept of next October 2009 conference will be the same, and the topics will be "The heritage of ships".

One of the background events of 2007 conference was the meeting of more than 30 Croatian industrial heritage experts, the day before the conference, who gathered together and discussed the possibilities of organising a Croatian organization for protecting the industrial heritage. Ways were discussed to make a Croatian "umbrella" organization, what its goals might be, how it will be structured and so on. There are many things to do, but we believe that in future Croatia will have a chance for better protection of industrial heritage and for more close cooperation with international organizations.

## TICCIH Conferences

For all conference information consult  
[www.mnactec.com/ticcih/news.htm](http://www.mnactec.com/ticcih/news.htm)

### Mexico

#### Primer Seminario de Patrimonio Industrial y Cultural Ferroviario

23-25 May, 2008.

Call for papers (deadline 29 de april)

■ Culture and identity, railway settlements, railway landscapes, locomotive technology and conservation and restoration are the main themes. Extalleres de locomotoras Complejo Tres Centurias.

Info: jose.garciar@aguascalientes.gob.mx

### China

#### First Chinese International Conference on Industrial Heritage

Chengdu, 1-4 September, 2008

First announcement and Call for papers

■ Chengdu is the capital of Sichuan Province with five World Heritage Sites including the ancient Dujiangyan Irrigation System, China's oldest listed industrial heritage. Presentations in English and Chinese. Deadline for submitting paper proposals is

February 29th, 2008, and the final date for accepted papers is July 15th, 2008. Pre-registration by 1st March, final registration by 1st August.

Info: Professor Que Weimin. The World Heritage Research Centre, Peking University, 100871 Beijing, P.R.China, e: [wmque@urban.pku.edu.cn](mailto:wmque@urban.pku.edu.cn), t: +86-10-62752999, f: +86-10-62751187

### Germany

#### XIV TICCIH Congress: 'Industrial Heritage, Ecology and Economy'

30 August – 5 September, 2009

■ The triennial TICCIH congress focusses on the close connections between environmental, economic, technical, social and historical questions of the industrial heritage, in a classic region for the study of industrial change and technical development. Institute for History of Science and Technology, (IWTG) of the Technical University of Freiberg, in cooperation with TICCIH-Czech Republic and TICCIH-Poland.

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