When The Trevithick Trust was established in 1992 as an agency for rescuing industrial sites in Cornwall, England (see Industrial Patrimony, #11), it was envisaged that most of these sites would be related to Cornish mining as there was a growing idea that Cornish mining sites should be the basis of a potential world heritage site.

The Trevithick Trust took on this challenge with the reopening of Geevor Tin Mine, the rescuing of Tolgus Tin and the eventual management of Levant Mine, Wheal Martyn China Clay Museum and King Edward Mine, it was also responsible for major improvements at Cornish Mines and Engines in Pool.

However, perhaps one of the greatest surprises was that whilst mining sites seemed to be under threat, even more serious was the threat posed to Cornish communications sites. Marconi had used Cornwall to broadcast in 1901 from Lizard Point to the Isle of Wight, thus proving that radio waves could travel in a curve rather than in straight lines, and later he was to demonstrate at Poldhu that he could broadcast to the United States.

For many years before this, the world had been spanned by underwater cables carrying telegraph traffic. One of the largest stations was situated at Porthcurno, lately operated by Cable and Wireless. The Trevithick Trust was instrumental in making sure that this underground site was not closed, and it is now a thriving museum with all the archives of Cable and Wireless being moved from London to Porthcurno.

Cornwall now has a cluster of communication sites and it is pleasing to record that the original Lizard Wireless Station, the only existing wireless station built by Marconi, has now been listed by English Heritage who on several occasions refused this honour because it was only a temporary structure!

By a strange coincidence, TICCIH, who are the official advisers to ICOMOS on industrial World Heritage Sites, were asked to assess the possibility of the Varburg Radio Station in Sweden being inscribed as a World Heritage Site (see Worldwide). This mission was undertaken by TICCIH and the nomination was subsequently agreed at the UNESCO conference in China in 2004. After a heated discussion, because some delegates to the conference felt that the Varburg Radio Station did not have sufficient architectural quality – how did they miss the point! – it was eventually passed with a recommendation that other radio sites around the world, especially in Cornwall, could be included in any potential future list.

Thus TICCIH, The Trevithick Trust and telecommunication groups can all rejoice in the fact that twentieth century sites are eventually getting onto the World Heritage Site list. ICOMOS has now produced a report presented to UNESCO which is entitled the GAP Report, asking that TICCIH and other organisations should propose further World Heritage Sites emphasising the gaps in representation. This is something which TICCIH will be taking up with enthusiasm.
Filling the gaps - an action plan for the future’ Report published

ICOMOS were invited by the World Heritage Committee in 2000 to study the current range and diversity of properties identified as ‘World Heritage Sites’. The Report has now been published by ICOMOS analysing the current List, as a contribution to the further development of the Global Strategy for a credible, representative and balanced... List. It includes the comment on ‘Technological/agricultural properties’ that although they figure prominently on the World Heritage and Tentative Lists, following up the proposal of the 1992 Strategic Review, these are overwhelmingly post-Industrial Revolution properties located in Europe and North America, along with earlier mining sites in Europe and Latin America. This aspect of heritage ought to be more explicitly defined, with the collaboration of ICOMOS and TICCIH. Comments on this document should be sent to Regina Durighello at ICOMOS Paris duringhello@icomos.org. Copies of the report in English : www.international.icomos.org/world_heritage/whlgaps.htm, and in French : www.international.icomos.org/world_heritage_fre/whlgaps.htm

Brazil. The first conference on industrial heritage to be organised in Brazil is going to be held in November at the State University of Campinas. More details when they appear in Events and the TICCIH webpage.

New members welcomed since June 2004: Mette Emilie Jakobsen, G.M. Kapur, Klaus Kemp, Teresa Marquez Martinez, Knut Michael Nyagaard, Ineke Olijks, Caterina Vatteroni. The Vitterhets-kademiens bibliotek/Riksantikvarieämbet in Sweden is a corporate member.
“The sensation was pleasurable – intensely so; it was sudden and immense exaltation, a mixed ecstasy of deadly fright and unimaginable joy. I believe that this combination made the perfection of human delight. This is the most enjoyable day I have spent on the earth. It has no fault, no blemish, no lack, except that there are only thirty-five miles of it instead of five hundred” - thus described Mark Twain his experience of the journey on the Darjeeling Himalayan Railway more than a hundred years ago.

The first and still the most outstanding example of a hill passenger railway, DHR opened in 1881 connecting Siliguri in the foothills of the Himalayan mountain range in the north eastern part of India with Darjeeling, climbing more than 2000 metres in the mountainous region in the process. It was a marvel of engineering as it applied bold and ingenious solutions to the problem of establishing an effective rail link across a mountainous terrain of great beauty. It is a tribute to the builders that it is still fully operational and retains most of its original features intact.

History: DHR has its origins in the late-nineteenth century, Darjeeling (or Dorje-Ling, place of Lama Dorje, as is was originally called) had been developed by the British who had initially leased a strip of country to the south of the Himalayas from the rulers of Sikkim, an erstwhile Himalayan kingdom, for a sanatorium for British troops as the climate was found to be salubrious. Later this tract including Darjeeling was annexed to the British Empire resulting in rapid progress to the region.

By 1878, Calcutta, the second city of the British Empire and the then Capital of British India, was linked to Siliguri by rail. The only link between Siliguri and Darjeeling was by a hill cart road on either horse drawn carriages or bullock carts. The journey from Calcutta to Darjeeling took almost 5/6 days. Tea cultivation had also developed and the need for suitable transportation was felt (as the existing horse drawn carriages and bullock carts were proving inadequate). A detailed scheme for a steam tramway was submitted to the Government of Bengal in 1878 and was approved in 1879 in which year construction also began. Between March 1880 and July 1881, the line up to Darjeeling was commissioned in stages, first to Tindharia, then to Kurseong and finally to Darjeeling. The rail link cut the journey time from Calcutta to Darjeeling to less than 24 hours.

A marvel of engineering: The total length of the DHR is 87.4 km which is covered by a 2 feet (610 mm) gauge railway, rising from the plains at Siliguri to height of 2258 m above mean sea level at Ghoom and finally reaching 2074 m above MSL at Darjeeling. There are a total of 456 bridges, (251 corbelled arch bridges) and 153 level crossings (all unmanned). There are 872 curves, maximum curvature being 120 degrees. The total length of line on curves is 59.4 km or 68%. The total length of line on curves of more than 60 degrees is 23.5 km or 27%. To overcome natural obstacles, follow the hill cart road, avoid the necessity of big bridges, avoid tunnels, keep the investments low and maintain the steep gradient (1:25) by adhesion only, great ingenuity was shown in three ways:

Zig-zagging and criss-crossing across the hill cart road
Reversing on a Z-shaped layout where the train runs forward, reverses up the slope, then proceeds forwards parallel to the approach line but at a higher altitude.

This made the construction of the DHR one of the greatest engineering feats of the 19th century. That it is still fully operational in the 21st century is a Industrial Heritage Wonder of the World and now a UNESCO designated World Heritage Site since 1999.
If globalisation is seen as a characteristic of the world today, it is to the nineteenth century that we should look for its roots. One of the most potent means by which industrial culture spread was though the international exhibition movement initiated by the Great Exhibition in London in 1851. The phenomenon has now been recognised by UNESCO through the inscription of the Royal Exhibition Building (REB) in Melbourne on the World Heritage Register. The REB is the sole surviving Palace of Industry to survive largely intact and still used for its original purpose, the staging of exhibitions and events. It operates as part of Museum Victoria, the largest museum organisation in Australia, together with the Melbourne Museum, the Immigration Museum and Scienceworks. The Melbourne International Exhibition of 1880-81 was an ambitious project designed to make the world aware of the thriving metropolis in the southern hemisphere and to display the latest technologies and achievements of the mechanised age. The products of more than thirty nations were displayed in the Exhibition Building itself and in huge temporary halls. Extensive landscaped gardens with lakes and fountains provided the setting. The Palace of Industry dominated the skyline of Melbourne with the Florentine-inspired dome reaching 67 metres in height above the crossing of broad naves and short transepts. Including the galleries above the side aisles, the REB provided 12,000 square metres of display space. There are four triumphal entrance porticoes, one on each side. In 1888 a second, even larger world fair was staged, the Centennial International Exhibition. Whilst it marked the centenary of European settlement in Australia, it was held just 53 years after Melbourne was founded. In the intervening half century gold had been discovered, leading to a boom in the population and the economy of the State of Victoria. The REB provided the centrepiece structure: 14 hectares of continuous roofed space covered the exhibits provided by forty countries. It was an enormous success, with nearly two million visits. For the first time an international exhibition could be opened at night, thanks to electric lighting of the internal displays and the exterior of the buildings. Innovative technology included Edison phonographs, ice-making machines, power looms and diving apparatus. Working displays featured a printing press producing 12,000 copies of the Argus newspaper every hour, a quartz-crushing stamper-battery and a dairy. The Royal Exhibition Building was left standing when the Exhibition closed and continued to be used for exhibitions and other events. The most notable of these was the first parliament of the new Federation of Australia, attended by 12,000 people in the nation’s largest building in 1901. Thereafter, trade exhibitions dominated the calendar with automobile and home shows particularly popular. Today the tradition continues, with exhibitions such as the Melbourne International Flower and Garden Show and the Melbourne Art Fair attracting many thousands of people. The building has been used for many other purposes. A temporary hospital was established in 1919 to care for the victims of Spanish influenza outbreak. Three years later the Australian War Museum opened, a precursor to the Australian War Memorial in Canberra. During the Second World War the REB served as a barracks for air force personnel. Religious meetings, peace rallies, balls and university exams have all filled the REB and continue to do so to the present day. The REB stands as a monument to Australia’s social and political history as well as the international world of commerce and industry.

As part of Museum Victoria, the Royal Exhibition Building provides an excellent platform from which to tell the story of a remarkable city. It has been carefully restored, including the internal decorative painting from the time of the Federal Parliament. Alongside it stands the striking new building that houses the Melbourne Museum that opened in 2001. There are exciting plans for the future. A popular feature in 1880 and again in 1888 was the Dome Promenade from which visitors could look down on the gardens and across the rapidly growing city of Melbourne to Port Philip Bay. We would like to re-establish the Promenade as one of the attractions today. Another project is a virtual recreation of the Centennial Exhibition using a combination of digital technology and nineteenth-century images. We are working with the City of Melbourne to restore parts of the garden, including an archaeological excavation to reveal traces of the original layout.

Museum Victoria is grateful to the President of TICCIH, Eusebi Casanelles, for his support for the nomination of the Royal Exhibition Building as a World Heritage Site. Its inscription means that the international exhibition movement, as a phenomenon of the Industrial Age, is now recognised by UNESCO as being of universal significance.

For further information on the Royal Exhibition Building, including downloads of the nomination document, see: www.museum.vic.gov.au/reb/
In the search to find new uses for abandoned industrial sites, or even entire industrial zones, and in the effort to protect and conserve unique examples of our technical heritage, which, in its day, forged the history of technology in our country, heritage conservation in the Czech Republic is confronted with a difficult task – finding optimal solutions for the conservation of such sites. These and other related issues have become the main topic in what is now the third in the series of international, professional seminars, on this occasion held in Ostrava at the site of the authentically preserved Michal Mine. The seminar was organised by the regional office of the National Heritage Institute in Ostrava and the central office of the National Heritage Institute in Prague. Its aim was to mediate the opinion shift in the perception among the lay and professional communities with regard to conserving and protecting technical heritage, focusing on positive examples of the revitalisation of industrial heritage in Europe. The seminar also addressed the issues of protecting movable facilities and the conservation of non-integral components of manufacturing sites, i.e. worker colonies. The tradition behind these professional gatherings dates back to the year 2000, when the first national meeting of professionals in the field of technical heritage was also held at the Michal Mine in Ostrava. One of the conclusions to emerge from that meeting was the creation of an outline for further events in support of technical heritage conservation. On even years a specialised seminar is to be held, focusing more on issues relating to heritage conservation; on odd years the international Biennial: Vestiges of Industry is to be held, which in addition to looking at the issues related to determining new uses for industrial heritage also focuses on many other educational and cultural events aimed at supporting technical heritage conservation.

This year’s seminar in Ostrava involved the participation of many professionals from throughout the Czech Republic, but also included the participation of lecturers from abroad. The seminar offered participants the opportunity, for example, to learn about the documentation and evaluation of colonies in the Rhineland (Prof. Franciszka Bollerey), to be presented with examples of the conversion of mining monuments in the Rhineland to new uses (Axel Föhl), and to learn about the revival of two small towns with a vanishing textile industry in Nordhorn and Delmenhorst (Prof. Michal Mende). The ongoing polemical debate over the conservation of the largest iron works complex in the Czech Republic – the blast furnaces of Vítkovice in Ostrava (which under the title of the industrial complex in Ostrava is part of the monuments and sites of the Czech Republic selected for nomination for entry onto the World Heritage List of UNESCO) – benefited from the stimulating comparative paper presented by Prof. Rolf Höhmann on similar monuments found elsewhere in the world. Prof. Gerhard Staedler provided participants with an overview of Austrian examples of industrial heritage. The seminar culminated in an excursion to monument sites in the Upper Silesian industrial zone, which took place thanks to contributions from the Silesian Centrum Dziedictwa Kulturowego in Katowice (the Silesian Centre for Cultural Heritage – Eugeniusz Paduch), which was one of the co-organisers. The Philosophical Faculty of the University of Ostrava also helped organise the seminar, which was supported by the Czech-German Future Fund and the Czech Chamber of Engineers and Technicians in the Field of Construction.

The Michal Mine mine was opened in 1843 and later passed into ownership by the Ferdinand Northern Railway Company. Between 1913 and 1915 the surface of the mine was again entirely reconstructed so that mining in the surrounding smaller mines and the ensuing preparation and shipping of the coal was concentrated at the Michal pit. The reconstruction, carried out according to a project by the prestigious architect František Fiala, was based on the complete electrification of all surface machines, which were concentrated into a single, large, glassed machine room. Up until the completion of its operations in 1993, the entire site, including the technical equipment, remained without any significant changes, and it houses a unique set of electrical mining machines and compressors, mostly from the Siemens-Schuckert company, dating from the early stages of electrification and preserved in their original functional locations. Now there is the Industrial Museum in Ostrava-Michálkovice as a part of the regional office of the National Heritage Institute in Ostrava. Key locations on the surface of the mine (chain changing rooms, sign-in hall and the machine room) are accessible to the public and preserved according to the principle of the "last working day".
World Heritage Inscriptions

Australia

Royal Exhibition Building

The Royal Exhibition Building in Melbourne and its surrounding Carlton Gardens were designed for the great international exhibitions of 1880 and 1888. The building and grounds were designed by Joseph Reed. The building is constructed of brick and timber, steel and slate. It combines elements from the Byzantine, Romanesque, Lombardic and Italian Renaissance styles. The property is typical of the international exhibition movement which saw over 50 exhibitions staged between 1851 and 1915 in venues including Paris, New York, Vienna, Calcutta, Kingston (Jamaica) and Santiago (Chile). All shared a common theme and aims: to chart material and moral progress through displays of industry from all nations.

Canada

WHS suggestions

The so-called Tentative List of sites proposed by the Canadian government, though leaving out the Claybanks brickworks described in the last Bulletin, does include three with evidence of industrial activity. Red Bay is a group of archaeological sites, underwater and on land, that represent a 16th century Basque whaling station in North America. All the major elements of Basque whaling are present including tryworks, cooperages, workshops, dwellings, wharves, burial sites and lookout. Submerged cultural resources include the well-preserved remains of a number of vessels that illustrate 16th century Iberian technology including three whaling ships, two chalupas and a pinanza.

The Klondike region contains First Nations story cycles of a challenging way of life that was briefly but radically altered by the Klondike Gold Rush of 1896-1898, one of the great 19th century gold rushes, and its aftermath.

Thirdly, the Rideau Canal is the only canal dating from the great North American canal-building era of the early 19th century that remains operational along its original line and with most of its original structures intact. It was also one of the first canals designed specifically for steam-powered vessels. The associated land use patterns of the Rideau corridor are also an exceptional example of the opening of the North American hinterland for settlement and economic development in the early 19th century. It includes a 202km section built in 1826-1832 as part of Britain’s strategy for the defence of British North America. [Adapted from www.pc.gc.ca/progs/spm-whs/srm3-/index_e.asp]

India

Chhatrapati Shivaji Railway Terminus

The Chhatrapati Shivaji Terminus, formerly known as Victoria Terminus Station, in Mumbai, is an outstanding example of Victorian Gothic Revival architecture in India, blended with themes deriving from Indian traditional architecture. The building, designed by the British architect F.W. Stevens, became the symbol of Bombay as the ‘Gothic City’ and the major international mercantile port of India. The terminal was built over ten years starting in 1878 according to a High Victorian Gothic design based on late medieval Italian models. Its remarkable stone dome, turrets, pointed arches, and eccentric ground plan are close to traditional Indian palace architecture. It is an outstanding example of the meeting of two cultures as British architects worked with Indian craftsmen to include Indian architectural tradition and idioms forging a new style unique to Bombay.

Sweden

The Varberg Radio Station

The Varberg Radio Station at Grimeton in southern Sweden (1922-24) is an exceptionally well preserved monument to early wireless transatlantic communication. It consists of the transmitter equipment, including the aerial system of six 127m high steel towers. Though no longer in regular use, the equipment has been maintained in operating condition. The 109.9-ha site comprises buildings
housing the original Alexanderson transmitter, including the towers with their antennae, short-wave transmitters with their antennae, and a residential area with staff housing. The architect Carl Åkerblad designed the main buildings in the neoclassical style and the structural engineer Henrik Kreüger was responsible for the antenna towers, the tallest built structures in Sweden at that time. The site is an outstanding example of the development of telecommunications and is the only surviving example of a major transmitting station based on pre-electronic technology.

United Kingdom

Liverpool waterfront

Six areas in the historic centre and docklands of the maritime mercantile City of Liverpool bear witness to the development of one of the world’s major trading centres in the 18th and 19th centuries. Liverpool played an important role in the growth of the British Empire and became the major port for the mass movement of people, e.g. slaves and emigrants from northern Europe to America. Liverpool was a pioneer in the development of modern dock technology, transport systems, and port management.

Czech Republic

Benjamin Fragner

Industrial Architecture of the Inter-war Period

Research Centre for Industrial Heritage (VCPD) at the Czech Technical University

This project looks at an important period of industrial architecture, between the emergence of the independent Czechoslovak state in 1918 and the Second World War, though a period that from the perspective of the process of mapping industrial heritage has been neglected. Yet it is the industrial architecture of the 20th century and specifically that of the period between the 1920s and 1940s that represents such a substantial contribution in a European and a worldwide context, and this is one of the significant aspects that the research project intends to emphasise.

In a European comparison the Czech heritage of industrial architectural work is among the examples representative of the exceptional cultural, technical and economic flourishing that occurred between the two world wars, and it can be directly traced back to the progressive tradition of the Werkbund, whose creativity no longer sees industrial production as such for its shortcomings, but focuses instead on its production under artistic scrutiny. The fusion of these two values – production and artistry – is the essential contribution of architecture that, though very fragile from the perspective of applied aesthetics today represents one of the basic milestones of the recognised values in the first half of the twentieth century.

The subject of the research is tied to the newly-founded Research Centre for Industrial Heritage at the Czech Technical University. The conference, will be reported in the following Bulletin.

France

New Masters course in Scientific and Technical Industrial Heritage

The University of Savoie has announced a new Masters programme in the History and Sociology specialising in “Patrimoine Industriel Scientifique et Technologique”. The university has a high standing for its international relations and is keen to attract foreign students to this brand new programme. More information is available at http://www.fish.univ-savoie.fr/8080/fish /02/masters/histoire/pist or from Hervé Boileau, herve.boileau@imov.savoie.fr

Iceland

Fishing industry museum prized

The Michelotti Award of the European Museum Forum for the best industrial or technical museum was won this year by the Herring Era Museum in Siglufjordur, in north Iceland. The collection covers the whole island and occupies two buildings, one a former salting station and the other a new building based on the first fish and oil factory in the town. The judges were impressed by the large number of voluntary staff, many from the herring industry, and the balanced view of the social, technical and industrial aspects.

Norway

Fishing industry museum prized

Another internet-based course in the documentation of industrial heritage was organised by TICCIH Norway with the Norwegian Directorate for Cultural Heritage between the 1 September and 8 October 2004. Though the course is web based, it included a field investigation of a margarine and fats factory in Fredrikstad. The course is sponsored by the Norwegian Archive Library and Museum Authority and the participants are students and employees in museums. More information about the organisation and objectives of the course can be had from Gustav Rossnes at the Department for Historical Monuments and Sites, gustav.rossnes@ra.no
Japan

New Developments in Industrial Tourism
TICCIH Intermediate conference
6-8 July, 2005

Call for papers

The conference will coincide with the 2005 World Exposition in Aichi Prefecture, Nagoya, at the heart of the World Expo site, has long been one of the manufacturing heartlands of Japan, but since 1996 the city has turned its industrial heritage into tourism products. The proposed dates will include two days of meetings and one full day excursions, a chance to visit the Expo site, and there are a number of one and two-night post-conference tours planned.

Contact: Akira Oita, National Representative of Japan, oita@suac.ac.jp

World
Conferences

Norway

Industrial Heritage – Contemporary Challenges:
De-industrialisation + Approaches to Contemporary Industries,
Stavanger
September 2005

This conference addresses ways of interpreting large-scale technological systems as industrial heritage. It focuses on the specific challenges of documentation and representation of complex structures. The issues raised will increasingly confront people working in academic and technological-industrial museums. The relevance for government bodies and businesses with stewardship over large technological infrastructures is evident. The event takes place at the Norwegian Petroleum Museum in the Norwegian oil capital, Stavanger. Excursions to some of the country’s central processing plants for natural gas and aluminium, as well as older brewing and fish-carrying establishments, are included. Conference language English. Number of participants is limited to 60.

Contact: http://www.museumsnett.no/htm or from Harald Tønnesen, Norwegian Petroleum Museum/Norsk Oljemuseum, P.O. Box 748 - N-4004 Stavanger, http://www.norskolie.museum.no T: +47 51 93 93 03, harald@norskolje.museum.no

United States

Second International Conference on the History of Transport Traffic and Mobility (T2M), University of Michigan, Dearborn 4 - 7 November 2004

The conference aims to build upon the success of last year’s inaugural meeting in bringing together the many scattered initiatives, research programmes, research institutions and individuals exploring the social, cultural, economic, technological and political history of mobility. The term mobility history invites investigation on the material and the symbolic circulation of people and goods in relation to various modes of transport. We especially encourage transnational and transmodal approaches. For a schedule of last year’s program please visit: http://www.t2m.org/

Contact: For general information contact the Programme Committee’s chair: Bruce Pietykowski at bp@umich.edu

Spain

II International Conference on Maritime Heritage
Barcelona 18-20 April 2005

The meeting, at the Maritime Museum, is focused on the technology and latest discoveries to be applied to the preservation of our maritime heritage. It will discuss the future of historic harbours, dockyards and other similar maritime structures as well as the function of historic vessels and their heritage value, tourism and maritime heritage and the need to protect it by suitable legislation.

Contact: Simone Jander, 36, rue Chabot Charny 21000 Dijon, T: 03 8068 9638, F: 03 8068 9658, Simone.Jander@u-bourgogne.fr

China

International Scientific Student’s Workshop
XXII ICHOTEC International Congress of History of Science: Globalisation and Diversity: Diffusion of Science and Technology throughout History,
Beijing 24 - 30 July 2005

For symposia proposals: 30 June 2004; for registration 20 December 2004; for abstracts of papers: 15 April 2005. The congress website on which you find the first circular is http://2005bj.ihns.ac.cn

Contact: Alexander Keller agiel@leicesters.ac.uk

Finland

XIV International Economic History Congress
Helsinki 21-25 August 2006

The IEHA welcomes proposals for sessions on all topics in economic history, the history of economics, demographic history, social history, urban history, cultural history, gender studies, methodological aspects of historical research, and related fields.

Proposals for sessions on the period before 1800, and for ones that include countries other than those of Western Europe and North America will be particularly welcome. The scientific programme of the congress will comprise approximately 100 sessions.

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