



THE INTERNATIONAL
COMMITTEE FOR THE
CONSERVATION
OF THE INDUSTRIAL
HERITAGE

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Photo: © Murdo MacLeod

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Industrial buildings –
modifying,
repurposing,
reactivating and re-
integrating...

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Who loves power stations, and are they
crazy?

■ The Dounreay Sphere at the Dounreay nuclear plant in Scotland, Great Britain, was designed by architect Richard S Brocklesby, and was erected between 1955 and 1959. Made of steel, which on average is one inch thick, it is a blast-proof vessel strong enough to contain a chemical explosion in its reactor. The design was empirical because no spheroid of this size had ever been built anywhere in the world. Reinforced concrete foundations were laid into solid rock for a cylindrical anchor block, onto which were clamped steel plates, which were then welded. Each weld was tested electronically and each zinc-coated plate was rolled individually. The result was a remarkable feat of design, construction and engineering; a perfectly spherical building with a diameter of 135 feet [41 m], containing 1500 tons of steel, over two miles of welds, and with a surface area of 1.5 acres [6,070 m²]; the largest spherical building in Europe, and possibly the world. As architecture it is a startling, geometric and alien intervention into the landscape, a universal statement of man's aspirations, and a masterpiece of its designer's art. Inside is a cathedral-like space as large as the dome of St Paul's cathedral, a paradigm of 20th century industrial innovation.

Last year a report by the conservation consultancy Atkins Heritage on the Dounreay nuclear site provided judgments which form the basis for a decision that the Dounreay Sphere will ultimately be demolished. The report has been accepted by Dounreay Site Restoration Limited, (DSRL) the Nuclear Decommissioning Authority (NDA) and Historic Scotland (HS). It has been presented as a definitive approach to assessing nuclear sites and accepted by an uncritical media as the final word on the matter. However, critical analysis of the Atkins Report reveals it to be an imperfect instrument in pronouncing ultimate demolition on an iconic and historic structure.

Its merit has long been recognized internationally. ICOMOS, supported by the Twentieth Century Society (the British group for 20th century heritage) and the Association for Industrial Archaeology has recommended it to UNESCO as one of 18 sites in Britain worthy of consideration for World Heritage status.

In 1962 it fulfilled the original purpose as its experimental reactor reached 'criticality', becoming the first fast breeder nuclear reactor in the world to supply electricity to a national grid. It continued to do so until 1977.

The Atkins Report, damning with faint praise, makes claims that the Sphere cannot be retained on the basis of statements that are at least subjective, and sometimes inaccurate: '...the risk of receiving a radiation dose may never go away.' Scientist Michael Cowie, former radiation protection advisor in the Sphere says; 'This is simply not true'. The NDA itself states that it is only lightly contaminated.

Atkins claims that the nuclear achievement within the Sphere '...is an example of a rare nuclear technology that is now largely but not wholly extinct.' Yet Japan's 2007 decision to develop fast breeder technology in partnership with France and similar decisions taken by Korea, India and China indicate otherwise. Subjective and unreferenced judgments are presented as unquestionable fact as the Sphere is judged on its ability to confer 'significant benefits' and found wanting. All that would be left after decommissioning would be a " 'shell'....its core values removed", a statement which few architects would make about this building.

Claims of contamination, radiation, and difficulty of access as reasons for demolition fade away in DSRL's admission that 'while the condition of the Sphere upon completion of decommissioning isn't known there is plenty of time for any organization to come forward with a proposal for its redevelopment that doesn't compromise the decommissioning of the site as a whole, nor add to the total cost'.

In other words, flexibility is needed so that DSRL may do as they wish in order to proceed with decontamination. Historic Scotland cannot over-ride safety priorities, so cannot list the sphere. A statement of determination to demolish the sphere allows the demolition company to proceed freely, which a statement of intention to preserve would not.

At the end of the process, the Sphere, safely decontaminated, will stand for a period then be destroyed. It fills all criteria for listing and preservation, but its geographical position, a set of subjective reasons for demolition, and paucity of cash will dictate its end.

Yet it could be saved; it stands in the middle of a 150 acre site where there are Neolithic remains, a castle, the site of two battles, and a world war two airfield as well as a need for tourist attractions in an area rapidly becoming economically depressed. Ultimately it may fall by what may seem a lack of imagination to some or mere utilitarianism to others.

Opinion

John Little
www.dounreaydome.org.uk

Save the dome of the Dounreay nuclear reactor

■ XV TICCIH Congress, 4th-11th November, Taiwan Post-Colonialism & Industrialisation- Industrial Heritage of Others

We have a congress venue for 2012! President Patrick Martin confirmed last month that the Board has accepted a proposal to organise the next TICCIH Congress in Taiwan. For the first time we are moving outside the traditional regions marked by 19th century industrialisation to take on the 'process of birth, growth and decline of industries fast-coursed by the colonization from the West to the world'.

As this line from the congress announcement suggests, there are places in Asia that are de-industrialising, while others are industrialising. The congress provides an original occasion to consider the relationship between the two and its implications for how we treat the consequent heritage of this process. The themes for the main sessions and sub-sessions will be settled shortly.

We'll be in Taipei, the capital of Taiwan on the very north end of the island. It was founded in the early-18th century but urbanisation only took off half a century ago. The main venues for the congress are the Taipei Fine Arts Museum and Huashan 1914 Creative Park, a re-used winery. Many of the sites we will experience during the congress and during the three-day tour after can be seen on the new Taiwan page of www.ticcih.org.

The first week of November has been chosen to avoid the hottest or rainiest weather.

The person responsible for organising the congress is Dr. Hsiao-Wei Lin of the Department of Architecture, Chung Yuang Christian University in Taipan. Dr Lin has already established a solid institutional base for the congress and is looking to include other organisations as well as to cooperate with colleagues from the ROC and other neighbour states.

The full announcement can be downloaded from the TICCIH webpage and is sent with the pdf version of this Bulletin.

■ TICCIH Congresses: the Bulletin offers free registration for Taipei to anyone who has attended all of them.

1973 I Ironbridge, Great Britain
1975 II Bochum, Germany
1978 III Stockholm, Sweden
1981 IV Lyon-Grenoble, France
1984 V Lowell, Mass. USA
1987 VI Vienna, Austria
1990 VII Brussels, Belgium
1992 VIII Barcelona-Madrid, Spain
1994 IX Montreal-Ottawa, Canada
1997 X Thessaloniki, Greece
2000 XI London, Great Britain
2003 XII Moscow, Russia
2006 XIII Terni, Italy
2009 XIV Freiberg, Germany
2012 XV Taipei, Taiwan

■ Dear TICCIH friends,

As the representative of TICCIH Japan I express our (JIAS-Japan Industrial Archaeology Society) and my gratitude to TICCIH colleagues and friends. Fortunately, I should say, there were no sufferers from the devastation among our members, I have heard. Prof. Hideki Onodera, JIAS/ICOMOS in Morioka (near Kamaishi) survived the Earthquake and Tsunami. But he wrote that he worried himself about Kamaishi and the Pacific seaboard, though Morioka-city was slightly damaged. We shall overcome all these difficulties inclusive of the radioactive pollution in the near future, I will hope.

Professor Akira Oita, Atomi University

■ Top 100 Spanish historic industrial sites

TICCIH España launched a new exhibition last month which presents the 100 outstanding representatives of the industrial heritage of the country. The promoters hope to awaken more understanding in Spain for an overlooked

aspect of the country's historical legacy. In the light of recent debates in this Bulletin, industrial heritage is defined as 'those elements of industrial exploitation generated by economic activities of the capitalist society and tied to a particular production process characterized by mechanization'. The 100 sites, ensembles and landscapes are distributed across the whole of the peninsula reflecting the varied specialisations and spread of resources across one of Europe's largest states.

The exhibition is at the Real Fábrica de Tapices in Madrid until the end of April and then goes on tour. Info: www.incuna.es

■ Industrial archaeology awards

The British AIA continues to distribute prizes and financial awards for scholarship and fieldwork, and has appealed for more applicants. Among last years winners was Professor Patrick Malone, for his book *Waterpower in Lowell: engineering and industry in nineteenth century America*. Patrick presented the book in at the TICCIH congress in Freiberg (2009). Info: <http://industrial-archaeology.org/awards.htm>

■ Grain silos and elevators: a heritage to be created

The Agriculture and Food Production Section of TICCIH has chosen these icons of modern architecture, celebrated by Gropius and Le Corbusier, as the focus for its third international conference in France this autumn (see TICCIH Conferences). It will be in Nogent, centre of a traditional wheat-processing area in which Europe's largest malt-house was built last year. The conference's four themes are preserving and storing food; construction technology and economic strategies; aesthetics, styles and images; and industrial hazard, perceptions and heritage. Paper abstracts to be sent before 1 June 2011.

■ Thanks to all the contributors. Photographs are by the authors unless stated otherwise.

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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.

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In December of 2007, experts and citizens alike were shocked when Canada's Bata Shoe Headquarters and warehouse complex, built in the 1960s in a Toronto suburb, was demolished. A year prior to its destruction, this site had won the Ontario Landmark Award and was prized for its distinctive architecture. The complex had been in excellent condition, no vandalism had taken place. After a bit of painting and vacuuming a new tenant could have moved in. But a new and prestigious museum was planned for its site.

Across the Atlantic Ocean, in the summer of 2009, the Lauffenmühle in Blumenberg, Baden Wurttemberg, fell victim to the wrecking ball. It was Germany's first windowless plant after the American model of dark-factories, designed by the internationally known architect Egon Eiermann, and a designated heritage site. Because a feasibility study about the renovation and re-use of the building, which had been decaying for decades, proved negative, it was demolished, despite the fact that in the previous twenty years over two hundred companies (according to the local engineering office IBS Schweizer) had been interested in moving into the building under the condition that the structure could be modified to meet their needs.

Although we do not like to hear of such losses of significant industrial architecture of the recent past, we are not at all surprised; it happens frequently in every industrial and post-industrial society. The assumption is that the specific character of such buildings is a serious handicap in adapting them to new uses once the companies that had them built leave. Issues of contaminated building materials such as asbestos, of inconvenient location, of an ephemeral building style, of insufficient technical infrastructure and so on make re-use seem unlikely. However, on a closer look, such problems may be smaller impediments than we think. There are enough examples of factories built after the 1950s where such obstacles were overcome and the structures adapted to a new life. The CIBA building in Dorval, Quebec, a former chemical

Solutions for the re-use of contemporary industrial heritage: confronting obstructions at the local level

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factory built in 1961, is currently being converted into condominiums. And the outdated industrial complex in Cologne-Ehrenfeld in which the well-known German "4711 Eau de Cologne" was produced, and which opened its doors in 1951, today houses offices, a supermarket and offers plenty of living space.

Success and failure in saving contemporary industrial sites depend on more than implementing re-use opportunities. Eiermann's factory in Blumenberg, listed as a monument in 1996, was demolished because the provincial preservation office in Stuttgart did not allow structural alterations to the building that may have interfered with the heritage value of the original architecture. However, significant modifications had already taken place while the factory was still in use: floors had been replaced, wall sections removed, exterior cladding modernized, and so on. Modifications are common on active manufacturing sites. In Cologne, the 4711 complex also enjoyed protection as a heritage monument but, in this particular case, the preservation office responsible allowed extensive alterations as long as the restoration efforts kept the specific characteristics of the architectural style. The original simple glass-tiles on the exterior of the building were regarded as unsafe by today's regulations. They were replaced by larger safety-glass sheets in the same colour, imitating the shape of the original tiles. By doing this, according to

the current preservation laws of all German states and the guidelines of the Venice Charter, the rules were bent beyond all accepted means. The deliberate loss of original building material should have been avoided or the heritage protection withdrawn. However, in many cases of 20th-century architecture, deteriorating surfaces and building structures cannot be restored. Safety regulations may require a change of material, and formerly mass-produced building-parts cannot be recreated in piece work. Not only in Germany but elsewhere, to safeguard contemporary industrial architecture may require a more flexible interpretation of Article 5 of the Venice Charter, which is concerned with the inherent value of original material and original lay-out.

Toronto's Bata headquarters was not a declared heritage monument even if a similar site may have gained this status in Germany. Most Canadian provinces choose to give heritage value only to as many sites as they can afford to maintain. In a country with such a short history, older sites are generally preferred over newer ones. For that reason, according to my research, even in the oldest industrialised province of Canada, in Quebec, not one post-World War Two industrial site can currently expect heritage protection. That the country's specific character has been shaped less by ancient French-style stone houses of its first colonizers than by sophisticated modern industries, to which a historic link will be needed for future generations, is widely overlooked in Canada.

The search for re-use options alone may not suffice. Differing interpretations of protection laws and varying selection criteria for heritage sites are only two examples among many others which need to be analyzed when searching for the reasons why so many important industrial sites are disappearing. Many other factors have to be considered in such an analysis; some are practical ones, such as taxation laws and zoning regulations; some are less easy to grasp, such as value systems shaped by history and discrete political agendas.



The CIBA building in Dorval, Quebec, Canada

Photo: Anja Borck



The 4711 building in Cologne, Germany

Photo: Anja Borck

Historic waterworks infrastructure should be preserved, whether operable or decommissioned, whether in whole or in part, whether above ground or below, whether in a purpose-built or adaptively-used role, because it informs modern water managers, civil engineers, policy makers and preservationists of the heroic civil engineering achievements of the past realized in the face of needed social change. Wherever this infrastructure was constructed, aqueduct systems were designed to deliver adequate and reliable supplies of potable water to consumers and their presence in an urban community consistently reduced outbreaks of disease and fire. Today, city-dwellers rarely stop to consider the extensive infrastructure that makes life sanitary and convenient unless it temporarily ceases to function. Amidst a 21st century culture of technological invention and infrastructural expansion, the survival of this aging, yet often unseen and silent utilitarian tissue has become increasingly vulnerable to unsympathetic alteration, abandonment, demolition by neglect, and obscurity in the public's consciousness.

This article builds on previous research performed at the American Academy in Rome and Columbia University, and argues three key points: 1) that historic waterworks infrastructure can be modified, repurposed, reactivated and re-integrated within active distribution systems to meet potable and non-potable water needs 2) that capital investment in restoration and selective modern upgrades of historic waterworks infrastructure can extend purpose-built and public-service utility while retaining character-defining features 3) and that environmentally sustainable and architecturally feasible alternatives to abandonment and demolition are possible for decommissioned waterworks heritage.

Two aqueducts in Rome and New York illustrate that this infrastructure can be modified, repurposed, reactivated and re-integrated within active distribution systems. Whether constructed to meet propagandistic, strategic, public health or civic-virtue purposes, monumental waterworks systems like the Aquedotto Vergine (June 19, 19 B.C.E) in Rome and the Croton Aqueducts (Old Croton 1837-42; New Croton 1885-95) in New York were built of durable materials according to engineering designs that anticipated their long-term serviceability. Consider that in Rome, a 2000-year old aqueduct continues to function, while in New York, a mid-19th century aqueduct was decommissioned after only 123 years of use. Comparing the two aqueducts' stewardship merits closer analysis. Within the same decade, spanning from 1955 to 1965, as NYC's Department of Environmental Protection (DEP) decided to de-activate a 41-mile long, gravity-fed, masonry-lined aqueduct which had been brought on-line in 1842, Rome's water management agency, ACEA, surveyed and ultimately chose to repurpose an ancient, 21-km long, gravity-fed, masonry-lined aqueduct which

Stewardship and sustainability of historic waterworks infrastructure: adaptive use challenges and opportunities

Meisha Hunter

FAAR, Senior Preservationist, Li/Saltzman Architects, NYC

was deteriorated but still active. During the post-war period in Rome, unregulated residential construction above the Vergine and absence of wastewater utility infrastructure cumulatively resulted in soil contamination, environmental degradation, infiltration, and structural damage, necessitating declassification of the aqueduct's water from potable to non-potable status." Instead of abandoning the aqueduct, ACEA undertook a structural reinforcement campaign and repurposed the aqueduct's water for ornamental fountain displays and the irrigation of public parks. The contrasts in management and long-term sustainability of these two aqueducts are instructive. The Vergine's repurposed use highlights a remarkable and recurring fact about many historic waterworks systems: namely, that age doesn't necessarily negate serviceability or utility.

The DEP's current project at the National Historic Landmark listed New Croton Dam demonstrates how capital investment in restoration and selective modern upgrades can extend purpose-built and public service utility of historic waterworks infrastructure. The monumental public work (constructed 1892-1903) features a 270'-0" foot high dam and spillway with a storage capacity of 32 billion gallons. The current project, which seeks to extend the Dam's service life by 50 to 100 years, will include preserving the historic dam and its associated structures, performing masonry repairs and cleaning, and rehabilitating water conveyance facilities.

Environmentally sustainable and architecturally feasible alternatives to abandonment and demolition are possible for out-of-use waterworks heritage. Amidst growing public consciousness of non-renewable resources and the carbon footprint legacy of demolition, it's important to consider that compatible and sustainable re-purposing of decommissioned waterworks infrastructure is possible. Adaptive use has transformed decommissioned waste weirs into venues for public tours, gatehouses into performing arts venues and

adult day care centers, cisterns into concert halls, aqueduct bridges into pedestrian thoroughfares and linear connectors between public parks, and ventilators into mile markers on scenic trails. Although envisioning vibrant and compelling new uses for these utilitarian structures, navigating existing ownership and jurisdictional restrictions, procuring funding and political support, and establishing long-term stewards are significant challenges, the examples cited above are tangible reminders that these structures can in fact be re-used. Many of these projects have been achieved with minimal alterations to historic fabric, and limited compromise to authenticity and character-defining features.

The challenges confronting waterworks heritage stewardship and sustainability continue to mount. At this moment, in the United States, monumental, visible, publicly-accessible and above-grade waterworks heritage is privileged in terms of recognition, designation, protection, political support and economic investment over the no-less monumental, but invisible, publicly-inaccessible, and below-grade heritage. There remains a need to expand the public's awareness of the engineering and cultural significance of this heritage. Encouraging a debate about the feasibility of preservation management guidelines that sensitively balance preservation and water management priorities for active waterworks heritage would be instructive. Best practices guidelines, such as the Nizhny Tagil Charter, as well as preservation management guidelines for historic bridges, might be carefully assessed for their feasibility and applicability to waterworks heritage. For decommissioned heritage, procedures need to be established which assist municipalities in surveying out-of-use structures and sites, and facilitating jurisdictional transfer of these structures and sites to new owners bound to preserve character-defining features. Ultimately, all of these ideas underscore one of the Nizhny Tagil Charter's maintenance and conservation goals: that "Continuing to adapt and use industrial buildings avoids wasting energy and contributes to sustainable development."



The 119th Street Gatehouse (center, corner of Amsterdam Avenue and 119th Street) was constructed in 1894-95 as part of the Croton Aqueduct system. The one-story rusticated granite building, which is an individually designated NYC landmark, has been vacant since 1990.

The British cemetery of Real del Monte, Mexico

Rita Sumano González, Conservator

In 2009, the National Institute of Anthropology and History of Mexico (INAH) requested the National School of Conservation, Restoration and Museography to assess the conservation conditions of the British Cemetery of Real del Monte, State of Hidalgo, Mexico. This task was carried out by an interdisciplinary team including Martha Lameda (Architectural Conservation), Raquel Beato (Historian), Adriana Sanromán (Conservator) and the author (Conservator).

The British Cemetery was created by Cornish miners in the early 19th century. They migrated to Real del Monte, famous since colonial times for its silver. The Cornish brought experienced professionals and industrial technology, as well as customs, traditions, forms of entertainment, religion, food and architecture. They built their own cemetery recreating the English style burials, grounded in their religion, ancient Celtic traditions and Masonic ideology.

From our very first visit to the site, it was clear that the standard evaluation procedure: take photos, make drawings, identify agents of deterioration and suggest solutions, was not enough. An adequate evaluation of the graveyard based only on its conservation dimension was not feasible; we needed to extend the approach to the urban, natural, cultural, historical and symbolic assets. Both the scientific and perceptual analysis were needed -from the identification of the agents of deterioration, to the impressions produced by the syncretism of nature with the site, the urban and natural landscape and the relation of the stakeholders with the place.

The proposed vision provides for the assessment of significance, divided according to the Burra Charter as aesthetic, historic, scientific and social.

The British Real del Monte, founded in London in 1824, intended to rehabilitate the then paralyzed and partially destroyed mines, abandoned ever since the War of Independence. This quest resulted in the introduction of new technology and machinery as well as in cultural syncretism between the Cornish migrants and the locals.

Construction stages were identified, the earliest tomb being dated 1834. The graveyard is still under use with a reserved area for future extension. Defining stages was key for understanding the historical dimension of the site, the different formal types, the quality of the manufacture, the meaning of symbols and iconography, the forms of deterioration, the state of conservation and the varieties of patina in the tombs.

The cemetery, surrounded by gigantic old trees, crowns Real del Monte and constitutes a hallmark in the landscape. The site offers a contrast between the rugged terrain of industrial heritage, the abundant natural resources, the soil rich in volcanic minerals, the pinewood forest and cold weather, with frequent rain and dramatic fog.

When entering the site, one is taken by the smell of vegetation, the pervasive humidity, the natural light shaded by slender trees and the wide variety of greenery in the graves. From the Cemetery, the city appears adorned by the rhythm offered by the English style steep gabled roofs, the red tiles, the light colored walls, iron balconies, industrial remains and narrow streets. These enhance the depth of the geography and sharpen the aesthetic appreciation. The symbolism and funerary art features are reinforced by the peaceful

atmosphere, the shades and natural lighting. The site holds a great scientific value. Architectural and funerary monuments document historical facts about the Cornish miners and their families; they serve as witness of their funerary traditions, their culture, aesthetics, ideology and religious customs.

Although the influence of English culture in the area of Real del Monte is evident, the British Cemetery is seen by the community as a place outside their own culture and heritage. Often they ignore the very existence of the site, and visit the place only to have a "Halloween-like" experience, since the graveyard looks so different from Mexican cemeteries. Conversely, the British-Mexican community considers this site as a symbol of their identity.

Results

This approach made it possible to detect and link in a hierarchical way the factors threatening the site and the prevalence of its values. A preservation project was proposed in four stages: knowledge (documentation and scientific analysis), reflection (dialog with specialists and stakeholders), action (restoration and conservation), maintenance and dissemination.

We believe that the conservation of any cultural property must begin with its appropriation by the stakeholders. Consequently, this work was presented at Real del Monte. Soon the delegation of INAH in Hidalgo, the board of trustees for the rescue of the British Cemetery, the British Society and the local community showed determination and interest in the proposal, and are now raising funds for its preservation.

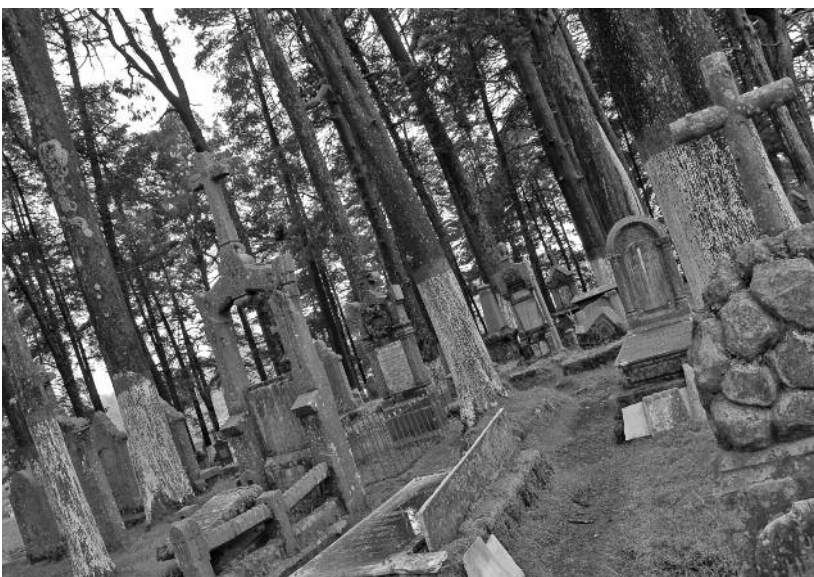
Austria

Guided railway tour of UNESCO World Heritage sites

Günter Dinhobl
TICCIH Austria

The UNESCO World Heritage sites of Austria can all be reached by train. That is why ÖBB-Erlebnisbahn offers this year - for the first time - a one-week guided railway tour to several UNESCO World heritage Sites.

The tour takes six days and it is named 'From the Danube to the Alps'. The special train for this tour contains 1st class carriages from the 1960s, the former 'Salon 10' wagon which was dedicated to Austria's Federal Presidents, and the 'Salon z' wagon - a "lounge-like smoking-parlour car". The tour starts in Vienna and the first visit is the famous 'Semmering Railway'. It was the first railway to pass the mountains and according to UNESCO the line "represents an outstanding technological solution to a major physical problem in the construction of early railways". Then comes the centre of Graz



The British Cemetery.



Kalte-Rinne-viaduct at the Semmering-railway.

which is the capital of the province Styria. On the next day the train pass the alpine landscape to bring the travellers the World Heritage region Hallstatt-Dachstein. There, a salt-mine will be visited which has a history of systematic mining of around 3000 years. Then the train ride leads to the Benedictine monastery of Admont; this monastery contains an extensive and impressive library. Back on the train, the route passes through the rough alpine valley named Gesäuse which is also a national park. The next World Heritage site is the valley of Wachau, a cultural landscape dominated by the Danube river and the wine-growing areas. Finally the tour leads back to Vienna where there are two World Heritage sites – the historic centre and the palace of Schönbrunn.

All World Heritage sites of Austria contain also Industrial Heritage sites to discover. Therefore, on the occasion of this railway tour, TICCIH Austria will compile an information leaflet which give examples of Industrial Heritage sites within Austria's UNESCO World Heritage sites.

This year two dates are offered – from July 3rd to July 8th and from September 25th to September 30th. For more information see the catalogue – <http://bahnbussschiff.ch2nno2.com/down/katalog2011.pdf>

Inventory of Colombian industrial heritage

Alejandra Alvarez

In the 19th century began a huge change in the political and social structure in Colombia. It was time to leave old traditions behind and open the path to new industry. This industrial revolution generated new economies and strengthened the capitalist system; boundaries

were opened and it was time to migrate to new lands.

Syrian, Lebanese, German, Jew and Chinese people arrived in Barranquilla coming along with new knowledge and culture; who could imagine that with their arrival everything would change and Colombia would never be the same?

Factories, mills, mains, railways, cable cars and other similar systems were only a small part of the emerging industry in Colombia. The situation in the country was defined by the war between the Liberal and Conservative parties. However, people claimed for a new situation where labour opportunities and equal conditions for the poor existed.

In spite of the strong conflict, the Conservative party was the winner and with them came the regeneration project that intended to industrialise the nation, preferably with foreign hands. In the middle of the 19th century, the immigration fever reached its peak with the public invitation to European and American men to work in Colombia. In order to fulfil the premise of whitening people's skin colour, immigration companies were created allocating waste lands to the new immigrants; nevertheless the project failed and the regeneration idea came to its end.

Despite that fact, with the little foreign communities the change had already started. The industrialising process in Colombia claimed many lives, for instance in the Caribbean coast, German and French people suffered because of the heat and the lack of drinking water, among other inconveniences; however the high price they had to pay represented the dawn in commerce.

Companies such as Correa and Heilborn with cattle breeding, Henriquez and Mathine with tobacco, Senior, Desola and Co. with cotton,



Coffee processing plant, late 19th century, Pandi, Cundinamarca, Colombia.

were some of the most representative firms in Colombia; they accounted for 34% of the national income and shot up the exports, taking abroad with them more than 50% of the national production. With the objective of increasing, it was necessary to make the production processes more technical, for that reason machinery was brought from the United Kingdom, Germany, France, Italy and the United States; the importing process was quite difficult because the machinery was carried by ship and when it arrived in Barranquilla, it was just as difficult to deliver it to other places of the country.

With hard work the industry blossomed and the modernism began. In contrast to other countries, Colombia had a slow process; an example of this is that the tramways disappeared in Bogotá, leaving behind only part of their rails, a pale consolation to be remembered through history.

In the 21st century in Colombia a new discipline gained strength, historical archaeology. Works in places such as the colonial fortresses of Cartagena set the beginning in the study of post-Hispanic sites; however only until 2003 a pottery factory in Bogota was studied and the term Industrial Archaeology appeared in the scene.

Industrial archaeology in Colombia is a new field and there are many aspects to be studied; even though the country has had a comparatively low industrial development. Until recently there were less than a dozen publications partially devoted to industrial sites and no research projects aimed at this type of heritage. In the meanwhile some of the most important examples of foundries, beer factories, aqueducts, power plants, coffee processing plants and textile mills dating from the nineteenth and twentieth centuries were being demolished or altered.

This year this situation is beginning to change. The ICANH (Colombian Institute of Anthropology and History) has granted a research aid to start an inventory of the national industrial heritage. The project includes the design of a methodology and a classification system suited to the reality of Colombian industry. The first one-year phase will cover approximately 7,000 square kms around the capital city, Bogotá, where industrial facilities were most abundant in the past two centuries. The team leader of the project is Alejandra Alvarez, B.A. in anthropology and member of TICCIH.

A database designed to support all the relevant information has been constructed and it will be fed with field information, photographs, geographical references, extracts from archives and oral testimonies from local people who lived at the time when the factories were at work. The first phase is expected to be completed by November 2011 and results will probably be published in 2012.

The ugly, the inside and the human - the virtual Carlsberg

Kitt Boding-Jensen

Curator, Workers Museum of Denmark
www.arbejdermuseet.dk

The project 'The virtual Carlsberg' is a 100% digital based project about the old Carlsberg brewery, which was established in 1847. It has a holistic perspective towards the history of this cultural site and challenges the preserving policy in Denmark.

Carlsberg - an industrial heritage site

For more than 150 years Carlsberg has been located on the same site in Valby in Copenhagen, brewing beer for the Danes and a growing international market. The Carlsberg enterprise has changed a lot over the last 150 years, and as a result of the globalization the brewery production is leaving the historical site in Valby. The production has moved to the countryside in Jutland, which means that a large area in Valby is freed up for urban development. Over the next 10 to 25 years a new city district will develop.

Some of the historical buildings will remain and will be reused in other contexts, while others will be torn down to make room for new buildings more suitable for urban functions such as housing, cultural activities and private enterprises.

In many ways the history and development of Carlsberg reflects the changes in society, industrial history and the development of the city of Copenhagen. From being a national, family-based firm established by the brewer I.C. Jacobsen, Carlsberg is now a multinational joint-stock company.

The main purpose of the project 'The virtual

Carlsberg' is to tell the history of the industrial heritage as well as connecting the history to the physical site; to see it from a broad perspective including the physical architectural qualities as well as the production technology, the conditions for the workers and the relationship between Carlsberg and its surroundings.

It is the totality combining the different point of perspectives that interests us. This approach is also provoked by the Denmark preservation policy which has been mainly focusing on the physical side and the architecture, with no concern for what has happened inside the buildings. Both perspectives are important in telling the history of a cultural heritage site.

"The virtual Carlsberg" is a digital project on the website www.humlenvedcarlsberg.dk - unfortunately only in Danish - consisting of three points of entry and three different layers of communication:

- a 3D simulation of the physical site of Carlsberg in Valby in the year 2007,
- an audio universe of montages with workers at all levels in the organization of Carlsberg, and
- a knowledge database

One point of entry to the website is by an interactive 3D simulation of the site in Valby from 2007. You can walk as an avatar through the whole area and get a physical 1 to 1 experience of the scenery. It is an interactive relation where you can walk around as in a computer game in all directions and look for new adventures. You will find information on selected spots about the existing buildings concerning architecture, function etc.

Walking around an avatar you will also meet the second communication layer which is the audio universe. This consists of 35 audio



conference report

montages of workers from the brewery. Workers as the main characters in one story can be side characters in another. The focus in this layer is memories, and the montage is a suitable and perfect tool to communicate and present a universe where identification is a keyword. While the story is being told, you can navigate through a selected range of material and sources on the history of Carlsberg. This leads us to the last layer of communication.

The knowledge database consists of a large body of material arranged by a taxonomy of industrial history developed for this project with four main pillars: culture, production, physical environment and relations to the surroundings. This ensures that not only the architectural history of the industrial society is being told, but also the everyday working life, the history of the business enterprise etc. The

knowledge database consists of digitalized sources, pictures, video, articles, memories, plans of buildings etc. Through this layer it is possible to go directly to the sources or read about it in a more communicative way in one of the many articles.

The goal of "The virtual Carlsberg" has been to make an interactive and audio playground where through different layers of communication you can experience the cultural heritage sites from different perspectives depending on interest.

The holistic point of view is also a comment to the preserving policy of Denmark not only to focus on the empty shells of the buildings. The content – the inside, the ugly and the human – is just as important factors in telling and preserving the history of a cultural heritage site as Carlsberg.

■ France Mining world heritage disappointment

Disgust in France for the decision by culture minister Frédéric Mitterrand to replace the application of the Nord-Pas-de-Calais mining area at the next session of the World Heritage Committee in June with the natural site of Causses-Cévennes. It seems that the order came from the Elysee Palace (aka the French President) at the request of more influential groups in Languedoc-Roussillon, already concerned about their twice-rejected application. CILAC is bitterly disappointed after a long campaign by many people, the preparation of a massive documentary support, and the expert reports by international scholars on the value of the site. For details: Info-Cilac N° 148.

TICCIH Conferences

Details of the conferences are on www.ticcih.org/TICCIH/news.htm

Taiwan

XV TICCIH International congress: post-colonialism & industrialisation – the industrial heritage of others

Taipei, 4-11 November 2012

■ The meeting will examine the close connections between historical, political, racial, environmental, economical, technical, and social questions of industrial heritage. Info and draft timetable: www.ticcih.org
Contact: Dr. Hsiao-Wei Lin: linhw23@cycu.edu.tw

France

Grain elevators: a heritage to be created,

Nogent-sur-Seine, 20-22 October 2011. Call for papers.

■ 3rd International Meeting of the TICCIH Agriculture and Food Section. Technology, construction, aesthetics, conservation. Info: picot.francoise@yahoo.com

World Conferences

Mexico

11th International symposium. Cultural heritage in geosciences, mining and metallurgy-libraries, archives, museums

Mexico City, Pachuca and Real del Monte, Hidalgo 29 August-2 September 2011.

South Korea

mAAN 8th international conference

Seoul, South Korea. 25-27 August 2011.

■ Info: <http://maankorea.org/index.html>

France

Industrial Heritage: New urban policies and the significance of re-use

Université de technologie de Belfort-Montbéliard, Belfort, 21 – 24 September 2011.

■ International seminar organised by the Université with CILAC and the Direction générale des patrimoines. Info: marina.gasnier@utbm.fr

Germany

9th International conference OF THE international association FOR THE history OF transport traffic AND mobility (t2m).

Deutsches Technikmuseum Berlin (German Technology Museum), 6-9 October, 2011.

■ The history and future of transport museums, exhibitions and collections and transport halls in larger technology museums. Info: submissions@t2m.org

Australia

Watermarks, the heritage of water

Melbourne. 27-30 October, 2011. Call for papers.

■ Annual conference of Australia ICOMOS and National Trusts of Australia. Industrial aspects of water supply. Info: <http://www.aicomos.com/2011-watermarks/>

France

Railways and speed - two centuries of speed on the railways, thirty years of high-speed trains. Call for papers.

The International Union of Railways headquarters, Paris, 14-16 December, 2011.

■ The conference is supported by SNCF, the International Union of Railways and AFFI. Info: www.ahicf.com

Czech Republic

6th International Biennial 'Vestiges of Industry'

Research Centre for Industrial Heritage, Faculty of Architecture CTU Prague, 14-16 October, 2011

■ Industrial heritage – on the edge. The architecture of conversions, an international comparison of different professional and educational approaches. Info: www.industrialhistory.cz/2011