TICCIH
The International Committee for the Conservation of the Industrial Heritage
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The *Se Khat Tala* spiral loop on the Trans Iranian Railway a few kilometres south of the Veresk Bridge. The line passes three times over a short distance at different heights, descending towards Sari or ascending through the Dowgal twin tunnels. The Trans Iranian is the fourth historic rail line recognised as a World Heritage site after the Semmering Railway in Austria, the Darjeeling Himalayan Railway in India and the Rhaetian Railway network in Switzerland. See page 24. Photo: Ninara.

OPINION

DANGEROUS INDUSTRIAL HERITAGE: A NEW TICCIH FIELD OF STUDY

Dr. Joeri Januarius, Center for Industrial, Scientific and Technical Heritage ETWIE (Museum of Industry, Belgium)

A couple of years ago, the Center for Industrial, Scientific and Technical Heritage ETWIE began working on a long-term project on dangerous or toxic industrial heritage in Belgium. The first case study focused on asbestos, the asbestos industry and its heritage. During the TICCIH online get together on the 3 September, the idea was discussed of a new TICCIH section of thematic study on dangerous industrial heritage.

Once described as the mineral with a thousand uses, for more than twenty years the use and the trade in asbestos has been forbidden in Belgium and Europe. Of course, the ban does not mean that suddenly all the asbestos has disappeared. Current policy makers and the public department of waste management OVAM are modelling a long-term policy. The goal is to get Flanders in Belgium asbestos safe in twenty years. 66 countries have now regu-

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CORRECTION:

The article in the previous TICCIH Bulletin #93 TICCIH AFRICA - A NETWORK FOR INDUSTRIAL HERITAGE should have credited all the authors: Rim Kelouaze (Algeria), Mirhan Damir (Egypt), Wondwossen Amsalu Misrak (Ethiopia), Ṣọlá Akíntúndé (Nigeria), Mogbolahan Ajala (Nigeria), Abdul Karim Kamara (Sierra Leone) and Helen Ashby (Sierra Leone). The apologies of the editor, the version held on the TICCIH webpage already has the correct names.

OPINION

lated the use of asbestos, while production still continues in some major countries, led by Russia, Kazakhstan and Brazil. With more than 2 million tons of asbestos still in use in Flanders, asbestos safety is a huge challenge.

The first part of the research project focuses on the history of the asbestos industry. Although Belgium never had an asbestos mine, the country was amongst the champions of the use of the mineral, specifically during the 1970s. After Ludwig Hatschek patented his invention of cement reinforced with asbestos in 1901, the company Eternit (now part of the Etex Group) started production and became one of the world leaders in asbestos products. With companies like Vynckier, Pol Madou, Scheerders Van Kerckhove e.a., the asbestos industry had a major impact on Belgian industry, not only in imports, production numbers and workforce, but also on the local communities where the asbestos companies were located.

Today, the impact of asbestos on public health is becoming more apparent every year, impacting a large number of former workers and local communities. Due to the long latency periods of asbestos-related diseases, the impact of asbestos exposure on health becomes apparent decades after exposure. Inhalation of asbestos fibers can lead to serious conditions such as cancer to the breast- and pulmonary membrane (mesothelioma), lungs, larynx, the pharynx, stomach, ovaries and cervix. The project contributes to raising awareness

ABOVE: The abandoned neo-classical Uralita asbestos cement factory outside Barcelona is surrounded by waste piles of the fibrocement produced here between 1907 and 1997.

RIGHT: An example of an unknown asbestos application: Seitz asbestos filter for eliminating impurities in malt wine. (Collection Jenevermuseum Hasselt, © Hugo Maertens Brugge)

that action needs to be taken immediately, especially since it has become apparent in recent years that after decades of use, the wear and deterioration of bound asbestos causes fibers to come loose with a very high risk of them becoming airborne.

Looking at the known qualities of asbestos, it comes as no surprise that on industrial heritage sites, asbestos has been widely used, not only as a building material, but also in machinery and technical equipment. Approximately 3,500 asbestos applications have been identified by OVAM. These applications may have been collected as cultural heritage objects in museums in the 1970s-80s or are a part of industrial heritage sites, often without knowing that they contain asbestos. Sometimes the asbestos is visible, and necessary measures can be taken to safely remove it. But in most cases collection and site managers do not recognize asbestos applications, certainly when it is hidden within the object, making it difficult to conduct a risk management assessment.

With more than 30 museums and industrial heritage sites as partners, the research project is searching for asbestos in museums and stores. As the use of asbestos is, certainly for the younger heritage professionals and volunteers, something from the past, education and training is vital in order to prevent health issues on the long term, or for example contamination in museum deposits due to deteriorating asbestos applications.

A new TICCIH section on dangerous heritage

Our research project raises several questions. How do we have to deal with dangerous or toxic heritage as asbestos? What about risk management and assessments? Should we keep remains of this industry, as a reminder of what was once an important part of our history and heritage, or should we forget it? These questions are not only relevant within the Belgian industrial heritage context, but also apply in other countries. Several inspiring cases have been found such as the German INDUMAP project, an online manual for the conservation of industrial monuments, also dealing with asbestos. Or the great historical research of Jessica Van Horssen on the history of the Canadian town formerly named Asbestos, (renamed Val-des-Sources last year), the home of one of the biggest opencast asbestos mines, the Jeffrey mine.

But the scope of our project is of course limited to Belgium, and a comparative approach is really necessary to get a firm grip on the subject. Of course, not only asbestos can be explored, also other types of dangerous or toxic heritage like lead, mercury and several other chemical industries like fertilizers.

What are actual trends in your country? How does it relate with current issues in heritage management and local environmental discussions? Are you interested in working on this? Or any ideas or comments? Please contact the author.

Joeri JANUARIUS, 'Gevaarlijk erfgoed! Asbest en industrieel erfgoed: een korte stand van zaken', *Erfgoed van Industrie en Techniek*, 2019, 2, 17-21.

Jessica VAN HORRSEN, *A town called Asbestos. Environmental contamination, health and resilience in a resource community*. UBC Press, 2016, 228.

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TICCIH is the world organization on Industrial Heritage, promoting its research, recording, conservation and dissemination and education on industrial heritage. It holds a triennial conference and organises interim conferences on particular themes. Individual membership levels range from $10 to $40 (USD), corporate membership is $65, and student membership levels range from $5 to $10.

There is an online membership form on www.ticcih.org

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 online to members four times a year.

Back issues can be downloaded as a pdf file from the TICCIH web site, www.ticcih.org

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& ON SOCIAL MEDIA:

The formal entrance to the Arles railway yard. Photo: Howard Stanbury

FRANCE

THE LONG CONVERSION OF THE ARLES RAILWAY WORKSHOPS

Géraud Buffa, CILAC administrator

The reconversion of the 150-year-old railway workshops in Arles, Provence, reached a milestone this year with the inauguration of the *Parc des Ateliers* of the Luma Foundation. Arles was originally chosen as the site for the depot and the main workshops for the repair and maintenance of rolling stock during the concession of the Avignon-Marseille line company in 1843, as it was halfway between the two terminals, and construction began in 1845. The workshops, deployed on both sides of the railway line, entered service in 1848. Meanwhile, the company merged with that of Lyon-Avignon and then of Paris-Lyon to give birth to the Compagnie des chemins de fer de Paris à Lyon et à la Méditerranée, or Paris-Lyon-Méditerranée (PLM). 1880-1890 saw the most important developments in the history of this site. Original buildings were enlarged in the same style, the bodywork workshop had to be like those of the wheels, the forges or the assembly shops which were extended on the site of three old roundhouses.

Arles specialized in the manufacture and repair of steam locomotives for the entire PLM. Until the 1930s, the workshops kept their architectural aspect of the 1890s. Confined to steam traction, however, they were gradually condemned by the change to other modes of traction. Integrated on January 1, 1938, into the new national rail company Société nationale des chemins de fer (SNCF), in the 1950s came the first major demolitions, and the workshops closed in 1984.

The future of this vast factory, which reached nearly thirteen hectares at the time of its furthest expansion and employed up to 1,800 people, became a big question for the city. Arles acquired the eastern part and launched a plan in partnership with the Provence-Alpes-Côte d'Azur region and the Chamber of Commerce and Industry, and from 2002-2004, the empty spaces were used for new buildings for higher education.

In 2003, a competition for urban architects was won by Alexandre

Chemetoff. The resulting development proposal was open to future projects but attentive to the industrial history of the place. It assumed existing buildings should be preserved as much as possible and proposed to ensure the maintenance of the largest number of buildings while waiting little by little for ideas for reconversion. The program provided for a new district mixing educational institutions (including the ENSP, National School of Photography), residential buildings, shops and restaurants, cinemas, exhibition spaces, especially for meetings, student residences...

On the eastern side, the wheel workshop, largely dating to the first construction campaign of the 1850s, was taken over to accommodate a business hotel. This first project gave way to a second, managed by Marseille architects Anne Lévy and Nicolas Magnan, aiming to install the Center for the Study, Restoration and Conservation of Works (CERCO) of the Museon Arlaten, and opened in 2013. From 2005 the 'great hall', 130 m long by 40 m wide and 20 m high and built in the 1880s as the iron boiler-making workshops, was rehabilitated under the Moatti and Rivière agency as a multipurpose theater. This intervention led to few modifications to the riveted iron beam frame of this industrial cathedral.

Maja Hoffmann, heiress of Roche Laboratories, created the Luma Foundation in 2004, whose vocation is to support creation and the arts, particularly in the field of photography. A very ambitious new project entrusted to Canadian architect Frank Gehry led to the raising of a 56 m tower with a complex and bold architecture. This rendered obsolete the plan for the reconversion of the workshops.

Readers of the TICCIH Bulletin will be more interested in the impact that its construction has had on the workshops. It is clear that the work of Frank Gehry is largely disconnected from its immediate environment. The architect chose his sources of inspiration in remarkable elements of Arles and its region: from antiquity for the base of the tower, whose round shape and volume recalls Roman amphitheaters, nearby Alpilles, which inspired the design of the tower and the color of its materials, and finally Van Gogh's Starry Night, an iconic painting representing Arles. But apparently not railway workshops, at the heart of which his tower is nevertheless implanted.

The rehabilitation of the other workshops was entrusted to the New York architect Annabelle Selldorf. The programme aimed to convert various buildings, including those of assembly, forges and offices, into exhibition spaces and workshops and workshops. This work was particularly attentive to the existing constructions, and in particular to the variety of metal frames which are an undeniable heritage wealth of this site. The workshops of Arles are indeed a very interesting case of monumental industrial ensemble whose architecture offers a wide range of different means of covering large spaces in the nineteenth century. The frames varied from the traditional wooden structure to the large metal spans in riveted beams, through various types of Polonceau trusses. Today, the five sheds with long parallel sides that remain of the twelve that were built consist of triangulated trusses in riveted angles, all relying on a forest of cast iron pillars, which does not allow to clear a ground surface free of any right of way of more than ten meters. Only the iron boiler-making shed, with its vast structure typical of the late nineteenth century, gives a span of more than 20 m. The metal extensions of the same buildings (forges, assembly workers, wheel workshop) resisted the fires, which constitutes *a posteriori* an astonishing plea for metal frames.

Elements of the partly-restored PLM workshops with the Gehry tower behind. Photo: Howard Stanbury

Let us salute the preservation of what remained, the attention to detail and the willingness to comply with the program without distorting the existing one. The architects adopted a minimum intervention posture but have not hesitated to restore columns or portions of frameworks as the same or almost identical where necessary. Let us also salute the choice that has been made to preserve the appearance of ruins left since the fires, even if this meant erecting metal structures to consolidate the weakened elevations, adopting processes thought to be reserved for other types of heritage. It is a mark of respect for the history of the place, and it is a work of great evocative power. The dark grey colour adopted for the painting of all these frames is perhaps more questionable, turning its back on the shades of paints of the different cast irons, iron and steel.

This work on the frames is all the more important as they are the main way to understand the material evolutions of this industrial site during the nineteenth century. From the first Avignon-Marseille company to the PLM, the company took great care with the treatment of facades and remained faithful to the choices made from 1848, basing all constructions on arched bays in triplets or twin bays framed in cut stone. This constancy in vocabulary testifies to the desire for architectural unity. It must naturally be seen as the policy of every major company of the nineteenth century, railway or otherwise, which aimed for a strong constructive identity. It is therefore only in this framework that the many modifications and enlargements implemented from 1846 to 1984 can be read.

Let's finish with the unfortunate landscaped park in this part, with the deployment of a vast garden designed by Bas Smets on the western part of the workshops, the consequent destruction of the remaining rail tracks, the loss of the horizontality of the factory, and the attempt to make it a ruin lost in the vegetation. His intervention is inseparable from that of Frank Gehry and Annabelle Selldorf, creating a continuity between contemporary architecture and rehabilitated industrial buildings. This creation indeed projects the wasteland in an anticipated phase of reconquest of nature, definitively turning the page of the factory whose buildings, and even whose ruins in the case of the forge, thus take on a new dimension. This approach is part of a long tradition of treating ruins and traces of the past, placing itself in a way in the wake of the neighboring development of the Allée des Alyscamps as it was carried out from the eighteenth century.

The history of the reconversion of the workshops of Arles can leave a lover of the industrial heritage uncertain. Most of the buildings have found a vocation, either in the cultural field or in that of higher education. The most significant destruction and loss dates back to the period when the site was still in operation or to the time of its closure. Subsequently, the choice in principle to keep as many of the buildings in place as possible provided a framework adapted to the relatively long duration of this process.

However, it has shown its limits in the face of a project as ambitious as that led by the LUMA Foundation, whose realization, despite its disproportionate appearance, nevertheless led to a limited number of destructions. The choices made for the rehabilitation of the existing structures have often been very judicious, and the final result offers this site a new visibility, thanks to the introduction of striking contemporary architecture. The mixture of styles of the interventions undertaken over more than twenty years now may seem strange, having accumulated different projects and convened great names in architecture both for creations ex nihilo and for the rehabilitation of existing buildings. This is largely justified by the size of the workshops, which will in this way have found a perennial place in the fantastically rich heritage landscape of Arles. Let us hope that the preserved buildings will not be the only ones to bear witness to the industrial history of this place, and that the LUMA Foundation will be able, through its activities, to give meaning to this heritage.

Restored repair sheds with the boiler workshops 'great hall' in the back.

TICCIH GLOBAL NETWORKING MEETING A SUCCESS

Dr. Miles Oglethorpe

Welcome to your President's quarterly column. First, I have to begin by thanking everyone who attended our TICCIH Global Networking event on 3 September. It was a first for us, but it turned into a hugely enjoyable and informative experience, aided by Daniel Schneider in Michigan, who managed the Zoom technology to great effect. However, we are especially indebted once again to our Secretary General, Marion Steiner, who expertly nursed us all through the programme.

For those readers who were not able to attend, the meeting was a catch-up designed to coincide with when TICCIH 2021 should have occurred in Montreal. This gave us the opportunity to reach out to audiences across the world, share information and showcase the work that is being done, and also to stress the fact that TICCIH 2021 is rapidly morphing into TICCIH 2022. Indeed, anyone who has not done so recently should take a look at the conference website and see for themselves how the event is taking shape (see Home | Industrial Heritage Reloaded (uqam.ca)). If you are considering attending and the possibility of submitting a paper proposal for Montreal, it's still not too late – there will be a final call for papers in November. You can also fill in your personal profile details.

One of the issues that I raised at the beginning of our networking event is the need for TICCIH to continue to modernise. We had already started this process, especially in relation to our new, affordable membership subscriptions, but the impact of the pandemic has concentrated our minds and also enhanced our capacity to communicate globally. There are a number of actions we need to take, not least exploring ways of reforming our statutes so that we are in a position to take advantage of the opportunities that lie ahead.

The good news is that our Montreal hosts have provided us with enough time in the programme to address some of these issues in our General Assembly, so we have a great opportunity to move our organisation forward – a process that will also involve Board elections. So, watch out for news of what we are proposing in future issues of this Bulletin. Meanwhile, Montreal will also include a substantial plenary session devoted to quick-fire 'National Reports', so it's important that everyone starts putting together reports which can also be used to showcase recent progress with industrial heritage in their countries. National Representatives are also asked to prepare the written reports that can be published with the conference papers, using the template. They should be sent to the Bulletin editor by May 1.

During the networking event I was also able to talk about how we are attempting to collaborate more with sister and partner organisations. Most of you will be aware of our continuing partnership with ICOMOS, which is extremely important. However, there are other organisations with which we have a lot in common and with who we regularly collaborate. We have already drafted an agreement with ERIH, the European Route of Industrial Heritage, and we are working on something similar with FIVA, Le Fédération Internationale des Véhicules Anciens (FIVA website). We have a close and very fruitful relationship with Europa Nostra, whose industrial heritage committee is both active and very effective. However, there is more to be done, and I am keen to engage with other organisations, such as The International Molinological Society (TIMS), whose

work over several decades has been truly outstanding (Home (molinology.org)).

The networking meeting occurred not long after the 44th session of UNESCO's World Heritage Committee in Fuzhou, China, so it was a good opportunity to reflect on what was a mixed session for industrial heritage. It was great to be able to congratulate our friends in Romania - Roșia Montană Mining Landscape, France - Cordouan Lighthouse, UK - The Slate Landscape of Northwest Wales and Iran - Trans-Iranian Railway on their successful nominations. It is good to be able to report that TICCIH was positively involved in all these nominations in various ways, particularly through our partnership with ICOMOS.

However, it was unfortunate that a lot of this good news was somewhat dimmed by the bad news – specifically the loss of Liverpool from the World Heritage List. Inevitably, there has already been a lot of soul-searching after what had been a protracted and painful process. It is hugely disappointing that, after such a long struggle, it proved to be impossible to stop the delisting. Obviously, there are lessons to be learned, but these might have to wait until the dust has settled and emotions have abated. Meanwhile, the UK was not the only country to suffer anxiety and frustration. Poland had put forward the Gdansk Shipyard for nomination, heavily supported by our friends in Europa Nostra. Unfortunately, the nomination was met with significant hostility from two member countries of the World Heritage Committee, and a solution proved to be impossible during the session. I sincerely hope that the nomination will not be left in limbo and it will be possible to resubmit it in a more acceptable form in due course.

Finally, I would like to thank those of you in countries where you are in the process of establishing or strengthening national, regional and continental groups and networks. It has been fantastic making new contacts in African countries, as well as reconnecting with people in South America, Saudi Arabia and India. I have also hugely enjoyed joining recent meetings in Hungary, Slovenja, Poland and Spain, and it's wonderful to find ourselves making new friends in countries such as North Macedonia. I urge you all to continue this process, and to use every tool available to us, especially social media, to help ensure TICCIH evolves into a truly global network.

USA

CHICAGO'S CRAWFORD ELECTRIC SMOKESTACK: DEMOLITION AND ENVIRONMENTAL JUSTICE

Gwen Stricker, Preservation Architect with Harboe Architects, Chicago

The Crawford Electric Generating Station smokestack in Chicago was demolished on April 11, 2020, using explosives, sending a cloud of dust and debris into the surrounding Pilsen and Little Village neighborhoods. Over a year later, the communities impacted by the irresponsible demolition continue a vital fight for the health and safety of their neighborhoods. The coal-fired powerplant, design by Graham, Anderson, Probst and White, held an industrial dominance along the South Branch of the Chicago River from its construction in 1926. Its history is intertwined with injustices common of industrial sites, spewing pollutants into the air and water for nearly a century. It seems even its demolition was in keeping with this past, raising concerns over the air quality of an area of Chicago that fought hard to close the plant in 2012 for the very same concern.

The Crawford plant was demolished to make way for a distribution center that opened on the site in July 2021. Over the last year, community activists asserted their concern that the distribution center would continue to worsen air pollution in the city's south and west neighborhoods, but they were unsuccessful in halting the development. Instead of a new industrial use, activists called for public, cultural uses such as a riverfront community center, regional electric museum, or mixed-use space. While they were unable to sway the stronghold industry has on Chicago's economy, their advocacy efforts sparked conversations about the future of industry and public health in the city.

The Crawford Station was located within the Pilsen/Little Village Industrial Corridor, a planned manufacturing district that ultimately decided its fate. The Industrial Corridor system, established by the City of Chicago in the 1990s to keep industrial uses inside the city when many companies were relocating to the suburbs, drew 26 boundaries throughout the city as a tool to trigger planning reviews in the event of proposed rezoning. In this case, the tool is working the way it should: to keep manufacturing uses and jobs in the city.

Because of the Industrial Corridor system, industrially-zoned land is not easily rezoned for new uses. This system causes bureaucratic hurdles for the heritagization of industrial sites, making it difficult to

The Crawford Electric Generating Station complex, circa 1968 (Courtesy of Historic American Engineering Record, IL-114, Library of Congress)

landmark sites within the industrial corridor boundaries. Chicago's Industrial Corridors contain only 15 city-designated landmarks, 10 of which are bridges. These numbers are dwarfed by the city's overall designation of over 350 landmarks, illuminating the lack of industrial heritage protections. While Chicago's history is defined by industry, protecting sites that embody this history is not a priority.

The neighborhoods of Little Village and Pilsen have, until recently, been overlooked as areas with important heritage resources, since they are characterized by industrial warehouses and small-scale workman's cottages. Not surprisingly, multiple advocacy campaigns to save the site and all its structures were not enough to prevent its phased demolition. Plans were reportedly in place to ensure that dust from the smokestack's demolition would not adversely impact the Pilsen and Little Village neighborhoods, but the outcome of the implosion proved otherwise. Residents were not even notified that the smokestack would be demolished until the evening before. The demolition exhibited negligence on the part of the city, putting neighborhoods which had long been subject to health hazards in danger yet again.

Preservation Chicago, a local advocacy group, included Crawford Station on their endangered list in 2017, describing its importance to the history of electricity in the city since its construction in 1926. The site is among many other abandoned relics of Chicago's early industrial development, making its demolition even more indicative of greater preservation shortcomings throughout the city. By excluding industrial heritage, the working-class, industrial neighborhoods that attach their history to these places are also excluded from the economic advantages afforded by local heritage designation. In the case of Crawford Station, the lack of heritage designation also represents more grave consequences of losing industrial heritage places.

Heritage practice increasingly aims to address contemporary issues of sustainability in the built environment and sustain community resilience. Industrial heritage sites specifically can address the goals of sustainable heritage practices as sites that can, with some ingenuity, support new uses. In protecting such places, industrial histories and public health are simultaneously safeguarded, and formerly harmful

industrial sites instead can become the catalysts for environmental justice. Several well-known examples of such success stories include the Duisburg Nord Landscape Park in Germany and the Foundries Garden in Nantes, France.

Shifting the heritage value from historical significance to avoided environmental impact and public safety includes a much larger percentage of existing buildings. It also reflects shifting cultural values over time, recognizing the current environmental challenges caused by years of unregulated pollution. People today value environmental justice and sustainable practices, and cultural heritage practice can and should reflect these values.

The Pilsen and Little Village communities have long understood the risks posed to environmental health by industrial activities. As neighborhoods in the shadows of a coal plant, among other industries, residents are familiar with the advocacy and activism required for responsible management of their neighborhood's wellbeing. They started the Little Village Environmental Justice Organization in 1994, and the Pilsen Environmental Rights Reform Organization followed in 2004. Resilience is part of their identity and culture, but the mishandling of the Crawford demolition came as another attack on their tireless efforts.

The end of the Crawford plant raises broader questions about the way cities preserve, reuse, demolish, and construct industrial buildings. When the demolition of industrial buildings poses health and safety risks, how can heritage protection be leveraged to prevent demolition and halt the cycle of detrimental industrial practices? How can industrial buildings become symbols of environmental activism? How can the historical narratives of industrial pasts become active elements to address contemporary concerns of air and water pollution, community resilience, and public health and safety? Heritage protections of sites such as the Crawford Electric Generating Station would help to protect communities that were long harmed by active industrial uses. Continuing to exclude sites because of their negative or toxic narratives exacerbates the under-representation of many working-class communities directly connected to industrial history. Industrial heritage sites hold power to become tools in remediating decades of harm, evidenced by a growing number of industrial heritage sites throughout the world that have been reused and reimagined in socially and economically productive ways.

The neighborhood was covered with a thick dust cloud after the implosion of Crawford's smokestack (Courtesy of Maclovio / Instagram @macnifying_glass)

Contact

POLAND

SPATIAL POLICY IN A POST-INDUSTRIAL CITY

Sandra Pichlak, Office of the Municipal Monument Conservator in Ruda Śląska

Ruda Śląska is a post-industrial city struggling with problems related to the liquidation of industrial areas like mines and ironwork. The long-term activity of heavy industry in the city is manifested in the contamination of the land, destruction of infrastructure (buildings) and of nature. This is visible all over the city and we must face the effects.

The construction of the Orzegów coking plant in Ruda Śląska started in 1900 as an answer to growing demand for coke in the Silesia region. The founders of the industrial plant, Joanna and Hans Ulryk Schaffgotsch, established a company called Oberschlesische Kokswerke und Chemische Fabriken (Oberkoks) to manage its construction better. The plant was built near the Karol coalmine with an intention to cut material transport costs. The 5.5 hectare site was finally launched in 1903. In the 1950s the authorities planned to close the coking plant, however, due to high coke demand in the region the closure was prevented. But in 1976 the factory was closed, and production at the coking plant was discontinued due to the outdated technology and machines.

The remains of the plant were included in the register of monuments in 1987 as a representative of the oldest structure of this type in Poland. The aforementioned document includes the remains of the coal tower building, tar tank, sequence of chambers of the

TOP: View of the site before works were started. The coke oven battery was covered by the tar around half of meter from the ground. Source: Google Earth

ABOVE: The coal tower and the tar tank.

Inside the coke oven battery.

first coke oven battery and a section of the access road (originally in the center of the plant). Since 1987, the buildings have been plundered and devastated several times and historical machines have been lost.

The Reclamation and Remediation of the Former Orzegów Coking Plant project was created in 2017 when the Office of the Municipal Monument Conservator (belonging to the City Hall of Ruda Śląska) received an 85% donation from the National Fund for Environmental Protection and Water Management. The donation amounted to almost 18 million PLN (almost 4 € million). The main aim of the project was to clean the soil from dangerous petroleum substances and heavy metals. However, only 30% of the donation could be allocated to activities other than those related to environmental protection, for example street furniture, paths or renovation works on historical buildings. Work started in 2018.

The investment area covers around 4,8 hectare and is divided into two functional parts: historical and park space, which are connected by designated paths. The park space is located in the north, center and west side of the layout. The middle section consists of walks with multi-colored pavement cladding, two playgrounds and benches and lighting that matches the appearance of historical objects. Visitors can also find historical information regarding the operation of the plant in the past. A path encircles all of the park area, including historical buildings that are located on the right side of the layout. In the west part of the park space, machines used in the process of cleaning soil are kept. The project makes use of two purification technologies: bioremediation which applies microorganisms in the purifying process and phytoremediation which uses greenery to reduce the soil contamination.

The historical area spreads out in the east side and consists of historical buildings belonging to the coking plant such as a coal tower, tar tank and coke oven battery. Low and high vegetation has heavily covered the building as it was not in use for several years while the historical roof and parts of construction have been destroyed by looters. In addition, a huge illegal landfill has been established in the area, covering objects. Historical objects are secured to prevent further degradation. Due to the limited financial expenditure that can be incurred on activities other than environmental protection, this is a contractual requirement.

The coal tower is a brick structure partially made of steel on three floors, one of them contains a technological chute with holes. The roof of the building was completely rebuilt, most of the openings were bricked up, only a few on the top and on the lowest floors were kept open. This operation has been performed both for safety reasons and for the protection of the facility against the weather. The interior of the building has been secured and prepared for possible future adaptation. A social object was situated next to the tower but because of its technical condition it had to be partially demolished. To keep the memory of its existence, fragments of walls were left to the level of about 1 m to mark the size and location of the historical object.

The coke oven battery has been cleaned from trash, greenery and tar, while the structure of the building has been strengthened and repaired. A ramp and some parts of the battery's sequence were removed due to their technical condition. In order to protect the facility against external factors and further degradation, a concrete slab has been put on the lower and upper oven battery. Stairs and a ramp leading to the lower coke oven battery have been situated there for people with reduced mobility. On the top of the concrete roof there is a terrace with a window where visitors can see inside.

The co-financed project of Reclamation and Remediation of the Former Orzegów Coking Plant gave new life to devastated and littered historical territory and partly restored its former values. Technological solutions such as cleaning and tidying up the pollution in the soils will provide healthy subsoils in future which currently are lacking in the Silesian region. These activities allowed for the adaptation of the area to new functions. The project combines recreation, history and education into one, providing a chance to find out more about the coke production process and the history of the city, simultaneously providing an opportunity to take a rest in an attractive space within the city.

RUSSIAN REPUBLIC

HISTORICAL SQUARE, REVALORIZATION OF A HISTORIC INDUSTRIAL TERRITORY

Nadezhda Solonina and Olga Shipitsyna, Ural States University of Architecture and Arts, Yekaterinburg

In parallel with the global movement for the preservation of the industrial heritage that began in the 1960-70s, and to some extent independently of it, in the Urals a very similar process began. However, this process was mainly focused on the identification, study, certification of historical industrial objects or territories that are part of the enterprises actively working at that time. Similar studies with scientific expeditions to the old factories of the Urals were carried out by a team of scientists including with the involvement of students of the Sverdlovsk Architectural Institute (now the Urals States University of Architecture and Arts; Sverdlovsk was the name of Yekaterinburg in the Soviet period). The studies were carried out within the framework of the then-new scientific direction History of the Ural's Architecture, which together with the acting complex scientific and creative program Stone Belt were founded by an architect and the first rector of the institute Nikolay Semenovich Alferov.

The study of industrial heritage objects in Yekaterinburg, which was built in the first half of the 19th century, mainly in the style of classicism, nevertheless made it possible to achieve certain results in the field of preservation and reuse of monuments of industrial architecture. So, in the early 1970s in the center of Sverdlovsk on the site of the former Yekaterinburg iron-making plant, a museum-memorial complex named Historical Square was created according to the project of a team of architects under N.S. Alferov. The adaptation of the former industrial territory to the public and recreational functions that are relevant for the city determined the first wave of the process of re-profiling the objects of the industrial heritage of Yekaterinburg. After a short break due to changes in the socio-economic conditions of the country's development in the mid-2000s, the second wave of re-profiling began. Its specificity consisted in a variety of directions for the reuse of such objects, from the usual for the city public, museum and cultural functions, to completely new ones – residential, sports, educational and commercial.

Historical Square in the 1970s.

Let us consider in more detail the re-profiling of the former iron-

works, which was a necessary measure. In the 1960s the factories located on it were closed and moved to another site, and the place was supposed to be cleared of old buildings that had historical and architectural value. However, soon the demolition of historical industrial buildings was stopped, and the preserved objects of industrial heritage were included in the structure of the Historical Square museum-memorial complex, the creation of which was completed in 1972-1973 to the 250th anniversary of the city.

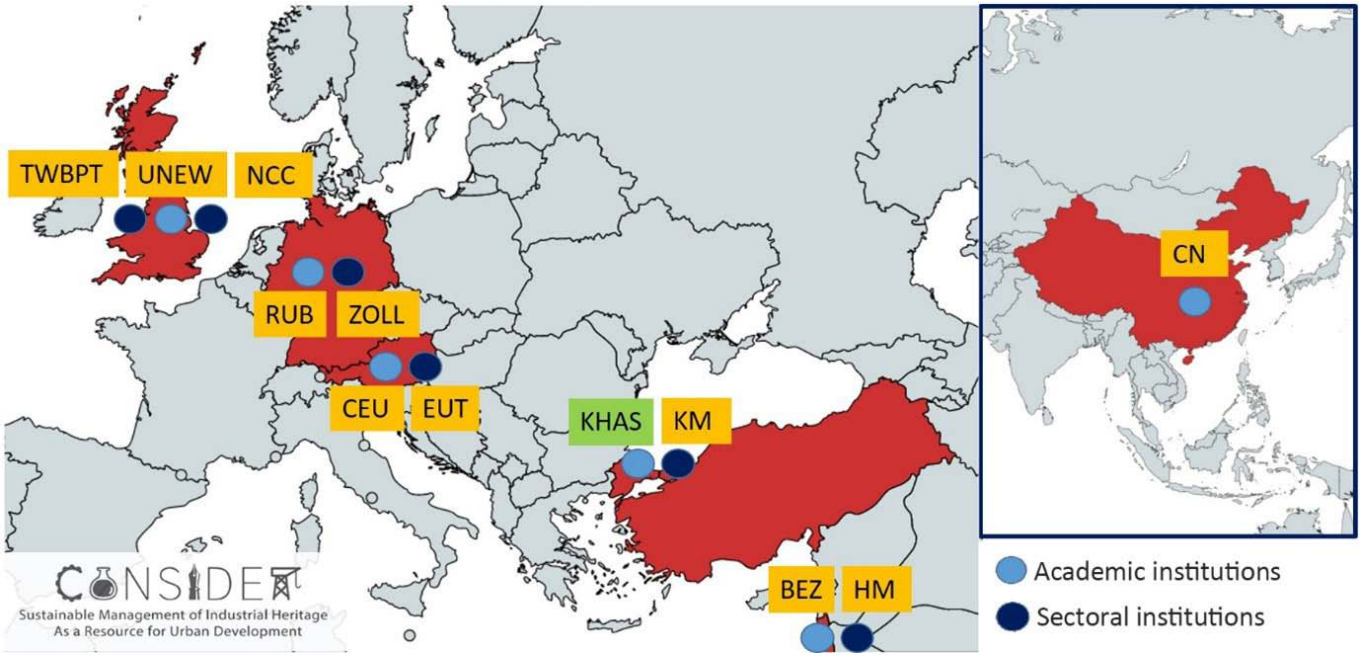
The revalorization of this former industrial area was aimed at restoring the historical, architectural and urban planning value of the place from which Yekaterinburg began its development. As conceived by the authors of the project, the complex was divided into two parts: the eastern part, where the museum zone is located, and the western part, where the memorial zone is located. Both parts were bounded from the north by the dam of the city pond. The museum area included the former ironworks buildings: the building of a small smithy and a boiler room (1865), a shop building, a drawing room and a mechanic's bureau (1833), a warehouse and logging department (1857-1860). The memorial area included a factory hospital building (1749). These industrial heritage objects were accordingly redesigned as the Museum of Urals Nature, the Museum of History Problems and Development Prospects of Urals Architecture and the Museum of Fine Arts. In addition, the complex also included a dam (1723), water tower (1880s), an exhibition of old machinery in the open air, the place adjacent to the retaining wall with a bas-relief and a rock-garden to the south.

After the re-profiling of the ironworks territory, a popular open public space appeared in the city, where various events, exhibitions and fairs have been regularly held for many years. The Historical Square, which launched the process of preserving industrial heritage sites in Yekaterinburg, was the first Russian example of a comprehensive revalorization and conversion of a former industrial territory into a cultural space.

The second wave of re-profiling began in Yekaterinburg in the mid-2000s in connection with the reconstruction of some objects of the Historical Square. During this period, landscaping, small forms, a fountain located it the riverbed were updated, as well as some historical objects were reconstructed. In particular, the reconstruction of all buildings of the Museum of the History of Architecture and Industrial Technology of the Urals began in 2008. In 2015, after the completion of the reconstruction work, individual buildings of the newly renamed Museum of Architecture and Design of Ural States Academy of Architecture and Arts were combined into a multifunctional complex with a common atrium space on the site of the former courtyard. Along with the museum, this complex also includes the Ural Design Development Center with its educational function. The exhibition of large machinery, previously located in the courtyard, was moved to the area near the museum, whereby the southeastern part of the Historical Square was significantly transformed and began to perform also an exposition function. Later, in 2018, the water tower of the old ironworks was also reconstructed, the first floor was converted into a coffee shop, and on the second floor a museum was created. The reconstruction of the Historical Square in the 2010s made it possible to finally consolidate the status of one of the most significant public spaces in Yekaterinburg.

The Night of Museums festival activity in the Historical Square.

The Museum of Architecture and Design, Ural Design Development Center and open-air exhibition of machinery.



The geographical spread of participants in CONSIDER.

TURKEY

SUSTAINABLE MANAGEMENT OF INDUSTRIAL HERITAGE RESEARCH

Prof. Dr. Yonca Erkan (Coordinator), Kadir Has University

CONSIDER is the acronym of the Sustainable Management of Industrial Heritage as a Resource for Urban Development. This project of the European Union Horizon 2020 Marie Sklodowska-Curie RISE program will run from October 2021 to October 2025. CONSIDER aims to develop a sustainable management model (SMM) for industrial heritage sites (IHS) to benefit local communities as a resource for strengthening collective identities, improving the urban landscape, promoting eco-friendly solutions, and contributing to the urban economy and a sustainable future of the city. It will investigate SMM for industrial heritage while exploring participatory governance models to better integrate IHS with European society.

As a Research and Innovation project, CONSIDER brings together twelve academic and sectoral institutions in six countries. Coordinated from Kadir Has University (Turkey, UNESCO Chair on Management and Promotion of World Heritage Sites), the academic institutions represented are Newcastle University (UK), Ruhr University Bochum (Germany), Central European University (Italy), Bezalel Academy of Arts and Design (Israel, UNESCO Chair on Urban Design and Conservation), while Kadikoy Municipality (Turkey), Newcastle City Council (UK), Tyne and Wear Preservation Trust (UK), Zollverein Stiftung (Germany), Eutropian (Italy), Haifa Municipality (Israel) are the sectoral partners. The Huazhong University of Science and Technology (China, UNESCO Chair on Industrial Heritage) acts as Third Country (TC) partner.

The involvement of three UNESCO Chairs, and the Zollverein Foundation as a representative site from the UNESCO World Heritage List as partners, attaches an added value on the industrial heritage globally. This funding will allow travel for 76 researchers, both established and early-stage, and circular knowledge exchange is based on a systematic and triple-helix approach between academia (universities), policymakers (municipalities), and practitioners (SME/NGO) that will contribute to identifying problems and developing guidelines to solve them. CONSIDER will extend beyond a Europe to rapidly developing post-industrial urban areas, Eastern Europe, and especially in Eastern Asia with the contribution of China, the TC partner. This research brings novelty in respect of geographic regions that were previously not sufficiently investigated and inventoried, thus providing the basis for further comparative research undertakings and the continuity of the project outcomes in the creation of new knowledge.

Deindustrialisation processes all around Europe give rise to social, economic and environmental problems resulting from structural change. There is therefore an urgent need to find SMM to over-

come these challenges. The three research objectives of the project are to i) expand on what is considered as industrial heritage, and how to safeguard it, ii) investigate the history of sites to identify the most influential factors used to maximise the benefit, and iii) explore inclusive governance and participatory models as a tool to better integrate industrial heritage with society.

CONSIDER aims to bridge gaps in research by making:

Investigations of the past: The fact that the history of the sites is not well known and documented will be addressed through research in partner cities (Istanbul, Newcastle, Haifa, Vienna). Extensive research especially on the transfer of technology, labour, machines, expertise, and soundscapes is deemed necessary. The collection of oral histories is one of the documentation methods that will be utilized.

Research on the deindustrialized present: A lack of clarity in the definition of industrial heritage and its values in different cultures/countries necessitates further investigation. Issues that are seen as the underlying causes of neglect and deindustrialization will be investigated such as legislation concerning industrial heritage being absent or varied in different countries; inventories not reflecting a global perspective (history, values, state of conservation, link with urban life and society); heritage specialists focus being on IHS, while policymakers' and developers' focus being on social and economic development; industrial sites being considered as a male-dominant sector; concerning how the decisions on the future of the sites (e.g. use, function, conservation) being taken, the involvement of only experts, surrounding communities not taking part in decision making; good practise and failures on sustainable management and conservation which will be addressed through investigating and identifying the meaning of industrial heritage and its values in different countries; investigating the legislative frameworks in partner countries; expanding existing inventories and creating relevant inventories of industrial heritage sites in partner cities; mapping stakeholders to understand diverse interests; research on good practice and failures.

Developing models towards an economically and socially sustainable future: Usually, IHS are seen as monuments and not as part of urban development; sites are not integrated well with society; potentials of industrial sites for sustainable development are not known (economic, social, environmental and cultural); potentials of industrial sites for urban resilience and risk reduction for a new era after COVID-19 pandemic and other disasters are not defined. Through the Sustainable Management Model(s) that CONSIDER will develop, integrating industrial heritage in planning processes, enhanced participatory processes in decision making concerning HIS, assessing the potential of IHS for integration to SDGs, and for adapting to new public health measures will be possible.

The innovative side of this model is its inclusive approach to the problem, regionally, sectorial, taking into consideration gender aspects, and its highlight on the exchange of knowledge, technology, and labour. This novel collaboration will be improved through synergies, networking activities, open access webpage, organisation of workshops, online courses, summer schools, radio programs, webinars, and a final conference to facilitate sharing of knowledge. The Kick-Off Meeting of CONSIDER will be realized in parallel to the celebrations on the 20th Anniversary of the inscription of the Zollverein Coal Mine Industrial Complex in Essen on the UNESCO World Heritage List that will take place in Germany on 14-16 October 2021.

Contact the author

ITALY

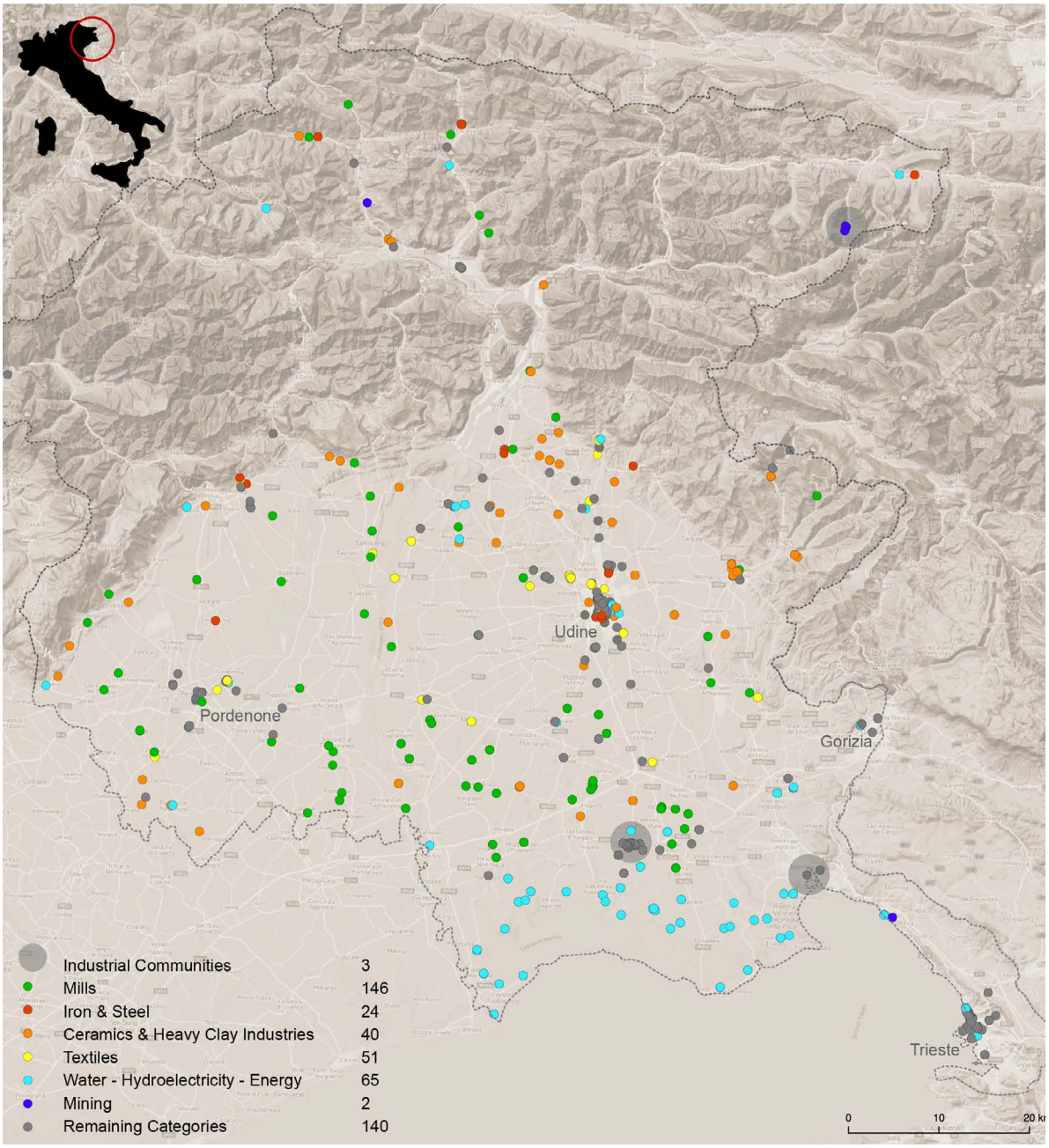
HERITAGE ANALYSIS AND CONSERVATION TOOLS

Maria Vittoria Santi, Anna Frangipane (University of Udine, Polytechnic Department of Engineering and Architecture) and Annamaria Nicastro, Soprintendenza Archeologia Belle Arti e Paesaggio del Friuli Venezia Giulia

Friuli Venezia Giulia in north-east Italy witnessed the development of numerous manufacturing and mining sites throughout its territory between the 17th and 20th centuries. Rooted in the sectors of mining, textiles, iron and steel, food, and the production of building materials, (all activities that still characterise the region today), this industrial heritage bears witness to the enduring entrepreneurial vitality of the area. Their historical sites constitute an important physical testimony of the development of the territory, not only in terms of its industry, but also of its culture, economy, and society. Some have already been presented including Torviscosa (TICCIH Bulletin #83, 2019), Cave del Predil (TICCIH Bulletin #81, 2018), and Panzano or in the recent InHeritage project.

Various data tools have been created over the last thirty years to aid in the protection, enhancement, and appreciation of this valuable heritage. The authors have conducted an analytical reorganisation of these tools, in this way facilitating new lines of research aimed at creating structured links to the European thematic networks, to which this industrial heritage rightly belongs. The sources of the collected data include a series of cataloguing campaigns, conservation schemes, local planning activities, as well as detailed studies. The compilation of these data in a georeferenced database has made it possible to create the first complete survey of the industrial heritage assets in the Region, in its online beta version, summarised below.

The approximately 500 properties included in the survey of 'indus-



Map of assets in Friuli Venezia Giulia included in the industrial heritage survey, classified with reference to the thematic sections identified by TICCIH.

trial cultural heritage' have been classified, based on their morphological and functional characteristics, in main categories (indicating the diffusion, number, and importance of the assets), with reference to the Thematic sections identified by TICCIH: Industrial Communities, Mills, Iron & Steel, Ceramics & Heavy Clay Industries, Textiles, Water – Hydroelectricity – Energy & Power, Mining, and Remaining Categories, based on the assets summarised in Figure 1.

The buildings and infrastructure are typical of industrial development in that they were realised in line with international standards and technologies while at the same time characterised by building types, formal solutions, and construction techniques and materials inherent to their particular geographical area and time: from proto-industrial buildings to 19th -century factories, as well as architecture from the early 20th century, the 1930s, and the post-war period, including several important works in terms of their architectural value.

Geo-referencing clearly illustrates the logical correlation between the environmental context and industrial development: for instance water-powered grain and iron mills were built along natural and artificial waterways; lime and brick kilns were located in areas rich with raw materials; large cotton and steel mills sprung up near the main urban centers and in the direct vicinity of waterways and communication routes; mining, lumber and hydroelectric industries were situated in the mountains and foothills; and water reclamation and control systems were developed along the shores of the lagoons near the Adriatic Sea.

Some of the most interesting sites in each of the various categories.

Below are some of the most interesting sites in each of the categories (Figure 2):

Industrial Communities: the mining community of Raibl-Cave del Predil, the shipyard community of Panzano (both dating to the 1920s), and the textile and chemical manufacturing community in the company town of Torviscosa (1930s-1940s);

Mills: the watermills in Aviano, Polcenigo (17th century), and Rigolato (18th century);

Iron & Steel: the SAFAU iron and steel works complex in Udine (from 1882);

Ceramics & Heavy Clay Industries: the lime kiln in Morsano (1902), and the brick and tile kiln in Rubignacco (1890);

Textiles: the Makò cotton mill in Cordenons (1865), and the Amman cotton mill in Pordenone (1893);

Water – Hydroelectricity – Energy & Power: the Malnisio hydroelectric plant (1905), and the pump house at Ca' Viola (dating to the 1930s);

Mining: the Cava Romana quarry in Aurisina (active since Roman times);

Remaining Categories: the Chiozza starch factory in Ruda (1865); the Burgo paper mill in Tolmezzo (dating to the 1930s, designed by the architects Pietro Zanini and Ottorino Aloisio); the Fantoni wood furnishings production complex in Osoppo (1970s-today, designed by the architects Gino Valle and Piero Valle).

One tool for the protection and conservation of industrial heritage assets is that of state protection, which permits the identification of industrial heritage through administrative measures aimed at ensuring the recognition of industrial archaeology as a cultural asset. In recent years, several decrees for the protection of cultural heritage have been issued regarding factories of various types, in various

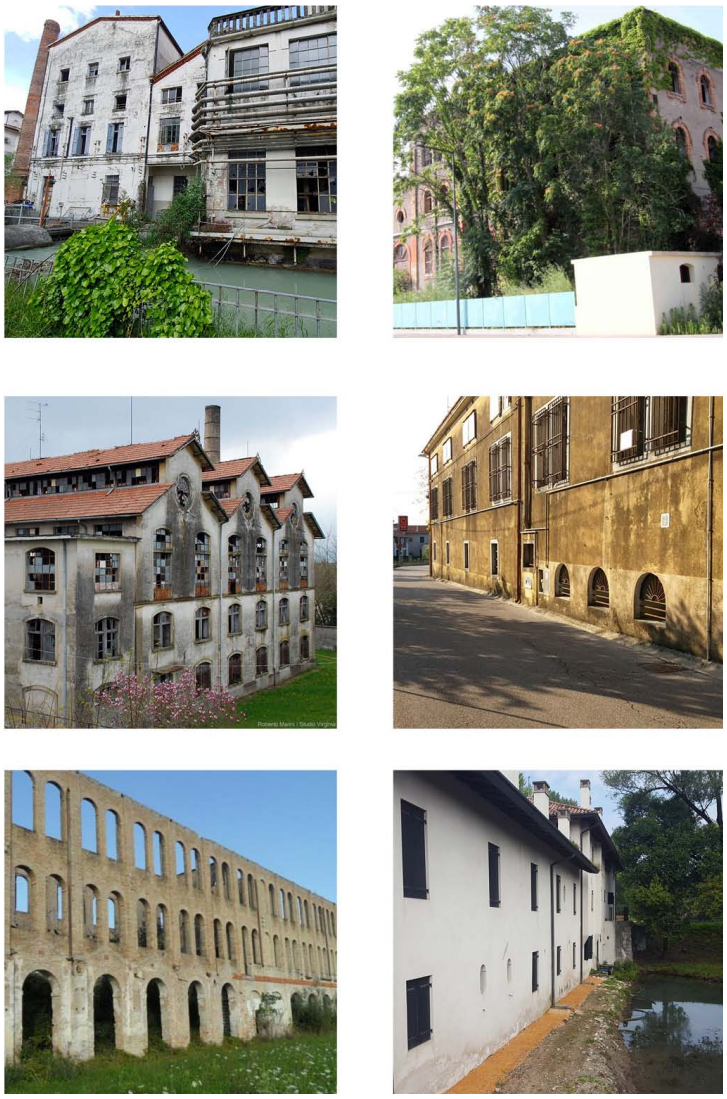
states of conservation, and from various historical periods. Buildings that have been protected include (see Figure 3): the Dormisch breweries in Udine (the original nucleus was built in the last quarter of the 19th century) the Società Anonima Birra in Pordenone (1910), the Filanda Banfi silk mill in Dignano (1921), the Filanda De Marchi-Frova silk mill in Stevenà di Caneva (1860), Ruderi della Fornace di Rivarotta (kiln ruins) in Pasiano di Pordenone (second half of the 19th century) and the Cartiera Galvani paper mill in Pordenone (1614).

The work carried out thus far also supports the development of tools for making information available at different levels and at the service of several types of user. This has already been implemented for the case study of Torviscosa (TICCIH Bulletin #88, 2020).

An analysis of the databases has made it possible to highlight, as well, a serious gap in the available data: information regarding the state of conservation, maintenance, and degradation of the Region's industrial heritage assets is badly in need of updating, a future planned task for the authors, preliminary to its on-line version.

The authors wish to remember their co-author, the architect Stefania Casucci (1965-2021). Her recent death has deprived her community of the expertise and sensitivity with which she acted, in her role as an official of the Soprintendenza Archeologia Belle Arti e Paesaggio, to protect its industrial heritage.

Contact the authors



Industrial heritage assets that have been recently protected.

INDIA

HISTORIC LIGHTHOUSES OF INDIA: BEACONS OF RESILIENCE

Priyanka Panjwani, Conservation Architect, Coordinator of National Scientific Committee on Risk Preparedness, ICOMOS India

Lighthouses have been integral to the maritime industry and commerce of countries around the world. Since ancient times, communities on the vast Indian shores have proliferated due to international connections and foreign trade. The first steam ships on the west coast of India began to operate from the 1830s and there was a need for a guiding system on the rocky harbours to avoid wrecks and losses. At first, the territorial markers were in the form of tall trees and landmark structures (forts, temples etc.), but since the 18th century, lighthouses were built as high tapering tower structures with lantern rooms at the top to house the lighting technology, such as reflectors and optics, that reached larger distances. The lighthouses in India encompass historic tangible assets and intangible associated memories.

Lighthouses continue to be the basic source of assistance to mariners, even as new technologies (such as satellite-based GPS systems, wind generators, solar lights, etc.) are being incorporated into them today. India's coastline is dotted with rich industrial heritage including 189 lighthouses across nine Lighthouse districts, Gandhidham, Jamnagar, Mumbai, Goa, Cochin, Chennai, Visakhapatnam, Kolkata and Port Blair. The 'General' lighthouses (in high seas) are controlled by the Central government and 'Local' lighthouses (in

(L-R) The new Daman lighthouse is located near the historic lighthouse (1888) on the Moti Daman Portuguese fort; the 26m high Mahabalipuram lighthouse constructed in 1900 using local granite is situated on a mound of stone close to the Olakaneeswara temple; Bhavnagar Old Port Lighthouse severely damaged by earthquake in 2001; Mandvi lighthouse tower was rendered unsafe due to an earthquake in 2001 and had to be pulled down. Courtesy: 'Indian Lighthouses', dgll.gov.in (2000)

port channels) are under the care of the state government or port management authorities. According to the Directorate General of Lighthouses and Lightships (DGLL), the oldest functional lighthouse in India was built in 1838, the False Point lighthouse located in Orissa on the east coast of India. The tallest lighthouse in India is the Jakhau (name derived from 'Yakshas' or creatures in Indian mythology). Lighthouse in Gujarat on the west coast of India and it is 45 m in height.

Lighthouse towers are generally circular or polygonal in plan and are made from stone masonry, cast iron or reinforced concrete. They are sometimes painted in bands of red-white or black-white colours for ease of identification. The lighthouses are built with a high foundation and plinth that leads to a room at the base that has a narrow stairway, and walls are punctured with small porthole windows. At the top, there is a balcony around the lantern room which gives views on both landward and seaward side. The main purpose of the lighthouses was to demarcate dangerous coastlines, hazardous shoals, reefs and safe entries to harbours.

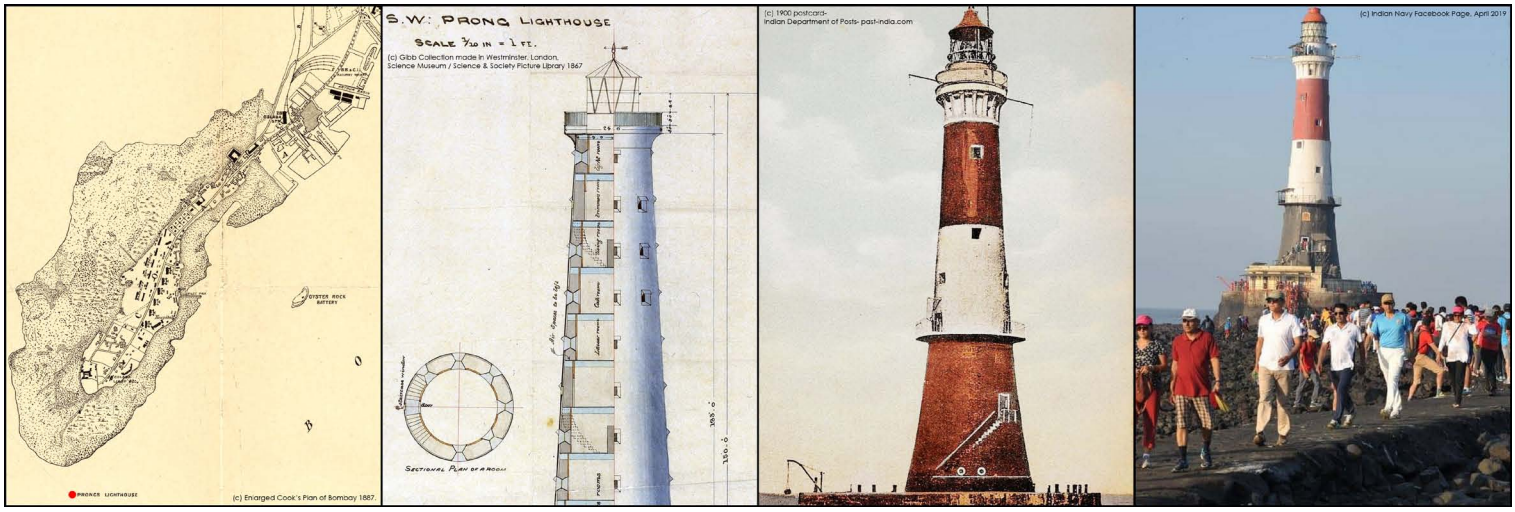
In March 2021, India endorsed itself as an emerging 'blue economy' in the annual Maritime Summit. One of the three focus areas of the summit was 'upgrading current infrastructure' including drawing up a program for developing tourism in the land adjacent to lighthouses in India. Seventy-eight lighthouses have been selected in Phase one, for boosting tourism as part of port-led development. The DGLL advises the central ministry on lighthouse engineering including maintenance, repairs, alteration of existing stations and their approaches for new works, experiments, tenders and contracts. The new infrastructure proposed near lighthouses include hotels, resorts, viewing galleries, maritime museums and adventure sports facilities, thematic restaurants, laser shows, amphitheatres and allied tourism facilities.

Risk and Resilience

Lighthouse buildings are exposed and unprotected. Rusting affects their strength and acute measures may be required to conserve and prolong the lifespan of the building. Lighthouses are also at risk due to lightning strikes and fires, as they are located in remote areas where earthing could be inadequate. Owing to their location, lighthouses can encounter cyclones, tsunamis and earthquakes. In 1998, the historic Mawadi lighthouse in Gujarat suffered a devastating cyclone, and its upper part was sheared off. After the Bhuj earthquake in 2001, the Mandvi Lighthouse had to be pulled down as it had become unsafe, while the damaged Kachhigadh Lighthouse could be restored. These incidents give an understanding of the local hazard patterns in the region, and a need to design appropriate safeguarding, maintenance and monitoring techniques for better resilience.

In addition to managing the risks scientifically, initiatives for sustainable development can serve as a beacon for the resilience. Repurposing of unused historic lighthouse structures can help in decarbonisation, which is key for a just transition and for creating sustainable places (UNSDG 11).

Co-creating sustainable tourism options with the local population is vital, as it can not only improve surroundings, provide job opportunities, but also help to enhance the local maritime heritage through exchange of stories and knowledge (UN SDG 1,8,17). The lighthouse sites have the potential to become a focal point for local awareness, emergency drills and training activities for the citizens residing in adjacent areas. They can be revitalized spaces which are envisioned for environment interpretation, education about life on land and water, evolution of maritime technology, meteorology etc. and continue to serve as warning signals for effects due to climate change. (UN SDG 4, 13, 14, 15)



A photo-collage of the Prongs Lighthouse, built in 1874-75 on the southernmost tip of Mumbai. (L-R) where more than 50 shipwrecks took place; Plan and part section of the lighthouse - Gibb Collection made in Westminster, London, Science Museum / Science & Society Picture Library 1867; the Prongs lighthouse on a 1900 postcard- Indian Department of Posts- past-india.com; Tourists visiting the Prongs Lighthouse on a low tide day- Indian Navy Facebook Page, April 2019.

The lighthouses of India have confronted cyclonic winds, sea level rise, coastal salinity, humidity and erosion for several centuries and stood resilient, while being in use for guiding the transport vessels. For combating the risks including those due to climate change, development of lighthouses and the land around them must be sensitive to heritage and oriented towards sustainability. In July 2021, France's Cordouan beacon (the 'King of lighthouses') received the prestigious World Heritage recognition. In spite of constant renovations and regular technical adaptations, the monumental site has retained its authenticity, while being an active maritime signalling unit. In light of this, India's historic lighthouses are gleaming with hope for a new era of sustainable development.

UGANDA

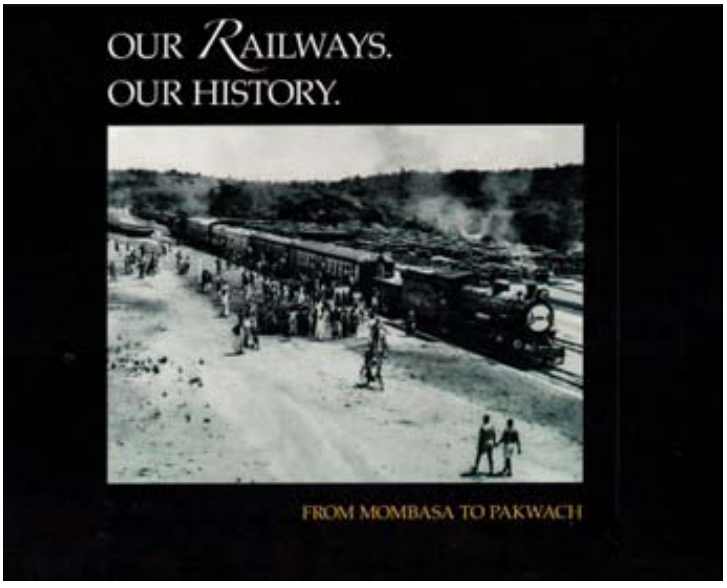
THE COUNTRY'S FIRST RAILWAY MUSEUM IN UGANDA

Simon Musasizi, Programme Manager, Heritage Conservation Trust of Uganda

Uganda's railways played a pivotal role in the economic, colonial and post-colonial development of the country and were important in bringing communities together, allowing access to education and other facilities, and cementing national consciousness.

However, for many years, they have been unused or underused, with historical artefacts (such as equipment, engines and carriages) and buildings (such as stations and workers' cottages) falling into disrepair.

It is against this background that the Cross-Cultural Foundation of Uganda (CCFU), with the support of European Union and the Uganda Railways Corporation (URC), has documented the history



Our Railways, Our History captures fascinating stories, testimonies and history, which help us to connect with the past.

The Uganda Railway Museum will offer a varied programme that includes heritage theme nights, exploring a locomotive and coach, guided tours and a cafeteria.

of Uganda railways as a means to create awareness about the many facets of our heritage, as well as the continuous need for its protection. As well as the book, a film (the Northern Uganda Railway line – some recollections) on the same subject has been produced to accompany a recently held exhibition at Uganda's National Museum.

The Railway Museum in Jinja

In addition, CCFU has been collecting artefacts (small and large), capturing stories and photographs and renovating the Jinja Railway Station as the first ever Railway Museum in Uganda. Jinja Railway Station is one of the oldest stations, and is still operational. The Museum will expand the range of the tourist attractions in Uganda, both for the local communities and for outsiders. A special section has been designed with youth in mind.

2021 UNESCO LISTINGS OF INDUSTRIAL SITES

UK

THE SLATE LANDSCAPE OF NORTHWEST WALES

Dr David Gwyn, Govannon Consulting

On 28 July this year (2021), UNESCO inscribed The Slate Landscape of Northwest Wales as a World Heritage site, following twelve years of hard work by Gwynedd Council (the promoting local authority), its strategic, business and community partners and its team of experts. It is made up of six separate Component Parts, each one of which includes not only a major slate quarry but also its associated worker-settlement, and the rail links towards the coast that enabled its main product, finely-split roofing elements, to start their journey to markets all over the world.

Details of this newly-inscribed property can of course be found on UNESCO's website, but an account of the process of inscription may be of interest to members of TICCIH. Gwynedd was already home to one World Heritage site, Castles and Town Walls of King Edward in Gwynedd, inscribed in 1986, and Wales to two others, the Blaenavon Industrial Landscape (2000) and the Pontcysyllte Aqueduct and Canal (2009). It was this last inscription which provided

Ffestiniog, its slate mines and quarries, the 'city of slates' and railway to Porthmadog - Blaenau Ffestiniog Landscape. © Crown copyright. RCAHMW

the immediate encouragement to the council to begin the process of preparing a bid.

Gwynedd's quarries have been explored by industrial archaeologists since the 1950s and the distinctive Welsh-language culture of the slate communities has survived the decline of the industry itself – most people in the quarry villages will tell you how their father or, more likely now, their grandfather, worked on the rock in such-and-such a place or was a slate-splitter in the mill, and will have their stories to tell of the old days. In the 1980s, the quarries had come to the notice of Cadw (the Welsh historic environment service) and the Royal Commission on the Ancient and Historical Monuments of Wales. There was, in other words, detailed knowledge available of the industry as a heritage resource, a strong local sense that this was a story which deserved to be shared more widely, an effective system of protection and management for key sites and assets already in place, and a local authority willing to sponsor a bid. Stone quarrying was in any case a significant thematic gap in the World Heritage list, and there was every reason to believe that Gwynedd could fill it.

Once the UK tentative list opened, a bid was duly submitted as a cultural landscape. Out of the 38 from different parts of the UK which were considered, it was one of the 11 sites recommended by the independent expert panel and accepted by the Minister for Tourism and Heritage at the Department for Culture, Media and Sport. Their report concluded that 'the physicality of the landscape is impressive and is good evidence of an industry of international significance and its supporting social structure' and added that it would be necessary to define carefully which areas of the slate industry's Gwynedd heartland should be included in any nomination. No one area could stand for the whole, but equally, each of the possible Component Parts had much in common with the others – in every case, a harsh but beautiful upland landscape, rows of terraced houses and Methodist chapels dominated by grey tips of waste rock, narrow gauge railways and inclined planes. It was important to draw out where they differed by showing, for instance, how systems which had proved themselves in one area then spread to another – an internal technology-transfer which paralleled how slate influenced architecture world-wide and the ways in which types of particular machine such as the Cornish steam engine were adopted by the industry, or in the case of narrow-gauge railways, inspired development in other sectors.

The expert panel also suggested that the bid would need support

from a thorough comparative study, which is in any case a specific requirement of a UNESCO dossier. To this end, the Council funded two international studies. One was of the heritage of slate-quarrying, which was informed by a gathering of experts under the aegis of ICOMOS-UK's summer conference at Plas Tan y Bwlch, the Snowdonia National Park study-centre which is located in a former quarry-owner's home, now part of the inscribed site, in 2012.

The other was an international study of the heritage of stone-quarrying sites, which was greatly assisted by the opportunity for me to attend the conference of the European Quarry Landscapes Network, an association of groups, specialists and organizations which study, use and care for historic quarries, created by an initiative of the city of Teruel, Spain, in 2014. A draft TICCIH thematic study was prepared, with Dr Christian Uhlir of the University of Salzburg as co-author.

Both of these confirmed the initial view that 'supporting social structure' had to form part of the bid, and so this was the stage at which the decision was taken definitively to include the transport systems associated with the industry, and the quarry towns and villages. This approach worked greatly to the bid's advantage, in several ways. The distinctive railway systems built to move output overland for most of the nineteenth and twentieth centuries, demonstrated a typology which could be traced in an international context, to the already-inscribed Mountain Railways of India and their evidence for Welsh influence. The settlements which came into being to house the workforce are now recognised as outstanding examples of their type but also very different from the planned philanthropic industrial worker villages which form part of several inscribed sites already. Including them in the Nominated Property made possible a more holistic presentation of this particular industry's social dynamic and on the role of women and children, rather than a limited focus on the male workplace and on production and transport.

This approach meant that the comparative analysis in the nomination dossier needed to be very comprehensive indeed. After some discussion, it was decided to exclude inscribed cultural landscapes based on naturally-renewing crops, but to consider all mineral-extraction sites that had already been inscribed or were on the tentative list, as well as slate quarrying and mining generally across the world, even though none was on the World Heritage list, and more generally to highlight what the railways and the settlements would bring to the bid by setting out their international context.

It also meant that the bid essentially put forward a very extensive working, inhabited landscape, which had its particular challenges. Concerns from home-owners and businesses were assuaged by setting out a management regime based entirely on existing practice, which in Wales is fortunately quite robust and comprehensive.

UNESCO sets out very clearly its requirements for a bid, and it goes without saying that these must be fully understood, and the bid and its nomination dossier prepared in the light of the operational guidelines. The nominated property has to be persuasive in itself. A good bid team is essential – one which combines but does not duplicate all necessary skills and where everyone is signed up to the same goals – no doubt Project Management for Dummies says exactly the same thing but it is no less true for being obvious. In this context, it is particular pleasure to acknowledge the contribution of Cadw and the Royal Commission experts as well as of Council staff, and of the external advisors, James Reebanks, Sir Neil Cossons and Barry Gamble.

Now that one quarrying landscape has made it to the World Heritage list, it is time to consider others. The recently-updated TICCIH study sets out some parameters for consideration. Quarrying for stone is an ancient and widespread industry over much of the world, and its heritage deserves to be better known and more widely commemorated.

Contact the author

2021 UNESCO LISTINGS OF INDUSTRIAL SITES

IRAN

THE TRANS-IRANIAN RAILWAY

Mohammad Hassan Talebian, Associate Professor, and Sara Taymourtash, PhD Candidate, College of Fine Arts, University of Tehran

In the second half of the 19th century, in the Qajar era, the concept of constructing a Trans-Iranian Railway was initiated with the development and transformation of cultural and political relations between Iran and Europe. Considered a strategic decision for the region, the concept of the construction of the TIR connecting two seas, crossing the country and through the mountainous, forest, desert, and coastal regions, was an incredible dream. Iran has almost 7 millennia of history and unique geographical diversity due to the Alborz and Zagros mountain ranges, and cultural diversity among different ethnic groups in various climatic regions. Many of these were not accessible before the Trans-Iranian Railways were built.

In spite of all the problems of crossing the various geographical regions, the Trans-Iranian Railway construction was initiated on 1927, and finished on 1938 after 11 years. Three years of its establishment it played a vital role in the Allies' victory and ending World War II. The TIR, like other major railways, has thus not only affected the social, economic and cultural development of railways and its associated regions, but also, due to its ancient historical background coupled with

The TIR linking the Caspian Sea to the Persian Gulf and the Oman Sea, with other cultural and natural World Heritage sites. Source: ICHHTO archive

important roads such as Silk road and Spice Road, has boosted the ancient roads and relations between Iran with neighboring countries.

In addition, at the time it opened, the TIR drew global acclaim for the exemplary project management achieved by the successful working relationship between the Iranian Government, the project managers and the 43 construction contractors from many countries, particularly Denmark, Norway, Sweden, Germany, Switzerland, Austria, Italy, Greece, the US, and Turkey.

Due to the mountainous landscape with many crossing rivers, much extra work was made in construction of bridges and tunnels so that the outcome can be considered as a work of an exceptional magnitude. It proved an outstanding way of solving unexpected problems through the breadth of international of experience during construction, enabling the TIR project to stay on time and on budget. It led to new technological developments which were later on used by international experts in other parts of the world. This clearly proves the exchange of technical knowledge and cultural interaction at a global level.

The World Heritage Committee inscribed the Trans-Iranian Railway on UNESCO's World Heritage List during the 44th session held online and chaired from Fuzhou (China). The property was nominated under criteria (ii) & (iv). According to the first of these criteria, the Trans-Iranian Railway serves as a living manifestation of multi-faceted interchange of human values, modern and innovative mountain railway skills and experience for its construction, emergence of a mixture of Iranian-western architectural styles as well as new structures, boosting the economy and trade by speeding up transportation which led to a revival of cultural-historical routes such as the Silk Road and the Spice Route at a specific period in central and western Asia during the early 20th century and later on with the European countries.

According to criteria(iv), the Trans-Iranian railway is a fine example of a technological and architectural ensemble representing major stages of long-term development of human, technical and economic activi-

ties in western Asia. It resulted in the formation of varied landscapes in relation to the assimilation and interaction of railway with natural landscapes and in overcoming obstacles. It caused a huge increase in trade, cultural and economic relations between Iran and other countries of the region, thus marked a significant and decisive stage in its historical development. Since it was fully opened in 1938, the railway has been a busy main line of standard track gauge 1435 mm.

The intricacies of its construction due to the harsh climate and rugged terrain of parts of Iran led to the improvement of the technical knowledge in building bridges, tunnels, aqueducts, retaining walls, roads as well as carriage of equipment, surveying and mapping in other parts of the world. On the whole, the Trans-Iranian railway is not only a unique museum of human creativity and endeavor but also a technological and architectural masterpiece resulting from human ingenuity and boasting unique values.

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2021 UNESCO LISTINGS OF INDUSTRIAL SITES

Open-pit gold mining near Roșia Montană, Romania (2013). Plans to re-work the Roman mines provoked citizen protests opposing the proposal. Photo: István Mihály

ROMANIA

ROȘIA MONTANĂ MINING LANDSCAPE

Barry Gamble, World Heritage consultant and co-author of 'Rosia Montana Mining Landscape'

Romania's first industrial property was inscribed as a World Heritage Site by the UNESCO World Heritage Committee in July 2021. Roșia Montană Mining Landscape, located in the Apuseni Mountains of Transylvania, is acknowledged to contain '…the most significant, extensive and technically diverse underground Roman gold mining complex currently known in the world.' Moreover, its surface mining landscape reveals diverse Roman technical heritage and substantial social and religious infrastructure dating from the Roman occupation of Dacia (106-271 CE).

Mining activity likely spans more than two millennia, and all phases have left their mark, including well-known 18th /19th century architecture in Roșia Montană village itself. Inscription represents a key preservation milestone and a significant conservation challenge. Roșia Montană also remains controversial. State-run opencast mining on the site ended in 2006 but plans by an international mineral exploration and development company to promote opencast gold mining using cyanidation prompted two decades of support to 'Save Roșia Montană'. Mobilisation of the international heritage commu-

nity, notably ICOMOS and Europa Nostra, as well as environmental NGOs such as Greenpeace, was joined by prominent Romanian institutions such as the Romanian Academy. Mass activism by grassroots social movements emerged, uniting Romanian and international civil society and culminating in nationwide protests in 2013 involving 200,000 people or more.

Substantial commitment from the Romanian government saw the National Institute for Heritage develop an action plan, at times, it seemed, against all odds. It finally achieved its goal. Ancient mines, especially precious metal mines, are under-represented on the World Heritage List, and there is no doubt that Roșia Montană Mining Landscape now 'fills a gap'. Simultaneously placing the property on the UNESCO List of World Heritage in Danger, with full agreement of the State Party, is, however, a new signal to the international heritage community to 'Remember Roșia Montană'.

UK

'LIVERPOOL - MARITIME MERCANTILE CITY' DELETED FROM THE WORLD HERITAGE LIST

Reaction to the UNESCO World Heritage Committee 13:5 vote on July 21 to remove Liverpool has been widespread, the decision reported and examined around the world, bringing industrial heritage, its management, use for urban regeneration and as a means to attract visitors, an infrequent moment of general scrutiny and international discussion.

The press release from UNESCO stated:

> The World Heritage Committee, holding its 44th session in Fuzhou, China, and online, decided to delete the property 'Liverpool – Maritime Mercantile City' (UK) from the World Heritage List, due to the irreversible loss of attributes conveying the outstanding universal value of the property.
>
> Liverpool – Maritime Mercantile City was inscribed on the World Heritage List in 2004 and on the List of World Heritage in Danger in 2012 following concerns about the proposed development of Liverpool Waters. The project has since gone ahead along with other developments both inside the site and in its buffer zone. The Committee considers that these constructions are detrimental to the site's authenticity and integrity.
>
> Liverpool's historic centre and docklands were inscribed for bearing witness to the development of one of the world's major trading centres in the 18th and 19th centuries. The site also illustrated pioneering developments in modern dock technology, transport systems and port management.
>
> Any deletion from the World Heritage List is a loss to the international community and to the internationally shared values and commitments under the World Heritage Convention.
>
> After the Elbe Valley in Dresden (Germany) and the Arabian Oryx Sanctuary (Oman), Liverpool is the third property to lose its World Heritage status.

Contemporary and early 20th century waterfront buildings in Liverpool in 2008. Photo: Scouserdave at English Wikipedia

The response to the delisting from the national heritage agency Historic England was:

> We are very disappointed that UNESCO has decided to delete Liverpool - Maritime Mercantile City from the World Heritage List. Over the past few years, we have been working closely with the [British government] Department for Digital, Culture, Media and Sport (DCMS), Liverpool City Council and local organisations to address concerns raised by UNESCO. We believe the World Heritage Site is in a better condition than when it was first inscribed thanks to several successful regeneration projects. Our role is to advise Liverpool City Council and various developers on regeneration plans which would affect the international importance of the World Heritage Site. We have supported some proposals and opposed others which would cause a high degree of harm, including the recent plans for a

new Everton stadium on Bramley Moore Dock [see TICCIH *Bulletin* #91].

We acknowledge the challenges the city faces, but believe that Liverpool's heritage remains internationally important. Despite UNESCO's decision, we are committed to supporting Liverpudlians and the council to champion their city's extraordinary heritage now and in the future.

Among the varied opinions published in the world's press, the judgment of the architecture correspondent of the *Financial Times*, Edwin Heathcote, was better informed than most. His article (July 23, 2021) was entitled 'Liverpool has been careless with its heritage', but he attributed the struggle to reconcile regeneration and conservation more on the ambitious delimitation of the site:

Perhaps the problem was scale. UNESCO's designation of the 'Maritime Mercantile City' was just too broad and encompassed too much still-empty land. Liverpool's big tourist pull is the Beatles rather than a UNESCO certificate, and the band had to move to Hamburg to make it. In fact, Hamburg is an interesting comparison: a big, historic port city, destroyed in the war, looking out to sea. Like Liverpool, it too has a slightly spurious Beatles industry. Like Liverpool, it has radically redeveloped its waterfront with some successes and much generic blandness. Unlike Liverpool, it is still on UNESCO'S list. All that is designated in Hamburg is the Kontorhaus district, the network of streets and canals featuring the large, distinctive, dark red brick warehouse and office buildings built in the expressionist style of the early 20th century. Self-contained, intact and stylistically cohesive, it has a distinctive character. The scale of those buildings has made them easy to repurpose, and many are used exactly as they were a century ago. Liverpool has struggled with what amounts to an almost blanket designation.

The *Bulletin* welcomes reflections on what might be learned from this decision by UNESCO, only the third time that an inscribed site has lost its World Heritage designation.

TICCIH NEWS

A NEW SEARCHABLE INDEX TO *BULLETIN* ARTICLES

James Douet, Editor

—

The 94 issues of our *Bulletin* hold a unique accumulation of knowledge, ideas, opinions, techniques and practices, as well as showing how our understanding of industrialisation around the world has evolved. All are now within the easy reach of TICCIH members through an index and searchable database held on Google Drive. The TICCIH Board decided to organise this great resource a couple of years ago, and our thanks go to Daniel Schneider, working from Michigan Technological University in the US, for his meticulous work entering the details of over 950 articles, news items, conference reports, reviews, profiles and op-ed pieces that we have published since the first Bulletins were posted, in the literal, old-fashioned sense, to our members in 1998.

This material has been divided into five categories: Articles and News Briefs, Conference Reports, Book Reviews, TICCIH News and obituaries. Each entry is identified by its title, the name of the writer(s), the country of the subject where applicable, and the date and the issue in which it appeared. Most entries have also been tagged with one or two attributes following a scheme worked out between Daniel and me. These include 'fields of interest' such as adaptive re-use, archaeology, conservation, education, tourism or interpretation, while 'thematic sectors' has industrial categories like extraction (coal, stone, oil, etc.), metallurgy, water, or industrial landscapes.

Once you have opened the database on Google Drive, entries can be sought using the filters and functions of Google's Sheets database program, or by using the usual word search functions.

A regular bulletin to connect the members of TICCIH is one of the enduring legacies of Eusebi Casanelles' presidency. I started working with Eusebi from his mNACTEC museum after he was elected Executive President at the XI Congress in Greece in 1997, and a Bulletin that aimed to connect our members was one of his priorities. The first fifty issues were printed and pushed into envelopes at the museum. The change to a more flexible and versatile pdf format, with a higher image quality, was introduced by Patrick Martin after he took over from Eusebi in 2009 and moved production to his university in Michigan, from where Daniel continues to lay out the contents and distribute each issue to all of us today.

Just browsing through the accumulated articles spanning almost 25 years is riveting. There are discussions of the industrial heritage in at least 60 countries, as well as Antarctica. Brief news items are less frequent now than in the beginning, more substantial articles have grown in frequency, sticking to a target of around 1000 words, while contributions from India, China, Brazil or Iran have increased relative to those from Europe and north America. The number of authors is beyond my capacity to count, but this is a good moment to thank some particularly supportive writers, among them Massimo Preite, Iain Stuart, Belém Oviedo, Patrick Vianne, Alison Wain, Stephen Hughes, Marie-Noelle Polino, Bode Morin, Jaime Migone, Nadezda Solonina, Norbert Tempel, Zac Liollio, Miriam Kelly, Moulshri Joshi, Rolf Höhmann, Axel Föhl, Betsy Falhman, Günter Dinhobl and Neil Cossons. Sadly, Marie Nisser, Stuart Smith, Louis Bergeron and Eric DeLony are no longer here for their excellent contributions to be acknowledged.

The charactisations of the contents of the articles can be revised and any mistakes corrected, by writing to me or to Daniel. The usefulness of the index is such that colleagues, students, friends and anyone else who might make use of it ought to be alerted that we have put this new resource within the reach of our members. New material will continue to be incorporated following the publication of each issue, to the discussions in which everyone in our association is always very welcome to contribute.

CONFERENCES

CANADA

TICCIH OIL HERITAGE CONFERENCE BUMPED TO AUGUST 2022

Pat McGee, Oil Springs, Ontario

—

After more than one pandemic postponement, the Oil Heritage conference to be held in Oil Springs and Sarnia, Ontario, Canada is now slated for Aug. 25 to 27, 2022. The conference centres on TICCIH'S thematic study Heritage of the Oil Industry. This international comparative research provides guidance in assessing heritage value and significance of oil sites, and includes ten cases studies, one being Oil Springs.

A tour of Fairbank Oil Fields in Oil Springs will show how this 160-year family business operates a complete system of oil technology from the 1860s in producing 24,000 barrels of oil annually. The newly renovated Oil Museum of Canada is included in the tour. Timing of this conference allows participants to then travel to the Montreal Congress which runs August 28 to September 3, 2022.

SWITZERLAND

SWISS RAILWAY HERITAGE PRESERVATION CONFERENCE POSTPONED

Toni Häfliger

—

The Railway Heritage Preservation Conference, originally planned for 25/26/27 November 2021, has generated an unexpected level of interest among specialists, and we received numerous abstracts at both the national and international levels. Unfortunately, we must inform you that we have decided to postpone the event, given the current development of the Covid-19. Information on the conference can be found on the website where the program will also be published.

SPAIN

PATRIMONIO CON GUSTO (HERITAGE WITH TASTE). 23rd INCUNA INTERNATIONAL CONFERENCE ON INDUSTRIAL HERITAGE, GIJÓN (ASTURIAS), SEPTEMBER 2021

Miguel Álvarez Areces, President of INCUNA and honorary member of TICCIH-España

—

Agricultural heritage and industrial heritage are part of a historical value chain in permanent evolution, which bears witness to the memory, work and production in the food industries. At the same time, it encourages a growing interest in social innovation, citizen participation and in combining the importance of the circular economy, the rational use of natural resources, and reconciling the necessary sustainable planning of rural areas with urban needs.

Attendees at the 23rd INCUNA International Conference on Industrial Heritage, Gijón, Asturias, Spain.

The agri-food heritage in its industrial, cultural and natural dimension has become the object of new perspectives and urgent actions to build the future, with the study of the landscape, the work of the people of the countryside. We appreciate an aroma, a perfume, a colour, a flavour, and meanwhile the link between people and the territory is broken, ancestral knowledge is lost and we forget about the work and the conditions of existence and living of the people who make our current ways of life possible.

This congress is organised annually by the Spanish association INCUNA (Industry, Culture, Nature) has been held continuously since 1999, and is a regular meeting place on an international scale to learn about relevant aspects of research, experiences and proposals on industrial heritage.

Since the beginning of the Covid19 pandemic, the Conference has adopted a hybrid formula in its development, in-person in cultural spaces and simultaneously on-line, counting this year with the attendance and monitoring of more than 250 people from 18 countries: Spain, Germany, Italy, Portugal, Brazil, Mexico, Vietnam, Indonesia, USA, United Kingdom, Uruguay, Argentina, Chile, Cuba, Greece, Colombia, New Zealand and Guatemala. 35% of those registered were present and participated in the different activities.

A special characteristic is a week of activities complementary to the academic or professional congress: film exhibitions on industrial heritage and cultural landscapes, photography exhibitions and heritage intervention experiences in the territory, also literature or storytelling competitions on heritage, industrial tourism routes through unique places and landscapes in Asturias and nearby regions, and even outreach programmes with students with APP and virtual reality tools on industrial and cultural heritage.

In the inaugural acts, the president of TICCIH, Dr Miles Oglethorpe and the Secretary General, Dr Marion Steiner, spoke about the objectives, projects and initiatives to increase the presence of TICCIH in all countries, and also offered the presentation by Professor Lucie Morisset of video that announced the next TICCIH congress in Montreal next year.

The event, as usual, attracted the interest of heritage defence associations, cultural and tourism managers, civil servants and technicians from public administrations, students, manual workers, engineers, architects, geographers, historians, economists and many people who are aware of the need to preserve, disseminate, activate and enhance the historical industrial heritage and cultural landscapes. It welcomed the presence of Ainara Martínez, president of TICCIH España, and the collaboration of representatives of the Ministry of Culture of Spain, the Principality of Asturias, the University of Oviedo and the City Council of Gijon or private companies that also participated in the Congress.

The congress was organised in six sections, two panels of transversal content and four sessions of polysemic content based on the central theme, where the hundred or so papers were distributed: Heritage with taste and heritage management; Biocultural heritage and unique places; Machines, buildings and landscape. Good practices in industrial heritage; Social innovation, heritage and territorial development. Experiences of urban-rural sustainability, creativity and innovation; Memory of knowledge and work, identity, oral history and gastronomic heritage; Agro-food landscapes, methodology in heritage applications in the territory, responsible and sustainable tourism.

An important aspect was related to the circular economy and social innovation, the new uses of industrial heritage in cases of reuse and recycling, always considering rigour, authenticity and the need to conserve not only buildings, but also machines, industrial processes with the main actor as protagonist, the women and men who make it possible for industrial heritage to make sense.

Biocultural heritage is a concept to which much attention and interest has been paid in the papers presented at the conference. Through the suggestive title Patrimonio con gusto (Heritage with taste) a multidisciplinary vision has been offered in these INCUNA International Conference, which highlights the history and technologies in devices, artefacts and architectures; emotions in the enjoyment of landscapes; flavours, gastronomy; emotions, aesthetics and admiration for the simple and natural, or good practices in their conservation and architectural and building reuse.

Two conclusions or lessons have been highlighted, firstly the need to apply the case studies in a more general vision in processes of countries and geopolitical and economic areas that give them a context and shared on an international scale, in which the historical, political, economic and industrial processes in different continents are highlighted. The globalising context makes it necessary to study local European, Asian, Latin American or African cases in an interdisciplinary perspective and adapted to a plural and international contrast.

On the other hand, to put the actor in the foreground: workers, technicians, entrepreneurs, local communities, social agents, who are protagonists of the memory of the place; ways of life and work cultures; rural spaces, urban needs activities that depend on them; in the growing consideration of climate change and sustainability for heritage conservation; the multiple stories that lead us to circuits and routes through the industrial agri-food heritage all over the world.

Once again, this successful experience of INCUNA is part of the line marked by TICCIH in the preservation and valorisation of industrial heritage in the world. We will see you in 2022 at the TICCIH Congress in Canada, working to give a future to our past.

WORK AND TRAINING

GERMANY

Postdoctoral Fellowship at Ruhr-Universität Bochum, Institute for Social Movements

In partnership with Deindustrialization and the Politics of Our Time (DePOT)

The Institute for Social Movements at the Ruhr-Universität Bochum, a key partner in the transnational DePOT project, is searching for a recent PhD graduate specializing in deindustrialization studies to spend six months in 2022 at the Institute. While the timing is open, the Institute is hosting deindustrialization researchers from around the world in early May as part of the wider DePOT project that is examining the politics of deindustrialization in Western Europe and North America.

During the six-month funded residency in Bochum, the selected candidate would work on their own research project on any aspect of deindustrialization and/or industrial heritage (not necessarily in this combination). The Postdoctoral Fellow will also work with Stefan Berger to develop a funding proposal to a German or European funding agency that will, if successful, allow the selected candidate to extend their postdoctoral fellowship period significantly. The postdoc is also expected to be active in the intellectual life of the Institute and the larger DePOT project. Familiarity with the DePOT project will be an asset.

The stipend will be 3,000 € per month. Deadline for applications: 14 November 2021

For additional information, please contact Stefan Berger at stefan.berger@rub.de.

GERMANY

Job Advertisement: Professor for Conservation of Industrial Heritage, Berlin

The Berlin University of Applied Sciences aims to fill a professorship (W2) in the School of Design and Culture (faculty 5) as soon as possible. These key areas of expertise are required:

Application and development of conservation and restoration methods for technical and industrial heritage on the basis of materials science, technological and historical property research and implementation of conservation and restoration concepts for large-scale objects and technical collections including material combinations, particularly properties featuring composites of metal(s), polymers or other organic objects

The appointment is a full-time position. Further information can be found on the homepage.

USA

The Getty Conservation Guest Scholars Program

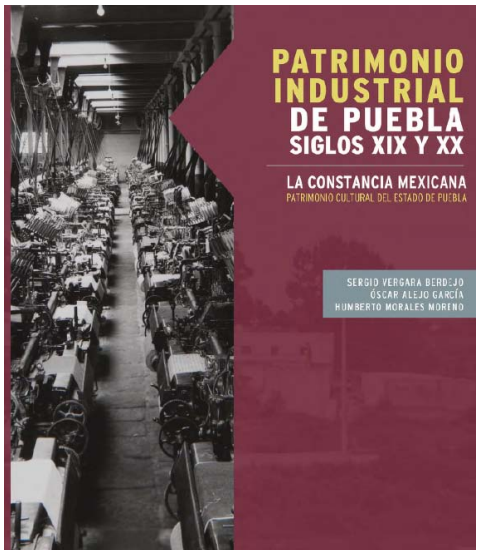
This provides opportunities for professionals to pursue research on topics that bring new knowledge and fresh perspectives to the field of conservation. Guest Scholar grants are for established scholars, or individuals who have attained distinction in their fields. Applications are welcome from researchers of all nationalities working in conservation, historic preservation, heritage science, and related fields.

Applications for the 2022-2023 residency period are now available. The deadline to apply is November 1, 2021. For questions regarding the program or the application process, please contact: GCIScholars@getty.edu

BOOK REVIEW

PATRIMONIO INDUSTRIAL DE PUEBLA, SIGLOS XIX Y XX. LA CONSTANCIA MEXICANA. PATRIMONIO CULTURAL DEL ESTADO DE PUEBLA

By Sergio Vergara Berdejo, Óscar Alejo García and Humberto Morales Moreno



Francesco Antoniol

Despite being presented in an agile format and with a fresh and current set of photographs, this is a powerful historical and comparative study of some types of industrial heritage that have characterized the development of human activity, not only in Mexico but in the world. Just scrolling the index, cases include railways, hydroelectric industries, plants for the various textile processes, cement factories, mills, sugar refineries and, more generally, the areas and infrastructures that have allowed the settlement of these factories or which have grown and developed with them.

The aspect that distinguishes this from similar studies is the particular attention to the contexts in which the individual cases fall. It is impossible not to understand what are the reasons that led to the birth of these sites, their development and their current condition. The study present the relationships with the historical moment, with social and economic needs and with the population, always presenting its peculiar aspects.

Through these analyses, the reader has the opportunity to have a wide-ranging and rather complete knowledge of the entire story of the industrialization of the state of Puebla and of the trends, with divestments, losses and recoveries and re-uses that are characterizing the present age.

All these considerations, extended in the first part of the volume on architectural, productive and different typologies, find synthesis in the case of La Constancia Mexicana, the first factory of cotton textile products in Latin America. The study of the site and the method for understanding its multiple meanings and resettling new ones, is paradigmatic.

Constancia Mexicana is not only the name of an industry with a glorious past and a future full of new contents, it is also the non-loss, over time, of the research and care work on and for the industrial heritage of the authors of the study and administrations that supported it.

LINKS TO ONLINE EVENTS CALENDARS:

- **TICCIH** Conference Calender
- **ICOMOS** Conference Calender
- **UNESCO** Events

To add events to the TICCIH Calender please send details and a link to ticcih@mtu.edu

TICCIH

The International Committee for the Conservation of the Industrial Heritage

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