

# Between different interests – conservation planning for industrial heritage sites

Stefan Brueggerhoff, Kornelius Goetz and Norbert Tempel

Industrial sites are increasingly being turned into monuments, both as a result of deindustrialization and because they give identity to a region and symbolize the industrialized era; sometimes, however, the conversion is simply a matter of saving the cost of an environmental clean-up. Problems associated with the maintenance of these types of monument are amplified in both character and complexity with industrial sites. They often involve a huge physical expanse and a complex structure with a complicated range of diverse materials. Moreover, such sites are often laden with toxic substances and they were never designed to last for centuries. Shortly before their shutting down, a great deal of wear and tear occurs at industrial sites for economic reasons. Between shutting down and recognition of the site as a monument, often several years of vandalism will occur. These problems might be avoided if only the heritage status of the site was identified in a more timely fashion.

After becoming a cultural heritage site, limited financial resources may be insufficient to cover the costs of proper maintenance. At the same time, access is a high priority for authorities. Maintenance and public access are thus forced into an unholy alliance. The owners of industrial monuments feel pressured to solve all of these problems at the same time. Estimating the scope of a project takes time; frequently scopes are only applicable to a limited part of the entire complex. In some cases it is deemed necessary to sacrifice the greater parts of the site in order to “save the rest”. Despite 30 years of experience with the preservation of historical industrial monuments in Germany, the current situation there is rather unsatisfying. Thus a small group of persons, involved in the preservation of industrial heritage in different ways, have come together and initiated a research project sponsored by the German Environmental Foundation, whose timescale is 2009-2011. After completion of the project, we will present a handbook (action plan) about the principles for dealing with industrial monuments including guidelines for concrete measures. Our recommendations should be applicable in principle to all industrial monuments.

## *Action Plan*

As already announced in previous presentations and papers (this text is just a summary of [1] with few extensions) we argue to follow a strategy of continuous inspection and maintenance than to think of a comprehensive and complete restoration in one go. To this end, action plans oriented towards a gradual restoration of monuments are needed. Also, for various reasons, it may become necessary to consider not only the preservation of the whole but also the loss of certain parts of the site, and to plan accordingly. Such a plan is also imperative for structuring possible rebuilding projects. With this in mind, a maintenance strategy, in line with practical experience, should be developed for the preservation of heritage-protected industrial sites. The plan of action should follow four basic principles: The main focus should be the unity of the site; second, the defined goals of the project should be achieved before treatment is introduced; third, treatment should be based on priorities; and fourth, an action plan should make possible an assessment of related expenses and time-frames.

## *Unity of the Site*

The main principle is our respect for the whole range of different levels of information: from creation of the site, through time of use and finally, the aftermath. And we see industrial monuments as unity of buildings and equipment. The levels of information and the unity of the site form a holistic cosmos. Together they form historical tradition.

## *Definition of Goals*

A definition of goals is not automatically provided by the industrial monument itself. First of all we have to decide carefully, which period of the site should guide the specification of concept. As a goal we may choose what we find on site: an industrial monument years after shutdown, possibly vandalized and heavily damaged. This goal could be named 'ruin'. Or we try to bring the site back to a very early period, a goal called 'former glory', which is, of course, never really possible. A good compromise is to choose the period shortly before final shutdown: we conserve evidence from time of use and call it 'realistic'. After the definition of goals, fixing of treatment is possible. In principle treatment ranges between conservation and repair / rehabilitation: conservation is a typical treatment for the goal 'ruin', repair / rehabilitation for 'former glory'.

**Conservation:** All measures and actions aimed at safeguarding cultural heritage while ensuring its accessibility to present and future generations.

**Repair:** limited intervention on an object or item to recover its functionality;

**Rehabilitation:** Intervention on a building, garden or landscape in order to recover its original use or adapt it to a different use.

There is a blurry transition between these extremes; intermediate treatments are possible too. This results in a broad range of possible treatments. Whatever decision is made will affect the grade of historical tradition and the appearance. Finally definition of goals for an industrial monument may result in sub-goals for certain objects within one site: While trying to achieve a realistic appearance for most objects on site, some single items are repaired to former glory and one area may be conserved as a ruin if this specific part was shut down long before final closing of the rest.

## *Principles for Measures*

The following principles are to be recognized in the implementation of restoration measures on monuments:

- Industrial heritage preservation often differs from other (re)building projects and sometimes represents a turning away from established technical procedures.
- Static-constructive treatment of industrial monuments requires experience and trained skills to perform proper assessment.
- The aging process must be accepted as a sometimes unavoidable, continuous change of material properties.
- Durability of construction is substituted for regular inspections.
- Maintenance means preventive conservation, viz. precautions and indirect measures aimed at the prevention and reduction of further degeneration or loss.
- Conservation (as defined above)
- Repair (as defined above)
- Renewal or Renovation (as defined above)
- Reconstruction consists of the rebuilding of an object with old or new materials in its presumed original form based on documentary or material evidence.

## *Treatment Priorities*

Simple first! More extensive treatment follows, if simple fails. As a consequence we establish a hierarchy starting with conservation, restoration, reconstruction followed by repair / rehabilitation. This will result in significant cost savings effects with a significant amount depending on the size of the site.

## *Assessment of Expenses and Timeframes*

The definition of goals has consequences. It results in treatment and allows an assessment of expenses and timeframes. Both are effects of goals – never vice versa! Our action plan will point out this fact very clearly. A special problem is the question of extent and means of financing of measures to restore industrial monuments: large industrial sites do not fit into the classical system of support for monuments. Nevertheless, our action plan will rank major industrial monuments on the same level of importance as other monuments.

## *Case Studies*

As examples we will discuss several industrial sites in the Rhine-Ruhr area: The blast furnaces of the Henrichshuette at Hattingen and Meiderich / Duisburg as well as the coking plants at Zollverein (white side) / Essen and Hansa / Dortmund. These sites show a wide range of different maintenance related issues. Right now, most of them have not been sufficiently resolved.

## *Interdisciplinary Approach*

Our action plan will be based on an interdisciplinary approach. Members of our working group have expertise in documentation and inventory, structural analysis, corrosion protection and material science, clean-up of former waste deposits, conservation and restoration, practical application to monuments and, last but not least, client needs.

## *Structure of the Action Plan*

Right now a structure for the handbook has been defined and we started to write down the content of different chapters, which of course will be subdivided furthermore:

1. **Introduction** (aim of the handbook and way how to use it)
2. **Task** (basic object definitions with regard to the planning process)
3. **Participants** (description of different roles of participants („stakeholders“) in the process: owners, preservation authority, experts, public, e.g.)
4. **Management Instruments** (which can be used to operate in the process)
5. **Overall Concepts** (ways to come to an overall perspective and an basic aim for the interesting object)
6. **Decision Making Process** (strategies how to result in a reasonable decision)
7. **The Toolbox** (standards, technical regulations, generally accepted ways of proceeding for different aspects of the preservation task)
8. **Documentation of the Object and Condition Report** (description of techniques and proper application to result in a convincing object information)
9. **Re-using Considerations** (also very important for the fixing of measures)
10. **Final Definition of Goals** (resulting from point 8 and 9)
11. **Process of Decision** (which has to be executed after final definition of goals)
12. **Implementation Phase** (different tasks guiding the measures)

**13. Documentation of the implemented measures / specifications for inspections**

(fixing of inspection cycles and if necessary discussing foreseeable future measures)

**14. References** (books, papers, reports, internet links, e.g.)

**15. Extended Annex** (with different examples of industrial heritage preservation)

Performing workshops with experts of different fields of knowledge we try to extract necessary and actual information but also to discuss different viewpoints for measures. Finally not only facts will be presented but also examples describing causes for a special proceeding.

### *Potential Benefits*

In creating an action plan benefits may arise for owners in guiding and shaping the long-range development of their site. They may adapt our work to their own large site as a template. Future generations may benefit, because they may enjoy evidence of industrialization in a unified site. The public will save resources, because an action plan saves money and improves safety for staff and visitors and creates public acceptance.

### *References*

[1]Kornelius Goetz, Stefan Brueggerhoff and Norbert Tempel (2009): Action plan for industrial monuments -a proposal for research into improving the management of large sites. in: Morten Ryhl-Svendsen, Karen Borchersen and Winnie Odder: Incredible Industry – Preserving the evidence of industrial society. Conference proceedings, Copenhagen, p.67-73

### *Authors*

**Dr. Stefan Brueggerhoff,**

German Mining Museum Bochum, Germany

(corresponding author: [stefan.brueggerhoff@bergbaumuseum.de](mailto:stefan.brueggerhoff@bergbaumuseum.de))

**Kornelius Goetz,**

Bureau for Restoration Advice, Meitingen, Germany

**Norbert Tempel,**

LWL-Museum of Industry, Dortmund, Germany