Preventive conservation of the human environment

Architecture as an element of the landscape

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The art of (architectural) reconstruction at archaeological sites in situ within the context of cultural landscapes

Ewa M. Charowska

Introduction

Archaeological sites are an example of a multiphase influence of humans on the surrounding landscape. The phase of settlement and urbanisation is followed by the stage of forgetting and reclaimed by nature, which then proceeds into a period of archaeological impact on the cultural landscape shaped throughout the centuries. Further forms of change to the landscape are the result of the decisions of stakeholders. The site can be buried and thus become an unnoticeable element of the landscape park or it can be expanded and prepared to accommodate tourists. In the resulting archaeological parks, protective structures are erected to secure the relics and, among them, one might find reconstructions of non-existent buildings.1

In this paper I would like to demonstrate how in situ architectural reconstructions on archaeological sites can be used to enrich the surrounding cultural landscape. Through a set of selected examples, I will discuss the features which reconstruction in situ can contribute to the protection of monuments and their history, to a more in depth understanding of the values that reconstructions should represent, and, last but not least, to the overall functional and aesthetic experience of those visiting the archaeological site.

The tradition of erecting reconstructions of architectural structures at archaeological sites spans several centuries. One of the older examples merit mention is the reconstruction of a portion of Gladiator barracks (Caserma dei Gladiatori) built by the engineer Francesco La Vega in Pompeii in the second half of the eighteenth century. La Vega believed that the construction of a live-sized structure based on the knowledge obtained during the excavations (he appreciated the educational value of the ruins and made accurate drawings of the uncovered walls) will help visitors see the shape of the ancient building. Additionally, the interior of the reconstructed building was adapted to accommodate the security guards – a much needed space on archaeological sites.2

Arguments for and against reconstructions

The reasons for pursuing reconstruction are numerous. It is an appealing method of educating people by way of displaying forgotten techniques and materials. The Treasury of the Athenians at Delphi, reconstructed from 455 pieces,3 offers a physical example of the volume, the scale and the basic architectural and construction details concerning Greek architecture on an otherwise dilapidated Sacred Way (Figs 1–2).

It may additionally be a business venture aimed at economically benefiting the community. Nicholas Stanley-Price identifies it as “tourism promotion” and gives the example of “massive reconstruction of pre-Hispanic sites in Mexico, Guatemala, Belize and Bolivia (Tiwanaku) in the 1950s and 1960s”.4

Reconstructions also help underline the historical (often in the name of national self-assertion) or symbolic qualities of a location, including those pertaining to spiritual values or religious beliefs. The initial goal of the reconstruction of the defunct 80 m high Pagoda in Nanjing was to recreate a building, which for several centuries (built 1413–28 and destroyed in 1854) was the iconic structure of the city.5

Last but not least, it may take on the role of a protective structure built to shelter relicts or archaeological sites, at the same time providing additional functional space servicing the area.

However, unlike conventional protective structures, reconstructed architectural spaces cause a lot of controversy. They are often not taken into account as a form of architectural communication for fear of violating international charts. This is caused by the fact that reconstructions are the result of our knowledge about the lost architectural forms and, as such, will never be the perfect copy of the building in question. Any mistakes in the interpretation result in errors of the design of architectural detailing, wall

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2 Jokilehto 2010: 59.
3 Schmidt 1993: 95.
4 Stanley-Price 2009: 36.
5 Zhuge 2015: 117.
colours or, worse, the function and massing of the structure. To prevent the formation of hypothetical visions of the past combined with the destruction of the preserved relics, Georg Dehio delivered in 1905 a statement *allerdings nicht restaurieren – wohl aber konservieren*, establishing the path of conservation efforts in the twentieth century. Starting with the demands to limit the restoration of monuments solely to *anastylosis* presented in the Charter of Athens in 1931, along with the firm opposition to all reconstruction expressed in the Charter of Venice in 1964, reconstructions have been removed from the list of acceptable methods of preservation. Exceptions include the destruction of architectural structures by natural disasters or war in the twentieth and twenty-first centuries, starting with the reconstruction of the tower on the Piazza San Marco in Venice, reconstructed in 1912⁷ and ending with the recent post-conflict reconstruction of mausoleums in Timbuktu in Mali in the years 2014–2015.⁸

Another problem lies in inscribing the new architectural form and volume of the reconstruction into the existing cultural landscape. Any change in the existing landscape creates conflict between the passive acceptance of what already exists and the negation of the dynamic changes caused by the constructed structures, the exception to this being the reconstruction of the demolished buildings shortly after their destruction. Such an example would be the reconstruction of the frontage of streets in the Old Town in Warsaw (Poland), devastated during the Second World War, which returned to their rightful place preserved in the memory of residents and the urban plan of the city. In the case of reconstruction for archaeological sites it is much more difficult to accept the newly built facility in locations that for centuries stood bare.

Additionally, the Byronic admiration for ruins is not unknown to the recipients: “Look on its broken arch, 

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⁶ Dehio 1914: 275.
⁷ Mager 2015: 5.
its ruin’d wall, its chambers desolate, and portals foul noticeable”.

The romantic idealisation of archaeological sites is often a factor in the opposition to any changes in the landscape, especially when they entail reconstruction.

However, preserved architectural relics on archaeological sites must be stabilised and should have at least a protective roof raised above them. There are no ruins exposed to atmospheric conditions that will last longer than the covered ones.

In the case of exposed and displayed relics in situ at archaeological sites, stakeholders are presented with multiple tasks: the protection of relics using preventive maintenance, a legible presentation and interpretation of preserved ruins, the education of others in the science of conservation of monuments and the popularisation of archaeological research. The task of interpreting the reliefs in situ is a major challenge when an archaeological site contains only a minimal amount of historical material, often overgrown with vegetation. Visitors may have an issue with understanding and reading non-existent architectural forms despite being presented with models, charts and monitors containing examples of 2D and small 3D reconstructions. The problem of interpretation and education became one of the reasons why ICOMOS, in the Charter of Lausanne in 1990, allowed for the use of reconstruction:

“Reconstructions serve two important functions: experimental research and interpretation. They should, however, be carried out with great caution, so as to avoid disturbing any surviving archaeological evidence, and they should take account of evidence from all sources in order to achieve authenticity. Where possible and appropriate, reconstructions should not be built immediately on the archaeological remains, and should be identifiable as such”.

Reconstruction type selected according to needs

Does reconstruction always need to be a necessary evil, a result of pressure on the part of the stakeholders? How can reconstruction help present relics in a non-destructive way and enhance the understanding of architectural structures which no longer exist?

The following examples presented below demonstrate the goals and methods of reconstruction in situ, as well as the variety of forms, functions and advantages. The wide range of various forms of architectural reconstruction allows the selection of a solution that will complement the existing cultural landscape.

1. Tumulus reconstructions

An excellent method of adapting the reconstruction to the park landscape is the usage of structures in the form of a tumulus.

The first example is the reconstruction of the tumulus from the Iron Age in the archaeological park “Matrica” in Százhalombatta in Hungary (Fig. 3). In this case, the new concrete dome accurately reproduced the shape and dimensions of the earth mound (14.4 m radius and 5.9 m in height) raised over the cremation burial of a man in the 7th century BC. Prior to the design of the reconstruction:

“The excavated tumulus was measured with a laser theodolite after the excavation, and beside the geodetic survey of the tumulus, the survey of the burial chamber was also carried out, and the data were fed into a computer. Without computer data processing it would have been impossible to determine the center, the radius, etc. of the tumulus and the inside stone-packing, and several more data were gained about the geometric measurement of the tumulus: on the basis of the survey of the sections of a trial-trench opened in 1996, not only the original height but also the shape of the tumulus could be deducted with great certainty. After the computer data processing

Fig. 3. “Matrica” Museum in Százhalombatta, Hungary. Reinforced concrete structure of the museum in the form of a tumulus covered with soil and grass (photo courtesy of the “Matrica” Museum, Százhalombatta)
the theoretical reconstruction drawing was made including the reconstruction of the burial chamber”.11

Additionally, earth-sections were taken for display and further testing. The result of the exhaustive preparatory studies is an excellent reconstruction of the tumulus, matching exactly the original mound in height, diameter, angle of inclination of the wall, as well as contributing to preserve the existing landscape (Fig. 4). The burial chamber was reconstructed inside of which some of the original wooden logs were retained and subjected to on-site conservation (Fig. 5). The exhibition was opened to visitors in 1998.12

Another example of a tumulus reconstruction is the Museum of the Royal Tombs in Aigai in Vergina, Greece (exposition opened in 1997).13 The idea of preserving the existing cultural landscapes dictated the selection of the protective structure in the form of an earth tumulus, which was dug up during the archaeological research. The four ancient tombs at the time of their creation in the 4th century BC were probably covered with a small earth mound. The later-erected Great Tumulus covered the four tombs and a small Heroön dated to the third century BC. The mound remained in its form until the archaeological excavations in 1970s.14

The reconstruction of the protective structure in the form of a tumulus allowed for the restoration of the characteristic element to the surrounding landscape, simultaneously creating favourable conditions for an exhibition in situ. Each tomb is located in a separate chamber and there are multiple corridors and hallways connecting the exhibition space with the exterior. The dome-shaped building is made of prefabricated reinforced concrete structural elements, providing a relatively easy reversibility of the structure. The newly created tumulus was made smaller than the Great Tumulus due to structural reasons. It is 66 m in diameter and 9.5 m high15 (Fig. 6).

12 Morgós et al. 2006: 158.
15 Onisiforidou 1999: 244.

Fig. 4. “Matrica” Museum in Százhombatta, Hungary. The plan and section of the reconstructed tumulus. Source: Gelesz 1998: 24 (courtesy of the „Matrica” Museum, Százhombatta)
In both cases of the tumulus reconstructions, the structures replicating the original earth mound were covered with turf on the outside, thus restoring the landscape lost due to previous excavations.

2. Fragmentary and schematic reconstructions

Fragmentary and schematic reconstructions, or the so-called “ghost structures”, are very helpful in determining the scale of non-existent buildings in the context of its surroundings.

The realistic fragmentary reconstruction of the portico of the harbour temple (Hafentempel) in the Archaeological Park in Xanten (Germany) built in 1979–1981 was designed based on both the dimensions of foundations uncovered during excavations and comparative studies of ancient architectural principles of design\textsuperscript{16} (Fig. 7). The colour scheme was discretely suggested on the capitals of the columns (these were, after all, the 1980s)\textsuperscript{17} (Fig. 8). The impressive height of the Corinthian columns bearing the triple architrave, frieze and decorative cornices, as well as their composition resembling ruins diversify the flat landscape of the park located on the foundations of the ancient city. In addition to educational purposes, the building acts as a protective structure, because under the crepidoma there are relics of the foundations of the temple, also available to visitors\textsuperscript{18} (Fig. 9).

The fragmental and simultaneously symbolic reconstruction (ghost reconstruction) of the 6\textsuperscript{th} century AD temple dedicated to Apollo in the ancient sanctuary in Portonaccio (Italy) is equally mesmerising against the background of rich greenery as it is helpful in arranging countless fragments of foundations and walls (Fig. 10). Of the sanctuary, one of the oldest and most venerated in Etruria, only the foundations remain, which have served as the basis for the simple and light design made

\textsuperscript{16} Such as Vitruvius’s tractate *The ten books on architecture*.

\textsuperscript{17} Even today colours are not being reconstructed on small models of the Parthenon in Acropolis Museum in Athens, Greece.

\textsuperscript{18} The building is currently closed for renovation.
of metal rods and bent plates. The monument is located on the edge of Parco di Veio, popular among tourists. The reconstruction increases the quality of the presentation of the non-existent temple by partially restoring its shape and size. At the same time, due to its lightness and transparency, it does not interfere with the natural landscape surrounding the excavations.

Similar results were achieved in the case of a “ghost steal frame” reconstruction of Benjamin Franklin’s house in Philadelphia opened to public in 1976. The approximate outline of the house was identified through steel posts and beams, leaving the wall and roof planes open. The structure pinpoints the location and the scale of the defunct building, thus helping the visitors to create their own vision of the appearance of the building. Forty years after its creation, the idea of a “ghost structure” remains valid. However, the steel elements used in the construction grow old and are not currently attractive.
3. Volumetric reconstructions\textsuperscript{19}

In some cases, the use of reconstructions relies on an interesting implementation of the concept, the use of neutral building materials and architectural composition in accordance with the existing site. These elements allow for a visual acceptance of foreign architectural element built into the existing landscape.

A very appealing example of an interesting reconstruction is the textile arch suspended inside of a glass shelter on the Roman Limes in Dalking, Baden-Württemberg (Germany). The rotated glass cuboid stands out against the greenery of the park. Through the glass walls appears a full-scale textile Roman arch hung over the stone relics of the original honorary arch built for the Emperor Antoninus Caracalla around 213.\textsuperscript{20}

In the 1970s, the lower parts of the walls and foundations of the arch with a small building, probably the guardhouse, were exposed. Once the conservation work was completed, the monument was left as exposed ruins, part of the scenery of the park (Fig. 11). After thirty years, the destruction of the walls caused by the weather conditions was so severe that a decision was made to design a light protective pavilion, which would hold a simplified reconstruction of the Roman arch and a small exposition. The height of the front and back elevations were established on the basis

\textsuperscript{19} N. Stanley-Price included Benjamin Franklin’s house and the schematic reconstruction of the Temple of Apollo in Veii in the group of volumetric reconstructions. I have decided to limit volumetric reconstructions to examples with clearly defined walls and roofs due to significant differences between the complexity of design, construction and associated conservation issues between an open or a sheltered presentation method.

\textsuperscript{20} Bender 2010: 8–9.
of the probable height of the ancient arch and building: the front one was 12 m and the back one was 6 m. The framing used to erect the building in 2010 is a reversible structure that could be easily removed in the future and replaced with another protective structure. The weight of the textile model of the arch lies on the framing, so as a result the ancient walls are not being damaged. The reconstruction enclosed in a glass casing looks very elegant against the park landscape21 (Fig. 12).

If the conservation program for relics in situ requires a construction of the protective shelter, it could be designed as a volumetric reconstruction with the use of modern building materials and techniques. The building massing takes a simplified form of an inexistent structure, usually developed on the basis of construction methods known to have existed during the time period in question. The shape of the protective structure is intended to demonstrate the size and cubic capacity of the non-existent building without providing more architectural detail. The new volumetric reconstruction becomes an integral part of the cultural landscape in which it is erected; therefore it must be skillfully inserted into the existing landscape.

An example of a volumetric reconstruction of buildings from the Roman Period in Chur, Switzerland22 reflects the range of questions which the designer must take into account when making decisions concerning the spheres of urban planning and architecture, as well as that of conservation. The remains of the walls of Roman residential buildings were uncovered in the seventies of the 20th century. The location of the relics near a built-up street of the town at the foot of the mountains imposed design constraints on the protective structure completed in 1986. The proposed reconstruction of the structures in the form of a three segment building skeleton with its massing alludes to the dimensions of the ancient buildings. With its rectangular layout and positioning along the street, the building blends into the existing landscape. The use of wooden lamellae in the construction of the walls

21 Architectural design: Architekturbüro Isin, Aalen; Structural design: Graf-ingenieure, Schwäbisch Gmünd.

22 Schutzba Areal Ackerman, Chur, Switzerland, architect Peter Zumthor.
complemented the surrounding natural mountainous environment, while providing an excellent ventilation of the interior of the monuments. The architectural language is simple and does not directly cite the ancient elements, yet it provides enough information about the street elevation and building massing of the defunct structures (Fig. 13).

A very skilfully designed volumetric reconstruction is located in the Archaeological Park in Xanten. A shelter and museum enclosed in glass and metal with red roofs was built on the foundations of the ancient Roman bath (Fig. 14). Another interesting example of volumetric reconstruction was constructed in the Villa Romana del Casale in Piazza Armerina, Sicily in place of the protective structure from the 1950s created by architect Franco Minissi.

4. Historic reconstructions

Reconstructions are used in experimental archaeology to recreate structures currently known to us only through written and iconographic sources, consequently improving our knowledge of not only forgotten building techniques, but also of the life of the communities that inhabited these buildings in the past. They are based on scientific research and a lot of effort is being directed at recreating the past construction methods and materials used. Historic reconstructions differ from pseudo-historic buildings, which are designed in accordance to the generally accepted architectural style of the era they are symbolised. However, neither the elevations, nor the plans of the buildings, nor the materials and method of construction reflect the information known about the reconstructed building. The historic reconstruction is a very expensive undertaking (research, construction and subsequent maintenance of the facility), which is why it is not often used.

The example of a partially reconstructed in situ fifteenth-century Native American satellite village in Crawford Lake (Canada) shows how to skilfully combine an experimental archaeology site with a suburban parks system. Crawford Lake Park bears the name of a meromictic lake, located within a few hundred meters from the settlement. The park is part of the Niagara Escarpment, which has been entered on the list of the UNESCO Biosphere Reserves in Canada.
During the course of archaeological excavations carried out in the vicinity of the lakes Ontario and Erie, researchers uncovered relics of villages and seasonal residences of the Neutral Nation, belonging to the Iroquois confederation dating from the 11th to the middle of the 17th century. Several villages uncovered by the end of the excavations have been preserved as provincial parks. Individual buildings have been reconstructed in at least nine locations.

Archaeological excavations conducted at the Crawford Lake archaeological site were completed in 1987. They resulted in the documentation of the examined traces of ten longhouses inhabited by families of the Neutral Nation, belonging to the Iroquois confederation, over the course of several hundred years. The skill of building longhouses disappeared among the tribes of the Iroquois shortly after the colonisation of the area by French immigrants. The structures have undergone some contemporary modifications, such as roof sealing or the usage of metal nails (Fig. 15).

The structures have undergone some contemporary modifications, such as roof sealing or the usage of metal nails (Fig. 15). Inside, along the walls, there were cots occupied by individual families. In the past, one hearth for cooking and nailing (Fig. 15). The third construction at Crawford Lake was carried on in 2013–2014. Before construction, a final archaeological survey was conducted, which gave a 5 m clearance around the future structure. The new building was designed to serve as a museum and educational centre. The air-conditioned interior of the museum was designed for multimedia presentations and group activities. It offers an open space that could be rearranged depending on future needs (Fig. 17).

The museum was built using modern construction techniques but, in order to preserve the character of the place, glued laminated arched timber was chosen as the primary construction material. The total height of the structure, including the roof, is about 7 m. A thin concrete foundation wall 15 cm wide with a wider base located under the structural Glulam arches sealed the space under the museum floor. The exterior walls and roof of the museum were covered with an arrangement of the posts and bark similar to the previous two reconstructions. The dimensions of the museum were carefully planned to fit inside of the defunct longhouse (6.85 m wide by 32.19 m long), traces of which have been studied by archaeologists in the past (Fig. 18). The final length of the museum building is smaller than that of the original longhouse primarily due to the construction costs. Thanks to the research and careful and thoughtful architectural design, the new building exterior does not differ from the previous ones.

The location of reconstructions in situ adds spiritual value to the buildings. One may pose a question if it is really important. Present preservation standards would dictate that the reconstructions should not be located on the archaeological site but rather next to it. However, that cannot be always achieved. In some locations, all land has great archaeological value and it is difficult to find a suitable free space to build. The question also remains how to protect an archaeological site with relics, particularly if they are exposed to the environmental factors and human activity. In this case, Crawford Lake archaeological site plays a significant role in the interpretation of the culture of Indigenous peoples in Ontario. Most of the remaining archaeological sites will remain buried and unidentified.

Reconstruction of the Slavic settlement of the Warini people in Gross Raden (Germany) from the 9–10th century is located in a large area and consists of several buildings: several huts, palisades with bridges, a temple and a refuge castle (Fig. 19). The settlement, situated on a peninsula and a small island surrounded by water, was destroyed in the 12th century. Over time, the area became covered with peat, which allowed the elements and details of timber structures to remain in good condition. The reconstructions are made

25 Williamson 2004: 150.
26 The Neutral Nation, a name given during the period of European colonisation, was the result of a long tradition of the political and economic role played by the Neutral people in keeping the peace with other Iroquois tribes in the north and with the Hurons in the south.
27 Information given by Ms. Brenna Bartley Education Coordinator – Crawford Lake and Mountsberg Conservation Area.
28 As per architectural sections and details obtained from Brook McIlroy Inc.
29 Architectural design: Brook McIlroy Inc., Toronto.
30 Schmidt 2000: 137.
28 As per architectural sections and details obtained from Brook McIlroy Inc.
Fig. 15. Crawford Lake Conservation Area, Ontario, Canada. Native American Satellite Village. Exterior view of the reconstructed long-house (right) and the museum (left) (photo by K.B. Frank)

Fig. 16. Crawford Lake Conservation Area, Ontario, Canada. Native American Satellite Village. Interior view of the reconstructed long-house (photo by K.B. Frank)
Fig. 17. Crawford Lake Conservation Area, Ontario, Canada. Native American Satellite Village. Interior view of the exhibition area (photo courtesy of Brook McIlroy Inc.)

Fig. 18. Crawford Lake Conservation Area, Ontario, Canada. Native American Satellite Village. Schematic floor plan of the museum overlaid on the archaeological map of a longhouse (courtesy of Brook McIlroy Inc.)
from local wood, while the construction details of individual buildings are based on the results of the analysis of the exposed archaeological relics\textsuperscript{31} (Fig. 20). Because the roof structures were poorly preserved, the reconstruction of the temple has a roof, which, as a result of further research, became considered as inaccurate.\textsuperscript{32}

Wood is an impermanent building material, which is why the value of this archaeological site is enormous and the reconstructions allow for the restoration of the character of the settlement, as well as a more understandable presentation of the life and daily activities of the Slavic Warini people, a population, whose culture was lost in the late Middle Ages. The reconstructed village blends perfectly into the forest landscape, giving the impression that it has been there continuously since its inception. Unfortunately, the location of the museum away from the popular tourist routes and inhabited areas undoubtedly contributes to a lower number of visitors.

\textsuperscript{31} See Charowska 2014 for reconstruction details.

\textsuperscript{32} Webpage of Archäologisches Freilichtmuseum Gross Raden.
THE ART OF (ARCHITECTURAL) RECONSTRUCTION AT ARCHAEOLOGICAL SITES IN SITU

Reconstructions are confronted with the status quo stating that only ruins are deemed “real” and, consequently, valuable. As Tino Mager says in his introduction to a new book devoted to politics and reconstructions: “By replication, architecture turns from a source of history into a result of our knowledge of history and loses its ability to provide a reliable account of the past. Moreover, in the case of buildings that vanished generations or even centuries ago, why do we compensate for a loss that we never experienced?”33

There is, however, a very visible need for reconstructions, which also includes inexistgent structures identified only by means of archaeological research and sparse historic information. Looking at the completed in 1956 reconstruction of the Stoa of Attalos on the Athenian agora generating so much controversy, we must ask ourselves – if indeed the remainder of the agora with its unsecured relics overgrown with vegetation or trampled by tourists is the better option? The Stoa of Attalos was built with great effort to maintain the authenticity of the building materials and methods, as well as to secure the preserved fragments of walls.34 The facility plays an educational role as an example full-scale ancient building, which protects relics, serves as a museum and a place of respite for thousands of people visiting the agora, especially in summer (Figs 21–22).

Architectural reconstructions can be useful, scientific and educational as long as they are properly designed. The aforementioned examples help establish the characteristic elements of architectural reconstructions built in situ, which are artfully designed and beneficial to their cultural landscapes:

• First of all, it should protect the relics and “avoid disturbing any surviving archaeological evidence”35. The erection of the new structure cannot under any circumstance damage the surviving archaeological evidence. If this is not possible another location must be chosen for the reconstructed building or the project might even have to be abandoned.
• Reconstructions are very complex scientific undertakings prepared by a multidisciplinary team of specialists. Research should be conducted prior to the project, including the analysis of the construction methods and building materials. Zbigniew Kobylinski writes: “All efforts to maintain, enhance, display, interpret and explain the relics of historical architecture mentioned in this chapter, despite the diversity of possible solutions, have one rule: only the prior research allows an avoidance of errors in the process of preventive conservation”.36
• Reconstructions undoubtedly should meet educational goals. Even Georg Dehio thought that a few examples of reconstructed houses and castles can serve the noble purpose of educating the public.37 A historic reconstruction should be conducted according to the best professional standards based on research and the achievements of experimental archaeology in the given area. Nicholas Stanley-Price names “evidence” as one of the principles for site reconstruction: “The evidence – its strength and its limitations – for the reconstructed form must be interpreted clearly to all visitors (an ethical obligation not to mislead or misinform the public)”.38
• The acquisition of funding and resources is equally important.
• A reconstruction requires an open-minded, innovative and careful approach to its design. Each case is unique and needs to be evaluated in its existing surroundings. An erection of an architectural reconstruction in accordance with authentic methods and the use of original materials (as in the case of a historic reconstruction) is very difficult, expensive and requires a lot of research and testing. However, reconstruction is not obliged to rigorously mimic the form and technology used during the original construction process of the no longer existent structure. Even through contemporary materials and modern architectural styling, the size and simplified form of the defunct structure can be demonstrated as in the case of volumetric reconstructions.
• A reconstruction should be aesthetically pleasing in its environment through harmony or conscious contrast with it.
• It should be accessible to a wide range of visitors. There certainly is a need for reconstructions in the case of forgotten or rare monuments, particularly those located in parks and close to popular tourist routes.

The art of designing reconstructions is based on finding individual solutions for each case. It is necessary to take into account the context of the existing cultural environment, because the reconstruction, though designed to recreate the form or function of defunct buildings, becomes an element of the current landscape.

33 Mager 2015: 2.
34 Schmidt 1993: 221–224.
35 Charter for the Protection and Management of the Archaeological Heritage, 1990: article 7, ICOMOS.
36 Kobylinski 2016: 22.
37 Dehio 1914: 276.
38 Stanley-Price 2009: 41.
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Fig. 21. Agora of Athens, Greece. Reconstructed Stoa of Attalos (photo by Ken Russell Salvador. Wikimedia Commons CC BY 2.0 http://creativecommons.org/licenses/by/2.0)

Fig. 22. Agora of Athens, Greece. Reconstructed Stoa of Attalos (photo by K.B. Frank, 2016)
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