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Typologies of Works

The sequence of damage and restoration produced over the centuries since the construction of the statues is not clear. Even in the past, the contribution of human beings to maintain the integrity of the artistic sculpture was high. For example, in the period 1678–1707, Aurangzed, a Muslim ruler, shot a huge gun at the Buddha, likely damaging the foot of the Western Giant Buddha.

In recent times interventions have been developed. Their investigation may help us to understand the effects of future restoration works on local materials and their long-term duration.

Two major interventions have been recorded, but written documentation is rare: the intervention of the French Archaeological Mission of the late 1950s to the early 1960s and the well-known Indian Archaeological Survey of the late 1960s to early 1970s.

Following are reported some comments on previous restorations based on the comparison among the private photo collection of Andrea Bruno (September 1960) and Kurt Lambek

(University of Canberra, Australia), taken in August 1967 and kindly provided for this work, and the photos from the Archaeological Survey of India (ca. 1968–1971, courtesy of Michel Jansen), and the present day. This discussion is certainly not complete and does not cover the huge number of interventions actually carried out during recent decades. It only describes the typology of works previously performed and their durability to the present.

1. The major remaining feature of the work developed by the French Archaeological Mission is the buttress, constructed to sustain the western side of the Eastern Giant Buddha niche. This demonstrates that, at least since the middle of the last century, the cliff was in a precarious condition, and probably at the limit of equilibrium.

The construction was performed in brick, and the result, shown in Fig. 9.1, demonstrates the typical intervention of that period: to solve the problem with limited attention paid to the environmental and aesthetic impact of construction. On the other hand, this side of the niche did not suffer too much as a consequence of the explosion of March 2001, confirming the efficacy of this intervention.

Unfortunately, the buttress was not well designed and the crack we would like to sustain started to re-open again. The reason is not clear even now, but there is a possibility that the soil foundation was not very well investigated, the buttress may be located over a cave, or the bearing capacity of the local soil may have been

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Fig. 9.1 The top of the buttress constructed by the French Archaeological mission (Photos A. Bruno, Sept. 1960)

underestimated. Even now, some evidences of deformation can be detected, suggesting the need for future intervention, at least to understand and recover the reason for such sinking. It is likely that the monitoring system of the main crack of the site did not reveal important widening in the period 2003–2007 in a small crack at the connection between the buttress and the cliff on the external side.

Finally, to overcome at least the heavy impact of the buttress, the Indian Archaeological Survey reshaped the structure and covered it with cement and natural earth, producing a camouflage not easy to recognize at first sight (Figs. 9.2 and 9.3).

2. Filling the fracture with concrete: A similar intervention was conducted, probably in 1960, in the Western Giant Buddha niche, as testified by K. Lambek's photos of August 1967, and likely aimed at avoiding water infiltration from the top of the cliff. Currently there is little evidence of this filling activity, suggesting a possible effect of the explosion or a natural enlargement of the fractures. This second hypothesis seems not to be

confirmed by the evolution pattern of discontinuities.

Cliff deformation of the Eastern Giant Buddha site produced many fractures inside the niche (Fig. 9.4).

During the restoration of the buttress, designed from the Indian Archaeological Mission in the period ca. 1968–1971, many of the cracks were grouted with cement and mortar to protect them from water infiltration and stabilize them. That was necessary because, as mentioned, the foundation of the buttress was not properly designed, and hung onto the cliff itself. In consequence of this, horizontal deformation probably increased.

The result of this grouting from the Indian Archaeological Survey is still satisfactory, even if some fractures, widening by a few centimeters, are now visible. One of these cracks, located exactly in contact between the buttress and the cliff, is now under permanent manual monitoring.

The effect of the blasting on present-day widening of the fractures is not clear. Certainly, in the upper part, the collapse of an element of the wall separating the niche from the stairway, limited by the upward prolongation of such disconti-

Fig. 9.2 The buttress and the most external part of the cliff showing the large crack and the detached block, which needs support. It is not clear whether the crack was moving at the time of the picture or not. Nevertheless, the crack was detected as slightly open in the 2002 survey by the authors (Photo A. Bruno, Sept. 1960)

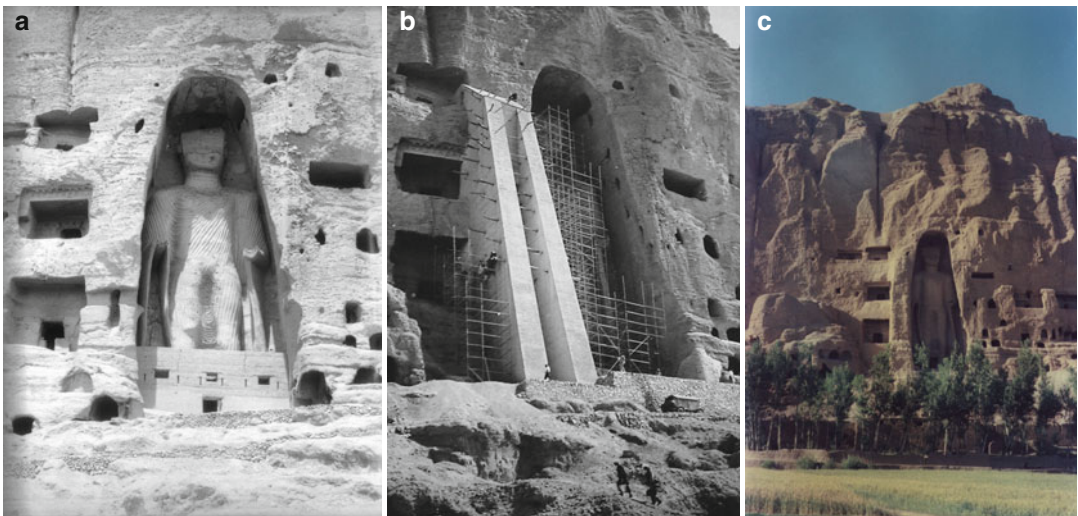


Fig. 9.3 The Eastern Giant Buddha before the French mission intervention, with the French buttress at the beginning of the Indian intervention (ca. 1968–1969)

(Courtesy M. Jansen) after restoration by the Archaeological Survey of India in 1975 (Photo G. Arduino), respectively (a), (b) and (c)

nities, poses some questions about the possible negative impact of the explosion (Fig. 9.5).

3. Reconstruction of missing parts: Looking at both the 1967 and present-day photos, it is

clear that a small portion of the border niche of the Western Giant Buddha has been perfectly reconstructed. Also, the contact between the large slide in front of the Western

Fig. 9.4 Filling a fracture in the Western Giant Buddha with cement

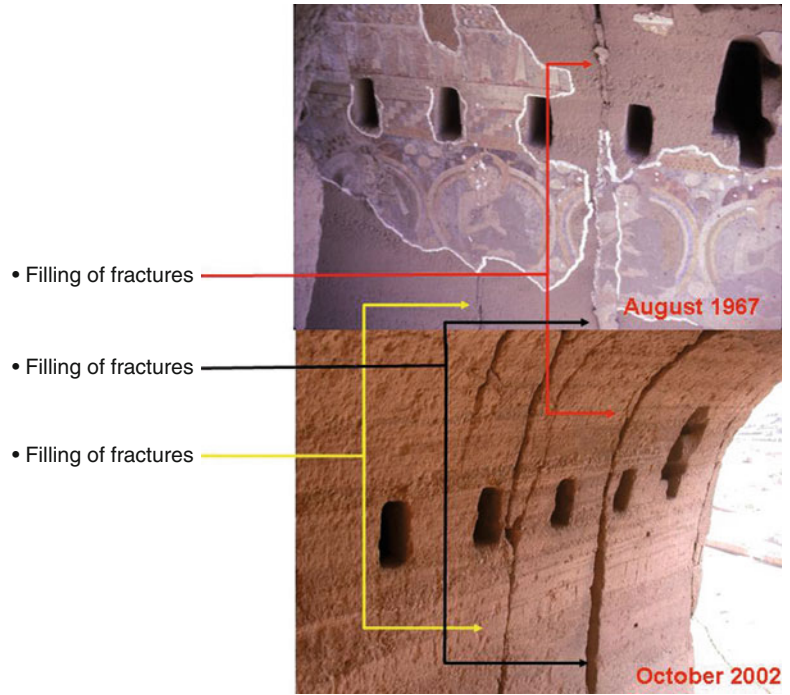


Fig. 9.5 Pattern of discontinuities in the Eastern Giant Buddha niche both before intervention of the Indian Archaeological Survey and currently (Courtesy Michel Jansen)

Giant Buddha and the cliff has been filled with concrete. A similar intervention of reconstruction of weak or missing parts has also been done for the Eastern Giant Buddha niche with excellent results (Fig. 9.6).

4. Protection from water runoff. This measure was considered extremely important in the past, and it still is. The Indian Archaeological Survey constructed two major protection channels above the Buddha niches. Their perfect maintenance and conservation is essential (Fig. 9.7).
5. Bolts have been used in the past to anchor small pieces of the statues to the cliff. The approach was correct and the result fully satisfactory until the blast occurred (Fig. 9.8).

Ideas for Exploitation

In the past only minor attempts were made to increase tourism and use the statues as a major attraction point in Afghanistan. This was mainly because of the safety issue of the country, which did not allow for a major exploitation plan and implementation for the site. Minor local private sector businesses were initiated, but unfortunately they did not reach any level of maturity. Similarly, the level of management and exploitation was mainly confined to the notes and scratch books of the experts who periodically visited Bamiyan. They immediately recognized the importance of the site and the huge potential

for its development. But unfortunately history did not allow such improvement. Among the various experts, a major role was played by architect Andrea Bruno, who dedicated a large part of his life to the conservation of Afghan monuments. His first visit to Bamiyan was in September 1960. Since then, a large number of documents and reports have been published on the restoration and exploitation of Afghan monuments. The surveys performed by Andrea Bruno in the 1960s (Figs. 9.9, 9.10, and 9.11) are masterpieces for knowledge of the site, especially after the destruction of the statues in 2001. The work of Bruno was not only important for recording the site, but also for the first ideas on the exploitation of the Bamiyan Buddhas.

The project of a museum located just under the ground level in front to the Western Giant Buddha niche, where one might look at the head of the statue is a stimulating and intriguing concept. The idea can be put on the table when the scientific community and UNESCO start to think about what to do with the fragments of the statues that were destroyed in 2001.

Finally, the preceding notes report some of the first attempts to develop the status and improve the attractiveness of the Bamiyan valley. The case study demonstrates that there is still a possibility to enhance the scenery of the area and related landscape without creating false and modern manufacturing that disrespects the true spirituality of the site (Figs. 9.12, 9.13, 9.14, 9.15, and 9.16).

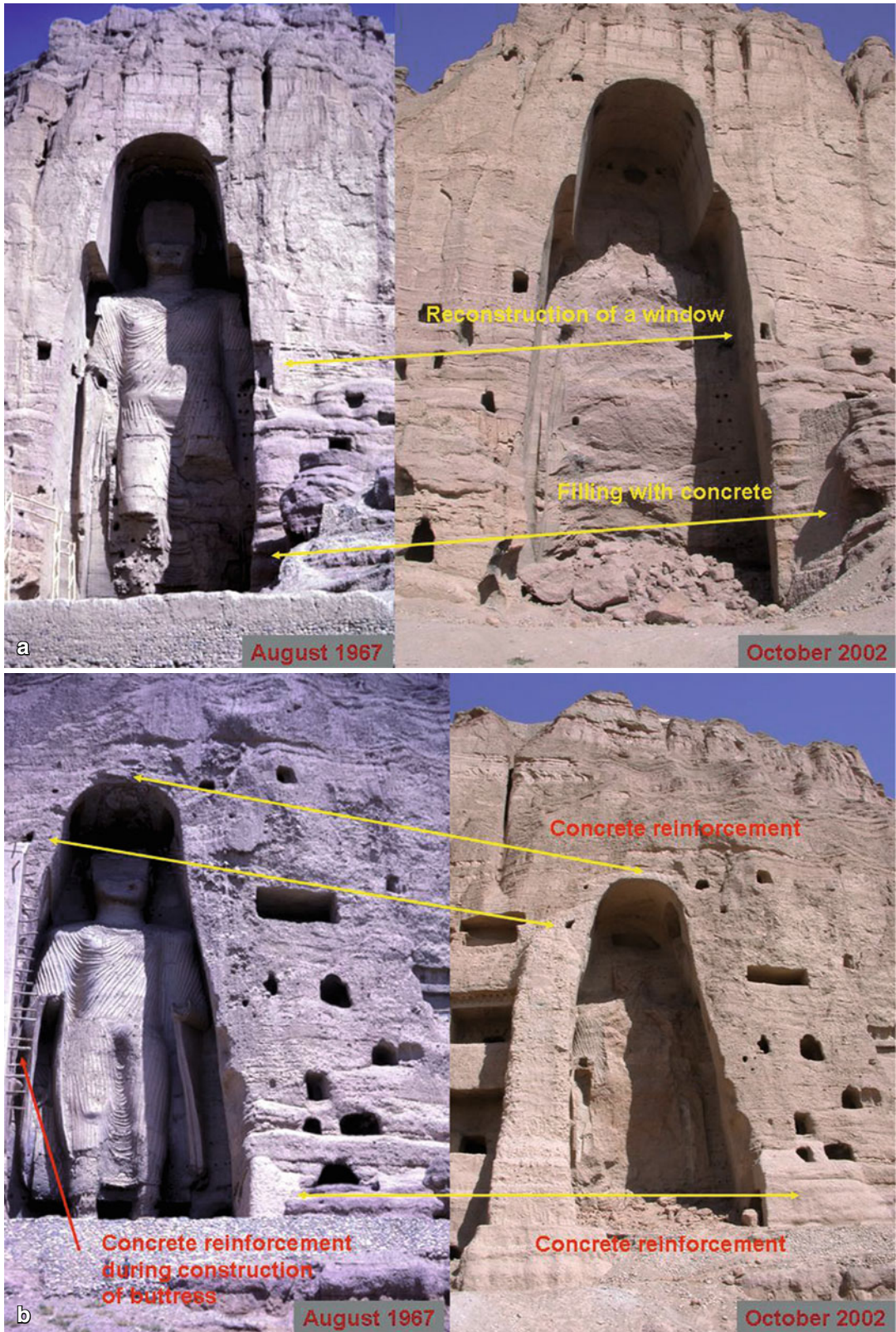


Fig. 9.6 Reshaping and consolidation of both Western and Eastern Giant Buddha niches with cement



Fig. 9.7 Protection from water runoff and infiltration

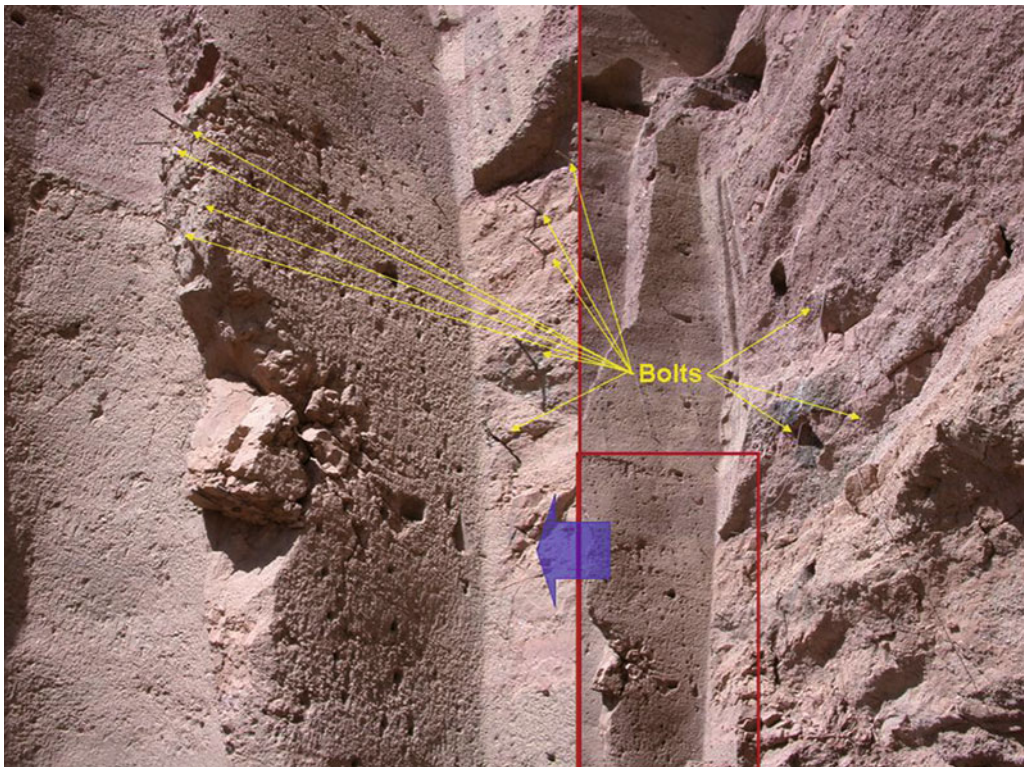


Fig. 9.8 Use of bolt for anchoring small pieces of the Western Giant Buddha

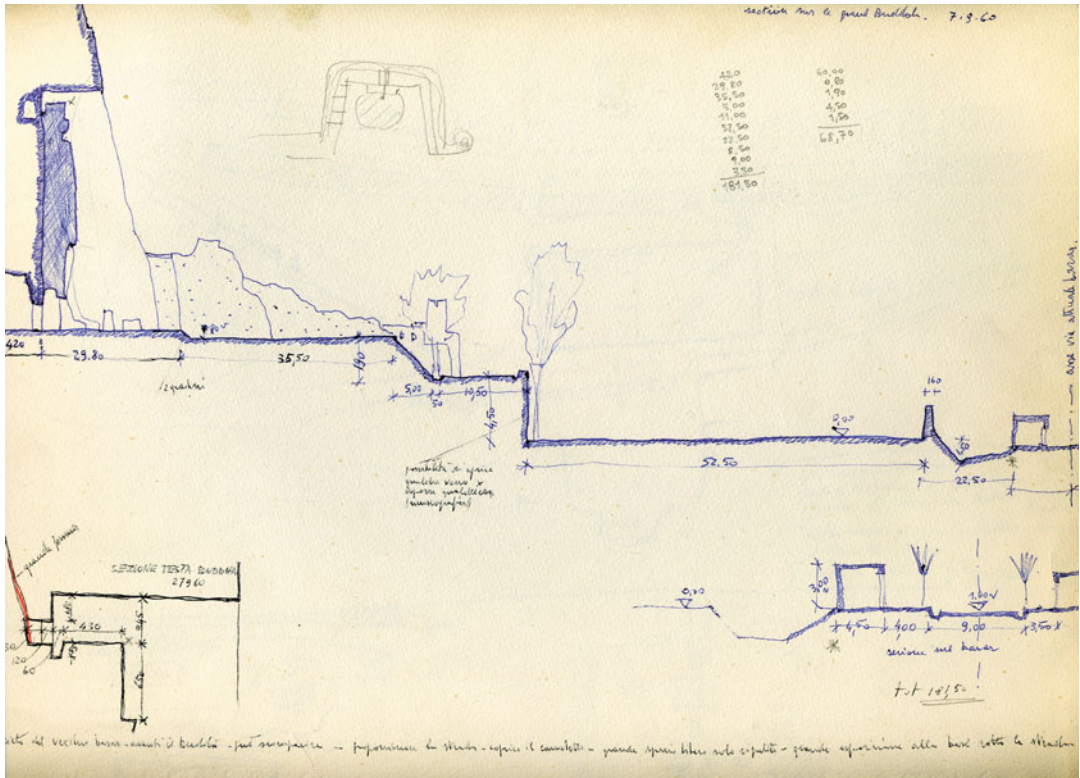


Fig. 9.9 Profile of the Western Giant Buddha niche and statue from the drawings of Andrea Bruno in 1960

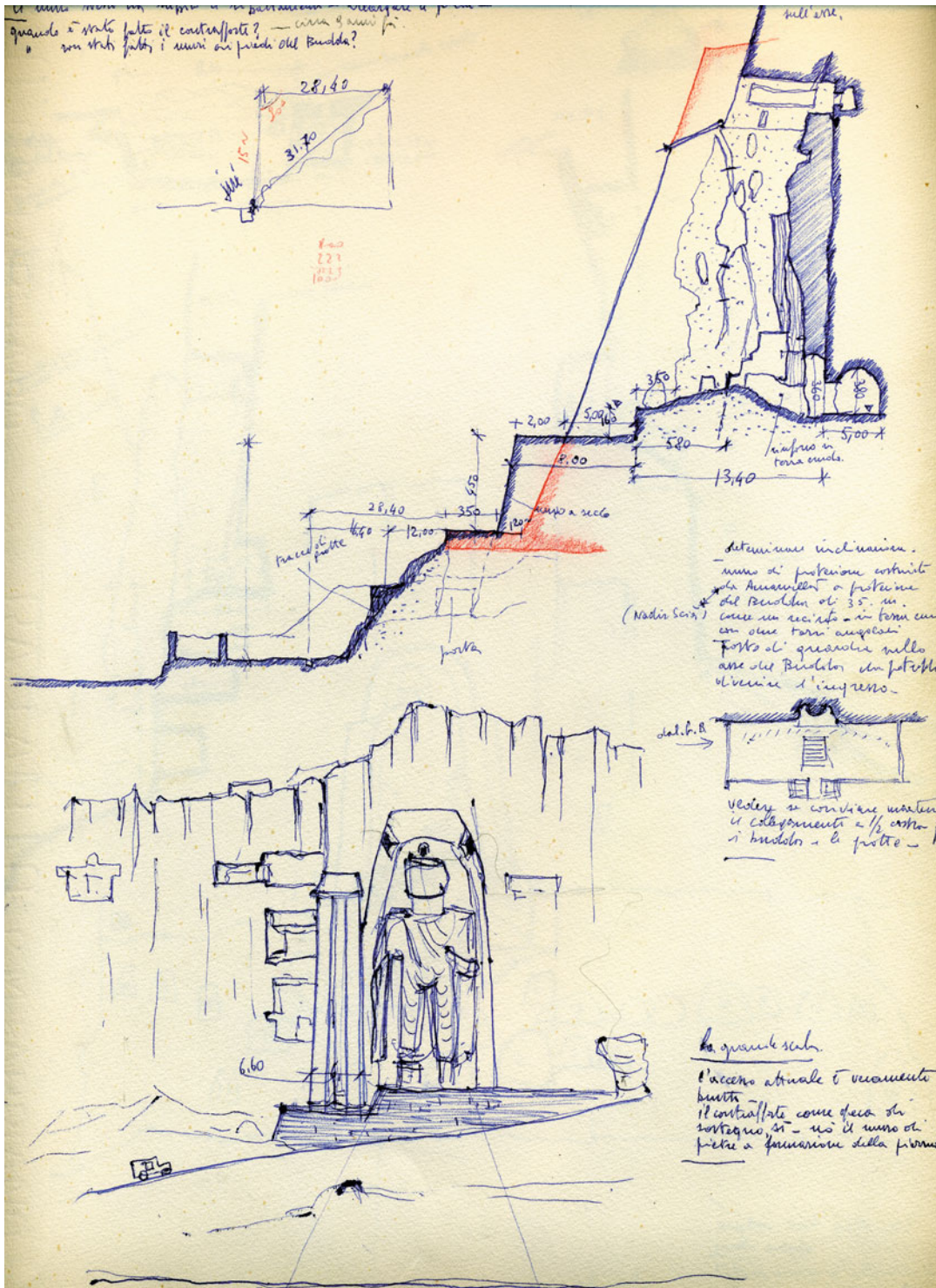


Fig. 9.11 Profile and front view of the Eastern Giant Buddha niche, in the drawings of Andrea Bruno in 1960 before the intervention of the Indian Archaeological Survey

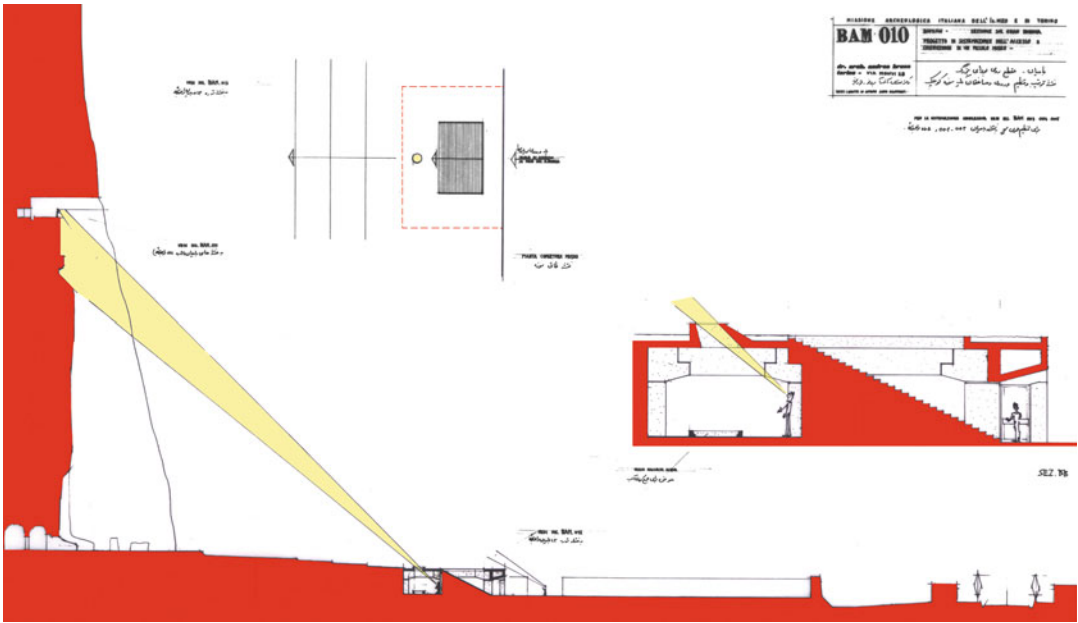


Fig. 9.12 The proposal of Andrea Bruno for the construction of a museum in front of the Western Giant Buddha niche in Bamiyan, 1960

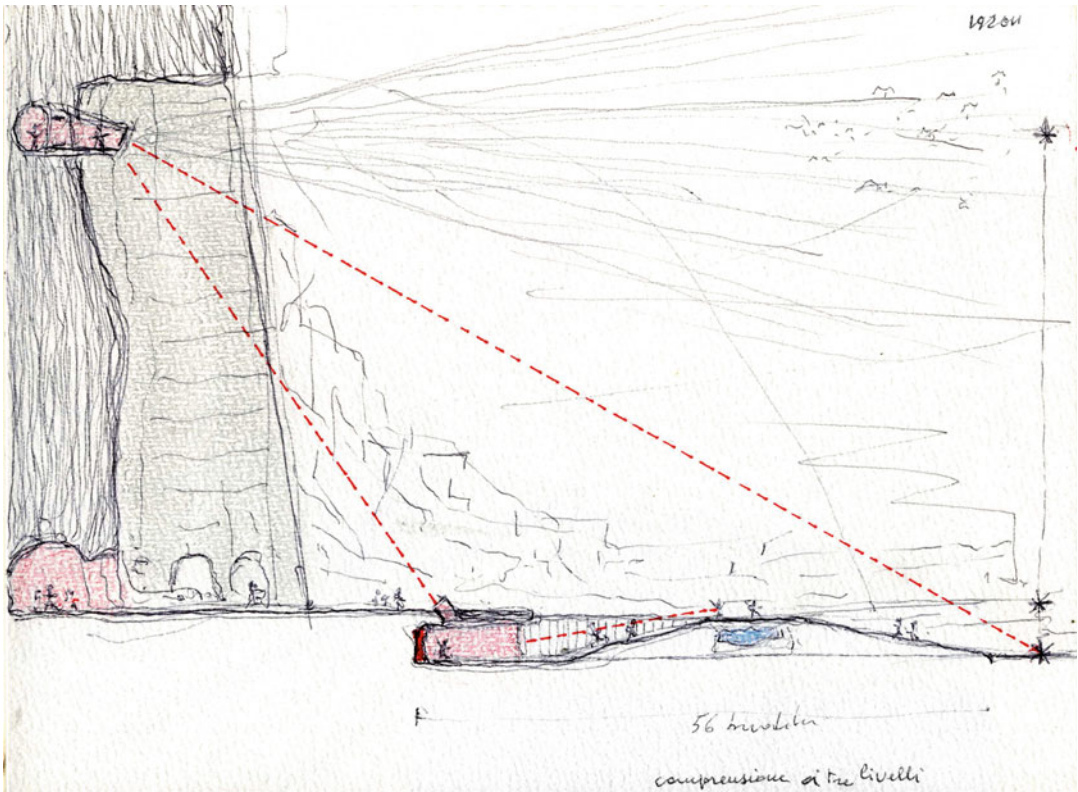


Fig. 9.13 The new project for the exploitation of the niche of the Great Buddha and the surrounding area, the observatory and the underground sanctuary-museum (Drawing by A. Bruno, 2010)



Fig. 9.14 General section of the project of valorisation of the niche in the Western Giant Buddha and requalification of the surrounding area, 2010. Project by Andrea Bruno: Legend for plans and sections: (1) “Great

esplanade” - area in front of the niche. (2) Ramp. (3) Entrance to the new sanctuary. (4) Access to the tunnels. (5) Sanctuaries carved into the rock. (6) Observatory

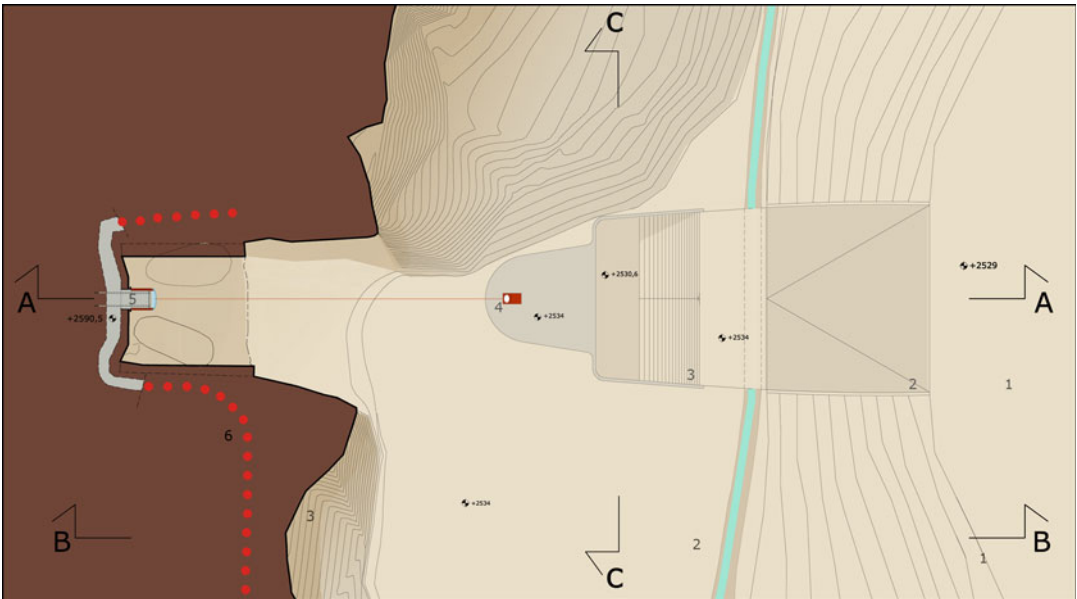


Fig. 9.15 General plan of the project at the level of the new Observatory (at approx. 65 m in height from the base of the Western Giant Buddha), 2010. Project by Andrea Bruno: Legend for plans and sections: (1) “Great

esplanade” - area in front of the niche. (2) Ramp. (3) Entrance to the new sanctuary. (4) Oculo. (5) Observatory. (6) Access to the tunnels of the wall

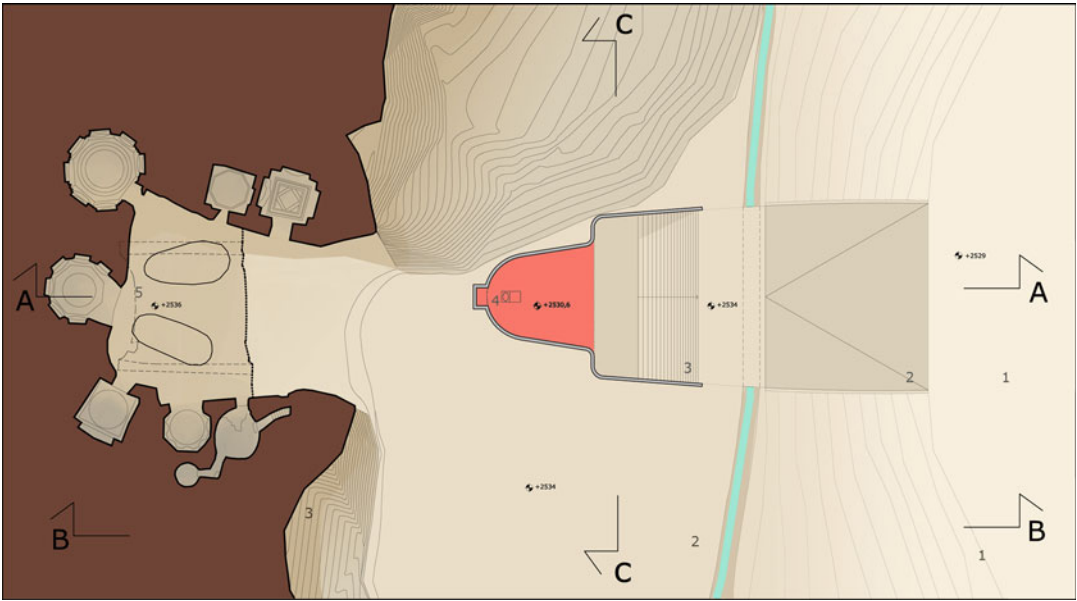


Fig. 9.16 General plan of the project at the level of the base of the Western Giant Buddha, 2010. Project by Andrea Bruno: Legend for plans and sections: (1) “Great esplanade” - area in front of the niche. (2) Ramp. (3)

Entrance to the new sanctuary. (4) Reproduction of the Western Giant Buddha on a small scale. (5) Sanctuaries carved into the rock surrounding the niche of the Western Giant Buddha