

Hartmut Pasternak

Brandenburg University of Technology,
Institute of Civil and Structural Engineering,
Cottbus, Germany
Hartmut.Pasternak@b-tu.de

Natasa Zivaljevic-Luxor

University of Nis, Faculty of Civil Engineering
and Architecture, Nis, Serbia
nluxor@gmail.com

THE COLOSSUS OF PRORA – BUILDING HISTORY AND NEW BEGINNING

Prora is a beach resort built in the 1930-ies on the island of Rügen, Germany. The structure itself extends impressive 4.5 kilometer. The design won the Grand Prix award at the 1937 Paris World Exposition. Decisive for the Monument Protection Authority were "the impressive and characteristic cubic structure of the building body" and the "reinforced concrete skeleton construction, cast on site". Never finished, it is now built into luxury apartments.

Keywords: large on-site cast reinforced concrete skeleton construction, heritage, intervention strategies techniques

1. INTRODUCTION

Prora is a beach resort on the island of Rügen, in the German part of the Baltic Sea. After smashing the German Unions in 1933, it was planned as a huge holiday resort for growing middle class of industrial workers, and partly built between 1936 and 1939. It is situated 160 metres from the beach and follows the cost line. The structure itself extends impressive 4.5 kilometres (Fig.1), that's why Colossus of Prora and it is listed as heritage since 1992.



Figure 1. View Prora complex [1]

2. ORIGINAL ARCHITECTURAL CONCEPT

The structure, an on-site cast reinforced concrete skeleton construction, consists of eight housing blocks, each 500m long and six storey high, which were intended to accommodate 20,000 guests at once. Each room was directed to the East, overlooking the sea. That's why the depth of the housing blocks was 10,5 meters on the ground floor and on the second floor and only 8 meters above. The ground floor was planned/designed to be used by children's homes, shops and staff apartments.

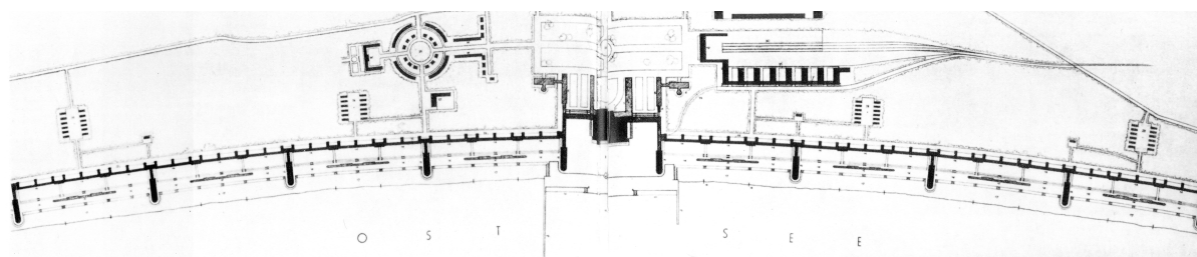


Figure 2. Original ground plan [2]

The "Community Housing", a 110 m tower, is positioned perpendicularly to the frontline of the housing blocks, ahead of them, in the beach area. It is 3.5 storey high structure. In its basement, there were utility rooms and dining rooms, while on the second floor, there were cafeterias and restaurants with terraces; in a mezzanine, the area was reserved for writing, reading and children playrooms, and on the upper floor, for bowling and billiard. On the backside of the building there were lifts at a distance from 50 m.

All housing blocks (Fig. 2) were designed by Cologne architect Clemens Klotz (1886–1969). The main hall for festivities (Fig. 3, in the upper right corner) was designed by Erich zu Putlitz (1892-1945), an architect from Hamburg. The design won the Grand Prix award at the 1937 Paris World Exposition, attracting lot of attention by its size.

The main hall for festivities (Fig. 3, in the upper right corner) was designed by Erich zu Putlitz (1892-1945), an architect from Hamburg. The design won the Grand Prix award at the 1937 Paris World Exposition.

Klotz designed mostly for Cologne and surroundings, and he accepted several non-military project requests from National-Socialist Party. In the very beginning of 20th century, Klotz was a member of Deutscher Werkbund, which later led to foundation of Bauhaus. He was engaged in planning Cologne, and he designed Munich train station, which reveals his interest in huge structures, which reshape the landscape. Klotz caught the spirit of the epoch by choosing cast concrete as structural element. The façade was simple, with few details. Apart from it, it has little resemblance with other grandiose architectural designs from the same period, for example done by Le Corbusier. Colossus is firmly on the ground, not leaving ground level free for communication, as one might expect. The proportions are determined by simplified function, and it is extreme and intentionally not balanced.

The uniformity of the architecture reveals that functionality in architecture was very important

and that concept had strong political background (KdF - Kraft durch Freude = Strength Through Joy).



Figure 3. Planned design [3]

3. ORIGINAL BUILDING DESIGN AND CONSTRUCTION

The structure of the housing blocks is an on-site cast reinforced concrete skeleton construction (Fig. 4).



Figure 4. Skeleton construction

The grid was 5 m x 5 m. The load-bearing exterior walls are made of masonry, while the window lintels consist of reinforced concrete. The cast concrete technology was already widely known and accepted at that time. Reinforced strip and individual foundations (C20/25) have been carried out. The thin ceiling of the housing blocks consists of reinforced concrete (C20/25) with steel bars ($d=6\text{mm}$ and $a=5\text{cm}$). Fig. 5 shows a cut-out roofing.



Figure 5. Removed roofing



Figure 6. Building under construction [2]

All major construction companies of the Third Reich with nearly 9,000 workers were involved in this project (Fig. 6). Some of the companies which were engaged, e.g. Dyckerhoff & Widmann, Hochtief, Polensky & Zöllner, exist to this day. The building site was stopped by World War II. The original design (Fig.2) included swimming pools, a cinema and a theatre, which were not built at the time.

Each guest room was of 4.75 x 2.25 metres in size, had two beds, a wardrobe, a seating corner and a sink, all designed according to the modular principle. Figure 7 shows the outlook of typical room. The guest blocks included communal toilets, showers and bathrooms on each floor.



Figure 7. Single room (photo: Th. Schramm [4])

4. COLOSSUS AS HERITAGE

The Colossus of Prora is interesting from two sides – as an extraordinary huge structure, and as an example of pre-WW II architecture which reflects values of the epoch. Basically, they are values of a former totalitarian regime, but superposed to values of architecturally advanced society, which also gave Bauhaus to the World, among other contributions, in years immediately before the Colossus was erected.

The complex was listed as heritage in 1992, because it was considered to be rare example of the Third Reich Architecture, built for entertainment and recreation, and not either for industrial or military purpose. Decisive for the Monument Protection Authority were: "the impressive and characteristic cubic structure of the building body", the "reinforced concrete skeleton construction, cast on site" (Fig. 8), and, in addition, that it should not be left as "abandoned building".



Figure 8. Interior under reconstruction

Five of the 8 blocks still exist. The last among many attempts for revitalisation of Colossus came in 2012, when the complex was sold to private investors, whose plan for rehabilitation included luxury holiday apartments and a 5-star hotel, for 3000 people, with an indoor swimming

pool and a wellness area (which were partially realized). By removing interior walls, it became possible to receive larger apartments (Fig.9).

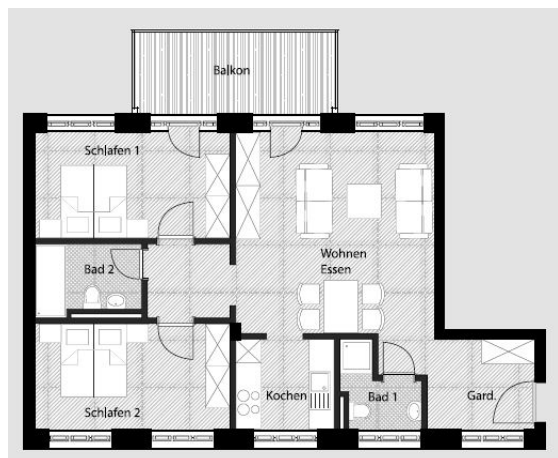


Figure 9. Floor plan of a 3-room apartment and living room [5]



Figure 10. Façade

Additional measures were: reinforcing the foundations, cutting out the masonry walls for doors and dismantling the inner concrete walls. One of the requirements of Monument Protection Authority was to keep the board formwork of the ceilings visible. On the other hand, they agreed to equip every apartment by a terrace or light cantilevered balcony (Fig.10). Freestanding parking houses have been built.



Figure 11. Escape stairs

Colossus reflects genuine sensibility of its architect, Klotz, which has not changed much even in decades of architecture practice following the end of War. Klotz's understanding of architecture, served the particular political regime, but it reflects values which are praised, in general, by every totalitarian regime. Therefore, part of Colossus is justly preserved as museum. The rest of it significantly changed. It was widely accepted that Colossus must be adopted for new purpose, with interventions including façade remodeling (Fig 10). In addition, escape stairs were installed for fire protection (Fig.11).

5. DISCUSSION AND CONCLUSION

Embracing principles of sustainability, in nowadays Europe, it is common to preserve outdated, abandoned industrial buildings without particular artistic values, aesthetically insignificant, for the sake of their size (being hard to demolish), its symbolic value or/and as

element of cultural landscape. It is unusual to apply such approach on a holiday resort, but in general, that is what happened in this case. Colossus is preserved for its size, which defines a skyline integrated with beach of the Baltic Sea. Regardless of its beauty, according to nowadays criteria, the Colossus generated cultural landscape, and became landmark whose loss would make the area unrecognisable. Colossus was different from other war buildings, because it is not preserved for sake of some 'threatening memory', normally based on aesthetic of ugliness (as in case of concentration camps), and therefore its rarity, as much as the size, make it valuable and worthy of preservation.

The logic of its revitalisation is essentially the one typically applied to industrial buildings – with loose limits to intervention, allowing changes of façades. Economic sustainability is expected to be provided on site (which is not typical). It has little economic impact to the development of the area. – which is at the moment considered to have already too many tourists. From the point of view of concept of economical sustainability, Colossus revitalisation can be compared with very successful City G in Vienna (Gas factory revitalisation in Siemering), and probably learn from it. Similar to City G, most of the Colossus will turn into comfortable apartments for residents, and the rest of it in variety of carefully chosen purposes.

The environmental sustainability of Colossus revitalization is somewhat ambiguous. Such building cannot be good for the environment, generally speaking. However, it exists very long and living environment is well adjusted to it by now, therefore radical change would be shocking. Demolishing such huge building, as alternative to preservation, would produce huge amount of debris which would be devastating for the environment. So, from point of view of sustainability, preservation is fully justified.

Finally, Colossus remains mostly challenging from the point of view of heritage management. It is well known that it is possible to adapt even an extremely huge, over 80-year-old, building complex for needs of contemporary life. However, it is not yet proven that current strategy would be entirely successful and turn Colossus in Prora into Colossus of Prora.

REFERENCES

- [1] https://www.google.de/search?q=der+aufbau+prora&source=inms&tbm=isch&sa=X&ved=0ahUKEwi718jY6fjSAhVFiwKHetTDPkQ_AUIBigB&biw=1259&bih=664&dpr=1#imgrc=wZgyzd a6DdwpMM:
- [2] Dokumentationszentrum Prora, <http://www.proradok.de/en/photo-gallery/>
- [3] <http://www.ndr.de/kultur/geschichte/schauplaetze/Der-Koloss-von-Ruegen,prora113.html>.
- [4] https://de.wikipedia.org/wiki/Datei:Prora_zimmer.jpg
- [5] Prora Solitaire Hotelbroschüre 2017.pdf