

Izmit Sultan Abdülaziz Imperial Hunting Lodge: Restoration following the 1999 earthquake

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Abstract:

Sultan Abdülaziz Imperial Hunting Lodge was built in the second half of 19th century during the construction of the Anatolian-Balkan Railway, which played an important role in the urban development of Izmit. This imperial lodge outside the capital city might have been constructed on the foundations of a former palace built during the reign of Murat IV. Due to its location above the Izmit Gulf, it has become one of the most important elements of the urban landscape. Witnessing important turning points in the history of the city, the lodge has been used as the centre of local government and then as a museum. It has been affected by a number of major earthquakes due to its location on the North Anatolian Fault, and following its latest restoration in 1998, it suffered great damage during the Kocaeli earthquake of August 17, 1999. The damage was further aggravated as the building had not been well maintained, had been the subject of inappropriate repair interventions and left exposed to the effects of climatic conditions.

The most important type of damage observed in the building was structural deformations of various types: the walls drifted outwards at the roof level while vertical detachments and cracks of various shapes and sizes were observed along the walls and the roof parapet walls were separated at the corners as a result of the earthquake. In order to decide on the type, method and techniques of intervention necessary, the architectural, structural and material characteristics of the building as well as the level of damage had to be studied and documented in detail. This data was then evaluated with the contribution of specialists in various fields and conservation, restoration and structural strengthening methodologies were developed. The intervention aimed at re-using the original building material detached during the earthquake while the basic principles were defined as an accurate analysis of the types of damage and the implementation of the solutions to these problems by the use of original materials and construction techniques through minimal intervention.

Keywords: *Architectural conservation, restoration, structural strengthening, damage assessment, earthquake damage, Av Köşkü, Hünkar Kasrı, Hunting Lodge, Izmit*

Sultan Abdülaziz Imperial Hunting Lodge, also known as the "Izmit Lodge" or the "Imperial Lodge" is located within a large garden surrounded by high retaining walls on a hill covered with pine trees

overlooking the Gulf of Izmit. The original entrance to the grounds is on the west side, through a monumental gate near the Clock Tower. However, an iron garden gate at the top of the Palace Street (Saray Yokuşu) provides access today.

A. Historical background

According to various sources, another smaller structure, known as the “Small Palace” and constructed during the reign of Murat IV (1623-1640) was also located in this area. Evliya Çelebi (1314H: 64-65), who came to Izmit in 1650 described this building, which was destroyed in an earthquake at a later date (Yücel, 1980: 5): “...one of the best ordered of the great palaces is that of the conqueror of Baghdad, Sultan Murad the Fourth; this is a large palace in a garden. It is not possible to describe all of its characteristics or beauty. It is used by the imperial family. About two hundred *Bostancı* (gardener) soldiers are employed in its gardens”^I Evliya (1314H) also stated that there were imperial shipyards near the palace^{II}, which indicates that it was probably located at the same location or very close to the present building.

The existing Hunting Lodge dates from the 19th century and was probably constructed for Sultan Abdülaziz, who was expected to come to Izmit to stay for a few days for the inauguration of Haydarpaşa-Izmit Railroad (Arar, 1997: 33; Yücel, 1980: 5). However this railroad, the construction of which began on August 4, 1871 (Anon.1, 1933; Taylan 1936) was inaugurated by the prime minister of the period, Rüşdü Paşa, on May 3, 1873 (Inal, 1982: 448). The exact date of construction of the lodge is not known, but the building must have been completed before 1873. Other sources argue that the building was constructed during the reign of Mahmut II (1808-1839) and was reconstructed or completed following a fire^{III} during the reign of Sultan Abdülaziz (1861-1876) (Anon.2, 1963: 3201; Darkot, 1968: 1255; Öztüre, 1981: 119). It was probably designed by the imperial architect Garabet Amira Balyan (Tuğlacı, 1981:52, 152; Batur, 1994: 39). The person in charge of construction (*bina emiri*) was Altunizade İsmail Zühtü Paşa (Baltacıoğlu, 1994: 216). Although some sources argue that the decorative programme belonged to the painter and decorator Sepon Bezirciyan (Pamukciyan, 1961: 2729), who was promoted to the post of the imperial decorator (*saray nakkaşı* or *resimcibaşı*) as a result of his success here, other sources cite the names of the French painter Sasson and one of the Imperial (Mabeyn-i Hümayun) painters, Mason Bey (Kaya, 2008: 203).

The building is visible in panoramic photographs of Izmit taken in early 20th century due to its prominent location in the urban landscape.^{IV} (Figure 1) It witnessed important incidents in the history of the city. The first of these was Atatürk’s visit and inspection of the Kocaeli Group on June 18-22, 1922, when he spent June 18 at the Hunting Lodge. On the following day, he had an interview with the French author C. Farrère at the palace garden^V and made a historic speech to the citizens of Izmit (Yücel, 1980: 6). During the continuing occupation of the Ottoman capital by the Allied Forces on January 16-21, 1923, Atatürk met the editors-in-chief of various Istanbul newspapers in the great hall located at the ground floor level. This event, known as the “Istanbul Press Conference”^{VI} (Arar, 1997: 33) was followed by a speech to the people of Izmit on January 21 at the Cinema^{VII}. The lodge was used as the centre of the local government following the establishment of the Turkish Republic in 1923 (Yücel, 1980: 5). It was handed over to the Turkish Ministry of Culture General Directorate of Monuments and Museums in 1965 (Tuğlacı, 1981: 153) and was opened to the public as Izmit Museum

of on June 28, 1967 (Yücel, 1980: 6; Tuğlacı, 1981: 153). The exhibits included 19th century furniture and an ethnographical collection on the upper floor and archaeological finds on the ground floor and in the garden. (Figure 2) The collections were removed for restoration work in 1993 (Aksoy, 2011: 140).

Classified as cultural property to be preserved as the historical representative of an era on its Monument Fiche (*Eski Eser Fişi*) in 1958^{VIII}, the building was registered with the decision no. 3448 dated 03.07.1987 of the Turkish Ministry of Culture High Commission on the Conservation of Cultural and Natural Property and was later classified as a “Group I Cultural Property” with the decision no. 5070 dated 18.02.1999 of the Istanbul No II Regional Commission on the Conservation of Cultural and Natural Property.

B. Former restorations

Due to its location on the North Anatolian Fault, the building had been damaged as a result of various earthquakes and was repaired there after throughout its history. The first documented repair-work is described in detail in Architect Mehmet Vedat’s cost assessment titled “*Mahal-i İnşaat-ı İzmit’te vaki Kasr-ı Hümayün Tamirâtı*” (“The Repair of the Imperial Lodge in İzmit”).



Figure 1. Panoramic view of Izmit with the Imperial Hunting Lodge, 1910s (Turgay, undated: 4)



Figure 2. Views from the period when the building was used as a museum, 1967-1993. C.Turgay Archive, Foto. Cem-Izmit)

During this intervention dated 1321H/1905, the building was partially repaired, and plasters, roof parapets and ceiling decorations were renewed^{IX}. In 1958, the building was restored according to a 77-item bill of quantities and contract prepared by the Turkish Ministry of Education General Directorate of Monuments and Museums^X. During the latest restoration dated 1997-1998, some of the façade cladding panels and window frames were changed, the ceiling decorations were repainted and all interior wall surfaces were re-plastered and repainted based on the ratified Survey and Restoration Project^{XI}. The building was opened to the public on November 16, 1998 by Memduh Oğuz, who was the Governor of Kocaeli at the time. However soon afterwards, the building was severely damaged during the earthquakes of Kocaeli on August 17, 1999 and Düzce on November 12, 1999. The responsible regional conservation commission approved a post-earthquake survey and documentation project^{XII} in 2000. Considering the magnitude of the damage and the importance of the building, the commission asked that a university prepare the detailed restoration project including interventions for structural strengthening^{XIII}. Thus, a repair and restoration project was designed by two faculty members^{XIV} of Istanbul Technical University Faculty of Architecture, following the application of the Governorship of Kocaeli through the Istanbul Technical University Foundation.

C. Architectural characteristics

The Imperial Hunting Lodge is located in a large garden overlooking the Gulf of Izmit. It was designed as a two-storey high small palace of brick masonry construction over a partial basement. The main entrance is on the south side facing the sea. There are secondary entrances on the east and west facades underneath the upper level balconies. The plan is symmetrical on the north-south axis. There is a large space at the centre with smaller spaces on the sides; the front spaces are living rooms whereas the back ones are reserved for services. There is a monumental marble staircase located on the entrance axis, which has a lower single central flight and then divides into two side arms after the first landing. The central axis that houses the entrance hall at the ground floor level and the large hall (*divanhane*) at the upper floor level is accentuated with a projection on the south façade.

The large window openings create a well-illuminated interior. There are painted decorations (*kalemişi*) of plant figures in geometrical patterns and various compositions in cartouches on the ceilings of all the halls at both floor levels. These ceiling decorations and the oil paintings directly applied on the *divanhane* walls further enrich the interior spaces. The exterior façades reflect a monumental order based on double pilasters, composite capitals, window and floor level cornices and decorative medallions.

The brick masonry structure of the building is plastered on the inside and clad with cut stone panels on the outside. There is a certain hierarchy in the use of materials: the use of Preconessis Island marble is more common on the monumental entrance façade whereas chemically precipitated clayey limestones with microfossils in the matrix from the Gölcük area and Yalova tuffs (*od taşı*) are preferred on the others. These natural stone panels were replaced with artificial stone ones during various interventions. The walls were constructed with bricks 6x11x22cm in size bound with a weak hydraulic lime mortar (*horasan*) typical for the late 19th century. The floor and ceiling structures and the roof are timber.

D. Conservation problems due to earthquake damage

The ageing of the building materials, the use of inappropriate techniques and materials in repair interventions, the effect of the earthquakes and the building's following exposure to climatic conditions, and the lack of maintenance were the major causes for the damages observed on the building. Due to the continuous interaction of these causes, the deterioration has increased in magnitude. (Figure 3)

The most prominent type of deformation was structural and resulted from the earthquakes. Although the structural system is ordered and rectangular, it is not symmetrical because the load bearing walls are concentrated in the back wing, and its centres of rigidity and mass do not coincide. This situation led to buckling under earthquake loads, resulting in heavy damage especially on the front corners where the front façade meets the side façades. The earthquake performance was negatively influenced by the high ratio of openings on the walls and the nearness of these openings to the wall corners and to one another. Further influential in this inadequate earthquake performance was the fact that the timber floors did not create the diaphragm effect, and thus could not transform the earthquake loads to the vertical load bearing elements as required. Especially striking was the collapse of the roof parapet on the east façade in large pieces, which has also brought down the cast iron balcony balustrades with them. (Figure 4) The debris of the parapet walls, the cornice and the brick masonry wall was collected on and underneath the east façade balcony. The most damaged area on the front



Figure 3. The condition of the building following the earthquake.



Figure 4. The view of the east façade with collapsed debris of the cornice; these fragments were classified, numbered and then documented in detail with the aim of re-using them in restoration.

façade was the roof parapet, especially on the east and west corners. (Figure 5) The corners of the parapet walls were cracked and separated as much as 30cm. The exterior and interior walls of the building bore cracks of various shapes in 0-7cm range whereas some leant as much as 10cm from the vertical. In addition to lost wall cladding panels, the crack sides were fully detached and the fragments were about to fall near the corners. There were vertical cracks of different shapes and sizes along the parapets on the side façades as well. (Figure 6) The cross and barrel vaults covering the smaller spaces on the north wing also showed cracks, and their plaster was partially lost.

In addition to problems arising from original design mistakes, inappropriate interventions and lack of maintenance prior to this disaster have intensified its destructive effect. The timber plaster lathing on the ceilings partially decayed in time; the lack of repair and maintenance and the parts collapsed because of the earthquake increased the rate of deterioration due to exposure to rainwater, as a result of which the original decoration was partially destroyed. (Figure 7) These problems due to long-term lack of maintenance indicate that the last restoration immediately prior to the earthquake had been limited to a face-lift rather than seeking solutions to inherent structural problems.



Figure 5. Deep cracks, detachment and material losses at cornice level (increasing in magnitude toward the building corners).

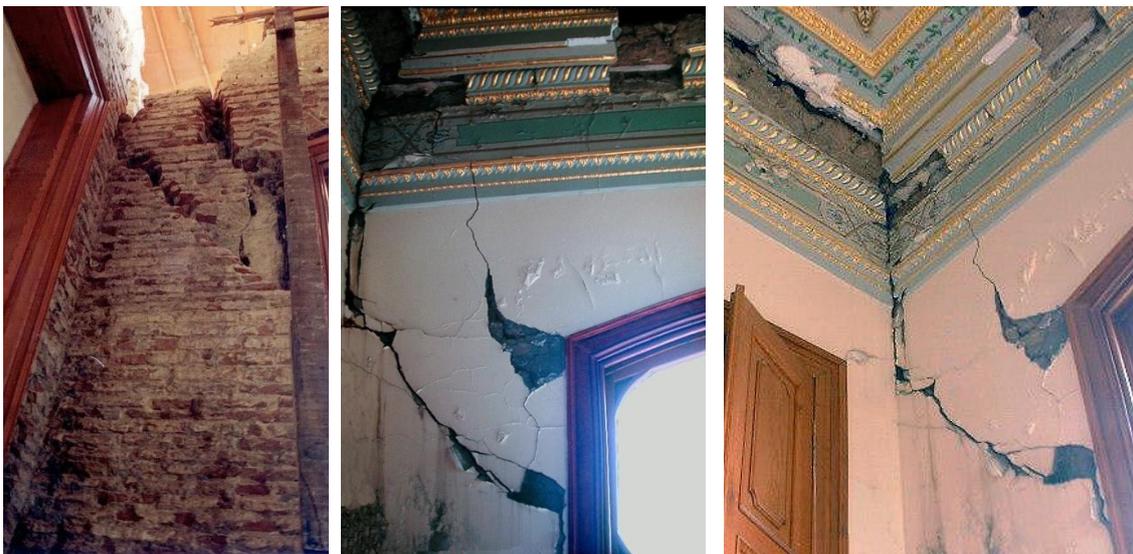


Figure 6. The cracks observed on the load bearing walls underneath the stone cladding.

The timber structure of the roof deteriorated more quickly due to holes on the roof while rain water penetrated to the intermediate floor level as well, causing the swelling of the timber cladding and the loss of decorated plaster on the ground storey ceilings below. (Figure 8) The synthetic-based paints and the Portland cement renders used underneath the decorative plaster during the latest repair also caused flaking and loss of the ceiling decoration in large pieces. The leaking water accelerated the decay of timber elements as well. Moving on the intermediate floor level of the large hall at the front central part caused excessive trembling, indicating that the timber beams of this wide spanning floor did not have adequate rigidity.

The tuff blocks used for cladding the façade were pitted, flaking and deteriorating as a result of the effects of climatic conditions and air pollution. The use of artificial stone panels instead of natural ones in the recent interventions and plaster repairs with Portland cement mixtures on the faces of the less severely damaged natural stone panels had only destroyed the visual esthetical uniformity of the façades but also caused further deterioration due to the effects of retained dampness and water soluble salts. There was moss and lower plant formation in the stone joints on the exterior façades as well.

E. Restoration and conservation principles

The aim of the evaluation of the data obtained through the survey and documentation process was the elimination of the effects of the damage due to the earthquakes of Kocaeli on August 17, 1999 and Düzce on November 12, 1999 through minimal intervention focusing on structural strengthening,



Figure 7. The severe damage on the mouldings and the ceilings.



Figure 8. Profile drawings of the mouldings on the wall-ceiling joints, which were severely damaged.

and preserving the original architectural, structural and material characteristics of the building. The interventions should have also provided solutions for the weaknesses arising from design mistakes, thus making the structure more durable against future earthquakes but at the same time they would have to be kept to a minimum so as not to damage the original architectural characteristics and the visual integrity of the building in principle. It was also proposed that the detached but structurally sound original materials could be re-used.

The suggested method of restoration not only aimed to reinstate the original appearance of the building, which had been changed through a series of inappropriate interventions following major earthquakes but was also expected to enable it to survive future earthquakes with minimal damage. Following the restoration, it was desired that the building be re-opened to the public with an undemanding function that would enable lengthening its life span through proper maintenance.

In order to achieve successful results based on the conservation, restoration and structural strengthening project proposals, a contractor with experience in the repair of similar buildings had to be chosen and the implementation be carried out with a qualified work team; the implementation process as well as the material and techniques used needed to be controlled by the designers and consultants at each phase; and the solutions provided for further problems that would be revealed during the implementation had to be solved according to the general conservation approach and principles.

F. Preparations for implementation^{xv}

In order to determine the appropriate method of restoration, the types and causes of deterioration needed to be defined and documented in detail. Although a survey and documentation project was carried out at the Imperial Hunting Lodge following the 1999 earthquakes, the amount of detail provided was not adequate to form a basis for the conservation decisions. The characteristics and degree of the damage was documented in more detail through more comprehensive documentation and analyses focusing on the construction system, structural system and construction materials, carried out both in situ and at the labs. (Figure 9) The documentation was not limited to the section and elevation drawings but the all the damage and deformations were mapped with their sizes and directions on drawings showing all the surfaces in each room. All the material detached and separated from the building were classified into groups, coded and numbered, and were documented on individual fiches. (Figure 10) The ceiling mouldings and decoration were documented in detail and colour analyses were carried out.

Bursa Regional Commission on the Conservation of Cultural and Natural Property approved the restoration, conservation and structural strengthening projects, supported with the evaluation of consultants in various fields on September 20, 2001. Following a bid on June 19, 2002, the intervention started. However, the project designers were notified of the fact about five months later, and took the architectural responsibility for the implementation (*MUS*) on November 15, 2002, after which date the work progress could be periodically controlled. But during this five-month interval while there was no designer control, the upper floor ceilings were partially dismantled without proper precautions, and some of the decorations that were planned to be re-used were fragmented and lost.

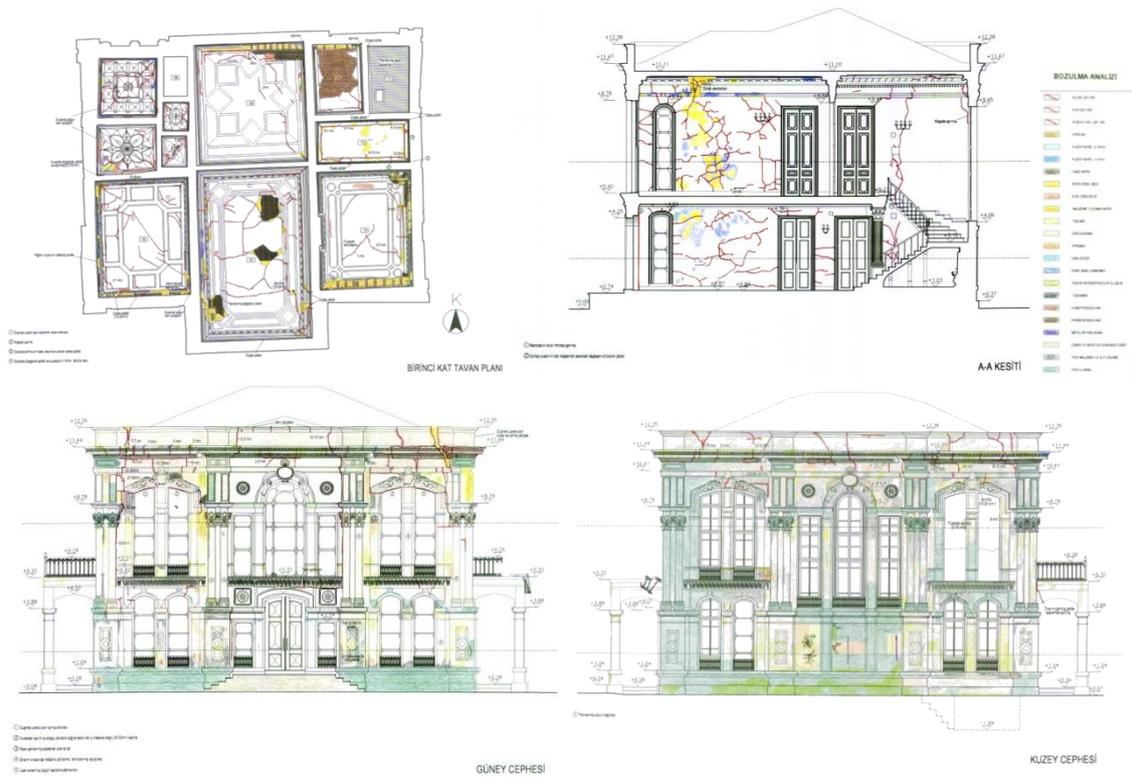


Figure 9. The various types of damage observed on the building were mapped in detail on the survey drawings, including cracks, vertical deformations, losses of architectural/structural elements and material deterioration.

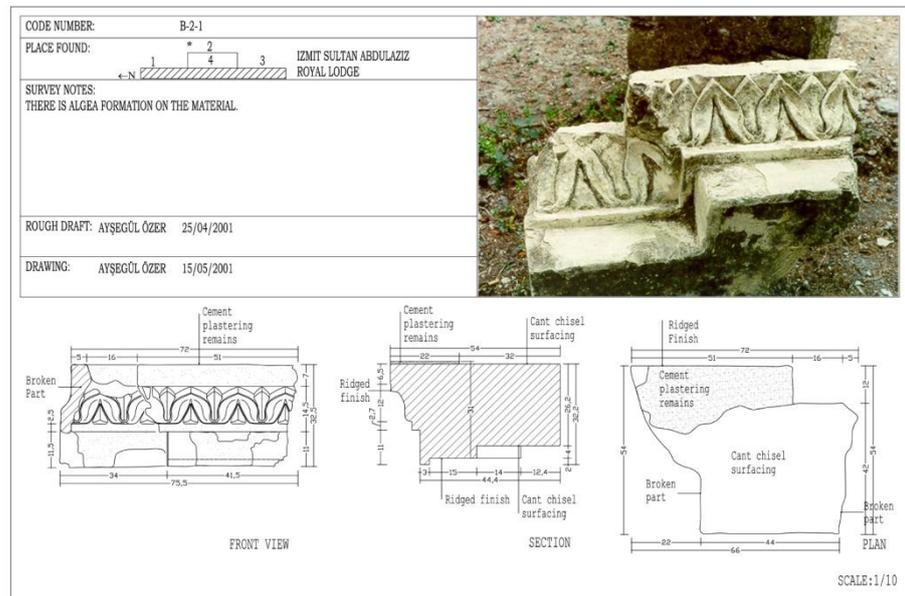


Figure 10. An inventory fiche was prepared for each fragment at 1:10 scale, documenting size, form, material and architectural characteristics and condition.

G. Restoration and conservation

Exterior façades

Cracks and vertical deformations

There are visible cracks of different sizes on the exterior stone cladding on the façades, originating in the roof parapet and running down toward the tops of the window openings. In order to determine whether these cracks also affected the load bearing walls behind the cladding, the stone panels were removed for a width of 25cm on either side of each crack. Those cracks that were also visible on the load bearing masonry and thus were continuous behind the stone cladding were repaired: for cracks and vertical deformations larger than 10mm in width, the masonry on either side was dismantled and this section was rebuilt whereas those narrower than 10mm were filled with fluid mortar injection.

Construction of horizontal beams to stop the outward movement of the walls and the structural strengthening of the partially collapsed parapet wall

The rebuilding of the brick and stone masonry parapet wall above the roof cornices not only focused on providing a better design for the original construction mistakes but also on making this part of the structure more stable and durable against future earthquakes. In order to stop the outward movement (drifting) of the walls a horizontal beam surrounding the building on the outside and as thick as the load bearing walls was introduced at the upper floor ceiling level; steel cross-beams located in the ceiling structure of each upper floor room were anchored to these horizontal beams on the corners (Sesigür, Çılı, 2009: 215). (Figure 11)

During this intervention, the stones of the cornice were numbered and dismantled and were replaced at their original locations at the end of the work. The elements of the cornice which had detached and fallen down from the east façade were re-used based on the information obtained from a detailed inventory and documentation study. Those in good condition were only cleaned whereas those with fragmental losses were cleaned and completed before they were replaced in their original locations. The missing cornice parts were reproduced from the original material. Following the completion of the cornice and parapet walls at their original level and in their original form, the exterior faces of the parapet walls were plastered using a mixture determined through laboratory analysis. (Figure 12)

The imitation stone panels used in former repair work

The artificial stone panels used instead of natural stone original cladding panels during former repair and restoration work impaired the original

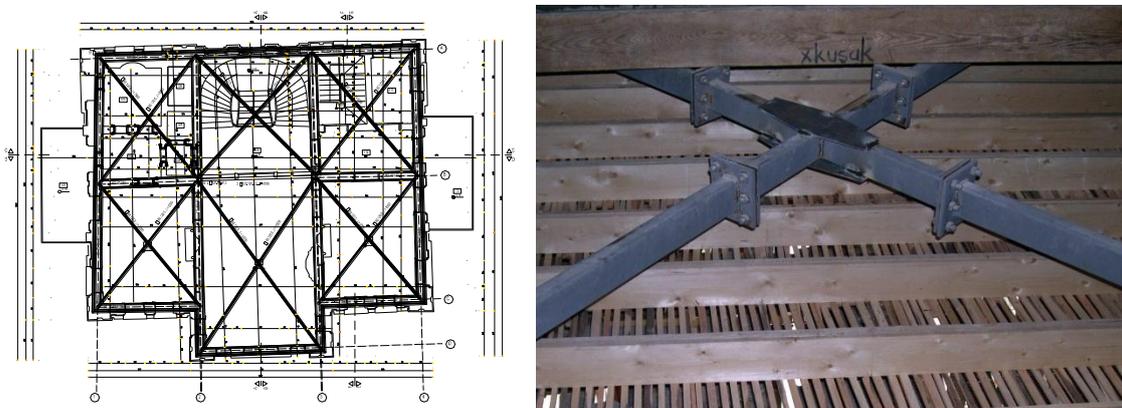


Figure 11. Steel cross-beams were added in the roof space to hinder the outward movement of the main load-bearing walls.

polychromatic design scheme of the exterior façades as their colour was visibly different from those of the natural stones. In addition, these panels attached to the brick masonry subsurface only with mortar were easily detached as a result of the earthquake and fallen down, thus increasing the visible magnitude of the damage. The stones that fell down and broke into fragments, and therefore were not re-usable were replaced with new stones appropriate to the originals in type, form and size. Natural stones were preferred so as to be able to preserve the original decorative polychromatic design scheme. The volcanic tuff (*od taşı*) was obtained from quarries in Yalova and Izmit whereas cream/light-yellow coloured limestone was obtained from the Kandıra area. These panels were attached to the brick subsurface using a mortar mixed according to the characterization of the original as well as epoxy resins and stainless steel reinforcing bars.



Figure 12. The rebuilding of the parapet wall at roof level with the re-use of the detached fragments.



Figure 13. The marble staircases, balustrades, window frames, floor claddings and sanitary installations were cleaned with appropriate methods in accordance with the results of the analyses of their surfaces, depending on the types of dirt and staining.

Existing plasters with portland cement binders

Those areas on the exterior stone claddings where there were surface losses were plastered with a mixture utilizing a Portland cement binder during former repairs. These cement plasters not only limited the natural ventilation and water vapour permeability of the walls and thus caused humidity problems but also impaired the visual quality of the façades. These repair plasters were mechanically removed during the restoration.

Cleaning

The pollution particulates and black gypsum crusts deposited on the walls were cleaned with a series of implementations: following a dry mechanical cleaning, the free particulates were removed with short-term atomized water sprays whereas AB57 gels were used to remove the black gypsum crusts. The lower plants growing in the joints especially on the north façade due to problems of humidity and lack of maintenance were pruned by hand, and their roots were dried with herbicides. The sanitary equipment in the wet spaces, the marble floor claddings and the marble steps of the staircase were cleaned according to the methodology proposed in the material analysis report. (Figure 13)

Interior façades

It was determined that plasters with Portland cement binders were used

on the interior wall faces during the latest repairs. These plasters which were not original to the building and which had hairline cracks on their surfaces were mechanically removed. It was observed that there were a great number of vertical cracks on the walls. These cracks were repaired according to their width with the methods described above for external façades: they were either injected with a fluid mortar or those areas were rebuilt with materials in original form, size and mixtures. Following this consolidation work, all the walls were re-plastered.

When the interior plasters were mechanically removed, it was observed that channels were cut into the lower sections of the walls for the installation of electricity, water and air-conditioning systems. These channels diminished the wall sections and made the structural system weaker. Therefore they were rebuilt with original bricks bound with the original mortar mixture. The original brick coursing was followed and the new courses were strongly bonded with the existing ones to increase stability.

The roof

It had not been possible to enter the roof during the survey and documentation phase. Instead it was documented in detail during the restoration. All the timber structural elements of the roof were numbered and dismantled following the documentation, and they were dipped into a water-based fungicide-insecticide for preservation. Those elements, which had deteriorated and thus were not re-usable, were replaced with new timber. Following the completion of the repair and structural strengthening work on the roof parapet walls, the timber elements of the roof structure were replaced in their original locations according to the documentation project. The chimneys that have collapsed as a result of the earthquake were rebuilt with original bricks and mortar as well.

Floors

In the large hall (*divanhane*) on the upper floor, the southwest section of the floor was damaged and the modern parquet was swollen due to rain penetration. When the wooden parquet cladding c. 10mm in thickness was removed, an original timber cladding c. 40 mm thickness was revealed underneath. The original boards were positioned in a triangular geometrical arrangement on the timber beams, and they were jointed with wooden beads in the grooves. A hot adhesive was utilized for the modern parquet, which was completely removed during the restoration, and the remnants of the hot adhesive were cleaned from the original board surfaces. Then the original cladding was removed in order to inspect the floor-ceiling beams underneath; their size and soundness were analyzed in terms of damage assessment.

In the large hall where the span is very wide and the floor trembled when somebody walked on it, it was observed that the tips of the beams were damaged and the timber sections were not adequate. This floor system was structurally strengthened with the addition of new laminated timber beams between the original ones; these were supported with L-shaped steel profiles hung upside down on the walls. (Figure 14)

The deteriorated sections of the existing beams were cured and those that were not sound enough to bear loads were replaced. All the timber elements of the flooring, including the beams, laths and cladding boards were impregnated with a “permetrine” based fungicide and insecticide solution. The original floorboards were repositioned according to the original

triangular geometric pattern and were mechanically scraped. The mechanical scraping was carried out in all rooms to clean the timber floor surfaces.

The ceilings

The deterioration of the timber floor beams and the wood lathing on the ceilings led to great damage on the plaster and paint decorations especially at the upper floor level. The ceilings at the ground floor level were in better condition. Following the photogrammetric and photographic surveys and colour analysis, a grid system was formulated and numbered on the drawings showing the remaining parts of the ceilings. (Figures 15-16) Then



Figure 14. The condition of the intermediate floor structure between the two levels and the transfer of the loads to the load bearing walls from the additional timber beams.

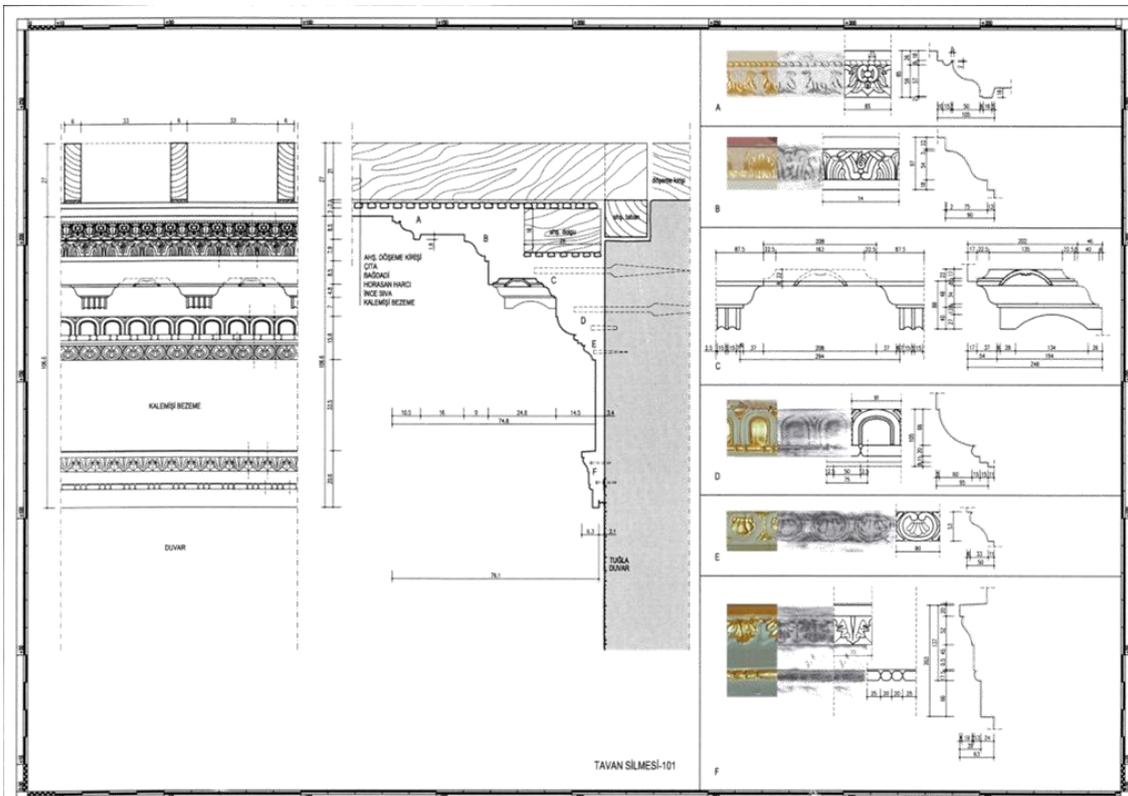


Figure 15. The mouldings at wall-ceiling joints were surveyed and documented in detail at 1:10, 1:5 and 1:2 scales and tracings were made of their decorative elements.

the ceilings were dismantled according to this grid system and the plasters were consolidated in situ. The timber floor system, which had become structurally unstable was also dismantled and rebuilt using timber beams in original size and form. The wood laths were replaced with new material as well. Plaster, gypsum finishing render and a primer was re-applied on the new ceilings. Based on the detailed documentation carried out before the earthquake, the decorations (*kalemîşi*) were re-painted in original colours on these surfaces following the application of the geometrical axes and dusting for the patterns. The dismantled and consolidated parts of the decorative programme such as flower bouquets, coats of arms and painting panels were attached to the wood lathing with screws. The joints between these original parts and the new application were closed and finished with careful workmanship during the plastering phase. (Figure 17)

The intermediate floor level was structurally strengthened from above, thus consolidating the lower floor ceiling plasters as well. The preserved ceiling paintings in the lower floor rooms were retouched in original colours paying close attention to Baroque forms and shading. The parts that have been fragmented and lost were re-painted making use of repetitive bordures and motifs according to the colour analysis. Heavy mouldings completely filled with plaster were located at the joints of these plastered ceilings with the walls during former repairs. These were replaced with lighter mouldings applied on wood-lath profiles and empty in section, thus correcting a repair design mistake, which caused increased damage during earthquakes.

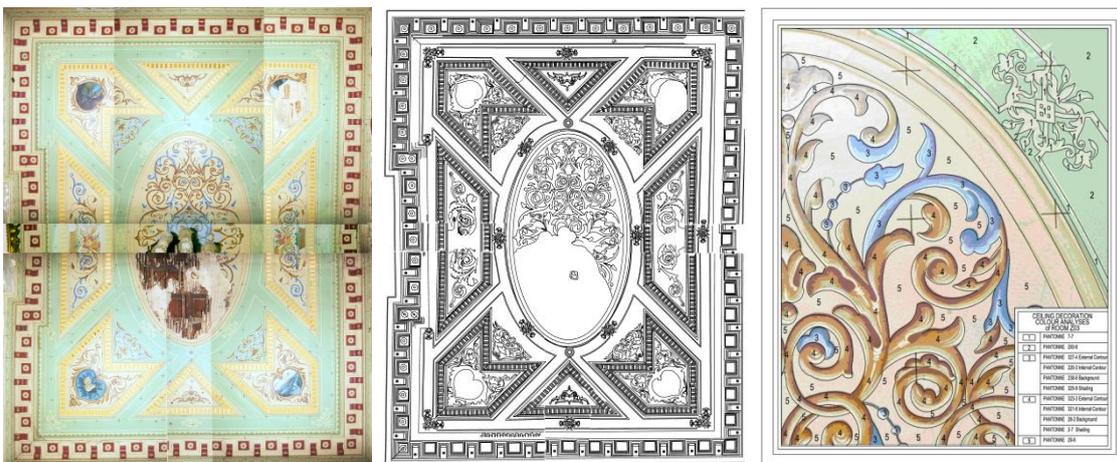


Figure 16. Rectified photogrammetric image of a ceiling, its architectural drawing and colour analysis.



Figure 17. The decorative programme and ceiling paintings were repaired and re-painted based on the fragments remaining in-situ or detached and collected from the floor and a detailed survey and documentation of all material.

The masonry superstructure of the smaller rooms along the north façade had been formerly repaired and altered as well. Later uncharacteristic additions in these areas were defined through probing and dismantled, and the survey and documentation project was revised according to the recently revealed data in these areas while the general building and damage assessment was reviewed. The original plasters where they had been preserved were consolidated with an acrylic resin emulsion but those areas which were previously repaired with Portland cement plasters were mechanically cleaned and re-plastered with a lime mixture similar to the original according to material analysis. (Figure 18)

Re-use

Following the completion of the restoration in 2004-2005, the original furniture removed following the earthquakes in 1999 was returned from storage. The Imperial Hunting Lodge became a “Palace-Museum” according to the restoration project and was opened to the public in 2007. (Figure 19)

Notes

- ¹ “...mükellef sarayların en muntazamı, Bağdat fatihi Dördüncü Murad Han sarayıdır ki, bağ ve bahçeli bir büyük sarayıdır. Vasfında lisan kısırdır. Halen padişahlara mahsustur. Bahçe üstadı, ikiyüz kadar Bostancı neferi vardır...”
² “...Hünkar Sarayı yanında Tersane-i Amiresi vardır...”



Figure 18. The view of the interior spaces following the renovation of the wall and ceiling surfaces and decoration.



Figure 19. The building in use today as a Palace-Museum , 2012.(Photo. N. Kuban)

- III Kaya, 2008: 199; based on the document “**Babiali Evrak Odası Sadaret Evrakı Umum Vilayat**” 347/52.
- IV For instance, Berggren, German Archaeological Institute Photography Archive, Neg.No. 463+R29.430 Repro; Başgelen, 1998.
- V “Aziz Dostumuz Klod Farer”, **Tevhid-i Efkâr**, June 19, 1922, Istanbul (newspaper article).
- VI “Gazetecilerin Başkumandan’la Mesaiyesi”, **Tevhid-i Efkâr**, January 18, 1923 Istanbul (newspaper article).
- VII “Makam-ı Hilâfet ve Hakimiyet-i Milliye Hakkında Başkumandan’ın Mühim Beyanâtı”, **Tevhid-i Efkâr**, January 21, 1923, Istanbul (newspaper article).
- VIII Archive of Turkish Ministry of Culture, Bursa Regional Commission on the Conservation of Cultural and Natural Property.
- IX Dolmabahçe Palace Archive Imperial Treasury Documents (**Hazine-i Hassa Evrakları**) No. 727.
- X GEEAYK (Turkish Ministry of Culture High Commission on the Conservation of Cultural and Natural Property) decision no. 17.05.1958/321
- XI Decision no. 4565 dated 04.09.1997.
- XII Çe-Mim Mimarlık
- XIII İstanbul No II Regional Commission on the Conservation of Cultural and Natural Property, decision no. 5789 dated 29.09.2000.
- XIV Yegan Kahya and Kani Kuzucular.
- XV Project and Implementation Team:
Client: Kocaeli Governorship
Designers: Yegan Kahya, Kani Kuzucular
Analytical Survey: Yegan Kahya, Kani Kuzucular, Nilüfer Yöney, Ayşegül Özer, Nurdan Kuban, Betül Yanılmaz
Photogrammetric Survey: Cengizhan İpbüker, Şinasi Kaya
Documentation of the Decorative Programme - Colour Analysis: Fatma Küçükarslan, Deniz Özkan
Structural System Analysis and Structural Strengthening: Feridun Çılı, Oğuz Cem Çelik, Haluk Sesigür
Materials Analysis: Erol Gürdal, Ahmet Ersen
Landscape Design: Deniz Aslan
Cost Analysis: Murat Çiracı
Contractors: Hikmet Yılmaz Akar and İsmail İslamoğlu (İSKA İnş.)
Conservation of the Decorative Programme, Wall and Ceiling Paintings: Ayfer Aran
Control Authority: Yusuf Balyemez – Kocaeli Directorate of Public Works and Settlements

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Izmit Sultan Abdülaziz Av Köşkü: 1999 depremi sonrasında bir restorasyon uygulaması

"Hünkar Kasrı" veya "Izmit Kasrı" olarak da bilinen Sultan Abdülaziz Av Köşkü, 19. yüzyılın ikinci yarısında Izmit'in kentsel gelişmesinde önemli bir dönüm noktası olan Anadolu – Rumeli Demiryolu hattının yapımı sürecinde inşa edilmiştir. Başkent İstanbul dışındaki bir Sultan Sarayı olarak dikkati çeken bu yapının, IV. Murat'ın yaptırdığı bir sarayın temelleri üzerinde yer aldığı ileri sürülmektedir. Körfez panoramasına hakim konumu nedeniyle yapımından itibaren kent silüetinin vazgeçilmez bir elemanı olmuştur. Izmit tarihinde önemli olaylara tanıklık eden yapı, bir dönem Hükümet Konağı, daha sonraları ise müze olarak kullanılmıştır. Kuzey Anadolu fay hattı üzerinde yer alması nedeniyle günümüze kadar pek çok deprem yaşamıştır. Son olarak 1993-98 yıllarında onarılan yapı, 17 ağustos 1999 depreminde de büyük hasar görmüştür. Deprem etkisi, depremden sonra yapının iklim koşullarına açık ve bakımsız kalması, yanlış onarımlar ve ilk tasarımdan kaynaklanan sorunların yanısıra bu etkenlerin birbirini olumsuz etkilemesi sonucu aradan geçen iki yıllık süre içinde hasarlar daha da artmıştır. Yapıda gözlenen en önemli bozulma strüktürel deformasyonlardır. Deprem etkisiyle çatı seviyesinde dışa doğru açılan yapının beden duvarlarında çeşitli boyut ve doğrultuda düşeyden ayrılma ve çatlaklar, çatı parapetinin köşelere yakın kesimlerinde ise yarıklar oluşmuştur. Yapının bezemeli tavanlarında da bakımsızlık ve yanlış onarım yaklaşımının neden olduğu önemli kayıplar gözlenmektedir. Gerçekleştirilmesi planlanan onarımı doğru tanımlayabilmek için yapının mimari, yapım tekniği ve malzeme özellikleri ile deprem sonrası yapısal sorunları yerinde ve laboratuvar çalışmalarıyla ayrıntılı olarak saptanmıştır. İncelemelerden elde edilen veriler, ilgili uzmanlık alanlarının katkılarıyla değerlendirilerek koruma, onarım ve sağlamlaştırma önerileri geliştirilmiştir. Deprem sırasında düşmüş olan özgün yapı parçalarının onarımda yeniden değerlendirilmesini de hedefleyen restorasyon çalışmasında temel yaklaşım, hasarların doğru analizi, iyileştirmeye yönelik çözümlerin özgün malzeme ve yapım tekniği kullanılarak ve olabildiğince az müdahale gerektirecek nitelikte gerçekleştirilmesi şeklinde tanımlanmıştır. İlk tasarımdan kaynaklanan zafiyetlerin giderilerek yapının depremlere daha dayanıklı hale getirilmesi de çalışmalar kapsamında öngörülmüş; fiziksel ömrü uzatmak için yapılması kaçınılmaz olan bu tür müdahalelerin yapının özgün niteliklerini ve görsel bütünlüğünü zedelememesi ana ilke olarak benimsenmiştir.