

Sharaf El Din, Shahira¹

Maladaptive use of a royal palace at Edfina, Egypt Niewłaściwe wykorzystanie budynku królewskiego pałacu w Edfina, Egipt

Keywords: Royal palace, Edfina, maladaptive reuse, deterioration, historical value.

Słowa kluczowe: pałac królewski, Edfina, niewłaściwe wykorzystanie, destrukcja, wartość historyczna.

1. INTRODUCTION

Our built environment, like our outstanding and unique natural surroundings, provides a vital link to our past, assists in celebrating our achievements, and offers a vision for our future. It is a working, functional illustration of the many chapters in the story of our nation. Protecting our built heritage and preserving our national story for future generations presents a real challenge. A challenge that should be enthusiastically taken up by builders, developers, architects, community groups, heritage councils, individuals and all levels of government.

Egypt enjoys a great diversity of architectural heritage from the Ancient Egyptian to modern times. While Pharonic, Greco-Roman, Coptic, and Islamic monuments attract the attention of a wide range of international as well national scholars and conservation bodies, we find the “less fortunate” heritage – that is not listed – faces a lesser degree of attention from the general public [1].

Adaptive Reuse – Preserving our past, building our future highlights how our built heritage can be conserved through the successful combination of existing heritage structures and cutting edge architectural design. Therefore, the type of intervention on a heritage building depends on its cultural value, ranging from simple maintenance, where the objective is not to change the cultural value of the building, to complex rehabilitation, when it is intended to improve the performance of the building. It is commonly understood that adaptive re-use help extend the life of historic buildings and prevents them from becoming forsaken and derelict. It preserves building from changing outdated functions into new uses to meet contemporary demand.

Looking at the political impact on architecture after the 1952 revolution, one finds a lack of coordination between the different concerned authorities such as the Ministry of Culture, and the Ministry of Endowment. The ignorance on behalf of some of the Revolutionary politicians have lead to the nationalization and the seizing of some of the palaces and

valuable buildings. These beautiful structures have inappropriately used as public elementary schools and police stations among other usages. However, In spite of the deterioration and misuse of these buildings, the rent control law and nationalization policy helped in preserving them against demolishing and rebuilding with better economic return [1].

2. HYPOTHESIS, PROBLEM DEFINITION AND STUDY METHODOLOGY

The monument subjected to study is in the city of Edfina at Beheira governorate. It is a huge wonderful palace from the Mohamed Ali royal era. Edfina palace was contributed to its significance as a historic district as it represented an important event which takes place in it (the summer palace of the royal family). However this palace which should be among the Presidential palaces or a touristic site, it was turned in to the faculty of Veterinarian in 1974, and that mal-adaptive reuse cause significant deterioration to the palace.

This study aims at evaluating the intervention with the heritage building through the following phases:

- The architectural and historical survey, which includes the acquisition of documented data about the building as follows: building location; building history; building construction stages; current usage; building style, aesthetic and visual qualities; the urban character and survey; movement and circulation systems; land uses and activities; and landscape documentation.
- Detailed survey of the existing condition of the building, which includes: degradation of building materials and elements; and deterioration factors.
- Elaboration of the diagnosis study (detailed survey).
- Criteria and suggestions for future intervention.

A detailed description of these phases will be presented on the following sections. Depending on the actual conditions of the building and on the objectives to be fulfilled, intervention can be assumed in different forms; from choosing an appropri-

¹ Assistant Prof., Architectural Engineering Department, Pharos University at Alexandria, Egypt, email: shira111@yahoo.com

ate treatment plan for Edfina royal palace and its landscape till the restoration treatment for the historic palace through repair, alterations, and additions.

3. ARCHITECTURAL AND HISTORICAL SURVEY

The city of Edfina at Beheira governorate got a huge wonderful palace from the Mohamed Ali royal era. It is considered relevant to search to understand the historical development of the building so its transformation can be better deciphered.

3.1. Edfina Royal palace location

The coastal zone of Egypt on the Mediterranean extends from Rafah on the east to Sallum on the west for over 1200 km. It hosts a number of important residential and economic centers of the country including the cities of Alexandria, Port Said, Damietta, Rosetta and Matruh. Activities on the coastal zone include fishing, industrial activities, tourism, trading and agricultural activities in the delta region [2].

The region under study is in Edfina City which is located in El – Beheira governorate (Muhafazat al Beheira), Egypt. Muhafazat al Beheira which is located about 135 km from the capital of Egypt – Cairo–From the East of Rosetta, and about 65 km from Alexandria. Beheira governorate enjoys an important strategical place, west of the Rosetta branch of the Nile. It comprises four important highways, namely the Cairo-Alexandria desert road, the Cairo agricultural road, the international road and the circular road. Beheira governorate is one of Egypt largest governorates and its capital is the “Damanhour” city. It is located in the east of the delta and surrounded from the north by the Mediterranean Sea while from the east there is the Rashid Branch from the west there are Alexandria and Matrouh governorates, and finally the Gizza governorate from the south. Edfina is a region of Beheira governorate.

Edfina got the huge wonderful palace from the Ottoman era which is the subject of this study. The palace lies on the western shore of the Nile River (Rosetta branch) north east of Edfina village at el Beheira governorate [3]. The old railway connecting the Montaza Royal palace and Edfina Royal palace is still working till today, as shown in Fig. 1. In spite of the transportation network from Alexandria to Rosetta is recently connected to the International Highway, still secondary roads are very narrow especially at some points of some settlements such as that near Lake Edku inlet.



Fig. 1. Google earth map showing Al Montazah royal palace (A) and Edfina's palace (B).

3.2. History of the Royal Palace

It was under the government of Ismail Pasha (1863-1879) during the Ottoman rule, also known as Ismail the Magnificent, which the Europeanization of Alexandria began. Ismail built new roads and laid out new districts, improved trade relationships, and granted many plots of land, where numerous lavish palaces were built [4].

The royal palace at Edfina; shown in Figs. 2-3, was one of these palaces built in the 18th Century by the order of Khedive Ismail. Afterwards, King Fouad bought the palace from the government's surveillance on the former Khedive funds. The palace was surrounded by lands that were not reclaimed. Also the palace building composed only of ground and first floor. Then King Fouad the first decided to reclaim the lands using modern technical engineering tools and also to build new extension for the palace. In 1935, King Fouad ordered to build a floor over the old building and to build a new extension perpendicular on the old part. Also various agriculture building were built and a very well designed drainage and watering system was established. The palace became the destination of many kings and scientific committees. King Farouk continues his father works, adding a small part to the palace building. This palace was a gateway to king Farouk especially in the summer because of the weather in Edfina in Delta was chilling comparing to hot Cairo. King Farouk used to take the train from Montazah Palace at the eastern end till Edfina palace.

In 1961, Waguih Abaza turned the palace to become a governmental agricultural institute. In 1974 President Sadat decided to turn the palace in to the faculty of Veterinarian following the University of Alexandria according to presidential decree no.542.

However, as this palace should be among the Presidential palaces, in 2001 the minister of Culture “Farouk Hosni” issued a ministerial decree No.233/2001 that is Palace and surrounded area should follow the high supreme council of antiquities and that the Faculty of Veterinarian should be transferred immediately to another building, but till now this order has not been implemented [3].



Fig. 2. The Edfina Royal Palace at 1979



Fig. 3. The Royal Palace at Edfina Nowadays

The palace have a marina directly on the Nile shore and extends along the eastern elevation, it's built of lime stone having the main entrance in the middle decorated with two big flower

pots on both sides.. Plants shaped motives decorated the entire fence. The main entrance leads to eight half circular shaped steps from the middle & straight from the two sides. This marina used to be the anchorage in which the royal ships dock. This marina gave the palace a significant view all over the Nile.

It was from here that King Farouk used to take his yacht from Edfina palace marina till nearest resort passing through Edfina aqua ducts to reach his constructed resort in Rashid colony, enjoying the Nile and the Mediterranean at the same time, as illustrated in Fig. 4-5.



Fig. 4. Different views of the marina exposing the palace to the Nile

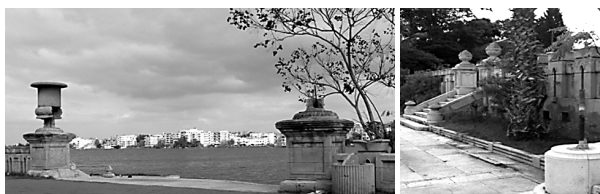


Fig. 5. The main entrance in the middle decorated with two big flower pots on both sides

3.3. The Royal palace Construction stages

The Royal palace was then built in three stages; as shown in Fig.6; the first stage was in the khedive's rule, while the second was in the king's Fouad the first and the third was in King Farouk era.

The first part of the palace was built in the ottoman period by the khedive Ismail who dedicated about 8000 acres for the palace and its surrounding gardens, this first part was only two floor height extending from north to south for 54 m long. The building faces the Nile and it was built of stone (el-fus) and the red bricks (masonry).

The second stage was built by king Fouad the first; he built a wing that extends from the east to the west perpendicular on the first building part. The main entrance of this wing is the western façade. This wing consists of three floors, the ground floor was specified for the kitchen, storages and the servants of the palace while the other two floors contains an inner lobby in which all rooms were related. This wing is characterized with its north balconies which contains granite columns and distinguished capitals. The letter (F) was set on motives on the façade referring to the king who constructed this part, as shown in Fig. 7. The third stage was an extension done by king Farouk, it was a small part attached to the original palace (the khedive's wing) from the south east direction, as illustrated in Fig. 6 [5].

3.4. The Royal palace status and usage

The Edfina Royal palace is used till now as The Faculty of Veterinary Medicine. The faculty was founded in 1974. Study started in the academic year 1975/1976 with a capacity of 50 students. The faculty provides veterinary medical services for the purpose of fostering the animal resources and increasing the awareness among the members of the community. Several centers are affiliated with, the faculty, providing poultry and animal treatment services to individuals, and institutes.

Degrees Offered in the faculty are: Bachelor of Veterinary Medical Sciences, diploma, Master of Veterinary Medical Sciences and Doctor of philosophy in Veterinary Medical Sciences. The faculty encompasses about 17 departments, such as: Anatomy & Embryology, Cytology & Histology, Physiology, Pharmacology, Biochemistry, Animal husbandry, Food Hygiene, Animal Nutrition, Pathology, Microbiology, Poultry & Fish Diseases, Theriogenology, Surgery, Animal Medicine, Forensic Medicine & Toxicology, Hygiene & Zoonotic Diseases and Parasitology [6].

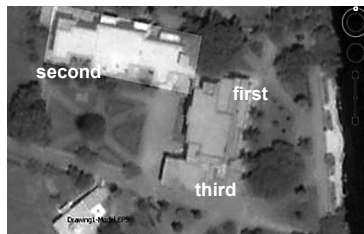


Fig. 6. The construction stages



Fig. 7. The letter (F) was set on motives on the façade refers to the king who constructed this part

3.5. Land uses and activities

The palace is surrounded by the following buildings: Anatomy department building, lecture hall building, a small clinic, new mosque, old mosque, an under construction hospital, girl students' dorms and a garden pergola; as shown in Fig. 8.

3.6. Landscape documentation

The garden of Edfina Royal Palace contains very rare plants from all over the World, as shown in Fig. 9. Some of these plants have survived till now surrounding the palace from all sides. Also an old octagonal shape marble fountain decorated the palace landscape from the North facing the north elevation of kings Fouad extension.

3.7. Building style, aesthetic and visual qualities

The palace architecture features vary from the Romanesque windows to the angled bay window, as shown in Fig.10. The palace buildings encompass new gothic revival architecture represented in the turret with battlements and pinnacles in the western and eastern elevation. The tower has square shaped plan, it was built from the red bricks with south direction entrance and having windows all around its four facades.

The northern and southern facades of the old palace were romantically asymmetry with tall narrow windows, Fig.11. Italianate architecture features also can be revealed in loggias and balconies with wrought-iron railings, or Renaissance balustrade, Low-pitched or flat roofs and projecting eaves supported by corbels. Motifs drawn from the Italianate style were incorporated into the building vocabulary, Fig. 10. Distinguish belvederes faced the Nile and the marina.

A black & white paved gravel mosaic insets are embraced with the whole palace building from the southern and western direction, as shown in Fig. 12. The entrance of the palace is decorated with two gravel mosaic tiles with large motifs to form unique carpets. By assuming & redrawing of the existing carpets, the designs in Fig. 13 imitate their original state.



Fig. 8. Buildings surrounding the Royal palace and land uses

In King Fouad part of the palace, some pharaonic stones with hieroglyphic writing appeared in the eastern elevation with a very unique feature, Fig. 14. Also very rare column capital in which the architect used a feminine sphinx capital appeared in the same façade, as illustrated in Fig. 15. A motif with the letter “F” referring to the king who constructed this part remains there.

The palace interior is a mix between the Italianate and Oriental styles. In Italianate interior decoration there were direct parallels to “Italianate” architecture with free recombination of decorative features drawn from Italian 16th-century architecture and objects, which were applied to purely 19th-century

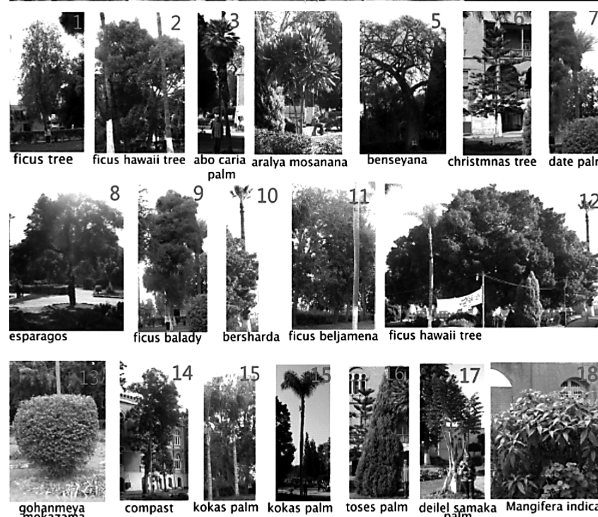


Fig. 9. Documentation of the garden of Edfina Royal Palace with its rare plants

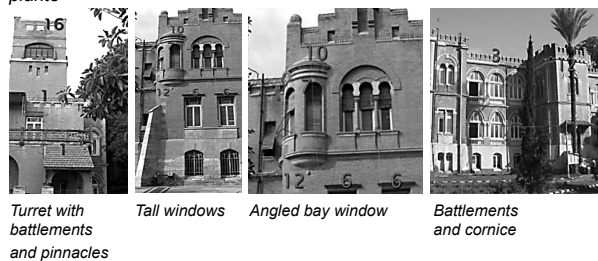


Fig. 10. The palace architecture features



Fig. 11. Northern and southern facades of the old palace

forms. Crown moldings, chair rails, Dentils egg and darts are common architectural details, Fig. 16. Linoleum, ceramic and wood are the most common flooring options. Some oriental features appear in using wooden crafts which were rare in the Italianate style. Also the combination between the Italianate

and oriental style is obvious in the iron of handrails of the spiral stair with remarkable stained glass used in windows as shown in Fig. 17.



Fig. 12. Two gravel mosaic tiles with large motifs to form unique carpets at the palace entrance



Fig. 13. Redrawing the two gravel mosaic carpets to imitate the original design



Fig. 14. Pharaonic stones with hieroglyphic writing

Fig. 15. Very rare column capital in which the architect used a feminine sphinx capital

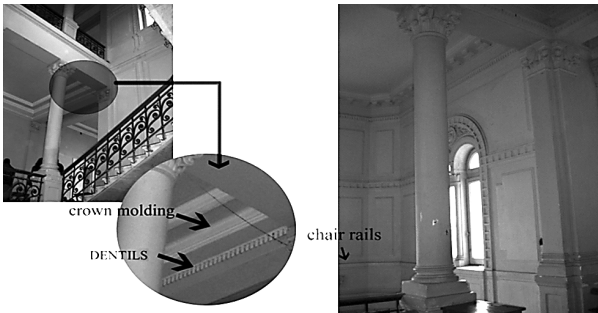


Fig. 16. Crown moldings and dentils egg in the ceiling, and chair rails as common architecture feature



Fig. 17. Stair with remarkable stained glass used in windows, and its current status

4. DETAILED SURVEY OF THE PALACE'S EXISTING CONDITION

4.1. Degradation of building materials and elements

Precise documentation has to address all available information about a monument and all types and results of investigation and work, ranging from the identification of a stone object to the quality control of preservation measures. Today, documentation plays an important role in education and project funding in the field of monument preservation. Modern computer technology represents an important tool for manifold steps of documentation.

The monument mapping method has been established as a non-destructive procedure for the precise registration, evaluation and documentation of lithotypes and deterioration phenomena [7]. The documentation is to ensure the thorough and proper understanding of all therapeutically actions ranging from their decision up to their long-term control and the maintenance of monuments.

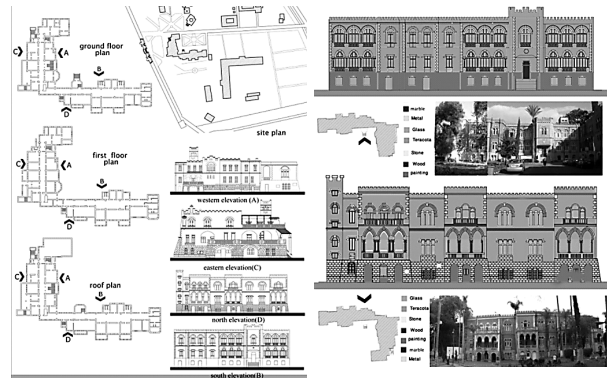


Fig. 18. Royal Palace main facades drawings

Fig. 19. Monument mapping of the south and north elevation of the palace respectively (litho types).

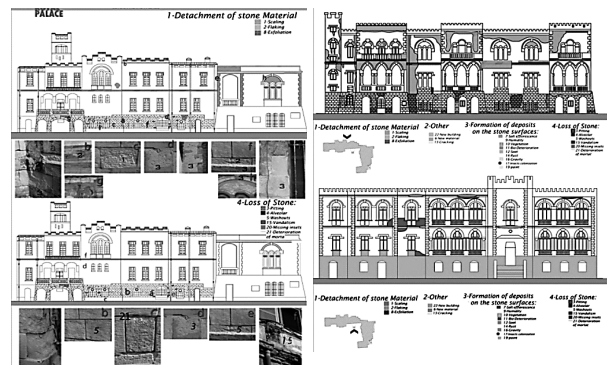


Fig. 20. Monument mapping details in the west elevation (weathering features)

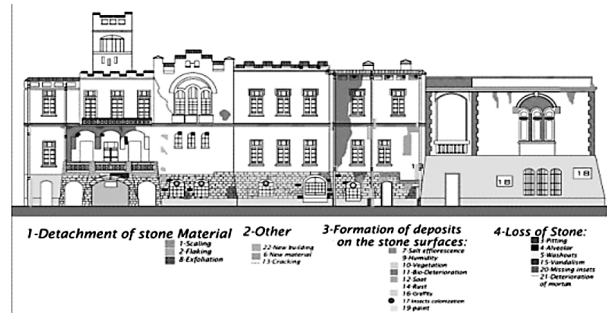


Fig. 21. Monument mapping of the west elevation (weathering features)

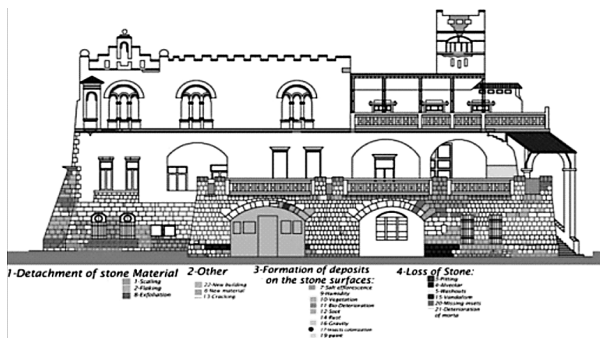


Fig. 23. Monument mapping of the east elevation (weathering features)

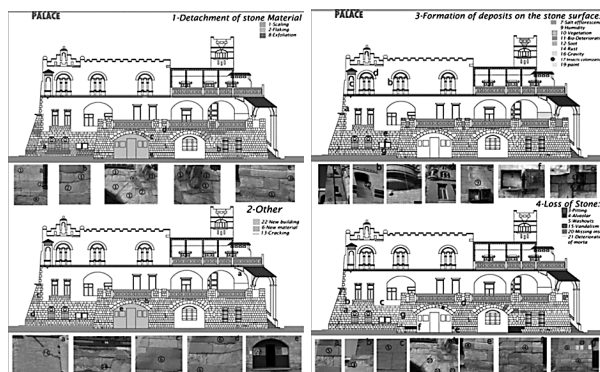


Fig. 24. Monument mapping details in the east elevation (weathering features) Fig. 25. Monument mapping details in the east elevation (weathering features)

Diagnosis of degradation of building materials and different type of damage to building elements are accomplished through visual examination and documentation of different litho types and deterioration mapping of the four facades, as documented in Figs. 18-25.

Throughout the study and analysis we found out the major factors or problems affecting this historical palace and its surroundings can be divided into two main groups: internal factors and external factors.

4.2. Deterioration factors

4.2.1. Internal factors

Foundation depth; water accumulation which is obvious in the main entrance mosaic settlement and some external cracks are signs for structural changes in the wall, as the wall settles with time and can lead to building failure. Shallow foundations also must be maintained.

Human intervention; many of the palace rooms were turned into laboratories without any isolation work. Changing usage without any consideration of loads, materials durability and the adjacent spaces can destroy the palace; each wall panel stands on itself and is stabilized by a floor or roof slab. Thus, if there is any slight disturbance of the wall due to other external factors, the wall panel cracks or even collapses. Also ceramics tiles replaced marble in many spaces due to financial restrictions leading to more leakage problems.

Mortar composition; some of the fine aggregate used does not seem to have a proper grading as required. This is due to the fact that, they were mined from any possible sources in the neighborhood of the construction site. It is well known that the choice of a well graded aggregate improves the strength of the mortars.

Building enclosure; the roof, gutters and downspouts and walls protect the building's interior from moisture penetration that causes deterioration of the building materials. Openings in the roof and walls, such as ventilation pipes, windows, and doors, must be appropriately constructed and well maintained to keep water out of the structural system and building interior. The roof drainage system (gutters, downspouts, and discharge system) is frequently a cause of water penetration and deterioration. The roof drainage system must be maintained to direct water away from the building.

4.2.2. External factors

Lack of maintenance; another cause of structural failure in the historical buildings is lack of maintenance. Lack of maintenance begins a sequence of deterioration that typically involves the breakdown. For example, roof leakages have contributed to serious damage to the buildings structural systems. Also, some of the mangrove poles supporting floor and roof slabs have rotted, sagged or cracked, which resulted to slabs collapsing.

Vegetation; Moisture and humidity resulted in covering some facades with vegetations. Big trees have deep roots that destabilize building structures. Also, these trees pose a threat to the building structure in the event that one or both fall.

Bio-deterioration; Lichen and algae affect the wall of the historical buildings. The activity of both organisms does not result in major changes, but the appearance of the walls is altered, Fig. 26. In addition, they have a corrosive effect on the substrate because they release acid metabolites [8].

Lack of knowledge; Original building materials are generally renewed without understanding their material characteristics and identification of their deterioration problems. Modern building materials are frequently used without testing their compatibility with the original materials. For example, the wide employment of cement during restoration has created irreversible damage to the historical masonry. Indeed, cement-based mortar restrains movement and leads to stress that cause failure in the original masonry, as shown in Fig 26. Moreover, some of the new restoration materials are not as durable as required while others do not permit the transfer of internal moisture out, Fig. 26. Modification of existing openings and change of openings design is also a crucial human intervention that falsifies building history. Signs fixations can also lead to external wall deterioration.



Fig. 26 Photos showing different deterioration aspects such as human intervention, back weathering, bio-deterioration and water penetration respectively.

5. Elaboration of the diagnosis study

The palace must be restored to match its design during the king's Farouk era and also all surrounded historic features will respect the palace architecture style. There will be two stages; active stage which will contain Cleaning and restoration procedures and adaptive re-use for the palace suggestions;

and passive stage which will discuss preservation of the site through different steps.

5.1. Active plan

5.1.1. Cleaning and restoration methods:

A well-planned cleaning project is an essential step in restoring, rehabilitating, or preserving, a historic masonry building. Proper cleaning methods and coating treatments, when determined necessary for the preservation of the masonry, can enhance the aesthetic character as well as the structural stability of a historic building. Removing years of accumulated dirt, pollutant crusts, stains, graffiti or paint, if done with appropriate caution, can extend the life and durability of this historic resource. Suggested treatment for the four palace facades are cited in Table 1.

Table 1 Suggested treatment for the four palace facades

External Facade	Main deterioration problems	Treatment suggestions
The eastern elevation	detachment of stone materials (scaling flaking and exfoliation)	Dentistry and consolidation
The north elevation	Formation of deposits on the stone surfaces (salt deterioration and vegetations).	Poultice desalination techniques and Alkaline cleaner's method [8].
The western elevation	Formation of deposits on the stone surfaces (soot and rust), and also some cracks as signs for wall settlement.	Water or water mists, washing cleaner method. Fixing cracks, consolidation for foundation [8].
The south elevation	formation of deposits on the stone surfaces (paint, bad conservation and salt efflorescence).	Chemical method by using alkaline cleaners' method.

Sometimes treatment for the complete deteriorated materials (wood, stained glass, and wooden handrail is needed. If the treatment failed then replacing by new one identical in shape, color, texture, materials, and scales in order to preserve the historical image come as second choice.

As for stones affected by bio-deterioration, it is preferred to be clean regularly, either by chemical or water cleaners. The stone affected by salt efflorescence we can use consolidate which reduces the salt efflorescent and protected the stone from being further deteriorated (scaling, flaking, exfoliation, alveolar, and pitting).

For Terracotta Bricks affected by bio-deterioration are preferred to be clean only regularly, either by chemical or water cleaners. The Bricks affected by salt efflorescence, we can use water repellent which reduces the salt efflorescent and protected the stone from being further deteriorated.

5.1.2. Adaptive re-use for the palace

The adaptive reuse of a historic building should have minimal impact on the heritage significance of the building and its setting. Main interventions with the palace buildings are summarized in Table 2. Developers should gain an understanding of why the building has heritage status, and then pursue development that is sympathetic to the building to give it a new purpose. Adaptive reuse is self-defeating if it fails to protect the building's heritage values.

Table 2 Summary of the main interventions with the palace building

Alterations observed in the palace building		
Causes	Needs	Interventions
Building usage	Separate circulation	Division of spaces.
	Service spaces	Removal of connecting elements.
	Extra spaces	Use of spaces for different functions. Mass /door addition.
Structure problems	Repair or replacement	Replacement of surface materials to cheaper and less durable material, Fig. 19. Replacement of architecture elements.
Changes in style	Semi-open spaces	Window blocking on ground floor, Fig. 19.
	New service spaces	Mass addition.
	Mechanical equipment	Installation of new equipment.

5.2. Passive plans

Preservation of the site can be accomplished through associated steps. Urban analysis for the site revealed that the palace has two main axes, as given in Fig. 27. The main axe is from the main entrance gate leading to the shore and secondary axe from secondary gate facing the green house from one side to mosque and El-makam in the opposite side. These two axes can divide the site into two main areas, as shown in Fig. 28:

Restrict area with restricted intervention which means only to restore the palace and re-use it as touristic palace and open museum. The reusing of the palace as faculty of Art may be acceptable as the students will be the palace restorer. This will begin by removing the veterinary college to another place and to restore all the feature of the site beginning from the small detail inside the palace up to the outer landscape. Restrict area consists of main royal palace, the main Marina, the green house the mosque and the El-Makam. The rare landscape composed of old trees and plants can turn into a botanical open museum and labeling each tree with full description including age. Unwanted buildings such as buildings for classes, a cafeteria, an animal barn and small shops can be removed.

Unrestricted area in which all new built buildings can be removed or altered freely such as the hospital under construction, student dorm, a restaurant and parking.

Revitalization of Edfina palace is not only about conservation and preservation of the heritage building, but also about some aspects that need to be put on focus such as social, economic, culture, people activities and environmental facilities. The improvement of the Edfina Area will make it livable and attractive place for people to come. These are many actions that can encourage this trend such as:

Marketing Zone creation as an open space which can create attractive activities and comfortable for people to stay. This can encourage the number of visitors to come to this area.

Converting unoccupied buildings to become commercial area, such as shopping centre, hotel, café, royal restaurant, bookshops and public offices.

Royal Boat, marina and Waterfront Area usage and enhancement. Developing the public facility along the Nile side area can encourage the study area to become attractive and livable. The creation of new activities can be done by developing

6. CONCLUSION AND RECOMMENDATIONS FOR FUTURE INTERVENTION

Creating new activities can improve and enhance Edfina palace development plan. This will be considered in the concept and its function as a public place, which will provide the various recreational and entertainment, and have various activities such as educational, art, culture, urban heritage and creative community. Finally, the design guideline can be a recommendation to do revitalization of attraction activity and public facility which need to be provided is the main focus in the redevelopment and revitalization of a historic area to be a public and tourism place. Standards for rehabilitations of the whole site are as follows:

Study and understanding the people activities and economic sector are important in redevelopment and revitalization of the historic area, which will improve the area to become attractive and livable.

The revitalization should point on physical and non-physical element, because both of elements have interaction in term of depth study of historic area.

The study and analysis of the public facilities enhancement is needed to facilitate the activities in the area, particularly to redevelop the study area.

A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken. Regular maintenance and monitoring for risk reduction of heritage properties must be accomplished.

The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.

Changes to a property that have acquired historic significance in their own right will be retained and preserved.

Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.

Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

Design guidelines for the building restoration and the site will be according to the Egyptian Urban Harmony guides [9].

The adaptive reuse of a historic building should have minimal impact on the heritage significance of the building and its setting. Also maintenance is central to protecting cultural significance or value because it is the least destructive of all the 'interventions' which inevitably occur in the process of

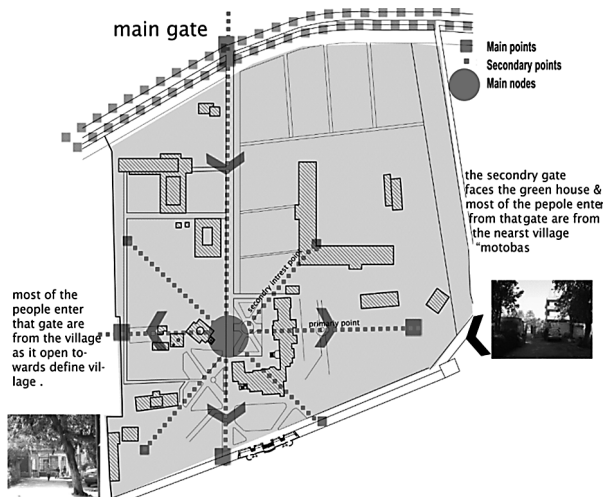


Fig. 27 Site two main axes

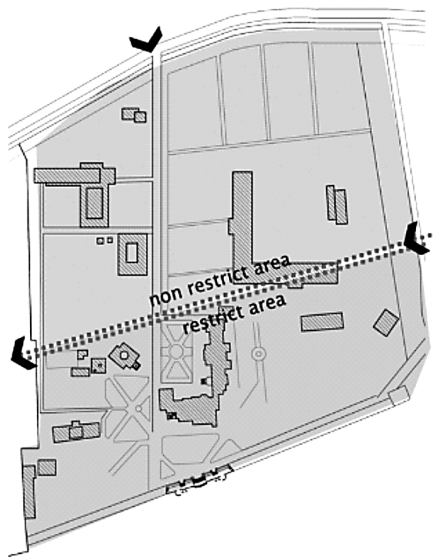


Fig. 28 Dividing the site into restricted and unrestricted areas

market, outdoor café and shop lot, which can attract people to come and enjoy stay in while fishing and sailing around.

Royal Maze and gardens and the improvement of accessibility and Facilities. Creating obvious guided easy access of people to this area with appropriate signs and maps. Facilities such as pedestrian walk, street and public transportation are also needed. Also, separation between street and pedestrian walk make comfortable and safety travel for people in the study area. The redevelopment need to focus on the comfortable and safety of disable people facility.

Recreation zone and public places formation. Creating public place is considered essential to the function of Edfina Palace revitalization plan to turn historic area to tourism place; it must be a main focus in its development. Public place is not just an open space, also the place to facilitate the activity of visitors, it must be an attractive place to support people to come and enjoy staying in. Public place also can provide various activities in this area such as bookshops and restaurants.

Create new activities in the study area relating to the social and economic assets. Activities such as Horse Riding Zone and botanic museum in the rare garden around the palace, can attract many people to come to this area especially tourists to visit the museum, look around, taking photographs and go to their office.

conserving historic buildings. Adaptive reuse of buildings has a major role to play in the sustainable development of communities. When adaptive reuse involves historic buildings, environmental benefits are more significant, as these buildings offer so much to the landscape, identity and amenity of the communities they belong to. Our lifestyle is enhanced not just from the retention of heritage buildings, but from their

adaptation into accessible and useable places. The reuse of heritage buildings in established well reused areas can provide the community with new opportunities. The adaptation of heritage buildings presents a genuine challenge to architects and designers to find innovative solutions that retain heritage significance.

REFERENCES

- [1] ElKerdany D. (2002) Innovation and Conservation: Case Studies in Intervening with Valuable Buildings. In: *Proc. UIA Int. Conf. WPAHR on Architecture and Heritage as a Paradigm for Knowledge and Development* Bibliotheca Alexandrina, Egypt.
- [2] El Raey M. (2005) *Sustainable Management of Scarce Resources In the Coastal Zone, D06.2: Case Study Report (Egypt) Abu Qir Bay, Egypt*. Coastal Resources Management, <http://www.ess.co.at/SMART/>
- [3] <http://egyptianchronicles.blogspot.com/2008/10/save-king-palace-at-edfina.html>.
- [4] Khalil M. (2009) The Italian Architecture in Alexandria, Egypt. M. Sc. Faculty of Engineering, Mansoura University, Egypt.
- [5] El Gohary M. (1954) *Palaces and Antiques: From Muhammad Ali to the Farouk*. Dar El Maaref, Egypt.
- [6] Wikipedia, the free encyclopedia (2012) *Faculty of Veterinary Medicine of Alexandria University*. http://en.wikipedia.org/wiki/Faculty_of_Veterinary_Medicine_of_Alexandria_University.
- [7] Galan E. & Zezza F. (2000) Protection and Conservation of the Cultural Heritage of the Mediterranean Cities. In: *Proc. 5th Int. Sym. on the Conservation of Monuments in the Mediterranean Basin*, Seville, Spain.
- [8] Weaver M. (1997) *Conserving buildings, a manual of techniques and materials*. John Wiley and Sons, USA.
- [9] The National Organization for Urban Harmony (NOUH) (2010) *Foundation and standards for urban harmony of buildings and heritage areas*, Egypt.
- [10] <http://www.urbanharmony.org/adela/index.htm>

Abstract

The city of Edfina at Beheira Governorate got a magnificent Palace from the Mohamed Ali Royal Era called The Royal palace Edfina or king Farouk's Palace. That palace, 20 km from Rosetta, was built in the 18th Century by the order of Khedive Ismail. Then King Fouad I decided to build new extension to it. It was built according to the Italianate style and it was king Farouk resort especially in summer because of the fine weather in Edfina in Delta as compared to hot Cairo.

In 1961, Waguih Abaza, first Beheira governor, turned the palace to become the headquarter of some governmental Agricultural society. In 1974, President Sadat decided to turn it in to the faculty of Veterinarian following the University of Alexandria according to presidential decree no.542. Already this palace should be among the Presidential palaces and thus the minister of Culture Farouk Hosni in 2001 issued an order No.233 that this Palace should follow the high supreme council of antiquities and that the Faculty of Veterinarian should be transferred immediately to another building. Till now this order has not been implemented.

This paper presents the Royal palace historical and artistic value. It also illustrates the maladaptive reuse and the deterioration processes of the palace. Regenerating this building can reinforce a sense of community, make an important contribution to the local economy and act as a catalyst for improvements to the wider area, i.e. Beheira governorate. New uses of this palace should be allowed with sensitive oriented adaptations.

Streszczenie

Miasto Edfina w prowincji gubernatorskiej Al-Buhajra szczyti się wspaniałym pałacem z okresu panowania Mohameda Ali, zwanym królewskim pałacem w Edfina lub pałacem króla Farouka. Pałac ten, znajdujący się 20 km od Rosetty, został zbudowany w XVIII wieku z rozkazu Kedywa Ismaila. Następnie król Fouad I postanowił go rozbudować. Został wzniesiony w stylu włoskim i stał się ulubionym letnim kurortem króla Farouka ze względu na przyjemny klimat w Edfina leżącej w Delcie, w porównaniu z upalnym Kairem.

W 1961 roku, Waguih Abaza, pierwszy gubernator Al-Buhajra, oddał pałac na potrzeby rządowego towarzystwa rolniczego by służył jako jego główna siedziba. W roku 1974, Prezydent Sadat zdecydował się przekształcić go na Wydział Weterynaryjny Uniwersytetu w Aleksandrii, dekretem prezydenckim nr 542. Ponieważ pałac powinien znajdować się na liście pałaców prezydenckich, Minister Kultury Farouk Hosni w 2001 wydał zarządzenie nr 233 by podlegał najwyższej radzie starożytności, a Wydział Weterynaryjny miał zostać natychmiast przeniesiony do innego budynku. Jak do tej pory to zalecenie nie zostało wprowadzone w życie.

Ten artykuł przedstawia historyczne i artystyczne wartości królewskiego pałacu. Ma także zilustrować niewłaściwe wykorzystanie i zachodzące w nim procesy destrukcji. Rewitalizacja tego budynku może wzmocnić poczucie wspólnoty, przyczynić się znacząco do rozwoju lokalnej gospodarki, a także zadziałać jak katalizator dla pozytywnych zmian na większym obszarze, to znaczy w prowincji Al-Buhajra. Nowe funkcje pałacu powinny być wprowadzane poprzez wyważone adaptacje.