



## **Toward Maintaining the Identification and Architectural Heritage to Develop the Historical Areas in Ain Al-Sira**

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### **Abstract**

Despite the State's exerted efforts in preserving Egyptian monuments as tourist destinations, Ain Al-Sira area has been suffering from multiple problems. The modern construction arts within the historical area and its architectural heritage have been ignored, as well as the construction of contemporary residential buildings not related to the historical area. The purpose of the research is to develop the architectural heritage of the residential neighborhoods in Ain Al-Sira in line with the architectural facades of the ancient historical monuments with a view to the restoration of these monuments, which have changed their faces and their architectural efficiency due to their obsolescence, weather and time factors and overcoming the scarcity of maintenance and restoration works. The new research includes the development of interim strategies in the implementation of the restoration and development of monuments and architectural style of residential neighborhoods in the area of Ain Al-Sira.

The motive of the research was the existence of a problem in the current local architectural formations, which is the lack of integration and harmony of ancient monuments with new neighborhoods and the imbalance between them. The descriptive and analytical approach has been followed to clarify existing effects and what is required to be developed. The research dealt with the analysis and presentation of the importance and the historical background of the area of Ain Al-Sira, with its ancient monuments, that we came to the current residential and architectural form between the shape of ancient monuments and modern dwellings, as well as the presentation of architectural problems in the region. To propose appropriate solutions for the development of the region in accordance with local and international standards and laws in order to find the most appropriate methods for architectural processing and the research will contain: On the proposals and plans necessary to develop the architectural style between the old and modern in the area of Ain El – Sira .

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### **Keywords**

*heritage of architecture; ain al-sira; archaeological restoration; architectural formations*

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### **1. Introduction**

The architectural art is one of the cultural genres in which Egypt occupies a prominent historical place. This can be seen through the ancient and diverse antiquities over different ages. The optimal method to develop the archaeological or historical areas is planning the surrounding area in which way that the conservation system becomes integrated with the development of the surrounding environment.

Since the area of "Ain Al-Sira" and "Magra Al-Oyoun" has a distinguished location, unique architectural character, and historical importance, It is necessary to develop this area in the light of an urban plan for the ancient facades and

modern facilities, including preserving the ancient architectural form and heritage, addressing the architectural distortions that have occurred over time as well.

The aim of the study is to preserve archeological sites and monuments as national heritage through the development of archeological and historical areas using sustainable and comprehensive strategies for restoration and preservation.

This study has been done by following the descriptive, analytical and applied approach to comprehensively describe the area of Ain Al-Sira as an archaeological area, analyze the problems it suffers from, aiming to present new solutions and applications to develop it from the architectural aspect

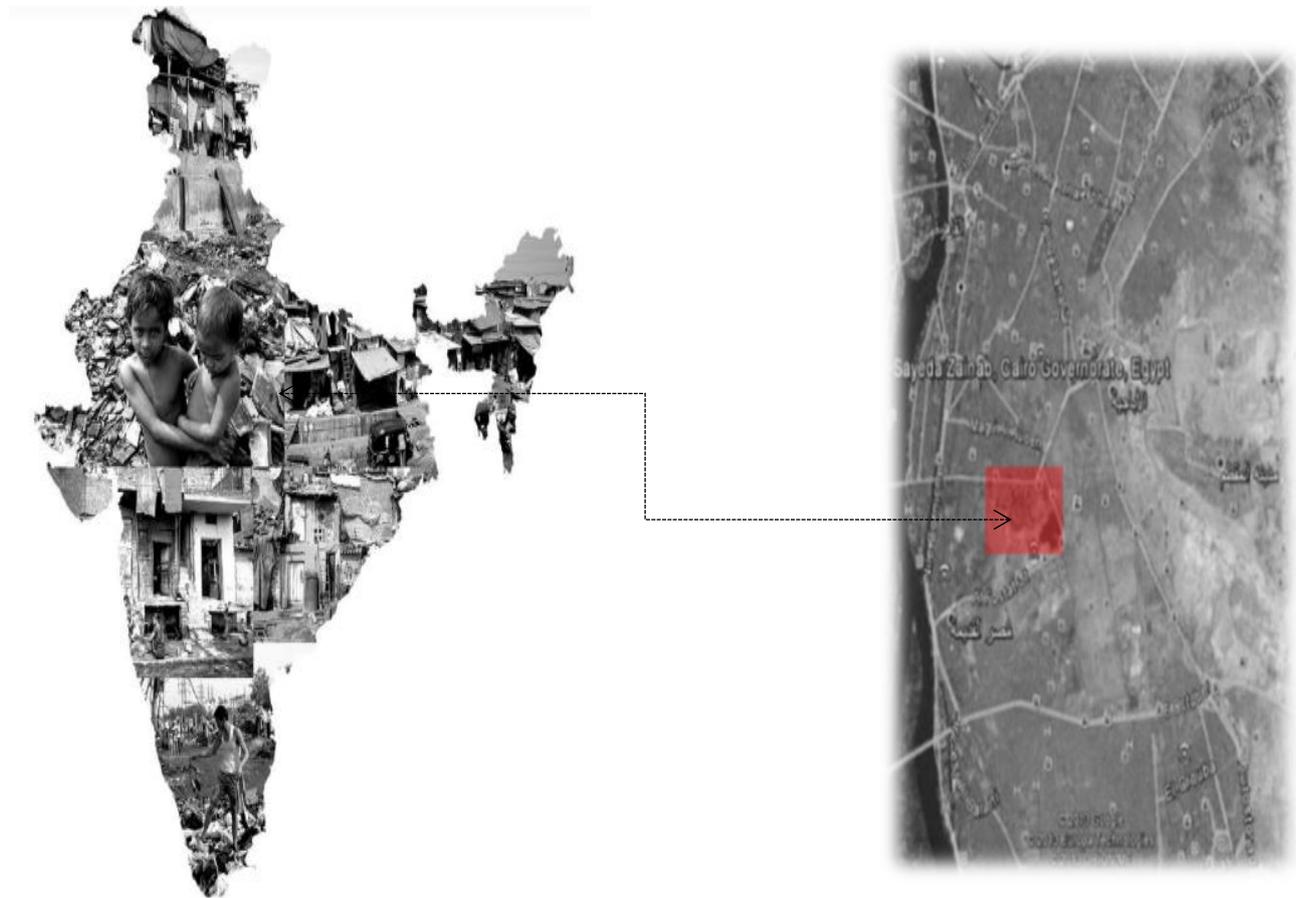


Figure1. Magra El-Oyoun on map , authors Urban Regeneration Project for Historic Cairo.

## 2. Historical Background of the Area and Old and Modern Urban Nature

Old neighborhoods in Egypt tell and write down a great history that shows the stages of urban development, which embodies every historical stage according to establishments and buildings which were built at each stage in a historical sequence of the development of architectural art. Of those areas, Ain Al-Sira area, where there are historic archaeological buildings classified and registered in Ministry of Monuments, which has mandatory thereon and these monuments in Ain Al-Sira area are often Islamic monuments (mosques and shrines).

Features of Ain Al-Sira area are described in many ancient books, but many of them agreed that Ain Al-Sira is a natural groundwater located south of Cairo governorate in area of Imam Al-Leithi (one of the religious archeological sites in the region). The references pointed out that this groundwater exploded due to an earthquake in 1926 and its water with a high rate of salinity. Level of water rises and decreases at different times of the year. The area of Ain Al-Sira is located in the northeast corner of the ancient Egyptian Quarter and is surrounded by streets of Magra Al-Ayoun to the north and Salah Salem Street to the south, and Al-Madabegh area to the west. This district was established by the late leader Gamal Abdel Nasser in late fifties of last century as the first integrated residential community comprising 144 block housing containing 8000 housing units with two gardens and three markets. The city, which was a haunt for all guests of Egypt during era of the sixties of the last century due to its splendor, beauty

and cleanliness, which was comparable to what established by the former Soviet Union and excels that city founded by (Josip Broz Tito) in the former Republic of Yugoslavia at fig (2).



Figure 2. The area of Ain Sirah old, authors cairo – a city in transition book

## 2.1. Ancient Historical Monuments of Ain Al-Sira

Egypt has treasures of monuments that are unparalleled in the world and are characterized by civilizations that extend from the dawn of history and in the region of Ain Al-Sira specifically we can smell the history of Islamic Egypt. The tombs of Imam Al-Shafei, who is among the most important Muslim scholars who have an important jurisprudent doctrine and who has lived in Egypt for many years and is practiced by hundreds of scholars. After his death, his tomb became a place around which many graves were built and became one of the most famous tombs in Egypt.

Tombs of the royal family: Family of Muhammad Ali, founder of modern Egypt, took from Imam Al-Shafei area to be site of the family tombs, which is not lacking architectural beauty with colorful decorations, which is no less magical than the beauty of their palaces. It also contains the remains of their servants.

The Shrine of Imam Al-Layth Ibn Saad: The refuge of the simple and kings, who was a famous jurisprudence scholar who was famous for his piety and when he died, his shrine turned into a destination for the blessing of the simple and even kings and built a mosque around him named after him as Imam Al-Layth Ibn Saad, whose tomb is located in Ain Al-Sira and considered a unique Islamic monument fig (3).

Mashhad Kalthoum: Mashhad Kalthoum is considered an Islamic monument with great architectural value and importance to those of the Shiite sect, which is considered a religious shrine for them. Tomb of Al Saba'a Banat "the seven daughters": They are beautiful domes called Al Saba'a Banat where some people do work of gyp and sorcery in this region. Mashhad Al Taba Taba: Located in Al-Imam Shafei cemetery and is located 500 meters to west of Mashhad Imam Shafei and 230 meters from north of Ain Al-Sira and attributed this Mashhad to Ibrahim Taba Taba bin Ismail Al-Dibaj bin Ibrahim Al-Ghamr bin Al-Hassan Al-Muthanna bin Hassan Al-Sabt bin Ali bin Abi Talib (May Allah be pleased with him), and this monument is one of the Ekhchidian states monuments in Ain Al-Sira area.



Figure 3. His Eminence Al – Shafei, Author 2019.



Figure 4. The graves of the seven girls , Author 2019.

### **3. Foundations and Standards of Heritage Buildings According to Law 119 of 2009:**

#### **3.1. Definition of Heritage Building:**

It is agreed that buildings and establishments of heritage or architectural style should be characterized by the following:

Community Acceptance: To be accepted and positively interacted with by society to allow it to continue Cultural and Social Phenomenon: The expression of physical, moral or intellectual phenomena in a particular period of time  
 Stability and Continuity: Any condition that allows continuity of its presence and the possibility of dealing with it  
 Value of Heritage Building:

Historical Value: A building that is associated with influential national events giving it special importance as part of the memory of the city. The historical values of the buildings can be measured using two basic indicators. The time index is expressed by the date of construction of the building or establishment, and whenever the date is far away, this indicator has increased and the building or establishment has a greater value. There is also a significant index which is influenced by the following considerations, the most important of which is the extent of expression or origin of its age and history, and the importance of the historical period to which the building or the establishment belongs, and the scale of building quality scarcity, i.e. the more the building is rare, the more the value, and absence of additions or changes damaging architectural entity of the building

Table 1. The basic values and standards that characterize heritage buildings in Egypt.

Value	Standards
Historical Value	<ul style="list-style-type: none"> <li>- A building is associated with historical and national aspects</li> <li>- Set up a personality that is important locally or globally</li> <li>- has a relationship with national important and influential events</li> <li>- Has symbolic values</li> <li>- Building age</li> </ul>
Unique Architectural Artistic Value	<ul style="list-style-type: none"> <li>- A unique architectural building</li> <li>- Unique architectural design and unique artistic creativity</li> <li>- Represents an important era of history of art and architecture</li> <li>- A product of a distinguished local or international artist or architect</li> <li>- Represents a scientific or technique architectural value characterized by rare and unique architectural value</li> </ul>
Urban Value	<ul style="list-style-type: none"> <li>- The building has a value for being part of a total architectural heritage integrated in its architectural planning</li> <li>- The building has a heritage garden of environmental importance and historical or garden coordination within the scheme shows the stage or era in the history of society</li> <li>- Heritage buildings integrated with each other in terms of form and style of construction</li> </ul>
Traditional Local Value	<ul style="list-style-type: none"> <li>- The building is a part of an urban, rural or desert building with an integrated nature characterized by its history and harmonious architecture</li> <li>- The building is within a total architectural structure using the materials of a distinctive building that expresses the nature of the place and adapts to the climatic conditions.</li> <li>- Traditional building expresses accumulated experience across generations of design, construction and traditional craftsmanship</li> </ul>

### 3.2. International standards for Selection of Heritage Buildings and Areas

In order for a site to be considered to have a unique international value, it must meet at least one of the following six criteria:

1. The site represents a unique artistic achievement or is considered a distinct piece of creative human genius.
2. The site has caused a significant impact on human values over a period of time in the cultural area of the world, through the development of architecture or arts or technology or city planning or design of natural places.
3. The site bears a unique or rare sign of civilization or culture disappeared or still alive.
4. The site is a prominent example of a building or an architectural or technological group or a natural view represents a stage or stages of meaningful human history.
5. The site is an outstanding example of a traditional humane settler or an isolated population domain representing a particular culture or culture that is liable to be extinct as a result of external influences or overlapping cultures.
6. The site is related to events or traditions of living and world views or beliefs, or artistic and literary works have a comprehensive and prominent meaning in the history of mankind. However, the architectural heritage site must prove to be of exceptional international value, meet the originality standard and ensure that the legal and political mechanisms and safeguards are sufficient to ensure long-term protection.

### **3.3. Standards and Local Laws Defining Heritage Buildings and Areas in Egypt**

The criteria for the registration of heritage buildings are a basic step in determining heritage buildings and areas. These standards and the method of preservation and handling are determined in accordance with the general objectives of the State and the moral ties of the community with the existing heritage resources.

In Egypt, there are relatively few countries such as Syria in the field of preservation of architectural heritage. Syria has not yet issued any special laws to protect the architectural heritage, but only the buildings and the registered heritage areas are subject to the Antiquities Protection Act No. 222 of 1963 and its non-substantial amendments. In Egypt, National Coordinating Authority for Civilization was established in 2001 as a specialized body to protect heritage buildings and areas. Law No. 144 of 2006 prescribes the laws that set the standards that define the buildings and the traditional and distinguished areas. Then Law No. 119 of 2008 comes to complete these standards and expands. Registration of heritage buildings and areas will be discussed as follows: This law deals with the regulation of the demolition of buildings other than the means to fall and the preservation of urban heritage. Article (2) of this law prohibits the granting of demolition permits or additions to buildings and establishments of outstanding architectural style. The inventory and registration of those buildings through specialized and permanent committees.

#### **3.3.1. Standards and Specifications of Heritage Buildings in Accordance with Law No. 144 of 2006.**

All studies have agreed upon setting the standards and specifications of the heritage buildings to be considered in its comprehensiveness within the following two levels: The first is to speak of its comprehensive environment as an urban complex, a city or a group of buildings or possessions and corridors, whether inhabited or unmanned, far from urban or close to it. The second is talking about a specific building that stands alone in its own right, whether it is large or small, modest or incomplete. The State is keen to protect the architectural heritage. Law No. 144 of 2006 was issued concerning the regulation of the demolition of buildings and non-destructive structures and preservation of architectural heritage. The second article prohibits the licensing of demolition or additions to buildings and structures with distinctive architectural style associated with the national history, or which represents its historical period or is considered a tourist attraction. Buildings and Establishments with Distinctive Architectural Style

Combined or single buildings and facilities or gardens that are characterized by their artistic value or construction materials or construction methods used and apply the standards and specifications of the following were created according to the concepts or architectural school, reflect the characteristics of a specific historical period, or a building that reflects the local environment.

### **4. A Study of the Current Situation and Problem Analysis**

Concerning the studies of the current situation, it has been addressed through the historical and urban perspective of the study area, so that the study covers all historical values, as well as the elements of urban studies. The study will

address the following: A historical approach of the area and the impact, the urban studies for the usage of lands, cases, heights, construction materials and systems, as well as the ages of the buildings and their ownership.

#### 4.1. Description of the New Residential Area at Ain Al-Sira

Ain Al-Sira project was established in 1959 in the form of dwelling for public housing. The area was planned by a structural density of 27% of the land surface, and it is characterized by a typical mapping; for the buildings form separate, recurring blocks, within which there are orderly spaces, without any inconsistency or discrepancy in the sizes of such spaces, except for a central space that is used as a public park the serves that area. Moreover, the area contains four schools within its corners, in addition to a club that separates the area and Salah Salem Street and Majra Al-Aoyoun Street, and such residential area is inhabited by a class of average or low-income citizens.

Ain Al-Sira residential project is characterized by blocks of buildings that are regularly arranged in a parallel and perpendicular order, within which there are ample extensive interface spaces through which pass some roads that are specified for vehicle movements. Furthermore, we observe that there is no visual diversity in the spaces of the area with regard to their width or height.

#### 4.2. Land Usage

Through the urban survey of the land – which included the usage of lands – we find that the area involves a variety of usages; where the industrial usage comprises the majority of them. Such industrial usages are represented by the tanneries areas, as well as some craft usages such as vehicle mechanical workshops, and craft industries for some of leather crafts and formation of cast. As for the commercial usages, they are centered in the "Al-Anwar" region, specifically along the Anwar Street, also, they are scattered within the residential blocks. Finally, the residential usage is centered in the western zone, west of the tanneries, and the eastern zone ("Al-Anwar region and Ein as Seira dwelling)

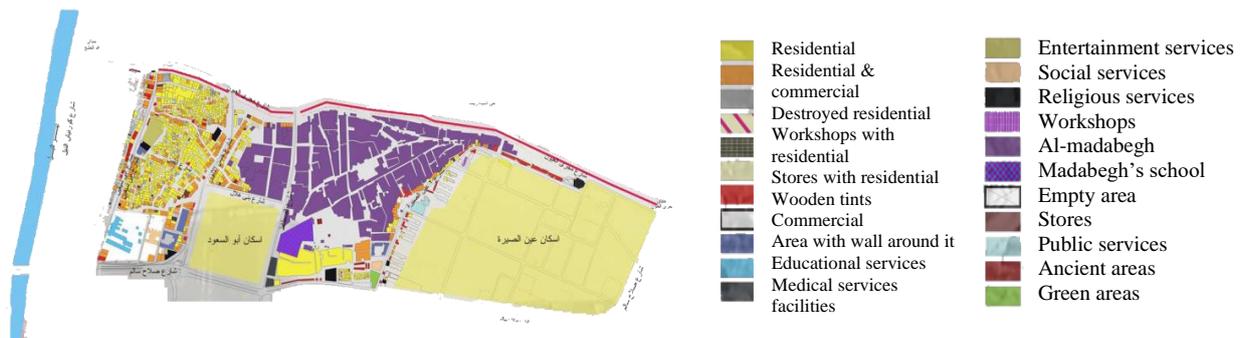


Figure 5. lang use map of magra el eyoun,outhor's national research center.



Figure 6. Residential & commercial locatio, Author, 2019.



Figure 7. Social services location, Author, 2019.

### 4.3. Buildings' Conditions

The buildings' conditions were categorized into 3 main classes according to their quality and maintenance. And like any other old district in Cairo, the study area suffers from a high percentage of poor quality housing; which is primarily a result of the manner followed in rental; which – in turn – affects the processes of maintenance and repair. All of which results in the deterioration of the urban and constructional status of the structure of the study area. The poor-quality buildings are centered in "Al -Anwar" region, as well as "Al- Madabegh" region which had been decided to be removed almost 30 years ago. However, there are buildings in good conditions, but in a scattered form within the urban perimeter of the study area. As for the buildings of average quality – as illustrated through the study of the urban survey – they are centered in some of the governmental housing construction at Ein as Seira. It is shown that the majority of the building conditions are the poor-quality ones; as they represent about 63%, while the average-quality buildings represent 35%. Finally, the percentage of the high-quality buildings does not exceed about 2%, all of which illustrates that the urban status of the area is too degraded.

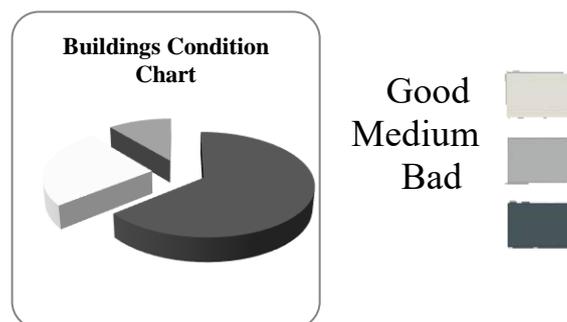


Figure 8. Chart shows the cases of buildings of Magra El Eyoun, Author, 2019.



Figure 9. Map building condition of magra el eyoun, Author's national research center, 2019.

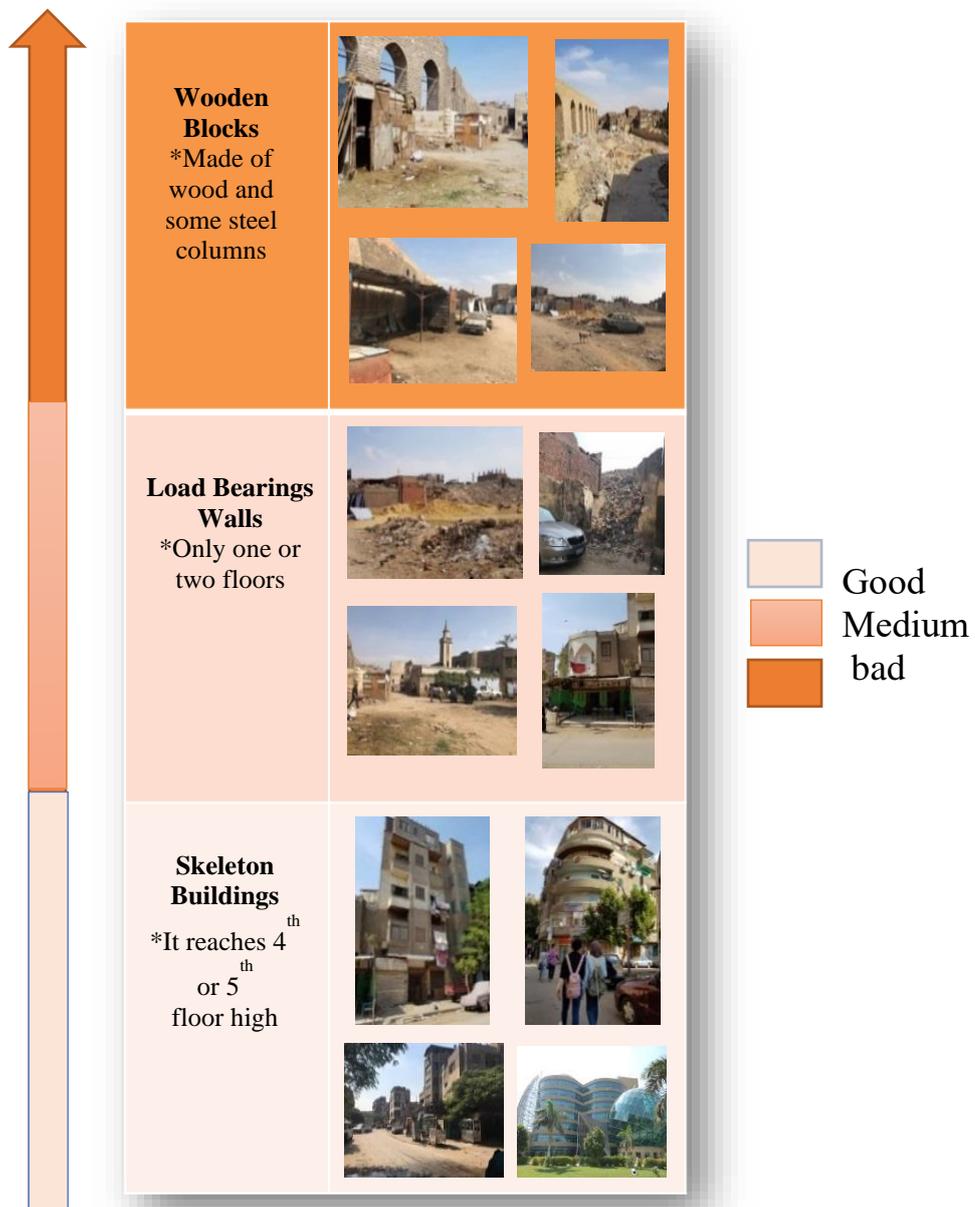


Figure 10. The building condaton, Auther, 2019.

#### 4.4. Construction Materials and Systems

The field survey for the study area illustrates that the main feature for construction materials and systems of the buildings are the bearing walls; as almost 70% of the majority of the buildings in the area are buildings with bearing walls. As for the structural buildings, they do not exceed around 11%. Moreover, stone buildings with wooden ceilings represent about 19%. All of which illustrate the constructional conditions of the buildings located in the study area. Furthermore, the most used materials in this field are bricks and stones, some of which serve as small houses that are primarily made of wood, and afterwards bricks are largely used; such houses are covered by wooden ceilings, and others are made of concrete.



Figure 11. Map showing types of materials used in buildings of magra el eyoun, Author's national research center, 2019.

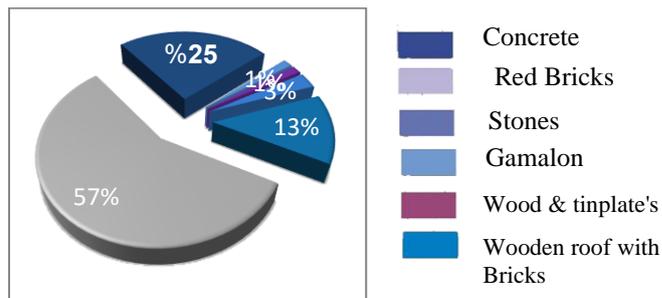


Figure 12. Chart shows types of material used building of magra el eyoun, Author's, 2019

#### 4.5. Ages of Buildings

The buildings were categorized according to their ages into five main classes; which are: 10:22, 23:40, 41:60, 61:91, until 120 years old. Though the field study, it is illustrated to us that the predominant category are the buildings whose ages range from 41:60 years, as they represent more than 50% of the total number of the area buildings. As for the modern buildings- with regard to age as of 1:22 years – they represent about 20%, while the old buildings whose ages range from 90:120 years do not exceed 5% of the total number of buildings.

"Construction materials and systems" illustrates to the field survey of the study area that the main feature of the construction materials and systems is the bearing walls; as around 70% of the total number of buildings of the area are buildings with bearing walls. Moreover, the structural buildings do not exceed 11% approximately, while the brick buildings with wooden ceilings represent around 19%. All of which illustrate the constructional status of the buildings located in the study area.



Figure 13. Mix using sample material of Ain El – Sira, Author's, 2019.

#### 4.6. Building Heights

Whereas the urban feature of the area is characterized by low heights – which is a result of the constructional status and the constructional system of the buildings – the predominant feature of the buildings located in "Al-Madabegh" region – as well as some regions in "Al-Anwar" – is a height that ranges between one to two floors. As for "Ain Al-Sira" region, most of its buildings range between 3 – 4 floors, while buildings of a height of more than 5 floors rarely exist; and most of them are located in the zone close to "Majra-Al Aoyoun" Street. Thus, whereas, the predominant feature for the building heights are two floors, it gives a chance for processes of removal, development, and upgrade the area with regard to its urban feature; due to the decrease of the rate of crowd out.

The study of the building heights for the first phase illustrates that the predominant feature for the building heights are one-floor buildings; as they represent a percentage of 36% approximately, and is followed by two-floor buildings, which represent around 29%, as well as three-floor buildings which do not exceed 15%. As for buildings that consist of more than 4 floors until 5 floors, they represent a very low percentage; as they represent 11%, as well as buildings whose height ranges from 6:8 floors; as they do not exceed 5%. All of which illustrate that the predominant feature of the building heights are 1:3.



Figure 14. Map of building heights, Magra El Eyoun, Author, 2019.

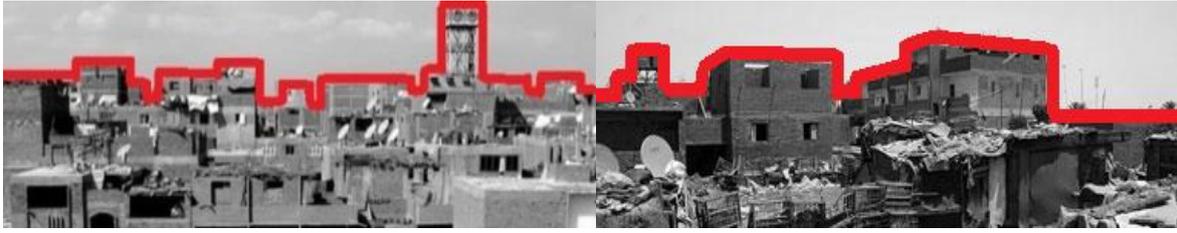


Figure 15. Height of Buildings, Ain El Sira, Author, 2019.

#### 4.7. Land Property

While studying the building property, it was found that there is a specified categorization for the property regarding this area within 3 main classes, which are: Private property that represents around 40%, private property that includes rented units which represent around 38%, and private property that contains "owned units" which represent around 20%.

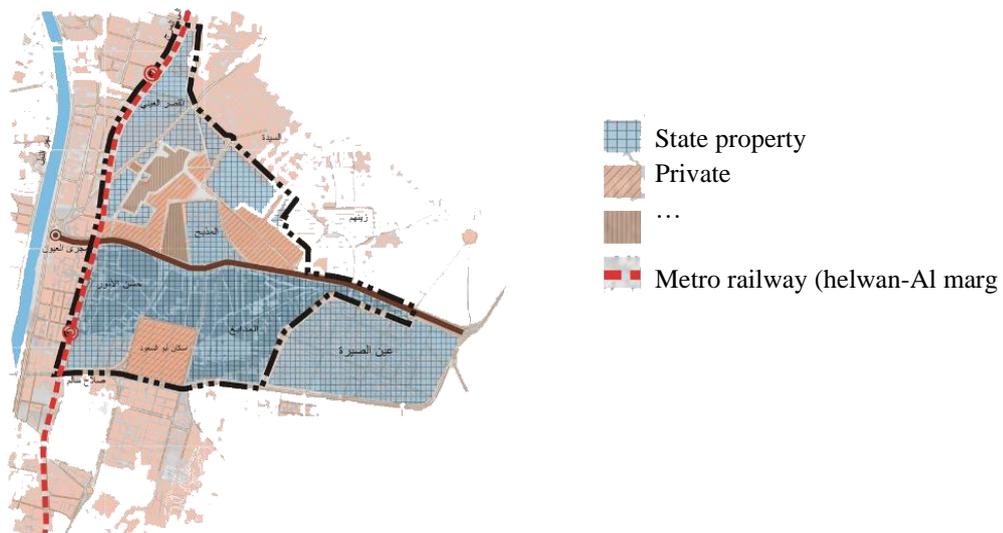


Figure 16. Map showing land ownership of Magra El Eyoun, Author, 2019.



Figure 17. Use of concrete in construction of Ain El Sira, Author, 2019.

#### 5. Analysis of the general features of the surrounding area

Analysis of the general plan of the surrounding areas under study to identify the general nature of the facades and its proposed architectural features in the new plan of the neighboring areas, so that the mechanism can be reached to develop and update the existing facades in the study area (Ain Al-Sira District). This study should take into consideration the different uses of residential, administrative and service buildings.

The mechanism also takes into account the architectural and constructive condition of the buildings, and the possibility of the project development to be consistent with the general nature of the wide environment of the area. This would be achieved under at a reasonable cost to achieve sustainability as an important criterion for the development project. Currently, the general area and residential buildings around the entire Magra El-Eyoon aqueduct is under development. Also, the area around the Cancer Hospital and the transformation of the facades of residential buildings and all commercial activities to the general feature at the place since the area and its ancient Islamic history were founded.

And also when building residential buildings next to the old buildings, it must be taken into account that they carry the same architectural features as the structure of windows and windows' openings that take the form of serial junctions and connections in the entire rotation of the building. Although they are built of red brick spread in the modern building, they use paints and structural materials to convert it Similar to the old and in line with the Islamic architecture required.



Figure 18. Residential buildings around the site under development, Author, 2019.

### 5.1. Ain Al-Sira housing field study

As a result of that field study, a mechanism of the development of the facades has been developed and determined according to the condition of the buildings that are there. There are some buildings deteriorating or falling, and there is a need to be removed and some of them are not coordinated with the targeted architectural features largely. They are developed as it is necessary to change the elements of the facade to the needed for. It is possible to develop, or add or modify some architectural elements or use paints and simple materials to have these buildings to their normal position, which should be to be consistent from the beginning and preserve their value as an ancient archaeological site. (Book for the analytical study of residential areas blanks, 2008)

Ain Al-Sira housing is characterized by regular blocks which are parallel and perpendicular, leaving vacant spaces between them allocated for motor movement. There is no visual diversity in the spaces of the area in terms of width and height. The spaces in this area can be described as negative spaces as the buildings contained spaces to create a feature and personality to them. The spaces are dispersed and distributed on the land's project without specifying the shape or separation between them as a result of not closing any of them visually.



Figure 19. Modifications to public spaces in the area, Author, 2019.

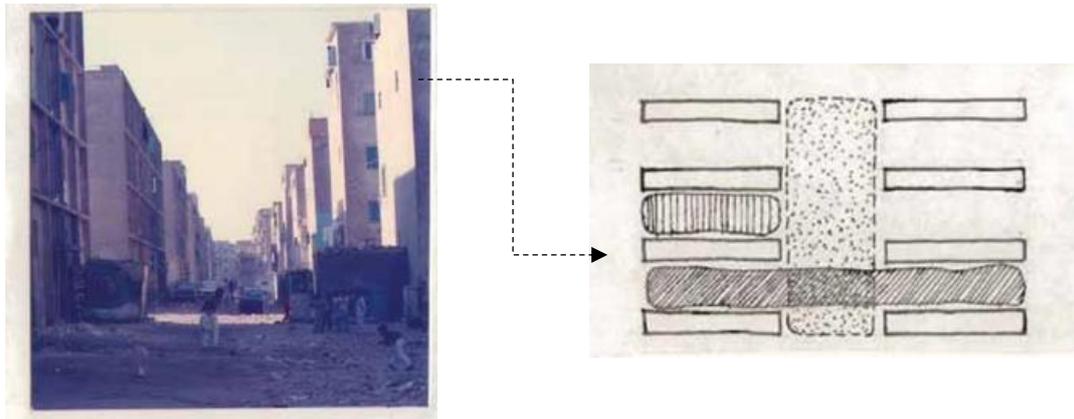


Figure 20. There is no visual closure of the spaces, which loses their special character or containment, Author, 2019.

## 6. Study of the integration between the existing formation and the new one

If we refer to the specialized studies and research in the field of study and development of facades to be used in the development of the facades in the area of study with a focus on the field of integration between the existing configuration and new ones, we can find that the previous studies have shown the need to have consideration of the following architectural elements with the study of facades and their development. One of the most important elements that affect the facades is the formation as any formation can be included in a large proportion through the shapes without the other visual characteristics of this formation, such as colors and touch, while the colors and touch elements complementary to the performance of the architectural formation and formation in the facades. This is proven that some architectural schools were dependent on The non-colored display in the expression of its design, and the possibility of realizing these formations in large proportion, but not complete through formations without colors or touches. The colors have also been closely linked with art and architecture throughout the ages, as color is one of the qualities of building materials, which can not be ignored.

It has been proved that the colors have been used in the coloring of drawings in about a thousand years in the south of France and North Africa. Colors were also used in the Pharaonic architecture in the interior spaces, especially the walls and ceilings. The architectural treatments appeared in the Greek architecture as a result of the use of granite and marble. Marble has also played a major role in the facades In the Islamic countries. Colors were also used in popular buildings in Egypt and the world, such as the villages of Nuba and the villages of Central Africa, where coloring is a construction ritual. Due to the fact that the construction process is related to the raw materials available in each area, and since each area has its own soil and climate, each area has its own local architecture, which is distinguished by its materials, colors and plastic patterns.

It is necessary to take into consideration the touch that is realized by touching. Materials and stones that represent and show the type of architecture, especially the Islamic architecture can be used. This is the predominant feature in the archaeological area, but can also be visually identified by the behavior of surfaces in dealing with the light falling on them, the rough surface, which is full of protrusions and cavities, is variant between dark and light. The interior and exterior design of the architecture requires a good knowledge of the materials, their nature, their properties, their multiple images and the possibilities of their use in accordance with the function of the building and its construction.

It is necessary to take into account the porosity during the design of the architectural facades and analysis of the ratio of openings to the load-bearing walls that were designed in terms of shape, proportions, size, location and composition in the formations of building facades, and their impact on the structural appearance of the facade. It is an analytical study of the relationship between the surfaces of the load-bearing materials and openings or spaces surrounded by the load-bearing roofs and its importance in knowledge of proportion and direction. Therefore, it is considered as an important element in the visual architecture.

### 6.1. Methods of treatment and achieving architectural integration between the existing formation and the new one

The previous studies on Ain Al-Sirah area have shown that these methods vary according to the facade required to be studied. These cases illustrate the different methods. After the slight influence of the modern movements on the building environment in the late sixties, a trend emerged to preserve the existing architectural forms. Attempts have been made to keep all historical buildings intact and to protect them from any change. Preserving the existing is the first step towards respecting the general nature of the area and towards awareness of the importance of the ideal choice for the design of the elements added to the buildings' facades.

The visual integration of the urban landscape is achieved through dealing with the original source (general view ) that defines the general features of the urban landscape as well as through organizing the skyline for the buildings and maintaining its visual continuity as well as through the organization of the general view (external form) of the urban landscape and its clarity. Visual integration is also achieved through the uniformity of the sizes of adjacent buildings, and by not leaving the inner spaces between the buildings, which constitutes a break of the continuity of the visual forms. Also, by reducing the variation in the building scale of the urban landscape and the organization of the use of materials through the use of local materials prevailing types and optical characteristics, which promote belonging of the population. the continuity of colors, details, size and finishing materials along the urban landscape without reaching boredom and repetitiveness.



Figure 21. Wood grills, which will be used in the area of Ain Alsira.



Figure 22. The historical fabric, which will be used in the area of Ain Alsira.



Figure 23. The gates are used as umbrellas for commercial activities, which will be used in the area of Ain Alsira



Figure 22. Development of the facades of residential units surrounding the site (housing Ain Alsira).

## 7. Conclusions and Recommendations

The area of Ain Al-Sira contains historical monuments, especially the monuments with religious nature such as temples, mosques, and shrines. Therefore, it's considered one of the most important tourist attractions that share in the national income of Egypt.

Unfortunately, the area of Ain Al-Sira suffers from natural factors related to the climate, including humidity, temperature, rain, wind, and power. These factors affected the construction nature in Ain Al-Sira, changed its façade and cultural pattern. Moreover, some of the constructions have been destroyed or exposed to severe wall cracks as a result of a change in the ground level which took place due to the groundwater in the area. Other reasons for those cracks are the sewage networks and drinking water, construction works of other facilities, and the random construction in the area.

There are also human problems affected the archaeological sites and the area of Ain Al-Sira generally, including the residence in some mosques and shrines, and the lack of conviction among citizens of the value of the archaeological buildings.

In order to implement the architectural development of Ain Al-Sira, the facades of ancient monuments, and modern dwellings, a comprehensive strategy must be prepared and coordinated with all the concerned authorities, not only from Ministry of Antiquities side (local development agencies, housing and reconstruction facilities, etc.), so that all development procedures are integrated and comprehensive.

## 8. Recommendations:

1. Maintaining the prevailing architectural styles at the street, field and area level, which require the use of suitable finish materials to be similar to the traditional materials used.
2. Paying attention to the establishment of each street in it and to highlight its privacy and in accordance with its identity and its architecture.
3. Preserving the building heights where elevations in the old areas are determined by certain heights so as not to damage the nature of the neighborhoods and streets of the heritage in these areas
4. The adoption of structural materials, colors and shapes that are consistent with the original cultural heritage represented by the semantic features inherited from different historical periods
5. To unify the visual characteristics of the facades of the urban landscape (size, color, details, building materials, finishing, model, outer borders of shape, scale, sky line and construction line) and continuity along the street.
6. Eliminate the interstitial spaces between buildings to achieve the visual continuity of the skyline
7. It is necessary to restore the archaeological buildings in Ain Al-Sira with a comprehensive development of mosques and shrines in order to restore them to their original state to preserve their historical content.
8. Renovation of walls, architectural facades, cracks and joints through modern building materials that react chemically with the old building materials of the walls and bear all the different atmospheric factors.
9. Development of the facilities network in full to overcome the problems of sanitation and groundwater under the archaeological buildings. Establishing scientific research centers specialize in the procedures of civilizational development and developing Ain Al-Sira area.
10. Issuing or activating laws, regulations, and legislations to preserve the cultural pattern of the archaeological buildings in particular and the area of Ain Al-Sira in general.
11. Prepare a sustainable program to educate the citizens Ain Al-Sira and increase their awareness to preserve their cultural and architectural heritage.
12. Coordinate and take advantage of the expertise of the UNESCO Organization technically, financially and scientifically to preserve this cultural heritage.

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