

Improving Sustainability Concept in Developing Countries

## The Eastern Necropolis in Cairo and its Buffer Zone (Towards a Sustainable Conservation Strategy)

Prof. Dr. Mohammed El Barmelgy<sup>a</sup>, Prof. Dr. Soheir Hawas<sup>b</sup>, Dr. Shaimaa Ashour<sup>c</sup>,  
Architect Ghada Attia<sup>a,b,c,\*</sup>

<sup>a</sup> *Cairo University, Faculty of Engineering, Department of Architecture, Giza, 12613, Egypt.*

<sup>b</sup> *Cairo University, Faculty of Engineering, Department of Architecture, Giza, 12613 Egypt.*

<sup>c</sup> *Arab Academy for Science, Technology & Maritime Transport, Heliopolis, Cairo, 11361, Egypt.*

\* *Freelance Architect, 21 Al-Hassan Street, Sheraton, Heliopolis, Cairo, 11361, Egypt.*

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### Abstract

The Eastern Necropolis is part of the World Heritage property of Historic Cairo in the URHC 2010-2012. It underlies a diversity of forces that lead to urban informality and ruins the sky line of Old Historic Cairo. Applying a sustainable conservation strategy will supposedly stop further slum formation and achieve urban equality. The research is divided into: 1) Pilot study, 2) Field Work and Survey; Evaluation for the study zone and creating a Base Map for the Eastern Necropolis, 3) Documentary studies; Conservation of heritage areas as an approach to regional planning, 4) Research results and final conclusion.

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### 1. Introduction

People migrate to Cairo from suburbs and other Provinces to search for a new life and seek shelter in a city that is already exploding. Millions of people tend to afford shelter in informal housing and those who cannot afford it seek shelter in grave yards and warren like structures.

#### 1.1. Point of Research

In July 2010-2012, the WHC together with the Egyptian Government launched the project “Urban Regeneration project for Historic Cairo (URHC)”; one of its tasks was to define the World Heritage property and its buffer zone.

The EASTERN NECROPOLIS is part the Heritage property and has been given protection measures although it has not been evaluated or graded for security reasons. Also its buffer zone that has been determined by the URHC happens to be Manshiet Nasser one of the world's most populated slums (according to several reports: about one million inhabitants). The EASTERN NECROPOLIS has been chosen out of the rest of the Cemeteries area due to its crucial position and its more powerful direct impact on the rest of Old Cairo, where any unwise informal development in it will have an extremely strong negative impact on the Heritage of Historic Cairo.

### 1.2. Question

Can we change unplanned development into planned development?

### 1.3. Aim

This research is an attempt to reach sustainable conservation measures for further development of such an important area in the heart of Cairo (The Eastern Necropolis). Accordingly this will preserve the sky line of Historic Cairo, and will also contribute in reaching urban equality for such a poor and neglected area.

### 1.4. Hypothesis

Following a sustainable conservation strategy can change people's behaviour to stop further growth of slum areas inside the Eastern Necropolis, which if left un-dealt with will destroy the skyline of Historic Cairo on the eastern side.

### 1.5. Objective

Evaluating the study zone using the same criteria set by UNESCO used to evaluate the world heritage of Historic Cairo.

Creating a Base Map for the Eastern Necropolis for documentation, listing, and for further studies and field survey.

### 1.6. Research Results

- Recommendations: Proposed conservation strategy for the Eastern Necropolis and its Buffer Zone
- Base Map of scale 1/800 for the Eastern Necropolis in Cairo for documentation and further filed studies and development

## 2. METHODOLOGY

Methodology applied in this research was as follows:

First: Pilot study for the study zone and has been divided into three stages:

- Over view about the study zone:

Second: Field work and survey and is divided into the following:

- Evaluation and grading for the study zone by using the same criteria that the UNESCO has applied over Historic Cairo.

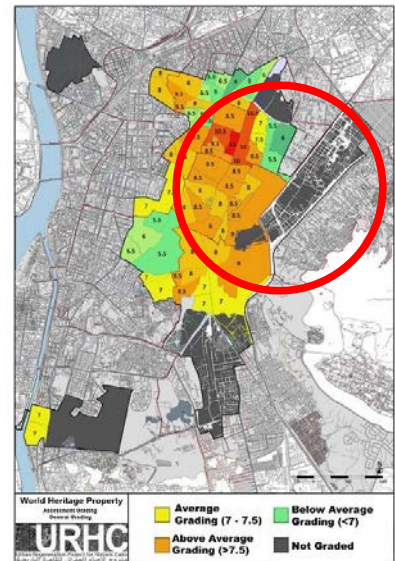


Figure 1: The assessment of Urban Heritage values where the cemeteries area is stated that it is not graded. Source: World Heritage Property ( 2011)

- Process for creating the Base Map for the Eastern Necropolis for the purpose of documentation and further field studies

Third: Inductive approach (documentary)

- Conservation as an approach to regional planning

Fourth: Deductive approach

- Introduction Towards Sustainable Conservation Strategy For "The Eastern Necropolis" and Its Buffer Zone
- Conclusion and Recommendations

### 3. PILOT STUDY

#### 3.1. Definition of the Study Zone

The Northern Cemetery which together with the Southern one, Comprises Cairo's historic necropolis (once a single settlement), the cemeteries were separated by the construction of new roads in the late 1960s.

The eastern necropolis surrounded by Salah Salem Road to the east and the Nasr st. to the west and further down lies Manshiet Nasr, which is considered to be one of the largest slum areas in the world, and also which has a very strong impact on the cemeteries area.

- The Eastern Necropolis is a strip of land about 600 meters wide x 3.5 km in length; 2.1 square km.
- From its highest point at the foot of the Citadel is 65 meters above sea level and slopes northwards between the city to the west and the Moqattam hills to the east and towards the Abbasiya some 12 meters below.
- The gradient of the slope eases off towards the north.
- West: Fatamid Cairo, Salah Salem Road
- North: Tayaran Street & the old railway
- East: Al-Nasr St. free way provides an even faster North-South route. Opened in 1985, it arches round Cairo in the tracks of the old rail road, which were built to service the quarries

— Salah Salem Rd.

 Mahshiet Naser

— El Nasr Rd

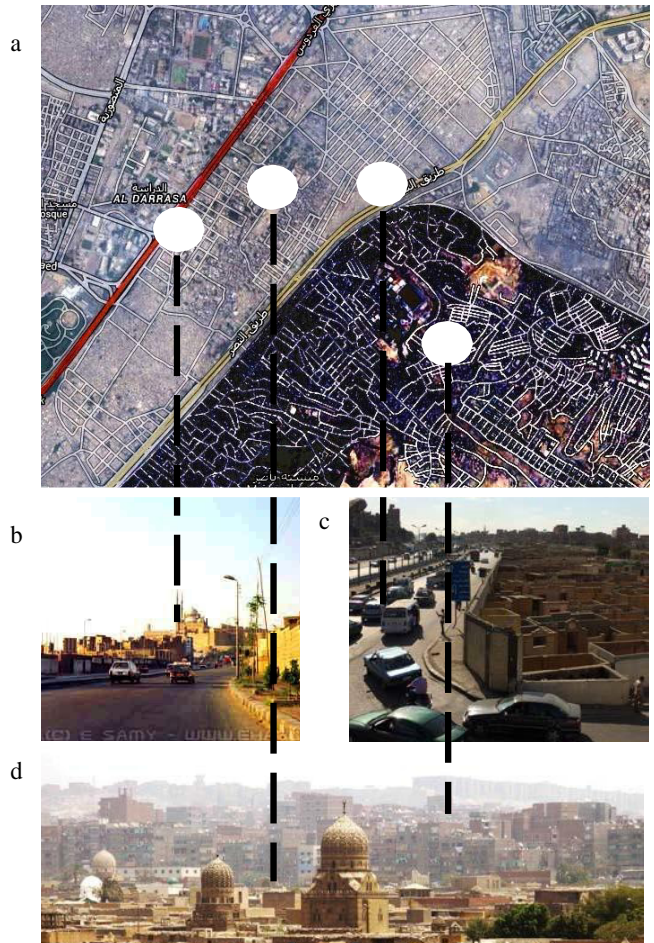


Figure 2: (a) Google map updated by researcher, shows the Eastern Necropolis in the middle and surrounded by Salah Salem rd on the east side. and behind it lies Historic Cairo and westward is El Nasr rd. and behind it lies Manshiet Naser; (b) is Salah Salem road on the east side of the side of the cemeteries. Source: internet ; (c) is the Nasr rd. which bounds the cemeteries westwards. Source: photo taken by the researcher; (d) Photo taken by researcher from Salah Salem road looking across the cemeteries and far away appears Manshiet Naser on the other side. (Date taken: 28/04/2013 - 12:11 PM)

## 4. C Survey Field Work and Over the Case Study of "The Eastern Necropolis" in Cairo

### 4.1. Built Fabric

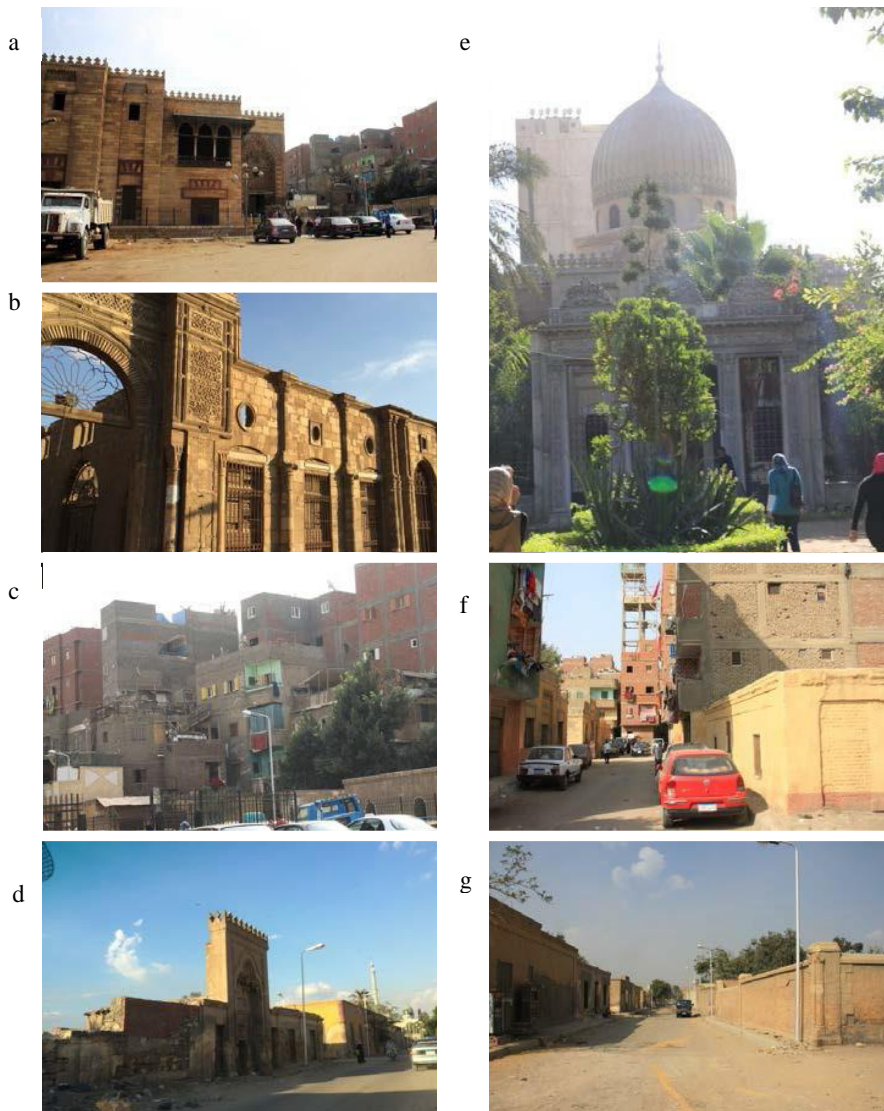


Figure 3: (a) Khankah Sultan Faraj ibn Barquq; (b) Part of the Gate of Ibrahim Pacha Palace; (c) Residential area in front of Faraj ibn Barquq; (d) Deteriorated front of a historical mausoleum; (e) Mausoleum of el Khedewi Tawfik; (f) Informal residential buildings; (g) Absence of character and liveliness

Several characteristics such as; scale, style, materials, modulation, condition, use and identity are all features contribute to the character and appearance of the built fabric.. Some buildings are monumental and of distinguished architectural value, some are historical and used to be of social importance; such as that of Khanqah and Mausoleum of Sultan Faraj ibn Barquq, Complex of Sultan al-Ashraf Qaytbay, but now they don't play any real role in the society as they used to be. Other areas are of residential prevalence over the cemeteries, other buildings are deteriorated and some areas are just deserted and of no living activities.



4.2. Evaluation and Grading for the Easter Necropolis in Cairo

The most precious values in the City of the Dead is the valuable heritage that is lost within the ruins and negligence, also, the bright future that should be waiting for those children.



Figure 4: (a) Shows the Mausoleum of Zeinab and Hessein Sherif; (b) Khedewi Tawfiq's Mausoleum main gate; (c) Children and residents of the Cemeteries. All photos in this section are taken by the researcher.

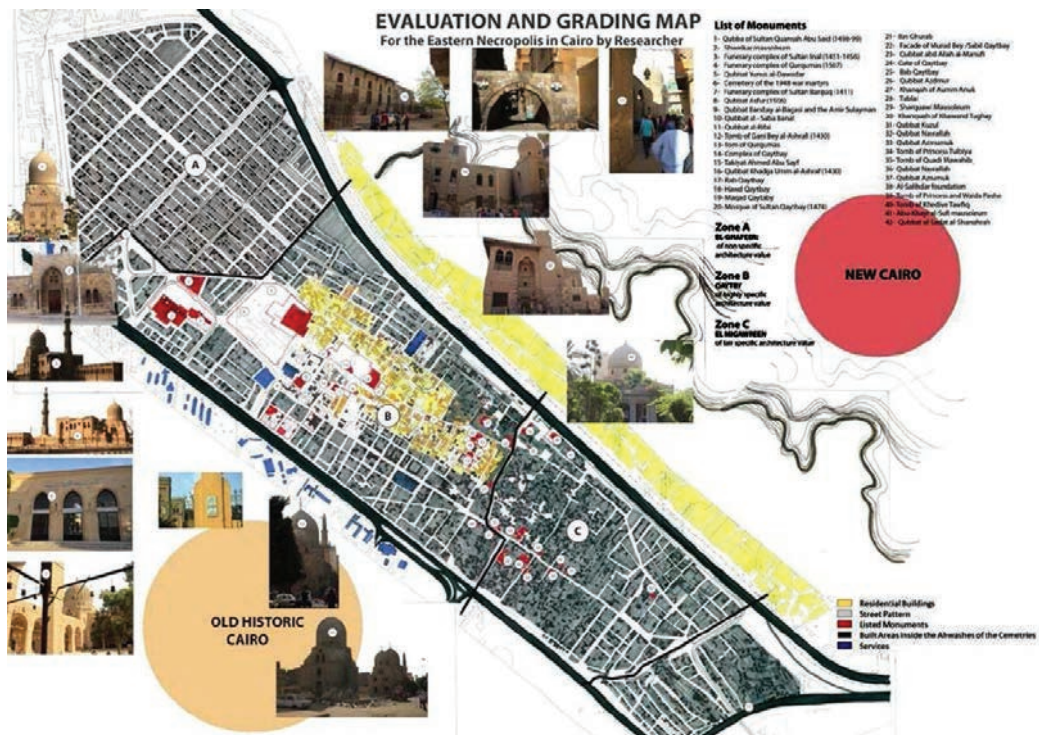


Fig. 5: Evaluation and Graduation Map by researcher; The study zone is divided into three zones: zone (a): El Ghaffeer of prevailing non historic burial areas with absence of monuments and residential buildings, zone (b) Qaytbay Is characterized by prevailing residential buildings, high concentration of important religious monuments together with tombs and burial, zone (c) El Migawreen is characterized by the presence of some scattered monuments absence of residential settlements, with a prevailing presence of burial structures and areas.

### 4.3. Creating The Base Map

The aim of creating the map for the Eastern Necropolis, is to have a unified Base Map that shows the street pattern, the block divisions, sub divisions of the Ahawash, important Historical buildings, buildings of architectural significance. This map is drawn to a scale 1:800 in order to become a reference for any further studies and could be of use for any future action plan concerning the Historical area.

#### 4.3.1. CAPMAS MAP:

The map is an AutoCAD file of the Eastern Necropolis (El Ghafir cemeteries) drawn to scale 1:5000. It shows the street pattern and block divisions of El Hawashes, all the buildings of Historical importance that are listed in the Supreme Council of Antique (SCA) are located on the map.

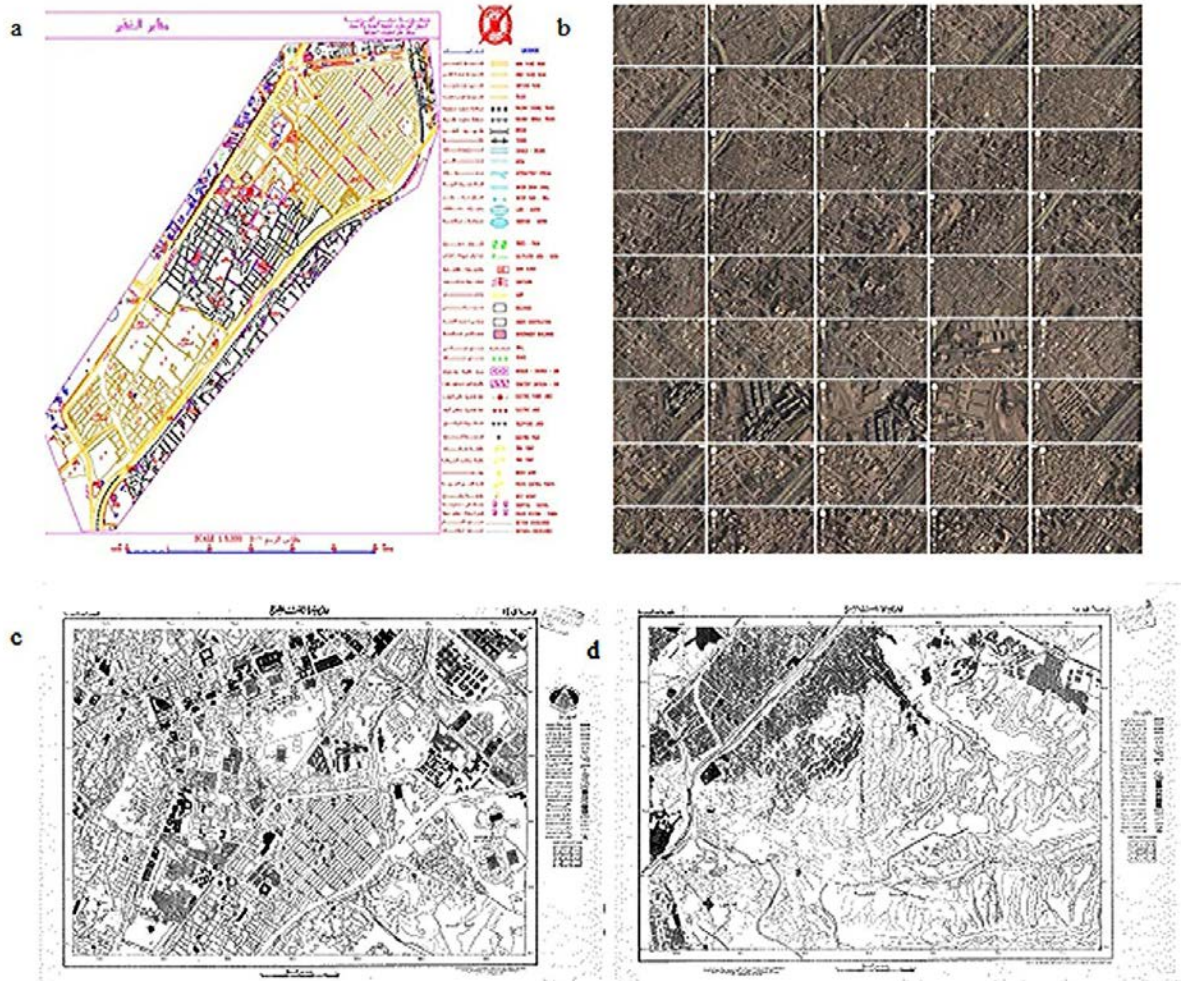


Figure 6:(a) The ACAD map for el Ghafir and Qaytbay cemeteries by CAPMAS. Scale 1:5000; (b) Shots taken by the researcher using Google maps of the Eastern Necropolis of Scale 1:800 for the process of creating the Base Map; (c) is a first part of an Arial Map Y14 for el Ghafir and Qaitbay cemeteries by the Egyptian National Authority of Survey. Scale 1:5000; (d) is the second part of Arial Map Y15 for el Ghafir and Qaitbay cemeteries by the Egyptian National Authority of Survey. Scale 1:5000



#### 4.3.2. GOOGLE EARTH Map

Selected shots for el-Ghafeer and Qaytbay Cemeteries of scale 1:800, have been taken by the researcher using Google Maps. Later on, those shots have been manually assembled to give a complete map of the site of scale 1:800, and then compare it with the previous maps to look for any recent changes that could have occurred on the site.

#### 4.3.3. EGYPTIAN GENERAL SURVEY AUTHORITY Map

It is an Aerial view of the cemeteries area and is to scale 1:5000. It also shows the Buffer zone of Manshiet Naser and el-Mokattam Hills.

#### 4.3.4. Assembled Map by researcher (Ghada Attia) as a Process Followed for Creating the BASE MAP

The assembled map is the product of the three previous maps (CAPMAS, Egyptian General Survey and Google Earth maps); and the following process stages are followed:

- Visiting CAPMAS to get from the Maps department an ACAD map for el-Ghafir and el-Megawrin Cemeteries drafted to scale 1/5000.
- Visiting the EGYPTIAN GENERAL SURVEY AUTHORITY to get the latest Aerial view map for el-Ghafir and el-Megawrin Cemeteries of scale 1/5000.
- Using Google Earth Maps site to get an Aerial view for the whole area of scale 1/5000 and the more detailed shots are of scale 1/800.
- Site survey to have an overall impression about the area; residential, historical monuments, street pattern and alignment, activities and graveyards subdivisions.
- Comparison Stage: Maps of the CAPMAS (ACAD map) and that of the EGYPTIAN GENERAL SURVEY AUTHORITY have been overlapped to compare them and it has been found out that they are identical and most probably the ACAD map of the CAPMAS have been drafted from the Aerial view map.
- Assembly Stage : By using the detailed shots of scale 1/800 of Google Earth Maps the base map has been assembled manually by the researcher to get a complete map of the site of scale 1/800.
- Drafting Stage: Then by over drafting the detailed shots of the Google Earth shots, a fully assembled detailed map of the site of scale 1/800 was obtained. It shows in detail the subdivisions of the graveyards, the streets, the residential areas and the historical monuments have all been manually over plotted and drafted. The new map will form a foundation to work on to obtain the Base Map.





	Residential Buildings
	Street Pattern
	Trees and plantings
	Built area inside the Hawashes



Figure 7 The Assembled map by the researcher Ghada Attia (copy right)

#### 4.3.5. THE BASE MAP

The Base Map by researcher (Ghada Attia) is the product of the Assembled map (Fig. 34) of scale 1: 800 and the ACAD map of CAPMAS Fig. 29, after it has been rescaled from 1:5000 to 1:800. The detailing of the street pattern, blocks divisions and subdivisions of el Ahwashe, Historical buildings, trees, plantations and Residential buildings have all been drafted over the ACAD MAP to produce a final Base Map (Fig.35) of scale 1:800 which could be used for further field survey studies well as any futuristic developing projects.

### 5. Conservation of Heritage Areas as an Approach to Regional Planning

According to the Urban designer and planner Tom Gallaher "Project plans in heritage areas tend to be holistic and flexible, they welcome appropriate growth and manage change in an orderly manner. They really are addressing regional issues in new way." Heritage areas may be messy and hard to describe, but at the same time they seem to possess solid spirit and great vitality that is very healthy for development. They also seek a balance between preservation and economic development.

The following steps should be followed in any conservation strategy :

- Any urban conservation strategies for historic cities should be part of coherent policies of economic, social development and urban and regional planning.
- Any conservation plan should ensure the harmonious relationship between the historic urban areas and the city as a whole.
- Deep social conservation should be followed; an overall environmental development by ensuring jobs, services, facilities, as well as maintaining and beautifying the physical appearance of the historic area.
- Any conservation planning should be empowered by the residents of the historic area. "The Golden rule : is that working the street with people has its own rhythm which calls for flexibility and patience from both the conservation team and the people" (Sedki)
- Improvement of housing should be one of the basic objectives of the conservation process.
- The objective of the conservation should be clearly stated to all parties involved as well as the legal, administrative and financial measures

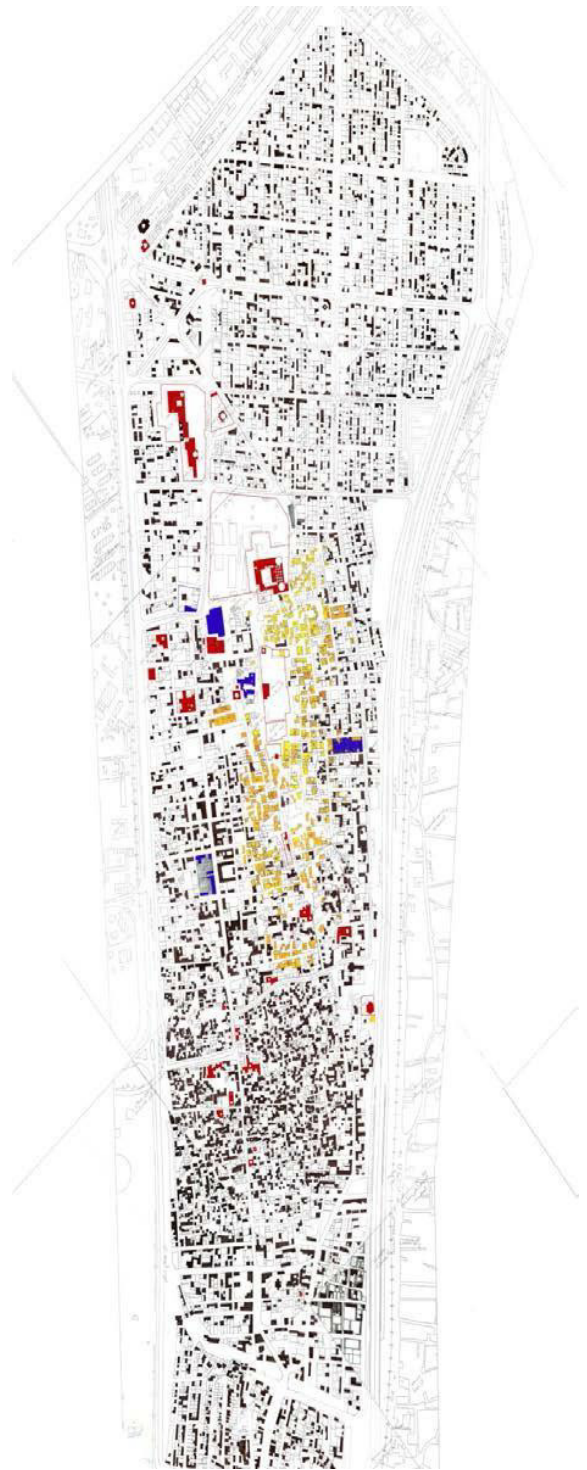


Fig. (8): THE BASE MAP for the Eastern Necropolis in Cairo of sale 1/800 drafted, by the researcher



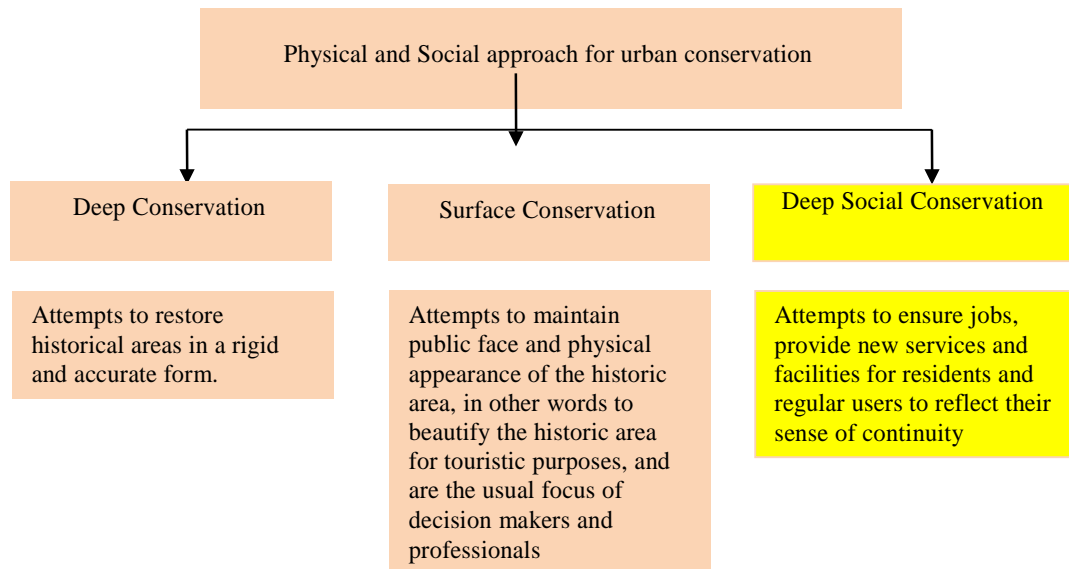


Figure 9: Shows the most recent approaches for urban conservation. The yellow color is the recommended strategy to follow. Source: Diagram presented by the researcher.

## 6. Introduction Towards Sustainable Conservation Strategy For "The Eastern Necropolis" and Its Buffer Zone

Manshiet Naser, one of the biggest slum areas in the world with an estimated one million inhabitant, stands to the right and forms a big challenge to any proposed development in the heart of Cairo. On the left side opposite to it stands Old Cairo and between them is the Medieval Cemeteries of Cairo. The over spill of Old Cairo, which has become congested, overcrowded and where rents are very high, move to reside in Manshiet Naser where rents are lower. The steep edges of el Mokattam mountain makes it very hard for any future extension for the residents of Manshiet Naser, and the on the other hand the Cemeteries seem to offer an alternative for any future expansion. Therefore, others choose to reside in the Cemeteries where the Ahawash are more spacious and of much lower rents than a lot of apartments, which makes it very attractive for people to go and live there.

### 6.1. Objectives of Conservation

Any conservation plan ought to be FOR the people and BY the people. People are the real guarantee for the success of any future policies and conservation planning, they have to be the first beneficial of the outcome for any development. Social equality should be sustained during the conservation process; by providing proper education, job opportunities, improving their living conditions, as well as developing the physical form of the Study Area as well as maintaining its cultural values.

### 6.2. Values in Conservation

- Smooth but firm change is recommended instead of abrupt and violent change.
- Clear Long vision planning and policies is to go in parallel with short term planning, and with clear Frame Work.
- Periodical evaluation and updating of the original plan should be carried out, according to the changes and variables that might happen in the future.

- Constant field monitoring and inspection is essential, to append any destructive or sabotaging behavior to the original plan.
- Accept the present situation; try to identify the pros and cons in it, the weak points are to be treated and the strong features are to be empowered. But in all cases we have to look at the people as a blessing of the space and as one of the strong features of it.

### 6.3. Target

- Stop further slum formation and growth in the cemeteries area in order to preserve the skyline of Historic Cairo by applying a SUSTAINABLE CONSERVATION STRATEGY FOR THE EASTERN NECROPOLIS and ITS' BUFFER ZONE
- Allow Modern Cairo to reform and expand eastward without destroying the unique cultural essence and value of Historic Cairo.



Figure 10: shows constraints for development; the residential areas in Old Cairo, Cemeteries in the middle and Manshiet Naser. It also shows the overspill of Old Cairo to reside in Manshiet Naser and also the overspill of Manshiet Naser go and reside in the Cemeteries area, and thus encourage housing in the Cemeteries.

### 6.4. Residential and Working Force Movement in the Study Area by researcher

#### 6.4.1. Present and Target Status by researcher for the residential movement

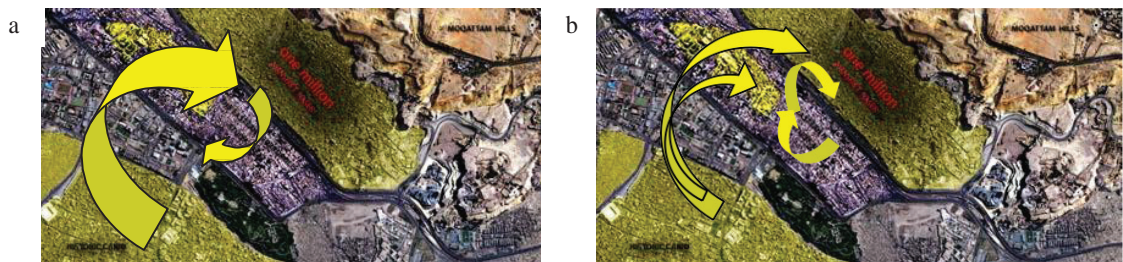


Figure 11: (a) Shows the Present situation for residents movement from Old Cairo to Manshiet Naser; People who cannot afford the high rents in Old Cairo move to live in Manshiet Naser where rents are much lower and the verspill from Manshiet Naser go in turn to reside in the Cemeteries area where lower rents and more spacious living areas in the hawashes of the Cemeteriesthan Manshiet Naser. This lead to more requiring for resedntial buildings in the cemeteries area which seems to be very attractive and presents normal extension for the expansion of Manshiet Nasser; (b) Targeting to reverse the residential movement, so that by developing Manshiet Naser would be attracting and not repelling more residents. Thus reducing the heavy residential impact on Old Cairo and also stopping more residential growth in the Cemeteries area.



6.4.2. Present and Target Status by researcher for workers movement

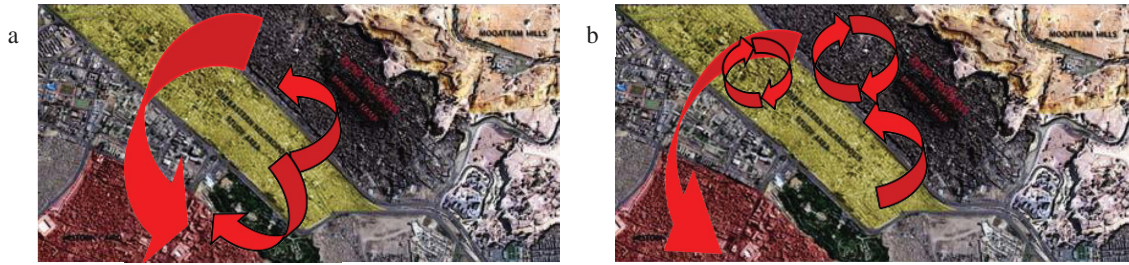


Figure 12: (a) Shows the Present situation for workers movement to Old Cairo center of trading and work opportunities for residents of Manshiet Naser; People who live in Manshiet Naser go to work in Old Cairo, while in the Cemeteries area people move to work in Manshiet Naser and in Old Cairo. This presents heavy traffic have very bad impact on the Historic city; (b) Targeting to reverse the working force movement, so that by developing Manshiet Naser would be attracting and not repelling for its own residents first of all, and also would provide job opportunities for the residents of the Cemeteries and perhaps Old Cairo. Thus reducing the heavy traffic and bad impact on Old Cairo and also stopping more residential growth in the Cemeteries area.



Residents movement within Old Cairo, Cemeteries area and Manshiet Naser.

working force circulation within Old Cairo, Cemeteries area and Manshiet Naser.

Fig. (a) Present status illustrated by researcher, which shows the overspill of Old Cairo and Manshiet Naser and their impact on the Cemeteries. Fig. (b) Expected status illustrated by the researcher, which shows the overspill of Old Cairo and Manshiet Naser and their impact on the Cemeteries if present situation is left undealt with. Fig (c) Target Status illustrated by the researcher, shows the desired proposal for the Cemeteries after applying preservation and upgrading strategies.

The above discussion presents the present, expected and target situation. To achieve the target situation the following steps are recommended by the researcher; for Manshiet Naser : a)accurate population count, b)vertical upgrading for the residential buildings, c)upgrading all public services and facilities, d) surrounding residential settlement with a green belt, e)upgrading the Nasr rd to become an important axe of development. As for the Eastern Necropolis the following is recommended: a) creating an independent planning and administrative entity to avoid conflict of policies and is connected to a bigger planning strategy, b) surveying all vacant and non vacant land plots, c)preservation for all significant monuments (listed and non listed), d) upgrading public services and facilities, (e) stop the burial for the next 30 years and generate a long term land use plan, (g) mixed land use is recommended in the residential zone.

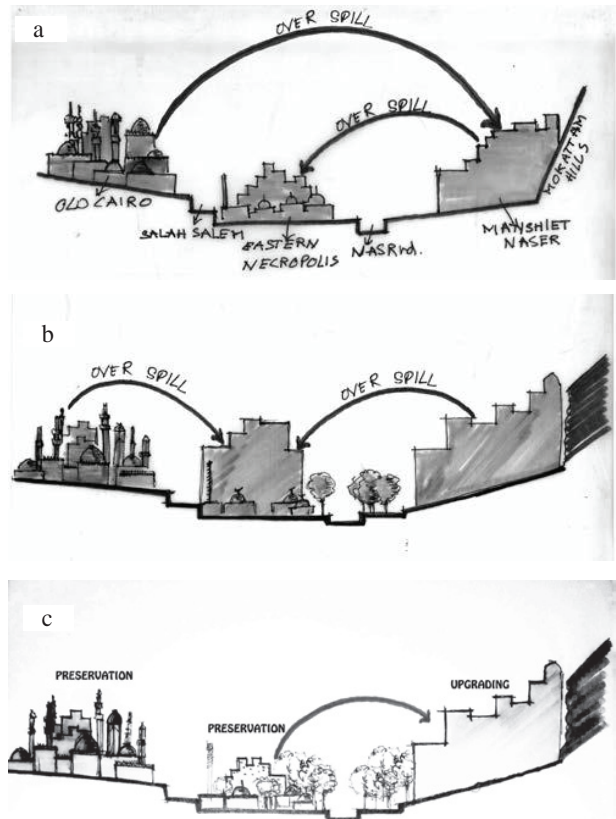


Figure 13: Sketches by the researcher showing a cross section through Manshiet Naser, El Nasr st., the Cemeteries, Salah Salem rd. and across Old Cairo

6.5. Towards a Sustainable Conservation Strategy for the the Eastern Necropolis and Buffer Zone (Manshiet Naser)

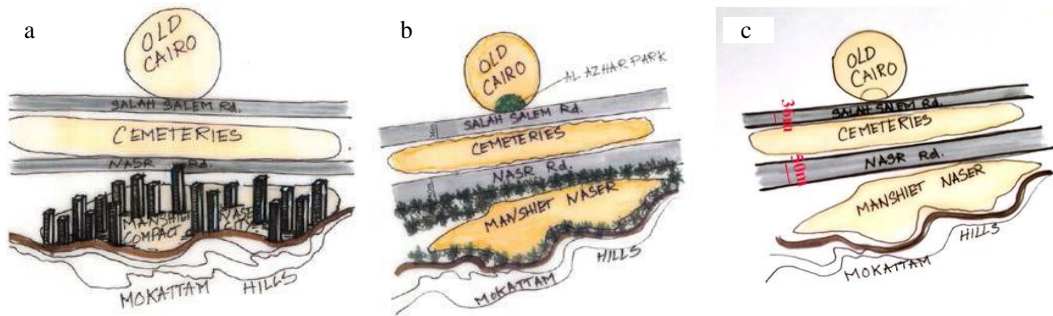


Figure 14: (a) illustrates the researcher's vision of Manshiet Naser vertical upgrading to become a Compact City; (b) Presents the researcher's vision for the green belt that should surround Manshiet Naser Compact City; (c) Presents the researcher vision for upgrading the Nasr rd. in front of Manshiet Naser to become of the same width as the rest of its previous section in front of el-Manassa.

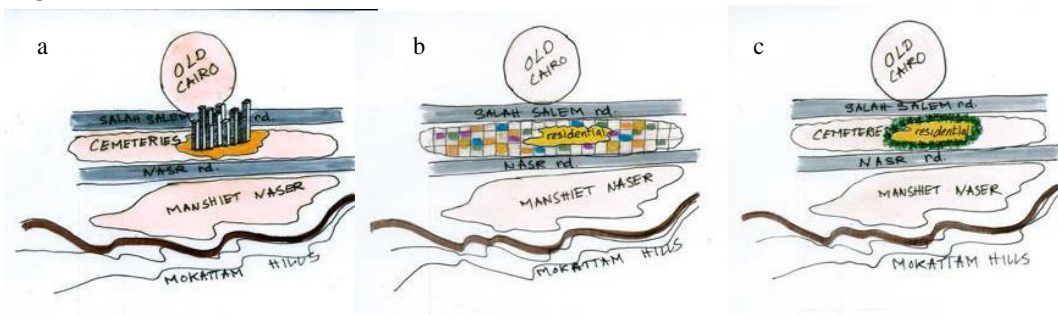


Figure 15: (a) Presents the researcher vision, for upgrading the residential buildings vertically that stand in the middle of the cemeteries; (b) ): Presents an imaginative land use plan for the cemeteries area, prepared by the researcher; (c)Presents the researcher's vision for the green belt that should surround Manshiet Naser Compact City.



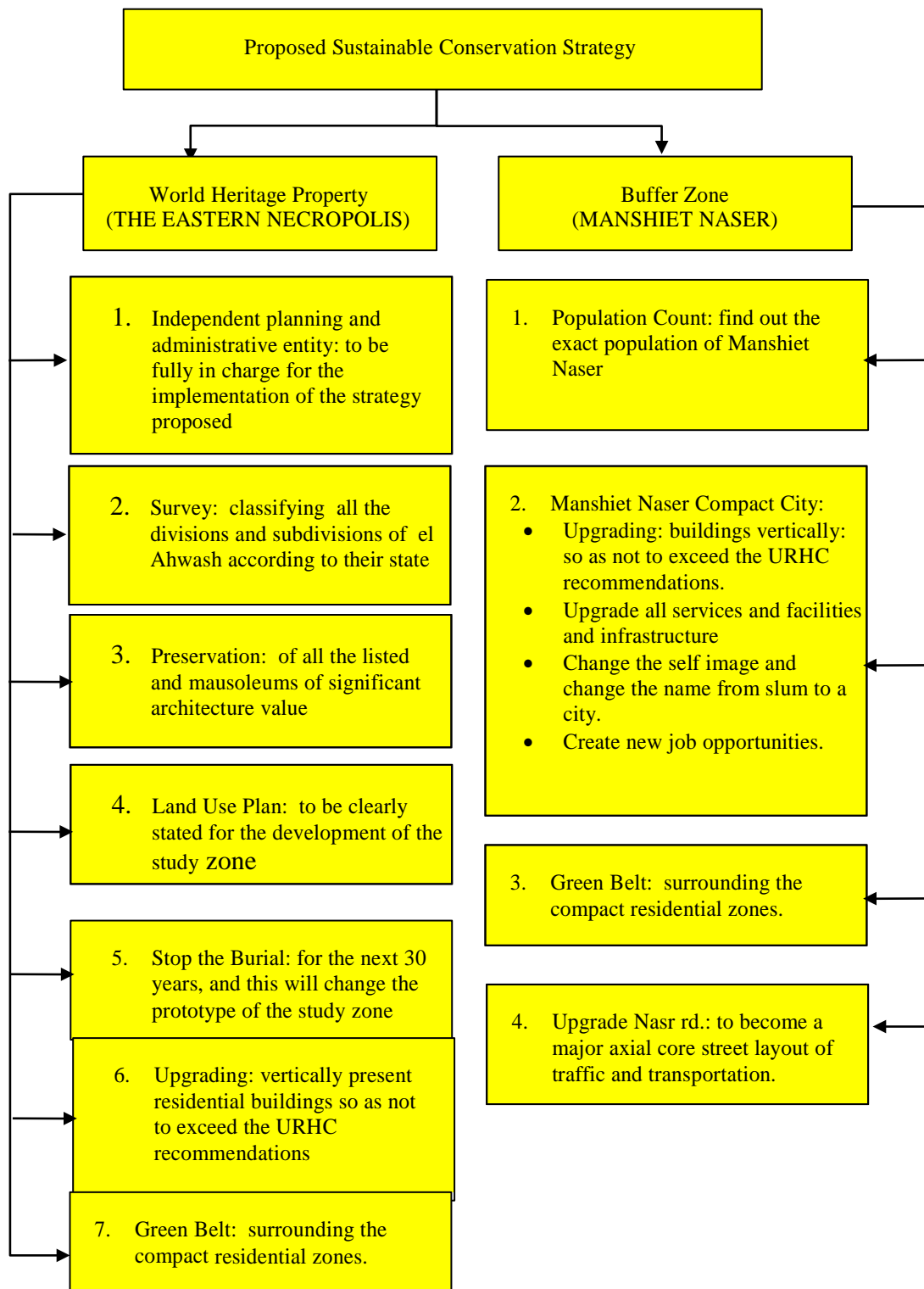
recommended expansion for Manshiet Naser City in a one way direction towards El Maadi -

Surrounding the Compact City of Mansiet Naser with a green belt is essential to overcome the side effect of

Figure 16: Presents the researcher attempt, for the proposed sustainable conservation strategy for the Eastern Necropolis and its Buffer Zone.



7. Conclusion and Recommendations



## Acknowledgements

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