




El Hallous Urban Profile

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Participatory Slum Upgrading in El Hallous & El Bahtini
Technical Advisory Unit
El Hallous Urban Profile
Ismailia Governorate
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By: Amir H. Gohar

El Hallous Urban Profile

United Nation Development Programme

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Governorate of Ismailia

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LIST OF ACRONYMS & ABBREVIATIONS

UNDP	United Nation Development Programme
UN Habitat	United Nations Human Settlements Programme
TAU	Technical Advisory Unit
PSUHB	Participatory Slum Upgrading for El Hallous & El Bahtini
UNEP	United Nation Environment Programme

1. INTRODUCTION

The capacity-building project "sustainable Ismailia Governorate" funded by UNDP and implemented nationally with support from UN-HABITAT is one of the first UN-HABITAT/UNEP sustainable Cities Programme (SCP) pilot projects.
The project directed its efforts to poverty reduction through capacity building of women and youth local NGOs. Throughout the project the capacity of the local authorities was built in participatory Environmental Planning and Management as will as in GIS.

The project focuses on El Hallous and El Bahtini as pilot cases to introduce the participatory approach in upgrading; they were also selected because of their strong need to direct treatment and immediate actions.

The settlement profile is usually a comprehensive description of the physical as well as the socioeconomic status of a selected settlement. This Report was prepared by the TAU in the Participatory Slum Upgrading in El-Hallous & El-Bahtini (PSUHB) to provide a general understanding about the urban context of the settlement. It focuses on the physical (urban) environment of el Hallous village as one of the selected settlements for the upgrading in the governorate of Ismailia. The report should provide the reader with a holistic overview about what is the main physical content of the settlement.

This report will describe and analyse the urban context of El-Hallous and will go through describing the following:

- Area & population
- Define the Community Boundaries
- The Built Form
- Land Use
- Services
- Infra structure
- Development opportunities & constrains
- Physical problems

Urban data presented in this report were derived from direct survey for el Hallous village, and also obtained from all stakeholders through participatory meetings and group discussions.

2. OVER VIEW OF SETTLEMENTS PROFILES

The Settlement Profile is a process by which communities take stock of where they are today and develop an action plan for how they want to operate in the future.

Whether the issue is a quality school system, an air pollution problem, lack of adequate affordable housing or solid waste disposal, the need for effective problem-solving skills is the same. The settlement Profile assists communities, local authorities, decision makers and community leaders to develop their problem-solving ability.

It provides a method for citizens to affirm community strengths, identify concerns and problems, and then to help a community structure collaborative approaches to meet these challenges creatively, set directions for the future, and manage change. Ismailia as a city had been profiled many times in several initiatives because of its successful contribution to solving informal settlemts problems.

3. THE URBAN PROFILE DATA COLLECTION

assess the amount of data the project has as a start and these data's validity. A good amount of maps from different

1. Collect the different maps from previous studies
2. Field verification
3. Check the day to day construction of new buildings
4. Check maps accuracy
5. Buy satellite imagery or Arial photographs(if 4. is not sufficient)

3.1 COLLECTING PREVIOUS MAPS:

The available maps were put together and combined to assess the amount of data the project has as a start and these data's validity. A good amount of maps from different sources and different dates were collected and overlaid. These maps were brought from the governorate (the planning and mapping unit).
Most of the found maps where in CAD format and it accuracy had been varying from an area to another in the same map, this is due to the way of digitizing the plots in the map (some are digitized form a paper ma and other were designed on CAD and inserted into the big map).
The following diagram is an example of the map found in the governorate archive
The map in figure (2) is showing a sample of a building that was found on the ground and not on the map which reflects the inaccuracy of the map and raised the doubts about the latest update.

Figure 1 sample of the available CAD drawings from the governorate

3.2 FIELD VERIFICATION:

It has been realized that there is a strong need to verify the maps from the field and check the accuracy that the project has; this is to be realistic and practical in developing and proposing plans.

3.3 CHECK DAY TO DAY CONSTRUCTION OF NEW BUILDINGS:

After huge and intensive visitation to the two areas (Hallous & Bahtini) it was noticed that allot of buildings are being added on daily basis and that we do not have enough accuracy for the existing maps.

The project management played an essential role

3.4 CHECK MAPS ACCURACY

After field investigation the following two issues were realized: (1) the accuracy of the base maps & (2) mixing the existing data on the map with the proposed planning on the same map.

ISSUE ONE:

The accuracy of the base maps:

It has been found that some of the building alignments is not accurate as required and also the maps is not updated... in more than one occasion it has been found that there are buildings that are not on the map.

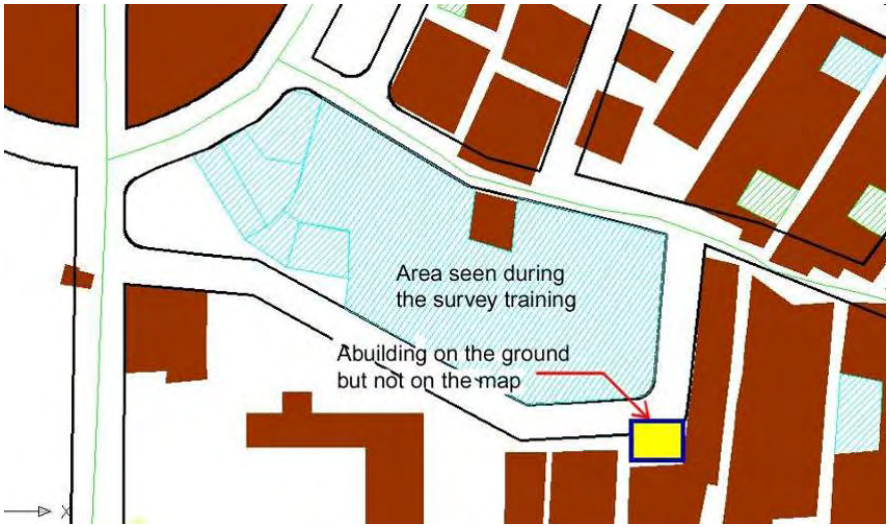

Figure 2 accuracy of existing base maps

It is necessary to update the map and make sure that buildings in place before (or while) the physical survey.

ISSUE TWO:

The previous proposed planning:

We need to make a strong segregation between the existing condition as is and the previous proposed planning, especially that some of the proposed roads are not properly located or could removed to better location with less interfering with the existing building as shown in the map below. The map in figure (3) shows a proposed road that interferes with the buildings and could easily be removed to another are few meters away to reduce the conflict with the local residents.

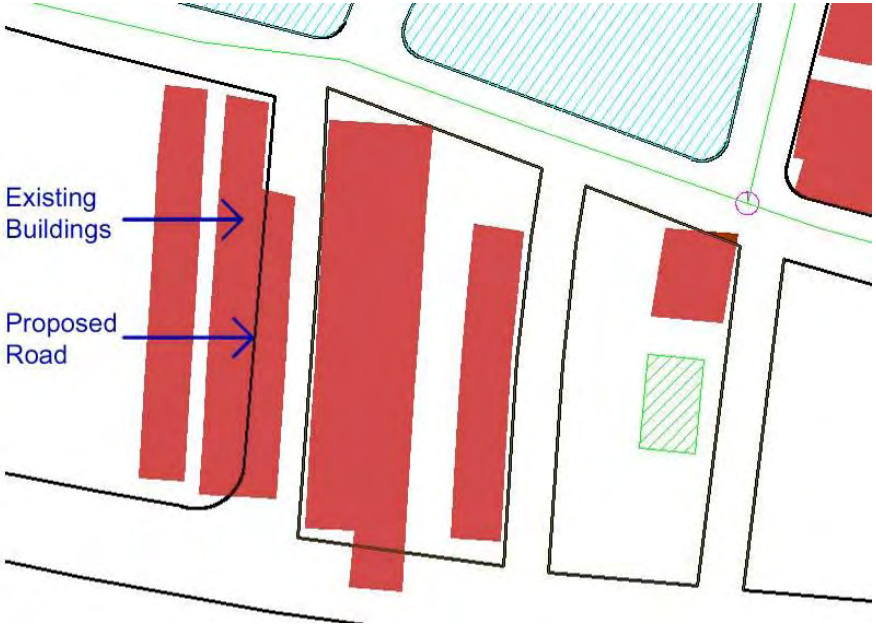

Figure 3 Mixing existing and proposed map features

It is highly recommended to revisit the proposed road planning and completely separate the maps of the existing condition and the maps with the proposed alignments.

3.5 PURCHASING THE SATELLITE IMAGERY

then it appeared that it is buying a satellite imagery is becoming a must therefore an "Ismailia_Ikonos80cm" was purchased and helped allot to get 80 cm accuracy and properly structure the base map.

The imagery that was purchased supported the project very much n visualizing the reality of the study areas and measure accurate distances and areas.

Figure 4 The Purchased Imagery for Ismailia including EL Hallous

4. AREA & POPULATION

El-Hallous has an area of about ... and a total population of ... most of El-Hallous inhabitants are originally settled in the area for a long time till 1967, then after the war they immigrated to other nearby cities and in 1974 they return and the settlement has allot of potentials and started to attract other inhabitants.

Elhallous is considered within a reasonable distance from abuatwa and adam from the west, the tourism villages zone from the east and Omara tourist road that leads to Ismailia city centre; all this supported its dependency on the near by services and infrastructure within these surrounded settlements

The built form of the area is currently within natural boundaries as it is surrounded by green fields and a difference in the contour level which construct a strong identity for the settlement, it is surrounded from the south west by

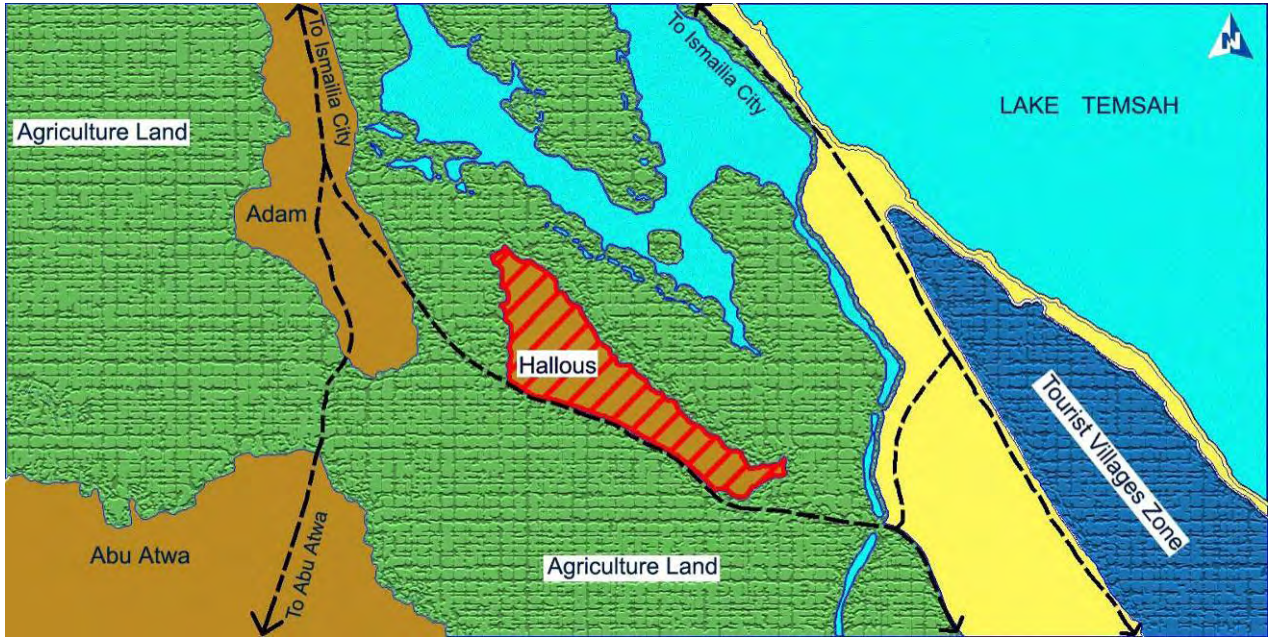

Figure 5 El Hallous location within the surrounding context

its main road that links the village with abu-atwa adam and el bahtini.

This unique site near by the main fishing lake directed allot of local residents to utilise this opportunity and work in the fishing (fish and umm-elkholoul).

Figure 5 shows the distribution of the land uses around el Hallous village as explained above, it also illustrates that the informal expansions in this region (including el Hallous) is tking alinear pttern and usually around the main spines of movement or the main asphalt roads.

It is easy to recognise that el Hallous, as well as Ezbet Adam settlement, is taking the north-south direction of growth. In addition to Abuatwa which is about to grow to link with Adam which emphasis that future expansion, if the pattern continues, will remain around the main roads.

Figure 6 the satellite image of el Hallous from Quick-Bird 0.6 m resolution

5. THE BUILT FORM

The built form of the settlement is usually described by identifying the and describing the building heights, conditions and building structure in terms of areas and numbers as explained below:

5.1 BUILDING HEIGHTS

The building heights was grouped into the following categories:

- Onestory
- 2-3 stories
- 4-5 stories
- More than 5 stories

This classification resulted to the map in figure (7). The percentages of this category distribution is as follow:

Heights Category	No of Buildings	% from total No.
1 story	474	65 %
2-3 story	218	29 %
4-5 story	24	4.62 %
5<	10	1.38 %

Figure 7 table showing the number buildings in each category

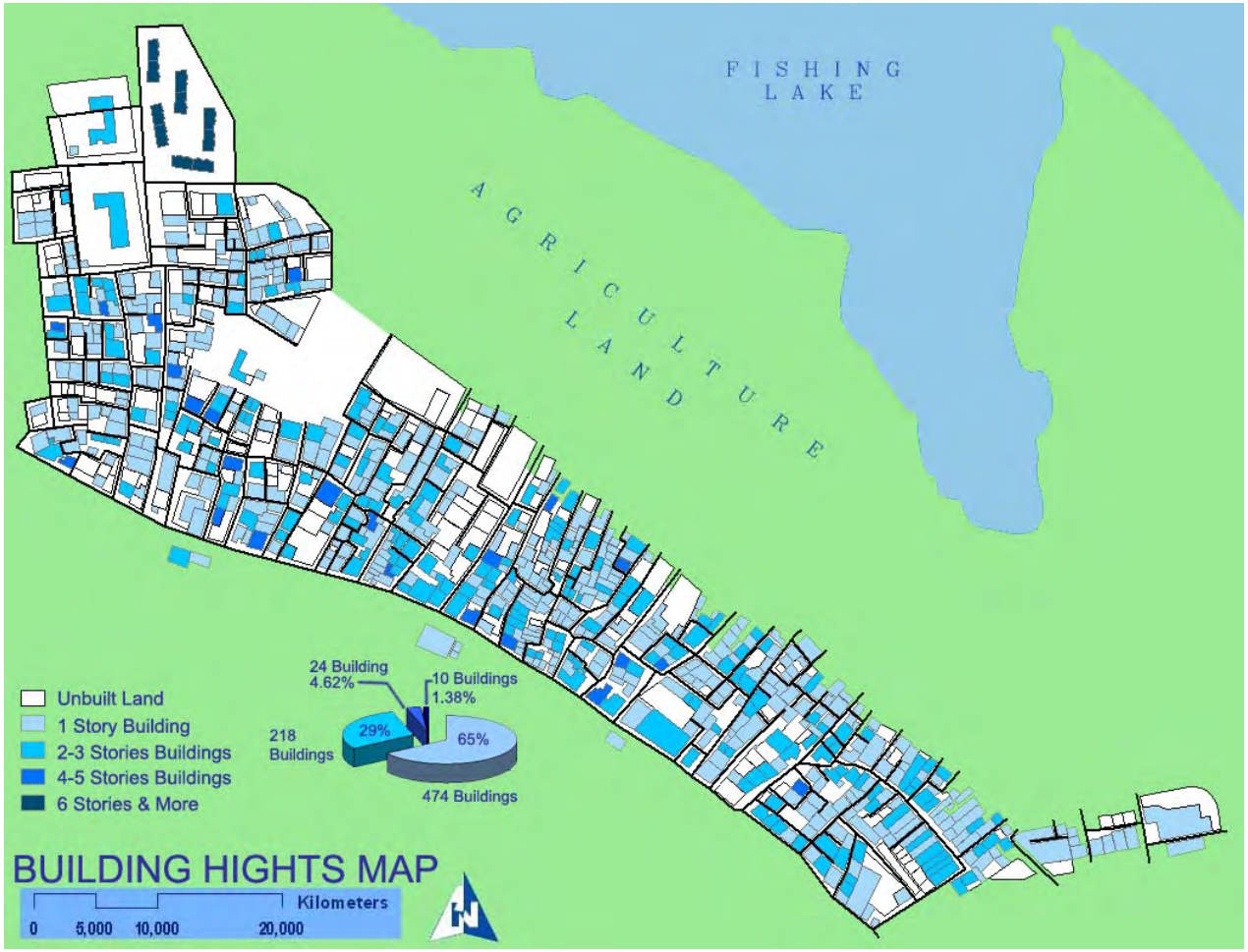

Figure 8 El Hallous Building Hights

5.2 BUILDING CONDITIONS

The building conditions was grouped into the following categories:

	**1. GOOD** Example of Good condition Building
	**2. MEDIUM** Example of Good condition Building
	**3. BAD** Example of Good condition Building

This classification resulted to the map in figure (9). The percentages of this category distribution is as follow:

Conditions Category	No of Buildings	% from total No.
Good	313	43.23 %
Medium	201	27.76 %
Bad	210	28.01 %

Figure 9 table showing the buildings number in each category

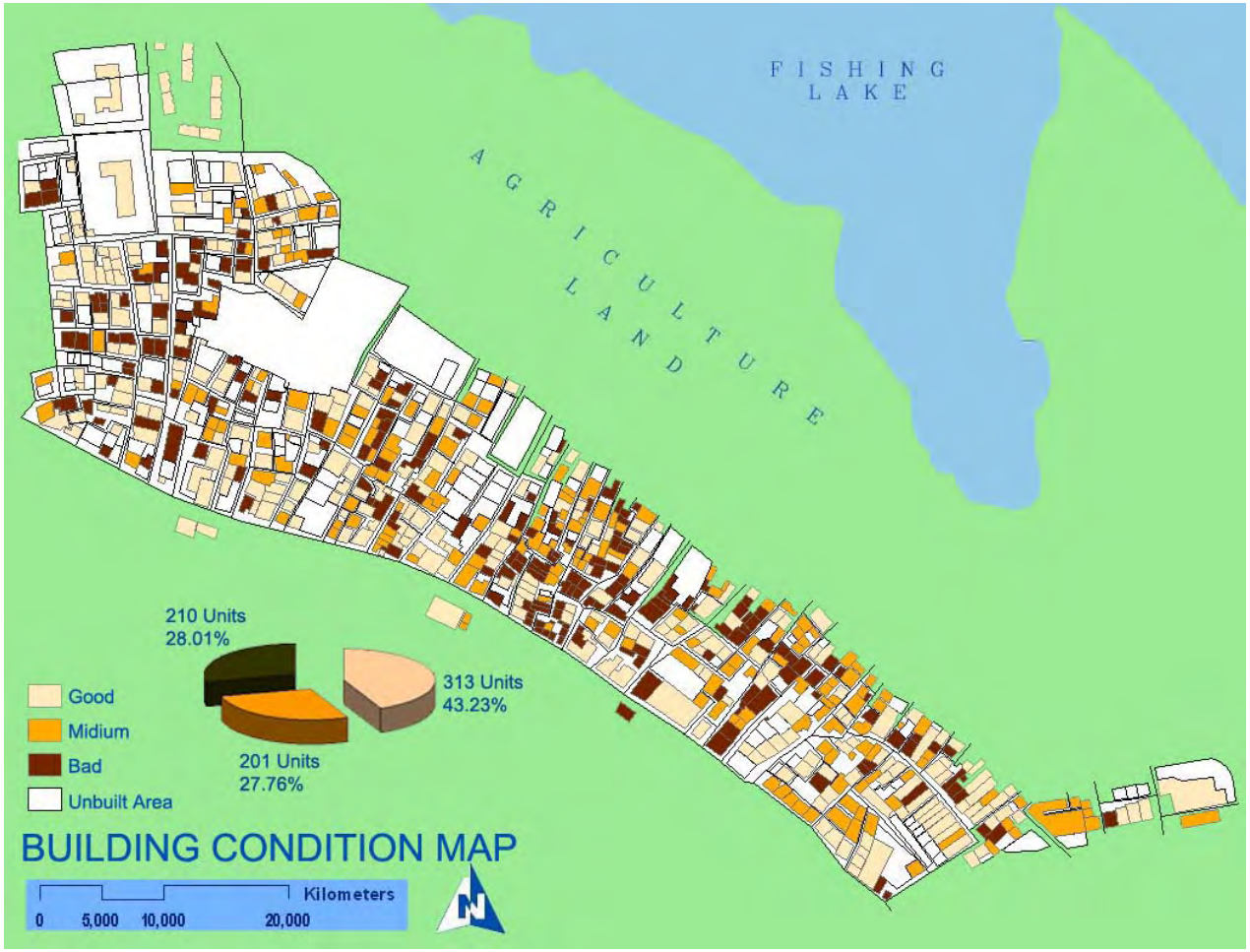

Figure 10 El Hallous Building Conditions

5.3 BUILDING STRUCTURE

The Structure was grouped into the following categories:

- Structure – Concrete [SC]
- BrickWall – Masonery [BM]
- Mud & Clay Bricks [MC]

This classification resulted to the map in figure (12). The percentages of this category distribution are as follow:

Structure Category	No of Buildings	% from total No.
SC	281	38.81 %
BM	274	37.85 %
MC	169	23.34 %

Figure 11 table showing the number buildings in each category

This classification explains the structure of the built form ad helps identifying possible intervention in any planning / upgrading process. This layout of such information provides to the decision maker a picture in which will support his understanding of the value of the existing real-estate in el Hallous town.

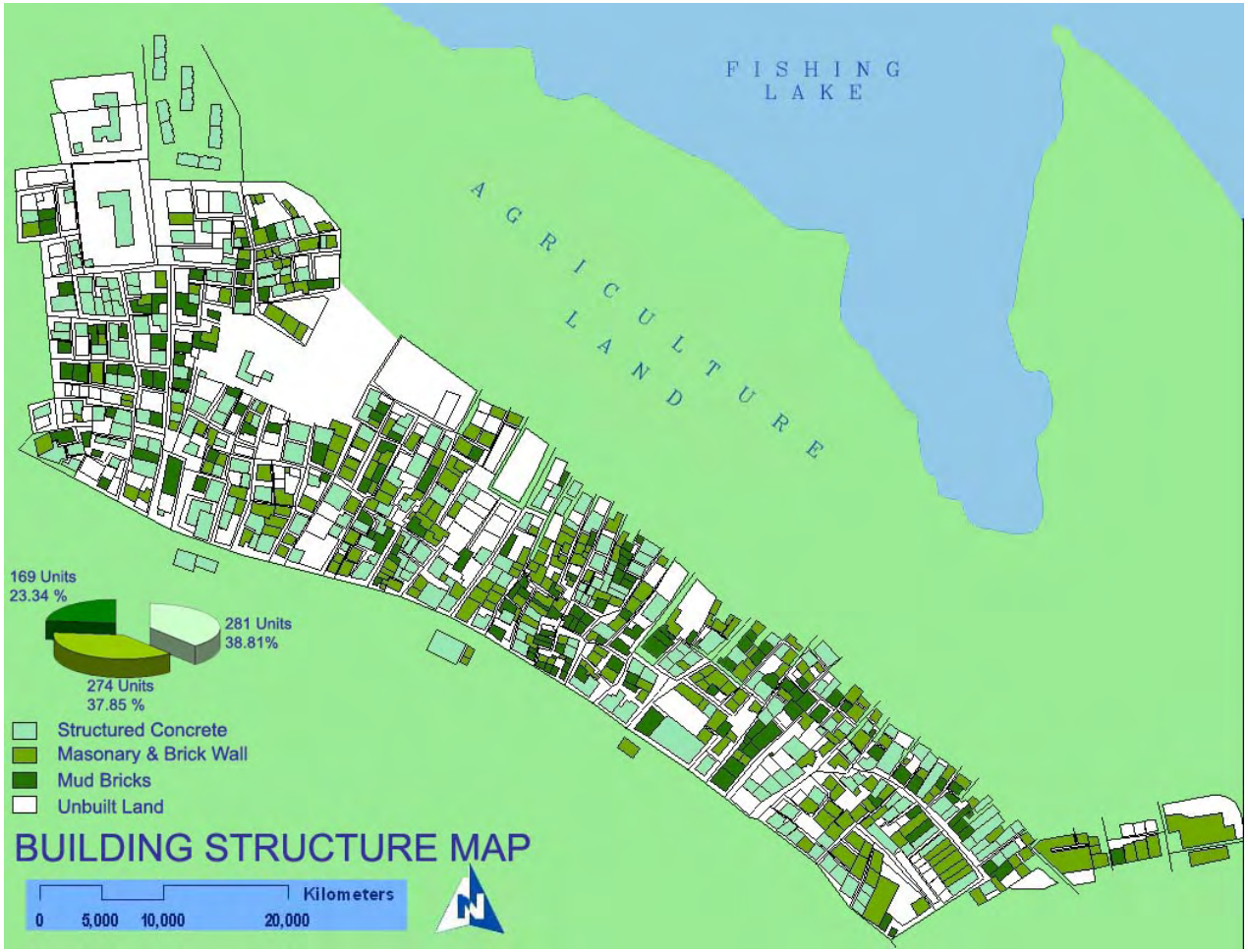

Figure 12 El Hallous Building Structure

6. LAND USE

The land use pattern of el Hallous village is not so sophisticated, it mainly consists of residential areas. all the uses can be classified as in figure (13) as follow:

- Residential

Which are the basic residential areas where no other uses exist.

- Residential / commercial

This mainly includes the residential stories except for the ground floor where there are local shops and groceries that provide goods to the locals in the area.

- Residential / Vocational

Which are residential blocks with handicrafts and handmade local industries such as the fishing nets

- Vocational

This includes buildings that are totally used exclusively for local products with no residential stories such as the warehouse for building local small fishing boats

- Commercial
- Such as local groceries, shops, and basic daily goods.
- Vacant lands

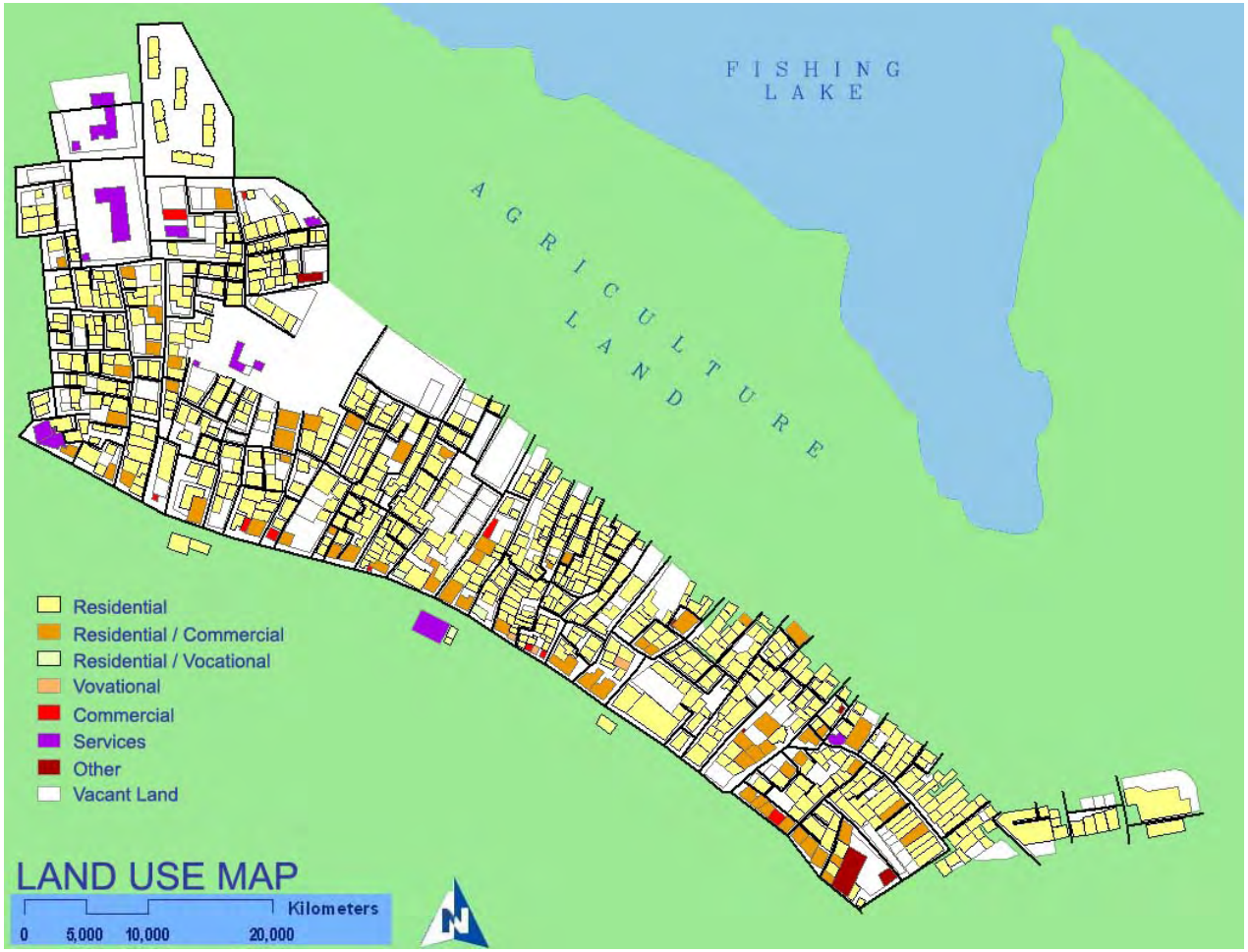

Figure 13El Hallous Land Use map

- Services

Such as schools, mosques, NGO, Nursery and Youth centre.

7. SERVICES

The basic urban services in the settlement is consist of the following:

- Mostafa kamel primary school
- Mostafa kamel secondary school
- Youth centre
- El-Hallous NGO for community development
- Mosque 1
- Mosque 2
- Mobile Health Unit
- Public transportation

7.1 SCHOOLS

1- Primary school has 340 students (Mix)
2- Preparatory school has 125 students (Mix)
The education in the high school levle is covered through the following schools:

1- in Abu-Atwa

Secondary (general) boys
Secondary (general) girls
Secondary (technical-industrial) girls – dresses, HVAC, tricot & mechanical sewing
Islamic diploma

2- in the city of Ismailia

Secondary (general) boys
Secondary (technical-commercial) boys
Small number (10-15) of the students come to el hallous schools from Ezbet El Zahraa (Ali Eid) for the preparatory school.

Figure 14 El Hallus Primary & Preparatory schools

The following table shows the planning standard for the school densities which reflect to quantitative shortages in the service.

Azhari School	40 student per class
Secondary school	35 student per class

however, it has been recognised from the locals meetings, focus group discussions, and needs assessment that there is a qualitative problem in terms of the quality of the teaching process and its surrounding environment, and therefore, and due to economical reasons as well, the education as a process needs allot of enhancements.

7.2 HEALTH SERVICES

The mobile health unit comes every Monday and it doesn't cover the demand for the health service. there was allot of requests to build a health unit in el Hallous to cover the minimum basic services for the local residents , however, the geographical distribution for t5he health units does not allow for one in el al Hallous because the nearest health unit is in Abu-Atwa which is less than 5 km from el Hallous. Although it

is within a walking distance but people do not use it for the following two reasons:

a) it is not safe for the women to walk this distance because of the high rate of crimes by drug dealers
b) the high cost of transportation (usually taxis that people can not afford easily)

People use the following health services instead although it is not as convenient for all:

- mobile health unit (only on Monday)
- first medical centre in sabaa banat
- health unit in abu atwa
- homeyyat hospital in Ismailia
- sadr hospital in Ismailia
- alamiri hospital in Ismailia
- university hospital in Ismailia

The following are the standards for the urban planning health services:

5000 people	1 health unit
15000 people	health complex

According to the above table, el Hallous has a lack of the health unit (since the mobile unit is not available daily) and also suffers a problem in the spatial distribution of the health services in near-by villages.

7.3 YOUTH CENTRE

The youth centre was established in the mid 70s and it was smaller than its size now. As the population growth there was a demand for increasing the area to accommodate the youth demands.

Figure 15 El Hallous Youth Centre

In mid 80s it was developed and renovated to become on the shape and form that it has now. The picture and layout in figure (15) show, to the left, the existing layout of the centre with its surrounding, and to the right, is a picture showing the main entrance with the social building within the centre.

7.4 MOSQUES

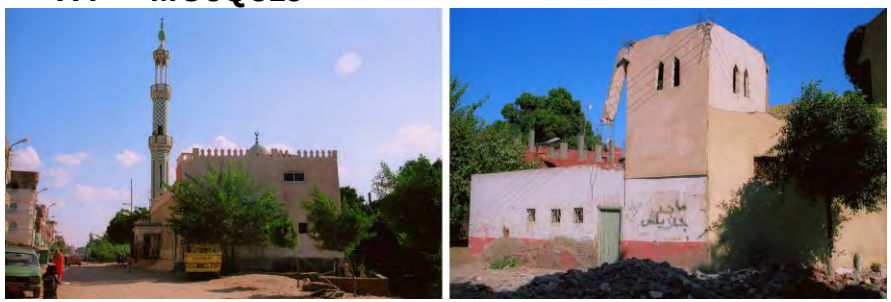

Figure 16 To the right the government mosque and to the left as an example of the privately initiated mosques (zawya)

El Hallous village has one major governmental mosque and, where the main Friday prayer usually takes place, in addition

to that, there are local initiatives for building small mosques (zawya) and el Hallous has four or five types of these small praying corners.

7.5 OTHER LOCAL SERVICE [PRIVATE INITIATIVES]:

There are some other services that are considered private initiatives from the local residents such as:

- Telephone and communication centre
- Bakery (producing local bread)

These are considered commercial (marked in the land use map as commercial use) but these activities provide local services for the residents.

The picture in figure (17) shows the backery of el Hallous, to the left, and the communication / telephone shop to the right, both located in el Hallous main road.

Figure 17 Local services provided as private initiatives

8. INFRA STRUCTURE

8.1 ELECTRICITY

All el Hallous is connected by electricity, some are legal connections are other are not. However, the illegal connections are considered very risky connections because of the wires exposure to water, children and adults. Its also very close to the house daily activities.

8.2 SANITATION

No waste water installed network in el Hallous, except for the main road that runs northeast-southwest, it has an old embedded pipe with allot of manholes. The efforts are being put from the PSUHB, Ismailia Governorate, Local municipalities to construct a waste water plant and install a complete network in whole village. The picture in figure (18)shows the construction site of the waste water plant in el Hallous.

Figure 18 Waste Water Plant is currently being constructed [Jan-06]

8.3 ROAD NETWORK

The road network is generally in very bad condition and all unasphalted except for the main road of el hallous that has some asphalt remain after the extensive construction work that ended up with a road in very bad condition and damages the vehicles that uses it.

8.4 WATER

The water network is not in place except for the main road where the main pipe in already installed in the main road in el Hallous. There are local initiatives for installing some pipes perpendicular to the main road to cover the areas to the maximum 30 m away from the main pipe, these are paid from the residents to the Suez Canal Authority and the houses with the 30 metre are not all covered. The rest of the houses use the public tabs in the main line or use the end line of their neighbours.

8.5 TELEPHONE NETWORK

The telephone network is not covering all the houses and there are some private initiatives to install telephone boxes such as the one in el Hallous main street in figure (19).

Although the hardware is physically installed but the actual services is not yet functioning n the installed area.

Figure 19 one of the telephone boxes in el Hallous main street

9. URBAN PROBLEMS

The problems of such areas are usually so complex and could not be classified in isolation of the other environmental, socioeconomic and administration problems. However, the following list is a summary of the problems that has a direct urban, or physical, impact on the built form of the village:

9.1 THE REAL ESTATE STOCK IN A VERY BAD CONDITION:

The buildings are in very bad condition either due to cheap construction or due to lack of maintenance and this is considered a waste of resource as it is considered one of the community assets when looking at upgrading existing settlement. The two pictures in figure (12) is a representation for the buildings in bad condition in el Hallous.

Figure 20 Buildings in bad Conditions

9.2 CONSTRUCTION WITHOUT PERMITS

The rapid illegal construction s a trend in these types of settlements as it is considered a method to occupy the land and it usually happens in the nights where there is low monitoring (if any). People tend to use structured concrete building t make more difficult for the local authorities to tae the lad back ad he demolishing decision becomes more difficult and less probable. The image in figure (13) represents a case for a building that is being constructed over night starting with the concrete columns.

Figure 21 Building without permit

9.3 LACK OF SANITATION SYSTEM:

The lack of infrastructure in general is a major problem in the village, however, the lack of sewage system clearly generates allot of urban problems such as the over floating of the sewage water in the main roads `which creates a health problem in addition to the original movement problem. As shown in the picture in figure 14 which is a photo taken in one of el Hallous main roads.

Figure 22 No Infrastructure

9.4 URBAN ENCROACHMENT OVER THE AGRICULTURE LAND:

This is considered a typical problem for all similar areas where the available vacant land, with lack of urban management, can not accommodate the population growth and people tend to expand and build on the edge of the built form of the village. This expansion is usually on agriculture land that surrounds the settlement. People, on one hand, tend to ignore the agriculture and reduce the level of its maintenance gradually until it becomes a normal vacant, and, on the other hand, develop urban pockets, which mean surrounding the targeted land with urban development until this pocket become part of the urban context rather than being a producing agriculture land. A good example of this urban pocket is shown in the picture in figure (16).

Figure 23 Urban pocket (vacant land surrounded with urban development)

9.5 NARROW ROADS

This problem appeared due to lack of urban planning and the unstructured massive building growth. This problem has affected the movement (modes of transportation) as it is very difficult to guarantee vehicular access to most of el Hallous Roads. In addition to that, the narrow roads prevent the community from having proper wind circulation and sun exposure and therefore this physical problem has environmental implications.

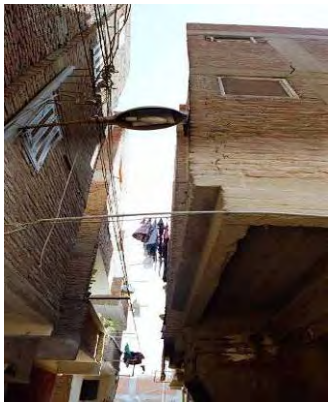

Figure 24 Narrow Roads

The narrow roads also make the installation and construction of infrastructure almost impossible as some roads get as narrow as 1.5 meter where it become almost impossible to use trucks, trailers and other construction equipment.

9.6 LACK OF SOLID WASTE MANAGEMENT

The lack of any solid waste management system generates an enormous amount of waste in the public spaces. Figure (22) shows an area just adjacent to the main street of el Hallous and parallel to a major drainage channel, the area in the picture is congested with allot of organic and non-organic waste that is thrown randomly just away from the private homes. This waste generates allot of environmental and health problems such as the increasing of the rodents in the village.

Figure 25 Lack of solid waste management system

9.7 POLLUTED AGRICULTURE DRAINAGE CHANNELS

The main drainage channels in the west of el Hallous, as well as he sub channels in the east, are contaminated by more than one source of pollutant. This pollutions come form the local residents, the surrounding settlements, the services, the construction waste,... and a lot more.

The picture in figure (23) shows the pollution of the drainage and its direct effect on the surrounding built form as well as its poisoning for the agriculture land which has a direct effect on the trees and the all the green stock.

Figure 26 main drainage channel extremely contaminated

9.8 LACK OF INFRASTRUCTURE

The lack of infrastructure increase the pressure of the waste water holding / septic tanks and therefore the over floating of the residential waste creates allot of environmental and health problem in addition to its direct negative effect on the (i) the building conditions, (ii) the road conditions and (iii) the surrounding soil which makes new construction difficult.

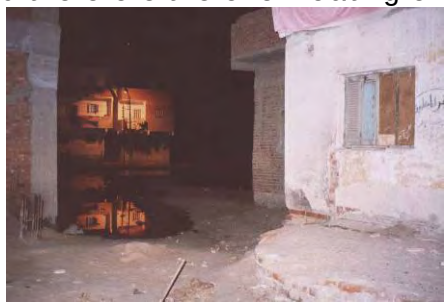

Figure 27 No waste water system

10. DEVELOPMENT OPPORTUNITIES & CONSTRAINS

10.1 OPPORTUNITIES

The settlement of el Hallous has enormous development opportunities that could be utilised to resolve some of its physical problems. These opportunities could be listed and summarised in the following:

a. .Areas for future development and urban expansion (horizontal expansion), as shown in yellow in figure (). These areas could be used to locate any needed services.
b. The northern edge is overlooking a magnificent view and could be utilised as a tourism attraction with tourist related activities n the local level.
c. There are areas among the settlement cross roads [the ones north-east / south-west, perpendicular to the main road in he east], there are some potentials for developing main road with main entrances to this dense settlement. This is an opportunity to increase the permeability of the existing urban tissue
d. One and two story buildings that could absorb more population by increasing the number of stories (vertical expansion). This could be obtained from the building height map in comparison with the building condition map.

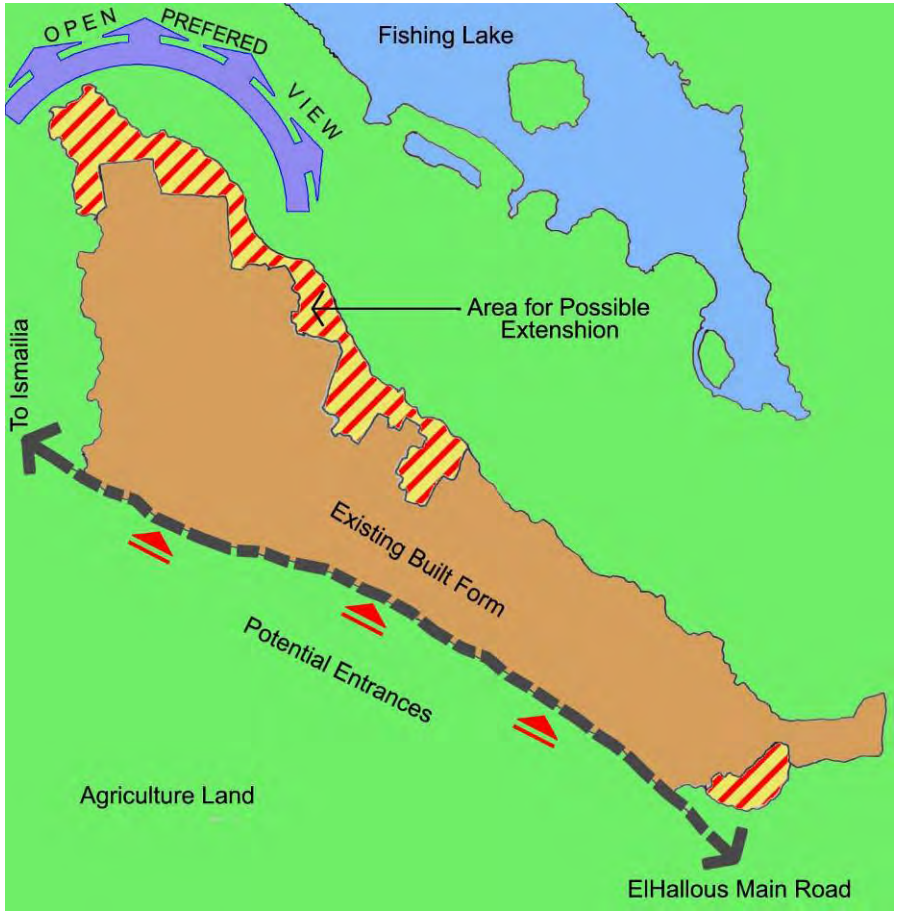

Figure 28 Potential permeability at proposed entrances, potential at the open view north edge & potential for horizontal expansion

Figure 29 Possible addition of stories on the 1 story concrete buildings

10.2 CONSTRAINS

There are existing constrains that will define the future growth or play a significant role in constraining the future urban planning of el Hallous. Theses physical constrains could be summarised in the following:

a. the agriculture land from the west and the north:

this boundary is considered physical and natural limitation to the urban growth because it consists of dense net of matured trees. It is marked as intensive vegetation in figure (27).

b. The topography in the northwest

This is a constrain for development expansion because it is a slope that prevent from further expansion and also its soil is verly loose particles of sand that does not support concrete foundations and it is marked in figure (27) as sloped land.

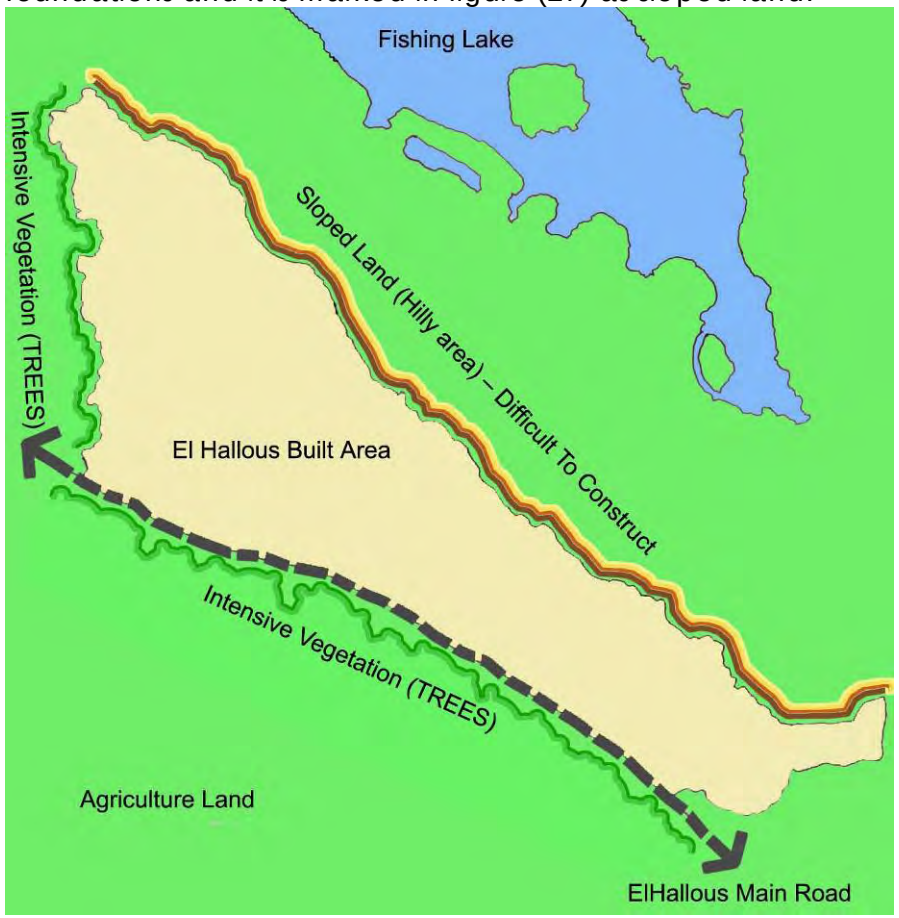

Figure 30 Development and urban growth physical constrains

c. The concrete construction that falls in the existing roads:

This represents the buildings in the roads spans, which is a huge obstacle towards widening the main roads. Figure (28) shows a thematic sketch to how the buildings alignment exist and its role as an obstacle to the proposed road alignments.

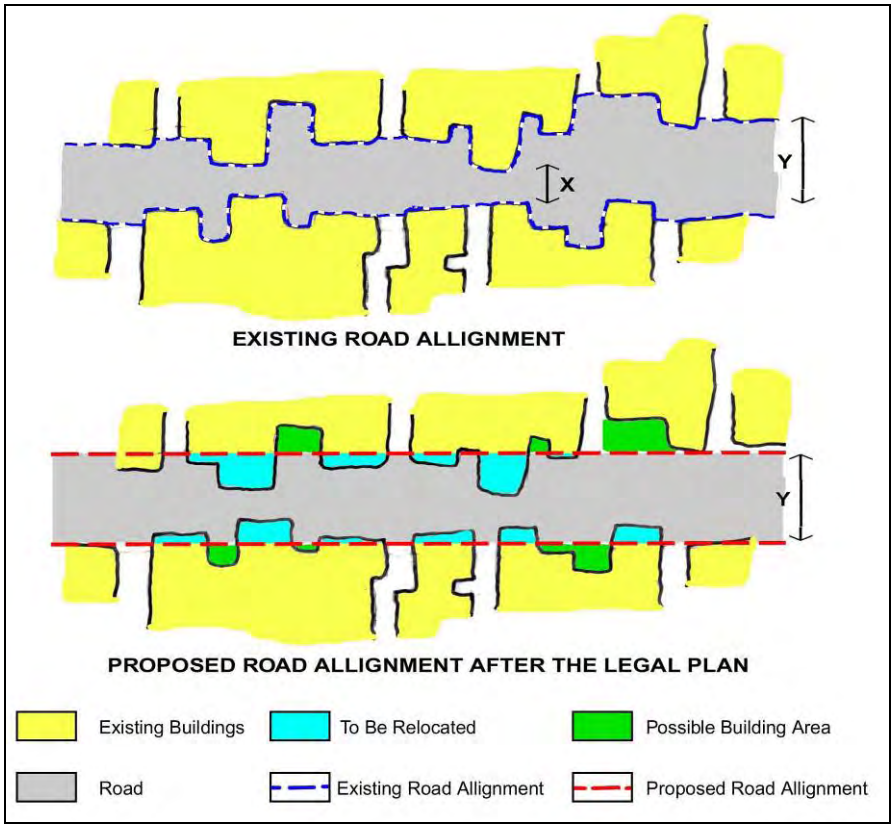

Figure 31 Different development constrains around el Hallous

NOTE: the carrying capacity of the settlement need to be calculated in order to assure that the above urban encroachments issues are a real development constrains; (they might be positive encroachments constrains to prevent the massive growth of the urban settlement that reflects a huge land use/ land cover change).

These development opportunities ad constrains are only the physical (identifiable and measurable). It is extremely important to consider the social aspect behind this physical analysis, as there is allot of positive social potentials and power that could work as a vehicle towards sustainable development for el Hallous; in addition to that, the social constrains could be the serious development limitation that need to be considered when analysing the settlement profile.

The socioeconomic profile is an important document to support the understanding of this report. It is a complementary document and extremely important to analyse the factors that are behind this physical profile.
Any intervention in any upgrading process will not be sustainable if the socioeconomic pattern is not analysed thoroughly.

In addition the socioeconomic data, there are other factors affect the final urban form that this report is analysing such as the local administration system, the urban management system, the monitoring for the local authorities, the legal status,...and allot of other administrative and financing factors.

APPENDICES

The information in this report is supported by huge amount of surveys and maps collected through the project office in the Ismailia Governorate and these materials are available upon request. These appendices could be summarised in the following list:

1. questionnaire urban survey forms
2. questionnaire social survey forms
3. questionnaire services survey forms
4. questionnaire priority problems survey form
5. photographic documentation for individual buildings
6. set of GIS urban profile maps
7. set of GIS infrastructure maps
8. set of graphical illustration & sketches
9. Interacted GIS system with all the physical data

The appendences appendices listed above are available at the project office in the Ismailia governorate:

Tel: +2 (064) 334 6132
Fax: +2 (064) 391 8085
P.O.Box: 191 – Ismailia
e-mail: sigp_2002@yahoo.com
Amir.Gohar@BTinternet.com

For more information contact: Mrs. Habiba Eid OR Mr. Amir H. Gohar