

P A R T   I I I

D I S T R I C T   A N D   V I L L A G E   P L A N N I N G   I N

T H E   N I L E   D E L T A

With special referents to Markaz Ashmoun  
and the country town of Shatanouf.



# KEY

--- DISTRICT BOUNDARIES

--- VILLAGE BOUNDARIES

— RAILWAYS

— PRINCIPAL ROADS

— ROADS SUITABLE FOR WHEELED TRAFFIC

--- HARBOR ROADS

— CANALS & DRAINS

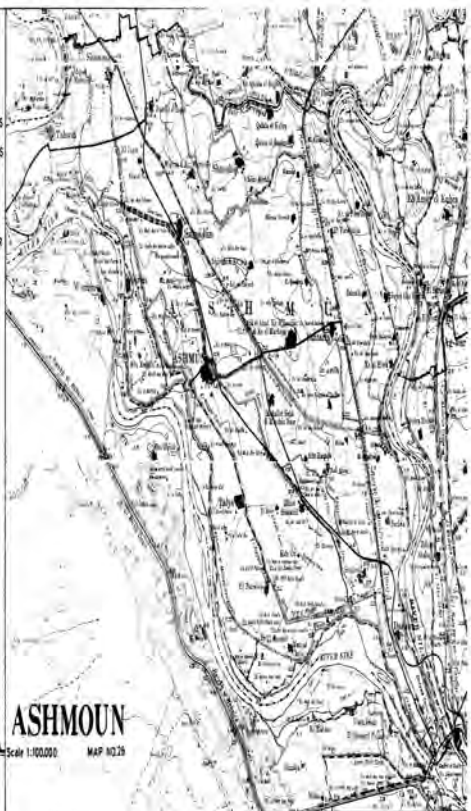
□ VEZIRK LAND

## MARKAZ ASHMOUN



Scale 1:100,000

MAP NO.26



CHAPTER IX

SURVEY AND PLANNING OF MARKAZ ASHMOUN

The district of Ashmoun, not only has a unique character as it forms the central part of the Delta, but it is also in a sense, representative of the whole Delta since within its boundaries it contains examples of three main settlement patterns to be found in different parts of the Delta. (See map No.9) Moreover the general population problem which characterizes the Delta is here in its most intense form since Ashmoun is one of the most overpopulated districts in the Delta.<sup>(1)</sup> One of the main reasons for choosing this particular area is the availability of most of the information needed for a study of this nature, since much research has already been carried out. This might be because it is one of the nearest areas to Cairo or because of its special physical features which make it an easily definable entity capable of separate examination without much reference to the influence of its neighbouring districts. It is quite noticeable that most of the rural reforms were first implemented in the areas nearest to the capital. This again gives the District of Ashmoun another advantage of being up-to-date in benefiting from the different types of reform.

The choice of the village of Shatanouf for special study was also based on similar grounds.

(a) Physical Features

General Setting

Between the Rosetta Branch to the west and the Damietta Branch to the east, lies the 67,971 feddans of Ashmoun, about fifteen miles to the north of Cairo. The southern boundary of Ashmoun is formed by the Delta Barrange. (See map. No.26).

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(1) Density of population is 1,800 per square mile.

With the two branches of the Nile on the two sides of the area, the 'Markaz' is somewhat cut off from neighbouring areas, except on the northern side where the boundary is less clearly defined except in northern Shanshour and part of Magiria where the boundary runs parallel to the southern bank of El-Faraonia drain, a former river channel.

The 'Markaz' of Ashmoun occupies the highest land in the central Delta and is very well served by the main sources of irrigation.

This geographical position is also responsible for many other results. Its effect on land holdings is serious. As a result of its nearness to Cairo most of the large farm holders find it easy to live in Cairo and are content with occasional visits to their farms.

Being near to Cairo and served by road and railways, the cropping system of the Markaz is partly directed towards the urban markets of Cairo. This applies especially to farms with vegetable and orchard produce.

### Topography

The land is almost flat. The differences in height between the contour lines is insignificant. The contour lines, however, run across the area from east to west while the inclination of the land drops to the north. The contour lines are very much affected by the course of the two branches of the Nile. (See map No.27). This explains the fact that the irrigation canals and drains run northward following the inclination of the surface of the land.

There are many bends in the two branches of the Nile which cause the flooding of a considerable area inside the curves during the flood of the Nile. These parts are called 'gezira land'. It has a special agricultural system and crops.<sup>(1)</sup>

### Soil Types

About 50% of the area is covered by clay loam. Most of the eastern part of the area is covered with loam while the western part is covered with sandy loam. In the middle there are separate patches of clay here and there. (See map No.28).

The soil is very fertile; in fact this is one of the most fertile areas in the world.

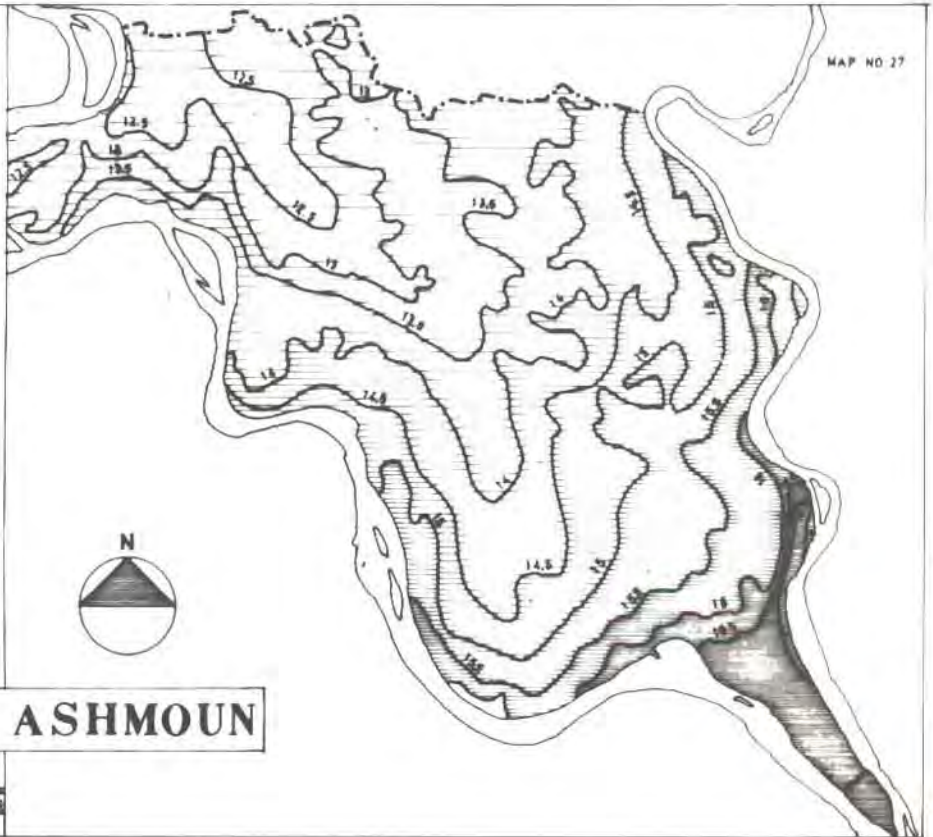
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(1) Cultivated according to Basin Irrigation



# TOPOGRAPHY

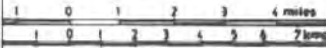
MAP NO 27



CONTOUR LINES SHOWN ARE  
AT 1/2 METRE INTERVALS

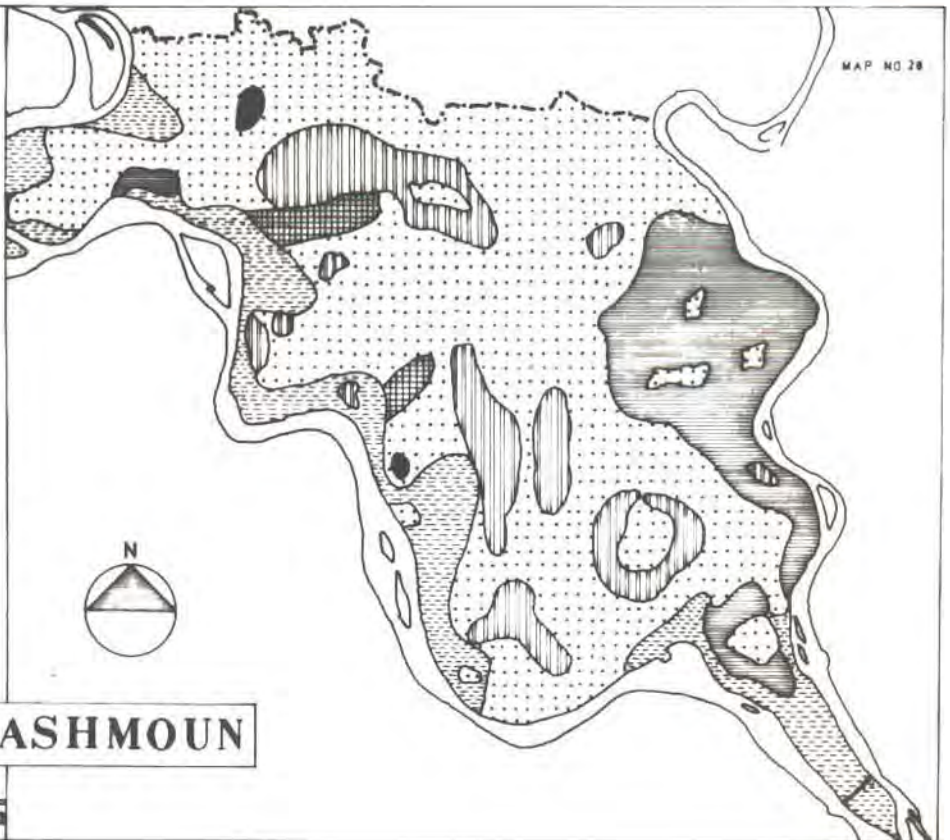


# MARKAZ ASHMOUN



# SOIL TYPES

MAP NO 28

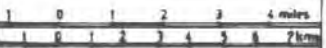


## KEY

-  CLAY
-  CLAY & LOAM
-  SANDY LOAM
-  SANDY CLAY LOAM
-  SILT CLAY LOAM
-  LOAM



# MARKAZ ASHMOUN



The depth of the clay varies slightly from one place to another. At the village of El-Kawadi the clay is about six metres deep, beneath which there is a layer of about four metres of fine sand followed by about twenty-four metres of medium coarse sand.<sup>(1)</sup> At the village of Shama the clay depth is about ten metres.

### Landscape

The landscape of the 'Markaz' is typical of that of the whole Delta. A vast area of flourishing fields dotted with some palm-groves or groups of sycamore (sant) or lebbek. This vast flat green surface is interrupted here and there by irrigation canals, the veins of life of the land and the people.

### Climatic Conditions

The geographical setting of Ashmoun and its relation both to the Mediterranean and adjacent desert areas is, above everything else, the determining factor in the climate of Ashmoun. Ashmoun at the head of the Delta, lies approximately between parallel  $30^{\circ} 10'$  and  $30^{\circ} 25'$  north and reflects conditions as a transitional zone between desert and Mediterranean conditions.

Temperature: The monthly range for the Delta Barrage (south of Ashmoun) lies between the  $15^{\circ} 2'$  C. mean for January and  $28^{\circ} 0'$  C. for July.

Generally when winds blow from the east and south east the prevailing temperature is considerably hotter than the monthly average whilst winds from the north west have a cooling effect. Western winds, however, are relatively warmer in January and have a cooling effect in April whereas the reverse is true of the eastern winds.

Wind Direction and Rainfall: The passage of depressions along the Mediterranean in winter and through North Africa in spring and early summer affects wind and rainfall. The former depressions are mainly responsible for the northern, western and north-western winds which bring the greatest part of rainfall in the area. In the spring the passage of depressions over the main land itself is reflected in the desert winds from south to south-east. The hot, dry Khamasein wind which blows in late spring is the main outcome of these depressions.

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(1) Nasr. S.N. Agricultural Geography in the Delta, Research, Cairo 1953.



The main directions of the winds are from the north, north-east, north-west and west.

The wind velocity rate at Tanta, varies from 1.1 m.p.h. in the late summer and early autumn to 1.8 m.p.h. for late winter and spring months. Generally speaking they are light winds with an average velocity of not more than 3 miles per hour.

Beside being negligible, decreasing towards the south and confined mainly to the winter months, rainfall in this part of Egypt is variable from one year to another for the same months as can be seen from the following table for Shebinel-Kom (north of Ashmoun) - 1945-1950.

Table (35): Rainfall in Shebin El-Kom (1945 - 50) S.S.

<u>Month</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>
	m.m.	m.m.	m.m.	m.m.	m.m.	m.m.
December	4.1	trace	0.6	6.0	11.6	0.0
January	-	6.0	4.4	7.4	9.6	16.9
February	-	1.8	trace	14.0	4.6	1.9
March	6.0	4.6	1.6	8.1	1.9	2.4
April	0.0	trace	0.0	2.0	0.0	5.3
May	27.3	18.2	2.6	0.0	0.0	3.0

Evaporation: The study of evaporation in relation to rainfall and irrigation arrangements is important. Calculating the expected loss of water is necessary in defining the allocation duty of canals and the amounts needed for the various crops. During the summer months when no rainfall exists and when the available water supply for irrigation is at a minimum evaporation is at its highest.

#### Land Utilization

In 1945 Ashmoun had an area of 107,880 feddans under field crops, 5,396 feddans under vegetables, 777 feddans under orchards, and nurseries and 7,873 feddans as agriculturally unproductive lands. (1)

(1) This includes built-up areas, roads, canals and open spaces.



Of that total area under field crops 55,825 feddans were under winter crops, 14,320 feddans under summer crops and 37,735 feddans were put under Nili crops. It is important to mention that the cultivated area has decreased in 1953, to 64,569 feddans while the uncultivated, or the unproductive land has increased to 8,680 feddans.<sup>(1)</sup> This difference of about 800 feddans has been taken by public works, canals, drains, roads, or residential buildings. The cropped area, on the other hand, increased to 119,367 feddans - 18,276 feddans under summer crops (seifi), 58,199 feddans under winter crops (shetwi), and 42,992 feddans under Nili crops. The remainder 1,325 feddans are under orchards. As can be seen, field crops constitute the main form of land use in Ashmoun. Orchards and vegetables usually cover small areas of land near the villages for security reasons. They actually compose a part of the village and its landscape.

### Water Resources

Wells: The need for well water and the factors governing it are responsible for the distribution of 'well-belts'. (See map No.29). There are three well belts in Ashmoun.<sup>(2)</sup> The first is mainly connected with irrigation problems. The second lies within the areas by the side of 'Sabbal' drain. The transformation of this drain from an irrigation channel has created the need for more water than could be supplied by the existing channels, and therefore the supply had to be supplemented by wells. A second factor which gave rise to this belt is the lowness of the land level and the excess of salt in the soil.<sup>(3)</sup> The third belt lies within the area served by the minor distributaries. The conditions which gave rise to this belt are similar to those met with in the second belt.

Common to the three belts is the existence of large farms which can afford the rather expensive under-ground irrigation.

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- (1) Ministry of Finance, Bulletin of Agricultural and Economical Statistics, May, 1954.  
 (2) Nasr. S.N. Agricultural Geography in the Delta/Cairo, 1953.  
 (3) See the Topographical map. /Research,

Irrigation Channels and Implements: The water reaches the fields from the Nile through four ways:

1. Main canals which draw their water directly from the Nile.
2. Branch canals of which the main characteristics are their continuous flow and the possibility of direct irrigation.
3. Distributaries which receive water from a branch canal during rotation periods only. There are main and branch distributaries which in turn lead to minor distributaries.
4. Water-courses, 'Massagi'.

For irrigation in Ashmoun there are three 'Tree Systems'. The following table shows their particulars in brief. <sup>(1)</sup> (See map. No.29).

Table 56 Irrigation Tree system in Ashmoun

<u>Tree System</u>	<u>Total length of channels:</u> <u>Km.</u>	<u>Area allocated:</u> <u>in feddans</u>	<u>Discharge duties per</u> <u>fd. in cu.</u> <u>Metres</u>
a. Rayah-el-Menoufi	100	30,250	1,058,750
b. Darawa	21	8,500	356,832
c. El-Naggaiel	179	31,000	900,000

The above mentioned three 'Tree systems' handle, besides supplying other areas, the total water supplied need<sup>ed</sup> in Ashmoun. Each system consists of one feeder and a small number of irrigation channels leading off from it.

In Ashmoun there are:-

300 Kms. of irrigation canals not including private water-courses.  
(See appendix No. 12).

120 Kms. of drains not including field drains.

(1) Nasr. S.N. Agricultural Geography in the Delta, (Research), Cairo 1953.



The following table gives the number of implements in the District, the area which is irrigated by each implement and their relative importance, i.e. the percentage of the total powerage of implements to general total. (1)

Table (37) Number of Implements and their Importance in Ashmoun.

S. S.

<u>Implement</u>	<u>No. of Implements</u>	<u>Area/implement</u> <u>(feddans)</u>	<u>Relative Importance</u>
Pumps	112	100	13%
Steam engines	199	338	23%
Steel Sakias	248	271	1.1%
Tabouts	872	77	6%
Normal Sakias (wooden)	3366	20	13%
Tambours	10178	6.6	4.1%
Shadoufs	542	1.24	.03%

From the above table the steam engine proves to be the most efficient for irrigation. Steam engines and pumps are used on large farms. Each engine costs about £400. In recent years the Co-operation Department in the Ministry of Social Affairs has induced many co-operatives in the Delta to use steam engines for irrigation. The Shatanouf co-operative has been very successful in pursuing this policy.

Most of the 'tabouts' and the 'sakias' are used semi-co-operatively. The implement is usually owned by more than one holder. Every holder has to provide the beasts besides other parts used for working the 'tabout' or the 'sakia'. Land fragmentation has a great effect on the number and the types of implement used, the number of irrigation implements increasing according to the increase in fragmentation.

(1) Ministry of Finance's Bulletin of Agricultural and Economical Statistics, April, 1953.



# WATER SOURCES AND IRRIGATION CANALS

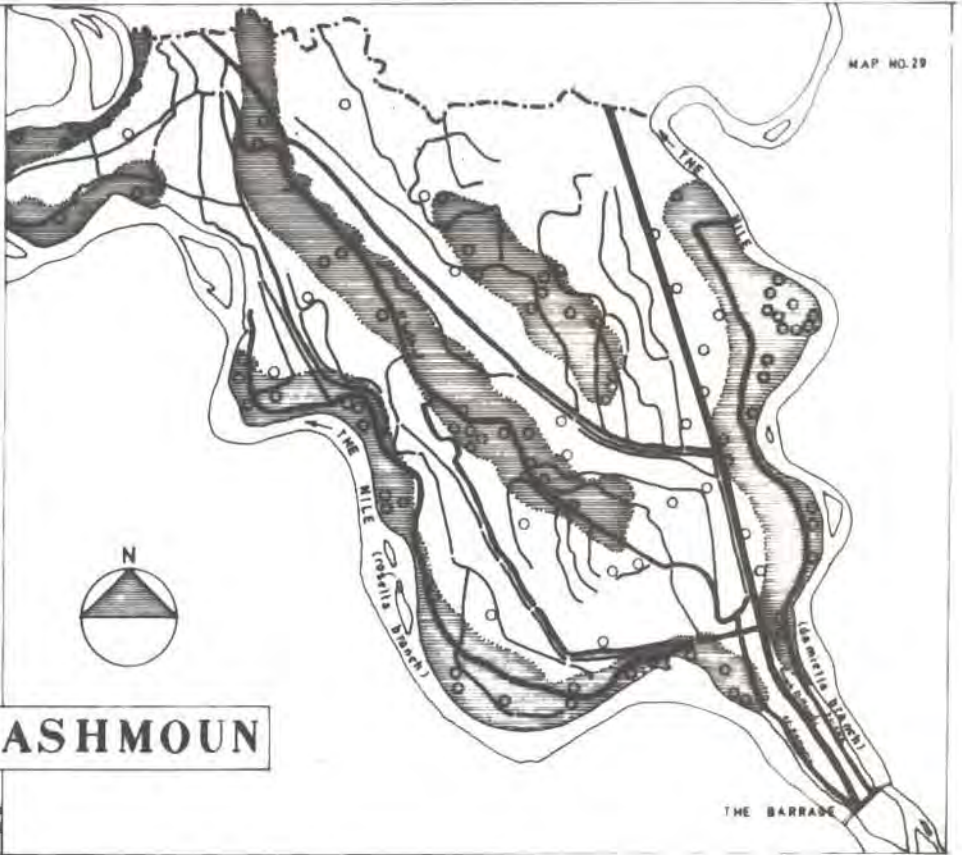
MAP NO. 29

## KEY

-  RELIEF CANAL (RAYAH)
-  MAIN CANALS
-  SECONDARY CANALS
-  WELLS & PUMPS
-  ARTESIAN BELTS  
(After N. Nasr)









# MARKAZ ASHMOUN



# COMMUNICATIONS

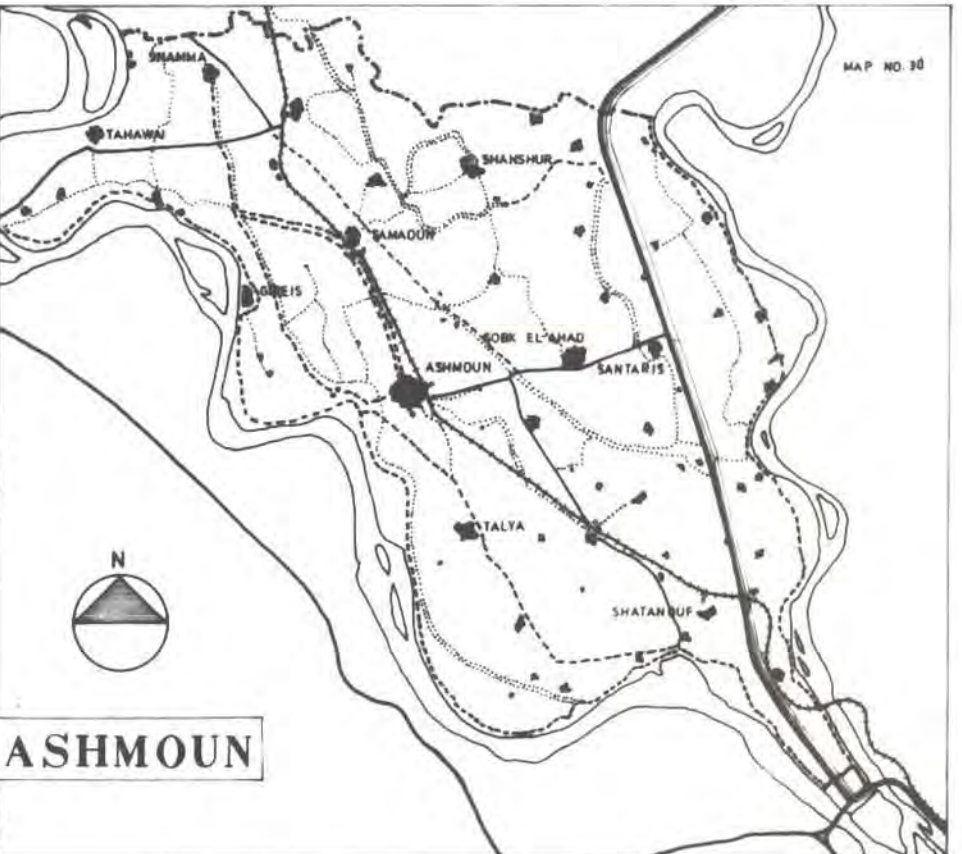
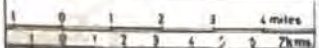
MAP NO. 30

## KEY

-  RAILWAYS
-  MACADAM ROADS
-  PRINCIPAL ROADS (EARTH)
-  ROADS SUITABLE FOR WHEELED TRAFFIC (EARTH)
-  ROADS OF MORE THAN 4 mts. WIDE
-  WATERWAYS



# MARKAZ ASHMOUN



Land Reform in Ashmoun

The area which was affected by the Land Reform Law is small. The requisition of land took place in five areas of about 1,258.5 feddans distributed as follows. (1)

Table (38) Areas affected by the Land Reform Law in Ashmoun.

<u>Village</u>	<u>Owner's Name</u>	<u>Area Requisitioned</u>			<u>Area Distributed</u>			<u>Area Left</u>		
		<u>F</u>	<u>K</u>	<u>S</u>	<u>F</u>	<u>K</u>	<u>S</u>	<u>F</u>	<u>K</u>	<u>S</u>
Samadoun	Abd El-Haviz Omar	393	7	2	355	19	2	37	12	2
Abu Awali	M. Nazly Sabry	319	2	23	250	-	-	69	2	23
El-Barraniya	Talaat El-Parausawy	267	2	18	236	13	18	30	13	18
"	Shefif Sabry	179	23	12	171	13	21	8	9	15
"	Anistasia Tyderally	99	-	23	19	-	23	-	-	-
<b>Total</b>		<b>1,258 13 16</b>								

This means that about 2% of the cultivated area of the district is under collective farming. Although this is a very low percentage it still provides a good example for that type of farming which might inspire other areas to adopt the system. These areas, therefore, constitute practical experiments which are already established with material results for the fellaheen to witness and to adopt.

(b) Communications

Railways

The 'Markaz' is served by one railway line crossing the area from south to north. This line runs between Cairo in the south and Shebin-el-Kom and Tanta in the middle of the Delta. Almost all of the villages of the 'Markaz' are served by four stations. They are from south to north: Shatanouf, Shisha, Ashmoun (the District town) and Samadoun. The number of passengers arriving at and departing from Ashmoun railway station in 1947 amounted to 205,000 and 197,000 respectively. (2) At present there are nine trains per day running northward and eight trains running southwards.

(1) Agrarian Reform Authority, Cairo 1959.

(2) General Census of Egypt (1947)



The north-western point of the Markaz, including Tahawai and El-Ingib zones, is served by the station of Shamma which is outside the boundaries of the 'Markaz'.

The railway stations are accessible either by roads or tracks; but very few motor coaches connect these stations with the different villages. They were reached either on foot, on donkeys, or (something which is rare in rural areas) special cars or carriages. Moreover, the trains do not run very frequently. There are 200 kms. of roads including (a) the Cairo-Shebin-el-Kom Road, (b) the Cairo - Kafr-el-Zayat Road, (c) the Cairo - Ashmoun Road, whereas there are only 26 kms. of railways, consisting of the one line which connects Cairo to Tanta via the Delta Barrages. (See map No.30).

#### Roads:

The Markaz is served by a system of roads running from the south to the north. These roads are of earth but are reasonably wide for vehicles. The only constructed road is that which runs along Riyah El-Menoufi. The roads usually follow the banks of the canals or the river. (Types and conditions of roads are shown on map number 30).

There are no coach services except on the road following the Rayah-el-Menoufi canal and that which runs in the middle of the 'Markaz' from south to north. Furthermore, these services are very infrequent and irregular.

#### Waterways:

The Rayah-el-Menoufi Canal which also runs from south to north in the eastern half of the 'Markaz' is the only water thoroughfare in the area. (See map No.30). In 1945 the number of sailing craft which passed through this canal amounted to 5,542 from North to South and 4,692 from South to North<sup>(1)</sup>. These figures dropped to 2,891 and 2,557 respectively in 1956.<sup>(2)</sup> Much of the cargo has been diverted to road transport.

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(1) General Census of Egypt (1947).

(2) The Engineer (July 1956), Article; The Development of Communication (1952-1956).



In general, the means of communication and transport are very poor, as in all other parts of the Egyptian countryside. This has had a great effect on the economy and productivity of the area, as well as being inconvenient to the people. It has also affected the migration of the people and perhaps their education.

The present regime in Egypt is aware of this fact. An ambitious scheme has been planned to build a greater network of roads and to improve the inland water transport. This was the first step taken by the permanent Council for the Development of National Production to achieve its objectives.

(c) Administrative Divisions and Service Areas

The 'Markaz' is divided into two units, one on the north and the other on the south. The northern unit is divided into six zones:

Tahawai, El-Ingib, Shanshor, Samadoun, Sintris and Ashmoun.

The southern unit is divided into five zones:

S.A. Shara, Shatanouf, Shisha, Talia and El-Barrania.

These units and zones are administrative divisions. In every zone there is a police station and perhaps a Collective Unit.

The Markaz (district) is divided into administrative, financial, and health units. (See map No. 31). From the administrative point of view the district is divided into a Centre (markaz) which looks after nine villages<sup>(1)</sup> besides the capital Ashmoun, and five police centres (Nokta). These are:

- (a) El-Nienaiya which comprises 11 administrative villages.
- (b) Zu-el-Fakar comprising 6 administrative villages.
- (c) Shatanouf comprising 12 administrative villages.
- (d) Shama comprising 10 administrative villages.
- (e) Shanshour comprising 9 administrative villages.

(Kafir Abu-Rakaba and Kafir Sarawa are both included in Abu-Rakaba and Saraw villages respectively).

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(1) The term 'village' has a wide collotation in Egypt both in terms of population and settlement size as well as area. For administrative purposes the term can cover either a country town or village together with its surrounding service area which may often include a number of hamlets.

# VILLAGE UNITS AND POPULATION

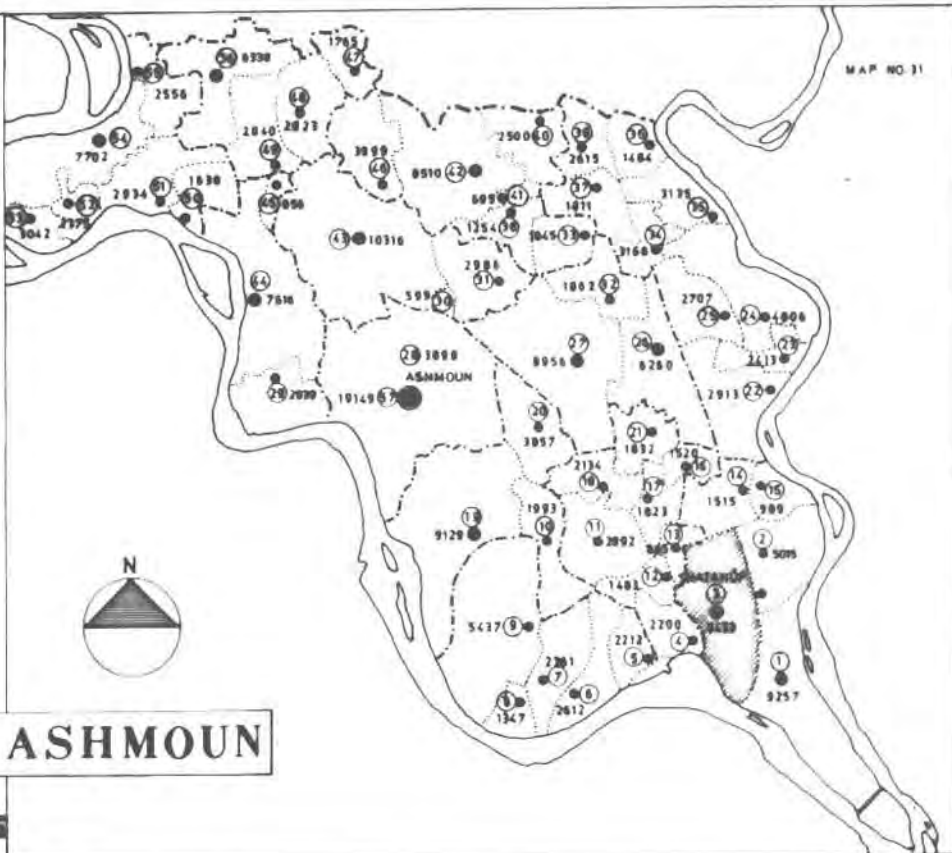
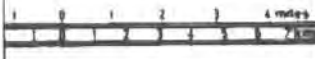
MAP NO. 31

## KEY

- Ⓢ VILLAGE NUMBER  
— see text.
- 54321 POPULATION / VILLAGE
- VILLAGES
- - - ZONE BOUNDARIES
- ..... VILLAGE BOUNDARIES



# MARKAZ ASHMOUN



# SETTLEMENT DISTRIBUTION

MAP NO. 32

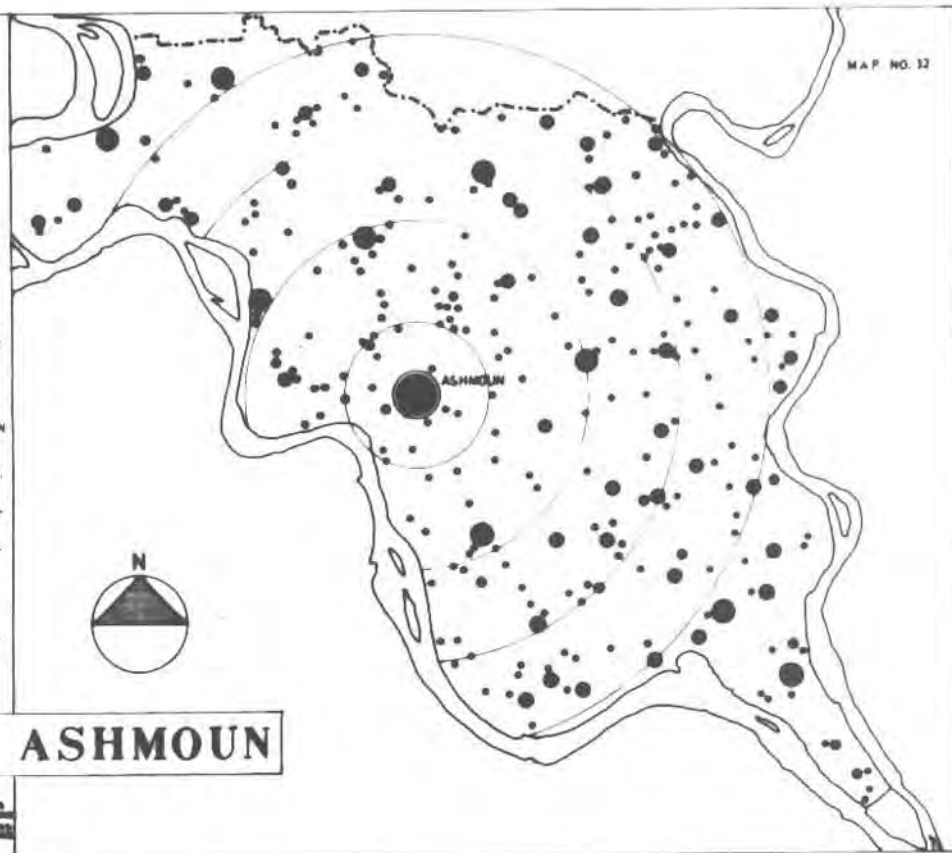
Grade (N) is the small market village of 5 to 8 kms. from its nearest neighbors and is the basis of the whole system. And grade (Y) is equivalent to a large county town of about 20,000 to 50,000 inhabitants which is the District Town. Then come towns of about 50,000 and over which are the Provincial towns.

## KEY

- I ● SETTLEMENTS OF LESS THAN 500 INHABITANTS
- II ● SETTLEMENTS OF 500 - 1,000 INHBS.
- III ● SETTLEMENTS OF 1,000 - 5,000 INHBS.
- IV ● SETTLEMENTS OF 5,000 - 10,000 INHBS.
- V ● SETTLEMENTS OF OVER 10,000 INHABITANTS
- N.B. CIRCLES 2.5, 5, 7.5 & 10 KM RADIUS FROM ASHMOUN.



# MARKAZ ASHMOUN





The financial or taxation units include the administrative villages plus the hamlets (ezabs) which they comprise. One of these units, for example, is the village of Shatanouf which comprises the hamlets (ezabs) of M. M. Farid, El-Dakar, H. Yousef, K. Yousef and Z. Yousef.

The health units are defined with respect to the health centres in the area. The district in this respect is divided into four health units:

- (a) Ashmouli, which looks after 26 villages.
- (b) Shatanouf looking after 23 villages.
- (c) Shama looking after 5 villages.
- (d) Shanshour looking after 4 villages.

This system of division operated until 1953 after which the distribution of Collective Centres has affected the functioning of the health units, and is likely to affect the other units as well.

#### Settlement Pattern.

In Ashmoun there are (in addition to the District Town) 56 Country towns and villages distributed according to population size as follows: <sup>(1)</sup>

Table (39) Distribution of Settlements according to population in Ashmoun. S.S.

<u>No. of Settlements</u>	<u>Size (Population)</u>
5 )	500 - 999
14 ) Villages	1000 - 1999
18 )	2000 - 2999
6 )	3000 - 3999
1 ) Small country towns	4000 - 4999
5 ) Market towns and	5000 - 6999
7 ) larger country towns	7000 - 10999
$\frac{1}{57}$	over - 20000

(1) See Appendix No. 5 (Population Census 1947) in Ashmoun.



This shows that besides the 'Markaz' town which has a population of over 20,000 there are thirteen settlements constituting the market and larger country towns of more than 5,000 inhabitants each and seven small country towns, whilst the number of villages amounts to 37. There are also about 200 hamlets with populations of less than 500 persons each.

The distribution of densities in the villages and towns is as follows: (1)

Table (40) Distribution of densities in the villages and Towns in Ashmoun S.S.

<u>NO. of Settlements</u>	<u>Density (persons per sq. kilometre)</u>		
2	100	-	199
2	300	-	399
8	400	-	499
12	500	-	599
12	600	-	699
8	700	-	799
7	800	-	899
2	900	-	999
3	1000	-	1999
1	4000	-	4999
<u>57</u>			

The size and distribution of the rural settlements of the district are shown on map No. (32). It is clear from this map that the distribution of population in the district is uneven and some redistribution of population within the Markaz seems both feasible and desirable.

(1) See Appendix (Population Census 1947) in Ashmoun.

### Public and Social Services

The district of Ashmoun is to be served by 12 Collective Centres as indicated on map No. (34). This is in addition to the rural centres already established. Five of the Collective Centres have now been built. Every collective centre is designed to serve 15,000 inhabitants. Their objectives have been discussed previously in Chapter (V). There are six police stations in the district with a fire station in the town of Ashmoun.

### Public Utilities (Water, Electricity and Sewerage)

The main sources of water are the canals, the wells and the pumps. There are three artesian belts in the Markaz. They follow the main inclination towards the north and are shown on map No. (29).

Markaz Ashmoun is also served by 24 water works the largest of which is in Ashmoun itself, the capital of the district. (See map No.33). The district was one of the first areas to benefit from the recent scheme to provide the rural areas with more adequate supplies of drinkable water.

Electricity is not available except in the town of Ashmoun. There are no proper sewerage systems anywhere in the 'Markaz'.

### Markets

In the main, maize is grown for the farmer's food, clover for his beasts, cotton for rent and debts while wheat is partly for rent and partly for current expenses. Any surplus of the above commodities together with meat, eggs, milk and cheese find their way to the village market or the weekly markets where buyers and sellers come from more than one village and may even come from all parts of the district. The outside market is beyond the small farmer's thinking. Large farmers are mainly concerned with this last market which, in the case of Ashmoun, may be Cairo for vegetables and fruits or Alexandria and other industrial towns for cotton.

There are nine market places serving the Markaz apart from that of Shamma which is just outside the district. (See map No.35).

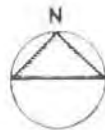
# PUBLIC SERVICES

HEALTH & EDUCATION

## KEY

- COLLECTIVE UNITS
- ELEMENTARY SCHOOLS (mixed, 6 to 12 years old)
- PREPARATORY SCHOOLS FOR BOYS
- PREPARATORY SCHOOLS FOR GIRLS
- SECONDARY SCHOOLS FOR BOYS
- SECONDARY SCHOOLS FOR GIRLS
- ▲ CLINICS
- △ SANITARY BUREAUX
- HOSPITALS
- RURAL SOCIAL CENTRES
- W WATER WORKS
- P POLICE STATIONS

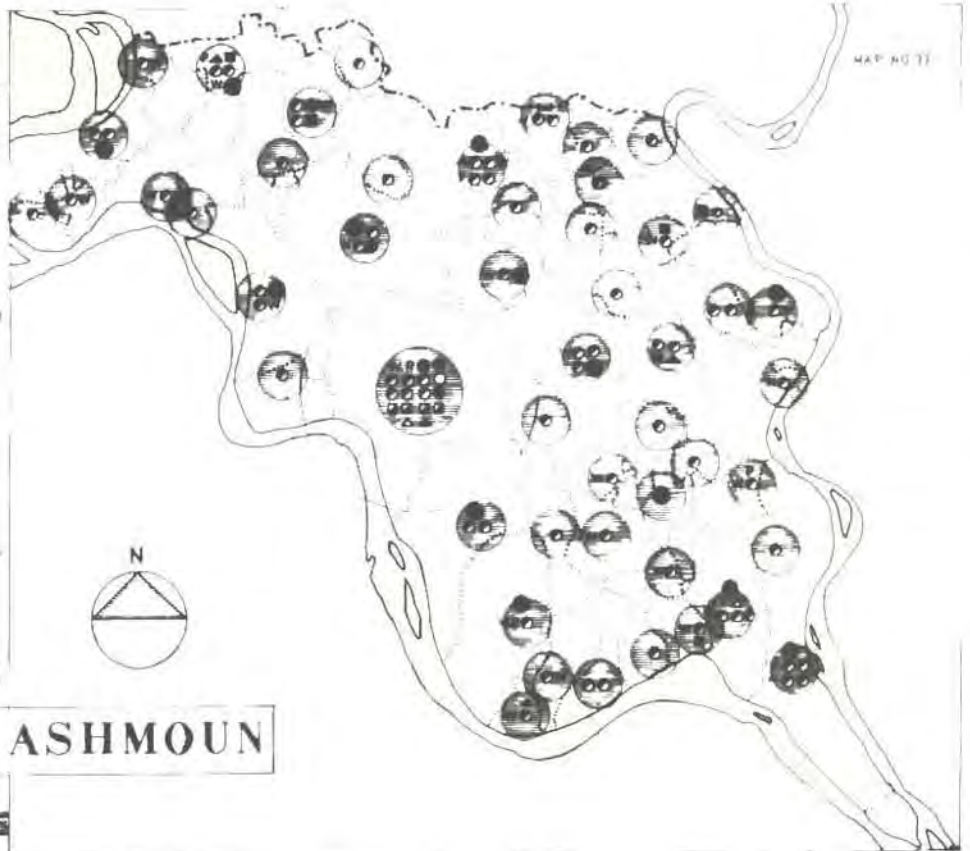
Journey to school is shown in circles of 800 mts. rd. & 1,000 mts. rd. for elementary & secondary sch. resp.



# MARKAZ ASHMOUN



MAP NO 13



# COLLECTIVE UNIT DIVISIONS

THE Collective Units are distributed in a regular sense. Every Unit is serving an area of approx. 25 km<sup>2</sup>. rd. Overlapping is due to poor communications. Every C. U. serves abt. 15,000 inhabitants.

## KEY

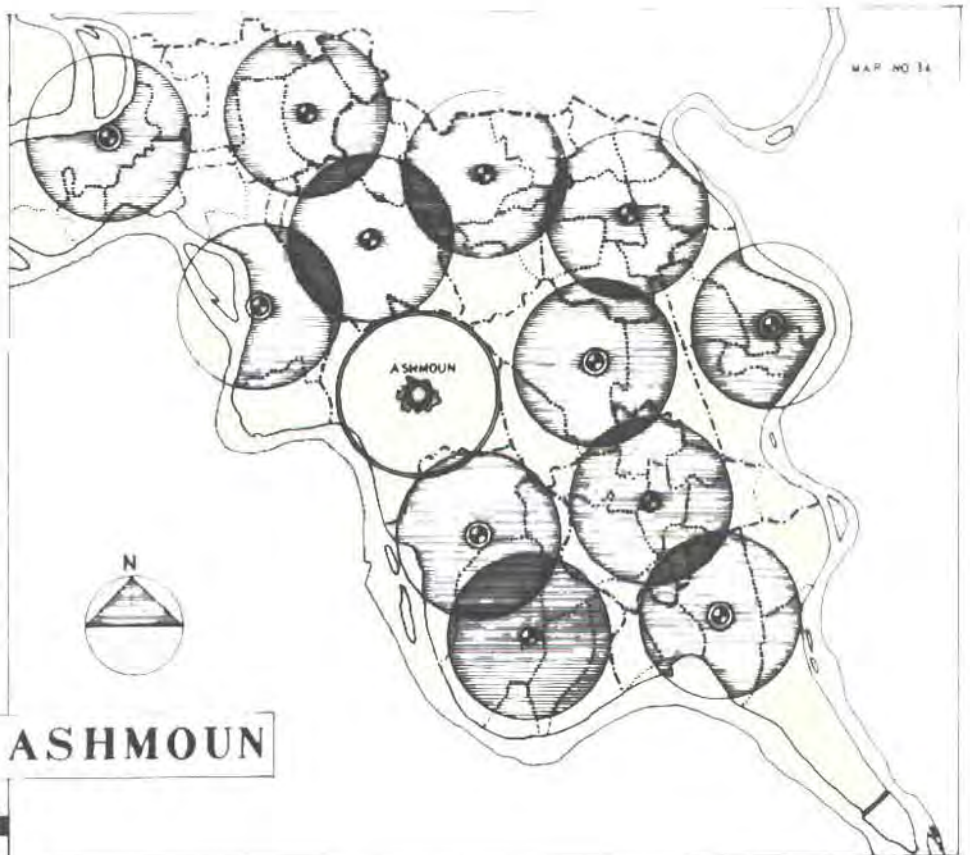
- EXISTING COLLECTIVE UNITS
- PLANNED COLLECTIVE UNITS
- C. U. BOUNDARIES
- VILLAGE BOUNDARIES



# MARKAZ ASHMOUN



MAP NO 14





These markets are of different importance according to the number of villages which each one serves and also according to the type of goods or trade which can be found there. A detailed examination of one of the markets is made later in this thesis when dealing with the market town of Shatanouf. These markets are held weekly and on different days. Some are well-known as cattle-markets or grain-markets besides functioning as general markets. The market is usually held on an open area outside the village built-up area.

These markets are:-

<u>MARKET</u>		<u>MARKET DAY</u>
Shatanouf	:	Saturday
K-el-Minara	:	Sunday
Talia	:	Sunday
El-Kawadi	:	Tuesday
S. A. Shara	:	Tuesday
Sintris	:	Thursday
Sobk-el-Ahad	:	Monday
Samadoun	:	Tuesday
Shoshai	:	Thursday
Shamna	:	Monday

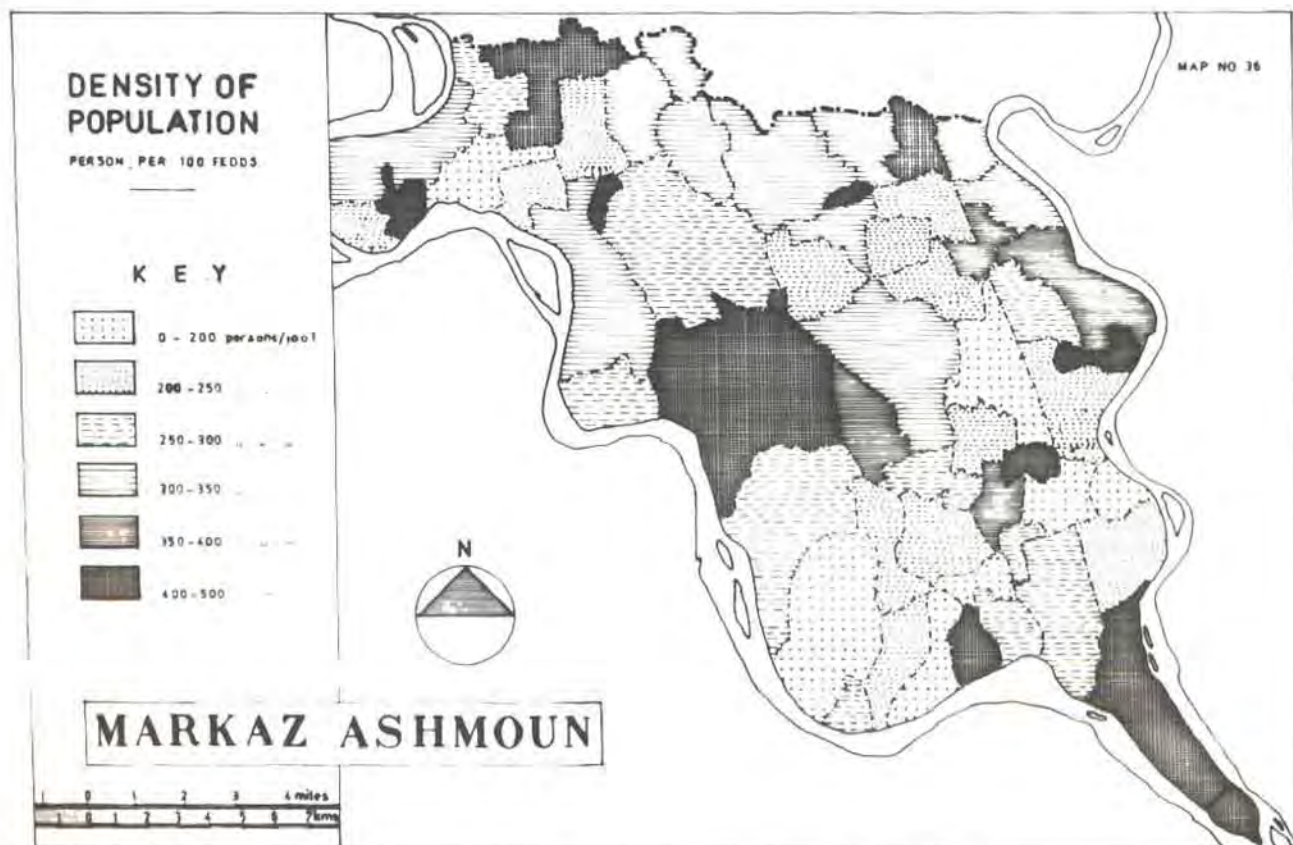
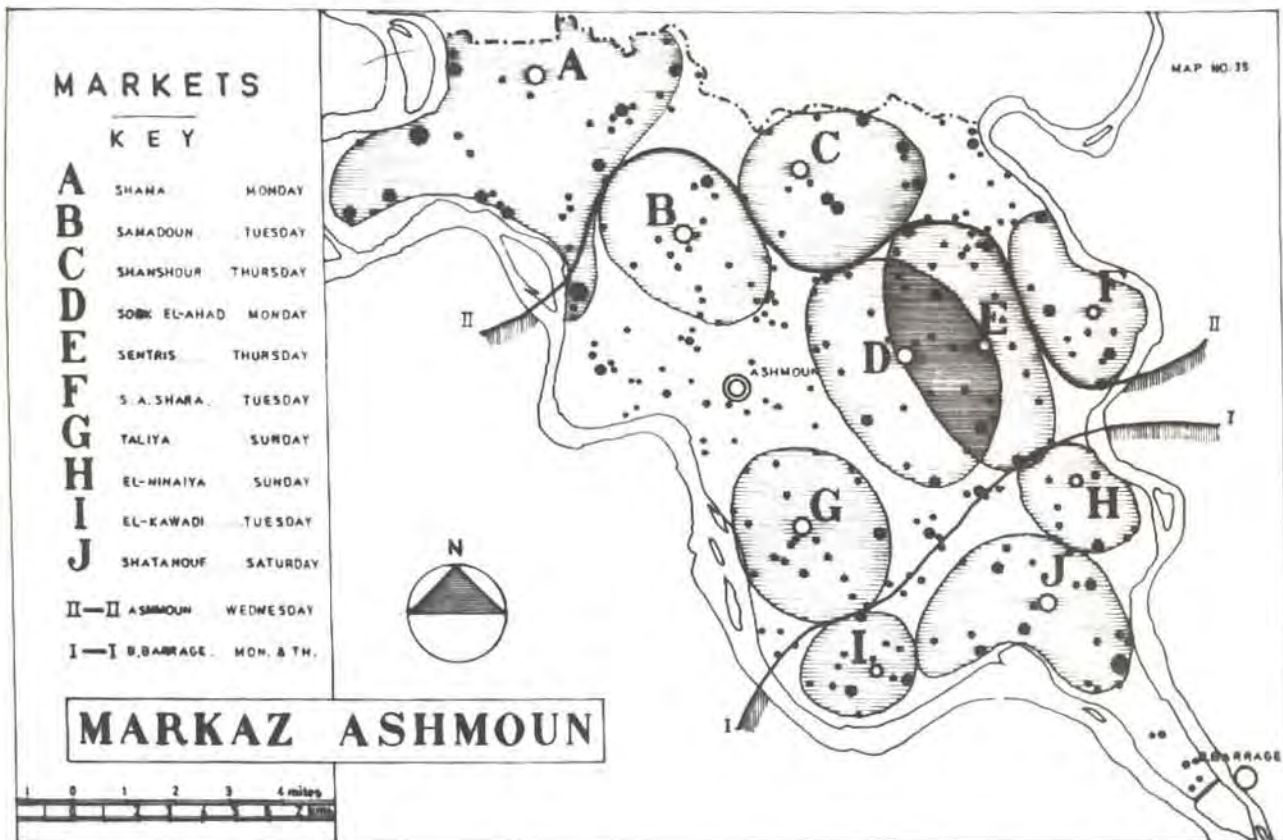
In addition to the above there are two big markets in the Markaz. The first is in the town of Ashmoun and is held every Wednesday and the other is the Barrage town market and is held every Monday and Thursday. The boundaries of the area which these two markets serve are shown on map No. (35).

#### (d) Population

The population of Ashmoun, although having the same general characteristics of the fellaheen elsewhere in the Nile Delta seems to be somewhat more enlightened and progressive. This might be due to the nearness of the district to Cairo which is easy to reach. Cairo as mentioned before is the main market for the district production especially for fruits and vegetables. The villages of the district were the first in the Delta to respond to the recent progressive movements.<sup>(1)</sup> Many of Cairo's labourers are drawn from Ashmoun and this migratory movement has affected the area to a great extent.

---

(1) This means the establishment of Collective Units, Schools, Co-operative, and Land Reform.





Moreover the district was the first to experience the social, economic, educational improvements which have been planned for the rural areas as a whole. Furthermore because of the district's proximity to Cairo the officials responsible for the implementation of these different branches of reform have the advantage of being able to visit Cairo from time to time which gives an advantage over those who work in remote villages under difficult living conditions.

The following table illustrates the structure of the population and its growth since 1882 when the first official census was taken up to 1947 together with estimates for 1957. <sup>(1)</sup>

Table (41) Structure of Population in Ashmoun (1882 - 1957)

S. S.

<u>Sex</u>	<u>1882</u>	<u>1897</u>	<u>1907</u>	<u>1917</u>
Male	48.855	68.953	79.025	91.469
Female	50.722	67.748	77.769	88.151
Total	99.587	136.701	156.744	179.620
Percentage				
Increase over previous total		(2.5%)	(1.5%)	(1.5%)

<u>Sex</u>	<u>1927</u>	<u>1937</u>	<u>1947</u>	<u>1957</u>
Male	93.838	100.960	102.468	103.976
Female	93.732	100.194	106.043	111.892
Total	187.570	201.154	208.511	215.868
Percentage				
Increase over previous total	(0.4%)	(0.7%)	(0.4%)	(0.38)

The birth rate is very high being 40 per 1000 total population but is offset by a very heavy infant mortality rate amounting to 15 per cent of the live births. Death rate is about 22 per 1000.






(1) General Census of Egypt (1947).



# EXCESS OF POPULATION ENGAGED IN AGRICULTURE

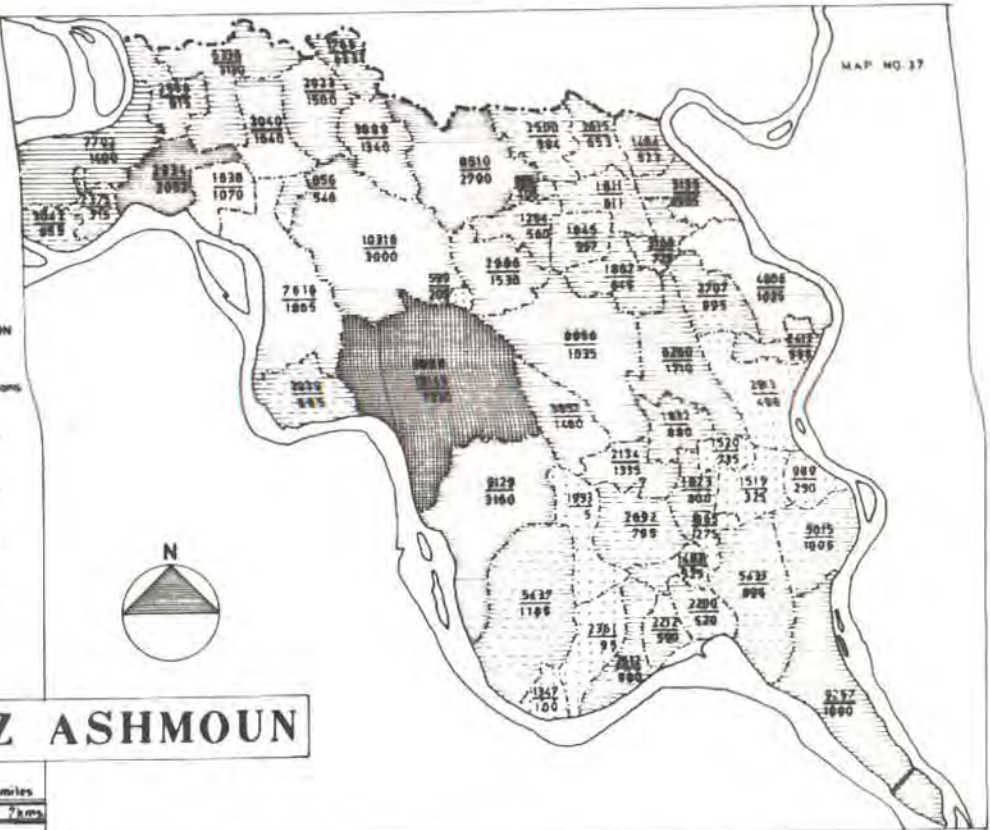
## KEY

11221 TOTAL POPULATION  
4321 EXCESS OF POPULATION

-  LESS THAN 500 persons
-  500 - 1000
-  1000 - 2000
-  2000 - 5000
-  OVER 5000



# MARKAZ ASHMOUN



The population of the 'Markaz' in 1977 is expected to be 250,000 if not more, due to the improvement in the health, education and social life of the people. *The estimate does not take account of migration problem.*

### Density of Population

Although the district is one of the most overpopulated in the Nile Delta the distribution of population is not even. While the density of population is 2 person per feddan in some places it rises to 5 persons per feddan in others. (See map no. 36) The main concentrations of population are round the market centre of Ashmoun and in the extreme south. The lower densities exist in villages and areas where large estates are to be found employing less labour on their land. There is a close relationship between the density of population and the excess of labour in the different villages as shown on both maps showing densities and excess of labour (See maps nos. 36 and 37) and this information can be of assistance in selecting sites for rural industrial sites having regard of course to such other factors as raw materials, communications and markets. (See appendix No.9)

As far as the state of labour is concerned there is a general excess of labour in every village of the 'Markaz'. The excess of labour ranges between 200 and 5,000 persons per village. In General the excess in the working population amounts to more than 30% of the total population of the District.

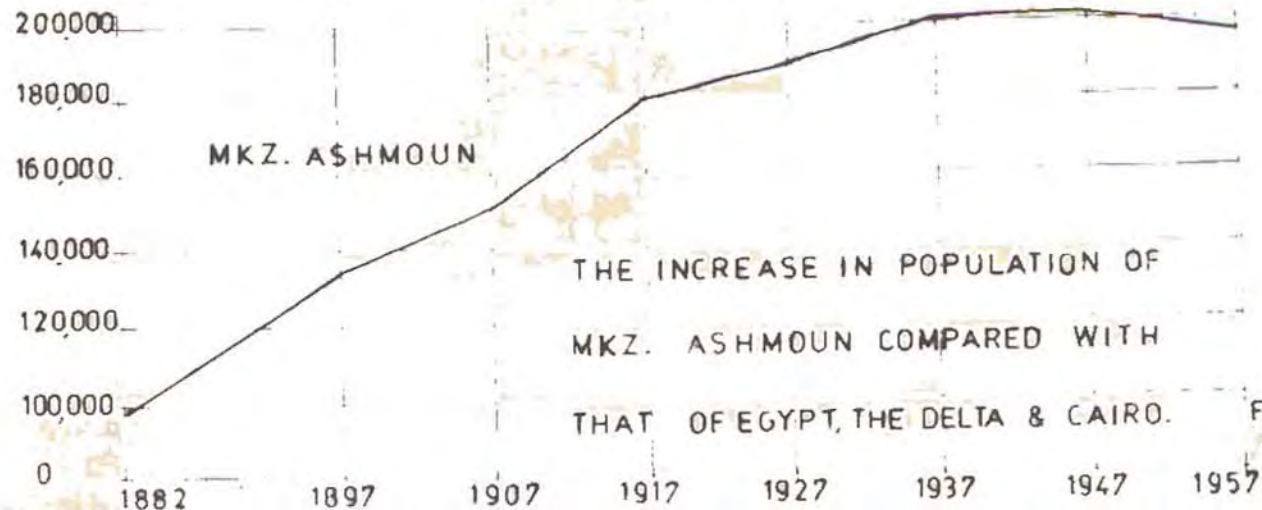
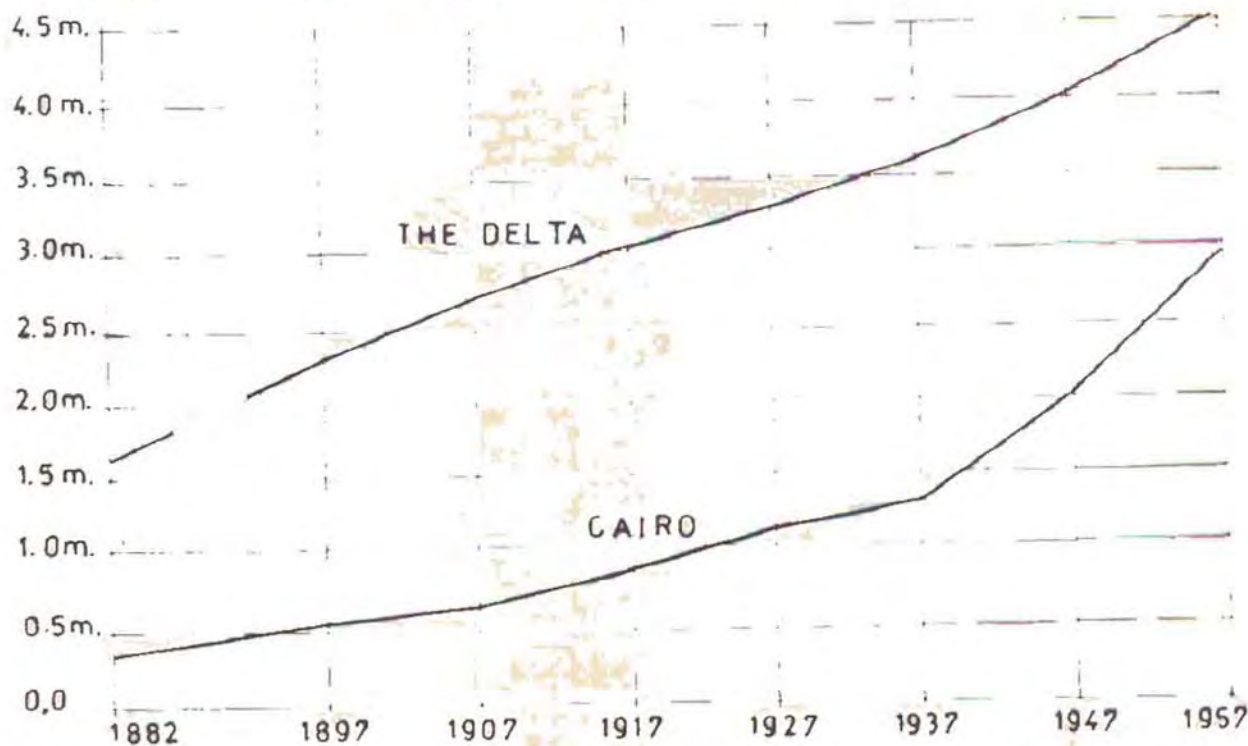
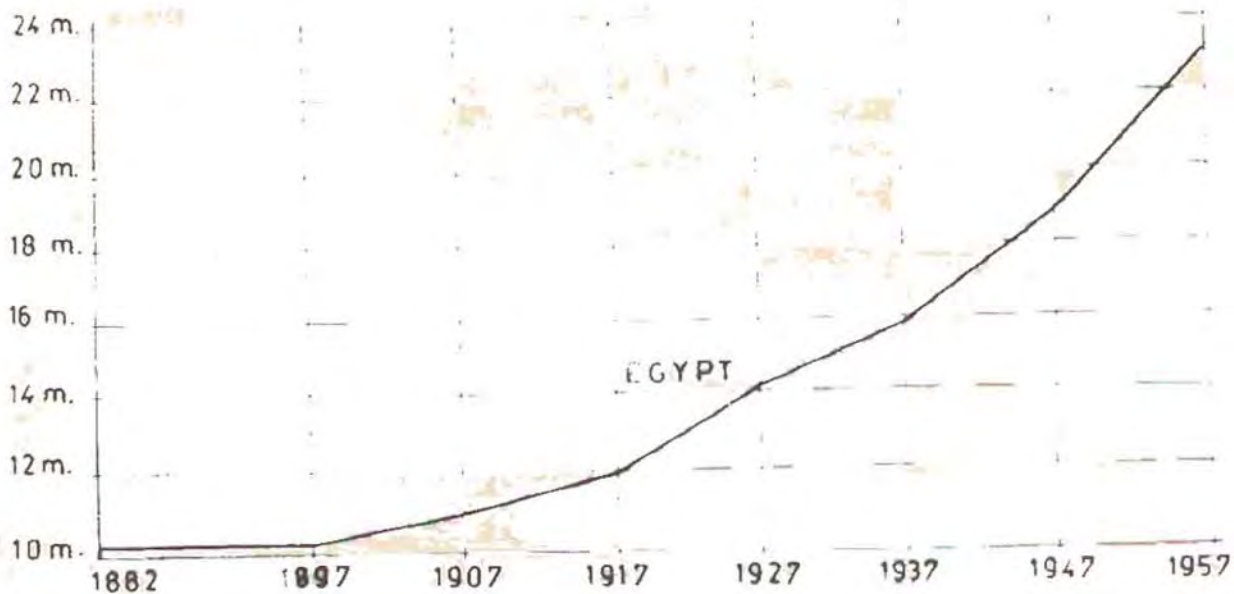
The figures given on Map No. 37 are calculated according to the method of determining the excess of labour given in Chapter VI.

The following table shows the average density of population per square kilometre and the state of crowding in 1947: (1)

Table 42. Density of Population and State of Crowding in Ashmoun

Area in Sq. Km	No. of population.	No. of families	No. of rooms	Density Pop/sq.km	Average size of family	Occupancy Rate
312.8	208,511	44,797	127,770	667	5	2 persons per room

(1) General Census of Egypt 1947



THE INCREASE IN POPULATION OF MKZ. ASHMOUN COMPARED WITH THAT OF EGYPT, THE DELTA & CAIRO.



It is clear from the previous table that the occupancy rate as far as dwellings are concerned, is not so alarming. It is the extremely miserable housing condition that matters. Although the occupancy rate is relatively reasonable the housing conditions are inhuman as have been described in chapter (IV).

Although the average rate of increase in the population in Egypt is about 2.5% in the case of the Province of Menufiya which embraces the District of Ashmoun, there is a recorded decrease of 1.5% because of outward population movement from the Province. (See fig. 17). Even so, Ashmoun is still one of the most over-populated parts in the Delta.

#### Population and Occupation

The following table shows the classification of the population of the district according to age and sex as stated in the census of 1947: <sup>(1)</sup>

Table (43) Population: Sex and Age Groups in Ashmoun.

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Less than 5 years	14,138	14,461	28,599
5 - 9	13,362	13,221	26,583
10 - 14	11,946	10,996	22,942
15 - 19	11,105	9,271	20,376
20 - 24	6,490	7,000	13,490
25 - 29	7,014	8,227	15,241
30 - 39	13,307	15,097	28,404
40 - 49	11,184	12,112	23,296
50 - 59	7,181	7,757	14,938
Over 60 years	6,619	7,647	14,266
Not mentioned	122	254	376
	102,478	106,043	208,511

The population pyramid is shown in fig. (18) (Sex and age groups for every village are shown in Appendix No.11)

The following table shows the distribution of the population in Ashmoun according to the different occupations of those over five years of age, i.e. among a population of 179, 900 inhabitants in 1947: <sup>(2)</sup>

(1) General Census of Egypt (1947).  
 (2) *Ibid.*

Table (44) Population and Occupation in Ashmoun.

<u>Occupation</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Agriculture & fishery	55,007	57,933	112,940
Processing industries	3,700	302	4,002
Building & construction	478	4	482
Transport & communications	806	5	811
Commerce & trade	4,003	1,527	5,530
Personal services	1,117	14,694	15,811
Public & social services	3,130	141	3,271
Other occupations	9,138	4,210	13,348
Unoccupied	10,891	12,766	23,657

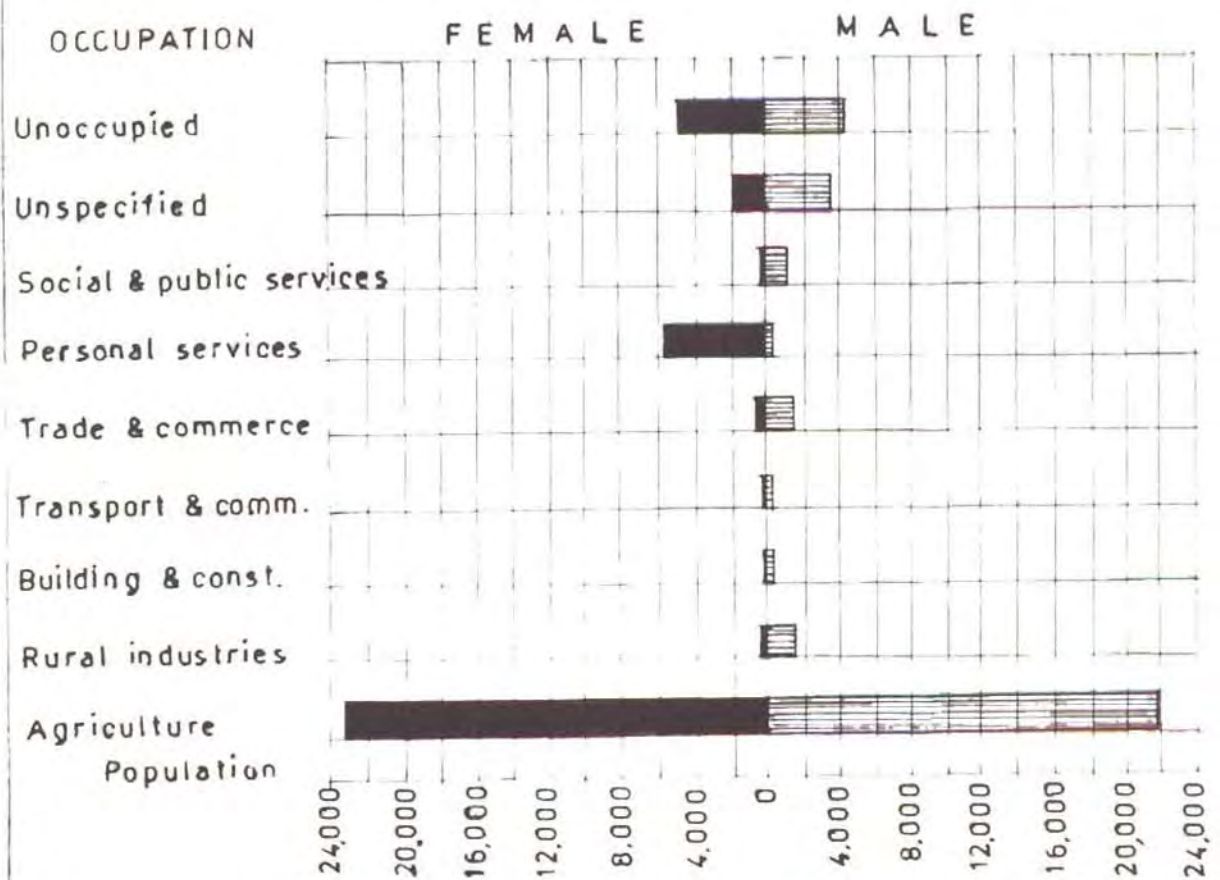
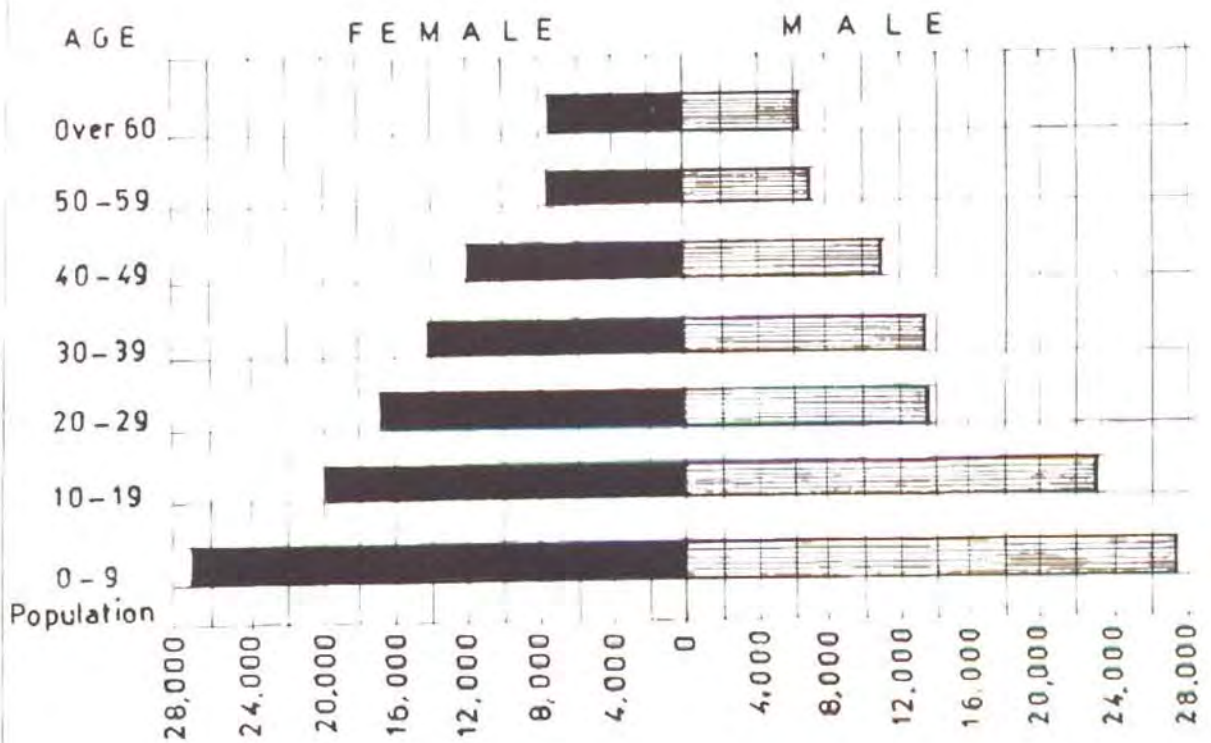
From this table (See fig. 18) we see that about 62.8% of the population are engaged in agriculture while only 2.2% are engaged in processing industries. This is against 8.8% engaged in personal services and 20% unoccupied or other non-productive activities. Furthermore there is an excess of agricultural labour amounting to 62,728 persons calculated on the bases indicated in Chapter (VI). This amounts to as much as 50% of the total agricultural labour force or 30% of the total population of the District. (Classifications of population according to occupations in every village in the District are shown in Appendix No.10).

The population engaged in agriculture are divided among the following occupations: (1)

Table (45) Occupations of Population Engaged in Agriculture in Ashmoun

<u>Occupation</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Arable farming	54,130	7,279	61,409
Horticulture	42	2	44
Livestock breeding	84	4	88
Bird breeding	-	29	29
Cheese & butter making (at home)	17	2,709	2,726
Honey bees	44	4	48
Poultry farming	27	5	32
Domestic services (in farmhouses)	85	293	378
Personal services ( " " )	-	47,045	47,045
Land lords	313	555	868
	<u>54,742</u>	<u>57,927</u>	<u>112,669</u>





POPULATION PYRAMID & OCCUPATION IN ASHMOUN



This means that arable farming accounts for 3% of the working population while 28% (all of them women) are engaged in domestic work complementary to agriculture.

#### Working Season

The agricultural year, as far as labour is concerned, is characterized by a long season of under-employment. In the Delta, this under-employment season varies from one province to another. In Menoufia (the province of which Ashmoun is a Markaz) the working year is around an average of 210 days for adult male labour, 180 days for female labour and 160 days for young labour.<sup>(1)</sup> This leaves adult male labour with a forced under-employment in the aggregate of five months each year. This is the case with permanent labour or small holders. 'Zoborat', or canal labour suffers much more. This seasonal forced under-employment points to the necessity of introducing subsidiary farm industries to fill the gap and add to the Fellah's income.

The period of canal winter closure, 'gafaf' is about 40 days, and takes place around December when less work is being done in the fields. The labour then is engaged mainly on canal cleaning. The seasons of excess of work are generally the harvesting of winter crops in May and June, cotton cultivation, in February and March, pest combating, cotton picking and 'tafi-el-sharaqui' or the watering of dry land before the cultivation of maize which starts in June.

#### Population Engaged in Rural Industries

By analysing the population engaged in rural industries we get the following distribution according to the different types of industries in the district:<sup>(2)</sup>

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(1) Naar. S.N. Agricultural Geography in the Delta, Research, Cairo 1953.

(2) General Census of Egypt (1947).

Table (46) Distribution of Population According the Different Industries in Ashmoun

<u>Type of Industry</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Milling	157	2	159
Bakery	44	5	49
Sweets	31	-	31
Preserved food from vegetables	4	-	4
Meat preparation	5	-	5
Dairy produce	31	6	37
Syrups	4	-	4
Tobacco	1	1	2
Oil pressing	1	-	1
Paints	2	-	2
Carpentry (machines)	25	-	25
Carpentry	235	4	239
Furniture	57	-	57
Implements	2	-	2
Chairs	5	-	5
Basketry	48	3	51
Palm tree products	10	-	10
Printing	6	-	6
Photography	8	-	8
Saddles	23	1	24
Cotton spinning and weaving	27	1	28
Wool spinning and weaving	83	45	128
Ropes and string	4	2	6
Matting	38	-	38
Cloth and textiles	37	-	37
Carpets and rugs	13	-	13
Spinning and weaving (unlicensed)	410	7	417
Tailoring	576	23	599
Caps	4	-	4
Women's tailoring	9	114	123
Shoe making and mending	220	2	222
Others connected with clothing	6	1	7
Umbrellas	1	-	1
Sacks for cotton	2	-	2
Irrigation (general)	426	-	426
Irrigation (private, mech.)	55	2	57
Gas and electricity	2	-	2
Water distribution	33	30	63
Brick work	16	1	17
Pottery	156	14	170

Cont. Over.....

Cont. Table (46)

<u>Type of Industry</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
Metal preparation	113	11	124
Blacksmiths, coppersmiths	406	15	421
Machinery and instruments	115	-	115
Repair shops (bicycles etc.)	160	2	162
Jewellery and fine instruments	26	-	26
Other metal trades	40	5	45
Buildings and construction	282	2	284
Roads	166	2	168
Railways	27	-	27
Railway transportation	82	-	82
Road transportation	294	4	298
Water transportation	366	1	367
Communications	60	+	60
Petroleum	60	-	60

The above table illustrates the structure of the rural industries in the district and their rudimentary stage of development in spite of the unique situation of the district in relation to the large market of Cairo and the easy communications to it.

The number of people engaged in preserving foods, vegetables and fruits; dairy produce; sweets; syrups and oil pressing, is insignificant, and there is obviously a prima facie case for the expansion of these productive and processing rural industries.

On the other hand, we find that the number of those engaged in carpentry and furniture manufacture is considerably larger although still not sufficient. The same can be said for those engaged in basketry, palm tree products, cotton and wool spinning and weaving, matting, carpets and rugs, cloth and textile. It has to be noticed that a great number of people are engaged in spinning and weaving without licenses. This fact shows the great demand for this kind of rural industry and <sup>the</sup> need to rationalise its development.

The manufacture of caps and straw hats is nearly unknown in the district in spite of the great need for this kind of head gear as protection from the burning sun. Here is another prospect for the rural industry to flourish.



The electrification of the rural areas and the extension of supplies water will employ a greater number of labourers than the few (65) now engaged, and give a great impetus to rural industries.

Another type of industry in the district, <sup>which</sup> has been considerably neglected is the brick work industry which employs only 17 labourers. This is one of the main industries to develop if rural reconstruction is to be achieved.

The greater number engaged in preparing metals and the manufacture of simple equipment from copper, tin and other metals could become the nucleus for the establishment of an industry in the region devoted to the production of kitchen and other household utensils.

Improving the ways of communications by building new roads will help, to a great extent the progress of rural reconstruction as well as the absorption of more workers.

Using this analysis of rural industries as the starting point, the distribution and the policy of establishing rural industrial centres in the district can be pursued on the lines of the recommendations discussed later in this Chapter.

### Social Classes

The social strata in the Markaz have been analysed according to Dr. Nasr, by classifying the population in different social classes according to their land holding and Annual income <sup>(1)</sup> as follows:

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(1) Giving ££ 50 of output per feddan per annum.

Table (47) Population of different social classes in Ashmoun.

Class	Size of holding (feddans)	Average Annual Income	% of Total
Low (a)	Less than 1	Under £E 50 <sup>(1)</sup>	44%
Low (b)	1-2	£E50-100	29.2%
Middle (a)	2-4	£E100-200	21.0%
Middle (b)	4-10	£E200-500	2.1%
High (a)	10-20	£E500-1000	2.1%
High (b)	Over 20	Over £E1000	1.6%

From the above classification we see that in the district over 94% of the holders own less than four feddans each and have an income, from the land of less than £E200 per annum. Only 4.2% of the holders possess farms of between 4 and 20 feddans and the rest (1.6%) possess holdings of over 20 feddans (See fig. 19).

More than 70% of the holders of less than 2 feddans provide the major part of the labour force. Moreover, there are many (35% of the total population) who rent land but own none themselves and their plight is usually even more serious than that of the poorest owners.

### (e) Education

The district is served by a secondary school for boys in the town of Ashmoun. Another secondary school for girls is also to be provided. In addition there are two preparatory stage schools (12 to 15 years), one for boys and one for girls in the same town and a similar school for boys in the country town of Samadoun.

Markaz Ashmoun is also served by about 79 primary mixed schools (first stage 6 to 12 years compulsory). Six of these schools are in the town of Ashmoun. (See Appendix No.13 & map No.33).

(1) The 1949 'Agricultural Statistics' gave £E 23 and £E 70 as an average income per holder of the very low and low classes respectively.

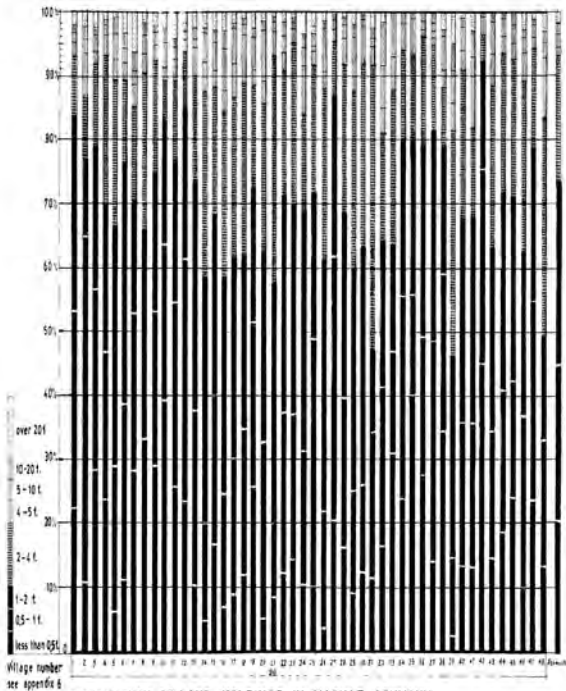


Fig. 19



The following table shows the different types of schools in the district together with the number of classes and the number of students in each school in 1957-1958. (1)

Table (48) Types of Schools and Number of Classes and Students in Ashmoun.

Type of School	Boys			Girls			Mixed			
	a	b	c	a	b	c	a	b	boys	girls
	No. of Sch.	No. of classes	No. of Stud.							
1. Primary	21	147	5,784	13	79	2802 62	48	290	7508	3700
2. General Preparatory	5	62	1,805	2	12	276	-	-	-	-
3. Agricultural preparatory	1	21	642	-	-	-	-	-	-	-
4. Secondary general	1	23	683	1	3	42	-	-	-	-

This table gives a total number of 516 classes accommodating 19,856 pupils in the primary schools, (See appendix 13) 74 classes accommodating 2,081 pupils in the general preparatory schools, and 26 classes accommodating 725 pupils in the general secondary schools. This gives an average of 35 pupils per class in the primary schools, 28 pupils per class in the general preparatory schools. All the schools, apart from two private schools, (2) are under government management.

The preparatory schools are distributed as follows:

1 - Ashmoun (boys)	13 classes with 386 pupils
2 - Ashmoun (girls)	7 " " 250 "
3 - Samadoun (boys)	9 " " 264 "
4 - Sintris (boys)	13 " " 384 "
5 - Shanshour (boys)	10 " " 275 "
6 - Ramlet El-Ingib (boys)	4 " " 100 "

Two of the general preparatory schools and the agricultural preparatory school are in the Barrage town which is outside the district boundaries of Ashmoun although serving children from this district. The two secondary schools are in the town of Ashmoun.

(1) Education census in El-Menubiya (1957-1958, Sliebin El-Kom Education Division (1959).

(2) The private schools are, of course, under government supervision.

To indicate the recent progress in education in the district, it must be mentioned here that the number of pupils in the primary schools have<sup>5</sup> risen by 26% between 1954 and 1958.

From the financial point of view the primary school pupil costs the country about £E 10 per annum. In the preparatory school the costs are £E 18 for a boy and £E 31 for a girl. In the case of technical preparatory schools the per head expenses are £E 48. This figure is reduced to about £E 30 for boys and £E 97 per annum, for girls in the general secondary schools.

In the hygienic field the conditions of the schoolchildren are very poor. It was found that 46% of the pupils of the primary schools in the district suffer from bilharzia and 39% from parasitic diseases. These percentages are 52 and 41 respectively in the preparatory phase and 67 and 54 among the pupils of the secondary schools. This means that about 50.5% of the pupils in the district suffer from bilharzia and 43% suffer from parasitic diseases.

As the average size of the family in Ashmoun is 5 persons of whom 0.75 persons are at the age of compulsory primary education, we find that the district needs schools to accommodate about 30,000 children. If we consider that a school of 6 class-rooms with 240 pupils is a reasonable size to serve a community of 1,600 inhabitants ( $240 \times 4/3 \times 5$ ), then the district should be served, theoretically, by 125 primary schools. This figure illustrates the great need for expanding the primary educational institutions in the area. There is also a great need for adult education to combat illiteracy in the district as about 80% of the population <sup>will</sup> ~~be~~ illiterate in 1947.

The following table shows the state of education in Ashmoun according to the 1947 statistics for inhabitants over five years old:

Table (49) State of Education in Ashmoun.

<u>Sex</u>	<u>Number</u>	<u>Illiterates</u>	<u>Literates</u>	<u>Unknown</u>
Male	88,330	59,094	26,056	3,180
Female	91,582	79,835	7,596	4,151
Total	179,912	138,929	33,652	7,331

The term 'literate' is usually given to the person who can only write his name in front of the census official. This means that there are many of the literates who are actually illiterate.



(4) Health

The hygienic conditions in Ashmoun, although similar to those prevailing in the Nile Delta, are comparatively better. This is due to the provision of more medical services than in many districts in the Delta.

The main diseases which prevail in the district are those of bilharzia, malaria, and parasitic diseases. It was found that from the 1625 deaths reported in 1947<sup>(1)</sup>, 520 (30%) cases were caused by diseases of the digestive system, 298 (18%) cases caused by diseases of the respiratory system, 102 (6%) cases caused by infective and parasitic diseases, 92 (5.5%) cases caused by diseases of the nutrition and glands, and 73 (4.6%) cases caused by diseases of the urinary and genital systems.

The Markaz of Ashmoun is served by eleven hospitals; (See map No. 33) three of them are situated in the town of Ashmoun. There is a clinic in each of the following country towns:- Shama, Shanshour, and El-Gannamiya. This is in addition to a medical bureau, for registering births and deaths, in the town of Ashmoun, Sintris, and Shatanouf.

The following table shows the capacity of hospitals and clinics in the district:

Table (50) Hospitals' Capacities in Ashmoun.

<u>Hospital</u>	<u>No. of beds</u>	<u>Additions</u>
1-Ashmoun General Hospital	38	Out patients' clinic
2-Ashmoun Eye Hospital	12	" " "
3-Tropical (local) Diseases Hospital in Ashmoun	20	" " "
4-Tropical (local) Diseases Hospital in Sintris	20	" " "
5-Collective Unit Clinic - Greis	14	" " "
6- " " " - Shatanouf	14	" " "
7- " " " - Tahaway	14	" " "
8- " " " - Saqiet Abu-Chara	14	" " "
9-Ghannamiya Health Centre	24	" " "
10-Shama Health Centre	13	" " "
11-Shanshour Health Centre	25	" " "
<b>Total</b>	<b>208</b>	

(1) Vital Census of Egypt, 1947.



This gives an average of one bed per 1000 persons in the District.

Public health and sanitation targets have been briefly set forth by the Council of Public Services as follows:

- 1 - Health Units to be established in each unit of a population of about 100,000 inhabitants. The staff are as follows:
  - a. One medical officer of health.
  - b. One woman medical officer.
  - c. Four sanitary inspectors.
  - d. Eight midwives.
  - e. Four health visitors.
- 2 - Each unit to have a hospital with an adequate number of maternity beds, on the basis of 4 beds for every 1000 persons. This makes the size of the hospital of about 400 beds.
- 3 - A dispensary and a maternity home for every 1000 persons.
- 4 - A doctor and a nurse for every 1000 persons.
- 5 - Improvement of rural housing with a development plan for each village.
- 6 - Rural sanitary improvement.
- 7 - Maternity and child-welfare have to be taken up in every village. Where child-welfare centres have been started, these could be easily become birth-control clinics.

(g) The Redevelopment of the Markaz

The Markaz as a whole will form the administrative unit on which the major development proposals will be based, such as those relating to main communications and the distribution of principal hospital and health facilities, and the establishment of Rural Industrial Centres, whilst local planning problems will be tackled within the boundaries of the Planning Units.

Communications

The railway line which runs from South to North through the Markaz is the backbone of the system of district communications connecting the Markaz with neighbouring districts and areas. As the only constructed road runs along the Rayah El-Menufi canal in the eastern part of the district, there is a need for a similar means of transport in the western section. The construction of a road branching from the Rayah El-Menufi route south of Shatanouf and connecting Shatanouf, Talya, Ashmoun, Samadoun, and Shamma is essential to serve the western part of the district. This road could be extended to the district town of Minuf in the North. (See map No. 38).

There is a marked absence of direct east-west routes across the district, and three such roads should be constructed. The first, in the northern part of the district, should connect Gireis, Samadoun, Shanshur, Qalata el Sugra, and then join the main road along the Rayah El-Menufi canal. (See map No. 38)

The second should connect Ashmoun, Sobk El-Ahad, Santaris, and cross the Rayah El-Menufi to Samalai and Saqyet Abu Shaqra. The third road to be constructed would run from Talya, Buhet Shatanouf, Kafr Quras, and then cross the Rayah El-Menufi to El-Neenaya. The lack of bridges across the Rayah El-Menufi canal isolates the eastern parts from the rest of the district. The provision of bridges over this canal is recommended at the four points shown on Map No. (38).

The overall net of communication within the district should be designed to connect the district town of Ashmoun with the different country towns which are to serve as centres of the planning units, and also to connect the main centres with outside areas. Communications within the boundaries of the individual planning units, should be dealt with separately as explained under the heading of 'Planning Units'.





# GENERAL DEVELOPMENT PROPOSALS

## KEY

### EXISTING FEATURES

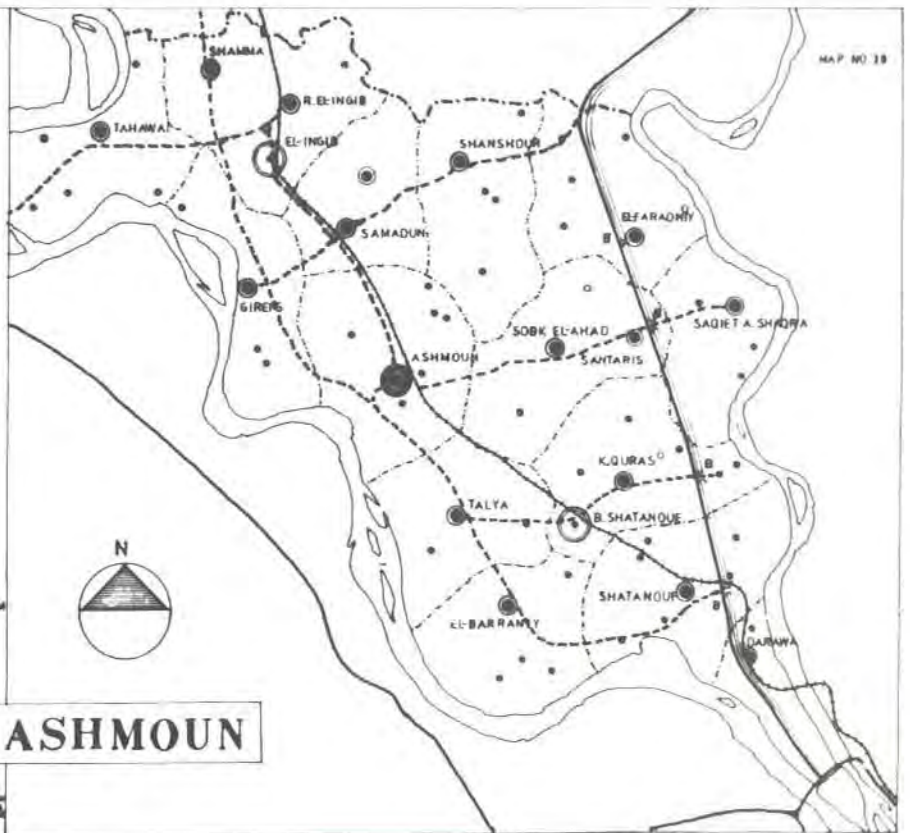
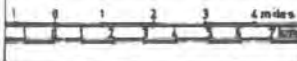
-  DISTRICT TOWN
-  COUNTRY TOWN
-  VILLAGE
-  MACADAM ROADS
-  RAILWAYS
-  WATERWAYS

### PROPOSALS:

-  PLANNING UNIT BOUNDARIES
-  PROPOSED RURAL INDUSTRIAL CENTRES
-  PROPOSED NEW MACADAM ROADS
-  PROPOSED NEW BRIDGES



# MARKAZ ASHMOUN



MAP NO 18



### Rural Industrial Centres

The District should be served by two rural industrial centres each serving about 100,000 inhabitants. These centres will comprise large-scale rural industries as part of a scheme for industrializing the rural areas in the Delta. These are, of course, different from the local rural industrial units which should be provided in every country town or planning unit centre.

The new sites for these centres should be served by good and adequate means of communication. The provision of labour is also another factor to be taken into account in selecting sites for these centres. Raw materials will naturally come from all over the district. The cultivation of orchards and vegetables in areas near these centres could also be considered. El-Ingib in the north and Bouhet-Shatanouf in the south would appear to be two reasonable sites for these centres. (See map No. 38).

### Health Centres

The District is to be served by one major health centre in the town of Ashmoun. This is besides the medical services provided by the Collective Units in every planning unit.

### Planning Units

The division of the District into several planning units will be carried out on the general basis adopted in connection with the Collective Unit divisions, but in the case of the planning unit divisions more consideration of physical factors relating to land holding and 'journey to work' inducements will be involved; for example certain holdings in a particular village area might be more easily served from a neighbouring village administration within the area of an adjoining Collective Unit. In such cases the boundary of the Planning Unit should be so arranged as to rectify such an anomaly. Where such cases occur in relation to village administrative areas within the Planning Unit, as they do for example, in the case of the Shatanouf village unit, no practical difficulty really arises, and, therefore, no alteration of a village boundary is called for - in fact for practical planning purposes village boundaries within the Planning Unit should be ignored. Where, however, a village boundary forms part of a Planning Unit boundary care in the definition of this boundary is called for. The boundary should lie between neighbouring villages near the perimeter of the different adjoining Planning Units and be so positioned as to give appropriate service areas to the villages concerned, having regard to their respective population sizes as well as to relevant topographical factors. (See map No. 38).