7. If the answer is YES, what is the reason? Lack of space (_____), change of the neighbours (_____), high rent (_____), lack of security (_____), lack of services?
8. Why have you chosen this residential quarter?

Population Data

1. Head of the household's place of birth: within the city (____), within the governorate (____), In Iraq (____), outside Iraq (____)
2. How many families reside in the residential unit? One (____), two(____), three (____), four (____), above four (____)
3. The educational status of the head of the family: illiterate (_____), Able to read and write (_____), elementary education (_____) , Intermediate (_____) , Secondary (_____), Diploma (_____), Bachelor (_____), Post graduate (_____)
4. Head of the family's profession: farmer (____), free worker (____), merchant (_____), retired (____), employee (____)
5. The marital status of the head of the family: Married (_____), divorced (_____), widower (_____), divorced (_____).
6. Specify the number of members in the family within the following spans: Below five years old (_____), 6-15 (____), 16 – 45 (____), 46 – 65 (____), above 65 years old (_____).

Social Data

1. Do each of the residential unit and the neighbourhood provide a suitable living for you and your family? Yes (_____), No (_____) Mention your reasons
2. Are there any reciprocal visits between you and other neighbourhoods? Yes (_____), No (_____)
3. Do you exchange assistance with each other in the neighbourhood? Yes (_____), No (_____)
4. If the answer is yes, what is the type of assistance exchanged with your neighbours: materialistic (_____), incorporeal (_____), materialistic and incorporeal. (_____).
5. Do you think that the residential neighbourhood provided you with the following: harmony with the neighbours(_____), contact with people (_____), feeling of belonging to the area (_____)
6. Do you have any intention of moving out of this residential quarter? - Yes (_____), No (_____)

- Once (------)

-Twice (------)

- Three times (------)

- More than three times (------)

15. What is the type of modification: Internal (------), external (------)
16. If the modification is external, in which area?

- in the façade (------)

-in the illumination and airing areas (windows) (------)

17. If the modification is internal where is it located?

-Chambers (------)

-Kitchen (------)

Bathroom (------)

-Toilette (------)

Economic Data

1. Is the residential unit :

- Owned (------)

- Leased from the private sector(------)

-Leased from the government sector (------)

- If other please specify (_____)

2. If the residential unit is leased, how much is the monthly rent? (_____) Iraqi Dinars
3. What is your means of transportation that you use to get to :

A) place of work (_____)

B) Offspring's schools (_____)

C) Daily shopping destination (_____)

D) weekly shopping destination (_____)

- Write the number of the transportation medium that is used to reach the above mentioned destination in its allocated space:

1. on foot (____), 2. by a private care, 3. Taxi, 4. Government vehicle, 5. Mass transportation.

How much money do you spend on transportation per month? (_____) Iraqi Dinars.

- Iron (_____)
- Aluminum (_____)
- No windows (_____)

Structural Data

1. The area of the housing unit: (_____) m^2
2. The design of the housing unit:
   - Eastern with an open courtyard (_____)
   - Western (_____)
3. Is the house terraced with neighbouring houses (_____) or detached (_____)
4. Is the house terraced from:
   - one side (_____)
   - two sides (_____)
   - three sides (_____)
   - Not connected with other houses (_____)
5. Number of floors in the residential unit:
   - A single floor (_____)
   - One and a half floor* (_____)
   - Two floors (_____)
   - Three floors (_____)
6. How many rooms does the residential unit consist of? (_____)rooms
7. How many bedrooms are there in the residential unit? (_____)bedrooms
8. Is there a separate bathroom in the residential unit: Yes (_____), No(_____)
9. Is there a separate kitchen in the residential unit? Yes (_____), No(_____)
10. Is there a separate toilet in the residential unit? Yes (_____), No(_____)
11. Is there a car garage in the residential unit? Yes (_____), No(_____)
12. Does the residential unit have a garden? Yes (_____), No(_____)
13. Have you make any modifications on the residential unit?
    Yes (_____), No(_____)
14. If the answer is YES, how many times did the residential unit undergo modifications since it was constructed?

* A floor and a half refers to the existence of one room upstairs without a bathroom.

The Questionnaire

Kindly tick (√) the suitable choice:

General Information:

1. Name of the residential quarter: (_____)
2. Date of constructing the housing unit: (_____)

Building Materials:

1. What is the type of building materials used in constructing the housing unit:
   - clay (___)
   - bricks and gypsum (___)
   - bricks and cement (_____)
   - Blocks (____)
   - Bricks and Blocks (_____)
   - Thermo stone* Blocks (_____)
   - Precast Concrete (_____)
   - Caravans (_____)
   -If others please mention them: _____
2. The Ceiling building material:
   - Wood with clay (_____)
   - Knotted (Akaada)[6**] (_____)
   - Concrete (_____)
   - Tin plates (_____)
   - If others please mention them: _____
3. Are the windows made of:
   - Wood (_____)
   - Wood with iron (_____)

* Thermostone blocks are blocks made of gypsum, and white cement. They are used in building walls and are shaped in rectangular cubes 20 cm heigh and 60 cm long.

** Akada refers to a roof made of bricks knotted round (I) shaped steel bars .

of Quality Education in Mansoura, The (First International – Fourth Arabic) Annual Conference, Academic Accreditation of Qualitative Higher Education Institution and Programmes in Egypt and the Arab World, "Reality and Aspiration", pp. 2453-2469.

11. .Ministry of Municipalities and Public Works, the General Directorate for Physical Planning, Development Strategy of Al Zubair City, Strategy of developing Al Zubair City, Third Stage, 2008.
12. Ministry of Water Resources, General Directorate of Area, M.P.D., Map of Iraq and Basra Governorate, Dec. 2007.
13. Mohammed, Sabah M., 1974: *The Great Hilla City: Its Functions and Regional Relationships*, 1st Ed., Al Manar Library, Baghdad.
14. Mousa, Mahir Y., 1997: *The Analysis Geography of Residential Function in Al Basra City*, PhD dissertation, University of Basra, Iraq.

Appendix

In the Name of Allah, the Most Merciful and the Most Compassionate

Republic of Iraq

The Ministry of Higher Education and Scientific Research
University of Basrah (Iraq)
College of Arts
Geography Department

The Fieldwork Questionnaire for the Research Paper Entitled" *Residential Regions in the City of Al Zubair (Iraq)*"

Dear Resident:

The researcher is making a study to know the residential state in Al Zubair City. In line of what we are certain of concerning your well known honesty and truthfulness in answering, I here by present this list of questions for you to answer.

Kindly, answer all questions with precision and honesty without mentioning your name. Please note that all of the answers are dedicated for scientific research purposes only. Your cooperation is the best assistance to achieve this purpose. God Bess you and accept my deepest respect and appreciation.

Yours Faithfully,

Firas Sami Abdulaziz Alqatrani

Conclusions

The study showed the existence of three residential regions in Al Zubair City reflect the residential reality of the city, where the weakness region represents the largest area in comparison with the propensity and aspiration regions, also it showed that nearly two-thirds of the city's residents showed their residential dissatisfaction and half of them have a desire to move from their residential quarters for two main reasons the small size of the housing units and the lack of the municipal and public services in the residential quarters.

References

1. Al Baghdadi, Abdul Sahib N., 1999: *Spatial Appropriateness of Residential Land Uses in Najaf City*, PhD dissertation, Urban and Regional Planning Centre for Higher studies, Baghdad University, Iraq.
2. Al Ghazali, Jasim S., 2007: *The Geographical Dimension of the Residential Function in Al Hilla City*, A Study in Cities' Geography, PhD dissertation, College of Arts, Al Mustansiriya University, Iraq.
3. Al Qaisi A., 1994: *Hamar Marsh, a Study in Physical Geography*, PhD dissertation, University of Baghdad, Iraq.
4. Al Naqshabandi, A. and M. Al Suwaidi, Drought as a basic feature of Iraq climate, Zanco journal for humanities, 3rd year, 4th issue, 1999.
5. Al Mayali, Sameer F., 2005: *The Residential Function of Karbala' City*, MA Thesis, College of Education- Ibn Rushd, Baghdad University.
6. Al Naqshabandi A. and M. Al Suwaidi, Classification of the Climate in Iraq and Analyzing its regional and climatic maps, College of Arts journal, University of Basrah, 22nd Issue, 1991.
7. Atawi, A., Urban Geography, Vol. 1, Dar Al Nahdha Al Arabia, Beirut, Lebanon, 2001.
8. Al Zuhairi, Qasim M., 1998: *Functional Proficiency of Al Umara City*, PhD dissertation, University of Basrah, Iraq.
9. Hamdan, Jamal, 1977: *Urban Geography*, 2nd Ed., Alam Al Kutub Press, Cairo.
10. Hassan, Najwa A., 2009, 8-9 April: *The Relevant Elements in the Good Quality of the Residential Environment and their Effects on House Violence Against Women*, College

Results

1. The percentage of housing units whose size is 200 sq m and less is 60%. This small space has led to the absence of house garden and car garages with percentages of 50,5% and 47,1% respectively.
2. The percentage of residential dissatisfaction in Al Zubair City has reached 65,6% of the total housing units.
3. The study showed that there is a rate of 65.6% of the total heads of households in the city who expressed housing dissatisfaction, most of whom belong to the regions of weakness and propensity, especially within its secondary region of low quality. While heads of households who expressed satisfaction with (34.4%) lived in the good-quality quarters of propensity region and the quarters of aspiration region.
4. The study of the city of Al-Zubair shows that the desire to move from the quarter preoccupies heads of households in all quarters of the city but in different proportions. The percentage of those who wish to change their residence to another quarter is 32.5% of the total housing units in the city and nearly half of the housing units whose owners expressed housing dissatisfaction. The percentage rises in the quarters of the weakness region as well as the propensity region in it secondary region of low quality housing units by 44% and 39% respectively. While it drops to the lowest values in the propensity region within its secondary region of good quality units, and the region of aspiration by 20.4% and 5.1% on respectively.
5. The reasons for wanting to move is primarily ascribed to the narrowness of the housing unit with a percentage of 61.85% of the total answers of heads of households, followed in the second-place by reasons related to non-availability of public and municipal services in the quarter by 33.95%. While the percentage of those who expressed their desire to move because of the high rental value is 2.12%. The percentages of those who wished to change their residence in order to change the neighbors or because of weakness or lack in security are 1.4% and 0.7% of the total answers of respectively. The destination of most who were willing to move was toward the residential quarters that are located within the ambition region, and propensity region of good-quality housing units.

With respect to building materials, it is observed that there is a rise in the percentage of the housing units built with bricks to 71.8%, followed by the prefabricated housing units (caravans) with 17.9%, whereas those built with blocks do not exceed 4.2% of the total number of housing units in the region. There seems to be no significant difference in the percentage of housing units that have concrete roofs in comparison with those of the Propensity Region, with 56.4%. As for the houses with roofs built in Al Iqada method, they are 25.7%. On the other hand, houses that have metal roofs that fulfill the conditions of the thermo insulation cover 17.9% of the total housing units in the region.

The environment of this region is considered the best in the city. The streets are spacious and paved. The residents show interest and care of the gardens and green areas that overlook the streets. There seems to be cooperation among people that stems from a sense of interest in the residential environment that surrounds the housing units. This might have come as a reaction to the nature of the interrelated relationship between the environment level and the residential level; if one is violated the second has to be effected.

The Aspiration Region occupies only a small percentage of the area and population in comparison with the other two previous regions. Its total area is 375.4 hectares, which is equal to 13.9% of the area of residential quarters. Moreover, it is considered to have the least percentage in terms of its population size which does not go over 13% of the total population of the city, and it has the least number of quarters and the best residence quality. However, there is an increase in the occupancy rate of bedroom and density of the housing unit, which have reached 3.5 persons / bedroom and 10.1 persons / housing unit respectively. Furthermore, the average number of families is 1.8 family / housing unit. This seems a common phenomenon that all Iraqi cities suffer from, irrespective of their size and residential area, due to the war circumstances that Iraq went through during the past 30 years and the cessation of the construction and development progress wheel. As for the net population and housing densities, they have reached 191.9 person / hectares and 23.6 housing units / hectare. These are less in value than their counterparts in the Weakness and Propensity Regions because of the spacious area of the housing unit.

Variables			Design of Housing Unit								Material of Ceiling				Materials of Housing Unit									
			Detached	Garden	Garage	Two floor	One-half	One floor	Western	Eastern	Galvanize sheet[1]		Concrete		All(gada (Bricks & Iron)		Wood &clay		Caravan		Precast concrete		Thermo stone		Blocks		Bricks		Clay	
The Total of Values for Aspiration Quarters			114	106	104	29	38	50	110	7	21		66		30		0		21		0		6		5		84		1	
Percentage of the Total of Region 's Houses			97.4	90.6	88.9	24.8	32.5	42.7	94	6	17.9		56.4		25.7		0		17.9		0		5.1		4.2		71.8		0.9	
No. of Questioners	117																													
Quarters of Region	Al Shimal , Al Dhubbat and Al Mulimeen																													
No. of Housin Units in the Region	2811																													
No. of Population	22951																													

Table 5 The Residential Characteristics of Aspiration Region in Al Zubair City 2011

[1]This type of ceilings contain insulating material, to reduce the effect of high temperatures in the summer.

pattern combine the traditional Arabic characteristics and the modern western. The inner courtyard takes the shape of a rectangle surrounded by rooms from all of its sides. The house consists of two floor and has two entrances: one for the guests and the other is connected with the kitchen directly. It also has a front garden and car garage. It is surrounded by a high fence and its gate is of the same height. The walls are built with bricks and cement and the roof is made of concrete. The size of the area of this pattern is 300-600 m^2.

Fig. 10 One of the Residences in the Aspiration Region in Al Shimal Quarter

***Source**: This photo was taken by the researcher on 22 /8/ 2012-11-01*

Table 6.5 reveals the most important physical traits of the Aspiration Region. It is observed that the western pattern is prevalent with 94% and the detached pattern amounts to 97.4%. The housing units that have a garden and garage are 90.6% and 88.9% respectively. However, the single floor houses reach 42.7%. Next to them come the one and half floor housing units with 32.5%. The latter are highly concentrated in Al Dhubbat Quarter. As for the two floor housing units, their percentage amounts to 24.8% of the total housing units in the region

Fig. 9 A High Quality Propensity Region Housing Unit in Al Marbid Al Jadeed Quarter

***Source**: This photo was taken by the researcher on 22/ 8/ 2012*

6.3 Aspiration Region (High Class Houses)

The quarters of this region are distributed in two areas: in the northern part of the city to the west of the archeological area fig. 6.1 as represented by Al Shimal Quarter that overlooks the Old City from its southern side, and some of its southern parts that overlook Al Resheediyah St. (Fig. 3.16) are considered part of the old city nucleus. As for the second area, it almost occupies the centre of the city's map where it lies to the south of the area near the central commercial zone which consists of Al Kut, and Jumhuriyah 2 Quarters and is only separated from it by Mustashfa (hospital) Street. The second area consists of the adjoining Mu'limeen and Dhubbat Quarters. This geographical location of the region enhanced its economic and social importance. Its spaces were invested by people of high income, and the region reflects the residents' economic status. This is seen clearly in the rise of the square meter prices of its residential lands which range between 500 000 to one million Iraqi dinars. There is also the area occupied by the housing units whose average residential area size reached 358 m^2. Moreover, most houses enjoy beautiful exteriors, which reflect the interest of their owners in choosing distinguished special designs in addition to choosing expensive building materials in covering their facades such as stone and sometimes marble, fig. 10.

Moreover, a new residential pattern has appeared in the Aspiration Region which is distributed in very limited areas particularly in Al Shimal Quarter on the two sides of Mohamed Al Braykan Street and also on Al Tabari St. The architectural characteristics of this

Variables				
The total of values for High Quality Propensity quarters				
Percentage of the total of region 's houses				
No. of questionnaires				
Quarters of region				
No. of Housin Units in the Region				
No. of Population				
Design of Housing Unit	Detached	١١٩	٧٧,٢	١٥٤
	Garden	121	٧٨,٦	
	Garage	124	٨٠,٥	
	Two floor	٥٣	٣٤,٤	
	One-half	١٣	٨,٤	
	One floor	٨٨	٥٧,٢	
	Western	١٢٣	٧٩,٩	
	Eastern	٣١	٢٠,١	
Material of Ceiling	Metal Plate	١	٠,٦	
	Concrete	١١٣	٧٣,٤	
	Al Iqada (Bricks & Iron)	٣٦	٢٣,٤	
	Wood &clay	٤	٢,٦	
Materials of Housing Unit	Caravan	٠	٠	
	Precast concrete	٤٣	٢٧,٩	
	Thermo stone	١٥	٩,٧	
	Blocks	٢٢	١٤,٣	
	Bricks	٦٨	٤٤,١	
	Clay	٦	٣,٩	

The number of housing units in the region is 6422 units that comprises 62.5% of the total housing units of the Propensity Region and 29.8% of the total number of housing units in the city. They are inhabited by 55525 persons forming 63.9% of the total population of Propensity Region and 31.5% of the total population of the city.

2. Propensity Region of High Quality Housing units

The quarters of this pattern spread in the city centre as represented by Resheediyah 2 Quarter and also in the western part of the city in Al Marbid Al Jadeed Quarter. This region is also distributed in the eastern part of the city namely in Al Binna' Al Jahiz and Al Askari Quarters. These four quarters constitute 33.3% of the total number of residential quarters in the region and 19% of the total number of residential quarters in the city.

This region heads in terms of its physical description towards the Aspiration Region. This is seen clearly in the high percentages of its physical traits of this region (table 4). This has encouraged identifying these two regions within the main region. The percentages of houses that have a garden and a car garage are 78.6% and 80.5% respectively. The housing units of a western pattern are 79.9% and the detached 77.2%. As for the two floor housing units, they have reached 34.3%, whereas the percentage of single floor houses is 57.2%.

As for the building material, there is a notable rise in the percentage of the housing units built with bricks which reached 44.1%, in addition to the ones using precast concrete which scored 27.9%. However, the percentages of the housing units built using blocks and mud do not go over 14.3% and 3.9% respectively. The housing units that have concrete roofs reach 73.4% but those roofed using Al Iqada method, wood and mud and those roofed with tinplate do not exceed 23.4%, 2.6%, and 0.6% respectively.

The quality of the environment of this region's quarters is at a good level, which reflects the aspirations of their residents. This is observed in their spacious and relatively clean streets, in addition, to the constant maintenance of the housing unit fig. 9.

This region includes 3835 housing units that represent 37.3% of the total number of units in the Propensity Region and 17.8% of the total housing units in the city. The population of this region is 31459 persons comprising 36.2% of the total number of population in the Propensity Region and 17.9% of the total population of the city

Variables	Design of Housing Unit								Material of Ceiling				Materials of Housing Unit					
	Detached	Garden	Garage	Tow floor	One-half	One floor	Western	Eastern	Metal Plate	Concrete	Al Iqada (Bricks & Iron)	Wood &clay	Carar an	Precast concrete	Thermo stone	Blocks	Bricks	Clay
The total of values for the low quality propensity quarters	١١٥	١٠٩	١١٤	٣٢	٢٨	١٩٨	١٢٨	١٣٠	١٤	١٠٩	١٢١	١٤	٠	٠	20	٩٦	١٢٢	٢٠
Percentage of the total of region 's houses%	٤٤,٦	42.3	44.2	١٢,٤	١٠,٩	٧٦,٧	٤٩,٦	٥٠,٤	٥,٤	٤٢,٣	٤٦,٩	٥,٤	٠	٠	٧,٧٥	٣٧,٢	٤٧,٣	٧,٧٥
No. of questioners	٢٥٨																	
Quarters of region	Arabs2 - Al Resheediyah 1 - Al Marbid Al Qadeem - Al Husein - Arabs1 - Al Kut - Al Jumhuriyah 2 - Al Ameer																	
No. of Housing Units in the Region	٦٤٢٢																	
No. of Population	٥٥٥٢٥																	

Table 3 The Residential Characteristics of Low Quality Propensity Region in Al Zubair City 2011

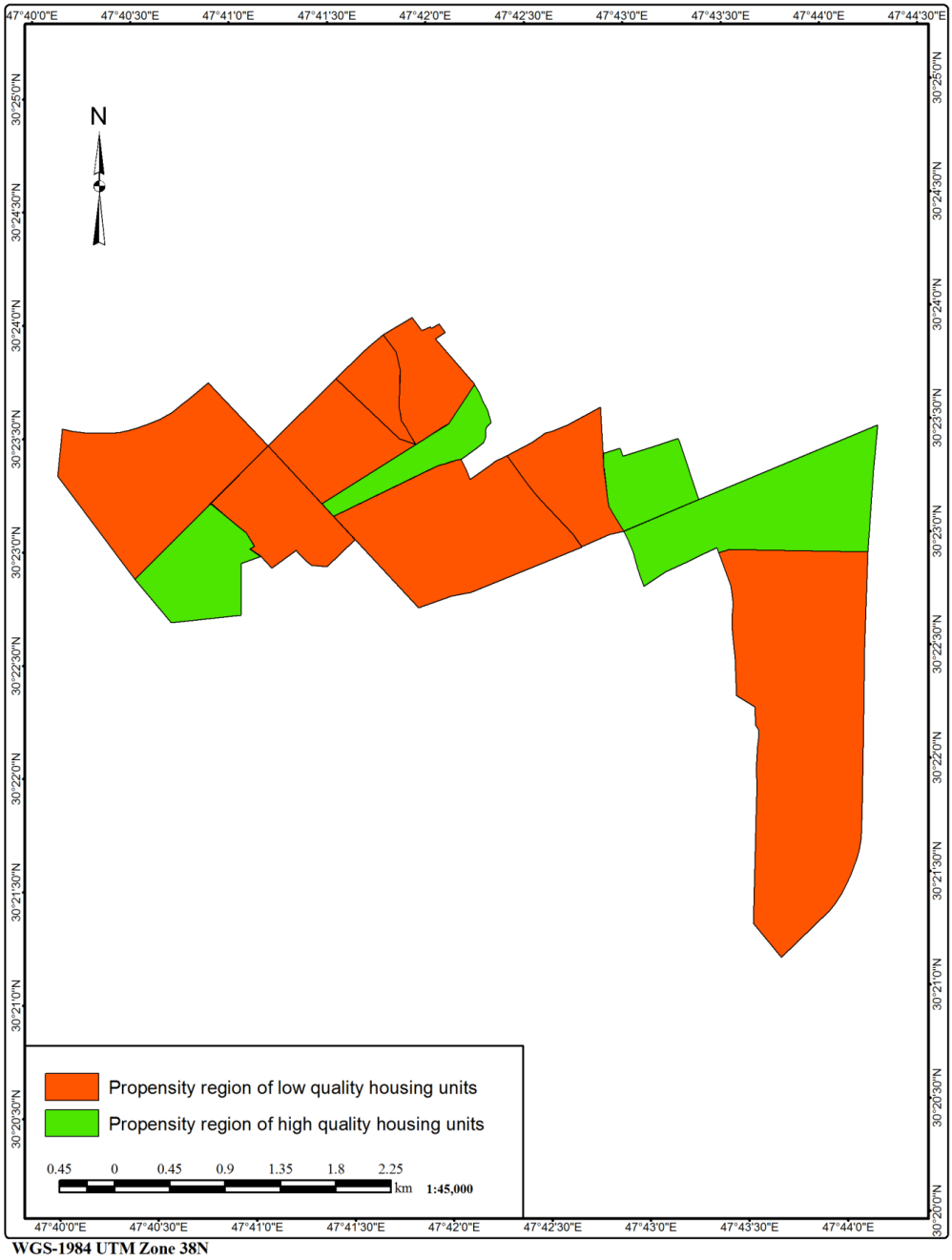


Fig.8 Secondary Propensity Regions in Al Zubair City

Source: The work of the researcher based on field study

units in the region respectively. The average size of a residential land is 216 m^2 and the price of a meter is (150000- 485000) Iraqi dinars.

The number of housing units in the Propensity Region is 10275 units, which covers a percentage of 47.6% of the total number of housing units in the city. They are inhabited by almost half of the city's population, 86894 persons who constitute 49.4% of the total city population. The net population density here is larger than the previous region due to the increase in population of this region which has reached 297 person / hectare. However, the average net housing density is somewhat less than the previous region reaching 35.2 housing unit / hectare. As for the occupancy rate, it amounts to 3.3 person / bedroom and the average number of people in a housing unit is 8.1 persons per a housing unit, which is the highest on the level of residential regions in the city.

Through this study of the residential reality in the Propensity Region and the induction of data related to the planning and physical characteristics of the housing unit, it is possible to identify two secondary regions on the basis of the conformity of their features of each fig. 6.5:

1. Propensity Region of Low Quality Housing units
2. Propensity Region of high quality Housing units

1. Propensity Region of Low Quality Housing units

The housing units of this pattern spread in the city centre as found in Al Kut and Jumhuriyah 2 Quarters in addition to the adjacent quarters such as Rasheediya1, Arab 1, and Arab 2 along with Al Ameer and the Al Marbid Al Qadeem quarters to the west of the city.

The quarters of this region are characterized by their relative low constructional level which signals the low incomes of their owners. The percentage of the housing units that are built with bricks is 47.3% of the total number of housing units in the region (table 3) whereas the ones built with blocks and mud reach 37.2% and 7.75% respectively. The housing units that were built in the connected pattern covered 55.4% and those that have a garden and a garage reach 42.3% and 44.2% respectively. The region is dominated by the feature of having single floor housing units with a percentage of 76.7%, whereas the percentage of one and half floor and two floor housing units are 10.9 % and 12.4% of the total housing units in the region respectively. On the other hand, the percentage of housing units that have concrete roofs is less than the second secondary region, which is 42.3%. As for the units that were roofed using Al Iqada method reach 46.9%, whereas those constructed with wood and mud and also metal plate are 5.4% each.

It is also observed that slightly over 50% of the housing units in the region belong to the eastern pattern. The common features in the physical characteristics of the quarters in the region are so similar to the extent of being almost homogeneous in having a degenerate environmental level as evident by the stagnant water in the streets, which seems a kind of extension towards the Weakness Region.

Table 2 The Residential Characteristics of Propensity Region in Al Zubair City 2011

Variables	Design of Housing Unit								Material of Ceiling				Materials of Housing Unit					
	Detached	Garden	Garage	Two floor	One-half	One floor	Western	Eastern	Metal Plate	Concrete	Al Iqada	Wood &clay	Caravan	Precast concrete	Thermo stone	Blocks	Bricks	Clay
The total of Values for Medium Quality Quarters	234	230	238	85	41	286	251	161	15	222	157	18	0	43	35	190	190	26
Percentage of the Total of Region 's Houses%	56.8	55.8	57.8	20.6	9.95	69.9	60.9	39.1	3.6	53.9	38.1	4.4	0	10.5	8.5	28.6	46.1	6.3
No. of Questioners	412																	
Quarters of Region	Al Resheediyah 2 - Al Bna' Al Jahiz - Al Askri - Al Marbid Al Jadeed - Arabs 2 - Al Resheediyah 1 - Al Marbid Al Qadeem - Al Husein - Arabs1 - Al Kut - Al Jumhuriyah 2 - Al Ameer																	
No. of Housin Units in the Region	١٠٢٧٥																	
No. of Population	٨٦٨٩٤																	

one and half floor and the two floor housing units have tripled and quadrupled in comparison to the Weakness Region, reaching 9.95% and 20.6% of the total housing units in the region. The percentage of Western Pattern housing units reaches 60.6% of the total housing units in this region, whereas the detached housing units percentage is closer to its counterpart in the previous region with 56.8% of the total number of housing units in the region. As for the building materials, the percentage of housing units built with bricks reaches 46.1%, two times the percentage of the previous region. On the other hand, the houses built with blocks cover 28.6% and those made of precast concrete and Thermo stone reach 10.5% and 8.5% respectively. However, houses built with mud do not exceed 6.3% of the total number of housing units in the region.

With respect to the type of roofing material, it is observed that there is an increase in the percentage of the housing units that have concrete roofs and they are two times the number of the previous region with a percentage of 53.9%. As for houses roofed by Al Iqada method, they reach 38.1%. However, houses roofed with wood and mud and also metal plate do not go over 4.4%, and 3.6% of the total number of housing

inside a housing unit have moved to the random illegal residence areas (slums) taking advantage of the state of chaos, absence of the law, and weakness of security Iraq witnessed in the aftermath of the fall of the previous regime in 2003, especially that the environmental, constructional and social state in the illegal residential areas may not be much different from some of the residential areas in the Weakness Region, be it in terms of the low building materials such as cement blocks and metal plates in roofing or in terms of the negligence its environment suffers from because of the accumulation of garbage stacks and spread of polluted filthy water in its streets and empty areas Fig. 7.

Fig. 7 One of the Residential Streets in the Weakness Region at Al Dirahmiyah Quarter.
***Source**: This photo was taken by the researcher on 22 / 8 / 2012*

6.2 Propensity Region (Housing Units of Medium Quality)

It is the region where the residents tend to improve the state of their housing units and the environment to make them more appropriate and compliant with the residency conditions. This is done making modification and renovation in addition to demanding the execution of service projects from government department. This goes parallel with having an inherent desire to change their place of living upon the availability of the financial means.

This region is distributed on several areas in the city. It extends along the eastern zone of the city represented by Al Hussein, Askari, and Al Bina' Al Jahiz quarters. Then, it extends through the Aspiration and Weakness Regions at the city centre as represented by Jumhuriyah 2, Resheediyah 1, Al Kut, Arab1, Arab 2. It also appears at the western parts of the city, namely, in Ameer, Al Morbid Al Jadeed, and Al Marbid Al Qadeem Quarters.

The Propensity Region consists of twelve residential quarters that constitute 57.1% of the total housing units in the city and occupies 39.1% of the total area of the residential quarters, and 45.7% of the total of the actual residential area of the city.

It is possible from table 2 to identify the general physical characteristics of the region. We find that there are high percentages of the housing units that have a garden and a garage reaching 55.8% and 57.8% respectively, which are two times their counterparts in the previous region. The single floor housing units reaches 69.9%, whereas the percentages of the

Moreover, the weakness of services and municipal laws, particularly during the post American occupation had a bad effect on the environmental reality of the region as stock-breeding and grazing spread in the alleys where animals feed on garbage Fig. 6.3. Some people also have seized areas in these alleys and used them to shelter stock and wagons. Thus they have turned into rural pockets within the urban zone, a phenomenon that has started to appear and spread in a lot of areas inside the city can be named (ruralization of the city), i.e., turning the city through social relationship patterns and economic activities practiced by the inhabitants into a rural environment. Therefore, the level of residential land prices in this region is the lowest inside the city where the price of a square meter of a residential piece of land ranges between 85000 – 200 000 Iraqi dinars.

The weakness region contains 8474 housing units that constitute 39.3% of the total housing units in the city. They are distributed on six residential quarters that cover 28.6% of the total number of the quarters in the city. They are inhabited by 66190 person or 37.6% of the city population. This region has the highest percentage in terms of its area in comparison with the other residential regions consisting of 47% of the total area of the residential quarters in the city. Its actual residential area covers 35.5% of the total actual residential area in the city.

Fig. 6 The Phenomenon of Raising Cattle in Al Zubair City 2011
***Source**: Photo was taken by the researcher on 9 / 6 / 2011*

Moreover, The value of the net population density rises in the Weakness Region to an average of 293 person / hectare and thus surpassing the other residential quarters. In addition, it outruns the others in terms of the net housing density with an average of 37.4 units / hectare. As for the occupancy rate, it reaches 3.9 people per bedroom and this is considered the highest in comparison with the Propensity and Aspiration Regions. The density of the housing unit reaches 8.6 people per housing unit, and the average number of families at the Weakness Region reaches 1.5 family per housing unit. In spite of the salient rise that is signaled by the average of housing unit density and the number of families in the housing unit, it appears less in value than those of Propensity and Aspiration Regions, this is due to the fact that many families that suffer from the increasing problem of residential crowdedness

Table 1 The Residential Characteristics of Weakness Region in Al Zubair City 2011

Variables	Design of Housing Unit								Material of Ceiling				Materials of Housing Unit					
	Detached	Garden	Garage	Two floor	One-half	One floor	Western	Eastern	Metal Plate	Concrete	Al Iqada	Wood &clay	Caravan	Precast concrete	Thermo stone	Blocks	Bricks	Clay
The total of values for weakness quarters	172	105	123	16	9	316	129	212	49	80	169	43	0	0	10	208	80	43
Percentage of the total of region 's houses %	50.4	30.8	36.1	4.7	2.6	92.7	37.8	62.2	14.3	23.5	49.6	12.6	0	0	2.9	61	23.5	12.6
No. of questioners	341																	
Quarters of region	Al Shuhadaa - Al Jumhuriyah 1 - Al Qarya Al Asrya - Al Dirahmiyah - Al Dhuaihrat - Al Mazari																	
No. of Housing Units in the Region	8474																	
No. of Population	66190																	

Fig. 5. The Residential Environment in the Weakness Region in Al Zubair City 2011.
***Source**: Photos were taken by the researcher on 9 /6/ 2011.*

As for the roofing material, it is observed from table 6.1 that the ceilings constructed using *Al Iqada* method constitute the highest percentage amongst other building materials. Its percentage reaches almost 50%, whereas the housing units that were roofed with concrete reach 23.5% of the total housing units in the region. It is also observed that 14.3% 25% of the housing units in the region are roofed with metal plates and 12.6% with wood and mud. The high percentage of cheap building materials gives the impression of its low construction condition and signals the poverty of its dwellers in spite of the reconstruction and renovation operations that have been made to some of the housing units

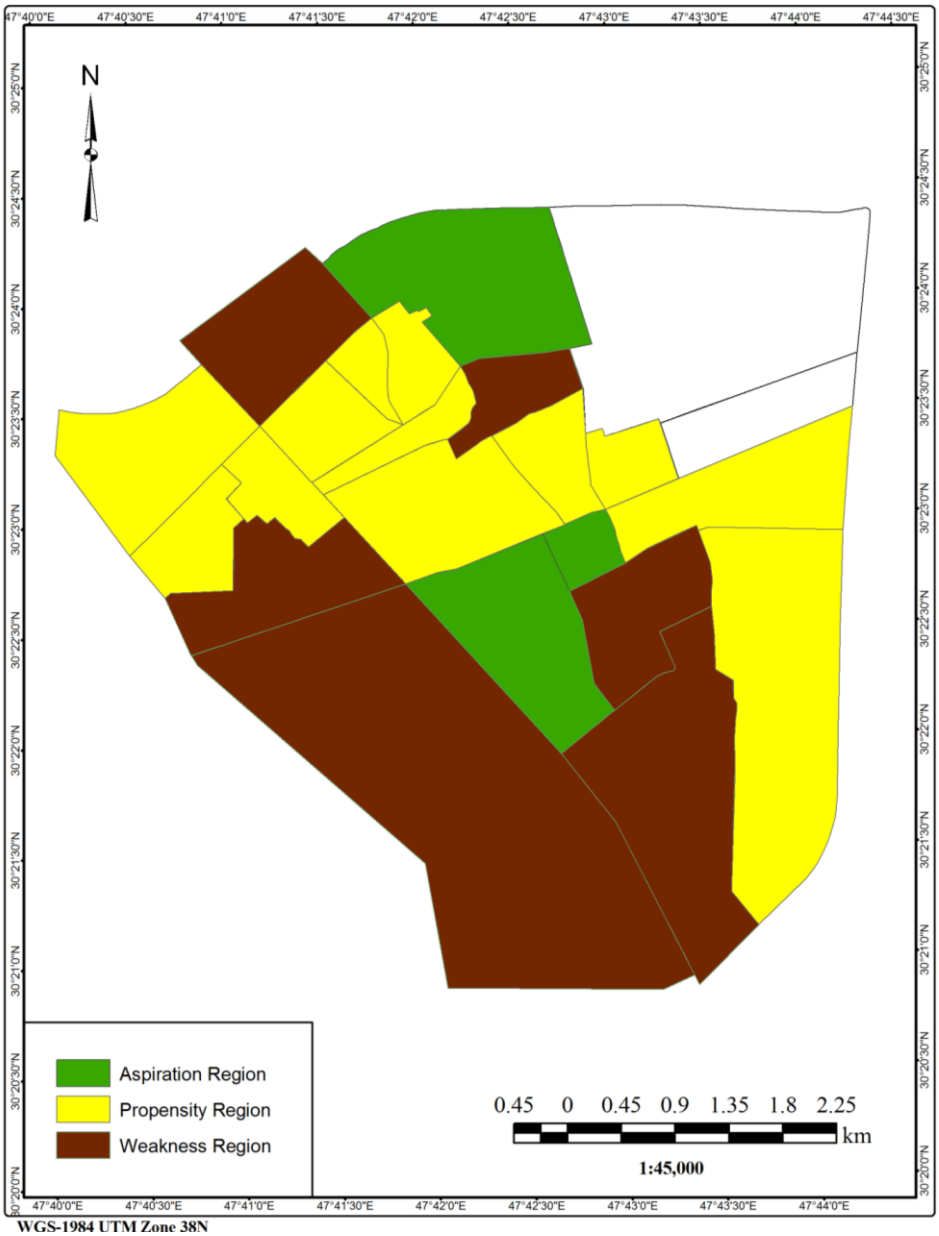


Fig. 6.1 Residential Region in Al Zubair City 2011

Source: The work of the researcher based on field study.

residential reality of the region suffer from notable constructional and environmental deterioration. Furthermore, the society is characterized by the spread of rural habits and behaviours, in addition to the high percentage of illiterates and those of below elementary education, who constitute up to 43% of the total number of householders in the region, a high percentage in comparison with the other two regions.[5]

The Weakness Region is distributed in multiple areas in the city. It is adjacent to the city centre in Al Jumhuriyah1 quarter which is one of the Old City quarters that were constructed during the first morphological phase, part of which belongs to the walled city. This area represents the old zone of the Weakness Region, some parts of which, despite of its construction and sanitary deterioration, are distinguished by constant raise in land price and leasing particularly those near the central commercial business area. Moreover, many housing units have been converted into competing commercial and industrial uses. This is seen clearly in the main streets particularly in Al Batin St. Inaddition, this region appears north the city in Al Qarya Al Asrya quarter and also in the southern and western parts in Al Dirahmiyah, Al Shuhadaa', Al Mazari and Al dhuaihrat quarters. They represent the new zone that was constructed during the third and fourth phases of the city age fig. 4.

It is possible from table 6.1 to identify the high percentages of low quality physical and planning variables of the Weakness Region which create a flaccid texture in its structure that requires more attention to adjust. The housing units of the eastern pattern reach 62.2% of the total housing units in the region and those that lacked a house garden and car garage reach 69.2% and 64.9% respectively, whereas, the terraced housing units constitute almost half of the housing units with 49.6%. The single floor units are 92.7%. However, the one-and-half floor units and two-floor units do not take more than 2.6% and 4.7% of the total number of housing units respectively. As for the building material, blocks are considered the most widely used material in building walls of the housing units in the Weakness Region, reaching 61%, whereas the housing units built with bricks reach 23.5%. As for the ones built with mud, they reached 12.6% of the total number of housing units in the region. This constitutes the highest percentage in comparison to the other two regions. These units are found in high concentration in Al Dhuaihrat quarter with 83 % of its total housing units and 60.5% of the total housing units in the region. While the housing units built with thermo stone do not exceed 2.9% of the total units in the province.

---

[5] The percentage of illiterate and below elementary education people is 20.6 % in the Propensity and 6.8% in Aspiration Regions (The High Class Housing Units).

Source: The work of the researcher based on Republic of Iraq Ministry of Municipalities and public works, Public director for physical planning, Strategy for developing Al Zubair city, Third Stage, 2008, Map of residential quarters.

2. Residential Regions in Al Zubair City

The residence is considered the closest and most influential environment on man's health and his psychological, social and economic life. This is due to the fact that the appropriate dwelling has an effect on developing the mutual relationships amongst its dwellers. The good quality of the housing unit's design and construction, in terms of area, building material and other architectural features, have subsequent effects on dwellers. Moreover, the nature of the social interaction and family relationships are affected by the degree of residential environment suitability. In case of weak constructional and design features of the housing unit, the dwelling of such has a negative impact on the behavior of its individuals (Hassan N. A., 2009). On the basis of the researcher's study of the residential characteristics of Al Zubair City, it has been found out that the physical and planning variables of the housing unit in addition to the economic and social statuses of residents have very important effects on the residence patterns. These effects, in addition to other factors, help classify the residential quarters into major and minor regions, each having its own distinctive features and characteristics.

These residential patterns come as a result of specific conditions the city passes through during a certain period of time, and they are unstable but are constantly changing under the effect of the changes in construction techniques and methods, in addition to transportation, social values, and the increasing human needs and desires as well as life conditions. Just like other uses, these patterns are influenced by economic, social, cultural, occupational levels and other environmental conditions of. On the other hand, the residence, with its own features be it a housing unit or residential quarter, is not at a stable state.

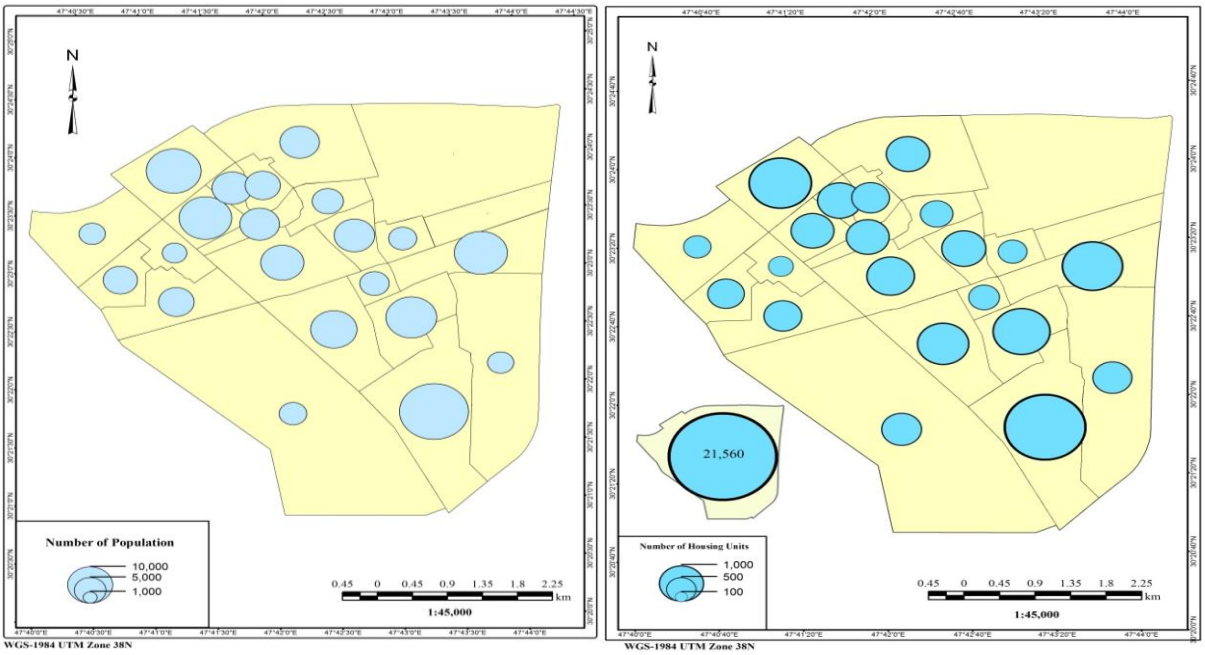
The studies that dealt with the classification of the city into residential regions differed on the basis of the type of criterion used. However, most of them are based on the architectural and social criteria, or on the physical history of the housing units and their area, pattern of construction and material or on both of them together (see: Mousa, 1997, pp.195-214.; Al Baghdadi, 1999, pp.96-118.; Al Zuhairi, 1998, pp.70-85; Al Ghazali, 2007, pp.174-191; (Al Qaisi R. I., 2002, p.57.; Mohammed, 1974, p.197; Al Mayali, 2005, pp.105-112).

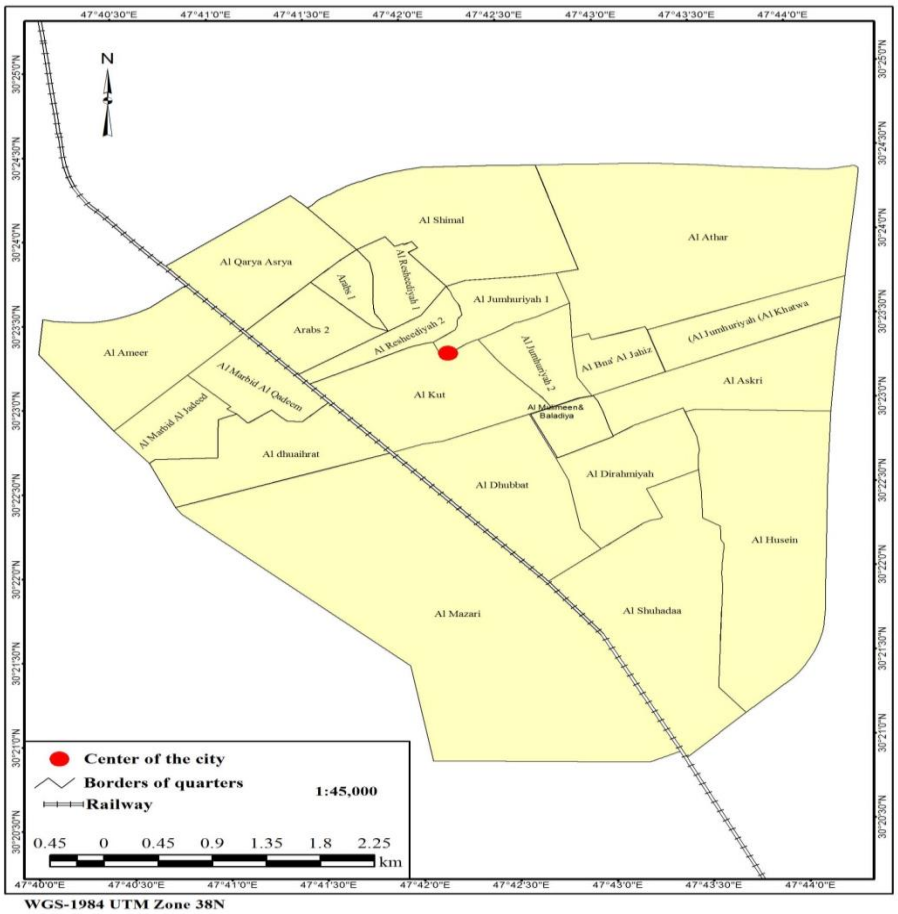
On the basis of fieldwork results and depending on the variables of residential characteristics, the researcher has divided the city into the following residential regions fig. 4.

2.1 Weakness Region (Poor Houses)

The housing units of this region share a high percentage of low quality constructional and design variables causing negative effects on the health, psychological, and social conditions inside the housing unit. The average housing unit area is no more than 190 m^2, and the percentage of the housing units that do not exceed 150 m^2 reaches 47.2% of the total housing units in the region. The streets of this region vary between twisting narrow alleys and straight streets of a width ranging between 1.5 -3 meters and sometimes up to 8 meters wide. Sewage water appears on the surface taking the shape of canals and puddles that accumulate on both sides and middle of the streets increasing the pollution and unpleasant odors fig. 6.2. There are a lot of stray animals and wagons pulled by donkeys and mules, which signals the low living standards of most of this area's residents. Moreover, the streets of this region are characterized by the abundance of children involved in various games for the lack of spaces allocated to them, which makes the region noisy and dusty all the time. During winter, most streets turn into puddles and swamps, and mud spread because of rain. This has made the

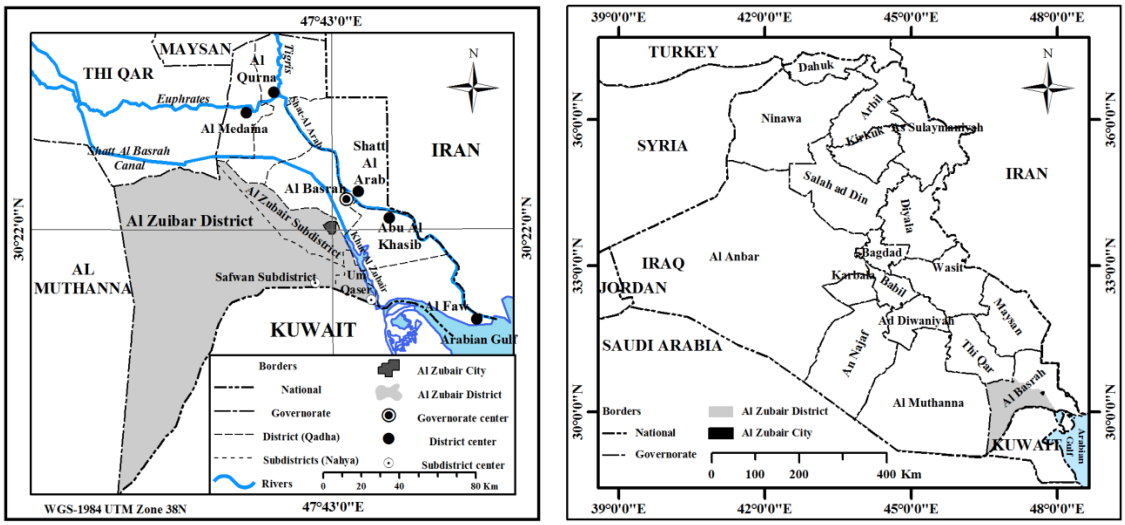
(Fig. 2)Destribution of Population and Housing units in the city of Al Zubair 2008





(Fig. 3) Residential quarters in the city of Al Zubair 2008

cities between Basra and Baghdad. In addition, Al Zubair is taken to have a nodality situation being located between two region s different in their natural features. These are the alluvial plain region which is located at the western boarders of the city and the western plateau region at its eastern side. This has made the city one of the most important cities on the commercial caravan roads in the area.



(Fig. 1) The Relative Geographical Situation of Al Zubair City

Source: *Prepared by the researcher based on: Ministry of Water Resources, General Directorate of Area, M.P.D., Map of Iraq and Basra Governorate, Dec. 2007, 1:500000.*

Based on all classifications that included the climate in Iraq , Al Zubair region lies within the dry desert region which is distinguished by short winters, little rain, and long dry summers.[3] Evaporation rates are much higher than the falling rain which has led to the placement of Al Zubair region under perpetual dry region .This region occupies more than 80% of Iraq area based on drought criteria.[4]

٣ A. Al Naqshabandi and M. Al Suwaidi, *Classification of the Climate in Iraq and Analyzing its regional and climatic maps*, College of Arts journal, University of Basrah, 22nd Issue, 1991, maps 4-16

٤ A. Al Naqshabandi and M. Al Suwaidi, *Drought as a basic feature of Iraq climate*, Zanco journal for humanities, 3rd year, 4th issue, 1999, map 7 and table 5.

Hypotheses

It is possible to understand the spatial temporal evolution of the residential reality of any city through identifying its residential regions.

1. General Geographical characteristics of Al Zubair city

Al Zubair city located at the intersection of latitude 30°22' N. and a longitude of 47°43' E (Fig. 2.1), within the western region of Basra governorate[1], south of Iraq which boardered by Iran to the east, Messan governorate to the north, and Kuwait and the Arabian Gulf to the south. It is also bordered by Thi-Qar and Al Muthanna governorates to the north west and west respectively. Al Zubair city, moreover, constitutes the administrative centre of Al Zubair district (Qadha) which is bordered by Thi Qar governorate and Al Medaina and Al Qurna districts and the centre of Basra district to the north and north east. From the east and south east it is bordered by Abu Al Khasib and Al Faw districts. It overlooks the Arabian Gulf to the south in addition to Kuwait which neighbours it from the south and south west. It is also boardered by Al Muthanna governorate from the west. Al Zubair district consists of three administrative divisions, namely the sub-divisions (Nahya) of Al Zubair district centre, Um Qasir and Safwan. Al Zubair City and all of these destinations are connected by good transportation roads and this particular situation has given the city a strategic, economical, social and political importance. Also, what adds to its economical importance is its closeness to the most important oil fields in Iraq **(Fig. 2.2)**. Moreover, the city is located at an international ground cross roads that connect Iraq, the Arabian Gulf countries, Iran, and the cities of Basra, Baghdad and other Iraqi cities. Moreover, the city enjoys administrative importance being the center of Al Zubair district. Hence, it provides administrative, health, and educational services to the dwellers of its region. Added to that, it has become an important religious attraction where people come in large numbers at certain seasons every year from all over Basra governorate, particularly after the overthrown of the previous regime that had forced strict limitations on the performance of many religious ceremonies. They come to visit Al Basra Mosque which is locally known as Al Khatwa Mosque where Imam Ali (p b u) which is locally known as Al Khatwa Mosque where Imam Ali (p b u) prayed. This has given the mosque an important status for a large sector of Muslims.

According to the types classification of the situation of cities[2], Al Zubair can fall under more than one type. This is due to the fact that it is considered to have a city access situation (porality situation) being the gate of a large region which is the region of the Western Plateau. Moreover, the city is taken as a sort of a desert harbor whereby commercial caravans stop either to rest or exchange goods. In addition, Al Zubair has an interstitial situation being located at the cross-roads connecting Iran and Basra to the east, Kuwait and other Arabian Gulf countries to the west and south, and Baghdad to the north. This has rendered it an interstitial city like Al Kut and Emara which have been and still are interstitial

[1] Administratively, Basra governorate is divided into seven districts (Qadha), namely: Al Basra, Al Zubair, Abu Al Khasib, Shut Al Arab, Al Qurna, Al Medaina and Al Faw, see Fig. 1.

[2] Cities are classified according to their geographical situation into six types: Nodality situation which is the most common, the Focality, Centrality, Marginality, Porality and finally the Interstitial situations.

See: A. Atawi, *Urban Geography*, Vol. 1, Dar Al Nahdha Al Arabia, Beirut, Lebanon, 2001, p.44. ; Jamal Hamdan, op.cit., p.437, 439.

Residential Regions in the City of Al Zubair (Iraq)

Firas Sami Abdulaziz Alqatrani
University of Basra / Collage of Arts

Abstract:

The residence is considered the closest and most influential environment on man's health and his psychological, social and economic life. This is due to the fact that the appropriate dwelling has an effect on developing the mutual relationships amongst its dwellers. The good quality of the housing unit's design and construction, in terms of area, building material and other architectural features, have subsequent effects on dwellers. Moreover, the nature of the social interaction and family relationships are affected by the degree of residential environment suitability. In case of weak constructional and design features of the housing unit, the dwelling of such has a negative impact on the behavior of its individuals. On the basis of the researcher's study of the residential characteristics of Al Zubair City, it has been found out that the physical and planning variables of the housing unit in addition to the economic and social statuses of residents have very important effects on the residence patterns. These effects, in addition to other factors, help classify the residential quarters into major and minor regions, each having its own distinctive features and characteristics.

The study aims to divide the city into residential regions divided the housing reality to the Poor Houses (weakness region), Propensity Region (Housing units of Medium Quality) and Aspiration Region (High Class Houses), according to physical, social, and economic standards, contribute to supplement the institutions concerned to provide municipal services and infrastructure in the city.

Keywords:
Residential regions, the city of Al zubair, Al Zubair

Problem of the study

The residential reality in the city of Al Zubair suffers of physical and planning deterioration and low socio-economic levels of the population in some residential areas, as opposed to other areas within the city.

Aim of the study

This study aims to:

1. Study the impact of natural and human factors in the formation of the general appearance of the housing units in the city of Al Zubair
2. Detect the residential reality of the city of Al Zubair
3. Distributing the quarters in the city of Al-Zubair into residential regions depending on the criteria used in the study (planning - physical - economic - social criteria).