# Changing the Pattern of the Residential Use of Roads NO.(17) and (44) in Quarter no (603) in Dragh Neighborhood

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# This work is licensed under a <u>Creative Commons Attribution 4.0 International License</u> **Abstract**

The phenomenon of partition of residential units into small residential annexes is regarded most common in the Iraqi's cities, especially Baghdad where these annexes have been extended to the high class residential neighborhoods including Dragh Neighbourhood (Quarter No. 603). The Current study aims to identify the reality of dividing residential units in Roads No. (17) and (44) in Quarter (603), as well as to investigate the reasons that led the owners of these residential units to divide their houses into small annexes. To achieve the aim of the study, The researcher has adopted a sample consisting of (270) residential units. Results show that changing the pattern of residential use has affected Negatively upon the urban appearance of the study area. Where (83.6%) of the population have found that Quarter (603) was deformed and got worst.

**Keywords:** Pattern, Changes, Residential Units, Residential annexes, Category.

تغير نمط الاستخدام السكني لشارعي 17، و44 في محلة 603 (دراغ)
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المستخلص

تعد ظاهرة تقسيم الوحدات السكنية الى ملحقات سكنية صغيرة من الظواهر المألوفة في المدن العراقية، وهيكل خاص في مدينة بغداد التي طالت حتى احيائها السكنية الراقية ومنها محلة 603 (دراغ)، يهدف هذا البحث التعرف على واقع تقسيم الوحدات السكنية في شارعي 17 و 44 في محلة 603 والتحقق من الاسباب التي دفعت مالكي الوحدات السكنية من تقسيم بيوتهم ، ولغرض الوصول الى هدف البحث اعتمد على عينة مجتمع البحث كليا والبالغ عددها (270) وحدة سكنية. توصل البحث الى بعض الاستنتاجات ومنها ان التغير الذي تعرض له الاستخدام السكني سواء في النمط أو الصنف قد اثر في المظهري الحضري لمنطقة الدراسة. حيث بلغت بنسبة (83.6%) ممن وجدوا ان محلة (603) تسير نحو الاسوأ.

الكلمات المفتاحية: النمط، التغير، الوحدات السكنية، الملاحق السكنية، الصنف

#### **Introduction:**

Housing is one of the most basic human needs in the world .it is no less important than the need for food and clothing .The problem of housing in Iraq has increased due to the accumulation of many years of abnormal conditions experienced by Iraq from wars ,where citizens of low income were unable to obtain suitable housing because of high land prices and high construction materials , that encouraged citizens to make adjustments on their residential units . This phenomenon arose in all Iraqi cities, especially in Baghdad city not only in the slums area ,and also involved high standard Baghdad's neighborhoods , for instance Drage.

Although the building of Appendices was slow in the 1990s, it increased after 2003 due to economic reasons, social, and security. The change is not only in pattern of residential units, but also involved in the residential use function, which has led to decrease the urban and social value of the residential units in the Drage neighborhood, and moreover arose of different social fabric for the original inhabitants, which affected of architectural design of the study area.

## **Research problem:**

What are the reasons that led the residents of streets 17, and 44 in the neighborhood of to change the pattern and function of residential use of their houses, which affected on urban and social environment of each street.

## **Research hypothesis:**

The change in the pattern and function of residential use of streets 17, and 44 in the neighborhood is due to a number of factors such as: ownership of housing, size of family, and type of work...Resulting a distortion of aesthetics appearance of residential units as well as shrinking of green spaces and lack of privacy.

#### **Research Goal:**

The purpose of this research is to study the reality of changing in the pattern and category of residential use ,and the reasons that led to this changes of the streets 17, and 44 in the neighborhood.

# **Research Methodology:**

The research was based entirely on the field work, which included the numerous visits to study area, and interviews with the officials of the municipal council of the study area and the direct interviews with the residents, as well as using the questionnaire form to obtain the data. The researcher used the whole community in the ,the streets 17, and 44 in order to clarify changes statement in the pattern and function of residential units. The number of residential units was 270 houses which were calculated by the researcher and were studied in detail.

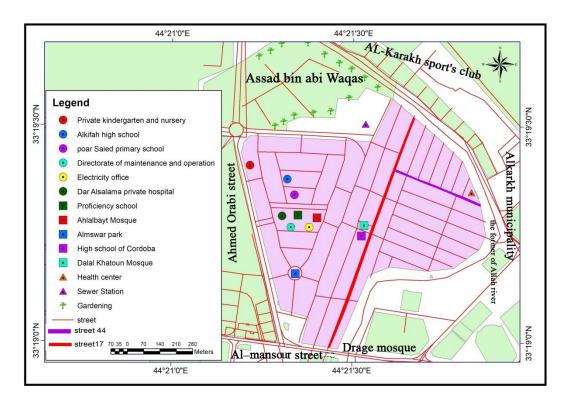
The research used in the analysis of the data some statistical methods to analysis the type of relationship between the variables such as pearson correlation analysis by using statistical package for the special program SPSS V23 , as well as the research adopted on Gisarch map in mapping and distribution of phenomena.

# **Boundary of study area:**

The study area includes streets 17, and 44 in the neighborhood (603) ,that located between 33° 15 and 33.° 20 north latitude and 44°.15 east .It's bordered to the north by Saad bin Abi Waqas Street, and Al- Karakh Sport's Club, and from the east

Al-karakh municipality the former of Al-Kar (Al-Khair), and west Ahmed Orabi Street, and south the Drage mosque and Al-Mansour street. See Map (1)

 $Map~(1)\\ Location~of~the~study~area(~streets~17\&44)~in~the~neighborhood(~603)~(Drage)$ 



Source: Baghdad, Almansour Municipality, 2018.

# **Definition of housing**

There is no common definition of housing, the researchers define housing differently. Housing is "wobbly pillar under the welfare state (Torgersen, at el; 1987,p.116)

Housing is dwellings provided for people (Webster ,1986,housing retrieved)

A house as defined by the Iraqi Ministry of Planning "is an urban environment through which the family and community relations are strengthened, that is to say, the dwelling is not only a shelter, but includes other facilities that connect the individual and the family to the society .. which are the two activities in which an economic and social development converge (Iraqi Ministry of Planning, 1986,pp-1-2). Housing has an essential role in an economic development of each country ,accounting for 10-20% of total economical activity in the country, as well as to be the biggest fixed asset of households. (Henilane,2016, p.168)

Today it is a topical issue that housing has to be comfortable, economical and reasonably maintainable, as well as expressive and compliant with environment. (Henilane, 2015, p.93)

The changing: means to make something different from what it is or from what it would be if left (simpson andweiner, 2008).

Pattern: As stated in the Oxford dictionary dictionary; it is an arrangement of lines or <sup>shapes</sup> especially a design in which the same shape is repeated at regular intervals over a surface (Oneil and summers, 2015)

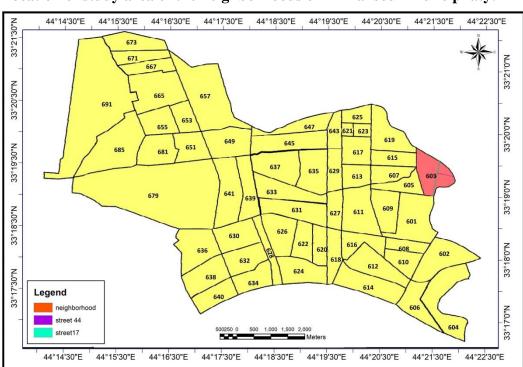
Housing Pattern: it is a group of characteristics and common attributes to a group of residential units that characterized by excellence and repetition, to give them character and personality from other housing units. Urban housing patterns are subject to change from one form to another depending on the degree of influence of the factors in the city (Esmaeel, 2012,p.5).

Change in housing pattern: any change that occurs in the method or form of use within the boundaries of it's original area. Change in category: It's the act of cutting other uses areas from the original use (Alamer, 2008, p.2)

The researcher paper has three sections:

**The first section**- the neighborhood (603):

The study area is located in Baghdad city inside of Alkarkh district within the Almansour sector; it is one of the residential area of the Almansour municipality. Maps (2) and (3).



Map (2) location of study area of the neighborhoods of Almansour Muncipilaty:

Source: Baghdad, Almansour Muncipilaty ,2018

44°10'0"E 44°15'0"E 44°20'0"E 44°25'0"E 44°35'0"E 44°30'0"E 33°30'0"N Diyala River Shap 33°25'0"N second sadi Adhamiya tilst Sadt Shula Chadir. New Baghdad 33°20'0"N Mansour Karrada 33°15'0"N 33°15'0"N Rasheed Dora Degla river 33°10'0"N Legend neighborhood 603 Municipality boundaries 33°5'0"N 0 8 12 River Km 44°10'0"E 44°15'0"E 44°20'0"E 44°25'0"E 44°30'0"E 44°35'0"E

 $Map\ (3)$  location of the study area for municipalities of Baghdad city

Source: Baghdad Municipality, 2018.

Abdul Hamid Drage Aljubouri owned the most land of a study area, so called this neighborhood by his name. In the beginning of the fifties of the last century, the Iraqi government has implemented a comprehensive urban plan for all parts of Iraq, and the most important goals were to provide adequate housing for low-income people throughout of Iraq, so the government bought agricultural land by their owners in that period, and distributed residential plots of land for teachers and state employees, with an area ranging between 200-400 square meters. The price per square meter was between 1-2 dinars. The Iraqi Bank contributed to the construction of housing units, and was a typical neighborhood in his time. (Drage Municipal Council, 2018).

The population of the study area is about 11,500 person in 2018 about 2,6% of the total residents of Almansour Municipalty at about 446,288 residents. The number of families in the study area reached to 2300 family ,and the averge family size is five (municipal council,2018).

The area of neighborhood (603) reached is 63,5 hectares, with a general population density of 181,10 person per hectares.

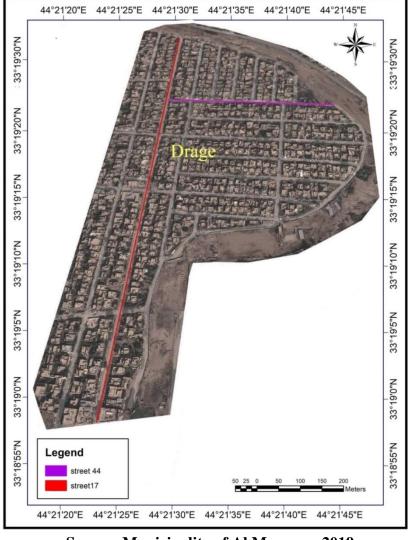
## The second section: Change in the residential use pattern:

The changes that have taken place in Iraq after 2003 in political, economic, and social aspects, which gave a new opportunity to move the population in all 1raqi cities, especially in Baghdad city, which has led the population to rushing toward the high class neighborhoods, which population after 2003, they had an opportunity to live in such neighborhoods, including the study area.

As mentioned before the researcher used the whole research community of the study area that represented by street 17, and street 44, which consist of 270 housing units.

The area of street 17 amounted to 1,10% of the total area of the neighborhood 603, and the general population density of this street is 232.5 person per hectare.

The area of street 44 is 0.24% of the total study area (603), and its general population density is 166.6 person per hectare. See map (4).



Map (4) shows a satellite image of study area the streets (17 and 44)

Source: Municipality of Al Mansour, 2019

In order to reach the goal of this research, it is necessary to analyze the factors that caused the change in the residential use pattern:

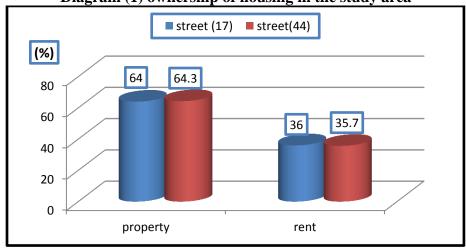
Firstly: Ownership of the houses: The countries of the world seek to provide adequate housing units for their citizens, Maslow presents his theory of hierarchial needs and human development .Briefly the first level is physiological (e.g.,the need for food, drink,shelter) (Ann, 2006,p.121) As mentioned above the majority of the inhabitants of the study area 603 who have been distributed the residential lands to them from the Iraqi government since the fifties of the last century, therefore, the high ratio of the residents of the study area are the owners of their homes. Except for a few of them. The percentage of the houses owned by the owners was 65.5% of the total of study area, that indicating the stability of the study area, while the ratio of rented homes 34.4%. The ratio of houses owned by their owners has converged for streets 17, and 44, it reached 64%, 63.3% respectively, as well as the ratio of rented houses for streets 17, and 44, to 36%, 35.7% respectively. Table (1), figure (1).

Table (1) Ownership of housing for streets (17,44) in the study area

| Street   | 17  | (%) | 44 | (%)  | Total |
|----------|-----|-----|----|------|-------|
| property | 128 | 64  | 45 | 64.3 | 173   |
| rent     | 72  | 36  | 25 | 35.7 | 97    |
| Total    | 200 | 100 | 70 | 100  | 270   |

Source: researcher depending on questionnaire, 2019

Diagram (1) ownership of housing in the study area



Source: researcher depending on table (1)

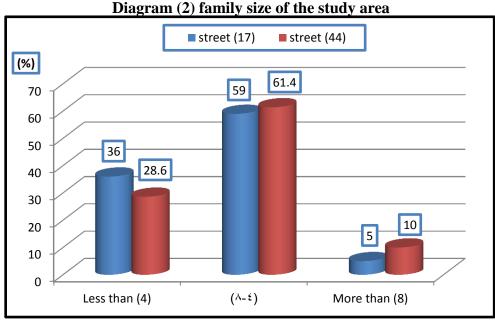
When using person correlation the result was shown (1) indicating that a completely positive relationship between the ownership of the houses and change its pattern.

Secondly- Family size: There is a close relationship between the dwelling and the size of the family. As in the study area, which is dominated by the size of big families, that ranging between 4-8 person, they had formed ratio 59%, 61,4% for streets 17, 44 respectively. Table (2), figure(2), this was confirmed by the result of person correlation, which was 0,75, that indicating a strong positive relationship between the size of the family and the change in housing units, table (2), figure(2)

Table (2) the family size in the study area

| Street        | 17  | (%) | 44 | (%)  | Total |
|---------------|-----|-----|----|------|-------|
| Family size   |     |     |    |      |       |
| Less than (4) | 72  | 36  | 20 | 28.6 | 92    |
| (4-8)         | 118 | 59  | 43 | 61.4 | 161   |
| More than (8) | 10  | 5   | 7  | 10   | 17    |
| Total         | 200 | 100 | 70 | 100  | 270   |

Source :researcher depending on questionnaire,2019



Source: researcher depending on table (2)

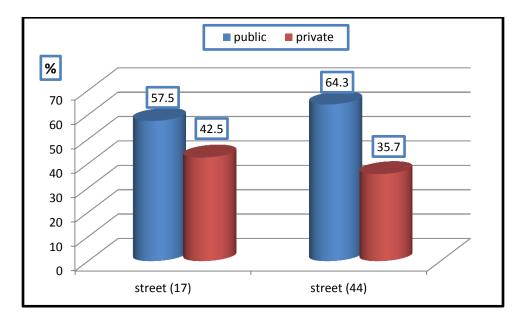
The third section: Type of the work: It has noted from the survey data that most of the residents in the study area are employed in the public sector with the percentage of workers was 59.2%, as it shown in the table(3), and diagram (3), while the ratio of workers in the private sector is to 40.7%. This is due to the beginning of the establishment of the neighborhood was allocated for government employees and teachers. However this situation has changed for a variety of reasons, so some of the residents of study area sold their houses to different professions, which belong to the private sector.

The ratio of those was working in the public sector on street 44 rose to 64.3%, while on street 17 decreased the ratio to 57.5%. While the ratio of the workers in the private sector for streets 17, and 44 decreased to 42.5%, 35.7%, respectively. Therefore it seems that the study area became a mix of different professions, which is reflected on the poor harmony among the residents of the study area. The result of person's correlation (1) shows that there is a complete positive relationship between the availability of enough money for the residents and the division of housing units.

Table (3) Type of work of the head of the family in the study area

| Street  | 17  | (%)  | 44 | (%)  | Total |
|---------|-----|------|----|------|-------|
| sector  |     |      |    |      |       |
| public  | 115 | 57.5 | 45 | 64.3 | 160   |
| private | 85  | 42.5 | 25 | 35.7 | 110   |
| Total   | 200 | 100  | 70 | 100  | 270   |

Source: researcher depending on questionnaire, 2019



Diagram(3) type of work of the head of the family in the study area

Source: researcher depending on table (3)

Division of residential units: In the past the residential neighborhoods were wonderful in their designs, but with the splintering of the houses and containment of small doors in most Baghdad's residential neighborhoods, the resulting loss of beauty and change in pattern affected the design of residential neighborhoods.

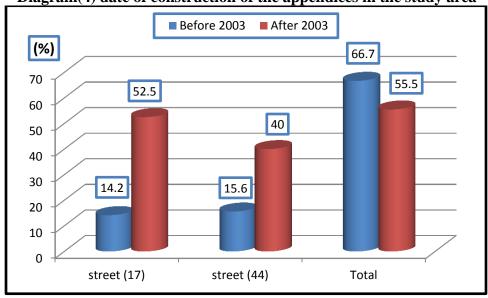
The study area which represented by two streets 17, and 44, in the district of (603), is one of the most superior residential neighborhood, which maintained its residential pattern until the 1990s during the economic sanction on Iraq, which resulted in low per capita income to it's lowest levels until the monthly salary for the family mostly didn't enough two days for family needs, so constructions activities have declined due to the population preoccupation with providing food to their families in that period, but the residents of the study are characterized by people with economic potential ,so they were able to build this number 24 of appendices for demographic reasons that comprising 14.5% of the total housing units in the study area, and 14.2% ,15.5% of the total residential units on the streets 17, and 4 respectively. After 2003 ,due to the political and economics changes and larger size of the family ,and the high prices of the property and rent, so for these reasons the family had to cut area of it's house to provide a small appendix to their newly married children or for the investment purpose , therefore the proportion of appendices increased in the study area for 49.1% ,table(4),and diagram(4)

Table (4) date of construction of the appendices in the study area

| Street      | 17 | (%)   | 44 | (%)  | Total | (%)  |
|-------------|----|-------|----|------|-------|------|
|             | 17 | 1.4.0 | 7  | 15.6 | 2.4   | 14.5 |
| Before 2003 | 17 | 14.2  | 1  | 15.6 | 24    | 14.5 |
|             |    |       |    |      |       |      |
| After 2003  | 63 | 52.5  | 18 | 40   | 81    | 49.1 |
|             |    |       |    |      |       |      |
| Total       | 80 | 66.7  | 25 | 55.5 | 105   | 63.6 |
| 1 Otai      |    | 00.7  | 23 | 33.3 | 103   | 05.0 |
|             |    |       |    |      |       |      |

Source: researcher depending on Questionnaire, 2019.

Diagram(4) date of construction of the appendices in the study area



Source: researcher depending on table (4)

Table (5) appendices multiplication for residential units in the study area

| Street        | 17 | (%)  | 44 | (%)  | Total | (%)  |
|---------------|----|------|----|------|-------|------|
| appendices    |    |      |    |      |       |      |
| One appendix  | 25 | 20.8 | 7  | 15.5 | 32    | 19.4 |
|               |    |      |    |      |       |      |
| More than One | 55 | 45.8 | 18 | 40   | 73    | 44.2 |
| appendix      |    |      |    |      |       |      |
| Total         | 80 | 66.6 | 25 | 55.5 | 105   | 63.6 |
|               |    |      |    |      |       |      |

Source: researcher depending on questionnaire, 2019.

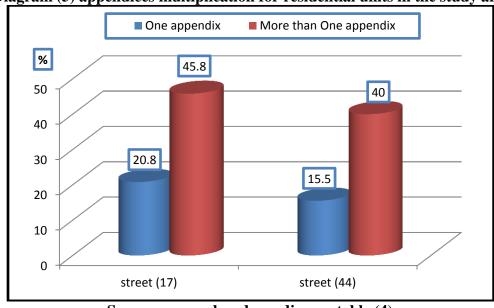


Diagram (5) appendices multiplication for residential units in the study area

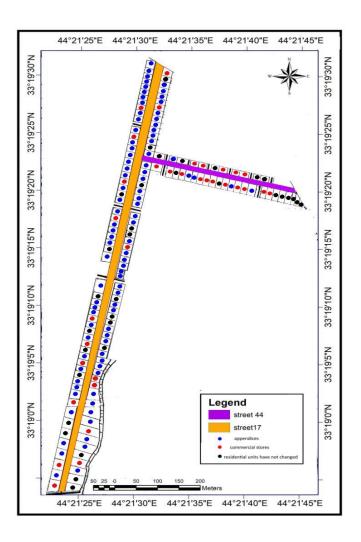
Source: researcher depending on table (4).

In order to illustrate the spatial variation of these appendices, the buildup of appendices has increased 52.5% and 40% on the streets 17 and street 44 respectively.

It has been observed through frequent field visits to the study area, showed increased structural density of building in the residential units. The percentage of the residential units divided into more than one appendix was 44.2% from the total study area. While the residential units divided into one appendix into 19.4%. when comparing the two streets it was found through questionnaire form on the street 17 that the first class was occupied in the multiplicity of divisions of the residential units by 45.8%, while the street 44 came by 40% as it's contains fewer housing units than street 17. The result of using person correlation was 0.99 showed a strong correlation with the increase the number of appendices after 2003 in the study area. Table (6) shows that the number of housing units in the study area has been changed by 76.2% due to increase in the number of residential units, and high population density, which leads the owners of the residential units to divide their houses into two or more, street 44 comes in second place in the change residential use of the study area by23.8%, for a lack of it's population density and contains a few of the houses. In addition, street 17 of the first class in the pattern of change in residential use by 66.7% for the residential units before the division of 120 houses ,while the street 44 came in the second place by 55.6% for the houses before the division of 45 houses.

Map (5).

Map (5) the residential use pattern and category have changed in the study area

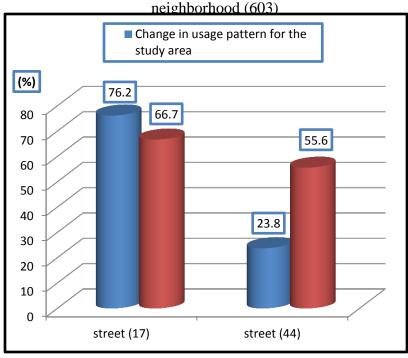


Source: researcher depending on field study, 2019

Table (6)rate of change in the residential use pattern for streets (17&44) in the neighborhood (603)

| Street | Residential | No. of     | Percentage change |                  |
|--------|-------------|------------|-------------------|------------------|
|        | house       | appendices | Change in usage   | Change in        |
|        |             |            | pattern for the   | usage pattern    |
|        |             |            | study area        | for every street |
| 17     | 120         | 80         | 76.2              | 66.7             |
| 44     | 45          | 25         | 23.8              | 55.6             |
| Total  | 165         | 105        | 100               | -                |

Source: researcher depending on questionnaire ,2019



Diagram(6) rate of change in residential use pattern for streets (17&44) in the

## Third topic: change the residential use category in the study area:

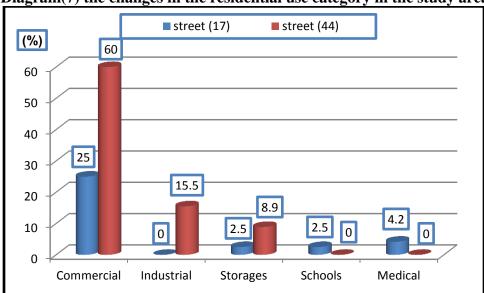
This pattern of change in the residential use category consist of the use of other uses of areas of residential use.

It was noticed through the various field observations of the study area that the commercial use accounted for 34.5% of the total non residential uses in the study area. It is noted from the table (7) that 44 street was ranked first in the field of commercial deduction by 60% and included groceries ,meat ,cafes ,restaurants, bakeries, and other shops that meet the population daily needs.

Table (7) the changes in the residential use category in the study area

| 14010 (1) 0110 | o circuing co |      | biacitia | ase carego | i ji iii tiit btaa | j arca |
|----------------|---------------|------|----------|------------|--------------------|--------|
| Street         | 17            | (%)  | 44       | (%)        | Total              | (%)    |
| The changes    |               |      |          |            |                    |        |
| Commercial     | 30            | 25   | 27       | 60         | 57                 | 34.5   |
| Industrial     | -             | ı    | 17       | 15.5       | 7                  | 7.2    |
| Storages       | 3             | 2.5  | 4        | 8.9        | 7                  | 4.2    |
| Schools        | 3             | 2.5  | -        | -          | 3                  | 1.8    |
| Medical        | 5             | 4.2  | -        | -          | 5                  | 3.0    |
| Total          | 41            | 34.2 | 48       | 84.4       | 79                 | 50.7   |

Source: researcher depending on questionnaire, 2019.



### Diagram(7) the changes in the residential use category in the study area

Source: researcher depending on table (7)

The high percentage of commercial use in the street 44 gives us a future indicator of the transformation of this residential street into a market, while the proportion of commercial use in the street 17 to 25%, the industrial use was only 15.5% on 44 street ,and included blacksmiths, repair shops, and furniture manufacturing. See Image (1).





source: field study on January 3,2019

The table also shows the presence of educational and medical use on street 17 only ,where three private primary schools operated three houses at 2.5% a high proportion of one street ,which reflecting a demand for private education by the residents of the study area. The medical use accounted for 4.2% ,including two clinics and three pharmacies. The reason for the concentration of educational and medical services in the 17<sup>th</sup> street because the street 17<sup>th</sup> overlooks the southern side of Al-Mansour street, which facilitates the entry and exit of cars ,while the street 44<sup>th</sup>

is not suitable for the presence of these services because it is busy in an industrial workshops. The number of stores on the streets of 17,and 44 is 2.5% ,8.9%, respectively, indicating that the street 44 more changed in the residential use category of street 17, so the residents of the study area suffering from the crowded traffic especially the residents of street 44.

we can summarize the reality of change in the pattern and category of residential use on streets 17 ,and 44 in the study area ,as shown in the table (8) and diagram(8) where street 17 the highest percentage of change in pattern of residential use due to high population density, which leads to construction of additional housing units to meet the needs of the population. The street 44 ranks second in terms of residential use change pattern by 23.8%, as it has less residential units than

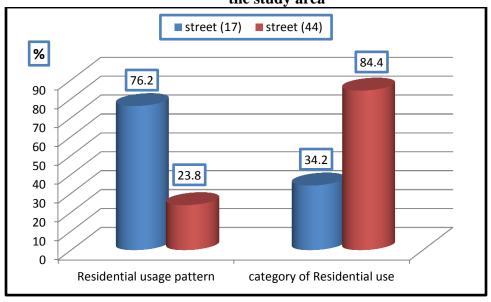
the street 17. Generally, the houses who had different changes showed a large percentage, which influenced the general pattern of study area. While the total number of respondents who did not occur in their houses change were 31, and by 24.4% of the total study area.

Table (8) the change in the pattern and category of Residential use in the study area.

|        | Percentage                | of change (%)               |
|--------|---------------------------|-----------------------------|
| Street | Residential usage pattern | category of Residential use |
| 17     | 76.2                      | 34.2                        |
| 44     | 23.8                      | 84.4                        |
| Total  | 100                       |                             |

Source: researcher depending on table  $(\overline{4\&6})$ .

Diagram(8) the change in the pattern and category of residential use in the study area



**Source: researcher depending on table (8).** 

Street 17 44 (%) (%) **Total** status 100 83.3 34 134 75.6 changed without 20 16.7 11 24.4 31 change Total 120 45 100 165

Table (9) the residential units remain without change

Source: researcher depending on questionnaire, 2019.

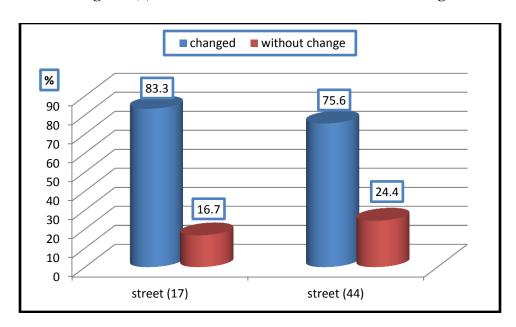


Diagram (9) the residential units remain without change

Source: researcher depending on table (9)

The change in the category of residential use occupied the street 44, the first class by 84.4%, in order to convert part of the house for industrial and commercial use, in order to obtain more profit than the division of the house into small residential units. While street 17 represented a lower percentage of 34.2% in the change in the residential use category. The decrease in this percentage reflects of social awareness and economic efficiency, although street 17 is characterized by an increase in the number of housing units and increase in the number of families.

The results of changing the pattern and category of residential use on streets 17, and 44:

The main function streets 17, and 44 are residential use, but the change in residential use has created some problems, including the high housing density in the study, as mentioned above, the housing density before the divisions the houses was 877 inhabitants\ha, became after the divisions1350 inhabitants\ha. For the purpose analysis of the spatial variation of residential density in both streets has reached in the streets 17, 167 inhabitants\ha, and street 44 reached 170 inhabitants\ha, because it contains more divisions of the houses. After changing the pattern of residential use, the residential density increased to 278 inhabitants \ha, and 1436 inhabitants\ha for the streets 17, and 44 respectively. The density of housing in the study area affects the size of services provided to the residential units, which had been designed I advance. Personal viewing has shown that the area of home gardens has shrunk and replaced by the construction of appendices. The number of housing units without gardens on the streets 17, and 44, it's 44.5%, and 55.7, respectively. In the future the ratio of residential homes that lose their home gardens will increase due to increased demand for housing.

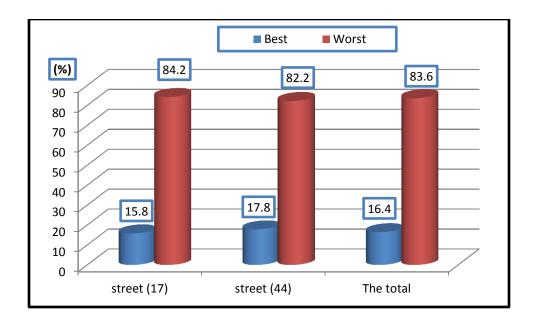
The study area has been built for more than sixty years, the housing units study area were of the detached pattern, and a small proportion of the dwellings were semi-detached. In other words, there is no such thing as a bar housing or row housing. But at the present time due to the changes in the study area, which led to the division into small appendices connected to each other with narrow doors, which makes it difficult to know the owner of these appendices. This was observed during the field study of deterioration of the housing units and loss of their urban value. This can be seen from the table (10)

Table (10) Evaluate the urban reality of the study area

| Tuble (10) Evaluate the dibulificantly of the study area |     |      |    |      |           |           |  |  |  |  |
|--|-----|------|----|------|-----------|-----------|--|--|--|--|
| Street variables   | 17  | (%)  | 44 | (%)  | The total | (%)       |  |  |  |  |
| Best   | 19  | 15.8 | 8  | 17.8 | 27        | 16.4      |  |  |  |  |
| Worst  | 101 | 84.2 | 37 | 82.2 | 138       | 83.6      |  |  |  |  |
| The total  | 120 | 100  | 45 | 100  | 165       | The total |  |  |  |  |

Source: researcher depending on questionnaire, 2019.

Diagram (10) Evaluate the urban reality of the study area



### Source: researcher depending on table (10)

A large proportion of the residents of the study area agree that the streets 17 ,and 44 incompatible with their ambitions, whether in the field of urban reality or social fabric, so the percentage of those found that the study area is going to the worst 83.6%. In addition, the percentages were close for streets 17 ,and 44 ,at 84.2% ,82.2% , respectively. Because they were not convinced of the urban reality of their area. And 15.8% of the residents of street 17 ,and 17.8% of the residents street 44 , believe that their neighborhood is moving towards the best, this a few residents no longer see the division of the residential units has reduced the aesthetics of the neighborhood. See Image (2).

Image (2):building a third floor on a street (17)

Source: field study on January 3,2019

Image (3) Distortion of housing design on a street 17



Source: field study on January,3,2019

#### **Conclusions:**

The research reached the following conclusions:

- 1- The field study showed that the change in the housing use has affected the urban appearance of the study area ,so the percentage of those who found that the study area is going to the worst 83.6%.
- 2- The questionnaire and the personal observation revealed the disappearance of the home gardens from the residential units, and the shrinking of some of them and replaced by the construction of small appendices.
- 3- One of the results of the change in the residential use pattern in the streets 0f 17, and 44, is the high residential density which reached 1350 person\ha, after it was before the changes on the residential units 877 person\ha. This affects the volume of services to the residents of study area.
- 4- Street 17 ranks first in the multiplicity of appendices of the residential units by 45.8%, while street 44 comes by less 40%.
- 5- The decision of the Municipality of Baghdad to allow the construction of a third floor of the residential units has affected the privacy, which has made difficult movement for families.
- 6- The research confirmed that there is a strong correlation between the ownership of the dwelling, the size of family, the type of job, and the decisions of Baghdad Municipality, and the change of pattern residential use on streets 17, and 44, which represented 76.2% of the total study area.

#### **Recommendations:**

In view of the importance of changing the pattern of residential use of the research area ,the study suggested that some recommendations are important to be taken in order to improve the urban reality of the study area.

- 1- it requires from competent authorities to form committees that conduct organized visits to residential areas to identify the illegal behaviors.
- 2- The necessity to formulate a planning law that defines structural controls in proportion to the current reality of residential areas.
- 3- To the competent authorities to review the decisions that concern the construction in the residential neighborhoods, including allowing the construction of a third floor, which led to decrease the privacy.
- 4- Encourage the population to the importance of the presence of home garden for the residential units because it has a positive impact on the psyche of inhabitants.
- 5- The need for commercial services is necessary within the neighborhoods, but needs to be located in their own places or compounds within the residential neighborhood rather than adjacent to the residential units.

## **Questionnaire form:**

Almustansiriya University Faculty of education Geography Department

Dear residents: this questionnaire is related to the specific research "Changing the residential use pattern of the streets 17 and 44 in the neighborhood of 603," and your serious cooperation in an answering the questions will achieve the completion of this project.

| we deeply appreciate you  |
|---|
| 1-Did you work in the public sector? Yes No                         |
| 2-Do you own the house that you live in? Yes No                     |
| 3-When did you live in the neighborhood (603)? Mention the year     |
| 4-How much is the size of house garden?                             |
| 5-How many members are in your family?                              |
| 6-Have you made any additions in the house?in the garden            |
|   |
| 7-What are the causes for addition? Increase the size of the family |
| Marriage of childrenfor the purpose of rent                         |
| 8-Did the construction of appendices increased before 2003?after    |
| 2003  |
| 9-What is your assessment of the neighborhood? the betteror the     |
| worse   |
| 10-Is your neighborhood still your ambition after 2003? Yes         |
| No  |

| 11-Does  | it  | bother | you | if   | the | house | next    | to | you | turns | into | a |
|--|-----|--------|-----|------|-----|-------|---------|----|-----|-------|------|---|
| commercial or residential apartment                        |     |        |     |      |     |       |         |    |     |       |      |   |
| 12- Has the residential units changed to another function? |     |        |     |      |     |       |         |    |     |       |      |   |
| beauty sal   | lon |        | ca  | rpen | try |       | - schoo | )] |     |       |      |   |

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