

# EMERGENCE OF MIXED-USE HOUSING IN KABUL, AFGHANISTAN

## Part-2 (Contemporary Mixed-use House)

Naweed Ahmad Hashemi<sup>1</sup>, Nobuyuki Ogura<sup>2</sup>

Department of Civil Engineering and Architecture

<sup>1</sup>University of the Ryukyus

<sup>2</sup>University of the Ryukyus  
Okinawa, Japan

**Abstract**— Kabul City is the capital and the largest city of Afghanistan. The city has faced many huge urban problems. This article is a continuation of the previous paper concerning research on mixed-use housing focused on the emergence of mixed-use housing in Kabul city. One of the famous types of housing is mixed-use, and it is growing fast. This paper studies the historical emergence of mixed-use housing. Khair Khana in the northern part of the Kabul city being the typical example of contemporary mixed-use housing in the city is select for this research. This paper also looks at the particular context of construction methodology of contemporary mixed-use housing by studying two typical examples.

**Index Terms**—Mixed-use Housing, Kabul, Emergence, Courtyard, Old City

### I. INTRODUCTION

Kabul is the capital and the largest city of Afghanistan, once it was a beautiful city with valuable housing; sufficient to the residence tradition and culture but, currently it faces many huge urban problems such as rapid development of informal settlement and construction of insufficient houses that are not meeting the needs of the residents, in planned areas of the city. Like many Islamic cities, the new architectural style and urban development in Kabul are pursuing the modernist style of architecture that does not provide the charm of traditional Afghan places and lacks much regional fit (Kazimee and Najimi, 2017). The old city of Kabul being the core part of the city presents the rich vernacular architecture of the city residents because it is a product of centuries back. The old city includes courtyard housing types, and it has bazaar inside the town with houses which have shops on the ground floor and residential space on upper floors, which basically depict the mixed-use housing. However, after the rapid increase in population, the city expanded and the government built a new style of housing included mixed-use. This paper studies the emergence of mixed-use housing focusing on contemporary mixed-use. Contemporary mixed-use housing will be analyzed in this paper.

### II. RESEARCH OBJECTIVE

The city has faced rapid growth of population after revolution of 2001. As a result, the city faced many big urban problems, development of informal settlement and developing of houses in the planned areas without considering the government regulation and codes. In the most upgrades areas of the planned area the residential transformed to mixed-use. Mostly, those houses which they are located along paved streets developed rapidly with contradiction to the defined land use of the master plan. In other words, in many parts of residential zones, landowners to get more income from their houses, they built some commercial spaces for rent purpose. It is a type of financial support for the owner, to make their investment sustainable because building and construction cost a huge amount of budget. Generally, these spaces are shops or retail. Thus, this type of commercial with residential in the same building is the most common prevalent type of mixed-use housing in Kabul. This transformation happened so rapidly. However, these houses built with lack of consideration of regulation about the land use and building height.

Based on this background, this paper studies the emerging of mixed-use housing in Kabul city. It is the broad concern of

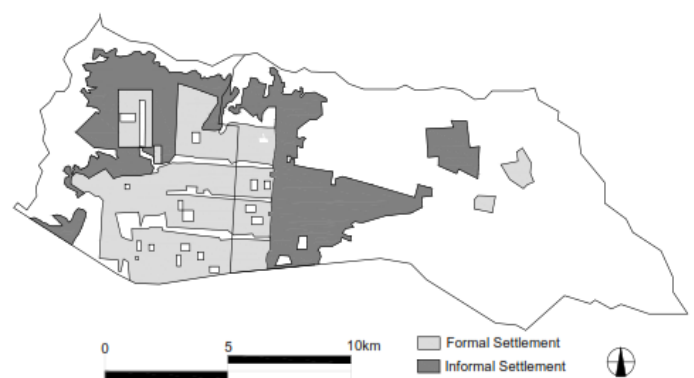


Fig.1. Study area districts

the paper. In particular, this study examines how, why and when the mixed-use housing came to the Kabul city and what are the main reasons behind this revaluation of changing residential to mixed-use houses.

- To define the emergence of mixed-use housing focusing on the contemporary type in the Kabul city

This study will not only fill in a missing gap in the housing history of Kabul, of which there is a shortage of research about the mixed-use housing but also illustrate the more recent revaluation and dominant housing types.

### III. RESEARCH METHODOLOGY

Kabul is the capital and largest city of Afghanistan. Notwithstanding being the capital city and the availability of resources and opportunities it has the worst environment and housing problem. Consequently, this article focused on the emergence of mixed-use by analyzing the contemporary type in Kabul to better sketch the condition of housing. The mixed-use housing a dominant type of housing is growing rapidly, therefore this paper will study this type of housing engaged in the following methodology; literature review, field survey, photography, key informant survey and focus group discussions with residents, shopkeepers, builders, and government officials. As the Kabul background is an Islamic city, for this reason, some literature about Kabul and other Islamic cities was reviewed some examples are J. L. Abu-Lughod researched about the Islamic city-Historic myth, Islamic Essence, and contemporary relevance. His research ended with a brief discussion of whether and in what ways it would be feasible or desirable to build contemporary cities on Islamic principles. He points out that, the historic Islamic city often achieved community, privacy, and beauty; it would be wise to seek these same goals, even though the old means are no longer available. Besides this, from the recent research literature review in Kabul, it can be concluded that there are some studies about the housing in Kabul city, but none of these conduct on mixed-use housing.

Nevertheless, some important points are essential for this study, for instance, Nabizada and Kita (2012), conducted research on the process and mechanism of transformation in settlements in the Kabul city and relationship between the typology and resident's demands. This study focused on the types of transformation which have taken place in urban areas of Kabul, and also it emphasized that the transformed houses accommodate the majority of the population. Although he focused on the planned area of the city specifically the expansion of residential houses, he did not consider the mixed-use buildings in Kabul.

The approach was to search about the factors that influenced the emergence of mixed-use housing and to know about its sustainability. Although the paper mainly focuses on the emergence of mixed-use housing but as historical background somehow the current mixed-use linked to the

courtyard house with shops in the old city, for this purpose at first, this research glanced the courtyard house with shops. To conduct this research district 1 (Kabul Old City) is selected for the study. The selection of the site was based on these principles. First to ensure that the site represents a typical one. The second consideration is to make sure that the site has a traditional type of mixed-use. This research is based primarily survey data which has done in 2017.

### IV. THE STUDY AREA

Khair-khana is part of the suburban area extending from city center toward the northwest with a distance of 8 km (Fig. 1) which is located in district 11 and 15. District 11 has land of 17.4km<sup>2</sup>; three quarters are urban areas with no agriculture. The amount of vacant or bare land calculated 21.0% of the district land due to hills in the north and the east. This district with a population of 1.15 million (JICA, 2011) is the most populated district in Kabul. The land area in Khair-khana was owned by the government and distributed to those who did not have a private house (Nabizada and Kita, 2012).

Khair-khana is one of the planned areas which has different layout compare to other governmental projects. Clusters of housing units are arranged within a square block with deviations from the usual grid pattern are apparent (Samizay, 1969). Most of the house according to the Master Plan has detached layout with rectangular plots. Khair-khana is the first residential area with a regular net of circulation designed by the government in early 1968-70s (Nabizada and Kita, 2012). The first picture of this area was completely residential, but now it has changed rapidly, the new commercial centers, shopping malls, engineering companies, medicine trade centers, and restaurants are built. Khair khan is divided into three parts part-1, part-2, and part-3. The study area is located in part three — one hundred twenty-three houses along the newly paved street which connecting southern (Lab-Jar) to the northern (Panjsad Family) is studied.

In the study area the houses are identified as these categories:

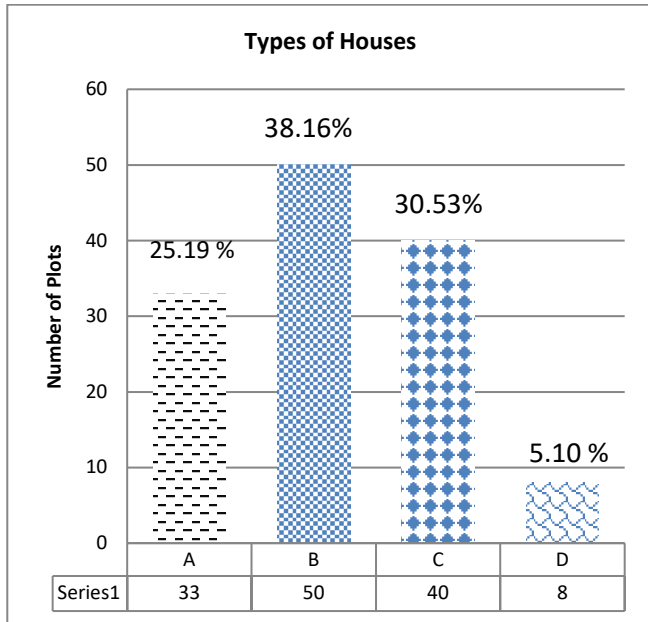
A. Residential detached house; as the area is planned only for the residential, this type of house is according to the purposed Master Plan of government.

B. Old residential detached house with shops; the main build is old, but recently the shops are built as an annex to the main building.

C. Mixed-use house; the residential houses are transferred to a mixed-use house. Mostly these houses are three or more than three stories. It is apartment type.

D. Commercial house; these houses are mostly used as commercial building. The previous function was residential and has changed to commercial only building.

The chart below shows the amount of these houses in the study area. Type B and C is the main targeted typology of houses in this study, but type-A and type-D are out of the discussion in this paper.



Series1= No. of Plots A= Residential B= Old Detached Mixed-use C= Mixed-use D= Commercial

Fig. 2. The different types of mixed-use housing in the study area

## V. EVOLUTION OF MIXED-USE HOUSING

### A. Chronology of Evolution

The study area is defined as a residential zone, but after 2001 when the reconstruction era of Afghanistan started, some of the houses in this area constructed with modern material such as concrete. At that time the corner plots build one or two small shops which they sell every ordinary item needed for the daily use of households. After the government started to construct roads and paved the streets, this was the start of changing the residential houses to mixed-use apartment's style. The commercial activity such as small shops was first at this site, later business offices, sports clubs, education centers, and engineering offices activated. Generally, in the study area, two types of mixed-use housing can be found;

Table.1. Percentage of different types of mixed-use housing in the study area

- Apartment Mixed-use housing
- Detached Mixed-use housing

According to the timeline, the detached mixed-use is first apparent at study area while the apartment mixed-use is built more recently. Currently, most of the houses build following the apartment style mixed-use.

At the same time, the land price rapidly increases compared to the past. The price of a typical land in this planned area has increased 80 times (approx.)

### B. Explanation of two main typical mixed-use houses shop

#### a) Case-1's mixed-use house ( a typical apartment mixed-use house)

The owner of case-1 with six brothers has a shop in the center of the Kabul city (Mandaway Bazaar). They owned a corner plot with a total area of 450 sqm. They got this land while the government started the Khair Khana project. At first, the owner built one story detached sundried brick structure for their living purpose in 1986. The old structure had 60% building area ratio while the remaining 40% was for landscaping. He planned to build a mixed-use apartment with five stories concrete structure including the basement which building covers all the plot land. For this purpose, he contacted a local builder which is called (Tikadar), a person who has experience of same projects, for construction and planning of this apartment but not educated or has any formal document. After finishing the construction of basement with two stories above it, he faced with lack of budget and stop construction work.

The prevalent construction materials are reinforced concrete structure with the support of brick bearings walls system. The landlord builds totally in 1360 sqm floor area, each square meter average cost 95 USD. Thus this building cost for him 129,200 USD. Basement and the first floor are planned for commercial purposes and above stories for residential apartment units. For each above floors, four apartment units (each has three rooms, one kitchen, and one bathroom) were planned. In the basement, two education learning center are tenant while in the first floor six shops with one sports club and learning center are located. The owner monthly earns 120 USD from each shop, 300 USD from the learning centers and club.

He gained 1620.00 USD from the rent of these spaces. By saving this money, he wants to build the upper levels in the future.

Usually, the commercial activities which happened in the basement and first floor are inconveniences for the upper residential units. The segregation between male and female are more important in Islamic culture than western culture. Thus the stairs which linked outside to inside sometimes be used by both users commercial and residential. The inconvenience also encompasses the sounds which made by commercial activities. As a result in the apartment mixed-use housing, the correlation between commercial and residential spaces is not much desire for the users.

#### b) Case-2's Mixed-use House ( A typical detached mixed-use housing)



The detached type is the second prevalent mixed-use housing in the study area. The current owner who bought this land recently from the previous owner, build this new mixed-use building in this area. The previous landowner, who lived in this area for 20 years and was the prime landowner, got this land from the government after the launch of this project. After increasing the land price, he decided to sell the land for the current owner. The current owner bought this land 100,000 USD and built three stories with basement mixed-use house. This house is built in 2009, with a total cost of 83,500USD which is built by Tikadar. The basement with the first floor is functioning as commercial space while the above stories are apartment units. The landowner with his family lives in 3rd floor, and remaining are tenants. The basement is used as a sports club. The first floor is a pharmacy with three shops.

The common construction material is the same with previous one, brick bearing walls with a reinforced structure. The current owner builds on the total floor area of ( 760 sqm) and each square meter cost for him (109.8 USD). Right now he lives with his family in this house, and the commercial parts are rented.



Fig.4. A typical detached mixed-use housing

The detached mixed-use housing usually has separated entrance for the residential space. In other words, there are no

space usage conflicts. Thus the segregation between male and female which is preferable for Islamic families is in good condition in this type of housing. But these housing is suffering from sound pollution as a result of commercial activities.

#### VI. THE RAPID GROWTH OF APARTMENT MIXED-USE ILLEGALLY IN THE RESIDENTIAL ZONES ALONG NEW STREETS

##### A. *The state of transformation*

Khair Khana is a planned residential area with other urban facilities. In 2013, the government paved the street; this was the main cause of the evolution, not only the prices of this plot increased but also the residential houses changed to the commercial and residential mixed-use housing( Fig.4). As a result, many commercial activities started in this area. Shops, education centers, pharmacy, engineering companies, house agencies, tailor shops, computer repair center, fast-food restaurants, and carpentry shops are working in this residential area.

##### B. *Changes in plots coverage ratio and height of the building*

The previous Kabul municipality regulation allowed two stories building height with a building area ratio of 60 percent. In the study area the houses which are built before 2010, they are two stories or less with building area ration of 60 percent or less. While the street paved, the revolution of mixed-use housing caused changes in the building height and coverage ratio. In the most recent cases which are apartment mixed-use housing, are built with 100% building coverage ratio with no ground for landscape or green space. The number of stories started on average from four stories and reached in its peaks up to ten stories. In the past, while the house built with two stories the common height each floor was 2.75 meters but in the contemporary type, the average is 3 meters. As result cooling and heating of these rooms consume more energy especially heating during the winter season which Kabul is popular with its cold weather. See table 1.

Table.1. The percentage of building stories

No.	Description	Percentage	Construction Year
1	Houses with two stories or less	50.7	Before 2007
2	Houses with three stories	12.8	2007-2009
4	Houses with four stories	10.6	2009-2014
5	Houses with five stories and above	25.9	2013-2017
Total		100	



Fig.5. The state of transformation in the study area ■ Mixed-use housing

### C. Environmental aspects

This evolution caused some environmental impacts, for instance, the recent type of mixed-use built in full plot area. As a result, the green and landscape endamaged. Regarding the Kabul municipality the 40 percent of the plot should be dedicated for the landscaping, but as lack of government control, these buildings break this rule, which caused many negative impacts on the environment. Kabul is popular for its

Cold weather during the winter season and most of the houses need the sun not only for winter but also for vegetation during other seasons. Those houses which are two or less, their sun is blocked by these recent high rise building. Additionally the shops built usually built one meter above the ground level, so the stair which connects ground level to shop floor makes an obstacle for walkways. Even in some cases these shops bring out the items from the shop and set them in the walkways.

### D. The main factors of evolution

This area changed rapidly while the new street paved. One can easily understand the importance of this street in this area comparing to other residential areas. But this is not only the reason, but the rapid growth of population in Kabul city and also thoughts of the landlords to make a sustainable income for future are also another side of this evolution. Nevertheless, in some cases the landlords' sale their other properties, to construct a mixed-use house and generate income for their living expenses.

## VII. CONCLUSION

The residential areas which were defined in the recent master plan of Kabul city are changing rapidly. The residential zone with low density is transforming to high rise mixed-use buildings. This paper studies the emergence of mixed-use housing Kabul city. It clarifies that primarily the residential zones of the cities go under change when government upgrades the area with some infrastructure, for instance, the pavement of the streets. The study which conducted in a typical formal residential area in the northern part of the Kabul city called Khair-Khan found that before 2010 the houses were only residential with two stories building but after that, the houses change to mixed-use buildings.

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