

### 2.1.3 Detailed land use and building conditions

#### (1) Detailed land use

The current land use by various economic, social and other uses is illustrated in Figure 2.6, and summarized by zone in Table 2.2 and Table 2.3, and compiled in Table 2.4. Most buildings over 85% are used for residential purposes. The total floor area is estimated to be 207,600m<sup>2</sup>. The average floor area is calculated to be 16.44 per resident and 85.85m<sup>2</sup> per family.

Commercial and industrial activities occupy the land area of 5.72ha. About a half of them are garages and car dealers facing the Sixth Tishreen street, and the remaining half are for small general shops, while there are few business offices. Some shops are located in residential buildings. No shopping street or market exists in the area.

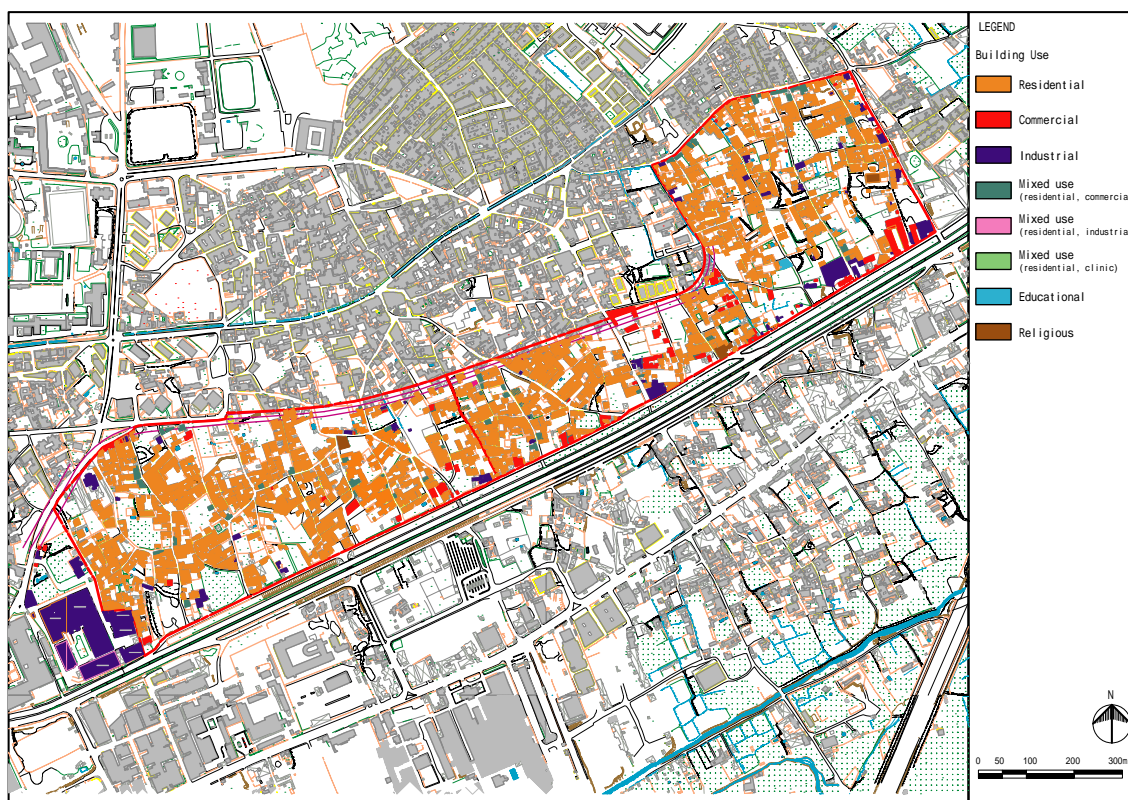


Figure 2.6 Existing Land Use

Table 2.2 Current Land Use (Zone A)

Landuse Category	Building surface (sqm)					Site area (based on Estimation) (ha)	Building floor area (based on estimation) (sqm)
	Number of building Floor						
	1	2	3 or 4	5 or 6	Total		
Residential (%)	41,246	25,656	2,669	0	69,571	23.58	101,900
					90.16%	82.99%	89.48%
Commercial (%)	1,426	1,101	0	0	2,527	0.86	3,628
					3.27%	3.01%	3.19%
Industrial (%)	1,301	121	620	0	2,042	0.69	3,713
					2.65%	2.44%	3.26%
Mixed Use 1 (residence & shop) (%)	1,236	1,022	0	0	2,258	0.77	3,280
					2.93%	2.69%	2.88%
Mixed Use 2 (residence & Industry) (%)	0	0	0	0	0	0.00	0
					0.00%	0.00%	0.00%
Mixed Use 3 (residential & clinic) (%)	0	0	0	0	0	0.00	0
					0.00%	0.00%	0.00%
Education (%)	166	0	0	0	166	0.06	166
					0.22%	0.20%	0.15%
Religious (%)	0	599	0	0	599	0.20	1,198
					0.78%	0.71%	1.05%
Total (Building lot) (%)	45,375	28,499	3,289	0	77,163	26.15	113,885
					100.00%	92.05%	100.00%
Road (%)						2.26	
						7.95%	
Total site (%)	45,375	28,499	3,289	0	77,163	28.41	
						100.00%	

**Table 2.3 Current Land Use (Zone B)**

Landuse Category	Building surface (sqm)					Site area (based on Estimation) (ha)	Building floor area (based on estimation) (sqm)
	Number of building Floor						
	1	2	3 or 4	5 or 6	Total		
Residential (%)	38,576	30,342	1,841	8	70,767	23.60	105,748
					82.22%	76.20%	83.89%
Commercial (%)	5,829	1,861	0	0	7,690	2.56	9,551
					8.94%	8.28%	7.58%
Industrial (%)	3,684	1,074	0	0	4,758	1.59	5,832
					5.53%	5.12%	4.63%
Mixed Use 1 (residence & shop) (%)	883	1,044	208	0	2,135	0.71	3,699
					2.48%	2.30%	2.93%
Mixed Use 2 (residence & Industry) (%)	68	0	0	0	68	0.02	68
					0.08%	0.07%	0.05%
Mixed Use 3 (residential & clinic) (%)	122	0	0	0	122	0.04	122
					0.14%	0.13%	0.10%
Education (%)	0	0	0	0	0	0.00	0
					0.00%	0.00%	0.00%
Religious (%)	16	510	0	0	526	0.18	1,036
					0.61%	0.57%	0.82%
Total (Building lot) (%)	49,178	34,831	2,049	8	86,066	28.70	126,056
					100.00%	92.67%	100.00%
Road (%)						2.27	
						7.33%	
Total site (%)	49,178	34,831	2,049	8	86,066	30.97	
						100.00%	

Table 2.4 Current Land Use (Zone A+B)

Landuse Category	Building surface (sqm)					Site area (based on Estimation) (ha)	Building floor area (based on estimation) (sqm)
	Number of building Floor						
	1	2	3 or 4	5 or 6	Total		
Residential (%)	79,822	55,998	4,510	8	140,338	47.16	207,647
					85.98%	79.42%	86.54%
Commercial (%)	7,255	2,962	0	0	10,217	3.43	13,179
					6.26%	5.78%	5.49%
Industrial (%)	4,985	1,195	620	0	6,800	2.29	9,545
					4.17%	3.85%	3.98%
Mixed Use 1 (residence & shop) (%)	2,119	2,066	208	0	4,393	1.48	6,979
					2.69%	2.49%	2.91%
Mixed Use 2 (residence & Industry) (%)	68	0	0	0	68	0.02	68
					0.04%	0.04%	0.03%
Mixed Use 3 (residential & clinic) (%)	122	0	0	0	122	0.04	122
					0.07%	0.07%	0.05%
Education (%)	166	0	0	0	166	0.06	166
					0.10%	0.09%	0.07%
Religious (%)	16	1,109	0	0	1,125	0.38	2,234
					0.69%	0.64%	0.93%
Total (Building lot) (%)	94,553	63,330	5,338	8	163,229	54.85	239,940
					100.00%	92.37%	100.00%
Road (%)						4.53	
						7.63%	
Total site (%)	94,553	63,330	5,338	8	163,229	59.38	
						100.00%	

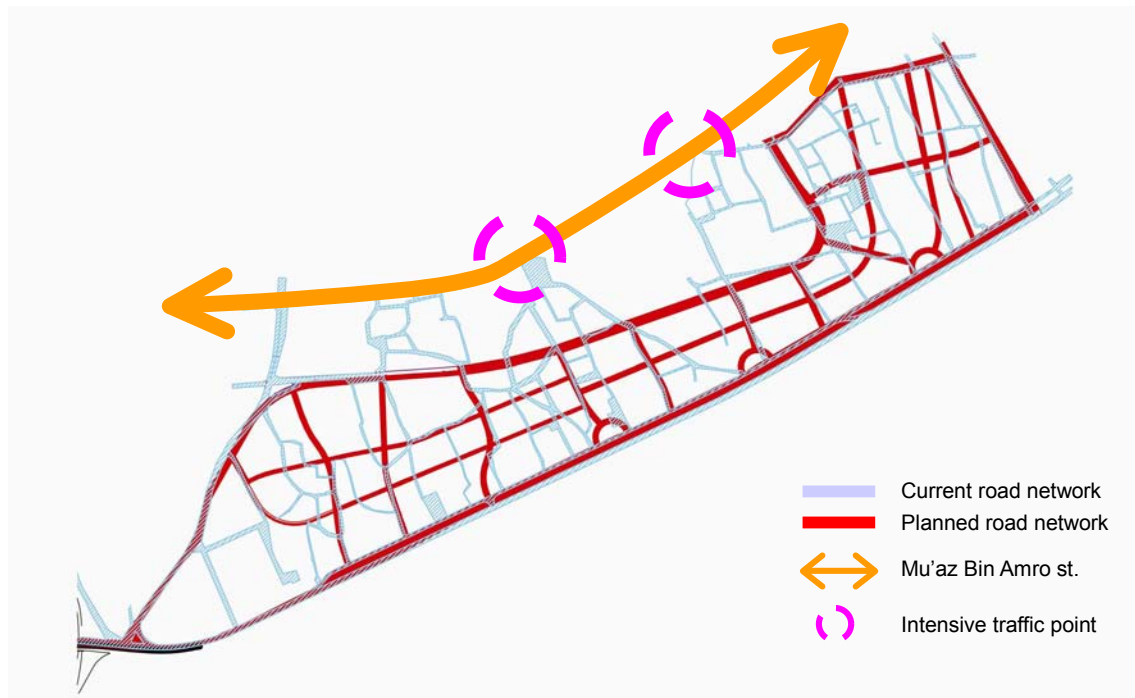
## (2) Road network

The present road network is illustrated in Figure 2.7. Despite the low road density in the project area, the traffic is not very congested since the roads in the area serve as distributors to handle small local traffic. The east-west highway along the southern border of the area has sufficient capacity to meet the traffic demand for the project area as well as the through traffic.

The east-west road located to the north of the area has 6.5m width for traffic in both directions, but its capacity has been reduced effectively to a single lane due to illegal on-street parking. Serious traffic congestion occurs during the peak hour to handle two way traffic by the single lane. To accommodate the local traffic with origins/destinations within the project area, both the highway in the south and the east-west road in the north need to be used. Another characteristic of the road network is the lack of grid formation. Consequently, some areas within the project area are deprived of adequate road services (Figure 2.8).



**Figure 2.7 Present Road Network in and around the Project Area**



**Figure 2.8 Characteristics of Existing Transport Network and Planned Network**

### **(3) Building conditions**

Most buildings in the western part of the project area, closer to the city center, are made of concrete and steel. These buildings are generally well maintained, and dilapidated ones are rare. Buildings in the eastern part are mostly constructed with blocks, and many of them need major or minor repair. Most buildings in the area have only one or two stories.

### **(4) Urban problems**

Through several workshops for the project area, the following urban problems were raised by residents.

- 1) Road length and capacity are not sufficient. Most roads are too narrow. Consequently, the traffic circulation is obstructed in and through the area. The traffic tends to concentrate on limited roads such as the Mu'az Bin Amro street.
- 2) The underpass for vehicles and the three pedestrian underpasses under the Sixth Tishreen street limits the access between the northern and the southern areas of the project area. The pedestrian underpasses are too dark even during the day and tend to invite criminal activities such as drug trading.
- 3) The east-west road located to the north of the area cannot function well due to illegal on-street parking.
- 4) Most buildings in the area were constructed illegally with only one or two stories.

They have a simple structure. While the low density reduces the risk of collapsing buildings, the land is not effectively utilized.

- 5) In some parts of the project area, power and water supply is cut off for a long time.
- 6) Although the sewerage network covers most part of the area, some areas suffer from poor drainage of industrial effluents not connected to the sewerage.
- 7) Only two schools exist in the area and their capacity is not sufficient. There is no public park in the area.
- 8) In some areas, garbage collection is not undertaken frequently. Also, industrial wastes and construction debris are not properly treated.
- 9) High voltage power cables run through the eastern part of the area over residential buildings.

## **2.2 Planning Concepts and Improvement Strategy**

### **2.2.1 Objectives of the project**

In view of the existing urban conditions and problems, the following objectives are established for the project.

#### **(1) Formalization**

Informal settlement areas in the Damascus city should be formalized as a matter of principle, supported by the new Law 46 of 2004. They should be integrated into the urban fabric of the city with the same quality of living conditions. The formalization for the project area should accommodate increasing population with higher density.

#### **(2) Provision of better public facilities**

In association with residential improvement, better public facilities should be provided to serve the residents in the neighboring areas as well. The project should contribute to the improvement of living conditions in the entire Qaboun area.

### **2.2.2 Frameworks for the project**

#### **(1) Institutional framework**

The project is expected to be implemented by land readjustment or urban renewal schemes involving property assessment and exchange procedure. These schemes are based on the idea of equivalent exchange of floor area by creating additional floor area for new residents as well. In the process, the shape and area of land lots may be changed, while the property value would be maintained for each owner. Current residents can continue to live in the area, while a portion of their land would be offered for public uses including additional housing floor

area for new residents.

These schemes have not been institutionalized in Syria. Therefore, the procedure involved in applying these schemes, financial planning necessary for the project implementation, and legal requirements are described in subsequent sections.

## **(2) Development framework**

### **1) Population**

The population density will be increased in the area. The following alternatives are conceived.

#### Case 1

The floor area ratio in the adjoining organized area may be in the range of 1.25 to 1.80 with their 8 to 13 story buildings. The overall floor area ratio for the project area is assumed to be 1.80. Of the total land area, slightly more than 40% should be utilized for residential development. Therefore, the total floor area for residential buildings is set at 450,000m<sup>2</sup>. Assuming the average residential floor area per resident remains at 16.4m<sup>2</sup>, the total population will be 27,500, corresponding to the population density of 463/ha.

#### Case 2

Alternatively, the population density in the area is projected to increase only to 400/ha. This corresponds to the total population of 23,800. With the same floor area, this will make the average residential floor area 18.9m<sup>2</sup>, some 15% increase. Probably, it is more desirable to increase the average floor area to convince the residents for the planned improvement.

### **2) Land use**

More land areas are used for schools, parks, roads and service facilities, while the area for industrial and commercial activities is slightly reduced. Green parks will be created, and the area under the high voltage power transmission lines will also be used as greenery. The road area will also increase.

### **2.2.3 Phased development**

For the smooth implementation of the project, the existing vacant or agricultural land should be utilized for the first phase development. After the completion of the first phase, residents in the next phase development area will move into the first phase area. In this way, the disruption of daily life by construction will be minimized. Considering the ongoing development in the northern adjoining area, the development in the project area should proceed from the west to the east.