

ZARQA CITY DEVELOPMENT



JANAA & GHWEIRIEH UPGRADING
RAWAN ATTOUR - JORDAN URBAN WORKSHOP



Rawan is currently the project manager of the Amman” Zoning conversion into the new zoning by-law” and “The downtown contextual zoning and special regulations” projects and the team leader of “Urban Envelope Implementation plan” for Amman. She was team leader of the Shafa Balqa, Rusaifa and Birayn Al Jadida master plans, and on the community plan component for the Shafa Balqa master plan. She was previously involved in the Area Plans and Base Zoning of the Amman Master Plan Project. Also she has been involved in delivering the Smart Growth training for various Municipal teams from Iraq and Ramallah.

Rawan has been awarded the exemplary performance award of Amman Institute for the year 2009

Rawan has work experience as a senior architect with several Urban and architectural firms including the Urban Workshop, 2K and Turath. She has been involved in the development of various master plans for the Urban strip, Jordan Valley Development, Zarqa City, Dead Sea, Azraq, Maan, Mafraq, Irbid, Aqaba, Jabal Amman urban Renewal and Rehabilitation of the Hijaz Railroad in Maán.

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ZARQA CITY DEVELOPMENT

1 BACKGROUND

1.1 CONTEXT

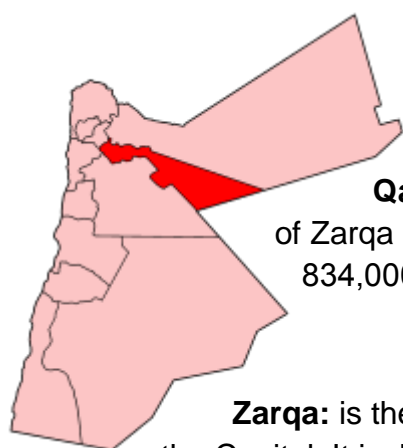
Jordan is divided into 12 governorates that each headed by a governor appointed by the king. They are the sole authorities for all government departments and development projects in their respective areas.



Jordan Governorates

Province	Population (2008 est.)	Major city	Population (Metropolitan, 2008 est)
Ajlun Governorate	118,496	Ajloun	8,161
Amman Governorate	1,939,405	Amman	1,135,733
Aqaba Governorate	107,115	Aqaba	95,408

Balqa Governorate	349,580	As-Salt	87,778
Irbid Governorate	950,700	Irbid	650,000
Jerash Governorate	156,680	Jerash	39,540
Kerak Governorate	214,225	Kerak	22,580
Ma'an Governorate	103,920	Ma'an	30,050
Madaba Governorate	135,890	Madaba	83,180
Ma'raq Governorate	245,670	Ma'raq	56,340
Tafilah Governorate	81,000	Tafilah	25,021
Zarqa Governorate	838,250	Zarqa	447,880

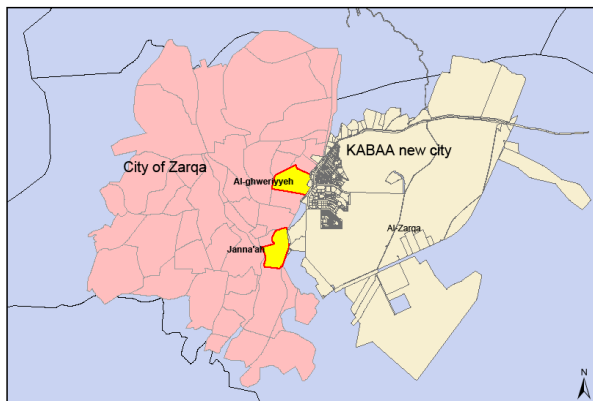
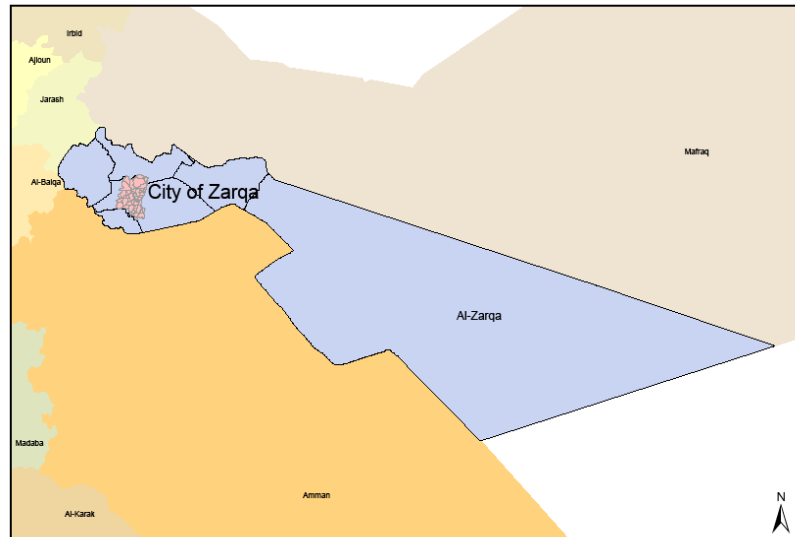
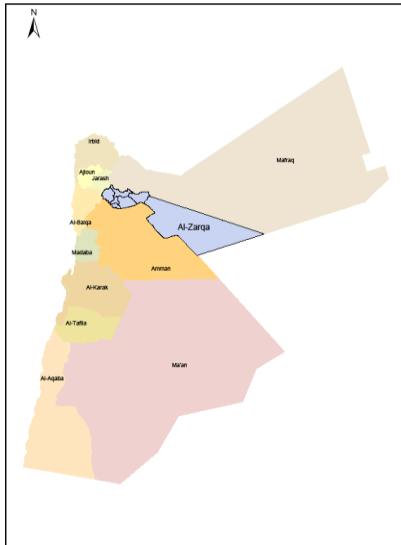


The Governorate of Zarqa is divided into 3 districts; **Zarqa Qasabah** , Russeifa and Hashemiyah, and 6 sub districts; the city of Zarqa is the second largest city in the Kingdom with a population of 834,000 in 2006 which constitutes 15% of the Kingdom's population.

Zarqa: is the Jordan's second largest city located to the northeast of Amman the Capital. It is Jordan's industrial centre; home to over 50% of Jordanian factories. This industrial growth is due to low real estate value and proximity to the capital; Amman.

Migration to Zarqa has steadily increased since the 1940s; more than 50% of Zarqa's populations are migrants from the West Bank (Palestine).

A new settlement (King Abdullah Bin Abdul Azeez City) that will house more than 370,000 people has been approved by the Jordanian government to be implemented in the old Military camp east Zarqa. This will be funded by Saudi corporations and it will include Residential and new office buildings, in addition to a new railway that will be constructed to connect Amman with Az-Zarqa.



Janaa and Ghweirieh



Ghweirieh

1.2 SOCI-ECONOMIC AND DEMOGRAPHIC CONTEXT

1.2.1 Economic

Average income in the governorate is 390JOD compared to 518 JOD for the Kingdom. 184,000 people that constitute 14% of the work force in the Kingdom. Unemployment 12.3% compared to 14% in the Kingdom.

Work opportunities; 4078 available jobs which constitutes 11.6% of the Kingdom work opportunities.

Expenditure 496 JOD/month compared to 629 JOD/month in the Kingdom. Poverty 15.7% compared to 13.5 % in the Kingdom.

1.2.2 Population

Housing: According to 2004 statistics the number of dwellings is 177,000, 82% of them were apartments and the remaining 18% separate houses. 27% of the dwellings were rented.

Housing needs: According to the estimates of the Housing and Urban Development corporation in 2007 the need for housing reached 4872 dwellings in the Governorate constituting 15% of the Kingdoms demand.

Housing types: Relative distribution of housing types in the governorate was as the following:

Housing type	percentage	Area (sqm)
House	18.3%	83
Apartment	81.6%	78
Villa	0.1%	233

Poor housing projects (Ministry of Planning and International Cooperation)

Project	Dwelling units			Total
	Finished	In progress	In Tendering	
Building and fixing the poor families' houses	51	35	22	108
Rehabilitating the dwellings of poor families in the refugee camp	88	100	—	188
Azraq Housing project	100	—	—	100
Japanese fund			84	
Total	239	135	105	480

Future housing project (Ministry of Planning and International Cooperation)

In response to the needs of the poor families in the Governorate the Ministry will

start with a plan to construct 200 units with an area of 62 sqm per unit and to expand and renew 100 units

1.2.3 **Ongoing projects**

2.3.1 transport and Road Network

Roads and bridges in addition to a Light Rapid Transit LRT connecting the city of Zarqa with Amman (BOT)

2.3.2 Water

Wadi Zarqa water treatment plant

2.3.3 Energy

As Samra Power station

2.3.4 Health

Zarqa new hospital

2.3.5 Education

2.3.6 Environment

2.3.7 Local Development

2.3.8 Natural Gas Network (BOT)

2.3.9 New industrial and Free zone in cooperation with Hashemite University.

2.3.10 Petrol refinery expansion

1.3 SCOPE OF WORK

The tasks that were required from the Prime Ministry regarding the Zarqa city development Project:

- 1- To come up with a preliminary Masterplan for the city of Zarqa and to define the areas that require upgrading and their priority
- 2- Conduct a comprehensive study for the two high priority areas and to determine through that study the needed services, parks, and other requirements for upgrading the area, and develop them as a model for upgrading in the city.
- 3- Define the zones and buildings that are going to be affected as a result of this upgrading Masterplan.
- 4- To suggest a method of compensation for the owners and tenants of properties that are going to be affected.

5- To submit the proposals for the prime ministry for approval.

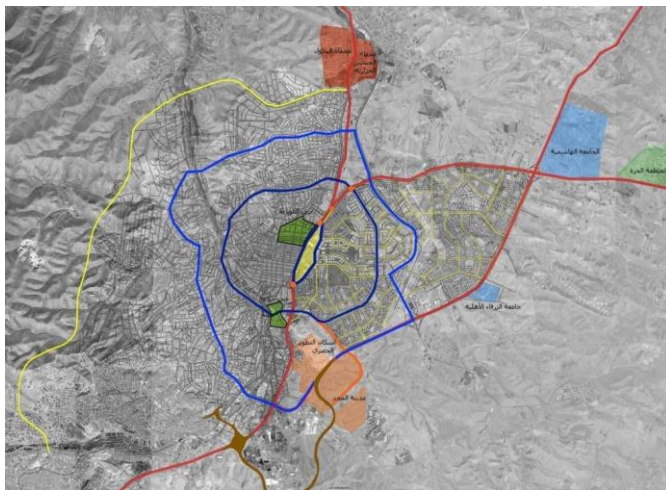
Following the proposed solutions for the relationships of the city to the new Eastern city development and the Amman Zarqa conurbation in general and the determination of the current conditions/components, it was required to estimate future needs of the population in terms of services and infrastructure priority projects.

The two priority areas that are to be studied comprehensively have been defined:

Janaa: with a population of 12,222 and an area of 27.2 hectares excluding the refugee camp. With an overall density of 44.93

Ghweirieh: with a population of 31,271 and an area of 64.4 hectares. With an overall density of 48.56

The various stakeholders are conducting their extensive and detailed studies to facilitate the process of understanding the context, problems and needs of those model areas.



1.4 STAKEHOLDERS

- Ministry Of Municipal Affairs
- Ministry Of Social Development
- Ministry Of Public Works
- Housing and Urban Development Corporation
- Zarqa Municipality
- Prime ministry Office

The project team consisted of City Planners, Urban planners, Architects, Civil Engineers, Structural and Infrastructure Engineers, Social Specialists, Road network Engineers, and field Surveyors that are from the Local community and work in the above mentioned Organizations.

1.5 PROBLEMS

The main problem would be the **High density** of the area that is leading to many other problems:

- Social
- Poor public services
- Informal settlements
- Education and health
- Insufficient and poor Infrastructure
- Congestion
- Pollution from the Industries
- Aesthetic pollution
- Urban Sprawl
- Economic activities
- Elimination of vegetation
- Traffic
- Tenure problems due to the fact that parts of the city are extensions for the refugee camp which started as slums and then developed into permanent.

Over the years, a policy of laissez faire has resulted in the development of poor social habits and a lack of public or civic sense and lack of responsibility in the old city of Zarqa.

The main cause of the problem as defined by the stakeholders was the absence of a regulatory authority during the growth and expansion of the informal settlements (groups of mud buildings) that existed before 1928, when the Zarqa Municipality was established.

The buildings had small footprints areas populated by few. Since that day the area started to grow without any supervising regulatory authority and without any land use or building regulation.

Later on this area was well known for its chaotic neighborhoods (Ghweirieh, Janaa and the refugee camp) which expanded rapidly, while the residents initiated solving their own problems and concerns outside the influence of regulatory authority.

Building permits were done according to the Municipal land use but they didn't comply with the regulatory plan regarding setbacks and the regulations for the allowable built-up area, building heights etc.

The inner city areas suffer from a lack of public space, poor housing structures and poor infrastructure, resulting in high housing and commercial densities, and an erosion of the quality of life. There are many households that are trapped in their present locations for a prospect of an alternative. Many have missed out on previous allocations of land or social housing, others came as temporary tenants and now look for more permanent accommodation and a stake in the city that they can pass on to their children.

Although the Municipality modified its regulatory plan to include the existing buildings, and despite the upgrading project that was conducted by the Housing and Urban Development Corporation, yet the area still need further upgrading initiatives in respect to its density, infrastructure, public services and social problems.

Some of the major problems/difficulties that faced the team working on this project are the unavailability of the accurate up to date data regarding land ownership, land use, and social

studies, which required the team to conduct some complementary field surveys to cover those problematic areas that are very important for the analysis process and for the formulation of alternative proposals for development and upgrading.



Road network and public transportation

Road network suffers from congestion because of the lack of alternative routes, taking people from the city to other parts without passing through the center of the city. Therefore it is important to establish links and ring roads around the city as well as within the city and to suggest improvements to the intersections to improve the performance and raise efficiency. Zarqa suffers from bottlenecks and parking problems and while there is the need for 3000 there are only 1800 spaces for public transportation cars.

There is heavy reliance on public transport for most of the population yet the public transport system is suffering from the indiscriminate and low level of service and lack of integration in the geographical coverage.

2 OBJECTIVES

The driving force behind the upgrading proposals is to provide a Guide and Master Plan for the old city of Zarqa to facilitate its future development in a way that is politically manageable, financially affordable, socially acceptable and environmentally sustainable.

This means having a strategy that responds and respects local traditions, lifestyles and circumstances; that can be far-sighted, clear and transparent; that can accommodate unforeseen shocks and circumstances; and that could be implemented without recourse to external funds and financing.

The objective of this strategy is to strengthen and facilitate local communities. That means a minimal disruption of their existing living and commercial properties and businesses, while

providing the room for maneuver to improve and upgrade the facilities and amenities missing as a result of a lack of interaction between public and private interventions.

The Macro scale objective of the project is: **To come up with a preliminary Masterplan for the city of Zarqa and to define the areas that require upgrading and their priority.** Within that the main objective throughout the course is to **prepare an integrated plan for the two specified areas; Janaa and Ghweirieh.**

The approach will include the most appropriate/efficient solution for reducing the density within the requested neighborhoods with minimal economical and social costs providing the residents with the required services and undertake the upgrading that would improve their living conditions and promote integration between their neighborhoods/old Zarqa city and the new city of KABAA without compromising the future growth of any of them.

3 PROCESS

Under a Royal decree a committee from various governmental bodies was established to coordinate the efforts and studies conducted in order to come up with the best solution for upgrading the area without sacrificing the existing residents' rights, traditions and circumstances.

The committee was constituted of representatives from:

- Ministry Of Municipal Affairs
- Ministry Of Social Development
- Ministry Of Public Works
- Housing and Urban Development Corporation
- Zarqa Municipality

In Addition to the collected data from the Department of Lands and Survey(DLS), Ministry of Planning and International cooperation, Department of Statistics, Ministry of Education and Ministry of Health.

The collected data and the group efforts emphasized studying the existing situation and shortcomings, addressing the needs for Infrastructure upgrading, schools, hospitals, social centers, public services and spaces.

The team also conducted field surveys i.e. studies in the fields of the existing land use, social conditions and outlets for upgrading, building condition and accessibility networks.

A SWOT analysis was conducted for the macro level development of the Zarqa city, then a micro level emphasis on the two major, model areas of Janaa and Ghweirieh.

The ministry of social development conducted a quick field survey by conducting a check list for problems, expected phenomena in the study area, site visits and meeting with the representatives of the local community and interviews, Observations and reviews of secondary resources. The team consisted of trained Social Development Directorate employees.

The Ministry of planning and international cooperation provided the project team with the Socio-Economic and demographic data for the Zarqa Governorate highlighting population issues; housing, housing needs, payment ability, poor housing projects and unemployment, work opportunities, expenditure, poverty and surrounding developments, education and health status and needs, in addition to Ecological and Environmental issues.

3.1 FIELD STUDY

8.1 The Ministry of Social Development studied:

- The availability of local community councils.
- Utilization of available opportunities in the local community (Experiences and skills.)
- Availability of communication channels with the target groups.
- Availability of production and service projects for all members of the local community.
- Charitable organizations to serve the public community.
- Cooperation between local community councils and members of the local community.

The labor force within the governorate is 618,000 with an unemployment ratio of 12.9% and a poverty ratio of 20%

Water sources/supply the governorate gets its supply of water from two aquifers; Amman-Zarqa and Azraq.

Electricity/Energy The governorate gets its energy from two different sources; Al-Hussein thermal station in Zarqa and Abdali central station in Amman, and the entire city is serviced with electricity.

8.2 **Zarqa Municipality** conducted various field surveys, documenting the existing conditions, schools, health centers, public spaces and services, defined the empty land parcels, deserted buildings in addition to the number of floors for a sample area for the purpose of proposing the alternatives.

8.3 **The Housing And Urban Development Corporation** provided the team with their work (2007) in the Janaa area in addition to conducting a quick field study to update their data.

3.2 PROCEDURES

Population evaluation; Conducted density analysis, needs for schools, needs for health centers, community services/organizations, registration of the existing services that are provided by the different sectors. Their capacity and future plans. Poverty and unemployment analysis, community participation in the field surveys, prioritizing community needs **Land ownership analysis**, parcel and built up analysis, infrastructure analysis (Water supply, Sewage network, Electrical supply, Road Network, Public transportation)

3.3 STUDY AREAS

3.3.1 Ghweirieh

A normal extension for old Zarqa neighborhoods has a regulatory plan for the local roads within the Masterplan. Yet:

- 1- Building within the neighborhood didn't follow the regulatory rules (with the exception of roads).
- 2- Buildings were constructed on small parcels that were divided informally between partners outside the regulatory authority, which resulted in building on parcels less than the minimum allowable size, which in turn led to a very compact chaotic area with winding narrow paths that were the outcome of some setbacks between buildings.
- 3- Based on the existing context the regulatory Masterplan was modified to accommodate these buildings.



Statistics: Ghweirieh has 6438 families, with a density ratio of 486p/ha.

Education: The area has 10 primary schools; 3 male with 5155 students, 4 female with 1782 students and 3 mixed with 1770 students. Two secondary schools; 1 male with 1205 students, and 1 female with 868 students.

Health: 1 healthcare center serving the community.

Environment: Sewage network: All residents dwellings are connected to the public sewage system which needs periodic maintenance to avoid overflow due to mal practices, which is causing health and environmental risks/problems.

Road Network: The area has 2 major road and 3 secondary roads, connecting roads and paths. Roads require widening and maintenance.

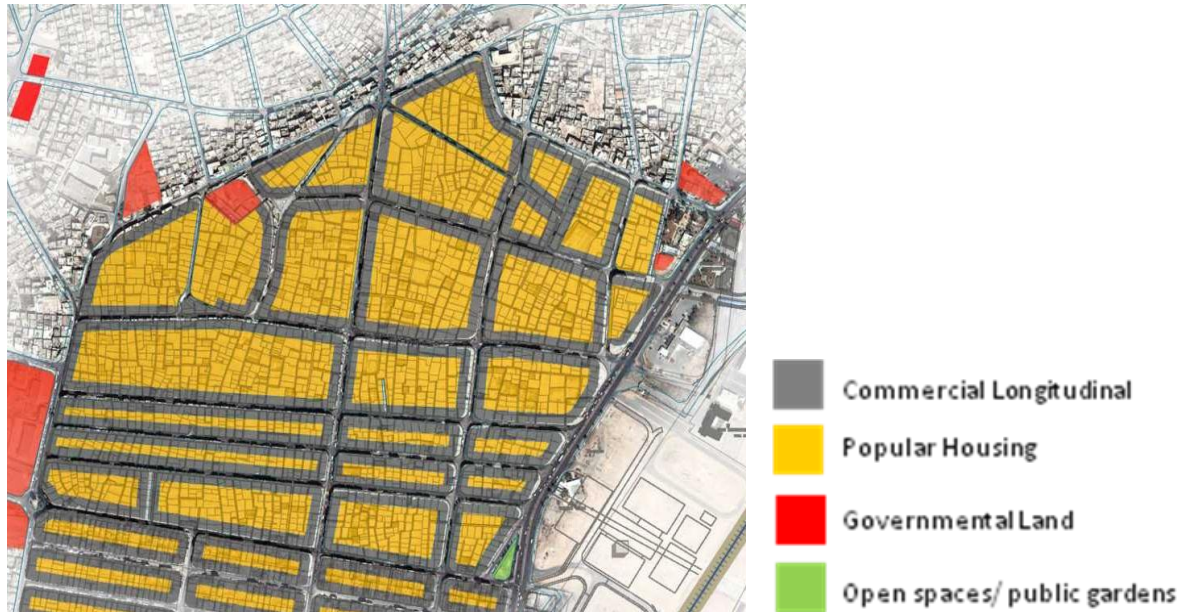
Electrical network: The area is serviced with the Electrical service. Water network: All dwellings are connected to the water supply network but the water does not reach them on a regular basis. Public waste service: Needs intensification of collection points.

Public parks are not available.

Social: Charity organizations: there is only one charity organization in the community.

Civil defense: Crimes/ offenses within the community vary in their type and intensity, they include; theft, vandalism, traffic, sexual trafficking, begging, violence, drunkenness, , child and family abuse.

Landuse: The outer edge of the block was regulated as commercial. The inner core of the block was regulated as popular housing in addition to allowing the building on parcels smaller than the allowable size 150sqm.



3.3.2 Janaa

- An extension to Zarqa refugee camp on the other side of the Railway. It started as slums (corrugated sheets) then developed into permanent buildings unregulated and not serviced by the Municipality, which caused a very bad Environmental and health situation that needed the interference of the government through The Housing and Urban Development Corporation in 2002.
- After the intervention of the government, the living situation improved but many issues remained unsolved such as landownership which affected the permanence and legality of the residents.



Statistics: Janaa area has 4288 families, 5.94 person/family with a density ratio of 450p/ha. It suffers from many social problems and negative behaviors due to its high density. Families depend on the only source of income that is either retirement fund or social security for the head of the family. 67% of the population has an income below 200 Jds (poverty line 500 Jds), 30% has an income between 100-150 Jds and they are mainly either construction workers or crafters. 10% of the population is unemployed.

Education: The area has 2 primary schools with 2600 students (males and females). Two secondary schools with 2600 students.

Health: 1 healthcare center serving the area and its surrounding areas. The healthcare center is sufficient to serve the area's residents but lacks medical equipments and specialization.

Environment: Sewage network: All residents dwellings are connected to the public sewage system which needs periodic maintenance to avoid overflow which is causing health and environmental risks/problems.

Road Network: The area has one major road 6 meters wide and the rest are secondary roads and paths. Roads require maintenance.

Electrical network: The area is serviced with the Electrical service. Water network: All dwellings are connected to the water supply network.

Public waste service: The area suffers lack of waste management, trash are stacked in the roads. Roads require maintenance.

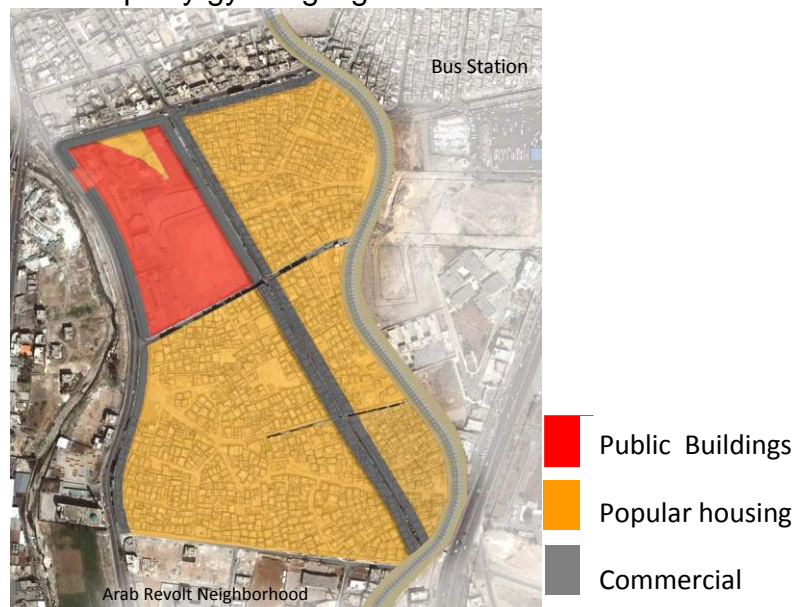
Public parks are not available.

Social:

Charity organizations; productivity enhancement, there is 1 project finalized, and 6 projects are pending for implementation. Civil defense; crimes/ offenses within the community vary in their type and intensity, they include; theft, vandalism, traffic, sexual, begging, violence, drunkenness, child and family abuse.

Land use: Mainly the land use of this area is Residential, with Commercial strips at the edges of the roads, in addition to the Municipality gym highlighted in red.

The proposed ring roads passes this area, it has been designed 3 years ago but not formally approved, the path of the ring road has witnessed some building activity which might require some demolition if this ring road is to be constructed.



3.4 ACTIVITIES

Arab Revolt Neighborhood

At the end of this stage the proposals will be submitted for the Prime ministry for approval. If the proposals were approved and advanced to detailed design stage, there will be some parallel efforts of involving the community in the upgrading process of the project through different means:

- 1- Establish a unit for local development for helping in the implementation of the development; selecting locations for the upgrading and the training of local groups.
- 2- Training of volunteers from the local community to improve their quality of life in their neighborhoods and to establish the procedures through the local development unit.
- 3- Conduct meetings on the level of the neighborhood with the community representatives, in addition to holding separate meetings with women to notify the community about the Municipality intentions to support their initiatives that are intended to improve the quality of the life in their neighborhoods.

Action plan and time table for the project work

The current work is considered as preliminary for the purpose of deciding on the general policy for the Masterplan of Zarqa and the development concept for the two Prioritized areas; Janaa and Ghweirieh and to subsequently prepare a detailed report of the approved policy and with the description of the required work to be executed. This will include:

- 1- Conducting a social study to introduce the residents to the concept of the proposed development and forming neighborhood committees to develop the Masterplan in cooperation with the residents. Duration 2-4 months
 - 2- Conduct a detailed study for the development of Janaa and Ghweirieh including the demolition and upgrading plans, street designs, road network, public spaces and storm water drainage, lighting and street furniture, and to prepare the tender documents of the above mentioned aspects for each area and each stage separately. Duration 8 months.
 - 3- Completing the strategic development study for Zarqa and setting the policies for the city and adoption of the development proposals for the urban areas by the supreme planning council to build the amended regulatory plans based on them. Duration 3 months.
 - 4- Completion of the preliminary study (pre-detailed design phase) for the ring roads and intersections networks, and rehabilitation of the Seil (stream) Area, and getting the approval for conducting the detailed design and tender documents for the projects or the approved parts of them to be carried out in the first phase and the adoption of the master development plan. Duration 3 months.
- Thus the time required for the preparation of the Zarqa Masterplan and development schemes of the two areas Janaa and Ghweirieh is 12 months from the approval of the preliminary report.

3.5 PROPOSALS

Solution for reducing the density within the assigned neighborhoods with minimal economic and social costs

Ghweirieh



Janaa



Existing condition

4 RESULTS

The proposals were submitted to the Prime Ministry in terms of the two different communities that correspond to their contexts and responded to the vision established by the community and the planning teams:

14.1 Ghweirieh

- Define buildings that need maintenance and help the residents maintain them.
- Define deserted and deteriorated buildings and report them to the responsible entity for action
- Maintenance for the sewage network.
- Re-paving the roads, paths and pathways
- Empower social development council and support them financially
- Intensify awareness meetings with the local community especially the youth.
- Coordinate between official and voluntary entities that would help in offering services to these areas.



14.2 Janaa

- Reduce density by providing housing options.
- To provide public gardens and beautify streets and paths.
- A comprehensive healthcare center in each area.
- Maintenance to schools and increase the number of classes.
- Solve the pollution problem of the stream/Seil
- Waste water Management
- Municipality to enforce regulations for building.
- Inspect the water network and repair to avoid any further loss or contamination.

