



Kurdistan Regional Government
Ministry of Interior
Joint Crisis Coordination Centre



November 2015

Shingal City Rapid Damage Assessment

The Early Recovery Needs



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Acknowledgments

On behalf of the Committee that conducted this rapid needs assessment, the Joint Crisis Coordination Centre (JCC) express its gratitude and appreciation to the Mayor, Municipality Council and the Directors of the local administrations of Shingal City as well as the Zeravani Peshmerga Forces for their cooperation and contribution to the assessment. We would also like to extend our appreciation to the UNDP and UNOCHA for providing technical assistance, especially in cost analysis.

This report presents the findings of a comprehensive assessment of the immediate needs and urgent priorities for early recovery. It also captures the level of the damage sustained to infrastructure inside the city as well as public and private property. While the scope of this report is limited to immediate and early recovery needs, there is a need for a comprehensive assessment on long-term reconstruction and development of Shingal and its sub-districts.

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Director General of the JCC
Head of the Assessment Team

Executive Summary

Purpose of the assessment

As a necessary step after the liberation of Shingal district mid November 2015, the Ministry of Interior of the Kurdistan Regional Government (KRG) instructed the JCC to conduct a rapid damage assessment. The purpose was to map and measure the level of destruction and damage inflicted on the city of Shingal and make informed priorities for rehabilitation, and early recovery. The findings presented in this report will assist the KRG in mobilizing the required resources at the local, national and international levels to assist the city administration in restoring basic public services and facilitate the return of IDPs to their homes.

Methodology

The assessment team was put together by the KRG Ministry of Interior and included the JCC, the governorate of Duhok and the Mayor. The team conducted a field mission to Shingal and visited most of the hard hit and destroyed sites. The team carried out interviews with local people, civil servants of the municipal council and representatives of the local administration in Shingal.

Information used in this report was collected through the team's site visits and interviews as well as assessments and information collected by the local administration.

Scope and limitations

The urgency of the assessment, limited time and lack of specialised expertise made it difficult to carry out a detailed assessment with precise recovery, reconstruction and development cost calculations. Therefore, the scope of the assessment is limited to Shingal city and minimum requirements for provision

of essential services. Moreover, the data collected is incomplete and a more comprehensive assessment is required to quantify the full scale of the damage. The costs calculated for restoration of basic public services is estimated against prices in the local market. The total cost might change depending on availability of material and workforce and other market factors.

Key findings

The first observation of the assessment team was the visible, total and severe destruction of the city caused by heavy fighting, airstrikes and IEDs planted by ISIS. The city is heavily damaged and the majority of the private homes are looted. Public buildings, schools, hospitals and social service infrastructure destroyed. Public and private assets were either destroyed or looted including equipment, furniture and machinery of government institutions, private property, material possessions and livestock of local people and the property of businesses. The nature and scale of the damage varies from one area to another. The neighbourhoods surrounding public buildings in the city centre are completely destroyed as many of the multi-storey public buildings and facilities were used as operational base and fighting positions for ISIS. The local shops and markets are levelled to the ground, some due to the fighting and others burned or blasted selectively and deliberately by ISIS. The deliberate targets were primarily the properties of the Yezidis and other religious minorities as indicated by the signs and markings left by ISIS to indicate which building should or should not be destroyed.

The general damage to social services infrastructure is estimated at 70%, and for private houses around 30%. It is estimated that USD 10.1 million will be needed within the coming six months for cleaning the city and basic restoration of critical services. The needs are colossal and the administration has no funds to address even the most immediate needs. The estimated amount covers priorities ranked by urgency to achieve minimum standards in service delivery until more resources are available for gradual and full restoration of basic public services to the pre-crisis condition and investments for long-term reconstruction and development.

Safety

The city was liberated only two weeks before the rapid damage assessment was carried out. Therefore, there is a legitimate concern and prevailing fear that the city is extensively mined with IEDs and other explosives. The

engineering team of the Ministry of Peshmerga has started to clean and clear the city and on the day of the assessment team's visit, they had cleared most of the main roads, streets and public offices and buildings. The clearing process takes time due to the prevalence of mines and IEDs, limited number of engineers and the size of the area liberated. Clearing the city from IEDs remains the top priority and a precondition before any activities can start to rehabilitate and restore the public services infrastructure. Table (1) below, presents an overview of the priorities and the estimated cost for immediate.

It is important to note that the population, particularly the Yezidis, need extensive assistance for safe and dignified return to their homes and to create conditions for their safety, enjoyment of rights and to recover economically, socially and psychologically.

Table (1): Priorities for early recovery of public services in Shingal City

Sector	Categories	Estimated Cost	Total
Municipality			
Cleaning	• Removing debris, rubbles & waste	\$2,250,000	\$2,650,000
	• Renovating Roads and bridges	\$400,000	
Water			
16 groundwater wells & 5 Water storages	• Renovation, repair & equipment supply	\$1,659,834	\$1,819,834
4 Generators 250kv	• Procurement	\$160,000	
Health			
1 General Hospital 3 Health Centres	• Renovation, Rehabilitation & furniture	\$3,799,000	\$3,839,000
1 Generator 250kv	• Procurement	\$40,000	
Electricity			
Network	• Repair of the network	\$600,000	\$600,000
Education			
27 Schools	• Renovation, Rehabilitation & furniture	\$1,221,000	\$1,221,000
Total			\$10,129,834

1. Introduction

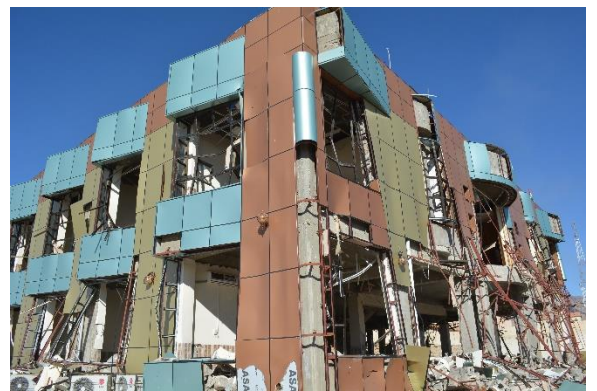
Shingal (Sinjar) is located northwest of Ninawa province, bordering Syria and 380 km from Erbil and 126 km from Mosul. With a surface of 3,188km², Shingal had a mixed population of estimated 400,000 before the invasion of ISIS in August 2014. Estimated ninety three thousand (93,000) families were living in the city of Shingal and the remaining scattered across the surrounding villages. The district is mainly composed of small rural communities living on agricultural produce (wheat and barley, livestock). The area is considered the ancient land of the Yezidi people, a Kurdish minority adhering to the Yezidi religion. Prior to the displacement, the district was inhabited by a majority Yezidi population but also other ethnic and religious minorities including Arab Shiite and Sunnis, Christians and Kurdish Kakayees. For decades, Shingal had been marginalised as former Iraqi governments had remained reluctant to invest in socio-economic development and service delivery in the district. Thus, the district has experienced decades of social, economic, political and cultural marginalization as well as repeated acts of violence and genocide committed against its population, especially the Yezidis. Hence, historical and geopolitical factors and isolation have contributed to the emergence of rather conservative and closed communities that have been deprived from basic developments and opportunities. Marginalization has resulted in under-achievement in education, public health and other social indicators as well as negligible economic development resulting in limited employment and other livelihood opportunities. Despite a history of deprivation and marginalization by the former Iraqi regimes, Yezidis have endured

the hardship while remaining in their lands and successfully preserving their unique religious faith.

On the 3rd of August 2014, ISIS took control of Ninawa and other cities in Iraq. This was followed by an invasion of Shingal district in the most brutal attack carried out by the terrorist group to date. ISIS systematically targeted the Yezidi population for their distinct religious identity. Among the most heinous atrocities committed by the group were mass execution of civilians, abduction and enslavement of women and girls and killing of the Yezidi men. As a result, the Yezidi population has suffered the gravest atrocities committed by the group, have lost all their sources of subsistence and been displaced across the Kurdistan Region. The



JCC Photo 1: Shingal Historical Minaret destroyed



JCC Photo 2: New Municipality Building

destruction measured in human and material loss is of such a magnitude that millions of dollars will be needed for recovery, healing, reconstruction and development over many years to come. The main impact can be summarised as follows:

- ❖ Large-scale displacement of approximately 350,000 people who fled to Shingal mountain and the Kurdistan Region of Iraq including Yezidi, Arabs and Christians;
- ❖ Approximately 1,800 Yezidi civilians were executed; in Qojo village alone, 400 men were shot dead;
- ❖ Estimated 5,838 women, men, girls and boys were abducted and 1,775 (1,666 women & girls) and (406 children) were confirmed missing by their families;
- ❖ The girls and women were given away or sold as sex-slaves to ISIS leaders and fighters in Iraq and Syria;
- ❖ Around 600 civilians, including 200 children, died on mount Shingal from starvation, heat and dehydration due to the ISIS siege of the mountain;
- ❖ Approximately 500 Yezidis are still missing. 254 of them have been confirmed missing by their families.
- ❖ Destruction of 14 Yezidi and Kakayee religious temples;

- ❖ The Yezidi families lost 70% of all their livelihoods and assets through looting by ISIS fighters and some opportunistic locals that are accused of having allied with ISIS;
- ❖ The total destruction of the city's infrastructure, buildings and private homes as a result of heavy fighting and airstrikes for 15 months.

On the 13th of November 2015, the Peshmerga forces, supported by the International Coalition, launched the Free Shingal Operation and liberated the district. Shingal and 28 villages were retaken after 15 months of ISIS occupation. The liberation has been widely celebrated by the Yezidis and other displaced communities as it has planted the seeds of hope for return. Yet, the city is severely damaged and the infrastructure is either completely destroyed or heavily impaired. The principal challenge remains clearing the city of debris and rubbles, renovation and restoration of basic public services and rehabilitation of public buildings to enable safe, dignified and voluntary return of the IDPs to their homes and a new beginning.

2. Level of damage and cost of immediate recovery

This section presents an overview of the type and level of damage caused and estimated cost for immediate recovery for transportation networks, water and sanitation, health, education, electricity, housing and livelihoods, public buildings.

2.1 *Cleaning and Renovation: Transportation Networks*

The city is covered in rubbles, debris and waste and cleaning remains priority number one for the local administration. The transportation network, including highways, roads, bridges and streets to and within the city of Shingal is partially damaged.



JCC Photo 3: Main Street in the city centre

The majority of the bridges on the highways were used by ISIS as a safe cover from airstrikes. This made the roads and streets a target and 30% of the streets are damaged by airstrikes. In addition, the main bridges were intentionally destroyed by ISIS to stop or interrupt the advances of the Peshmerga forces during the free Shingal operation. The streets inside the city are only partially damaged but are covered in waste, rubbles



JCC Photo 4: Small Bridge on main road to Shingal

and debris, especially in the city centre and around main public buildings where heavy fighting and airstrikes took place. The KRG Directorate of Roads and Bridges in Duhok Governorate has already started the reconstruction of a bridge on the main road to Shingal. The reconstruction is in its final stage and will be opened soon for public transportation.



JCC Photo 5: new bridge being constructed on main road

Table (2): Level of damage and estimated cost for cleaning and renovation

Sector	Level of damage		Category	Estimated Cost	Total
Cleaning	30%	750 buildings & houses	Debris, rubbles & waste	\$2.250.000	\$2.250,000
Renovation	10%	-----	Roads and bridges	\$400.000	\$400.000
Total					\$2.650,000

2.2 Water and Sewage Networks

Shingal city suffered from lack of clean water supply prior to the invasion as ground water was the only water source and the city does not have developed water purification and treatment plants. Shingal had only one small water purification station to provide the population with drinking water. Therefore, the city heavily depends on its 16 ground water wells and 5 water storage tanks. This already insufficient water infrastructure is partially damaged. The equipment was looted and the infrastructure is impaired. It needs basic renovation such as repair of the water supply network, wells, pools and provision of required equipment to make it operational

again. Table (3) below presents the estimated cost for the basic rehabilitation of the water infrastructure. Annex 2 (\$1.660.000) presents more details on urgently needed equipment.

Sewage networks are blocked through damage, waste, rubbles and debris. This has caused overflowing of sewage water into the streets. Looting, combined with the destruction of the whole waste management and sewage system, has caused the piling up of solid waste and sewage water in the streets. Cleaning tools and equipment are no longer available.

Table (3): Wash Sector: water and sewage networks

Sector	Level of damage		Category & Equipment needed	Estimated Cost	Total
16 Water wells & 5 storage tanks,	10%	Equipment looted & pumps destroyed	Renovation, provision of equipment	\$1.659.834	\$1,819,834
Generators, 250kv			Supply	\$160.000	
Total					\$1,819,834

2.3 Health Sector

Before the crisis, Shingal city had one general hospital, three primary health centres as well as 26 primary health centres in the suburban areas. The invasion of ISIS and subsequent fighting has caused severe damage to the health infrastructure of the city. The general hospital, all its units and 140 beds have been severely damaged to estimated 40%. The maternal and new-born and administration units are destroyed beyond repair. Most of the equipment is looted or destroyed. The other three health centres and the health care centre were found in a better condition but there are minor damages and the equipment is looted. These three health centres need basic renovation and the full provision of equipment and supplies. It is estimated that USD 3.000.000 million will be required for

renovation and restoration of the health sector to provide basic health services.

Table (4) below illustrates the damage and the immediate restoration needs of the health sector.



JCC Photo 6: Maternity Unit-General Hospital

Table (4): Level of damage and estimated cost for Health sector

Sector	Level of damage		Category & Equipment needed	Estimated Cost	Total
1 General Hospital	40%	Partially damaged	Renovation, Furniture, equipment and medical supplies & pharmaceutical items Generator (1)	\$3,799,000	\$3,839,000
3 Primary Health Centres inside city	10%	Minor damage and furniture, equipment and medical supplies looted	Renovation, Furniture, equipment and medical supplies	\$40,000	

2.4 Electricity

The main source of electrical power in Shingal was the Mosul hydropower plant coming from Telafar. In addition to this, generators were used as back-up during power cuts in hospitals, water wells and local administration offices. Currently, the city has no power source, but two options were proposed by the Director of Electricity; a) connecting the city to the 132kv power plant in Raabia and Zummar and, b) buying electrical power from the private sector Cement Factory power plant. This power plan is in need of renovation but could be an appropriate quick interim solution until Telafar is liberated.



JCC Photo 7: Mobile generator burnt

The electricity sector has been hard-hit and the infrastructure is completely impaired. The generators are burned down, destroyed

or looted. The electricity network is seriously damaged especially in areas near the local offices and main streets where heavy fighting took place. The damage to the network is estimated at 30% and the transformers looted or destroyed. The devastation is very visible in the city centre. Electricity directorate is partially (10%) damaged and the equipment looted.



JCC Photo 8: New transformer plant- destroyed

The Directorate can easily be renovated but the new electricity transformer plant and the mobile generators are completely (100%) destroyed and cannot be repaired. The cost for rehabilitation and renovation of the electricity sector is estimated at (\$600,000). Table (5) below provides more details about the needs and the cost per category

Table (5): Damage and cost of immediate repair of electricity infrastructure

Sector	Level of damage	Category & Equipment needed	Estimated Cost	Total
Distribution Network	30% Partially damaged	Repair the power distribution network	\$600,000	\$600,000
Electricity Directorate Building	10% Partially damaged, looted Needs renovation	Renovation & furniture	-----	-----
New Electricity transformer plant	100% Completely destroyed	Construction of new one	-----	-----
Mobile Electricity generator	100% Burned down & completely destroyed	Provision of new one	-----	-----

2.5 Education Sector

The education sector of Shingal city had poorly developed infrastructure even before the crisis. One third of the population were illiterate and half of the literate had only finished intermediate level education. Only a small number of students from Shingal were able to go to high school and university.

Shingal has 27 schools of which 24 Arabic and 3 Kurdish, and one training institute for teachers. Over 15,000 students were previously enrolled in these schools. The school buildings are partially damaged but the gravest harm is caused by looting and destruction of equipment and furniture in all schools. The schools require minor rehabilitation, furniture and supplies. On the contrary, the building and two warehouses of the Directorate of Kurdish education were completely destroyed and burned down and cannot be repaired. It is necessary to construct a new building and new warehouses. The Directorate of Arabic Education is also severely (70% damaged) but can be rehabilitated and reequipped. Table (6) presents damaged to the education sector and the cost for the renovation and furniture which is estimated at (\$1,221, 000). This will only bring back education infrastructure to its pre-invasion base-line which was already sub-standard.



JCC Photo 9 Shamalik School



JCC Photo 10: Warehouse burnt



JCC Photo 11: Playground of Shamalik School

Table (6); Level of damage caused to education sector and estimated cost of immediate repair

Sector	Level of damage		Category & Equipment needed	Estimated Cost	Total
27 Schools	10%	Marginally damaged	Refurbishment, Furniture & teaching materials		\$1.221,000
Directorate of Arabic Education	70%	Severely damaged, furniture and supplies looted or destroyed	Renovation, repairing & furniture	-----	-----
Warehouses (2)	100%	Completely destroyed and cannot be repaired	Construction of new ones	-----	-----
Directorate of Kurdish Education	100%	Completely Destroyed	Construction of new building	-----	-----

2.6 Housing Sector and Livelihoods



JCC Photo 12: local houses damage



JCC Photo 13: local shops burnt

The level of damage inflicted on the housing sector varies from one area to another. The houses on/near the main streets and entrance to the city are heavily affected and the majority are completely destroyed. Apart from the destruction caused by airstrikes and fighting, ISIS carried out targeted and deliberate destruction of houses and private property. Moreover, the furniture and other family possessions were looted. The damage caused to private houses is estimated at 30% and requires cleaning,



JCC Photo 14: slogans on Yezidi shops at local market

Rehabilitation and reconstruction of new houses. It is estimated that 700 private houses have been damaged or destroyed inside the city.

Livelihoods: When it comes to private businesses and small shops, the damage varies. ISIS has destroyed shops owned by Yezidi and other religious and ethnic minorities such as Kurdish and Arab Shia Muslims. Moreover, a large number of shops at the city centre and entrance to the city were destroyed by airstrikes. The damage of shops and the city market is calculated at 70% including the two flour factories (100% destruction) and cement factory (30% damage).

The assets and livelihoods of the families in the suburban areas were looted and some property and equipment destroyed such as houses and agricultural machineries. 70% of the families lost their livestock and crops, which were their main source income.

Table (7): Level of damage and cost of recovery for housing sector & livelihoods

Sector	Level of damage	Category & Equipment needed	Estimated Cost	Total
Houses	30%	1. Destroyed, damaged, looted	-----	-----
Cement factory	30%	1. Partially destroyed 2. Most of the machines looted & destroyed	-----	-----
2 Flour factories	100%	Completely destroyed	-----	-----
Livelihoods				
Shops & market	70%	Completely destroyed	-----	-----
livestock	70%	Sheep, goats & cows looted Poultry looted	-----	-----
Agriculture	70%	1. Wheat, barley chain lost 2. Machinery (tractors, harvesters, water pumps ... etc.)looted	-----	-----

2.7 Public Buildings

ISIS used public buildings as operational bases and fighting positions. This resulted in major damage to the public offices and 70% of the buildings are completely damaged by airstrikes, fighting and explosives. The equipment including machineries, vehicles and furniture were looted or destroyed. The cost of reconstruction of public buildings will amount to several million dollars.



JCC Photo 15: New Building of civil and National IDs



JCC Photo 16: Directorate of Kurdish Education

As presented in the table (6), 9 of the buildings are completely destroyed beyond repair. Four other buildings are severely (70%) damaged but can be repaired. Only three are partially damaged and require basic rehabilitation. However, the equipment and furniture of all public offices were looted or destroyed. A more comprehensive assessment is needed to calculate the full extent of the cost.



JCC Photo 17: Directorate of Communication destroyed

Table (8); Level of damage and cost of immediate repair for Public Buildings

Sector	Level of damage	Category & Equipment needed	Estimated Cost	Total
Public Facilities				
Mayorship Building	100%	Completely Destroyed	Construction of new building & Furnitue	-----
Old & New Municipality Buildings	100%	Completely Destroyed	Construction of new building & Furnitue	-----
Court & ownership directorate	100%	Completely Destroyed	Construction of new building & Furnitue	-----
Archaeology directorate	70%	Destroyed & looted, It can be repaired	Renovation & furniture	-----
Post office Directorate	100%	Completely Destroyed	Construction of new Building & Furnitue	-----
Civil and National IDs directorate	100%	Completely Destroyed	Construction of new building & Furnitue	-----
Directorate of Agriculture	30%	Partially damaged, looted, admin section burnt	Renovation & furniture	-----
Directorate of Fire-fighting	100%	Completely Destroyed	Construction of new Building& Furnitue	-----
Directorate of Irrigation	70%	1. Heavily damaged 2. It can be renovated and repaired	Reconstruction, repairing & furniture	-----
Directorate of Police	100%	Completely Destroyed	Construction of new Building	-----
Shingal Prison	100%	Completely Destroyed	Construction of new Building	-----
Directorate of Electricity maintenance	10%	1. Partially damaged 2. The equipment looted 3. The Electricity transformer unit is not hurt	Renovation and repairing	-----
Directorate of Veterinary	80%	Severely damaged	Reconstruction & furniture	-----
Shingal Central Warehouse	70%	1. Heavily impacted 2. One part of the building is destroyed 3. The machinery destroyed or looted	Reconstruction, renovation & machines	-----
Bus & Taxi Terminal	30%	Partially damaged	Renovation & furniture	-----

3. Annexes

Annex 1: Map of Public Buildings & main streets

SHINGAL - Public Buildings and Main Streets Damage Assessment - NOV 2015



Ministry of Interior
Joint Crisis Coordination Centre

- Damage %**
- 10 - 30%
 - 31 - 70%
 - 71 - 100%

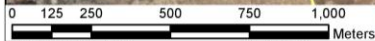
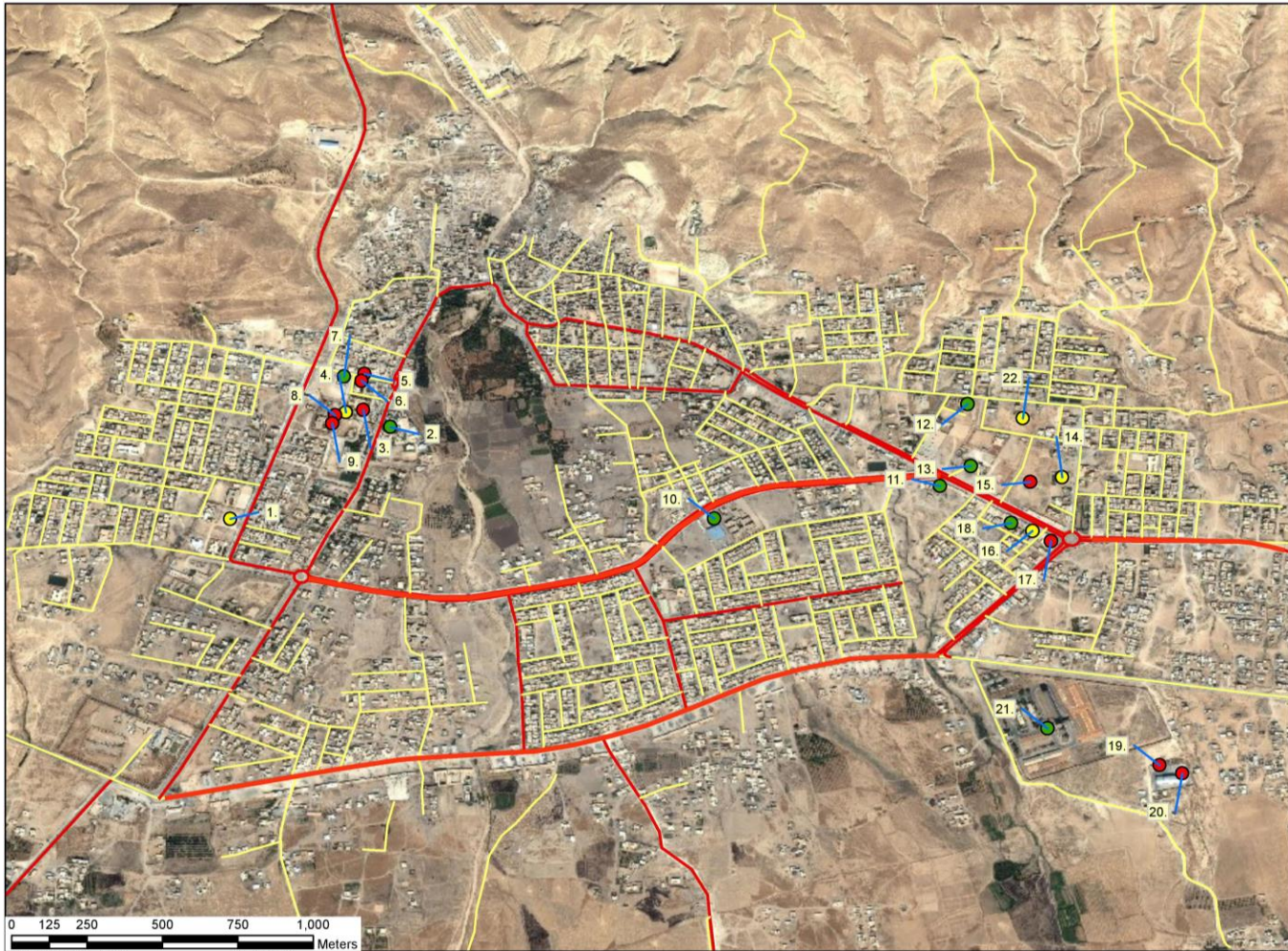
- Roads**
- Damaged Road
 - Street Road

No	Name
1	New Municipal Building
2	General Hospital
3	The Court and ownership Building
4	Archeology Building
5	Menaret Market
6	Old Municipal Building
7	Electricity Building
8	Post office building
9	National and Civil IDs Building
10	School Building
11	Health Care Center
12	Lalish Yazidi Center
13	Building of Agriculture
14	Directorate of Arabic Education
15	Directorate of fire-fighting
16	Directorate of Irrigation
17	Directorate of Kurdish Education
18	Directorate of Electricity maint.
19	Electricity Generator
20	New Electricity Transformer Station
21	Shingal Central Silo
22	Shingal Central Warehouse

Description:
Field assessment done by JCC
Note:
Picture attachments in numeric order



Creation date: 02/12/2015



Sources: COD, JCC Disclaimer:

1:12,500

Annex 2: Details of the water Sector needs with estimated costs

Category	Capability	Price	Total
16 Pumps	20 horses	16 x \$4,800	\$76,800
5 Rooftop pumps for pools	75 horses	5x \$7600	\$38,000
Pushing water pump	60 horses	13 x \$6600 =	\$85,800
Plastic pipes	Inches	Number	
Stainless pipes	8	300	300 x \$2,280
	6	450	450 x \$1,740
	4	450	450 x \$ 1,560
	2.5	90	90 x \$1,050
Lockers	8	100	100 x \$15
	6	150	150 x 10
	4	150	150 x 5
Plastic locks	8	8	8 x \$4,020
	6	25	25 x \$ 2400
	4	25	25 x \$1620
Flange locks	6	6	6 x \$300
	8	10	10 x \$408
Total			\$2,766,390