

# VISION, SCENARIO BUILDING, & ACTION PLAN REPORT

Urban Planning & Infrastructure in Migration  
Contexts-Jordan

Al Hashmi Al Janoubi Neighbourhood

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## Abbreviations

BAU	Business As Usual
BRT	Bus Rapid Transit
DLS	Department of Lands and Survey
GAM	Greater Amman Municipality
GIS	Geographic Information System
GPS	Global Positioning System
MoE	Ministry of Education
MoH	Ministry of Health
PWD	People with Disabilities
RFP	Request For Proposal
SDG	Sustainable Development Goal
SECO	Swiss State Secretariat for Economic Affairs
UN-HABITAT	United Nations Human Settlements Programme
UPIMC	Urban Planning and Infrastructure in Migration Contexts

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## Executive Summary

In a country that has welcomed approximately 4 million refugees due to instability in the region, migration is profoundly associated with the history of Jordan, whereby the various waves have played a key role in shaping the country's political, economic, social, and urban characteristics. The Urban Planning and Infrastructure in Migration Contexts (UPIMC) programme recognizes the need to support municipalities with a long-term strategic approach in connecting migration and displacement affected neighbourhoods with access to public services through financeable infrastructure investments.

### Approach

The UPIMC programme is being implemented in three countries: Cameroon (Douala), Egypt (New Damietta), and Jordan (Amman and Irbid). This report is a product of the programme implementation in Amman.

The programme consists of four interlinked components: (1) spatial analytics and urban profiling, (2) developing a strategic vision and scenario building, (3) defining prioritised infrastructure investments and establishing linkage to financing, and (4) contributing to knowledge exchange. In the first component, the UPIMC team developed [the Amman Spatial Profile](#) based on a spatially focused cross-sectoral situational analysis of urban settlements hosting displaced populations, allowing local stakeholders to get a comprehensive spatial understanding of the existing situation as a basis for decision-making, long-term urban development strategies, and infrastructure investment planning. The spatial profile identified and mapped challenges, provisions, and gaps in public infrastructure services in coordination with humanitarian interventions at the national, regional, city, and neighbourhood levels. A Geographic Information System (GIS) program was utilized to undertake the spatial analysis throughout the profile, which included measuring the accessibility to basic services within 5, 15, and 30-minute distances at different scales, and measuring the demand on infrastructure networks.

This report is the output of the second component and builds on the developed spatial profile. Based on a comprehensive selection criteria and stakeholder consultations during the first component, Al Hashmi Al Janoubi neighbourhood in Amman was selected as the pilot neighbourhood for the development of a shared strategic vision and scenarios, the outlining of an action plan for achieving this vision, and the identification of prioritized infrastructure investments,

which aim to improve the quality of life of refugees and host communities living in one of the most affected neighbourhoods in Amman City following the influx of refugees. The chapters of this report comprehensively outline this process.

### Vision

As this report shows, the development of a shared strategic vision was highly participatory and inclusionary, involving critical institutional stakeholders together with representatives from civil society. Through a community consultation workshop, the residents of Al Hashmi Al Janoubi neighbourhood proposed several key words to be embedded within the vision statement of their neighbourhood. Accordingly, the neighbourhood's vision statement was formulated, taking the needs and aspirations of the neighbourhood in the coming 15 years into consideration. The Al Hashmi Al Janoubi neighbourhood Vision thus calls for "An Inclusive, Liveable, and Sustainable Neighbourhood where All are Proud to Live in".

### Scenario Building

The scenario building process analysed how the urban situation in Al Hashmi Al Janoubi neighbourhood could develop over the next fifteen years in relation to the built environment. This considered the possible events, or what were referred to as "variables", that would result in large changes to the built environment, and the expected impacts and probabilities of these developments. The variables that were assessed are: 1) Population Growth; 2) Urban Footprint; 3) Needed Projects; 4) Climate Risk & Natural Hazards; and 5) Local Economic Development

To build these scenarios, detailed data on the current state of the neighbourhood was collected using a combination of methods, namely GIS mapping and on-site surveying and observation. This data was then thoroughly analysed in relation to the five selected variables to determine how Al Hashmi Al Janoubi neighbourhood could be spatially and functionally configured in 2037.

Two scenarios were developed; Firstly, the "Business As Usual (BAU)" scenario visualized the neighbourhood in 2037 if no or minimal measures are implemented. Secondly, the "Optimal" scenario rethinks the mosaic of the Al Hashmi Al Janoubi neighbourhood to establish a clear link between what should be done to transform the neighbourhood into an inclusive, liveable, and sustainable neighbourhood

based on the formulated vision, and how the different sectors can support this transition. This optimal scenario includes 11 needed projects that should be implemented in the next 15 years. A scoring matrix (Annex B) was developed to identify the highest priority projects according to their urgency, their transformative social, environmental, economic, and spatial impacts, as well as their alignment with the existing governmental plans and the views of the local community and key stakeholders. By conducting a technical assessment of each project and consulting the community and relevant governmental institutions, the optimal scenario was finalized, and the needed projects were prioritized to determine when they should be implemented.

### The Blueprint for Implementation: The Al Hashmi Al Janoubi Neighbourhood Action Plan

The blueprint for achieving the optimal Al Hashmi Al Janoubi neighbourhood by 2037 has been formulated by translating the strategic recommendations proposed in the optimal scenario into implementable actions through a detailed action plan that can tackle incremental spatial, environmental, social, and economical transformations. This action plan provides an overarching framework that guides the Greater Amman Municipality (GAM) and the key stakeholders from the relevant entities to ensure a proactive and manageable approach to implement the needed changes at the neighbourhood level. It outlines how to coordinate the identified needed projects in Al Hashmi Al Janoubi neighbourhood. Within this context, needed projects were collectively assessed, whereby projects with possible synergies were grouped together to ensure that the limited available resources are utilized in the most efficient and cost-effective way to deliver the highest possible impact.

This action plan is split into short-, mid-, and long-term phases, with each spanning five years, starting from 2023 and ending in 2037. The short-term phase (2023-2027) is the period in which the high priority needed projects identified through the scoring matrix must be implemented. These projects include rehabilitating the staircases; upgrading the water and sewerage networks in critical areas; upgrading the road and sidewalk networks in critical areas; implementing flood mitigation interventions; and Upgrading the Existing Al Hashmi Al Shamali Comprehensive Health Centre. The mid-term phase (2028-2032) consists of the medium-priority projects, including upgrading the existing public schools; encouraging mixed-use development; rehabilitating the existing public park and playground; and

upgrading the remaining critical areas of the road, sidewalk, water, and sewerage networks. Finally, the long-term phase (2033-2037) includes improving residential buildings in critical and substandard conditions as well as constructing a new public school.

The action plan in this report outlines the actions needed for each project and the implementation sequence to follow during these phases. Several factors were taken into consideration, including the urgency of the situation, spatial overlaps between projects, the cost-efficiency of the implementation, alignment with governmental plans and strategies, as well as alignment with donors/financiers' strategies and current interests.

Investment cards were developed (Annex C) for each high-priority projects to begin the mobilization of resources in 2023. They describe the project, its objective, beneficiaries, impact, partners, life cycle, timeline, and financial details. These cards will link the prioritized infrastructure investments to potential partners for financing and implementation.

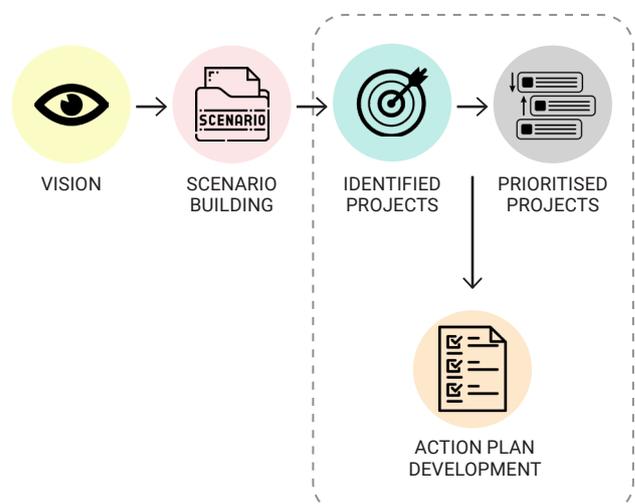


Fig. 1: Work Flow Diagram

## The UPIMC Programme

By conducting activities that go beyond a pure planning stage, the Urban Planning and Infrastructure in Migration Contexts (UPIMC) Programme endeavours to support the prioritization of infrastructure investments and their linkages to financing, which will benefit migrant communities and all urban dwellers with a better quality of life and access to economic opportunities. Accordingly, the scope of work will also ensure significant contributions to the Sustainable Development Goals (SDGs) by supporting the selected cities and neighbourhoods to become increasingly inclusive, safe, resilient, and sustainable. This will allow for the necessary shift from short-term emergency interventions to long-term development investments. The programme will achieve this through the following four interlinked components:

- **Spatial Analytics and Urban Profiling**

Under the first component, this programme has developed urban profiles based on a spatially focused cross-sectoral situational analysis of urban settlements hosting displaced populations. This allowed local stakeholders to get a comprehensive spatial understanding of the existing situation as a basis for decision making on long-term urban development strategies and infrastructure investment planning. The urban profiling itself will build upon data already collected by the various actors using a participatory and area-based approach. It will develop a baseline that can be used as a consultative mechanism to support the vertical and horizontal integration of stakeholder requirements, including governmental entities at various levels and other relevant stakeholders. It will also be used to select suitable pilot areas within the cities, where more detailed scenario building will be conducted under the second component. The Amman Spatial Profile can be accessed [here](#), and the Irbid Spatial Profile can be accessed [here](#).

- **Develop a Strategic Vision and Scenario Building**

Building upon the analytical work and the recommendations for the selection of the pilot areas under the first component, this component consists of developing strategic visioning and scenario building for urban development in the selected neighbourhoods. It is based on a comprehensive planning charrette, which is highly participatory and inclusionary, involving critical institutional stakeholders together with representatives of civil society (displaced, migrants, host communities, etc.) and the private sector. Participants will provide direct inputs into the visioning process, which will facilitate discussion on strategic urban development visions, possible interventions, related individual interests, technical opportunities and/or constraints, as well as

political objectives. The scenario building will identify where strategic infrastructure interventions are needed, which will be prioritized through a technical assessment. The scenario will be supported by an action plan that outlines what could be done where and when.

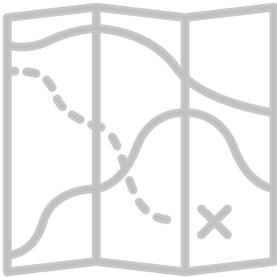
- **Define Prioritized Infrastructure Investments and Linkage to Financing**

The urban profiles, scenarios, and action plans from the first and second components set out the rationale and evidence to support decision-makers in identifying interventions for prioritized investment in municipal services that are both financially realistic and viable. It will aid in prioritizing investments through an assessment of the economic, social, and environmental potential as well as of the sustainable impact of the proposed interventions on the city and its migrant communities. The technical and financial feasibility of prioritized interventions will further be detailed through technical assistance and consultative bilateral engagements with national and local authorities, donors, and development banks, including through analysing city budgets, capital spend potential, as well as investment platforms, such as UN-Habitat's Cities Investment Facility. The proposed prioritized infrastructure interventions and anchor points (where catalytic projects can be linked to existing city/neighbourhood priorities and policies for financing) will then be presented and validated in a workshop with key local authority, development partners, and, where possible, the private sector. This will include linking them to potential partners for financing and detailed pre-feasibility studies.

- **Knowledge Exchange**

This last component will build and foster knowledge exchange and awareness in the cities among stakeholders for the importance of good data management and urban observatory platforms for future use. Through forums and digital media, the programme will also connect cities at the national and international levels through events and international conferences, including the Cities Investment Platform events. It will also make use of UN-Habitat's platforms and those of partners.

**COMPONENT #1**



**Spatial Analytics & Urban Profiling**

Multi-Sectoral Spatial Analysis  
Profile Preparation & Pilot Area Identification

**COMPONENT #2**



**Develop Strategic Vision & Scenario Building**

**Identification of potential economic opportunities**  
**Finalisation & dissemination of action plan**

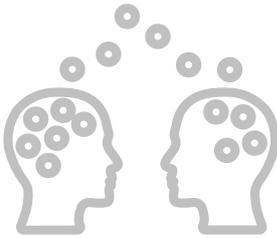
**COMPONENT #3**



**Define Prioritized Infrastructure Investments & Linkages To Financing**

Impact assessment framework of proposed infrastructure

**COMPONENT #4**



**Knowledge Exchange & Capacity Sharing**

City-to-city knowledge exchanges  
Capacity sharing sessions with local authorities to continue to monitor and guide infrastructure implementation

## Introduction

### Moving from Assessment to Strategic Vision and Scenario Building

The spatial profile has established and summarised the challenges and opportunities that impact Amman City in Jordan. Understanding these challenges and opportunities, which span categories of urbanisation, climate change, socio-economic challenges, refugee policy and land management, provides a contextual framework to the current status of Amman city. These challenges and opportunities are aligned to the SDGs and have been verified by stakeholders through engagement sessions hosted by UN-Habitat.

Building upon the spatial and analytical work under the first component of the UPIMC Programme and the concluded recommendations for the selection of Al Hashmi Al Janoubi neighbourhood within the Al Madinah District as the pilot area in Amman City, this document intends to cover the second component, which is to "Develop a Strategic Vision and Scenario Building" for urban development in Al Hashmi Al Janoubi neighbourhood.

Al Hashmi Al Janoubi Neighbourhood has an area of 0.43 km<sup>2</sup>, a total population of 14,100 inhabitants based on the 2015 census, and, accordingly, a population density of 32,118.4 person/km<sup>2</sup>. It represents the typology of a dense neighbourhood with overloaded infrastructure networks in Amman City. It is also one of the neighbourhoods in Amman City that was most affected by the influx of refugees, with the highest refugee presence in comparison to the other neighbourhoods within the Al Madinah District.

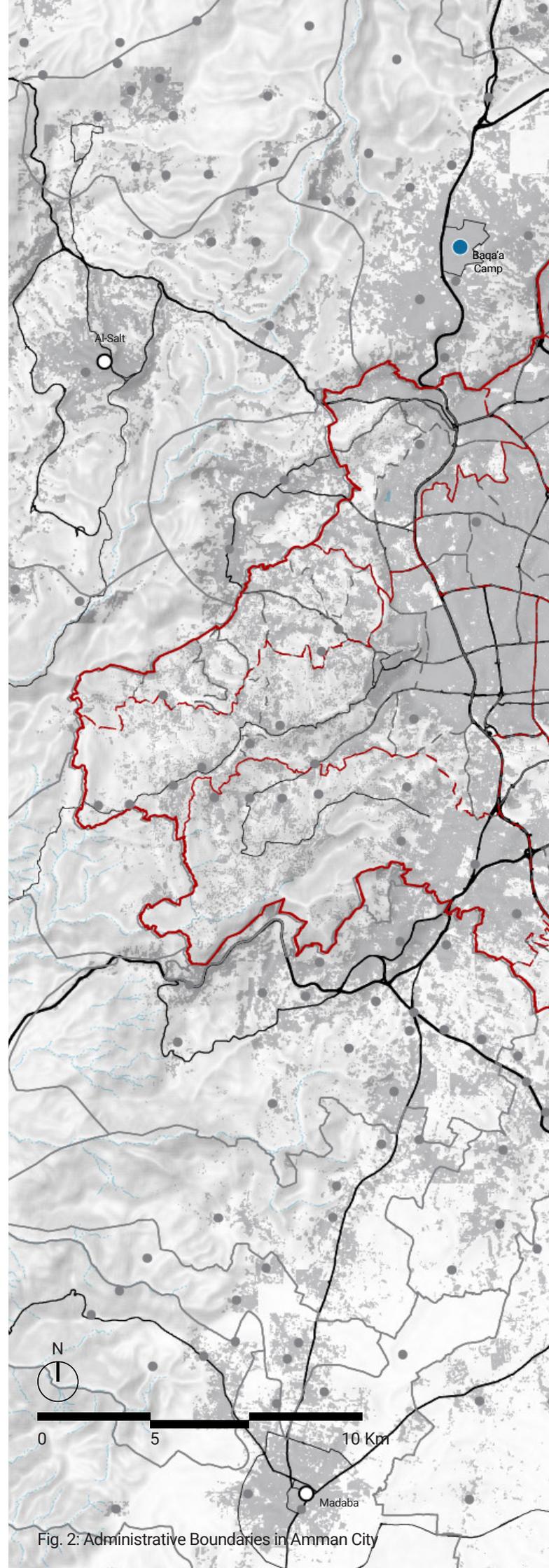
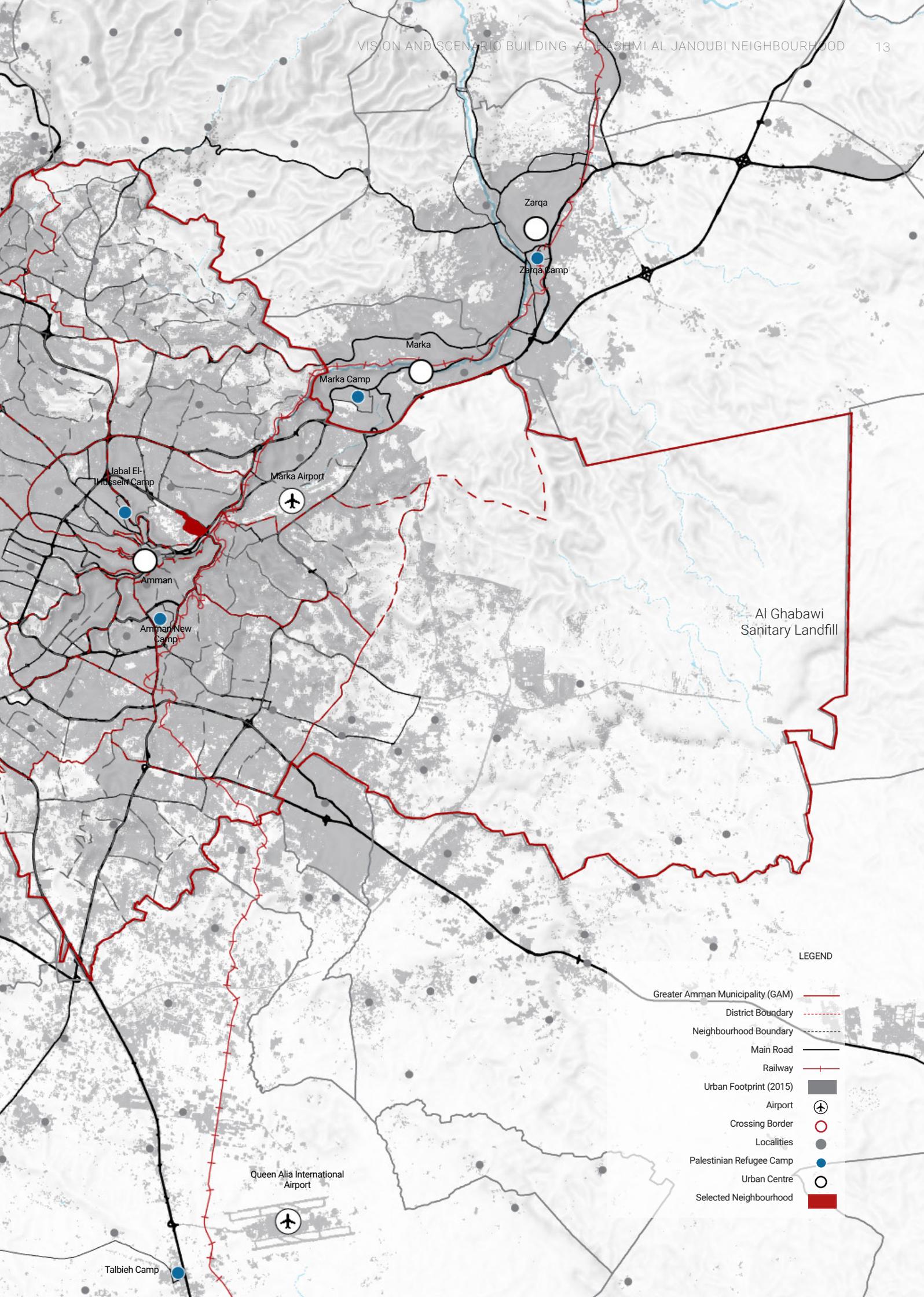


Fig. 2: Administrative Boundaries in Amman City



LEGEND

- Greater Amman Municipality (GAM) ————
- District Boundary - - - - -
- Neighbourhood Boundary - - - - -
- Main Road ————
- Railway —+—+—+—+—
- Urban Footprint (2015) ■■■■■
- Airport (⊗)
- Crossing Border (○)
- Localities (●)
- Palestinian Refugee Camp (●)
- Urban Centre (○)
- Selected Neighbourhood ■■■■■

## Background- Challenges and Interventions needed in Al Hashmi Al Janoubi Neighbourhood

Based on the spatial analysis conducted for the pilot neighbourhood in Amman City (Al Hashmi Al Janoubi) and the challenges, needs, and opportunities identified in cooperation with the neighbourhood's residents, this section summarises the identified challenges and the needed interventions in Al Hashmi Al Janoubi neighbourhood in relation to the SDGs.



### SDG 3: Good Health and Well-Being

The analysis revealed that there is a lack of access to health care facilities within a 5- and 15-minute walking distance at Al Hashmi Al Janoubi neighbourhood. This was validated by the neighbourhood residents.

Accordingly, the needed intervention is to construct **a comprehensive health centre or upgrade and transform the existing primary health centre** within the neighbourhood **to a comprehensive one that includes a 24-hour emergency centre.**



### SDG 6: Clean Water and Sanitation

Residents described the water service as weak and limited. They also explained that the sanitation network needs regular maintenance. This is aligned with the capacity analysis conducted that revealed that the water and sewerage networks within the neighbourhood are overloaded. Therefore, the needed intervention is to **upgrade the water and sewerage networks** to accommodate the increase in population.



### SDG 9: Industry and Infrastructure

The residents mentioned the need for road maintenance, installing speed bumps, adding pedestrian crossings, and enhancing the street-lighting in general. The field visits conducted by the UN-Habitat team confirmed that the roads need rehabilitation and more lighting. Furthermore, the residents also discussed the issues of flash floods and poor storm-water drainage. Accordingly, the needed intervention is to **rehabilitate the road infrastructure** and to **add more lighting poles** in the neighbourhood. There is additionally a need to **provide periodic maintenance to the storm-water drainage system.**



### SDG 11: Sustainable Cities and Communities

The analysis revealed the limited commercial areas within the neighbourhood, which was further emphasised by the residents. Additionally, the residents mentioned the lack of facilities for children and people with disabilities. They also explained that the public recreational facilities in the neighbourhood need significant rehabilitation. Therefore, the needed interventions are to **add a central commercial area, a nursery, a vocational training centre, and a centre specialized for people with disabilities.** Regarding the public recreational facilities, the needed interventions include **providing more secured play areas, more games** (specifically inclusive games and activities for people with disabilities), **more lighting poles, public toilet facilities, shaded seating areas, a kiosk, and regular maintenance in general.** Furthermore, residents mentioned the existence of some abandoned houses within the neighbourhood that pose hazards to public safety to the residents. **Therefore, the renovation or demolition of these buildings is needed.**

As for transportation, the analysis showed that the neighbourhood residents have good access to public transport means within 5- and 15-minutes walking distances. However, residents highlighted the need for public transport stops and routes. They also highlighted the lack of pedestrian bridges and traffic lights on the main roads that lead to the main nearby public transport stop available, which threatens their safety. The needed interventions in this regard is to **extend a public transport route into the neighbourhood** and to **add a fixed stop in the central area of the neighbourhood.** Additionally, pedestrian traffic lights on the main streets are highly necessary.

Furthermore, the unequal distribution of janitors and waste containers was highlighted as a challenge concerning solid waste management in the neighbourhood. Accordingly, the needed **intervention, is to add waste containers and assign more janitors** to serve the neighbourhood equally and efficiently. Furthermore, the residents mapped two areas that are considered **health hazardous areas, where these hazards should be mitigated.** Another highlighted need is the **general beautification of the neighbourhood,** with residents suggesting painting murals and increasing the green elements, such as by adding trees and utilizing rooftops and vacant lots for urban agriculture.



Al Hashmi Al Janoubi neighbourhood  
Source: UN - Habitat, Jordan



**01**

**VISION**

## Vision Workshop

This phase of the project is considered highly participatory and inclusionary, involving critical institutional stakeholders together with representatives of civil society to provide input to the visioning process.

On the 9th of March 2022, the UN-Habitat Jordan team held the Neighbourhood Vision Workshop at the Greater Amman Municipality's Library, located within the city centre of Amman, which is very close to Al Hashmi Al Janoubi neighbourhood. 28 participants attended the workshop, most of whom were residents of Al Hashmi Al Janoubi Neighbourhood, including the head of the neighbourhood (Mukhtar Al Hara) as well as women, youth, elderly, refugees, and people with disabilities, to ensure the inclusion of diverse age groups, genders, nationalities, and abilities within the neighbourhood. Additionally, representatives from GAM attended the workshop, including GAM's area manager and district planning engineers.

The workshop started by informing the residents of Al Hashmi Al Janoubi neighbourhood about the UPIMC Programme and its objectives. This was followed by a recap of the first stage of profiling and analytics, as well as an explanation of the intended deliverables of the current stage, which aims to 'Develop a Strategic Vision and Scenario Building'. The vision formulation session began with the UN-Habitat team providing a brief explanation of the vision formulation process, its importance, and the steps to develop the vision of their neighbourhood.

Next, an interactive session was held with the residents, where they were divided into three groups for an open discussion to identify and select keywords that represent their concerns and that should be included in the vision statement of their neighbourhood. Through this exercise, they expressed their perspectives on how they see their neighbourhood in the upcoming 15 years.

The session ended with each group presenting their collectively identified keywords of the neighbourhood's vision.





Image during the vision session. Source: UN-Habitat

## Vision Formulation

The residents of Al Hashmi Al Janoubi Neighbourhood proposed several key words that they believe should be embedded within the vision statement of their neighbourhood. The frequency in which a key word was suggested was taken into consideration. For example, an often repeated word indicated its importance compared to a words that were not repeated or that were repeated less. Accordingly, the highest number of times a certain key word was suggested among residents indicates that this word is of the highest priority and that it would be beneficial to incorporate it into the vision statement.

Therefore, the proposed key words have been organized according to their level of importance from the residents perspectives. As shown in the word-cloud figure, the proposed key words are the following:

- Inclusive
- Green
- Clean
- Well-served
- Safe
- Accessible
- Walkable
- Ideal
- Modern
- Sustainable
- Prosperous

The figure highlights the frequency in which each word was repeated. For example, the key word "Inclusive" had the highest number of repetitions, while the words "Prosperous", "Sustainable", and "Modern" were only mentioned once.

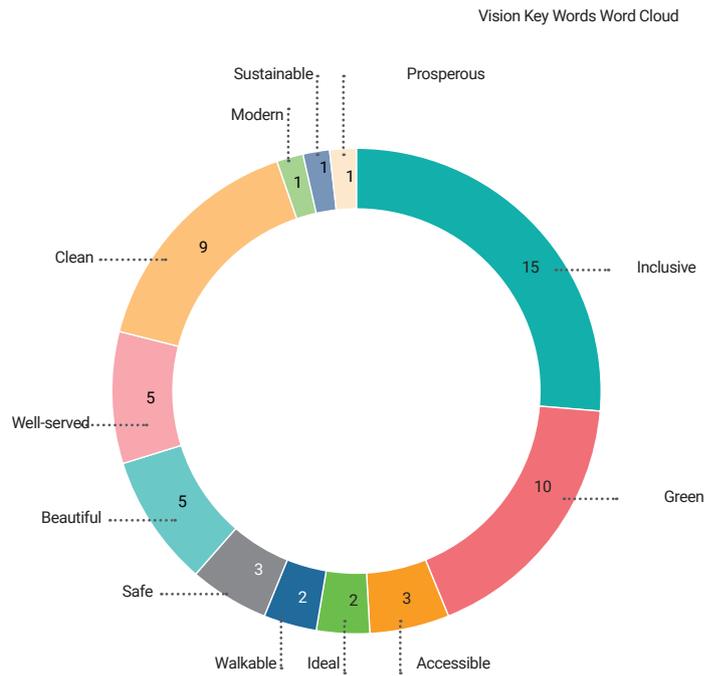


Fig. 3: Frequency of Vision Key Words proposed by Al Hashmi Al Janoubi residents



Stakeholders brainstorming and sharing their perspectives during the vision workshop. Source: UN-Habitat

## Vision at a Glance

Accordingly, the UN-Habitat team and the neighbourhood residents generated the neighbourhood's vision statement that takes into consideration their needs and aspirations for their neighbourhood in the coming 15 years. The Al Hashmi Al Janoubi Vision states:

### *An Inclusive, Liveable, and Sustainable Neighbourhood where All are Proud to Live in*



**Inclusive**



**Liveable**



**Sustainable**

## Objectives:

The objectives indicate what needs to be accomplished to achieve the above vision for Al Hashmi Al Janoubi Neighbourhood. These include:

- Improve provision of infrastructure services
- Enhance public facilities' accessibility to all the community members
- Create self-reliant and diverse neighbourhood
- Improve the walkability in the neighbourhood
- Beautify the neighbourhood using green elements

## Link to Amman City Vision:

The formulated vision of the Al Hashmi Al Janoubi neighbourhood is linked to the larger city vision for "An organized, modern, smart, safe, attractive, spirited, friendly, and liveable city that is proud of its heritage and authenticity." This linkage has been established through embedding the same main principles of sustainability, inclusiveness, and liveability as key themes in the Al Hashmi Al Janoubi neighbourhood vision.

Accordingly, the efforts to translate the Al Hashmi Al Janoubi neighbourhood's vision into tangible actions on the ground, will support GAM in achieving it's vision, especially if replicated in the various neighbourhoods of Amman.

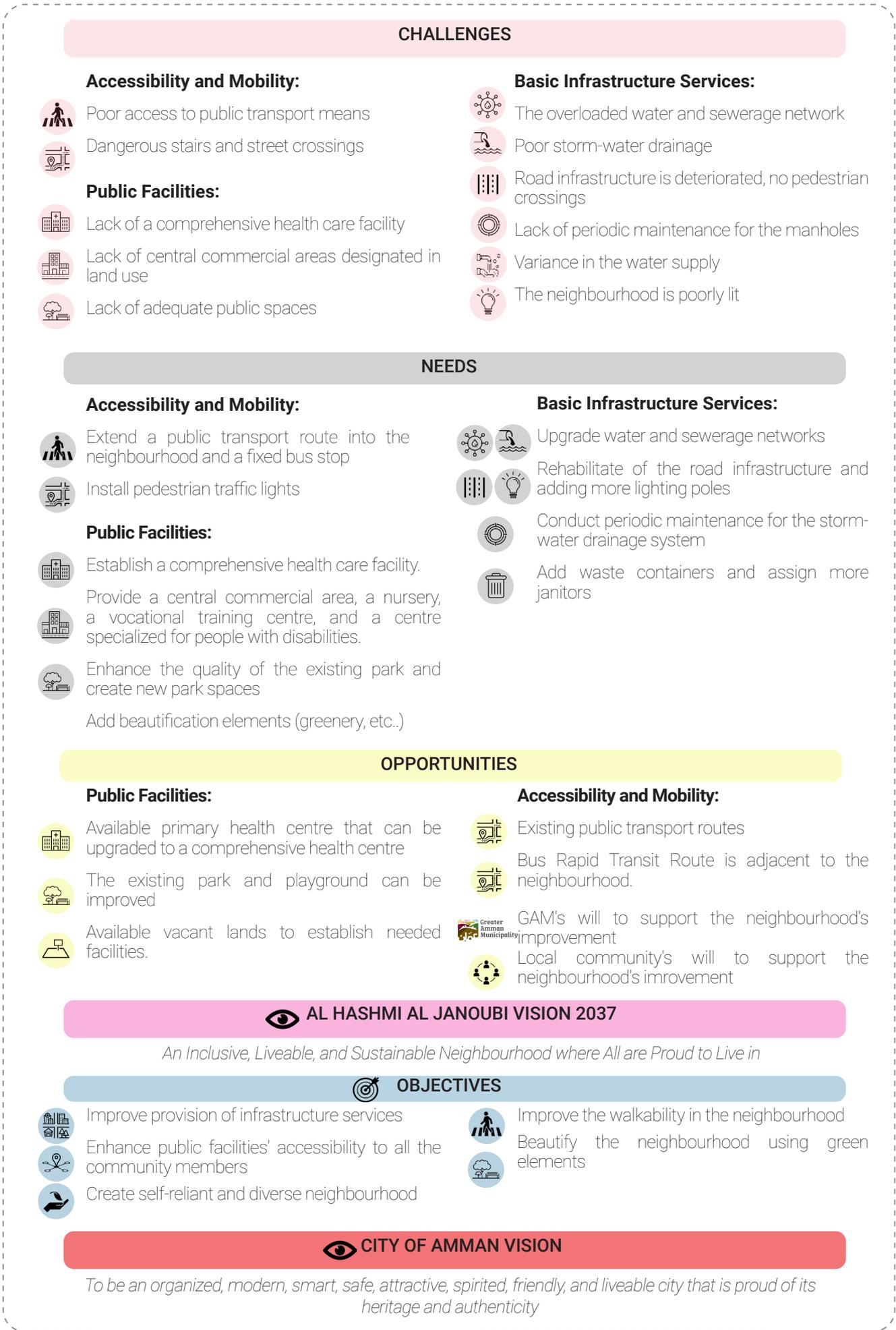


Fig. 4: Al Hashmi Al Janoubi's Vision interlinkage with challenges, needs, opportunities, and the Amman City's Vision



**02**

**SCENARIOS**

## Introduction

The challenges, needs, and opportunities identified in the spatial profiles and verified with the local community point to certain trends that will affect the neighbourhood's development trajectory. These trends, or variables, will be used to project possible future scenarios for Al Hashmi Al Janoubi's development until 2037.

### Why Scenario Building?

Scenario building for sustainable development provides an opportunity for participants to make guided assumptions about the future, including, but not limited to, how the built environment may change over time. It is a way to imagine, explore, create, and measure possible future conditions, both desirable and undesirable, and assess the probability and impact of the different scenarios on the area in accordance with past and present trends.

Additionally, scenario building can guide long-term planning, including policies, strategies, and plans, to help align the desired and likely future circumstances, while outlining the important milestones along the way. These scenarios can enable policy and decision makers to grasp the long-term requirements for sustainable development and growth, and to mitigate possible complications with foresight, including through developing adaptive strategies.

Scenario building for urban contexts' will often follow the 'chain of plausibility' approach, which includes a detailed review of all possible events and future developments. Using this approach, scenario building starts with establishing assumptions or minimum conditions that are required for any of the scenarios to develop. Next, variables that are likely to spark a chain of events that will result in a series of potential impacts are identified. Based on the trends identified in the Urban Spatial Profile, the most important variables are selected and the likely directions of these variables are thereafter determined.

### What is a Variable?

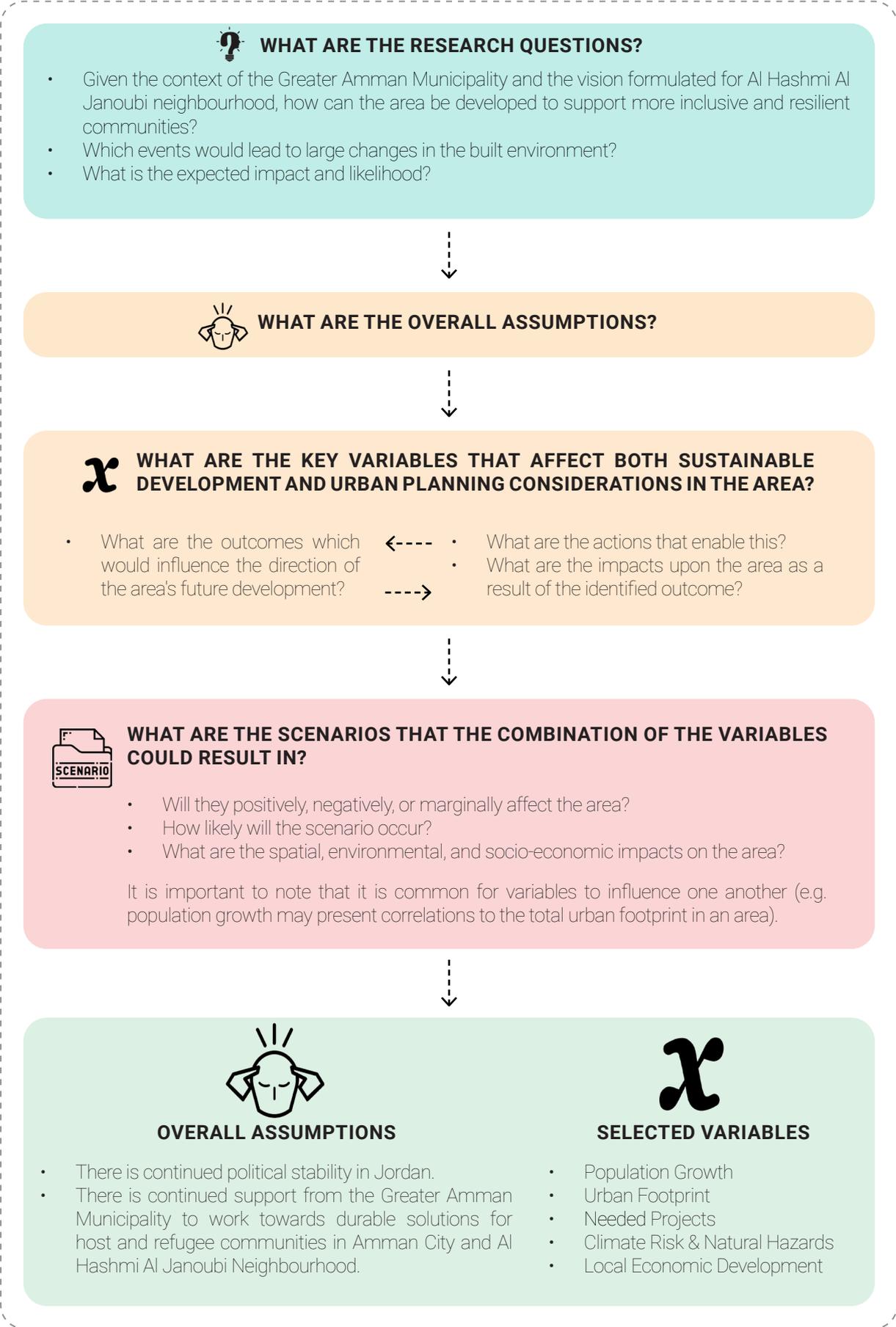
In this exercise, a variable is a development or an event that has the potential to cause a change in an urban situation. An assumption is based on the direction that a variable is most likely to proceed (e.g. increases or decreases in specific conditions).

The outcomes of each isolated variable are broadly outlined and then explored in a more composite manner when combined together as part of the potential scenario.

The research questions that were considered in the scenario building process are the following:

- Given the context of the Greater Amman Municipality and the vision formulated for Al Hashmi Al Janoubi Neighbourhood, how can the area be developed to support more inclusive and resilient communities?
- Which events would lead to large changes in the built environment?
- What is the expected impact and likelihood?

The main variables selected are: 1) Population Growth; 2) Urban Footprint; 3) Needed Projects; 4) Climate Risk & Natural Hazards; and 5) Local Economic Development.



## Methodology

To build the scenarios, detailed data on the current state of the neighbourhood was collected using a combination of methods, namely Geographic Information System (GIS) mapping and on-site surveying and observation. Below is an explanation on the data collection methodology.

### Data Collection

The fieldwork for Al Hashmi Al Janoubi Neighbourhood entailed collecting data and assessing the current state of the neighbourhood in terms of building density, building conditions, number of floors built, vacant lands, types of public space (including sidewalks and public stairs), the available public facilities and their current condition (such as schools and health centres), the accessibility of the neighbourhood, and the available economic activities.

The data collection began with obtaining the parcel plan from the Department of Land and Survey (DLS), downloading the building from an open source<sup>1</sup>, and then validating the accuracy of the dataset by comparing it to Google Earth and through field observation. The buildings were then mapped and given codes that correlate with the parcel number, which facilitated the field surveying work by providing navigation guidance in the field. The neighbourhood was divided into 25 zones.

Simultaneously, the team developed a comprehensive questionnaire with multiple categories on the Kobo Toolbox to collect and manage data for the scenario building process. In the next steps, the fieldwork was conducted at Al Hashmi Al Janoubi over several visits, and included surveying the neighbourhood, mapping the current situation of the built environment, and filling out the questionnaire using the Kobo application.

The data collected was integrated into the available GIS data to obtain an accurate portrayal of the neighbourhood, which would inform the development of the "Business as Usual (BAU)" and the "Optimal" scenarios. Ultimately, the data was used to calculate the maximum capacity of the neighbourhood and produce and conduct spatial analyses to help assess the future housing, public facilities, and population needs. Additionally, it assisted in identifying the infrastructure interventions needed to improve the livelihood opportunities and quality of life in the neighbourhood.

### Questionnaire

The questionnaire (Annex A) had three main objectives. Firstly, it aimed to categorize the element that is being assessed, either a building, vacant land, public space, public

transport stop, solid waste dumpster, or a health hazard area. Each categorization would then branch into a series of requests that included adding the Global Positioning System (GPS) location of the element, capturing a picture, and other assessment questions. Secondly, the questionnaire aimed to assess the socio-economic conditions of the different zones and buildings within the neighbourhood through an external visual assessment of the buildings and identifying the economic activities within and around them (if any). Thirdly, the questionnaire aimed to assess the walkability, accessibility, and inclusivity of streets and public spaces, including sidewalks and stairs, and to identify the activities surrounding them.

The criteria used to assess the conditions of the elements is as follows:

- **Good:** Routine maintenance required, no apparent problems.
- **Fair:** Minor repair required, minor repairable problems.
- **Substandard:** Major repair required, apparent failure, including significant problems.
- **Critical:** Urgent repair and/or replacement required, extensive damage or missing element(s).

### Challenges and Lessons Learned

There were a few challenges that became apparent on site and throughout the data collection process, including:

- Limited accessibility to some of the buildings.
- Difficulties in collecting data on residents' nationalities, refugee status, and income, due to the sensitivity of these topics.

**Please add the code to the building**

**What is the current use of the building?**

Residential

Commercial

Mixed Use

Industrial

Park

Mosque

School

Health Care Facility

Other

**How many are the total floors of the building?**

1

2

3

4

5

6

7

Kubocollect Questionnaire Sample- Source: UN-Habitat

Consequently, some of the lessons learned include:

- The field investigation is highly needed to validate the available GIS layers.
- The best approach was to update the GIS maps once all the fieldwork data was collected to avoid duplication.
- This methodology led to more accurate calculations of existing and forecasted populations for the upcoming 15 years, which assisted in the development of more realistic scenarios.

### Scenario Building Process

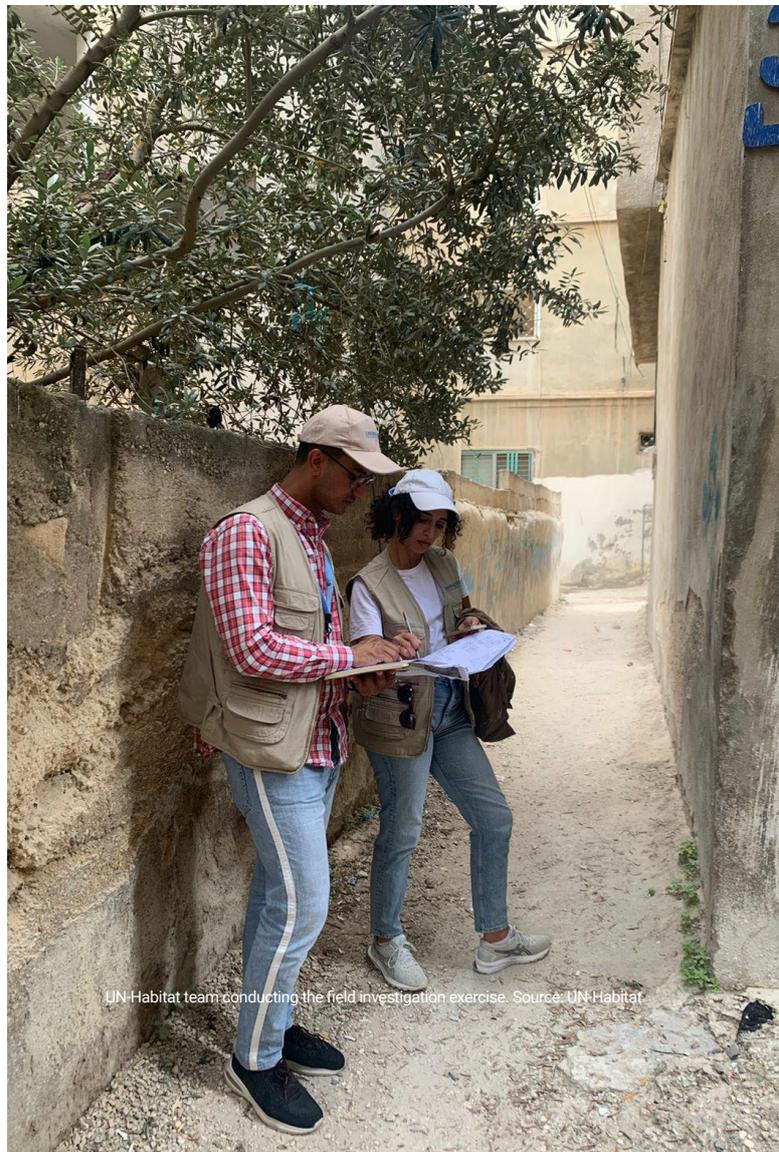
After collecting detailed data for Al Hashmi Al Janoubi neighbourhood, the data was thoroughly analysed in relation to the five selected variables.

This section explains the scenario building process, which aims to analyse how the urban situation in Al Hashmi Al Janoubi neighbourhood could develop over the next fifteen years in relation to the built environment. Accordingly, it endeavours to determine the events that would result in large changes to the built environment as well as the expected impacts and probabilities of these developments.

The complex interrelationships between variables, priorities, and realities have been simplified to provide two scenarios of how Al Hashmi Al Janoubi neighbourhood could be spatially and functionally configured in 2037.

The first scenario is the "Business As Usual (BAU)" scenario, which intends to visualize the neighbourhood in 2037 if no or minimal measures are taken into account for the future. The second scenario is the "Optimal" scenario, which rethinks the Mosaic of Al Hashmi Al Janoubi neighbourhood in alignment with the Greater Amman Municipality's (GAM) Strategic Plan 2022-2026. This 'Optimal' scenario aims to establish a clear link between what should be done to move Al Hashmi Al Janoubi neighbourhood towards the formulated vision of an inclusive, liveable, and sustainable neighbourhood and how the different sectors can support this transition.

In the following pages, the five selected variables are explained more broadly and their interlinkages are analysed.



## Variable: Population Growth

Unplanned urbanization puts pressure on basic services, public facilities, and the environment, while often leading to an inefficient use of resources. A major variable that will impact the future of Al Hashmi Al Janoubi neighbourhood is the population size. The growth or decline of both the host and refugee communities will determine future infrastructure provision needs and potential economic growth, heavily impacting the development of the neighbourhood's scenarios.

### Population Growth

Natural population growth can drastically change the built environment. Jordan is characterized by rapid urbanisation and urban growth, with the annual population growth rate being 2.3% in 2019. The Amman Governorate has an estimated annual growth rate of 2.2%.<sup>2</sup>

Al Hashmi Al Janoubi neighbourhood has an area of 0.43 km<sup>2</sup>, a total population of 19,589 inhabitants based on the data collected in the field investigation, and, accordingly, a population density of 45,555.8 person/km<sup>2</sup>. Based on the 2015 Census, the refugee residents represent 11.2% of Al Hashmi Al Janoubi neighbourhood's population, whereby 2.4% are Palestinians, 8.4% are Syrians, and 0.4% are Iraqis. It is worth mentioning that this percentage of Palestinian refugees only takes into consideration Palestinians who do not hold Jordanian citizenship, whereby the actual number of Palestinians in this neighbourhood is higher if those with Jordanian citizenship are also included.

The projected growth outcomes are shown in the graph, illustrating high, medium, and low growth outcomes where the assumptions are as follows:

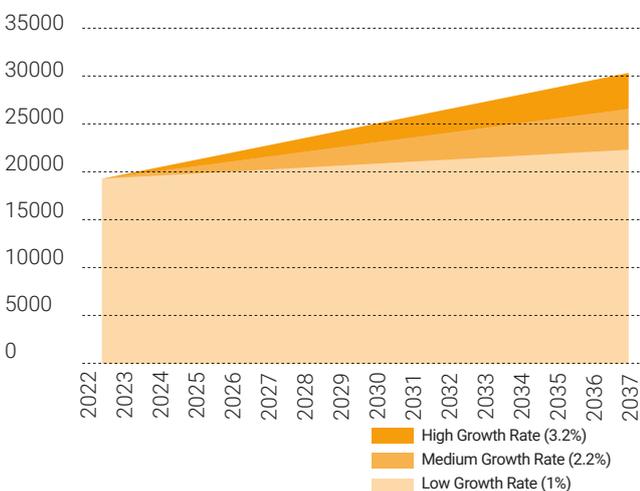


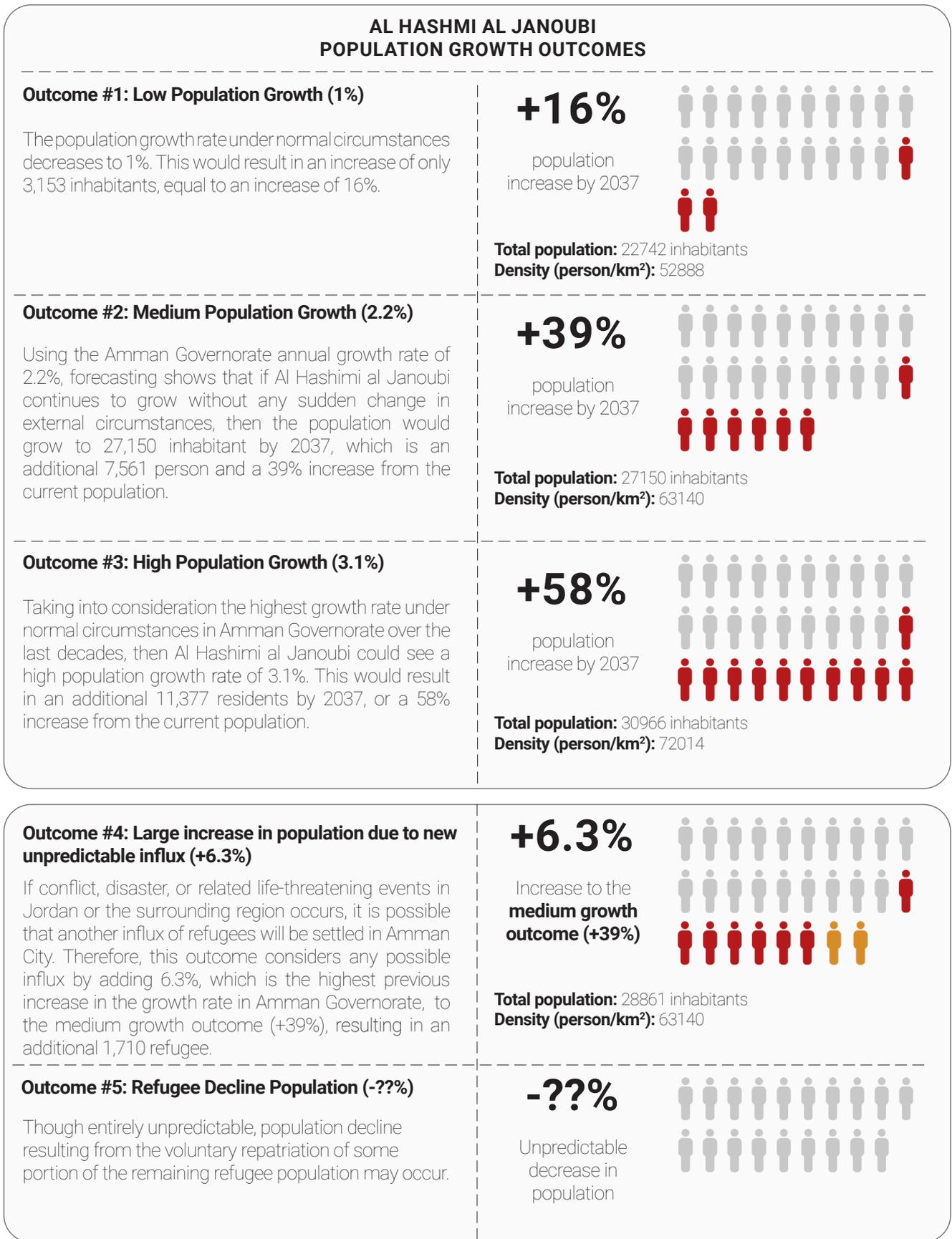
Fig. 5: Population Distribution according to the Growth Rate Scenarios

- **Low Growth Outcome:** The population growth rate will decrease to 1%. Under normal circumstances, the population growth rate in Amman Governorate decreases by 0.1% annually. Based on this, an estimate of 1% was calculated to be the lowest possible growth rate in the following years.
- **Medium Growth Outcome:** The population growth rate will follow the same annual growth rate of Amman Governorate at 2.2%.
- **High Growth Outcome:** The population growth rate will increase to 3.1%. This rate is based on the highest population growth rate reached in Amman Governorate under 'normal' circumstances and before the Syrian refugee crisis. 'Normal' circumstances in this context refers to a stable situation where no internal or external conflict occurs in the area that would cause sudden demographic changes.

If the neighbourhood's population growth rate were to gradually decrease over the next fifteen years to 1%, this would still result in an additional 3,153 residents, or an increase of approximately 16%. If Al Hashmi Al Janoubi neighbourhood were to maintain an annual growth rate of 2.2% (Medium Outcome), matching the current estimated growth rate of Amman Governorate, this would result in an a total population of 27,150 inhabitants by 2037, which is an additional 7,561 person and is a 39% increase from the current population. Finally, if the growth rate in Al Hashmi Al Janoubi neighbourhood was to increase to a growth rate of 3.1%, this would result in an additional 11,377 residents by 2037, or a 58% increase from the current population.

In addition to these projected growth rates, refugee surges may occur within the next 15 years, which could cause a sudden spike in population. However, refugee surges are difficult to predict, and, if this occurs, an additional 6.3% population growth rate can be added to the projected number of the medium growth outcome, to accommodate for any possible crisis influx in the area. The suggested percentage is based on the highest previous increase in the growth rate that occurred in 2013 due to the Syrian refugee influx in Amman Governorate.

Another outcome to consider is the possibility of having voluntary repatriation of some portion of the remaining refugee population. This outcome can be neglected in the Amman context as it is unlikely to happen. Based on the current trends since the opening of the voluntary return in 2021, a minimal number of refugees actually returned.<sup>3</sup> Furthermore and as aforementioned, the percentage of existing Syrian refugees in the neighbourhood is minimal.



 Represents existing 1000 inhabitant    
  Represents forecasted additional 1000 inhabitant    
  Represents forecasted additional refugee 1000 inhabitant

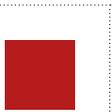
Fig. 6: Al Hashmi Al Janoubi Population Growth Outcomes

## Variable: Urban Footprint

As previously discussed, the forecasted population growth will affect the expansion of the urban footprint of the Al Hashmi Al Janoubi neighbourhood. This, in conjunction with the density of the built areas, could define how much more land needs to be developed to accommodate the projected population growth. To predict the possible impact of the population growth on the urban footprint variable, the maximum capacity of the neighbourhood was calculated based on the current land use plan.

It should be noted here that the residential zones of Jordan are categorised into seven main types: Residential types A, B, C, and D, as well as agriculture residential, rural residential, and residential with special regulation. Residential type A category represents the least affordable typology while residential type D is the most affordable one. In the Al Hashmi Al Janoubi neighbourhood, the residential land use comprises of types C and D, constituting 9.9% and 7.1% of the neighbourhood's area respectively. Around 6.7% of the land use in the neighbourhood is mixed-use and 3% is services. According to the dominant land use categories in Al Hashmi Al Janoubi neighbourhood and the Amman Building and Zoning by-law (2018), the regulations followed are as shown in the below table.

### Maximum Neighbourhood Capacity

	Mixed Use Building Type	Residential Building Type C	Residential Building Type D
Plot Area (m <sup>2</sup> )	 1000	 500	 300
Percentage of Built-up Area	45%	51%	55%
Number of Floors	6	4	4
Number of Apartments per Floor	3	2	2

The scenario building process has been conducted in accordance with the land use plan of the neighbourhood, and according to the assumptions regarding the number of apartments per floor based on the zone type (2 for residential land uses and 3 for mixed land use), as well as the average household size of 4.8 in Amman City. Therefore, if all available vacant lands are in-filled according to the land

use typology and if the existing buildings are upgraded to the maximum number of residential floors according to the by-law, then the maximum capacity of the neighbourhood would be 33,096 inhabitants. Under these circumstances, the neighbourhood would have a maximum population density of 76,967 person/km<sup>2</sup>. The figure on the following page indicates the spatial location of buildings with the potential for vertical densification through constructing more floors as well as the future infill buildings.

Accordingly, the neighbourhood is predicted to reach its maximum capacity based on the growth outcomes as follows:

- **Low Growth Outcome (1%):** The neighbourhood will reach its maximum capacity in 2075. Whereby 2037, 69% of the maximum capacity would be reached.
- **Medium Growth Outcome (2.2%):** The neighbourhood will reach its maximum capacity in 2046. 82% of the maximum capacity will be reached by 2037.
- **High Growth Outcome (3.1%):** The neighbourhood can reach its maximum capacity in 2039, which means almost 91% of the maximum capacity will be reached by 2037.

Therefore, infill and vertical densification are considered sub-variables throughout this scenario building process. The vertical densification sub-variable covers the increase in the density of existing built-up areas within the neighbourhood. Meanwhile, the infill sub-variable covers the potential infill of the vacant lands assigned as residential land use.

It should be noted here that, with the goal of achieving inclusive and sustainable urban planning, the strategic objective in the GAM Strategic Plan for 2022-2026 is to achieve a balance in urban land use in line with the development of the city. This will be considered during the optimal scenario development.

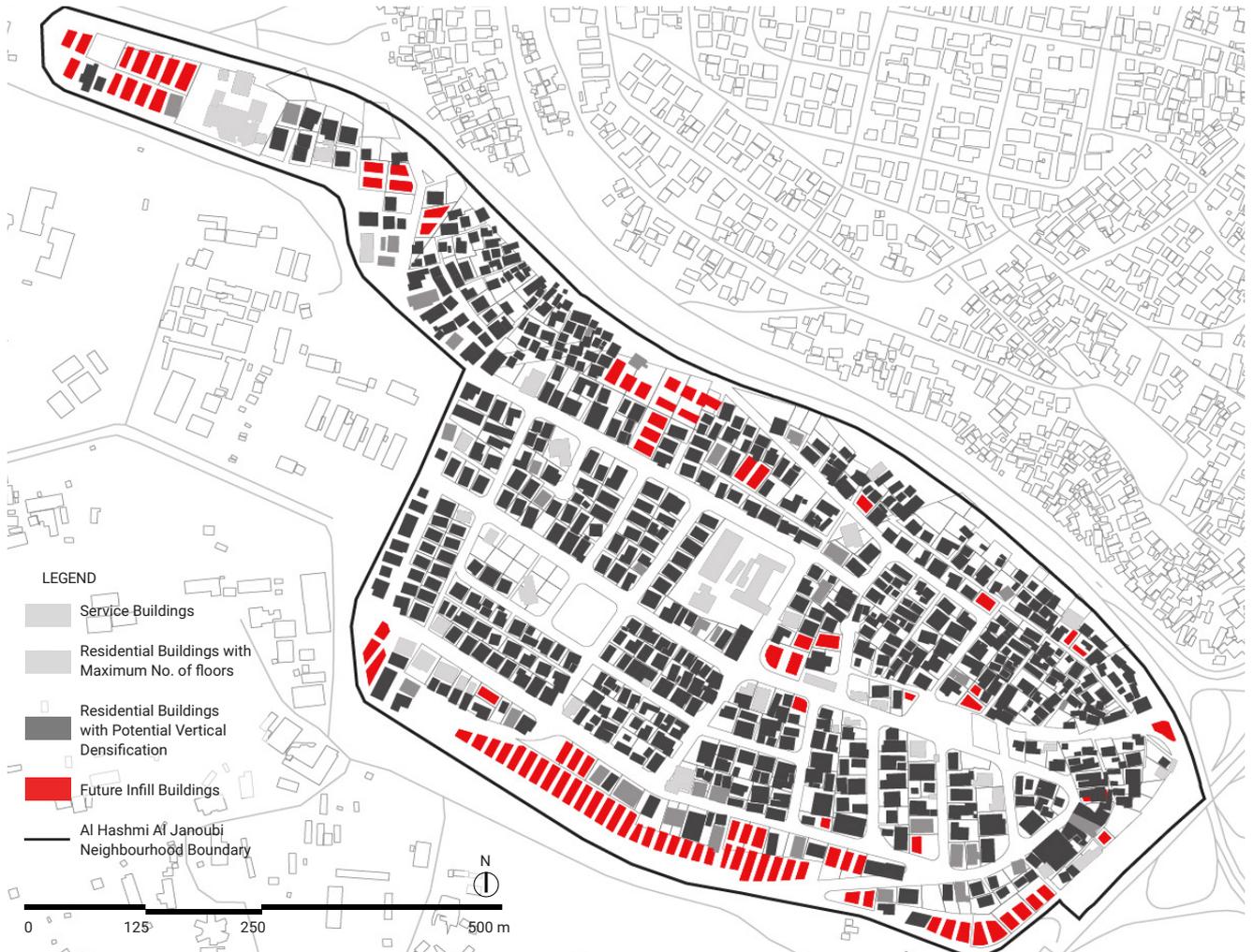


Fig. 7: Potential Infill/Vertical Densification of Residential Buildings in Al Hashmi Al Janoubi Neighbourhood



Fig. 8: Maximum Built Up Capacity of Al Hashmi Al Janoubi Neighbourhood based on Land Use Map

### **Conditions of Residential Buildings**

To determine the possibility of vertically densifying existing residential buildings in Al Hashmi Al Janoubi neighbourhood, a visual assessment for the buildings was conducted during the field investigation, and buildings were categorised according to their condition into 4 main categories; good, fair, substandard, and critical.

The buildings that were in good condition constitute 30% of the total buildings, while the buildings in fair condition constitute 23%. Buildings in good condition have no apparent structure problems and are therefore more likely to expand vertically than the other buildings, if their land use regulations allow.

On the other hand, buildings in substandard and critical conditions, which are concentrated mainly on the northern edge of the neighbourhood, as shown in the map, represent 29% and 18% of the total buildings respectively. Buildings in substandard condition mainly showed the need for major repair, apparent structure issues, and significant problems, while buildings in critical condition are in need of urgent repair and/or replacement, and suffer from extensive damage or missing element(s). Buildings in substandard and critical condition are unlikely to expand vertically if no improvements took place. This will be taken into consideration when developing the scenarios, specifically when proposing the residential and mixed-use buildings that can be vertically expanded to accommodate the forecasted increase in population by the year 2037.

It is worth mentioning here that most of the service buildings are in a good condition.

### **Abandoned Residential Buildings**

During field investigation, several buildings were found to be abandoned. These buildings were highlighted by the residents as hazardous areas and a threat.

Additionally, some of these buildings represent a potential for antisocial behaviour, resulting in a lack of safety and feelings of danger for the residents.

Accordingly, immediate measures should be taken in regard to these buildings.

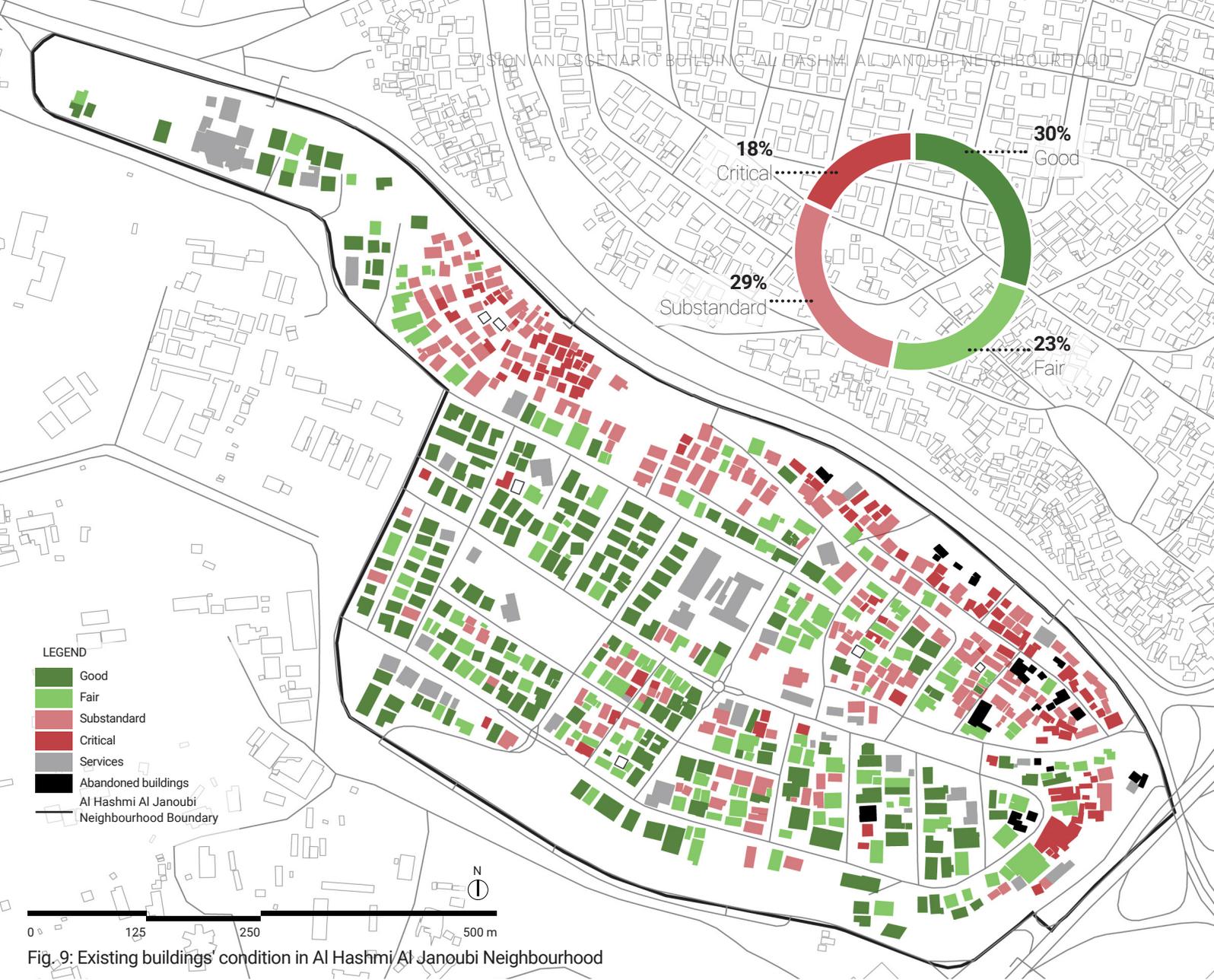
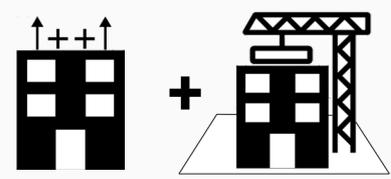


Fig. 9: Existing buildings' condition in Al Hashimi Al Janoubi Neighbourhood

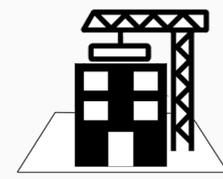
**Outcome #1: Infill and Vertical Densification**

To respond to the projected increases in population by 2037, this outcome forecasts different ratios of densification and infill according to the low, medium, and high population projections. For example, for a high population growth rate of 3.1% and according to the maximum capacity of land use, almost 100% of vertical densification and infill of vacant lands is forecasted.



**Outcome #2: Full Infill**

This outcome forecasts a full infill of all vacant lands in the Al Hashimi Al Janoubi neighbourhood according to the maximum capacity of its land use typology.



**Outcome #3: Full Vertical Densification**

This outcome forecasts a full vertical densification of all existing buildings in Al Hashimi Al Janoubi neighbourhood, according to the maximum capacity of their land use typology.



## Variable: Needed Projects

While there are multiple projects that could be considered as critical enablers for transformative change in the neighbourhood, three needed projects have been identified, which, if implemented, would transform the neighbourhood into a more inclusive, sustainable, and liveable area. Each of the needed projects involve multiple smaller-scale projects that will be implemented over several stages in the upcoming years. These projects have been identified as being particularly necessary and impactful to the future growth of the area. While each project will yield specific benefits over time on its own, the combined impact will be significant on the quality of life of the neighbourhood's residents.

Additionally, these projects will increase the economic development potential of the neighbourhood and increase its desirability as a place to live and work, which will eventually facilitate the achievement of the formulated vision for the neighbourhood.

### Catalytic Project #1: Improvements to the Infrastructure Networks

The basic infrastructure services are affected by the population growth and the urban footprint variables. Consequently, the population growth and increase in urban footprint will increase the demand on basic infrastructure services including electricity, water, and sewerage.

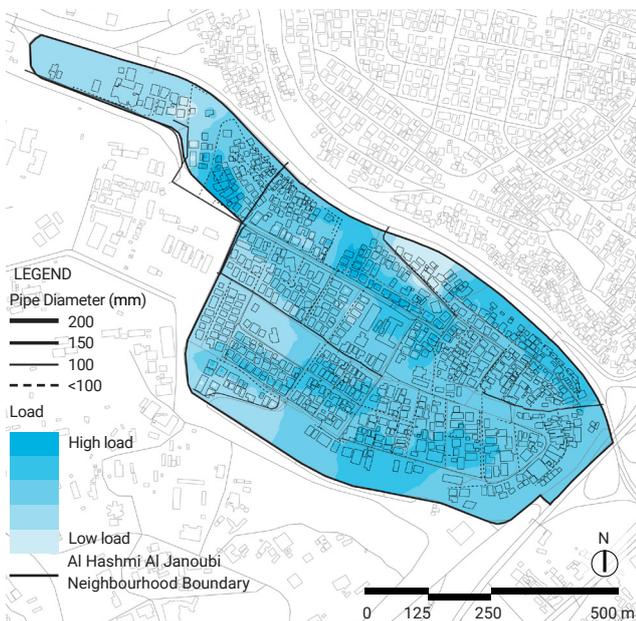


Fig. 10: The current load on the existing water network

- **Water Service:**

A capacity versus demand assessment analysis was conducted for the existing water network using the GIS capacity/demand assessment tool. The tool measured the demand in comparison to the capacity of the existing water network and analysed the sufficiency of the network (whereby high load means low network sufficiency) by factoring in the pipes' diameter and length, as well as the number of people in the neighbourhood currently being served in 2022. The results designated areas of high and low load on the tested infrastructure network.

Overall, the water capacity/demand assessment revealed that there is a very high load on the existing water network in almost all areas at the neighbourhood level, as shown in the figure below. In the future and according to the maximum capacity of the neighbourhood, the load will multiply by 1.8 in comparison to the existing load. This indicates the significant **need to prioritize upgrading the existing water network** as a proactive measure to accommodate the maximum capacity of the neighbourhood.

- **Sewerage Service:**

The capacity/demand assessment tool measured the load on the existing sewerage network and revealed that there is a relatively high load at the neighbourhood level. This indicates that the sewerage network is serving a larger population than it is designed to. Based on the estimated population

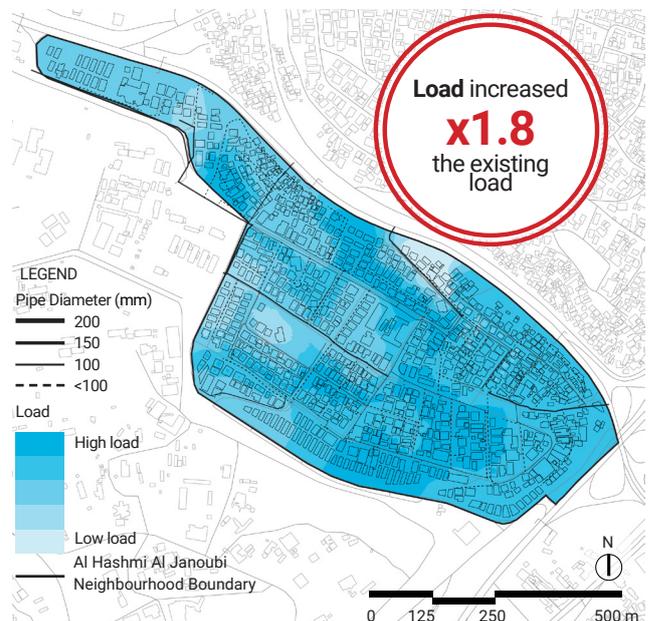


Fig. 11: Future load on the existing water network

increase, the load will multiply by 1.8 in comparison to the existing load. This indicates the significant **need to prioritize upgrading the existing sewerage network** as a proactive measure to accommodate the maximum capacity of the neighbourhood.

- **Electricity Service:**

In regard to the electricity service, the analysis revealed that the access to electricity is currently stable in general. However, there are some threats related to the location of the electrical posts. Accordingly, **the electricity provider should take into consideration the estimated increase in the neighbourhood's population and undertake the necessary upgrading of the electrical grid in advance. Additionally, improvements to the spatial distribution of the electrical posts should be considered. Furthermore, a potential opportunity would be to utilize the renewable energy sources to provide the electrical energy services at the neighbourhood level.** This is aligned with GAM's efforts to implement the Amman Green City Action Plan<sup>4</sup> that focuses on developing resilient and efficient energy systems, increasing renewable energy supply by 25% by 2030, diversifying energy sources to reinforce the energy self-reliance of the city and the country, and reducing the demand for energy by 15% by 2030 through improving the energy efficiency of buildings and electrical systems.

- **Solid Waste Management:**

Solid waste management has been highlighted as a challenge, specifically regarding the unequal distribution of janitors and waste containers, with some areas lacking any waste collection services at all. Throughout the field investigation, solid waste containers were mapped and a service catchment area of 100 meters was considered as shown in the map. This revealed that the areas in the northern-western part of the neighbourhood are not served with solid waste containers. The challenge will be exacerbated by the predicted increase in population.

Accordingly, **improving the efficiency of solid waste collection and its general management must be considered throughout the scenario building process.**

It is important to note here that the densification of the neighbourhood will significantly increase existing pressures on infrastructure networks. Therefore, investment in upgrading the networks to serve the surge of future populations is essential for the continued livelihood of the neighbourhood's residents.

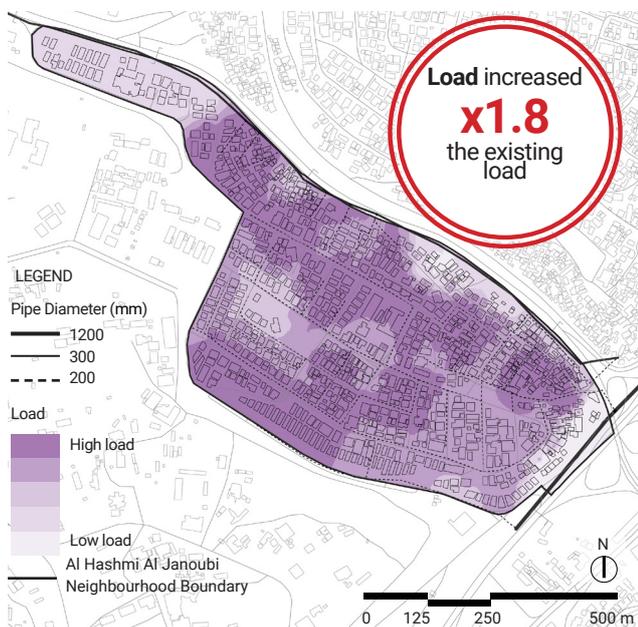


Fig. 12: The future load on the existing sewerage network

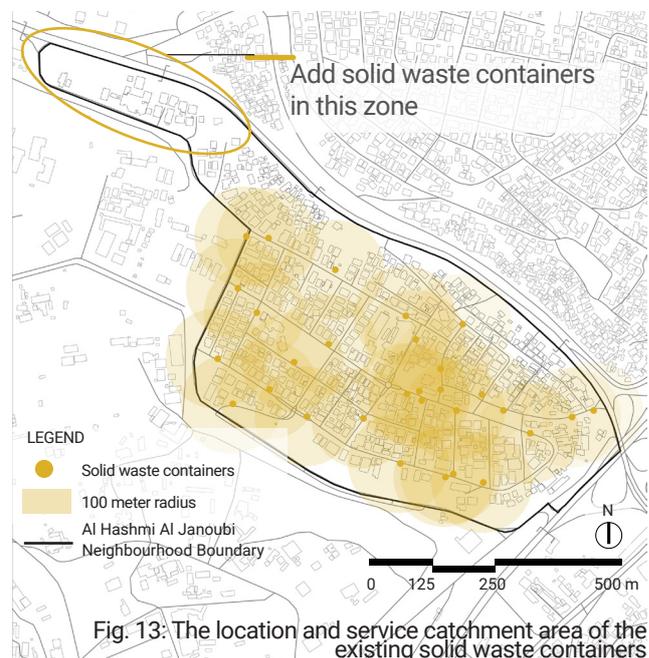


Fig. 13: The location and service catchment area of the existing solid waste containers

**Catalytic Project #2: Improved Access to the Public Facilities and Commercial Activities**

The street network analysis conducted for accessibility revealed that spatially, all residents of the neighbourhood can access the existing public facilities, including the educational, recreational, and health care facilities, within a 15-minute walking distance, taking into consideration the topography. On the other hand, the residents covered the qualitative part of the analysis during the participatory workshops conducted, where they highlighted several challenges related to public service provision, as indicated below.

- **Educational Facilities:**

There are 4 public schools located within the neighbourhood. Based on the analysis, 85% of the population have access to public schools within a 5-minute walking distance and 100% within a 15-minute walking distance. According to the 2015 census, students make up 21% of the total population in Amman city. Accordingly, there are currently 4,114 people between the ages of 6 to 17 years old (considered as the student population) in Al Hashmi Al Janoubi neighbourhood. Based on the data received from the Ministry of Education (MoE), 2,621 students are currently enrolled in the neighbourhood's existing public schools. This means that around 1,500 students in the neighbourhood either go to private schools or nearby public schools, or have dropped out. The maximum expected

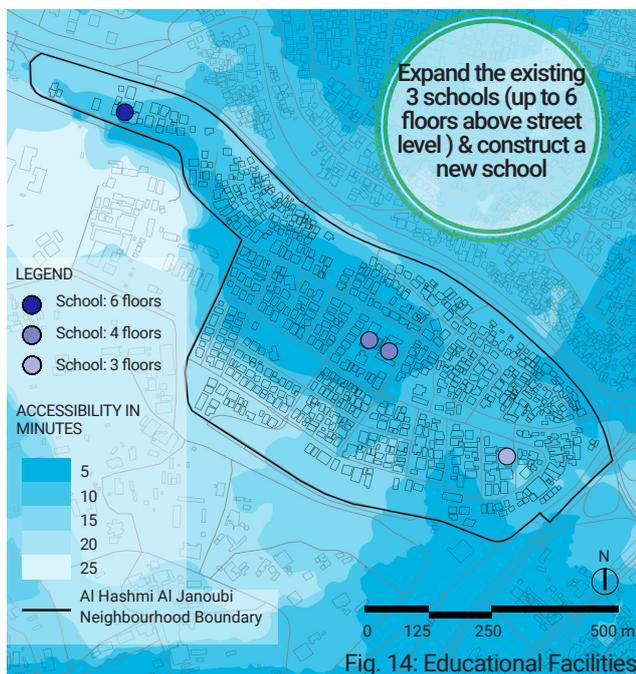


Fig. 14: Educational Facilities

increase of the student population for the target year is an additional 1,964 students. Accordingly, to identify the needed number of schools to be constructed /upgraded to accommodate the expected number of students, the capacities of the four existing public schools were analysed, whereby the central two schools can be expanded vertically to include 2 additional floors, and the north-western school can be expanded to include 4 additional floors, in accordance with the building law of Amman City and taking into consideration the regulations of the urban multi-use typology in which schools are under. It should be noted here, that the Eastern school named "Al Hajjaj Bin Yousef Al Thaqafi Elementary Boy School" can vertically expand to up to 3 additional floors. However, this was not taken into consideration as the local community frequently described the building as being in very critical condition. **In total, the vertical expansion of the three existing schools can meet the educational needs of an additional 900 students.** Furthermore, nearby public schools that can be accessed within a 15-minute walking distance were also considered. Nevertheless, **even if the nearby schools are vertically expanded, there will still be a need to construct a new school to accommodate approximately 1,000 expected students.**

- **Commercial Facilities:**

The current commercial facilities serving the residents in the neighbourhood are scattered, which has resulted in residents walking long distances to fulfil their basic

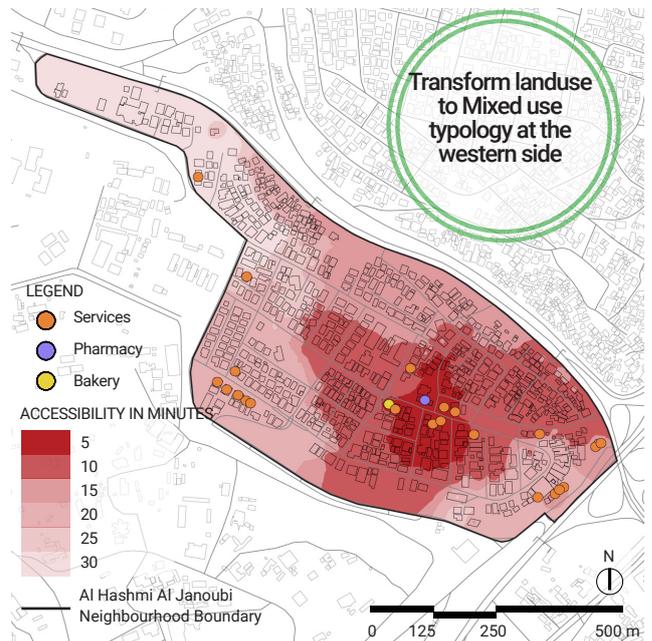


Fig. 15: Accessibility to Basic Needs at the Neighbourhood

needs at the market, pharmacy, bakery, vegetable and fruit market, butchery, and water stores. Currently, all shops for basic needs are located in the South-Eastern side of the neighbourhood, which includes a pharmacy and a bakery, while the other areas lack some of these shops.

Therefore, and based on the analysis and identified needs, it is necessary for mixed-use areas that include all the shops for basic needs to be developed in the neighbourhood. **This can be achieved through updating the existing land use plan of the neighbourhood whereby some residential land use of vacant areas can be transformed into a mixed-use typology to serve the areas at the western side of the neighbourhood.**

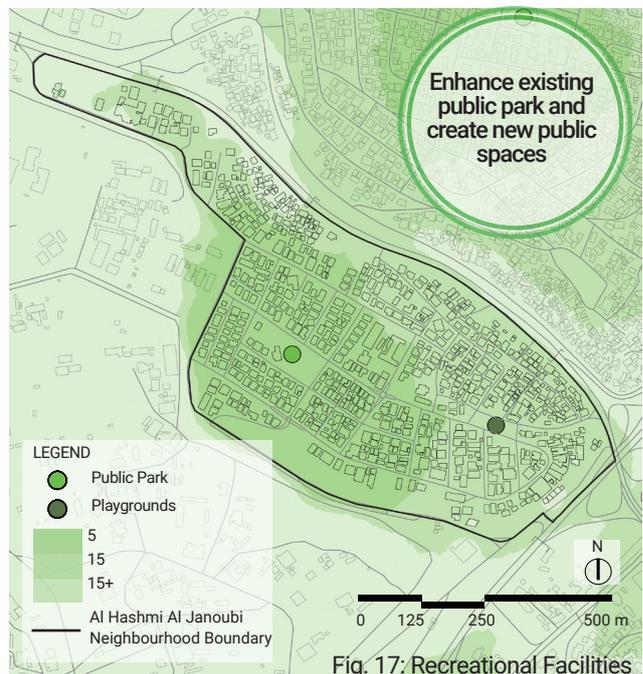
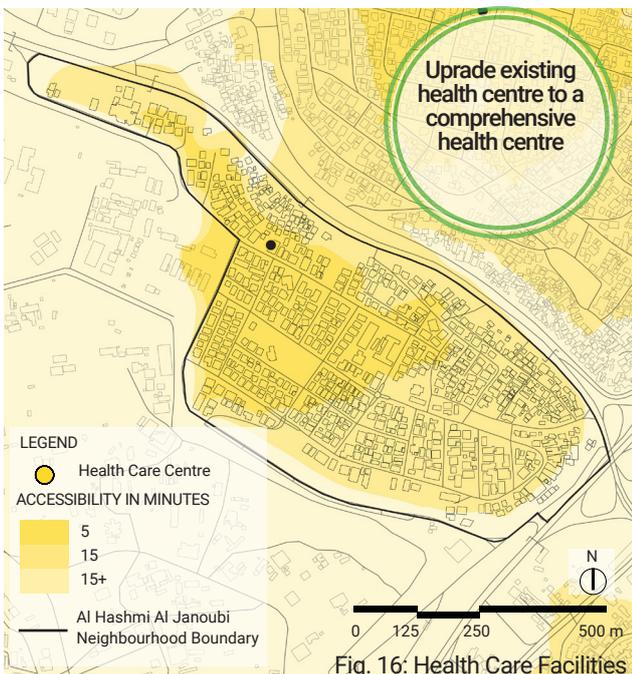
• **Health Care Facilities:**

The residents explained that a main challenge faced in the neighbourhood is the poor health care services available and the lack of a 24-hour emergency centre. This provided necessary qualitative information of the situation, which was different from the spatial analysis, which instead showed that the neighbourhood was well-served by the existing primary health centre. Additionally, according to the by-laws and regulations of the Ministry of Health (MoH), the minimum population size to be served by a comprehensive health centre is 15,000 inhabitants, and the maximum is 50,000 inhabitants. Therefore, this further highlights the need to have a comprehensive health centre in the neighbourhood, since the existing population is

19,589 inhabitants. **Accordingly, there is a need to provide a comprehensive health centre in the neighbourhood. One of the ways that this could be achieved is through upgrading the existing primary health centre into a comprehensive one through vertical expansion.**

• **Recreational Facilities:**

According to the street network analysis, 40.9% of the population have access to the existing park within a 5-minute walking distance and 100% have access within a 15-minute walking distance. Nevertheless, while the existing park is considered to be spatially accessible, the hilly topography of the neighbourhood and the lack of People with Disabilities (PWD)-friendly facilities means that, in reality, it is inaccessible by all community members on the ground. Additionally, the existing park only covers 1% of the total neighbourhood's area, which is considered insufficient. The residents also highlighted the lack of regular periodic maintenance for the existing public spaces, including the playgrounds and the park. They also mentioned the lack of public toilet facilities within the park. Public spaces play a vital role in improving the quality of life for urban residents and can be considered as avenues for enhancing social cohesion, fostering economic opportunities, improving health and wellbeing, and providing ecological solutions to climate change. Therefore, the existing public spaces are considered inadequate. **Accordingly, there is a need to enhance the quality of the existing park, playgrounds, and create new public spaces.**



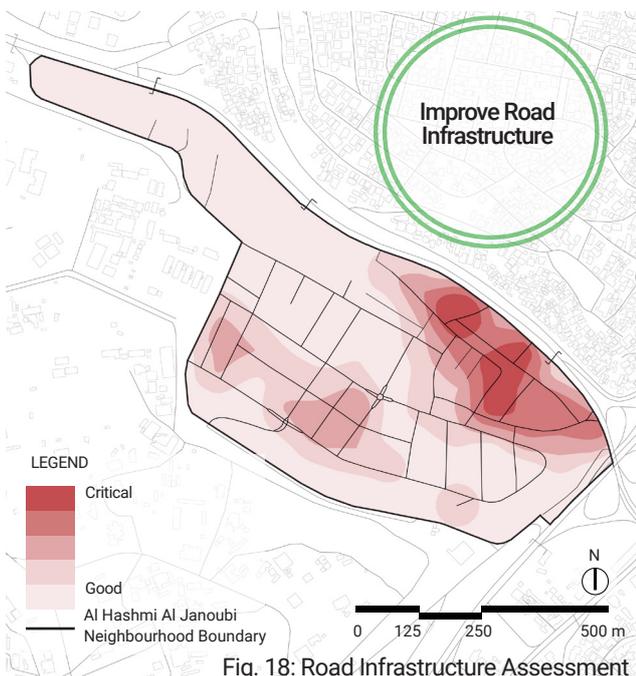
### Catalytic Project #3: Improved Walkability and Access to Public Transportation

Accessible and inclusive transport ensures the everyday mobility of people. The transport infrastructure consists of the networks used by vehicles and pedestrians to commute from one place another. Promoting walkability is a key factor that must be considered when designing the built environment because it fosters more attractive, convenient, healthy, and efficient neighbourhoods.

With regard to accessibility and connectivity, there are many interventions needed at Al Hashmi Al Janoubi neighbourhood, including upgrading the road infrastructure, sidewalks, stairs, and means to access public transportation.

- **Roads:**

The residents stressed that the overall existing road network is deteriorated. The field investigation included an evaluation of the road infrastructure conditions, which were rated as good, fair, substandard, or poor, as shown in the figure below. This assessment will be considered when developing the action plan of the optimal scenario. **In summary, road infrastructure improvement is needed in the neighbourhood.**



- **Sidewalks:**

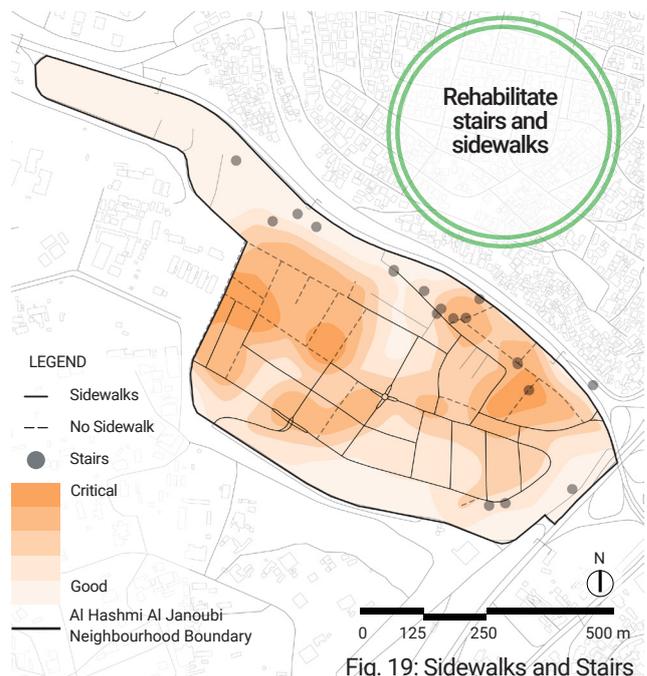
The team evaluated the conditions of the existing sidewalks during the field investigation. Many areas were found to lack sidewalks, while the existing sidewalks in other areas were found to be in very poor condition. Both these situations negatively impact the walkability of the neighbourhood. **Therefore, sidewalk improvements are needed to serve residents and people with disabilities, promote walkability, and increase pedestrian safety while commuting.**

- **Stairs:**

All stairs in Al Hashmi Al Janoubi neighbourhood were assessed as dangerous and in need of immediate rehabilitation. **Stair improvement is among the most important projects needed in the neighbourhood. If properly utilized and in good conditions, stairs provide a great opportunity for the area and can become innovative public spaces that enhance social interaction.**

- **Public Transportation:**

The street network analysis, which considered the spatial location of the existing bus stops, public transportation routes, and the Bus Rapid Transit (BRT) route that is under construction, revealed that residents of the south-east and



north-west areas of the neighbourhood have access to bus stops within a 5-minute walking distance. Additionally, the analysis found that the entire neighbourhood has access to bus stops within a 15-minute walking distance.

The increased population that has been forecasted will similarly have access to public transportation routes and bus stops within 5 and 15 minutes walking distances, based on the spatial street network analysis.

However, the residents explained that they usually use a private car or a shared white taxi to reach the nearest bus stop due to the poor walkability in the neighbourhood as a result of the lack of adequate pedestrian infrastructure. Therefore, the accessibility to the nearest bus stop is considered unsafe due to the lack of pedestrian pathways, bridge, and traffic lights on the main street.

**Accordingly, there is a significant need to provide pedestrian traffic lights on main streets and improve the walkability means in the neighbourhood in general.**

It should be noted here, that the proximity of the neighbourhood to the BRT route is considered an opportunity for the neighbourhood's residents as they will have increased access to affordable public transport.

All proposed interventions under the needed projects variable are aligned with the Greater Amman Municipality's Strategy for 2022-2026 and the Jordan Economic Modernisation Vision under the main pillar of "Advancing Quality of Life for All."

<p><b>Outcome #1: Minimal Implementation of Needed Projects</b></p> <p>If minimal implementation of the planned needed projects is undertaken and the population reaches its forecasted estimate for the year 2037, the resident's quality of life, access to resources, and livelihood opportunities will be significantly compromised.</p>	<p><b>MINIMAL</b></p>
<p><b>Outcome #2: Partial Implementation of Needed Projects</b></p> <p>If only a partial implementation of the proposed needed projects is completed, there would be some benefits to the residents regarding their standards of living and access to resources. The suggested improvements to the public facilities provision in the neighbourhood would improve the ease of living and increase the economic opportunities for the residents. Additionally, the improvement of the public transport network might increase the connectivity of the area, people, goods, services, and economic opportunities. The infrastructure network upgrades are the most crucial, so upgrading them would significantly effect the livability of the neighbourhood. However, partial Improvements do not guarantee a good quality of life for all residents, especially with the forecasted increase in population, and might hinder other possible opportunities.</p>	<p><b>PARTIAL</b></p>
<p><b>Outcome #3: Extensive Implementation of All Needed Projects</b></p> <p>This outcome reflects the implementation of all needed projects. The infrastructure networks are essential for the liveability of the area, while the transport network coupled with access to public facilities will ensure the connectivity of people as well as access to resources and new economic opportunities in the neighbourhood, all of which will ensure a sustainable, enabling neighbourhood that provides a good quality of life for its residents.</p>	<p><b>FULL</b></p>

## Variable: Climate Risk & Natural Hazards

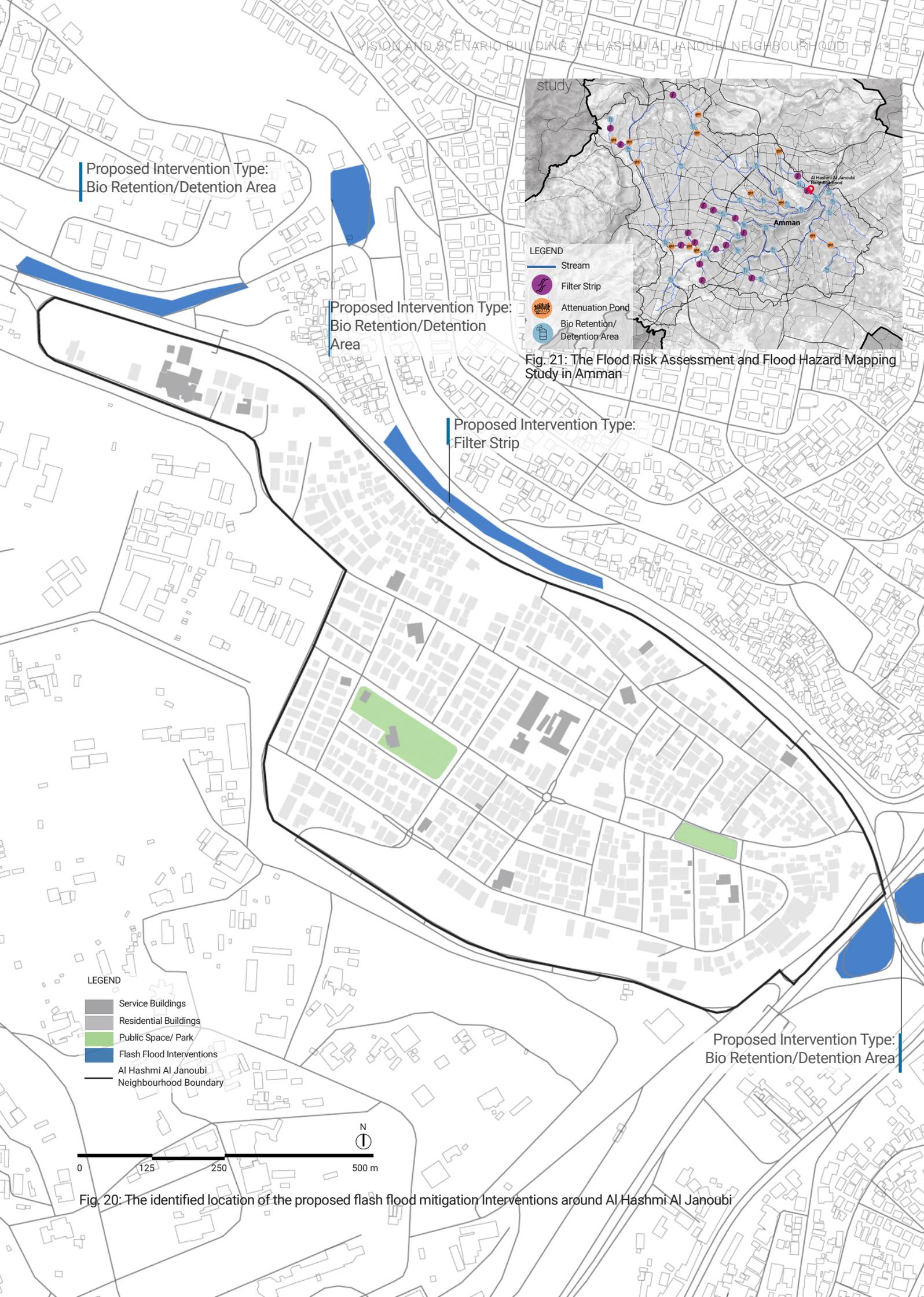
One of the key natural hazards that Amman is vulnerable to is flash floods. According to the "Flood Risk Assessment and Flood Hazard Flood Hazards Mapping" study that was done by UN-Habitat Jordan in 2021, the districts of Amman are among the most vulnerable to flash floods due to the increasing population, which exert pressure on social services and infrastructure for water and sanitation, drainage, and waste management. The unusually heavy rains often lead to flooding in lower areas of the city, and its elevation exposes it to hazardous blizzards. This has affected schools, transportation, the power grid, and access to quality basic services, while additionally exacerbating the vulnerabilities for the poorest segments of the population.

The aforementioned study identified 120 locations in Amman where potential flood adaptation and mitigation measures can be implemented, of which 5 are located on the periphery of Al Hashmi Al Janoubi neighbourhood, as shown in the figure.

Furthermore, the study proposed short, medium, and long-term solutions and interventions to mitigate the flood risk that can be implemented in the various hot spot areas. In the identified hotspot areas surrounding the Al Hashmi Al Janoubi neighbourhood, the solutions included (1) the short-term solution of implementing **Bio Retention/Detention Areas in 4 out of 5 hotspot areas, which** introduces a series of storm-water retention and detention elements around the upstream areas of the city. Such elements would detain the fast-approaching flood water for some time before it drains down slowly, giving the drainage system in the downtown area enough time to pass the water through without causing harm or damage; and (2) the solution of implementing a filter strip in the northern longitudinal area, as shown in the figure. Filter strips are vegetated strips of land designed to accept runoff as overland flow from upstream developments.

Accordingly, implementing flood mitigation interventions is among the projects needed for the area.

<p><b>Outcome #1: No specific climate change mitigation or adaptation actions are taken, leading to increasing vulnerability for local communities</b></p> <p>If no actions are taken, the impacts of climate change are going to continue to worsen for the foreseeable future. Flood events will increase in severity and frequency, causing increasing levels of damage to the economy and peoples lives.</p>	<p><b>NONE</b></p>
<p><b>Outcome #2: Climate change adaptation actions are taken leading to reduced vulnerabilities for local communities</b></p> <p>While these adaptation actions are able to protect the local communities from some of the impacts of climate change, ie. improve flood protection in vulnerable areas, they do not fully result in an overall improved outcome. These actions will not have any effect upon the wider climate change impacts, which is necessary to slow climate change on a global level. As such, the impacts are likely to continue to worsen.</p>	<p><b>ADAPTATION MEASURES</b></p>
<p><b>Outcome #3: Both mitigation and adaptation strategies are taken, leading to reduced vulnerabilities and the improved resilience of local communities</b></p> <p>The proposed interventions will contribute to the potential reduction of detrimental impact of climate change on the communities who live in Amman and in Al Hashmi Al Janoubi neighbourhood in particular. This outcome assumes that this will happen in conjunction with both national actions as well as global efforts. Adaptation measures will result in both a better understanding of the most risk affected communities, the targeting of more resilient infrastructure to protect vulnerable groups from flooding, as well as the introduction of livelihoods that are more resilient to the impacts of climate change. The mitigation measures will help to reduce the impact the communities are already having on the environment. Overall, this outcome combines mitigation and adaptation actions to assist in shaping a resilient community with reduced vulnerabilities to climate change.</p>	<p><b>ADAPTATION + MITIGATION MEASURES</b></p>



Proposed Intervention Type:  
Bio Retention/Detention Area

Proposed Intervention Type:  
Bio Retention/Detention Area

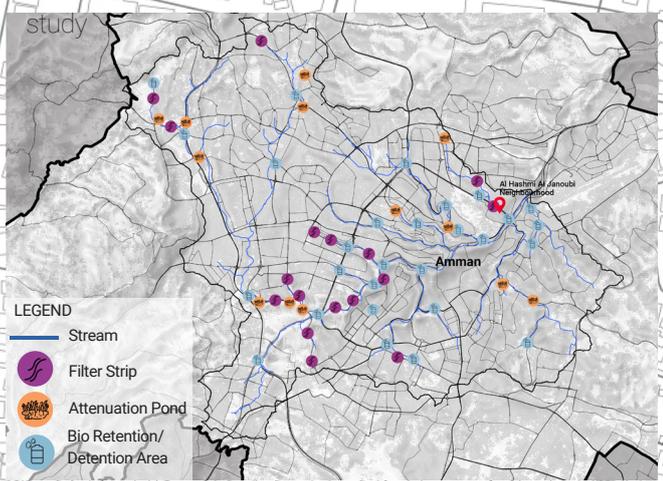
Proposed Intervention Type:  
Filter Strip

Proposed Intervention Type:  
Bio Retention/Detention Area

- LEGEND
- Service Buildings
  - Residential Buildings
  - Public Space/ Park
  - Flash Flood Interventions
  - Al Hashmi Al Janoubi Neighbourhood Boundary



Fig. 20: The identified location of the proposed flash flood mitigation Interventions around Al Hashmi Al Janoubi



- LEGEND
- Stream
  - Filter Strip
  - Attenuation Pond
  - Bio Retention/Detention Area

Fig. 21: The Flood Risk Assessment and Flood Hazard Mapping Study in Amman

## Variable: Local Economic Development

Jordan faces many economic challenges, such as high unemployment and poverty rates. Unemployment rates at the national level have risen sharply over the years, from 13% in 2015<sup>5</sup> to 22.8%<sup>6</sup> as of the 1st Quarter of 2022. The unemployment rate has especially increased among young people between 15-24 years old (47.7%) and women (31.5%).<sup>7</sup> Similarly, the unemployment rate in Amman City is high at around 18.6%<sup>8</sup>, and likewise specifically increased among women and youth. Additionally, the highest numbers of poor people are concentrated in Amman, driven by low wages and high costs of living, whereby many fall into the 'working poor' category and are working in insecure conditions in the informal sector.<sup>9</sup> The majority of refugees work in informal jobs, and many work in close proximity to their place of living.

A combination of factors were taken into consideration when developing the Local Economic Development variable. The factors include the significant working-age population (ages 18-64, which constitute around 61% of the neighbourhood's total population), the strategic location of the neighbourhood, the land use plan of the neighbourhood, and the potential of implementing the needed projects, which could provide great potential for local economic development in the neighbourhood. Furthermore, a key factor in promoting solutions that integrate refugees with host communities in a planned and coordinated way is to leverage the potential inclusive economic benefit that the investments in the area can have for all.

When considering the land use plan of Al Hashmi Al Janoubi neighbourhood and the potential for how the proposed needed projects could impact the future economic development of the neighbourhood, two main outcomes are concluded that are tied to the spatial dynamics of the neighbourhood. These are generally based on policy measures, infrastructure investments, and land-use strategies that would help enable (if implemented) or continue to constrain (if not implemented) the economic vibrancy and development potential in the area.

### **Outcome 1: Natural economic growth resulting in marginally improved access to opportunities**

Currently, based on the existing situation and the field investigation, a total of 456 job opportunities are available in the neighbourhood. This means that only 6% of the working-age population in the neighbourhood are provided with formal job opportunities within the neighbourhood, and logically, a high percentage of the population are currently working in informal jobs.

This outcome considers the natural economic growth in the neighbourhood based on the full utilization of the current areas under the mixed land use typology. Accordingly, following the current trend, if these areas are implemented, with various commercial/services activities at the ground floor level, an additional 48 job opportunities would be provided, which is equal to only 11% increase in job opportunities for the working-age population living in the neighbourhood.

### **Outcome 2: Significant economic growth resulting in substantially improved access to opportunities for both hosts and refugees**

This outcome considers the potential increase in job opportunities if all proposed needed projects are implemented in the neighbourhood. Being comprehensive, if the three identified schools were actually upgraded, an additional 61 opportunities will be provided. Additionally, if the proposed school was constructed to fulfill the forecasted demand, another 56 opportunities will be generated. Similarly, if the existing primary health centre was upgraded to the needed comprehensive one, then another 45 opportunities will be generated. Furthermore, if the land use of the identified areas were transformed to a mixed use typology, another 32 job opportunities will be available. Other possible increases in job opportunities could be related to improvements proposed to public spaces, which have been estimated to be around 5 opportunities. Overall, these developments will provide a 54% increase in opportunities for the working-age population in the neighbourhood, including the host community and refugees.

In summary, the local economic development variable addresses the potential at the neighbourhood to increase formal job opportunities, decrease the unemployment rate in the neighbourhood, and simultaneously decrease the informal economy in the area. This is aligned with the recent Jordan Economic Modernisation Vision.

**Outcome 1: Natural economic growth resulting in marginally improved access to opportunities**

This outcome assumes that a few activities will continue to occur based on the natural economic growth in the neighbourhood. This is limited to the opening of new commercial/services stores in the mixed land use areas according to the maximum utilization of the neighbourhood's land use plan, and assuming that each store would provide 2 job opportunities. This would result in an increase in the informal economy in the neighbourhood due to the minimal formal job opportunities available according to the natural economic growth.



+48

Total increase in opportunities when vacant mixed land use areas are utilized: +48



**+11%**

Total increase in opportunities for hosts and refugees

**TOTAL: 456 Job Opportunities**

**Outcome 2: Significant economic growth resulting in substantially improved access to opportunities for both hosts and refugees**

The actions that could possibly enable significant improvement in economic growth would include:

- Expediting of the implementation of the various needed projects proposed, including infrastructure interventions, the upgrading of public facilities such as schools and the health centre, and construction of a new school, improvements to public spaces, transforming residential land uses into mixed land use, as well as the potential utilization of the existing vacant mixed land use areas. These interventions will result in multiplier effects, whereby each would leverage the next.
- Easing the legal and regulatory limitations for refugees to find employment.



+117



+45



+80



+5

Total increase in opportunities when needed projects are implemented: +247



**+54%**

Total increase in opportunities for hosts and refugees

**TOTAL: 704 opportunities in the neighbourhood by 2037**

## Business As Usual Scenario

Variables	Population Growth	Urban Footprint	Needed Projects	Climate Risk & Natural Hazards	Local Economic Development
Outcome #1	<b>Low Growth Scenario:</b> the population growth rate will decrease to 1%.	<b>Infill and Vertical Densification approach</b> to accommodate the forecasted addition in population for year 2037	<b>Minimal implementation</b> of needed projects	<b>No</b> mitigation or adaptation measures	<b>Natural Economic Growth</b>
Outcome #2	<b>Medium Growth Scenario:</b> the population growth rate follows the estimated annual growth rate of Amman Governorate, 2.2%.	<b>Full infill approach</b> to accommodate the forecasted addition in population for year 2037	<b>Partial implementation</b> of needed projects	<b>Mitigation</b> measures	<b>Increase</b> Business and livelihood opportunities are increased, providing additional jobs and local economic stimulus
Outcome #3	<b>High Growth Scenario:</b> the population growth rate will increase to 3.1%.	<b>Full vertical densification approach</b> to accommodate the forecasted addition in population for year 2037	<b>Extensive implementation</b> of all needed projects	<b>Mitigation and adaptation</b> measures	
Outcome #4	<b>Large increase in population due to new unpredictable influx</b>				
Outcome #5	<b>Refugee Decline Population</b> (-??%)				

<b>PROBABILITY</b>	Highly Unlikely	Unlikely	Likely	<b>Highly Likely</b>
<b>IMPACT</b>	<b>Significant Deterioration</b>	Slight Deterioration	Slight Improvement	Significant Improvement

### Scenario

Population growth remains at 2.2% amongst the host and refugee communities and partial implementation of the recommended actions are taken to address planning & development measures.

### Likely Impact

Based on the context and the current trend in Amman City, the built footprint will continue to expand at different ratios of vertical densification and infill to accommodate the natural increase of population by the year 2037 (estimated to be 7,561 inhabitants). Based on the most likely circumstances, all buildings that are in good condition and that can be vertically densified have been assumed here to be densified, and all residential and mixed use vacant lands have been in-filled. The buildings in critical and moderate conditions that can be vertically expanded by the law were ignored as it is unlikely that they can be expanded up if no improvements to their conditions occur. Nevertheless, despite vertically densifying residential buildings in good condition and infilling residential and mixed-use land, 14% of the forecasted population will still not be accommodated within the neighbourhood by 2037.

3 of the vacant lands for infill are under the mixed land use typology. This would generate livelihood opportunities through the opening of commercial/services shops, based on the natural economic growth.

Nevertheless, this increase in built footprint will add pressure to the existing infrastructure networks that are already serving a higher population than they were designed to, specifically the water and sewerage networks. Additionally, the challenges related to the provision of and accessibility to public facilities will be further exacerbated.

Furthermore, significant investment in needed projects in the neighbourhood is unlikely as there are no major plans for the neighbourhood in the GAM Strategic Plan for the upcoming 5 years, nor in the current plans of relevant ministries such as the Ministries of Education and Health, or the Jordan Water Company (Miyahuna). This will further contribute to diminishing job and livelihood opportunities.

This situation represents the business as usual scenario for Al Hashmi Al Janoubi neighbourhood. In this scenario, the neighbourhood will not achieve the vision formulated with the local community.

**Increase in population:**  
7561 hosts & refugees  
**Total Population:**  
27150 inhabitant

**+39%**

increase of the current population



**202**

+

**40157 M<sup>2</sup>**

**14%**  
of expected increase in population can be accommodated

buildings that are in **good condition** are vertically densified to accommodate around **27%** of the expected increase in population

of vacant lands are in-filled to accommodate **59%** of the expected increase in population by 2037

86% of the expected increase in population can be accommodated in the neighbourhood according to the BAU scenario.

BRT Route

Vertical densification of good condition residential buildings

Vertical densification of good condition residential buildings on mixed use land (up to 6 floors)

Vertical densification of good condition mixed use buildings

Infill of residential vacant lands

Basic needs stores

Total increase in opportunities for hosts and refugees

**LEGEND**

- Service Buildings
- Existing buildings with no changes
- Residential buildings for vertical densification (up to 4 floors)
- Mixed used buildings for vertical densification (up to 6 floors)
- Residential buildings on mixed use land for vertical densification (up to 6 floors)
- Residential vacant lands for infill
- Mixed used vacant lands for infill
- Open public space
- BRT line
- Existing basic services
- Al Hashmi Al Janoubi Neighbourhood Boundary



0 125 250 500 m



**+11%**

Fig. 22: Business As Usual Scenario of Al Hashmi Al Janoubi Neighbourhood

## Optimal Scenario- Planning for an Inclusive, Liveable, and Sustainable Neighbourhood

Variables	Population Growth	Urban Footprint	Needed Projects	Climate Risk & Natural Hazards	Local Economic Development
<b>Outcome #1</b>	<b>Low Growth Scenario:</b> the population growth rate will decrease to 1%.	<b>Infill and Vertical Densification approach</b> to accommodate the forecasted addition in population for year 2037	<b>Minimal implementation</b> of needed projects	<b>No</b> mitigation or adaptation measures	<b>Natural Economic Growth</b>
<b>Outcome #2</b>	<b>Medium Growth Scenario:</b> the population growth rate follows the estimated annual growth rate of Amman Governorate, 2.2%.	<b>Full infill approach</b> to accommodate the forecasted addition in population for year 2037	<b>Partial implementation</b> of needed projects	<b>Mitigation</b> measures	<b>Increase</b> Business and livelihood opportunities are increased, providing additional jobs and local economic stimulus
<b>Outcome #3</b>	<b>High Growth Scenario:</b> the population growth rate will increase to 3.1%.	<b>Full vertical densification approach</b> to accommodate the forecasted addition in population for year 2037	<b>Extensive implementation</b> of all needed projects	<b>Mitigation and adaptation</b> measures	
<b>Outcome #4</b>	<b>Large increase in population due to new unpredictable influx</b>				
<b>Outcome #5</b>	<b>Refugee Decline Population</b> (-??%)				

<b>PROBABILITY</b>	Highly Unlikely	Unlikely	<b>Likely</b>	Highly Likely
<b>IMPACT</b>	Significant Deterioration	Slight Deterioration	Slight Improvement	<b>Significant Improvement</b>

### Scenario

For a resilient and sustainable neighbourhood, the population growth rate considered is 8.5% to include any unpredictable increase in the population due to a new influx of migrants. Accordingly, this scenario proposes improving all residential buildings in critical and substandard conditions for vertical expansion, vertically expanding buildings in good condition, and infilling 68% of the available residential vacant lands to accommodate the expected increase in population (estimated to be 9,271 inhabitants). Moreover, all proposed needed projects should be implemented by 2037.

### Likely Impact

There are available vacant lands in the north-western side of the neighbourhood that lack access to basic needs within a 15-minute walking distance. Therefore, the identified vacant lands are best positioned to serve as a mixed-use area in the future. Accordingly, homes, commercial enterprises, and small industries could be developed by transforming the existing land use from residential to mixed. Upgrading the existing primary health centre to a comprehensive one to fulfill the existing and future demand is an opportunity for the neighbourhood due to its strategic location. As for the educational facilities, to fulfill the expected increase in student population, the three existing public schools can vertically expand and a new school can be constructed in

the available vacant public land at the south-western side of the neighbourhood. Additionally, improving the existing public park, converting the existing playgrounds into a park and playground, and utilizing the stairs as innovative public spaces are other opportunities.

Moreover, the sewerage and water infrastructure networks should be upgraded to accommodate the existing and future demand. In addition, it is necessary to add solid waste containers in the identified unserved areas. As for the electricity service, improvements to the spatial distribution of the electrical posts must be considered. Furthermore, installing Photovoltaic cells will improve the quality of life, as utility bills will decrease. To overcome the flash flood impact in the area, it is crucial to implement the flood mitigation interventions at the identified four hotspot areas on the periphery of the neighbourhood. The walkability can also be enhanced through improving road infrastructure, including sidewalks, and by adding pedestrian traffic lights.

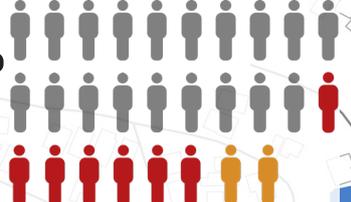
By providing designated space for mixed uses and public facilities, as well as through targeted improvements in infrastructure, a robust foundation can be created to support improved economic activity and livelihood opportunities in the neighbourhood.

**+6.3%**

Increase to the **medium growth outcome (+39%)**

**Increase in population:** 7561 hosts & refugees + 1710 influx migrants

**Total Population:** 28861 inhabitant



**202** + **149**

buildings that are in **good condition** are vertically densified to accommodate around 22% of the expected population increase by 2037

buildings that are in **substandard condition** are improved and vertically densified to accommodate around 26% of the expected population

**102** + **27264 M<sup>2</sup>**

one floor buildings that are in **critical condition** are improved and vertically densified to accommodate around 22% of the expected population increase

of vacant lands are in-filled to accommodate 30% of the expected population increase

Flood Mitigation Intervention Area/Bio Retention Detention Type

Expand the existing schools vertically

Convert Residential Landuse to Mixed Landuse

Transform HC to a comprehensive one

Pedestrian traffic lights

Flood Mitigation Intervention Area/Filter Strip Type

Improvement and vertical densification of substandard and critical condition residential buildings

Rehabilitate stairs

Enhance the existing public park

Vertical densification of good condition mixed use buildings

A pharmacy and a bakery are proposed here

Construction of a new school building on the public land

Infill of residential vacant lands

Vertical densification of good condition residential buildings

Convert existing playgrounds into a new public park and playground (Public Land)

Flood Mitigation Intervention Area/Bio Retention Detention Type

- LEGEND**
- Service Buildings
  - Existing buildings
  - Residential buildings for vertical densification (up to 4 floors)
  - Residential buildings on mixed use land for vertical densification (up to 6 floors)
  - Mixed used buildings for vertical densification (up to 6 floors)
  - Flood mitigation intervention area
  - Residential vacant lands for infill
  - Mixed used vacant lands for infill
  - New school
  - Residential vacant lands for infill after 2037
  - Open public space
  - BRT line
  - Existing basic services
  - Solid Waste Bins
  - Stairs to be rehabilitated
  - Existing open spaces to be upgraded
  - Existing public facilities to be upgraded (vertical expansion)
  - Pedestrian traffic lights
  - Al Hashmi Al Janoubi Neighbourhood Boundary

Total increase in opportunities for hosts and refugees

**+54%**



Fig. 23: Optimal Scenario of Al Hashmi Al Janoubi Neighbourhood

## Prioritization of Needed Projects

To move forward with the development of the optimal scenario action plan, it is necessary to assess the identified projects and prioritize the investment projects to select those that should be implemented over the first five years of the action plan implementation.

To do so, a scoring matrix was developed to identify the highest priority projects according to their urgency, transformative social, environmental, economic, and spatial impacts, as well as the alignment with the existing governmental plans. Additionally, this scoring considers the assessments of the local community and key stakeholders regarding the needed projects that have been identified for the Al Hashmi Al Janoubi neighbourhood.

The scoring matrix measured each of the aforementioned transformative impacts at the equal weight of 20 points each, while the urgency, alignment with existing governmental plans, and the local community and key stakeholders assessments were each weighed at 5 points respectively. The total scoring weight is 100 points.

Accordingly, the following needed projects were assessed and scored:

1. Stair Rehabilitation
2. Water and Sewerage Network- Critical Areas Upgrading;
3. Roads and Sidewalk- Critical Areas Upgrading;
4. Housing Improvement and Upgrading
5. Flood Mitigation Interventions.
6. Mixed Use Development;
7. Schools Upgrading;
8. School Construction;
9. Existing Health Centre Upgrading;
10. Public Park Rehabilitation; and
11. Playground Rehabilitation

PRIORITY SCORING CRITERIA		
<b>Technical Priority:</b> Rate the urgency to implement the project within the short term period of the action plan? (5 Points)		
TRANSFORMATIVE IMPACT	<b>Social Impact (20 Points)</b>	<b>Provision of Basic Needs:</b> How many basic needs services does the project provide?
		<b>Inclusivity:</b> Does the project enhance the inclusivity of refugees and vulnerable groups
		<b>Safety:</b> How much does the project impact the safety of residents?
		<b>Well Being:</b> How much does the project improve the well-being of the residents?
	<b>Environment Impact (20 Points)</b>	<b>Natural Resource Consumption:</b> Rate the level of reduction the project can have on the natural resource consumption? (Water, fossil fuel)
		<b>Climate Mitigation:</b> Rate the potential level the project mitigates the climate change impact?
		<b>Climate Adaptation:</b> Rate the climate change adaptation potential level of the project?
		<b>Healthy Ecosystem:</b> Rate how much the project can contribute to creating a healthy ecosystem?
	<b>Economic Impact (20 Points)</b>	<b>Job Creation/livelihood opportunities:</b> How many job opportunities can the project create? (Direct and indirect)
		<b>Diversity:</b> Does the project diverse job opportunities?
<b>Spatial Impact (20 Points)</b>	<b>% of Beneficiaries</b> from the project	
	<b>Connectivity:</b> Does the project improve the connectivity of people to their basic needs?	
	<b>Butterfly Effect of needed projects:</b> proximity of the project to the other needed projects and/or improves the residents' accessibility to the other projects	
<b>Alignment with the relevant governmental plans:</b> is the project aligned with the existing relevant governmental plan/strategy (5 Points)		
<b>Key Stakeholder Assessment (5 Points)</b>		
<b>Local Community Assessment (5 Points)</b>		
<b>Total (100 Points)</b>		

Table. 1: The Priority Scoring Matrix- Template of Al Hashmi Al Janoubi Neighbourhood





# 03

## STAKEHOLDER ENGAGEMENT

## Vision and Scenario Building Validation Workshops

As part of the participatory process adopted throughout the project, several validation workshops were held with the key stakeholders including relevant governmental entities, and the local community representatives to validate the vision and developed scenarios of the Al Hashmi Al Janoubi neighbourhood as follows:

### Validation Workshops - Key Stakeholders

On the 11<sup>th</sup> of September 2022, the UN-Habitat Jordan team held a workshop with the Greater Amman Municipality committee to discuss the Al Hashmi Al Janoubi neighbourhood vision, which was formulated in a participatory manner with the local community, as well as the developed scenarios for the next 15 years. The scenarios include the "Business As Usual (BAU)" and the "Optimal", where the BAU reveals the neighbourhood's condition in 2037 if partial implementation of needed planning actions were taken, while the optimal envisions the neighbourhood's situation with all the needed planned actions implemented.

The workshop was held at the UN-Habitat office in Amman and included six representatives from the different departments in GAM, including the GIS, Urban Observatory, and Planning departments. The workshop started by presenting the challenges, opportunities, and needs that were identified throughout the Spatial Analytics and Urban Profiling component of the project. Next, the presentation continued with the vision keywords and statement that were developed with the local community. After that, the assumptions and variables that would impact the scenario building process were discussed in-depth. These variables include the population growth, urban footprint, needed projects, and local economic development. At the end, the two developed scenarios were presented and discussed with the participants, who all agreed on most of the results.

Following this workshop, a second workshop was held with the GAM team and relevant key stakeholders on the 23<sup>rd</sup> of October 2022, to discuss the Al Hashmi Al Janoubi neighbourhood vision, as well as the "Business as Usual (BAU)" and the "Optimal" Scenarios for the neighbourhood condition in 2037. The main aim of the second workshop was to validate the identified needed projects with the key stakeholders from the relevant governmental entities. The participants included the Executive Manager of Planning, representatives from six different departments in GAM,

including the Studies Design, Planning, and Construction departments, as well as representatives from the Ministry of Water and Irrigation, the Jordan Water Company (Miyuhana), and the Ministry of Energy and Mineral Resources.

Similar to the previous workshop, this workshop started by presenting the challenges, opportunities, and needs, which were then followed by the vision keywords and statement that was developed with the local community. After that, the assumptions and variables that would impact the scenario building process were presented in-depth. In the end, the two developed scenarios were presented, which started various fruitful discussions. The participants agreed with the process and results, and made the following recommendations that will be taken into consideration when updating the optimal scenario:

- Consider encouraging mixed-use development in the selected North-Western area rather than re-classifying the residential land use into mixed-use land use since residents can apply for a vocational license, including basic needs stores, on residential land.
- GAM is prepared to cover the current gap in solid waste containers at the north-western area.
- The proposed public land for the construction of a school is not appropriate due to its proximity to the royal palace and the resultant security issues.
- GAM is willing to support the rehabilitation of the existing playground area since the land is owned by GAM.

In the last session of the workshop, and after all the detailed discussions on the situation of the neighbourhood, there was a scoring exercise where the participants voted on the highest priority projects that should be implemented in Al Hashmi A Janoubi neighbourhood in the next five years from their point of view. The results showed a majority of votes for the Health Centre Upgrading, then equal votes for the Public Park and Playground Rehabilitation, Flash Flood Mitigation Interventions, the Rehabilitation of Critical Areas of the Roads and Sidewalks, the Stairs Rehabilitation, and the Water & Sewerage Networks Critical Areas Upgrading.



Images during the validation workshops with the key stakeholders- Source : UN-Habitat

## Validation Workshop - Local Community

The UN-Habitat team held a workshop with the local community and relevant stakeholders from GAM on the 6<sup>th</sup> of November 2022, at the GAM Library in the city centre, close to Al Hashmi Al Janoubi Neighbourhood. 20 people attended the workshop, some from Al Hashmi al Janoubi, including the head of the neighbourhood (Mukhtar Al Hara), women, and refugees, to ensure equal representation, in addition to some residents of Al Hashmi Al Shamali, a close neighbourhood to the North of Al Hashmi Al Janoubi. Representatives from GAM, also attended including the area manager.

The workshop aimed to discuss and validate the neighbourhood's vision, which was formulated with the local community in a participatory workshop in March, as well as to discuss and validate the developed variables and 'Business as Usual' scenario, and to work together on finalizing the developed 'Optimal' Scenario.

The workshop started by discussing the neighbourhood's vision and keywords that were previously formulated, where the residents validated and confirmed their approval of the formulated vision. Then the variables 'Business as Usual' Scenario were presented to give the participants a clear idea of the findings before moving on to the participatory session for the finalization of the 'Optimal Scenario'.

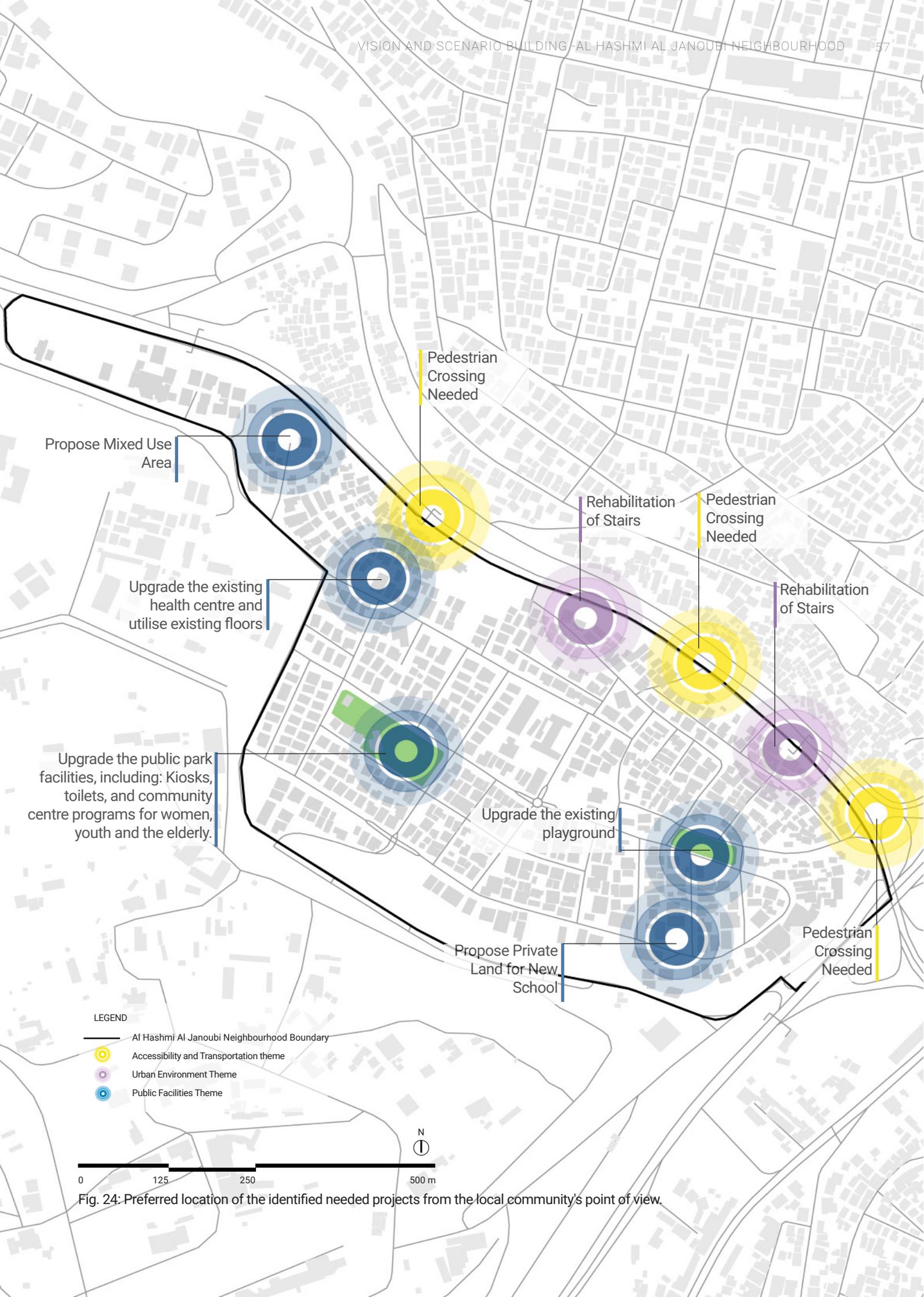
The participants were then divided into two groups of 10, where each group was assisted by a UN-Habitat team member. In this session, the groups discussed and validated the variables one by one, while mapping solutions in the neighbourhood and identifying the preferred location of the needed projects, to develop the 'Optimal Scenario' from their point of view, as shown in the figure. This exercise assisted in finalizing the developed optimal scenario.

In the last session of the workshop, and after all the detailed discussions on the situation of the neighbourhood, the residents participated in the scoring exercise where they voted on the most urgent projects that should be prioritised for implementation in Al Hashmi A Janoubi neighbourhood over the next five years.

According to the scoring, the prioritised projects that were voted for in order of preference are: stair rehabilitation, road and sidewalk rehabilitation, housing improvements and upgrading, school upgrading, and health centre upgrading.



Images during the workshop with Al Hashmi Al Janoubi Neighbourhood residents



LEGEND

- Al Hashmi Al Janoubi Neighbourhood Boundary
- ⊙ Accessibility and Transportation theme
- ⊙ Urban Environment Theme
- ⊙ Public Facilities Theme

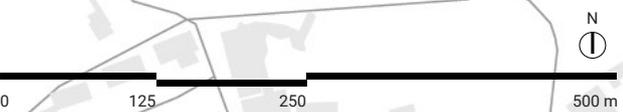


Fig. 24: Preferred location of the identified needed projects from the local community's point of view.

## Bilateral Validation Sessions with Relevant Government Entities

Following the previous validation workshops, the team held several bilateral meetings with the relevant governmental entities to validate the needed projects and their proposed spatial locations within Al Hashmi Al Janoubi neighbourhood.

### Education Facilities

The recommendations for the school capacities, and number of current and forecasted students in Al Hashmi al Janoubi neighbourhood were validated with the Ministry of Education (MoE). It was found that the numbers of current, and expected increase in students matched, and therefore the needed school recommendations were validated.

The MoE team highlighted that schools cannot exceed four floors above the street level due to the fact that it is difficult for students to carry their bags for more than four floors. Furthermore, according to the regulations of the MoE, any new school construction will need to be on land that is at least 5,000 m<sup>2</sup>.

Based on this information, to meet the forecasted educational needs and the MoE recommendations for the Al Hashmi Al Janoubi neighbourhood, **three of the existing schools must expand vertically and/or horizontally according to further site-specific analysis, and a new school must be constructed in the neighbourhood.**

There is no adequate publicly owned land with the needed minimum area for the construction of a new school within the neighbourhood, so private land will have to be purchased. Thus, in coordination with the MoE representative, an appropriate site for the construction of a new school was selected on land located in the north-western part of the neighborhood, as shown in the figure, as it is considered to be the most appropriate.

It was highlighted during the meeting that the building of the school named "Al Hajjaj Bin Yousef Al Thaqafi Elementary Boy School", which is located in the eastern side of the neighbourhood, is in substandard condition. The neighbourhood residents explained that students are under high risk. Following the meeting, the MoE sent a team to validate the existing situation of the school.

According to the Ministry's new strategy, all rented school buildings must be replaced with Ministry-owned property. After evaluation and since the school is rented, **a decision was made by the MoE team to move all students to the other two existing public schools within the neighbourhood starting next semester and that the**

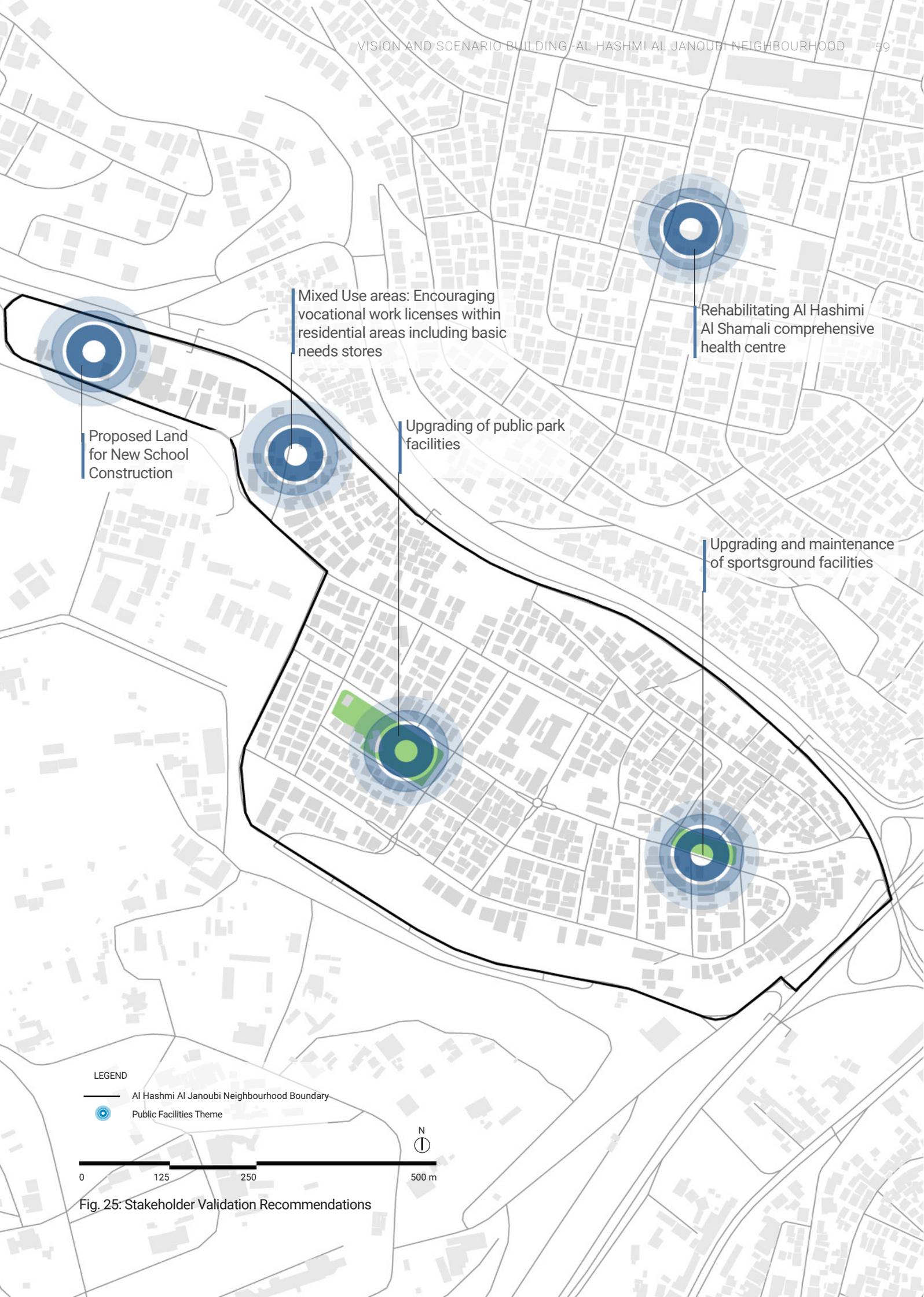
**school will be officially closed to ensure the safety of students. This is considered one of the positive tangible impacts of the UPMC programme on ground.**

### Health Care Facilities

The recommendation to upgrade the existing primary health centre in Al Hashmi Al Janoubi neighbourhood to a comprehensive one was validated with the Ministry of Health (MoH). The MoH agreed that there is a need to improve the health care services for the residents in the area. However, since the building that the health centre occupies is rented, upgrading this building is not applicable.

Instead, MoH proposed an alternative solution, which is to improve and expand the comprehensive health centre in Al Hashmi Al Shamali neighbourhood, which is a neighbourhood adjacent to Al Hashmi Al Janoubi. While this comprehensive health centre is already serving the residents of Al Hashmi Al Janoubi neighbourhood, the quality of its services are limited and need to be enhanced to adequately serve both neighbourhoods.

Accordingly, the needed upgrades that have been identified by MoH include the rehabilitation of the current building, by replacing the floor tiles and the suspended ceiling, renovating the doors, windows and the roof waterproofing layer, painting the walls, replacing the water tanks, renovating the outdoor plazas and parking areas, in addition to that, the renovations include electro-mechanical work like providing air conditioners, as well as renovating the sewerage and water networks in the building, as well as the water drainage system. As for the expansion of the health care centre, the construction can take place horizontally on two sides of the building to the full height of the current centre, where the estimated total area of the expansion is 450m<sup>2</sup>. The new spaces could be used for redistributing the sections and clinics in the centre, as well as expanding the dental clinic, general doctors clinics, and specialist clinics. The expansion and redistribution could be used to make the service easier for the users. Finally the upgraded healthcare centre will need provision of new office and clinic furniture, and medical equipment for family planning, ear checkup equipment, dental chairs, clinical equipment, as well as emergency centre equipment.



LEGEND

- Al Hashmi Al Janoubi Neighbourhood Boundary
- Public Facilities Theme

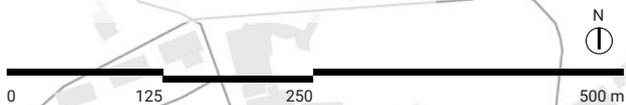


Fig. 25: Stakeholder Validation Recommendations

## Conclusion- High-Priority Needed Projects

After the validation of the needed projects, the technical assessment, as well as the local community and stakeholder assessments, the priority scoring matrix was completed and the highest-scoring needed projects were identified. These identified projects are the high-priority needed projects that must be implemented within the short term (the first five years) period of the optimal scenario action plan.

The high-priority needed projects include: the Stair Rehabilitation, Water and Sewerage Critical Areas Upgrading, Road and Sidewalk Critical Areas Upgrading, Flood Mitigation Interventions, and Existing Health Centre Upgrading. Accordingly, the short term action plan was developed, as shown in the following section.

PRIORITY SCORING CRITERIA						
<b>Technical Priority: Rate the urgency to implement the project within the short term period of the action plan? (5 Points)</b>						
<b>TRANSFORMATIVE IMPACT</b>	<table border="1"> <tr> <td rowspan="4" style="text-align: center;"><b>Social Impact (20 Points)</b></td> <td><b>Provision of Basic Needs:</b> How many basic needs services does the project provide?</td> </tr> <tr> <td><b>Inclusivity:</b> Does the project enhance the inclusivity of refugees and vulnerable groups</td> </tr> <tr> <td><b>Safety:</b> How much does the project impact the safety of residents?</td> </tr> <tr> <td><b>Well Being:</b> How much does the project improve the well-being of the residents?</td> </tr> </table>	<b>Social Impact (20 Points)</b>	<b>Provision of Basic Needs:</b> How many basic needs services does the project provide?	<b>Inclusivity:</b> Does the project enhance the inclusivity of refugees and vulnerable groups	<b>Safety:</b> How much does the project impact the safety of residents?	<b>Well Being:</b> How much does the project improve the well-being of the residents?
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		<b>Well Being:</b> How much does the project improve the well-being of the residents?				
	<table border="1"> <tr> <td rowspan="4" style="text-align: center;"><b>Environment Impact (20 Points)</b></td> <td><b>Natural Resource Consumption:</b> Rate the level of reduction the project can have on the natural resource consumption? (Water, fossil fuel)</td> </tr> <tr> <td><b>Climate Mitigation:</b> Rate the potential level the project mitigates the climate change impact?</td> </tr> <tr> <td><b>Climate Adaptation:</b> Rate the climate change adaptation potential level of the project?</td> </tr> <tr> <td><b>Healthy Ecosystem:</b> Rate how much the project can contribute to creating a healthy ecosystem?</td> </tr> </table>	<b>Environment Impact (20 Points)</b>	<b>Natural Resource Consumption:</b> Rate the level of reduction the project can have on the natural resource consumption? (Water, fossil fuel)	<b>Climate Mitigation:</b> Rate the potential level the project mitigates the climate change impact?	<b>Climate Adaptation:</b> Rate the climate change adaptation potential level of the project?	<b>Healthy Ecosystem:</b> Rate how much the project can contribute to creating a healthy ecosystem?
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			<b>Climate Mitigation:</b> Rate the potential level the project mitigates the climate change impact?			
			<b>Climate Adaptation:</b> Rate the climate change adaptation potential level of the project?			
		<b>Healthy Ecosystem:</b> Rate how much the project can contribute to creating a healthy ecosystem?				
	<table border="1"> <tr> <td rowspan="2" style="text-align: center;"><b>Economic Impact (20 Points)</b></td> <td><b>Job Creation/livelihood opportunities:</b> How many job opportunities can the project create? (Direct and indirect)</td> </tr> <tr> <td><b>Diversity:</b> Does the project create diverse job opportunities?</td> </tr> </table>	<b>Economic Impact (20 Points)</b>	<b>Job Creation/livelihood opportunities:</b> How many job opportunities can the project create? (Direct and indirect)	<b>Diversity:</b> Does the project create diverse job opportunities?		
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		<b>Diversity:</b> Does the project create diverse job opportunities?				
<table border="1"> <tr> <td rowspan="3" style="text-align: center;"><b>Spatial Impact (20 Points)</b></td> <td><b>% of Beneficiaries</b> from the project</td> </tr> <tr> <td><b>Connectivity:</b> Does the project improve the connectivity of people to their basic needs?</td> </tr> <tr> <td><b>Butterfly Effect of needed projects:</b> proximity of the project to the other needed projects and/or improves the residents' accessibility to the other projects</td> </tr> </table>	<b>Spatial Impact (20 Points)</b>	<b>% of Beneficiaries</b> from the project	<b>Connectivity:</b> Does the project improve the connectivity of people to their basic needs?	<b>Butterfly Effect of needed projects:</b> proximity of the project to the other needed projects and/or improves the residents' accessibility to the other projects		
<b>Spatial Impact (20 Points)</b>		<b>% of Beneficiaries</b> from the project				
		<b>Connectivity:</b> Does the project improve the connectivity of people to their basic needs?				
	<b>Butterfly Effect of needed projects:</b> proximity of the project to the other needed projects and/or improves the residents' accessibility to the other projects					
<b>Alignment with the relevant governmental plans:</b> is the project aligned with the existing relevant governmental plan/strategy (5 Points)						
<b>Key Stakeholder Assessment (5 Points)</b>						
<b>Local Community Assessment (5 Points)</b>						
<b>Total (100 Points)</b>						

Table. 2: The Priority Scoring Matrix of Al Hashmi Al Janoubi Neighbourhood

\*: Priority Needed Project

IDENTIFIED PROJECTS NEEDED FOR AL HASHMI AL JANOUBI NEIGHBOURHOOD										
Infrastructure Investments Projects					Public Services Projects					
1. Stair Rehabilitation	2. Water & Sewerage Networks Upgrading-Critical Areas	3. Road& Side walk Upgrading-Critical Areas	4. Housing Improvement and Upgrading	5. Flood mitigation interventions	6. Mixed Use Development	7. School Upgrading	8. School Construction	9. Health Centre Upgrading	10. Public park Rehabilitation	11. Rehabilitation of Playground
5	5	5	5	5	5	2	0	5	2	5
0	1	0	0	0	4	1	1	1	1	1
5	0	5	0	0	0	5	5	5	5	5
5	5	5	5	5	2	0	0	5	2	2
5	5	5	5	5	2	2	5	5	5	5
0	5	0	2	5	0	0	0	0	0	0
2	5	5	2	5	2	2	2	2	0	2
2	5	5	2	5	2	2	2	2	2	2
5	5	5	5	5	5	2	2	2	2	5
10	0	10	10	10	15	15	15	15	10	10
0	0	0	0	0	5	5	5	5	0	0
4	6	4	4	10	2	10	4	10	10	8
5	5	5	0	0	5	0	5	0	0	0
5	3	4	2	2	0	1	1	1	1	1
5	5	5	0	5	5	0	0	0	5	5
4	4	4	1	4	0	0	0	5	4	4
5	4	5	4	3	2	4	2	4	3	1
67*	63*	72*	47	69*	56	51	49	67*	52	56

## Optimal Scenario - Final Version

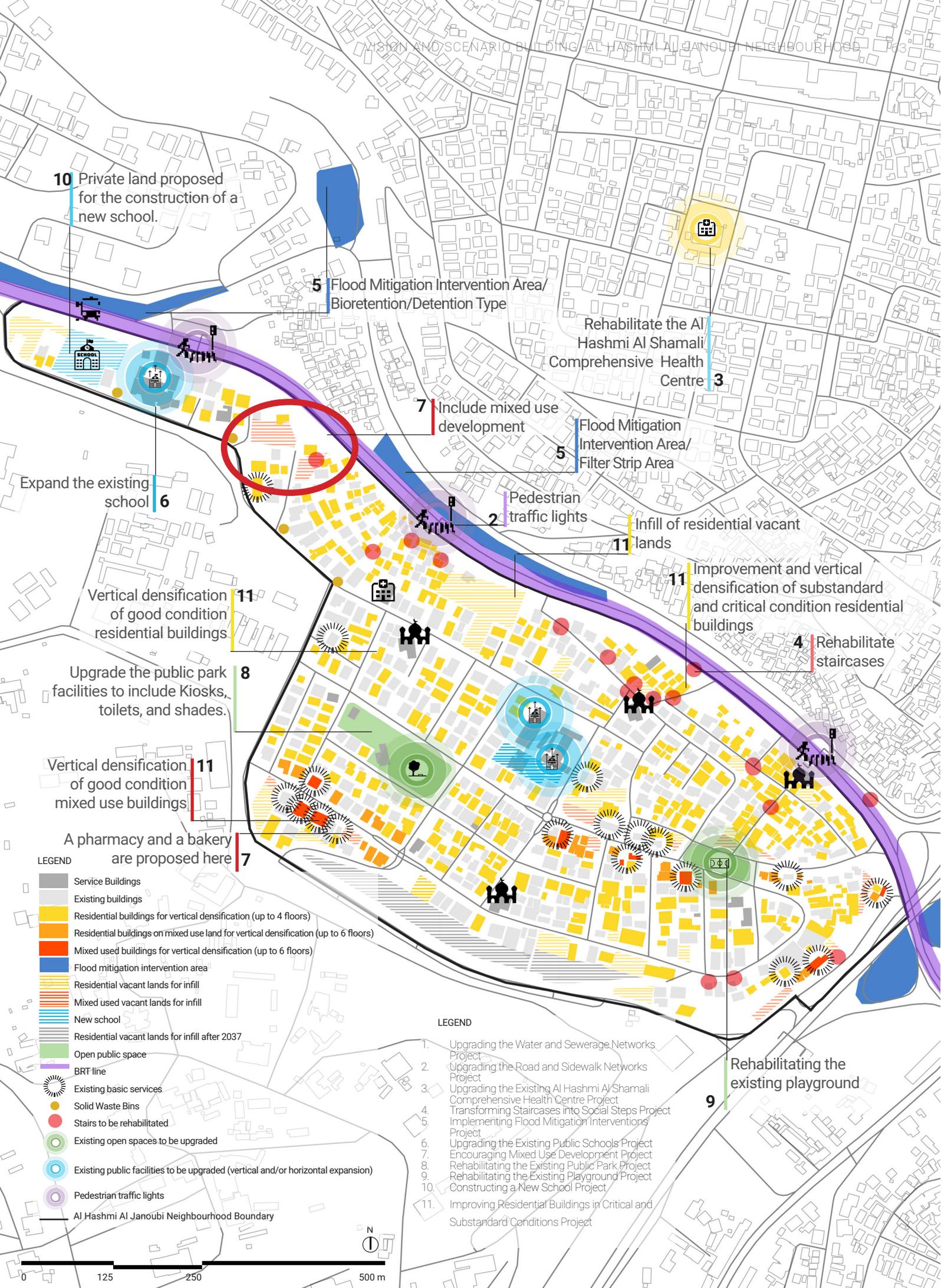
Variables	Population Growth	Urban Footprint	Needed Projects	Climate Risk & Natural Hazards	Local Economic Development
<b>Outcome #1</b>	<b>Low Growth Scenario:</b> the population growth rate will decrease to 1%.	<b>Infill and Vertical Densification approach</b> to accommodate the forecasted addition in population for year 2037	<b>Minimal implementation</b> of needed projects	<b>No</b> mitigation or adaptation measures	<b>Natural Economic Growth</b>
<b>Outcome #2</b>	<b>Medium Growth Scenario:</b> the population growth rate follows the estimated annual growth rate of Amman Governorate, 2.2%.	<b>Full infill approach</b> to accommodate the forecasted addition in population for year 2037	<b>Partial implementation</b> of needed projects	<b>Mitigation</b> measures	<b>Increase</b> Business and livelihood opportunities are increased, providing additional jobs and local economic stimulus
<b>Outcome #3</b>	<b>High Growth Scenario:</b> the population growth rate will increase to 3.1%.	<b>Full vertical densification approach</b> to accommodate the forecasted addition in population for year 2037	<b>Extensive implementation</b> of all needed projects	<b>Mitigation and adaptation</b> measures	
<b>Outcome #4</b>	<b>Large increase in population due to new unpredictable influx</b>				
<b>Outcome #5</b>	<b>Refugee Decline Population</b> (-??%)				

<b>PROBABILITY</b>	Highly Unlikely	Unlikely	<b>Likely</b>	Highly Likely
<b>IMPACT</b>	Significant Deterioration	Slight Deterioration	Slight Improvement	<b>Significant Improvement</b>

After taking into consideration the feedback received from the community, the Greater Amman Municipality, and other key stakeholders from the relevant ministries during the validation sessions, the optimal scenario has been updated, as presented on the following page.

In conclusion, the final version of Al Hashmi Al Janoubi neighbourhood's optimal scenario includes the following actions:

- Consider a population growth rate of 8.5% to include any unpredictable increase in the population in case of a new influx of migrants.
- To accommodate the expected increase in population, improve residential buildings in critical and substandard conditions for vertical expansion, vertically expand buildings that are in good condition, and infill 68% of the available residential vacant lands.
- Encourage the mixed-use development of the identified vacant lands on the north-western side of the neighbourhood, whereby residents can apply for a vocational license, including basic needs stores, on residential land.
- Rehabilitate the existing comprehensive health centre located in Al Hashmi Al Shamali neighbourhood, which is adjacent to the Al Hashmi Al Janoubi neighbourhood, to adequately serve the existing and future populations of the two neighbourhoods.
- Vertically and/or horizontally expand the three existing public schools and construct a new school in the available vacant lands at the north-western side of the neighbourhood.
- Improve the existing public park by adding the needed facilities, including shading, sanitation facilities, and a kiosk.
- Rehabilitate the existing playground.
- Rehabilitate and utilize the existing stairs as innovative public spaces.
- Upgrade the sewerage and water infrastructure networks to accommodate the existing and future demand.
- Add solid waste containers in the identified unserved areas.
- Improve the spatial distribution of the electrical posts.
- Implement flood mitigation interventions at the identified five hotspot areas on the periphery of the neighbourhood.
- Enhance the walkability of the neighbourhood through improvements to the road infrastructure, including sidewalks, and by adding pedestrian traffic lights.



10 Private land proposed for the construction of a new school.

5 Flood Mitigation Intervention Area/ Bioretention/Detention Type

3 Rehabilitate the Al Hashmi Al Shamali Comprehensive Health Centre

7 Include mixed use development

5 Flood Mitigation Intervention Area/ Filter Strip Area

6 Expand the existing school

2 Pedestrian traffic lights

11 Infill of residential vacant lands

11 Vertical densification of good condition residential buildings

11 Improvement and vertical densification of substandard and critical condition residential buildings

8 Upgrade the public park facilities to include Kiosks, toilets, and shades.

4 Rehabilitate staircases

11 Vertical densification of good condition mixed use buildings

7 A pharmacy and a bakery are proposed here

LEGEND

- Service Buildings
- Existing buildings
- Residential buildings for vertical densification (up to 4 floors)
- Residential buildings on mixed use land for vertical densification (up to 6 floors)
- Mixed used buildings for vertical densification (up to 6 floors)
- Flood mitigation intervention area
- Residential vacant lands for infill
- Mixed used vacant lands for infill
- New school
- Residential vacant lands for infill after 2037
- Open public space
- BRT line
- Existing basic services
- Solid Waste Bins
- Stairs to be rehabilitated
- Existing open spaces to be upgraded
- Existing public facilities to be upgraded (vertical and/or horizontal expansion)
- Pedestrian traffic lights
- Al Hashmi Al Janoubi Neighbourhood Boundary

LEGEND

1. Upgrading the Water and Sewerage Networks Project
2. Upgrading the Road and Sidewalk Networks Project
3. Upgrading the Existing Al Hashmi Al Shamali Comprehensive Health Centre Project
4. Transforming Staircases into Social Steps Project
5. Implementing Flood Mitigation Interventions Project
6. Expanding the Existing Public Schools Project
7. Encouraging Mixed Use Development Project
8. Rehabilitating the Existing Public Park Project
9. Rehabilitating the Existing Playground Project
10. Constructing a New School Project
11. Improving Residential Buildings in Critical and Substandard Conditions Project

9 Rehabilitating the existing playground

Fig. 26: Optimal Scenario of Al Hashmi Al Janoubi Neighbourhood - After Validation

# IT'S TIME FOR ACTION



# 04

## **THE BLUEPRINT FOR IMPLEMENTATION: AL HASHMI AL JANOUBI ACTION PLAN**

## Translating the Optimal Scenario into Catalytic Actions in Al Hashmi Al Janoubi Neighbourhood

To realise the formulated vision for "An Inclusive, Liveable, and Sustainable Neighbourhood where All are Proud to Live in" by 2037, and to achieve the optimal scenario for Al Hashmi Al Janoubi Neighbourhood, specific actions must be taken. Accordingly, transforming the strategic recommendations proposed in the optimal scenario into implementable actions requires a detailed action plan that can tackle incremental spatial, environmental, social, and economical transformations. These actions are not solely the responsibility of the Greater Amman Municipality (GAM), but also concern other relevant actors who undertake development at the local level, such as the Jordan Water Company (Miyahuna) and the Ministries of Health and Education. The primary aim of the action plan is to provide an overarching framework that guides GAM and the key stakeholders from the relevant entities to ensure a proactive and manageable approach to implement the needed changes at the neighbourhood level. Guided by the holistic approach of the optimal scenario, this action plan outlines how to coordinate the identified needed projects in Al Hashmi Al Janoubi neighbourhood. Within this context, needed projects must be collectively assessed, whereby projects with possible synergies can be grouped together to ensure that the limited available resources are utilized in the most efficient and cost effective way to deliver the highest possible impact.

As outlined below, the Al Hashmi Al Janoubi neighbourhood action plan is divided into three main phases (short-, mid-, and long-term), with each phase spanning five years, starting from 2023 and ending in 2037.

- **Short-Term Phase:** The short-term phase spans from 2023 until 2027 and is the period in which the high priority needed projects must be implemented. These projects include the rehabilitating the staircases; upgrading the water and sewerage networks in critical areas; upgrading the road and sidewalk networks in critical areas; implementing flood mitigation interventions; and upgrading the existing Al Hashmi Al Shamali Comprehensive Health Centre.
- **Mid-Term Phase:** This phase extends over the period of 2028 until the year 2032. The medium priority projects have been identified based on the scoring matrix and must be implemented during this phase. These projects include upgrading the existing public schools; encouraging mixed use development; rehabilitating the existing public park and playground; and upgrading the remaining critical areas of the road, sidewalk, water, and sewerage networks.
- **Long-Term Phase:** This phase includes implementing the remaining needed projects, during the period between 2033 and 2037, which include improving residential buildings in critical and substandard conditions as well as constructing a new public school.

It should be noted here, that this action plan has been **validated and updated with the key relevant stakeholders and GAM team**. To monitor the implementation of these actions, and to ensure the action plan continues to be 'fit for purpose' and responsive to change, **this action plan must be reviewed and updated every 3 years by the assigned committee which includes all involved entities.**

No.	Project Name	Implementation Plan Phases		
		Short Term (2023-2027)	Mid Term (2028-2032)	Long Term (2033-2037)
1	Upgrading the Water and Sewerage Networks	■	■	
2	Upgrading the Road and Sidewalk Networks	■	■	
3	Upgrading the Existing Al Hashmi Al Shamali Comprehensive Health Centre	■		
4	Transforming Staircases into Social Steps	■		
5	Implementing Flood Mitigation Interventions	■		
6	Upgrading the Existing Public Schools		■	
7	Encouraging Mixed Use Development		■	
8	Rehabilitating the Existing Public Park		■	
9	Rehabilitating the Existing Playground		■	
10	Constructing a New School			■
11	Improving Residential Buildings in Critical & Substandard Conditions			■

Fig. 27: All needed projects/implementation time line over the implementation plan phases

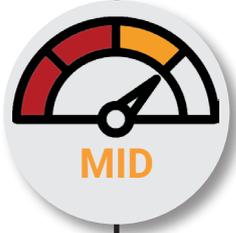
## TOWARDS AL HASHMI AL JANOUBI NEIGHBOURHOOD OPTIMAL SCENARIO

### ACTION PLAN (2023-2037)



#### SHORT TERM PHASE 2023-2027

- Rehabilitating Staircases
- Upgrading Water and Sewerage Networks in Critical Areas
- Upgrading Road and Sidewalk Networks in Critical Areas
- Implementing Flood Mitigation Interventions
- Upgrading Existing Health Centre



#### MID TERM PHASE (2028-2032)

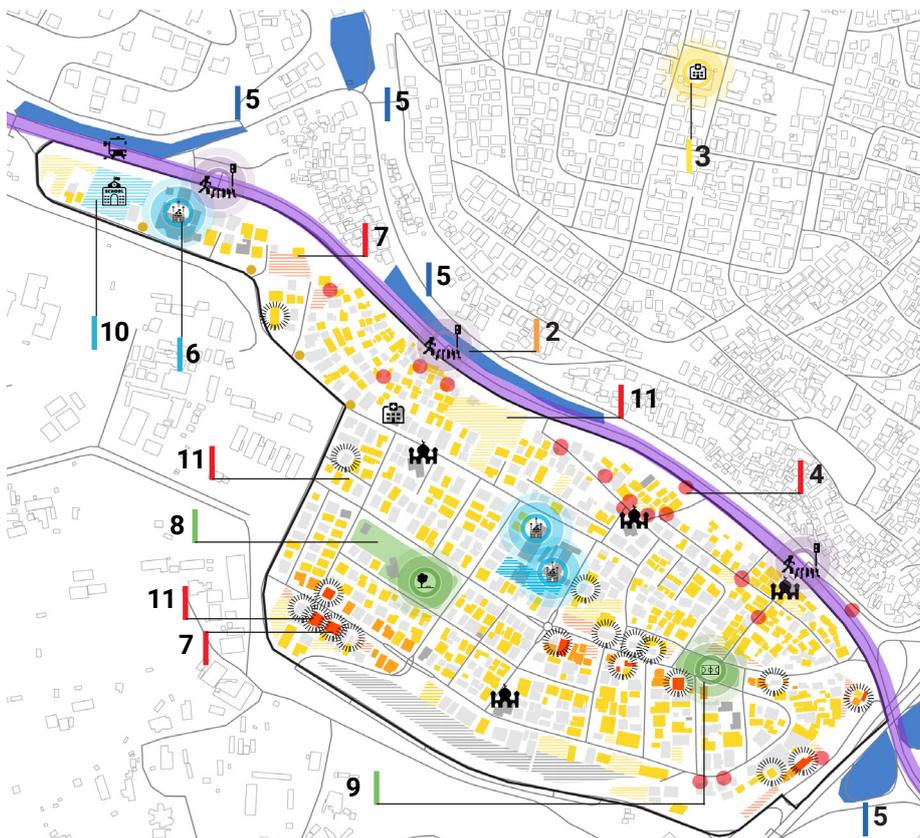
- Upgrading Public Schools
- Encouraging Mixed-use Development
- Rehabilitating Public Park
- Rehabilitating Playground
- Upgrading Road and Sidewalk Networks in Remaining Areas
- Upgrading Water and Sewerage Networks in Remaining Areas



#### LONG TERM PHASE (2033-2037)

- Improving Residential Buildings of Critical and Substandard Conditions
- Constructing a New Public School.

### OPTIMAL SCENARIO OF AL HASHMI AL JANOUBI NEIGHBOURHOOD



No.	Project Name
1	Upgrading the Water and Sewerage Networks Project
2	Upgrading the Road and Sidewalk Networks Project
3	Upgrading the Existing Al Hashmi Al Shamali Comprehensive Health Centre Project
4	Transforming Staircases into Social Steps Project
5	Implementing Flood Mitigation Interventions Project
6	Upgrading the Existing Public Schools Project
7	Encouraging Mixed Use Development Project
8	Rehabilitating the Existing Public Park Project
9	Rehabilitating the Existing Playground Project
10	Constructing a New School Project
11	Improving Residential Buildings in Critical and Substandard Conditions Project

Fig. 28: Al Hashmi Al Janoubi Action Plan diagram

## Short-Term Phase (2023 -2027)

As explained earlier, the identified high-priority projects must be implemented within the short-term phase of this optimal scenario action plan. These projects include:

- Upgrading the Water and Sewerage Networks in Critical Areas
- Upgrading the Road and Sidewalk Networks in Critical Areas
- Rehabilitation of Staircases; hereafter referred to as "Transforming Staircases into Accessible Social Steps"
- Upgrading the Existing Al Hashmi Al Shamali Comprehensive Health Centre
- Implementing Flood Mitigation Interventions

This section covers the actions needed for each project and the implementation sequence to follow during the period between 2023 and 2027. Several factors were taken into consideration in identifying these actions and this sequencing, including the urgency of the situation, spatially-overlaps between projects, the cost-efficiency of the implementation, alignment with governmental plans and strategies, as well as alignment with donors/financiers strategies and current interests.

To maximise the impact, efficiency, and cost-effectiveness of implementation, the aforementioned projects were collectively analysed to detect synergies and, accordingly, identify the most economical process for implementing the action plan.

Therefore, spatial-overlaps between projects were identified so that these projects can be implemented in a gradual order that ensures the optimal utilisation of available resources. This includes upgrading the water and sewerage networks as well as the road and sidewalk networks infrastructure in overlapping critical areas. Accordingly, the upgrading of the road and sidewalk networks in critical areas will begin at the same areas that have been identified for the water and sewerage networks. This project is referred to as **"Upgrading the Road and Sidewalk Networks in the Identified Areas"**, while the rest of the critical areas will be considered as **"Upgrading the Road and Sidewalk Networks in the Remaining Areas"**.

The beneficiaries for these projects will be the total population of Al Hashmi Al Janoubi neighborhood, including the host community and refugees (around 19,500 residents currently), as well as some residents and visitors from nearby areas.

Investment cards were developed (Annex C) for the high-priority project to begin the mobilization of resources in 2023. They describe the project, its objective, beneficiaries, impact, partners, life cycle, timeline, and financial details. These cards will link the prioritized infrastructure investments to potential partners for financing and implementation.

ICON	PROJECT	SHORT TERM PHASE (2023-2027)				
		2023	2024	2025	2026	2027
	Upgrading the Water Network in the Critical Areas	█	█	█	█	
	Upgrading the Sewerage Network in the Critical Areas	█	█	█	█	
	Upgrading the Road & Sidewalk Networks in the Critical Areas	█	█	█	█	
	Transforming Staircases into Accessible Social Steps	█	█	█	█	
	Upgrading the Existing Al Hashmi Al Shamali Comprehensive Health Centre	█	█	█	█	
	Implementing Flood Mitigation Interventions	█	█	█	█	█

Fig. 29: The priority projects/implementation timeline of the short term phase

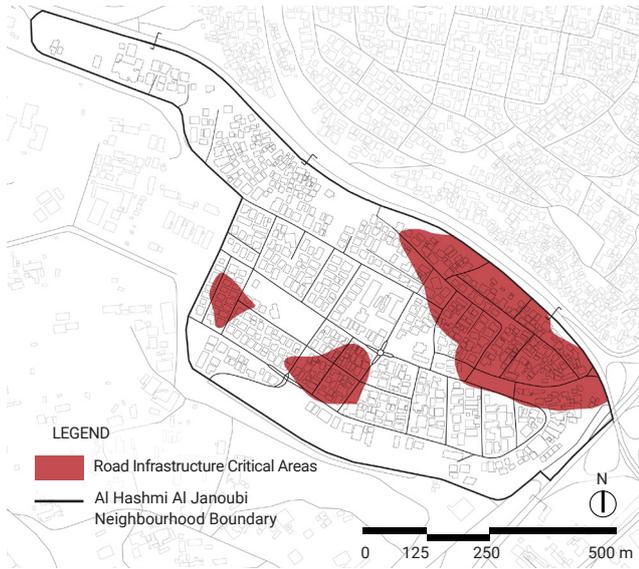


Fig. 30: Road Network Critical Areas at Al Hashmi Al Janoubi

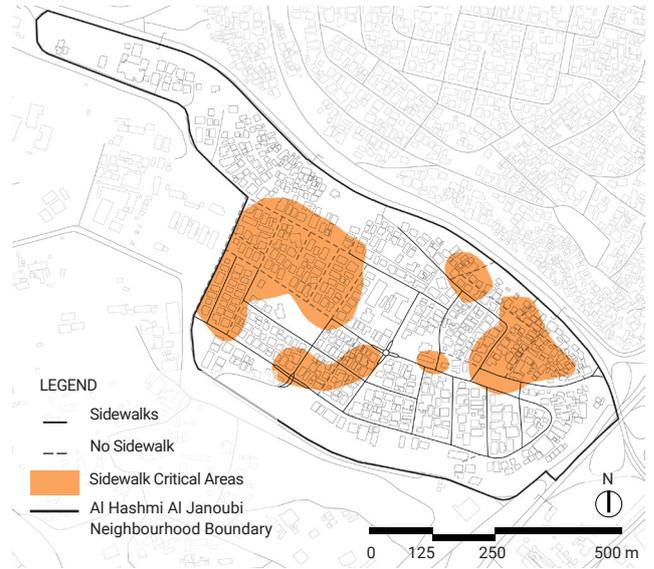


Fig. 33: Sidewalk Network Critical Areas at Al Hashmi Al Janoubi

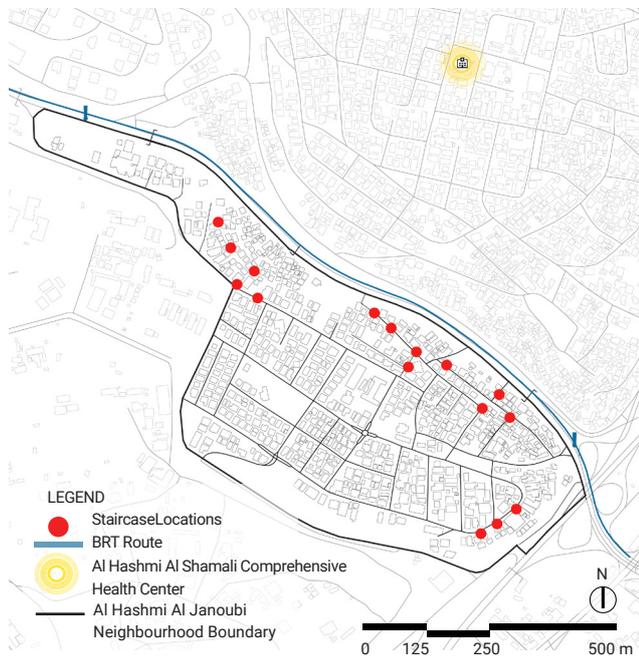


Fig. 31: Existing Staircases at Al Hashmi Al Janoubi and the Al Hashmi Al Shamali Comprehensive Health Centre

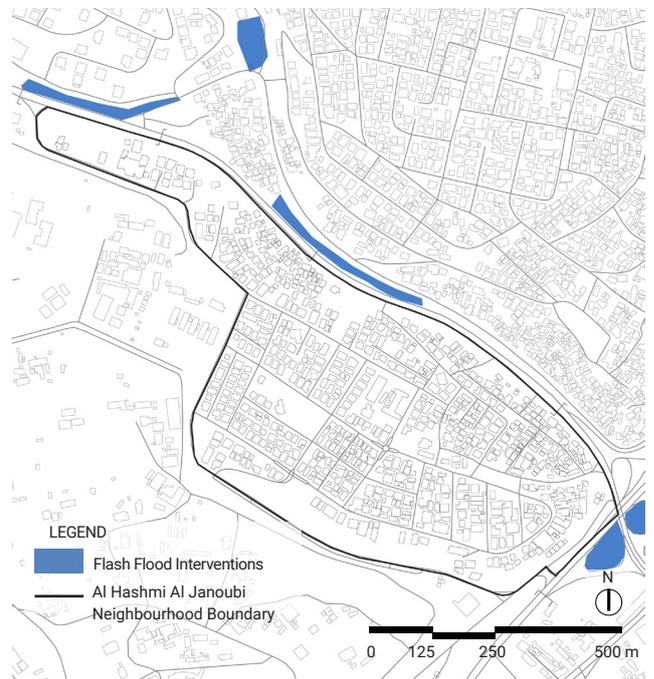


Fig. 34: Flood Mitigation Intervention sites

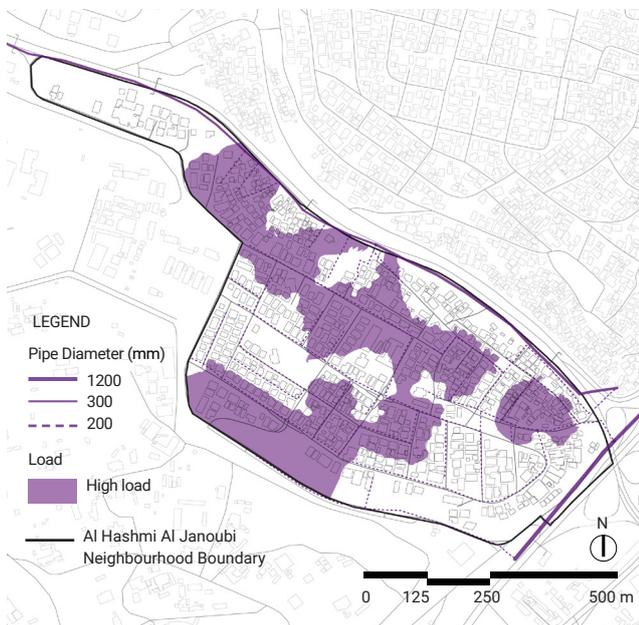


Fig. 32: Sewerage Network Critical Areas

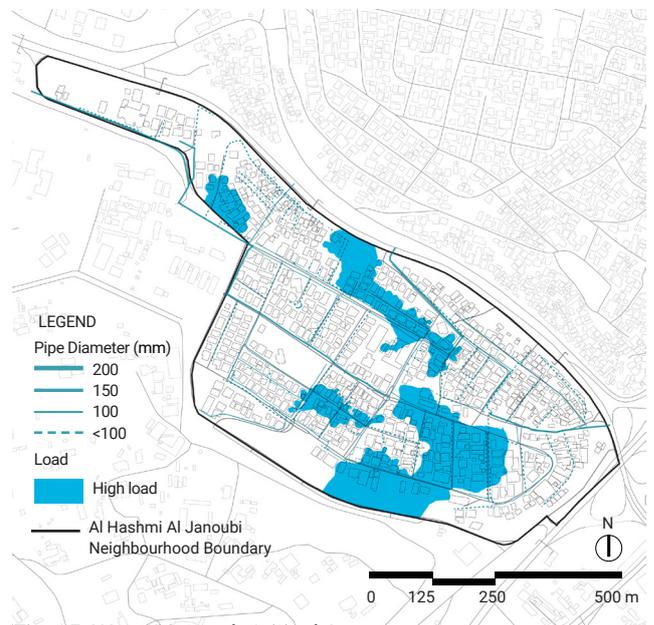
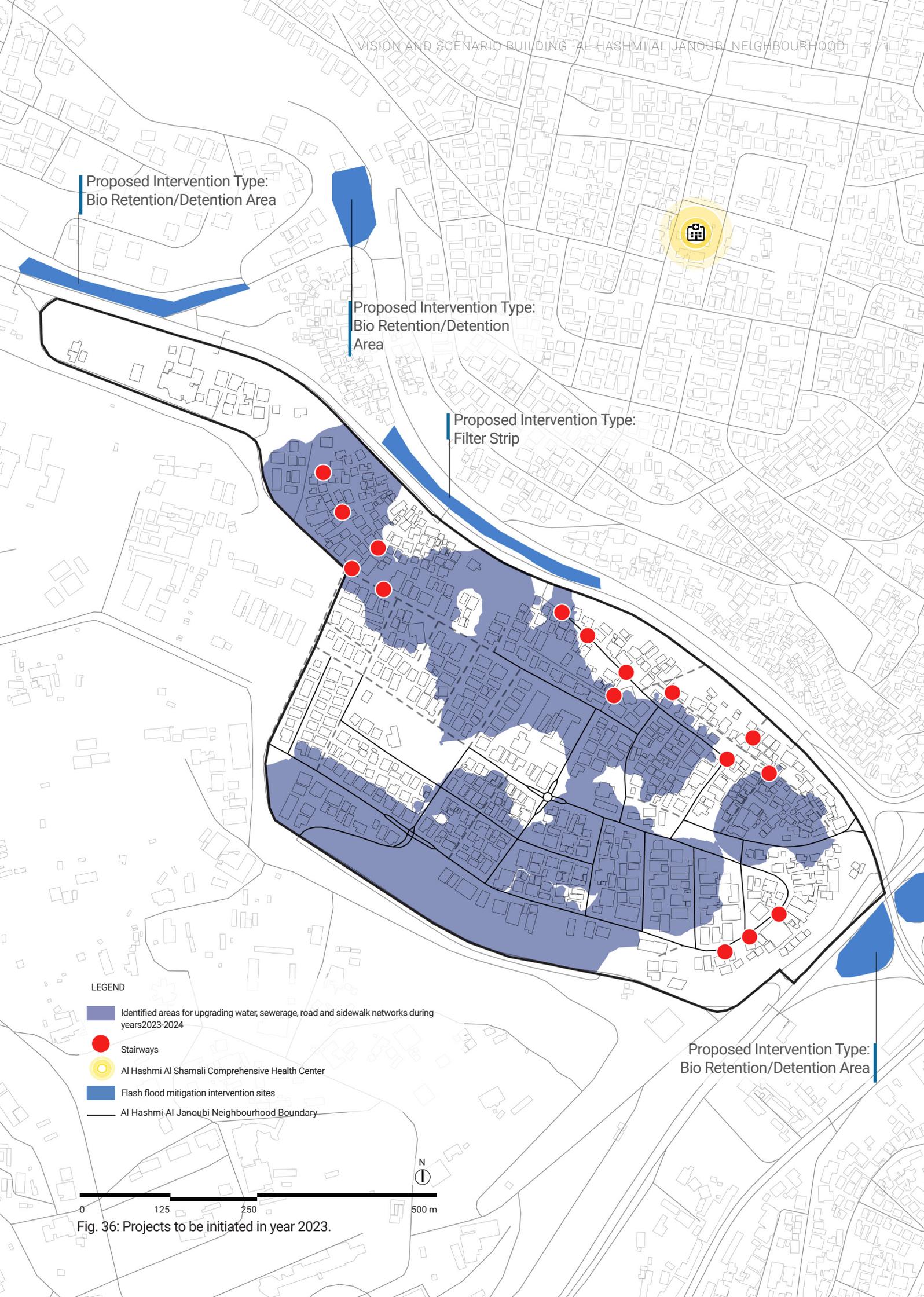


Fig. 35: Water Network Critical Areas

- **Actions for the Year 2023**

To initiate the work in Al Hashmi Al Janoubi neighbourhood, the first step is to identify the available resources at the involved entity for the implementation of each high-priority projects. This includes developing the project budget, whereby the possible in-house contributions and the needed investment for the project implementation are calculated. If needed, the next step is to begin mobilizing resources from interested financiers/donors to implement the project during the short-term phase of the action plan. It is necessary to prepare the budget and initiate the process of seeking a financier/donor to support the implementation of all the prioritised projects in this year.

Accordingly, the year 2023 can be considered a mobilisation year to secure the needed funding, prepare the detailed work plans, identify the roles and responsibilities, and prepare for the procurement process for all the priority projects that must be implemented within this phase of the action plan.



Proposed Intervention Type:  
Bio Retention/Detention Area

Proposed Intervention Type:  
Bio Retention/Detention  
Area

Proposed Intervention Type:  
Filter Strip



LEGEND

- Identified areas for upgrading water, sewerage, road and sidewalk networks during years 2023-2024
- Stairways
- Al Hashmi Al Shamali Comprehensive Health Center
- Flash flood mitigation intervention sites
- Al Hashmi Al Janoubi Neighbourhood Boundary

Proposed Intervention Type:  
Bio Retention/Detention Area

0 125 250 500 m



Fig. 36: Projects to be initiated in year 2023.

- **Actions for the Years 2024 -2025**

The pre-construction phase for upgrading the water and sewerage networks in the identified critical areas should begin in 2024. This includes preparing the Request For Proposal (RFP) for developing the detailed design for the bidding process, holding the bid evaluation, and selecting a consultant. The consultant, in coordination with the Jordan Water Company (Miyahuna), Ministry of Water and Irrigation, and Jordan Water Company, should then start conducting the needed studies, developing the detailed design drawings, and, upon approval from Miyahuna, prepare the construction RFP for the implementation bidding process. After the evaluation and selection of the contractor, the implementation should start in 2025.

This should be directly followed by upgrading the road and sidewalk networks infrastructure at the same locations, as these projects overlap spatially and excavation works will already need to be undertaken to upgrade the sewerage and water networks, leading to a more cost-efficient implementation.

Therefore, the Greater Amman Municipality (GAM) should start developing the concept and detailed designs for the road and sidewalk infrastructure at the areas overlapping with the water and sewerage networks upgrading within Al Hashmi Al Janoubi neighbourhood. Accordingly, the construction RFP must be prepared to hold the bidding process and select a contractor. The implementation should start in 2025.

This sequence would also result in a more comprehensive and tangible impact on ground, whereby these two projects will enhance the provision of water and sewerage services, reduce the current load, minimise the water loss due to the replacement of the existing deteriorated pipes, enhance accessibility and mobility, promote walkability, as well as increase pedestrian safety in these identified areas that host the majority of the neighbourhoods' residents. To align efforts, regular coordination meetings should be conducted between the Miyuhana and GAM teams.

The estimated direct beneficiaries of these projects are around 10,000 to 15,000 inhabitants of the current and forecasted population of Al Hashmi Al Janoubi neighbourhood respectively, including the host community and refugees.

Additionally, the surveying of the 16 existing staircases should start in 2024, followed by the development of the concept design for transforming the staircases into innovative and sustainable public spaces (social steps).

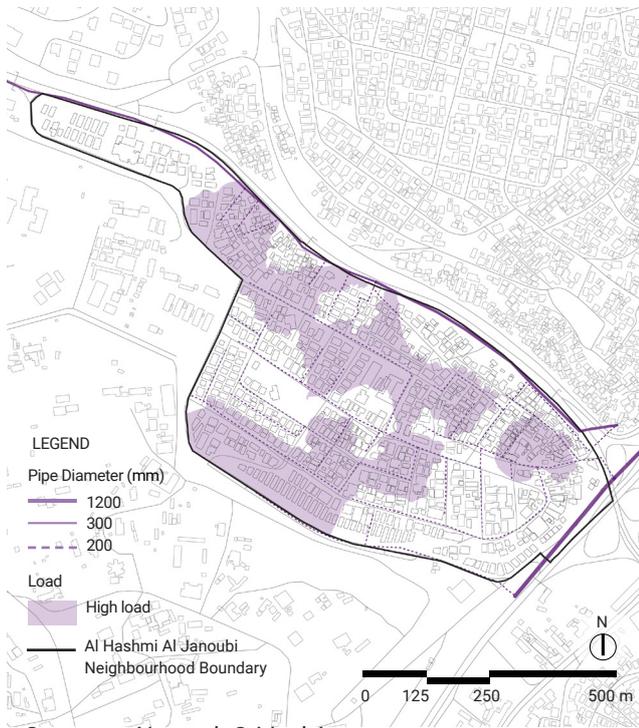
Once the concepts are validated by the local community and officials, the detailed designs should be prepared. It should be noted here that these staircases should be designed using locally-sourced, low-cost, and environmental-friendly materials that promote innovative, and sustainable public spaces, while simultaneously assisting in mitigating the impact of climate change at the neighbourhood level.

Following this, the construction RFP must be prepared to hold the bidding process, evaluate the received bids, and select a contractor by the end of year 2025.

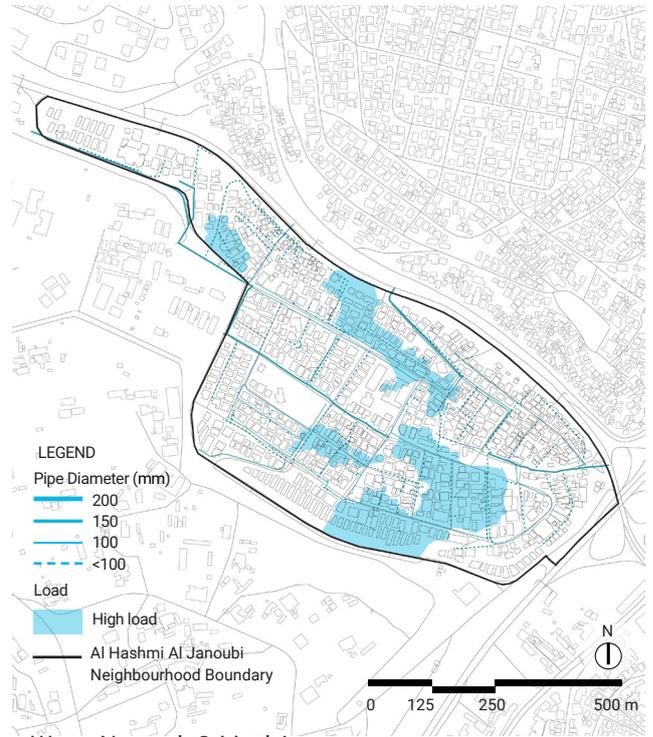
The beneficiaries of the "Transforming Staircases into Accessible Social Steps" project include the residents of Al Hashmi Al Janoubi in addition to the residents and visitors from nearby areas that would use the staircases to reach the Bus Rapid Transit (BRT) station on the nearby Al Istiklal Street.

Regarding the upgrading of the existing health centre at the nearby neighbourhood (Al Hashmi Al Shamali Comprehensive Health Center), the RFP documents should be prepared for the design and construction to rehabilitate and expand the centre, followed by the actual implementation. Accordingly, this project would adequately serve the existing and future populations of both Al Hashmi Al Janoubi and Al Hashmi Al Shamali neighbourhoods. The project will benefit around 350,000 inhabitants including host communities and refugees.

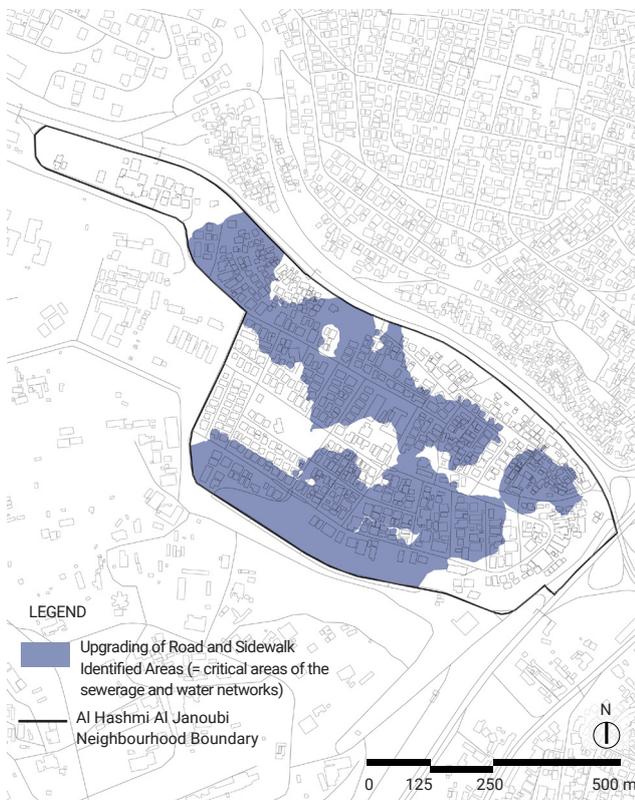
It is important to note that the Ministry of Education must start the process of acquiring the vacant lands identified for constructing the new school at Al Hashmi Al Janoubi Neighbourhood during the long term phase of the action plan, starting this year, since this is considered a lengthy governmental process.



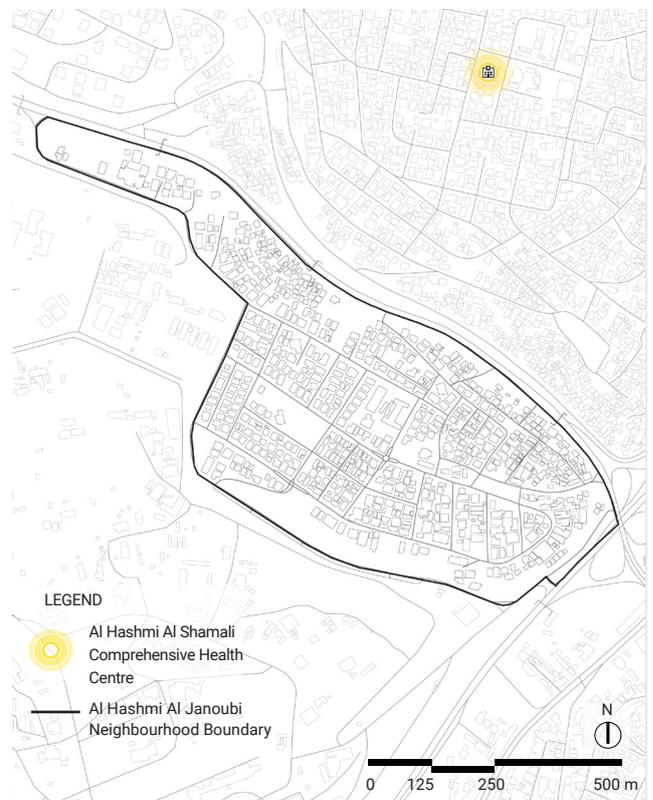
Sewerage Network Critical Areas



Water Network Critical Areas



Road and Sidewalk Networks Identified Areas



Al Hashmi Al Shamali Comprehensive Health Centre

Fig. 37: Projects to be implemented on ground during year 2024-2025

- **Actions for the Years 2026- 2027**

The pre-construction phase for the flood mitigation interventions at the identified hotspot areas on the periphery of the Al Hashmi Al Janoubi neighbourhood should begin in 2026. This project aims to mitigate the impact of flash floods at the neighbourhood and city levels through implementing interventions at the five identified hotspot locations shown in the figure. These interventions include:

- The implementation of Bio-Retention/Detention Areas in 4 out of 5 hotspot areas, which introduces a series of storm-water retention and detention elements around the upstream areas of the city.
- The implementation of a Filter Strip in the northern longitudinal area. Filter strips are vegetated strips of land designed to accept runoff as overland flow from upstream developments.

After mobilizing the needed resources, the required actions include preparing the design RFP for the bidding process, holding the bidding, evaluating received bids, and selecting the consultant. Afterwards, the survey work should be initiated, the concept designs should be developed for the five flood mitigation interventions, and the detailed designs should be finalized. Following the design process, the construction RFP for the bidding process must be prepared to select a contractor and initiate implementation on the ground in 2027.

Furthermore, the implementation for the "Transforming Staircases into Accessible Social Steps" project must also start in 2026. The project will improve mobility, promote walkability, enhance connectivity, and increase pedestrian safety while commuting for all residents and visitors.

This should be directly followed by the upgrading works for the road and sidewalk networks infrastructure at the remaining critical areas shown in the figure. The steps begin with GAM developing the concept and detailed designs for the road and sidewalks infrastructure, preparing the construction RFP for the bidding process, holding the bidding, evaluating the received bids, and selecting the contractor to initiate implementation in 2026, following the completed rehabilitation of the staircases.

This proposed sequence is considered optimal as it will minimize any possible destruction of the street infrastructure that connects to the staircases, which may be caused by the movements of the construction vehicles.

The following pages present the breakdown of actions and the proposed timeframe for each project.

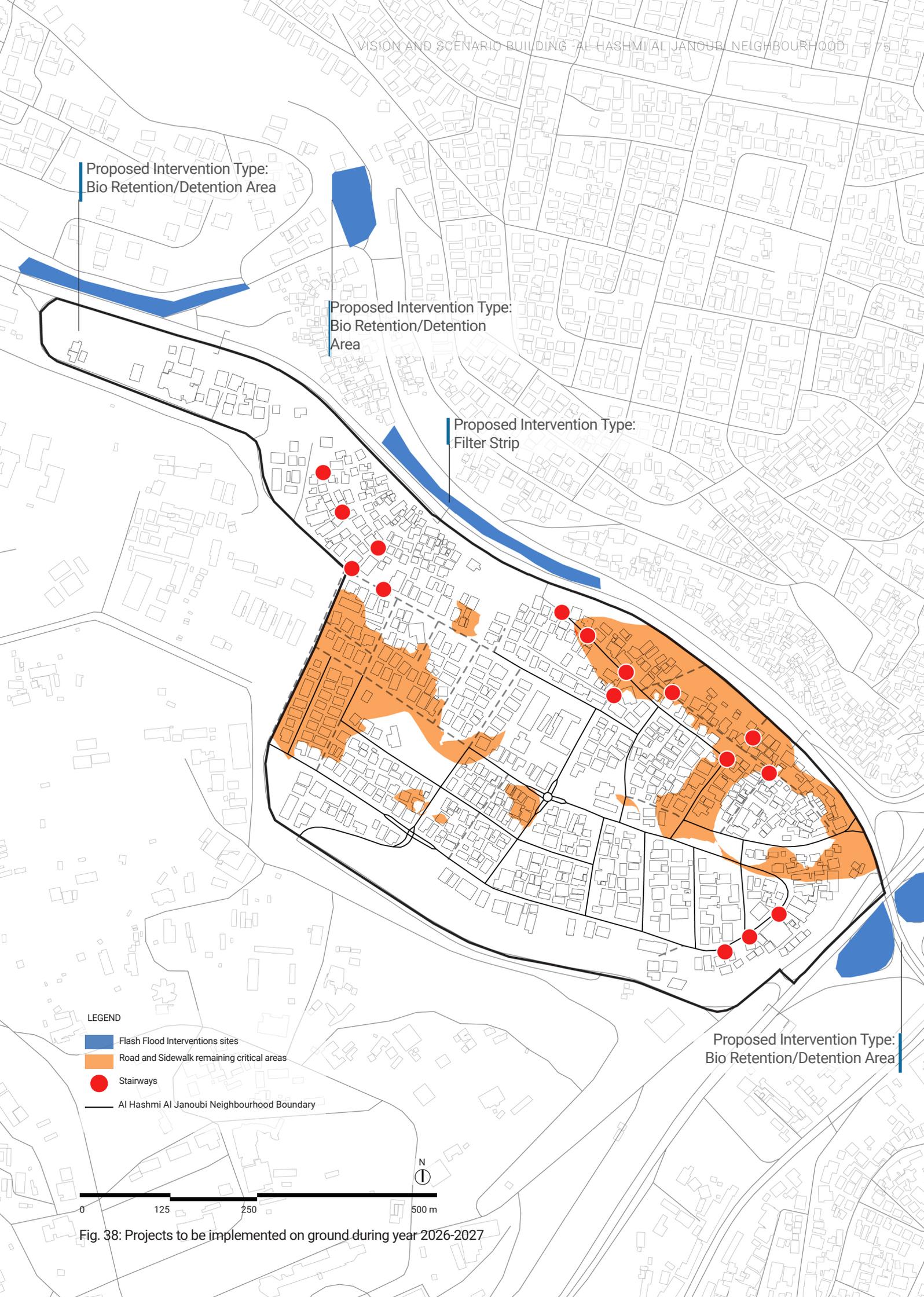


Fig. 38: Projects to be implemented on ground during year 2026-2027

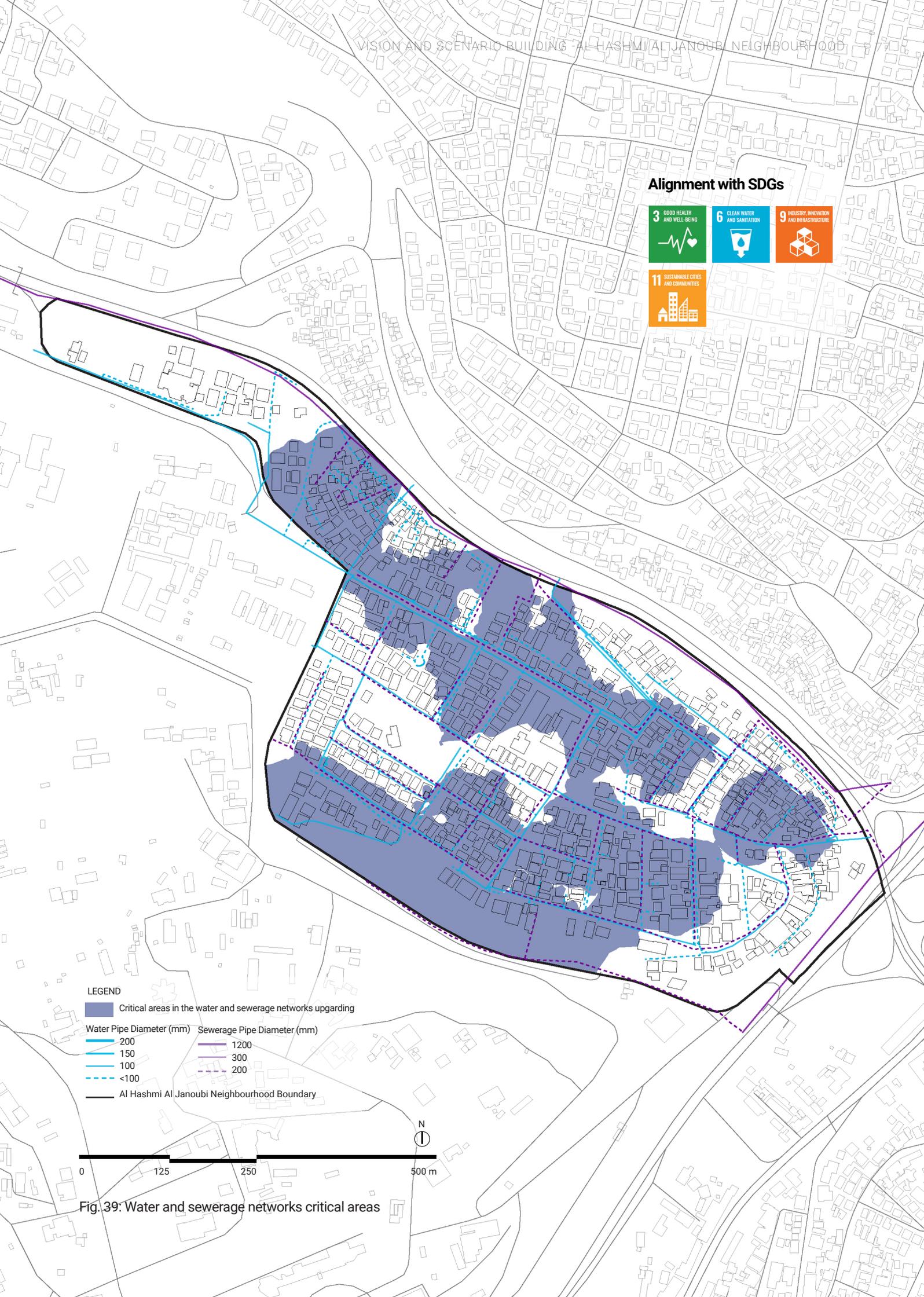


## UPGRADING THE WATER AND SEWERAGE NETWORKS IN THE CRITICAL AREAS PROJECT

Actions	Responsible Entity	Year (Quarters)																									
<b>01</b> Prepare the project budget, mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities.	Miyahuna, in coordination with MOWI & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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<b>02</b> Prepare the Design and Supervision RFP for the bidding process of the networks and conveyor lines and to expand the purification stations connected to them (if necessary) & announce the bid. The RFP must include conducting a detailed technical assessment, conducting an environmental impact assessment, identifying needed pipes' specifications, including pipe diameter and material for the upgrading of the existing networks, developing the design, and preparing the construction RFP.	Miyahuna, in coordination with MOWI & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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<b>03</b> Hold the bid evaluation and selection and, accordingly, negotiate and award the contract.	Miyahuna, in coordination with MOWI & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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<b>04</b> Conduct a detailed technical assessment for the water and sewerage networks at Al Hashmi Al Janoubi neighbourhood and identifying connecting points.	Consultant under the supervision of Miyahuna, MOWI, & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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<b>05</b> Prepare and finalize the detailed design drawings for upgrading the water and sewerage networks in the critical areas and obtain needed approvals.	Consultant under the supervision of Miyahuna, MOWI, & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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<b>06</b> Prepare the construction RFP for the bidding process & announce the bid.	Miyahuna in coordination with MOWI & WAJ, & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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<b>07</b> Hold the bid evaluation and selection and, accordingly, negotiate and award the contract.	Miyahuna in coordination with MOWI & WAJ, & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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<b>08</b> Implementation of the construction work	Contractor under the supervision of Miyahuna, MOWI, WAJ & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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\* The upgrading work of the water and sewerage networks should be coordinated with the project of upgrading the roads and sidewalk networks.

Alignment with SDGs



LEGEND

Critical areas in the water and sewerage networks upgarding

Water Pipe Diameter (mm)	Sewerage Pipe Diameter (mm)
200	1200
150	300
100	200
<100	

Al Hashmi Al Janoubi Neighbourhood Boundary

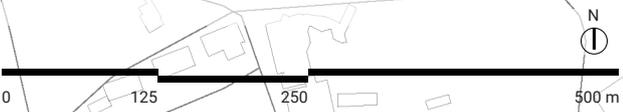


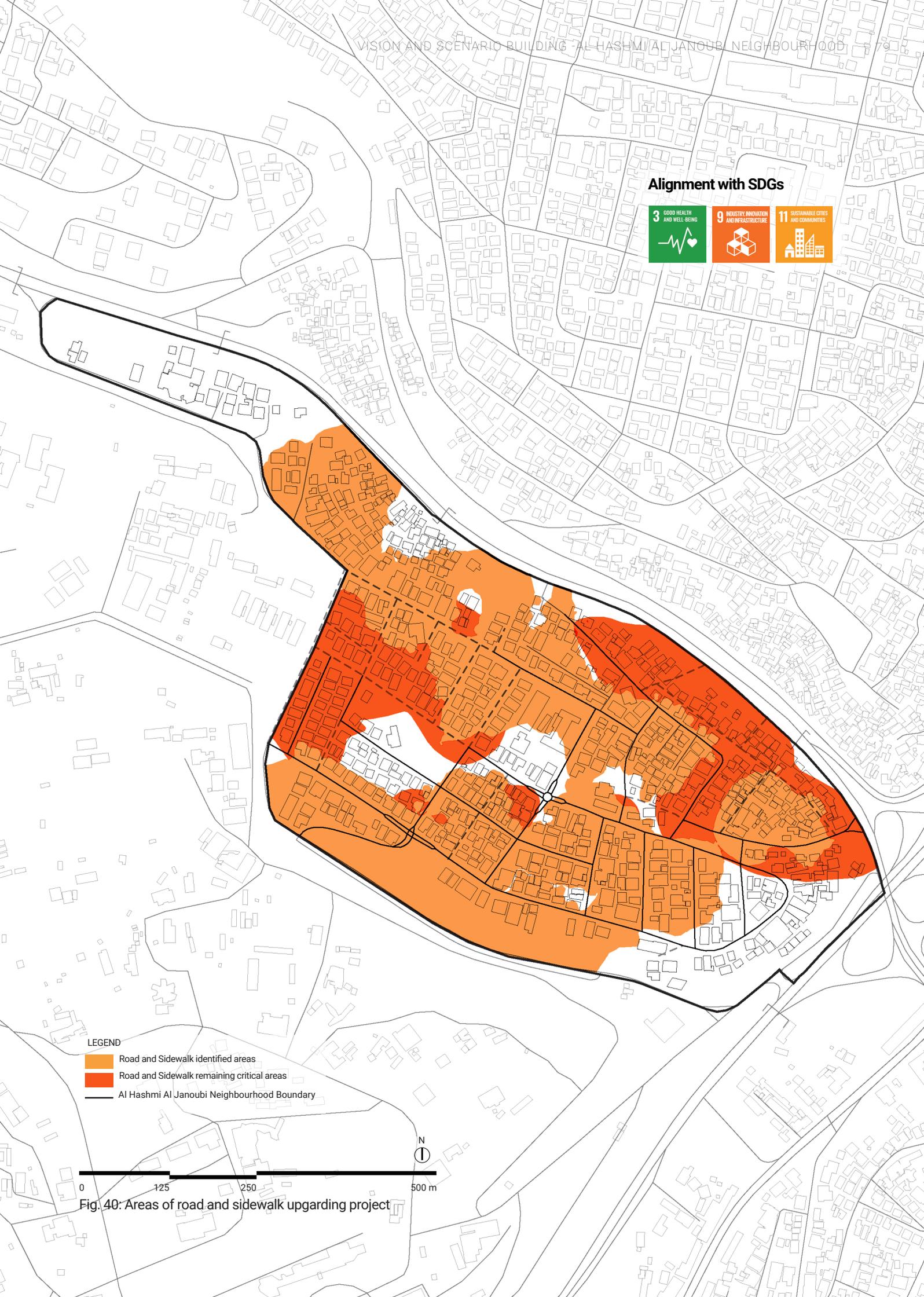
Fig. 39: Water and sewerage networks critical areas

## UPGRADING THE ROAD AND SIDEWALK NETWORKS IN THE CRITICAL AREAS

Actions	Responsible Entity	Year (Quarters)																														
<b>01</b> Prepare the project budget for the <b>identified areas</b> that overlap with water and sewerage critical areas.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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<b>02</b> Develop the concept and detailed design for the roads and sidewalks to be inclusive and sustainable; e.g using porous material to assist in mitigating the climate change impact and including ramps.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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<b>06</b> Prepare the project budget for the <b>remaining critical areas</b> .	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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<b>07</b> Develop the concept and detailed design for the roads and sidewalks	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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\* The upgrade of the road and sidewalk network in the identified areas must be coordinated with the upgrading work of the water and sewerage networks.

Alignment with SDGs



LEGEND

- Road and Sidewalk identified areas
- Road and Sidewalk remaining critical areas
- Al Hashmi Al Janoubi Neighbourhood Boundary

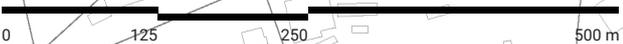
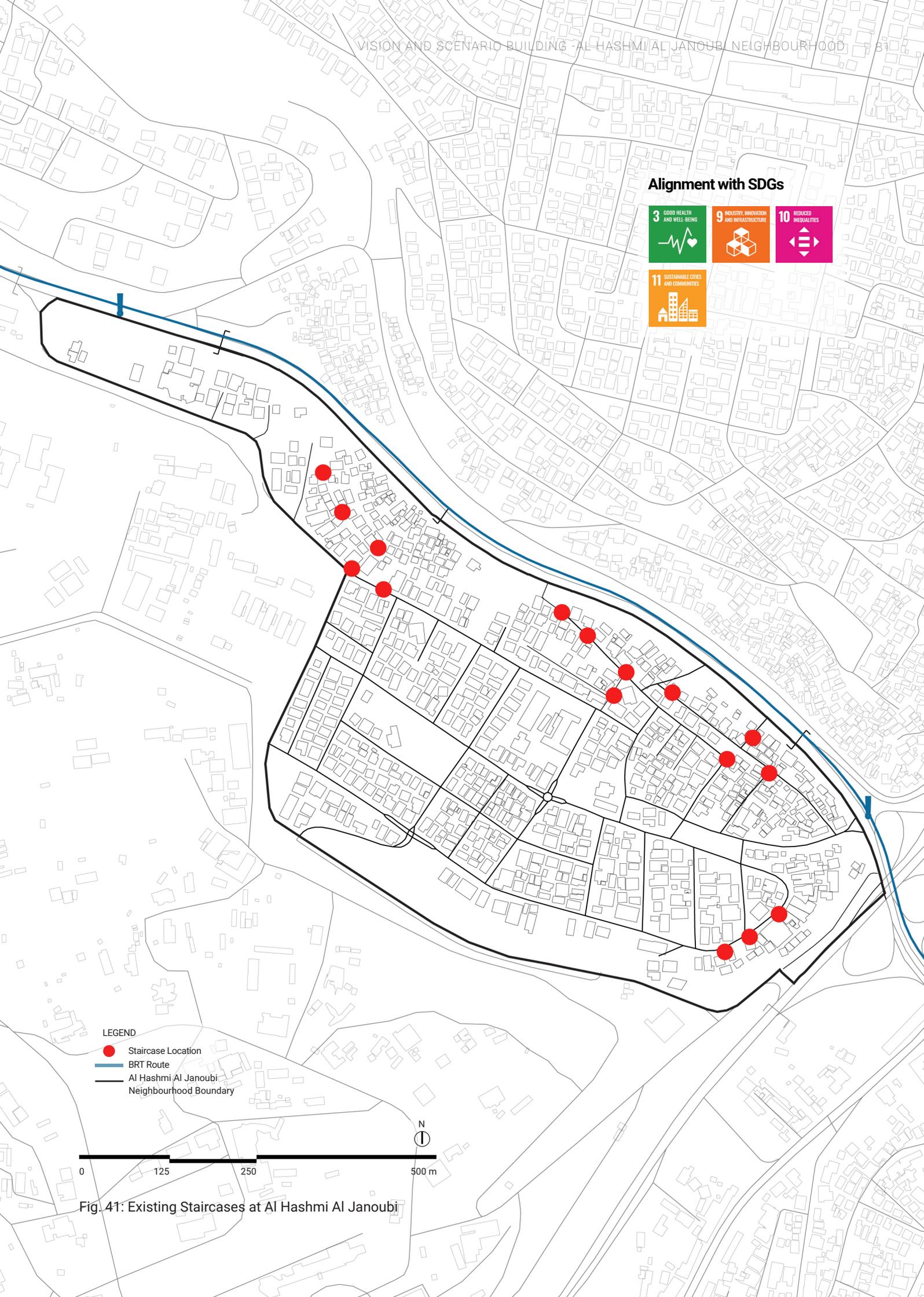


Fig. 40: Areas of road and sidewalk upgarding project



## TRANSFORMING STAIRCASES INTO ACCESSIBLE SOCIAL STEPS

01	Actions	Responsible Entity	Year (Quarters)																									
01	Develop the project budget, mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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02	Prepare the design RFP for the bidding process and announce the bid. The RFP must include survey work, developing the concept and detailed designs for the staircases to become innovative public spaces (social steps) that are inclusive, sustainable, and green and that enhance social cohesion and livelihood opportunities in the area	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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03	Hold the bid evaluation and selection and, accordingly, negotiate and award the contract.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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04	Initiate survey work	Consultant under the supervision of GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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05	Conduct community consultation workshops to identify needs and develop the concept.	Consultant under the supervision of GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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06	Develop the concept design for the social steps at Al Hashmi Al Janoubi neighbourhood and conduct community consultation workshops to validate concept design.	GAM & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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07	Finalize detailed design drawings and obtain needed approvals	GAM & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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08	Prepare the construction RFP for the construction bidding process and announcing the bid, Hold the bid evaluation and selection and, accordingly, negotiate and award the contract..	GAM & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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09	Implementation of the construction work	Contractor under the supervision of GAM &	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>					2023					2024					2025					2026					2027
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### Alignment with SDGs



#### LEGEND

- Staircase Location
- BRT Route
- Al Hashmi Al Janoubi Neighbourhood Boundary

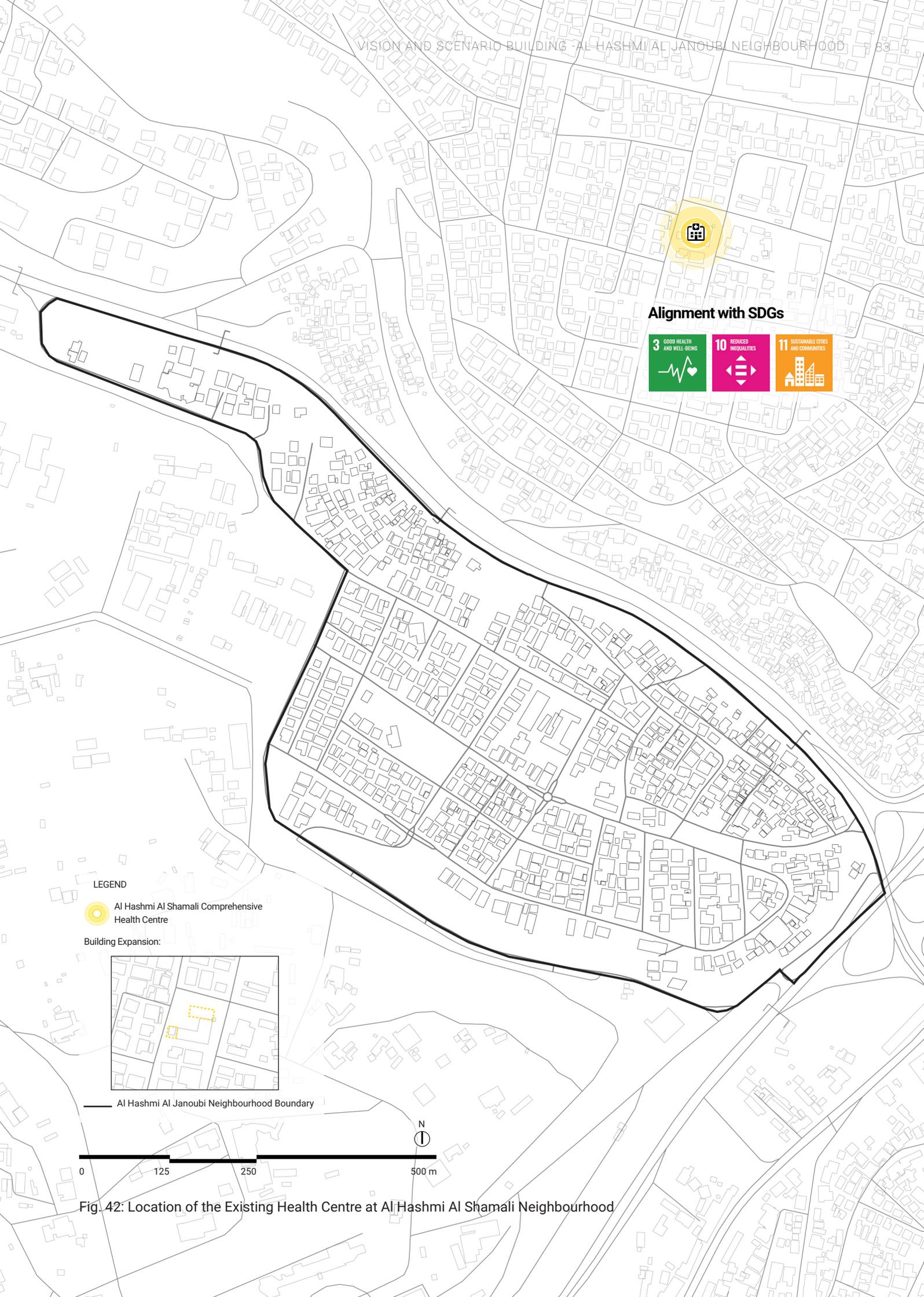


Fig. 41: Existing Staircases at Al Hashmi Al Janoubi



## UPGRADING THE EXISTING AL HASHMI AL SHAMALI COMPREHENSIVE HEALTH CENTRE PROJECT

Actions	Responsible Entity	Year (Quarters)
<b>01</b> Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities	Ministry of Health (MoH)	2023
		2024
		2025
		2026
		2027
<b>02</b> Conduct structural analysis for the existing health centre	Ministry of Health (MoH)	2023
		2024
		2025
		2026
		2027
<b>03</b> Prepare the design RFP for the bidding process and announce the bid. The RFP must include developing the detailed designs for the needed expansion.	MoH	2023
		2024
		2025
		2026
		2027
<b>04</b> Hold the bid evaluation and selection and, accordingly, negotiate and award the contract.	MoH	2023
		2024
		2025
		2026
		2027
<b>05</b> Develop the concept design.	Consultant under the supervision of MoH	2023
		2024
		2025
		2026
		2027
<b>06</b> Finalize the detailed design drawings and obtain needed approvals.	MoH & Consultant	2023
		2024
		2025
		2026
		2027
<b>07</b> Prepare the construction and rehabilitation RFP for the bidding process and announcing the bid. The RFP must include the details of the needed rehabilitation and construction.	MoH & Consultant	2023
		2024
		2025
		2026
		2027
<b>08</b> Hold the bid evaluation and selection and, accordingly, negotiate and award the contract.	MoH & Consultant	2023
		2024
		2025
		2026
		2027
<b>09</b> Implementation of the construction and rehabilitation work	Contractor under the supervision of the MoH & Consultant	2023
		2024
		2025
		2026
		2027
<b>10</b> Operate upgraded health centre	MOH	2023
		2024
		2025
		2026
		2027



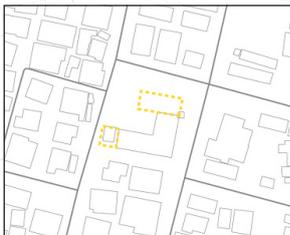
**Alignment with SDGs**



**LEGEND**

 Al Hashmi Al Shamali Comprehensive Health Centre

Building Expansion:



 Al Hashmi Al Janoubi Neighbourhood Boundary

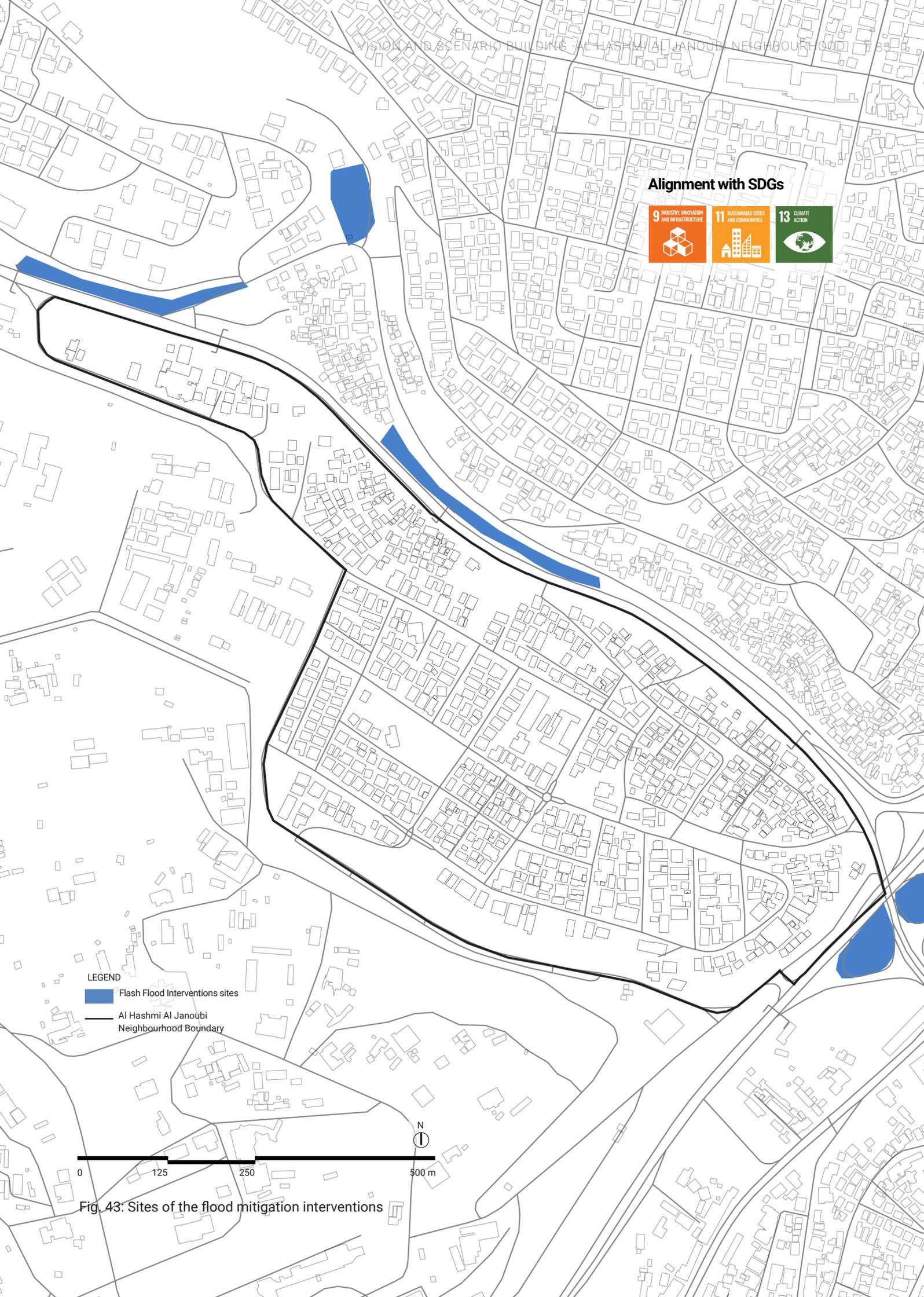


**Fig. 42: Location of the Existing Health Centre at Al Hashmi Al Shamali Neighbourhood**



## IMPLEMENTING FLOOD MITIGATION INTERVENTIONS PROJECT

01	Actions	Responsible Entity	Year (Quarters)																														
01	Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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02	Prepare the design RFP for the bidding process and announce the bid. The RFP must include developing the concept and detailed designs for the 5 flood mitigation interventions' sites.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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03	Hold the bid evaluation and selection and, accordingly, negotiate and award the contract.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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04	Initiate survey work and develop the concept design.	Consultant under the supervision of GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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05	Finalize the detailed design drawings and obtain needed approvals.	Consultant under the supervision of GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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06	Prepare the construction RFP for the bidding process and announce the bid.	GAM & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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07	Hold the bid evaluation and selection and, accordingly, negotiate and award the contract.	GAM & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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08	Implementation of the construction work.	Contractor under the supervision of GAM & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2023</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2024</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2025</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2026</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2027</td></tr> </table>						2023						2024						2025						2026						2027
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**Alignment with SDGs**



**LEGEND**

-  Flash Flood Interventions sites
-  Al Hashmi Al Janoubi Neighbourhood Boundary



Fig. 43: Sites of the flood mitigation interventions

- **Time Frame of the Short Term Phase Actions**

NO.	PROJECT /ACTION
<b>Upgrading the Water and Sewerage Networks in the Critical Areas Project</b>	
 01	Prepare the project budget, mobilize resources, prepare the detailed work plan, and identify the roles
02 & 03	Prepare the design RFP for the bidding process, hold the bid evaluation, and select consultant.
04	Conduct technical assessment and identify the connecting points
05	Prepare and finalize the detailed design drawings
06 & 07	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select consultant.
08	Implementation of the construction work*
<b>Upgrading the Road and Sidewalk Networks in the IDENTIFIED Areas Project</b>	
 01	Prepare the project budget
02	Develop the concept and detailed designs for the roads and sidewalks
03 & 04	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor.
05	Implementation of the construction work*
<b>Transforming Staircases into Accessible Social Steps Project</b>	
 01	Develop the project budget, mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities
02 & 03	Prepare the design RFP for the bidding process, hold the bid evaluation, and select consultant
04	Initiate survey work
05 & 06	Conduct community consultation workshops and develop concept design
07	Finalize detailed design drawings and obtain needed approvals
08	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor
09	Start and finalized construction work
<b>Upgrading the Existing Health Centre Project</b>	
 01	Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities
02	Conduct construction analysis on the existing health centre
03 & 04	Prepare the expansion design RFP for the bidding process, hold the bid evaluation, and select consultant
05	Develop the concept design
06	Finalize the detailed design drawings and obtain needed approvals
07 & 08	Prepare the construction & rehabilitation RFP for the bidding process, hold the bid evaluation, & select contractor
09 & 10	Start and finalize construction and rehabilitation work; & Operate upgraded health centre
<b>Upgrading the Road and Sidewalk Networks in the REMAINING CRITICAL Areas Project</b>	
 01	Prepare the project budget
02	Develop the concept and detailed designs for the roads and sidewalks
03 & 04	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor.
05	Implementation of the construction work*
<b>Implementing Flood Mitigation Interventions Project</b>	
 01	Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities
02 & 03	Preparing the design RFP for the bidding process, hold the bid evaluation, and select consultant
04	Initiate survey work and concept design development
05	Finalize the detailed design drawings and obtain needed approvals
06 & 07	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor.
08	Implementation of the construction work

\* Actions to be coordinated and aligned due to spatial overlap

Table. 3: Action plan for the short term phase (2023-2027).



## Mid-Term Phase (2028 -2032)

The identified projects that can be implemented within the mid-term phase of this optimal scenario action plan include:

- Upgrading the Water and Sewerage Networks in the Remaining Areas
- Upgrading the Road and Sidewalk Networks in the Remaining Areas
- Upgrading the Existing Public Schools
- Encouraging Mixed Use Development
- Rehabilitating the Existing Public Park
- Rehabilitating the Existing Playground

includes upgrading the water and sewerage networks in the remaining areas as well as the road and sidewalk infrastructure in the overlapping areas. Accordingly, the road and sidewalk infrastructure upgrading will begin at the same areas that have been identified for the water and sewerage networks.

This section covers the actions needed for each project and the implementation sequence to follow during the period between 2028 and 2032.

As previously explained, the projects were analysed to detect synergies that could maximise the impact, efficiency, and cost-effectiveness of implementation, and, accordingly, the most economical process for implementing the action plan was identified.

Therefore, spatial-overlaps between projects were identified so that they can be implemented in a gradual order that ensures the optimal utilisation of available resources. This

ICON	PROJECT	MID TERM PHASE (2028-2032)				
		2028	2029	2030	2031	2032
	Upgrading the Water Network in the Remaining Areas	█	█	█	█	
	Upgrading the Sewerage Network in the Remaining Areas	█	█	█	█	
	Upgrading the Road & Sidewalk Networks' in the Remaining Areas	█	█	█		
	Upgrading the Existing Public Schools	█	█	█	█	█
	Encouraging mixed-use development	█				
	Rehabilitating the existing public park	█	█	█	█	
	Rehabilitating the existing playground	█	█	█	█	

Fig. 44: The projects/implementation time-line of the mid term phase

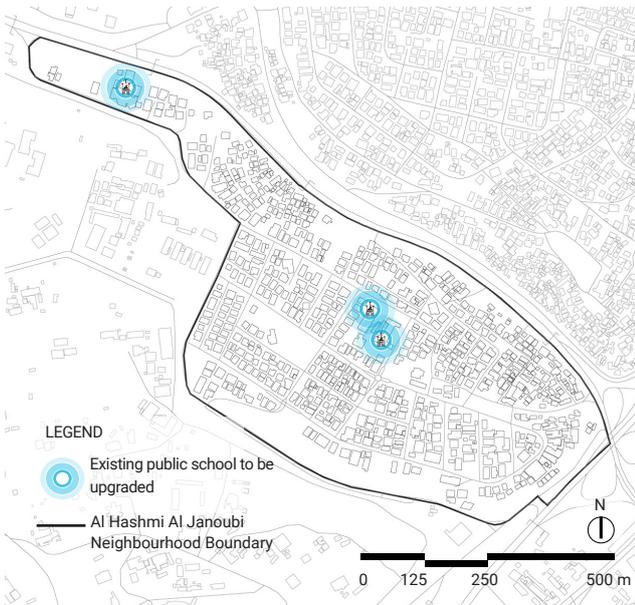


Fig. 45: Existing Public Schools at Al Hashmi Al Janoubi

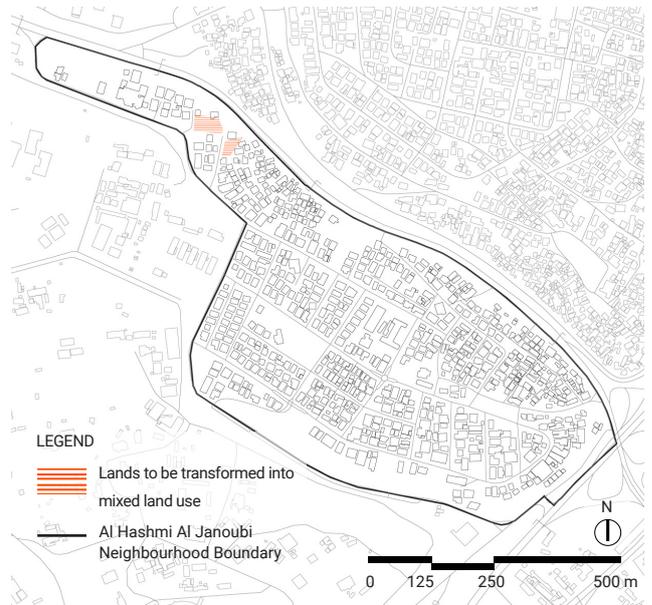


Fig. 48: Areas where the land use must be transformed into Mixed Land Use

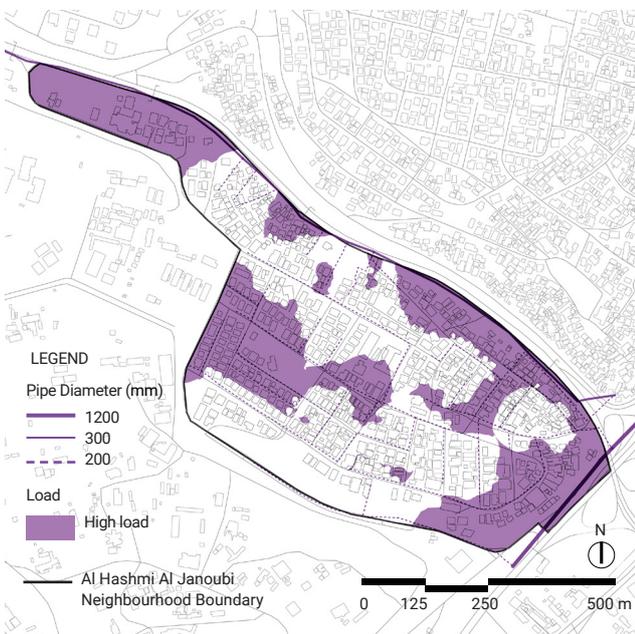


Fig. 46: Sewerage Network Remaining Areas

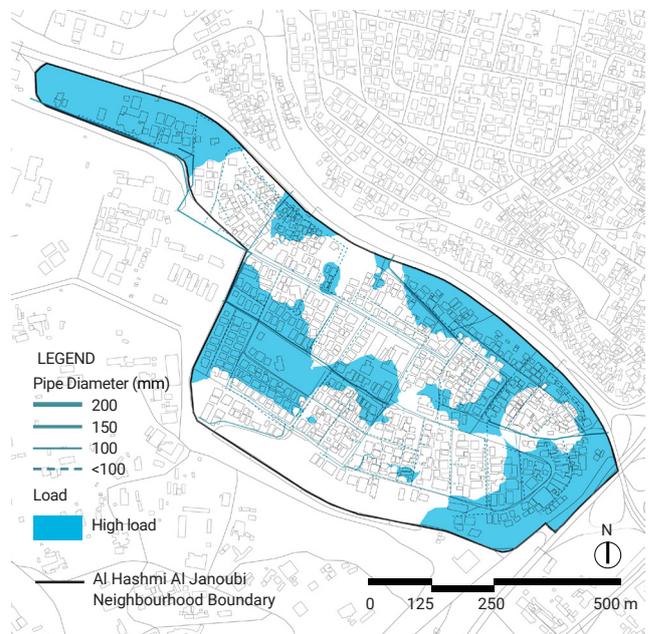


Fig. 49: Water Network Remaining Areas

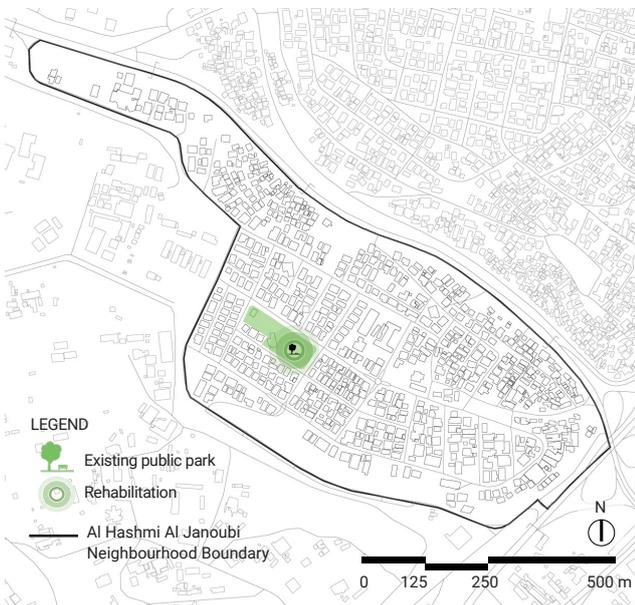


Fig. 47: Location of Existing Public Park

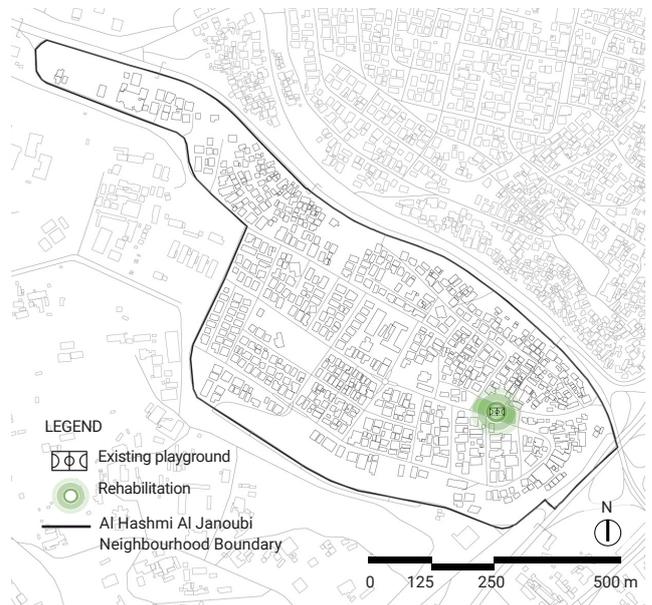


Fig. 50: Location of Existing Playground

- **Actions for the Years 2028-2032**

Throughout the year 2028, it is necessary to prepare the budget and initiate the process of seeking a financier/donor (if needed) to support the implementation of the selected projects.

The pre-construction phase for upgrading the water and sewerage networks in the remaining areas should begin in 2029. This includes preparing the RFP for developing the detailed design for the bidding process, holding the bid evaluation, and selecting a consultant. The consultant, in coordination with the Jordan Water Company (Miyahuna), should then start conducting the needed studies, developing the detailed design drawings, and, upon approval, prepare the construction RFP for the implementation bidding process. After the evaluation and selection of the contractor, the implementation should take place in 2030.

This should be directly followed by the upgrading of the road and sidewalk infrastructure at the same locations, as these projects spatially overlap and excavation works will already need to be undertaken to upgrade the sewerage and water networks, leading to a more cost-efficient development.

Therefore, GAM should start developing the concept and detailed designs for the road and sidewalk infrastructure networks at the overlapping areas with the water and sewerage networks upgrading within the Al Hashmi Al Janoubi neighbourhood. Accordingly, the construction RFP must be prepared to hold the bidding process and select a contractor. The implementation should start in 2030.

To align efforts, regular coordination meetings should be conducted between the Miyahuna and GAM teams.

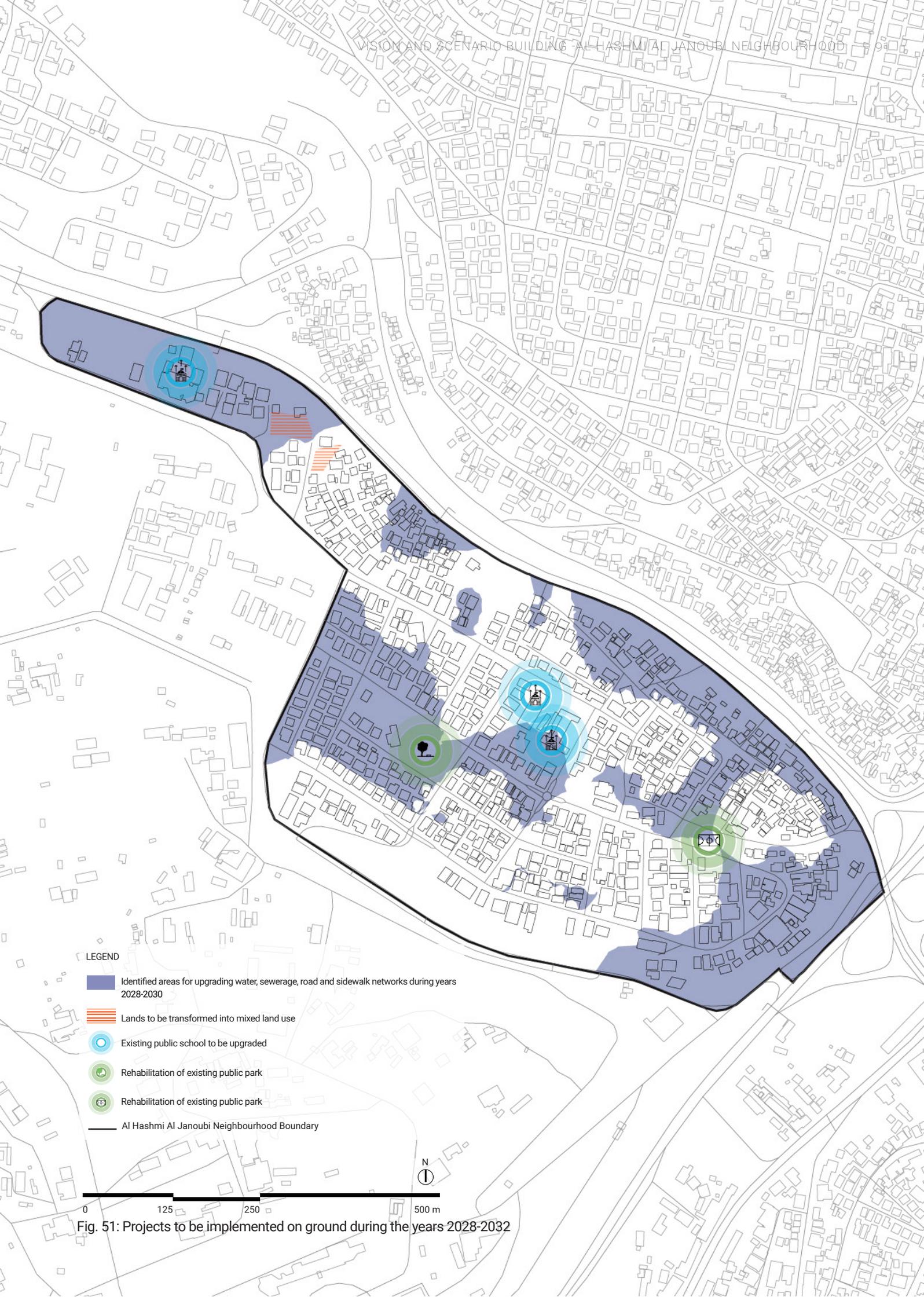
Regarding the upgrading of the existing three public schools in the neighbourhood, the RFP documents should be prepared for the design and construction to rehabilitate and expand the schools in 2029, followed by the actual implementation in 2031. The upgraded existing public schools will be operational by 2032.

As for encouraging the mixed-use development in the identified North-Western area of the neighbourhood shown in the figure, the relevant GAM team should update the existing land use map to re-classify the identified land plots from residential to mixed-land use.

In regard to the rehabilitation of the existing public park

and playground, the relevant GAM team should develop the design RFP in 2029, which includes holding a technical assessment for each of the public spaces, conducting community consultations to identify needs, developing the concept design, and preparing the finalized detailed designs and RFP documents for the construction bidding process. The construction must start in 2031.

The following pages present the breakdown of actions and the proposed timeframe for each project.



LEGEND

- Identified areas for upgrading water, sewerage, road and sidewalk networks during years 2028-2030
- Lands to be transformed into mixed land use
- Existing public school to be upgraded
- Rehabilitation of existing public park
- Rehabilitation of existing public park
- Al Hashmi Al Janoubi Neighbourhood Boundary

0 125 250 500 m



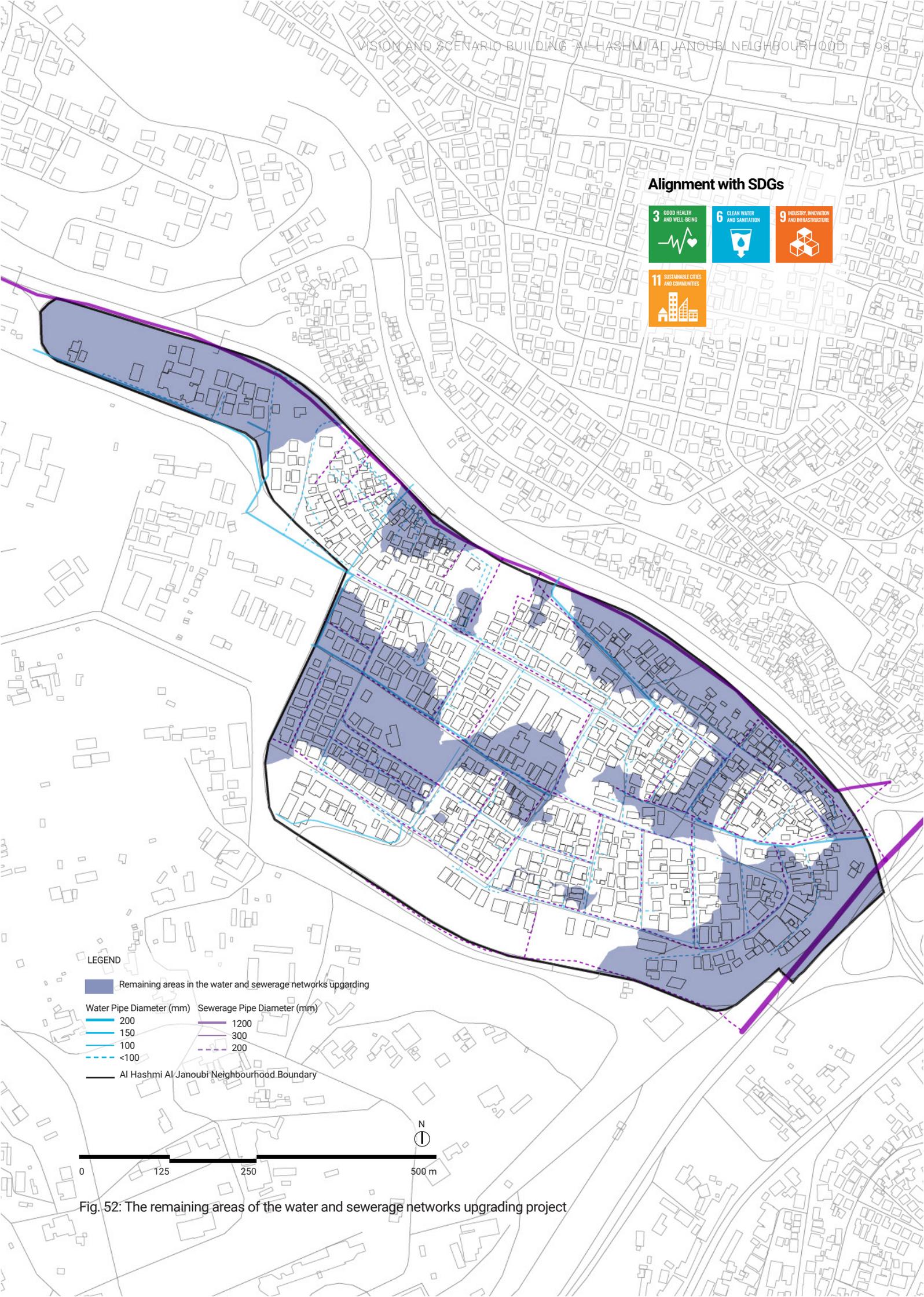
Fig. 51: Projects to be implemented on ground during the years 2028-2032



## UPGRADING THE REMAINING AREAS OF THE WATER AND SEWERAGE NETWORKS

Actions	Responsible Entity	Year (Quarters)																								
<b>01</b> Prepare the project budget, mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities	Miyahuna, in coordination with MOWI & WAJ	<table border="1"> <tr><td colspan="4">2028</td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>	2028																							
2028																										
<b>02</b> Prepare the Design and Supervision RFP for the bidding process of the networks and conveyor lines and to expand the purification stations connected to them (if necessary) & announce the bid. The RFP must include conducting a detailed technical assessment, conducting an environmental impact assessment, identifying needed pipes' specifications, including pipe diameter and material for the upgrading of the existing networks, developing the design, and preparing the construction RFP.	Miyahuna, in coordination with MOWI & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																								
<b>03</b> Hold the bid evaluation and selection, and, accordingly, negotiate and award the contract.	Miyahuna, in coordination with MOWI & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																								
<b>04</b> Conduct a detailed technical assessment for the water and sewerage networks in Al Hashmi Al Janoubi neighbourhood and identify the connecting points	Consultant under the supervision of Miyahuna, MOWI, & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																								
<b>05</b> Prepare and finalize the detailed design drawings for upgrading of the water and sewerage networks at the remaining areas and gain the needed approvals	Consultant under the supervision of Miyahuna, MOWI, & WAJ	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																								
<b>06</b> Prepare the construction RFP for the bidding process and announce the bid.	Miyahuna in coordination with MOWI & WAJ, & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																								
<b>07</b> Hold the bid evaluation and selection, and, accordingly, negotiate and award the contract.	Miyahuna in coordination with MOWI & WAJ, & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																								
<b>08</b> Implementation of the construction work*	Contractor under the supervision of Miyahuna, MOWI, WAJ & Consultant	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																								

\* The upgrading work of the water and sewerage networks should be coordinated with the upgrade of the roads and sidewalks.



**Alignment with SDGs**

3 GOOD HEALTH AND WELL-BEING

6 CLEAN WATER AND SANITATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

**LEGEND**

- Remaining areas in the water and sewerage networks upgrading
- | Water Pipe Diameter (mm)  | Sewerage Pipe Diameter (mm)  |
|---|--|
| <span style="display: inline-block; width: 20px; height: 2px; background-color: #00a0e3; border: 1px solid black; margin-right: 5px;"></span> 200 | <span style="display: inline-block; width: 20px; height: 2px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 1200 |
| <span style="display: inline-block; width: 20px; height: 2px; background-color: #00a0e3; border: 1px solid black; margin-right: 5px;"></span> 150 | <span style="display: inline-block; width: 20px; height: 2px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 300  |
| <span style="display: inline-block; width: 20px; height: 2px; background-color: #00a0e3; border: 1px solid black; margin-right: 5px;"></span> 100 | <span style="display: inline-block; width: 20px; height: 2px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> 200  |
| <span style="display: inline-block; width: 20px; height: 2px; border-bottom: 1px dashed black; margin-right: 5px;"></span> <100                   |  |
- Al Hashmi Al Janoubi Neighbourhood Boundary

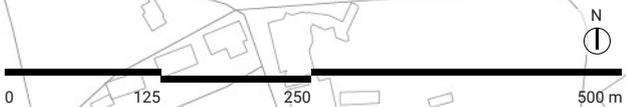


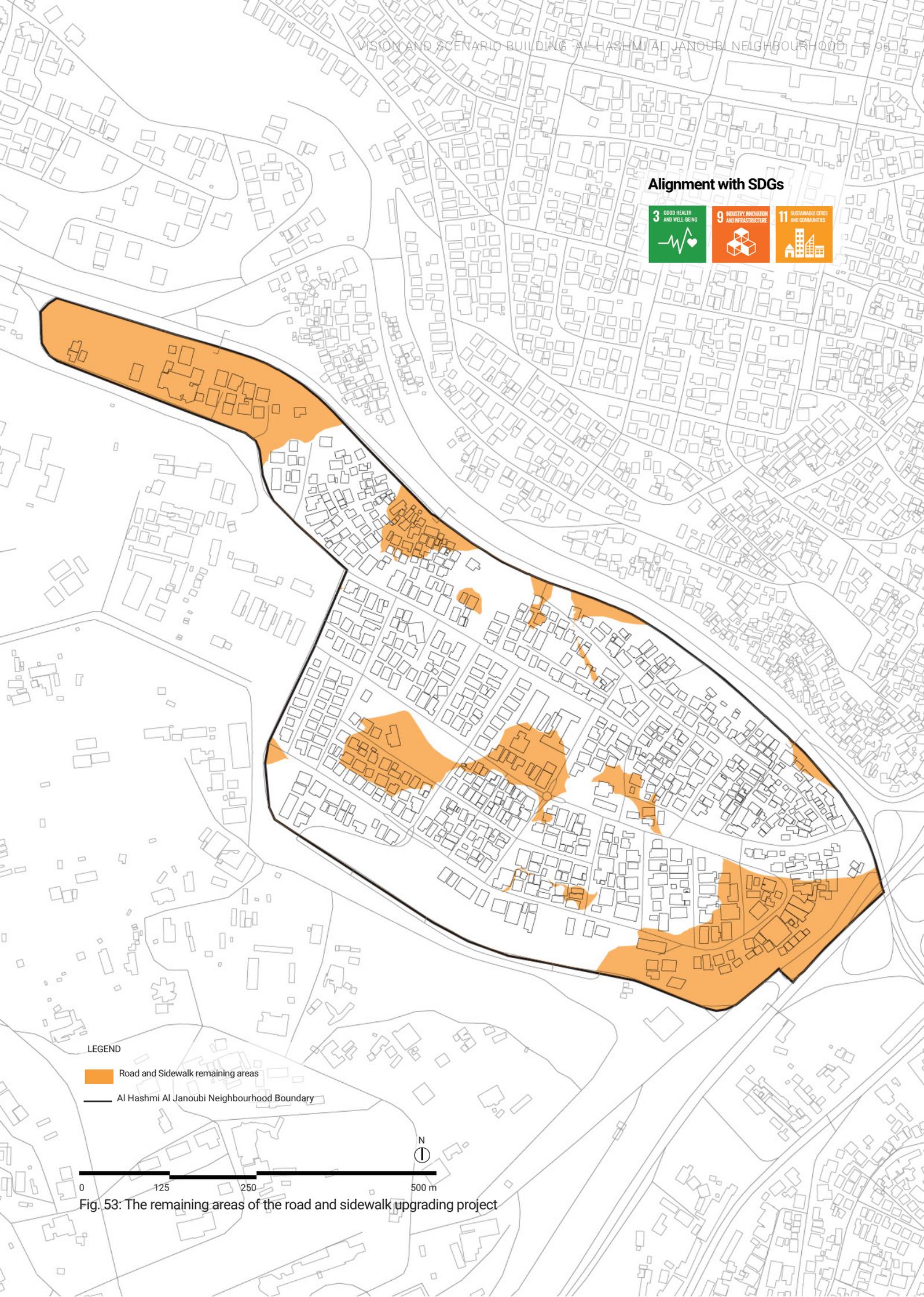
Fig. 52: The remaining areas of the water and sewerage networks upgrading project

## UPGRADING THE ROAD AND SIDEWALK NETWORKS IN THE REMAINING AREAS PROJECT

Actions	Responsible Entity	Year (Quarters)																														
<b>01</b> Prepare the project budget for the remaining areas that overlap with the remaining water and sewerage areas.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2028</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2029</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2030</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2031</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2032</td></tr> </table>						2028						2029						2030						2031						2032
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<b>02</b> Develop the concept and detailed design for the roads and sidewalks to be inclusive and sustainable, e.g. using porous material to assist in mitigating the climate change impact and including ramps.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2028</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2029</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2030</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2031</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2032</td></tr> </table>						2028						2029						2030						2031						2032
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<b>03</b> Prepare the construction RFP for the bidding process and announce the bid.	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2028</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2029</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2030</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2031</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2032</td></tr> </table>						2028						2029						2030						2031						2032
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<b>04</b> Hold the bid evaluation and selection, and, accordingly, negotiate and award the contract..	GAM	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2028</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2029</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2030</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2031</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2032</td></tr> </table>						2028						2029						2030						2031						2032
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<b>05</b> Implementation of the construction work*	Contractor under GAM's supervision	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2028</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2029</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2030</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2031</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2032</td></tr> </table>						2028						2029						2030						2031						2032
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\* The upgrading work of the roads and sidewalks should be coordinated with the upgrade of water and sewerage networks.

Alignment with SDGs



LEGEND

-  Road and Sidewalk remaining areas
-  Al Hashmi Al Janoubi Neighbourhood Boundary



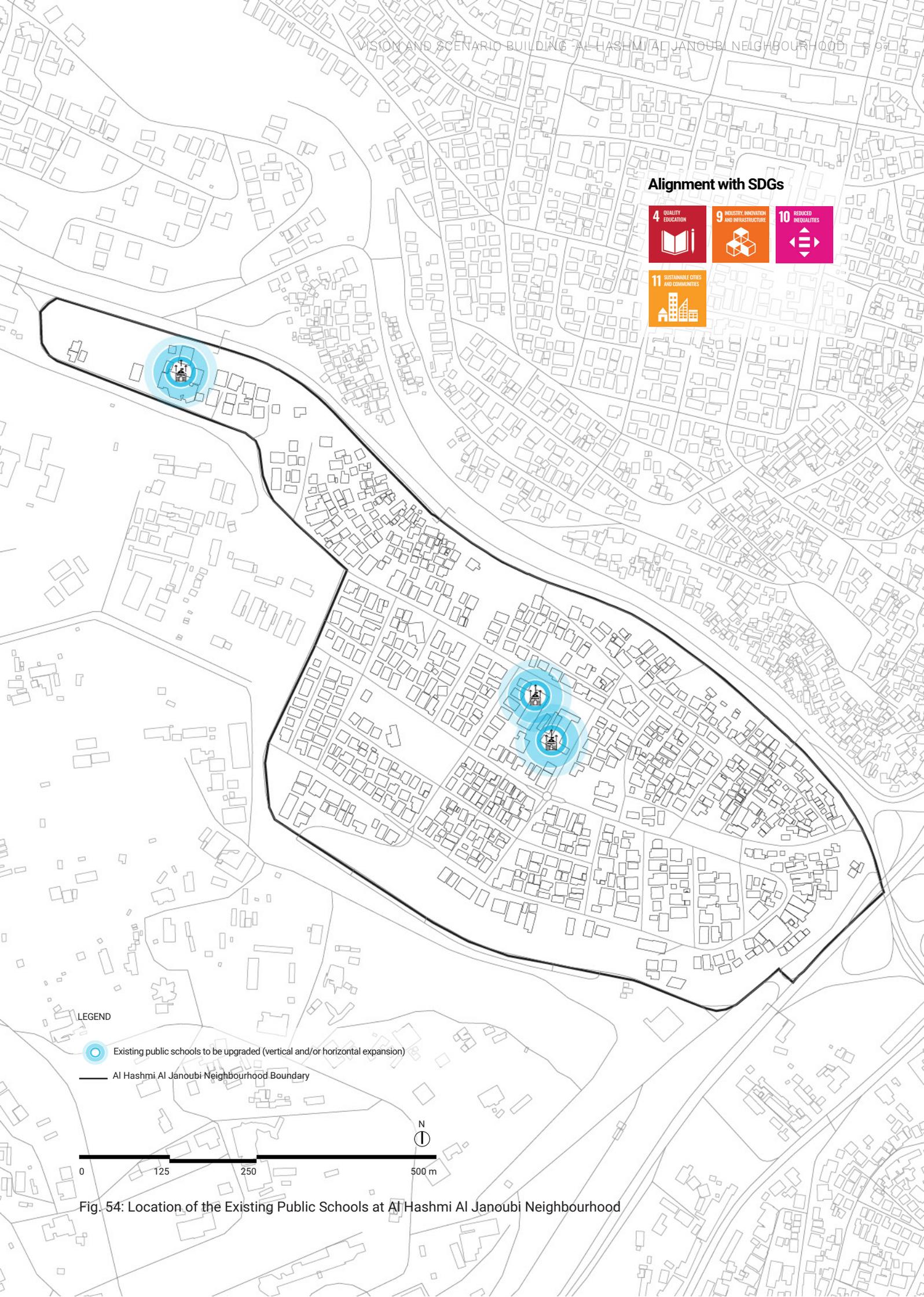
Fig. 53: The remaining areas of the road and sidewalk upgrading project



## UPGRADING THE EXISTING PUBLIC SCHOOLS PROJECT

Actions	Responsible Entity	Year (Quarters)
<b>01</b> Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities.	Ministry of Education (MoE)	2028
		2029
		2030
		2031
		2032
<b>02</b> Prepare the design RFP for the bidding process and announce the bid. The RFP must include developing the concept and detailed designs for the needed expansion.	MoE	2028
		2029
		2030
		2031
		2032
<b>03</b> Hold the bid evaluation and selection, and, accordingly, negotiate and award the contract.	MoE	2028
		2029
		2030
		2031
		2032
<b>04</b> Develop the concept design.	Consultant under the supervision of MoE	2028
		2029
		2030
		2031
		2032
<b>05</b> Finalize the detailed design drawings and gain the needed approvals.	MoE & Consultant	2028
		2029
		2030
		2031
		2032
<b>06</b> Prepare the construction and rehabilitation RFP for the bidding process and announce the bid. The RFP must include the details of the needed rehabilitation and construction.	MoE & Consultant	2028
		2029
		2030
		2031
		2032
<b>07</b> Hold the bid evaluation and selection, and, accordingly, negotiate and award the contract.	MoE & Consultant	2028
		2029
		2030
		2031
		2032
<b>08</b> Implementation of the construction and rehabilitation work	Contractor under the supervision of the MoE & Consultant	2028
		2029
		2030
		2031
		2032
<b>09</b> Operate upgraded public schools	MoE	2028
		2029
		2030
		2031
		2032

### Alignment with SDGs



#### LEGEND

- Existing public schools to be upgraded (vertical and/or horizontal expansion)
- Al Hashmi Al Janoubi Neighbourhood Boundary

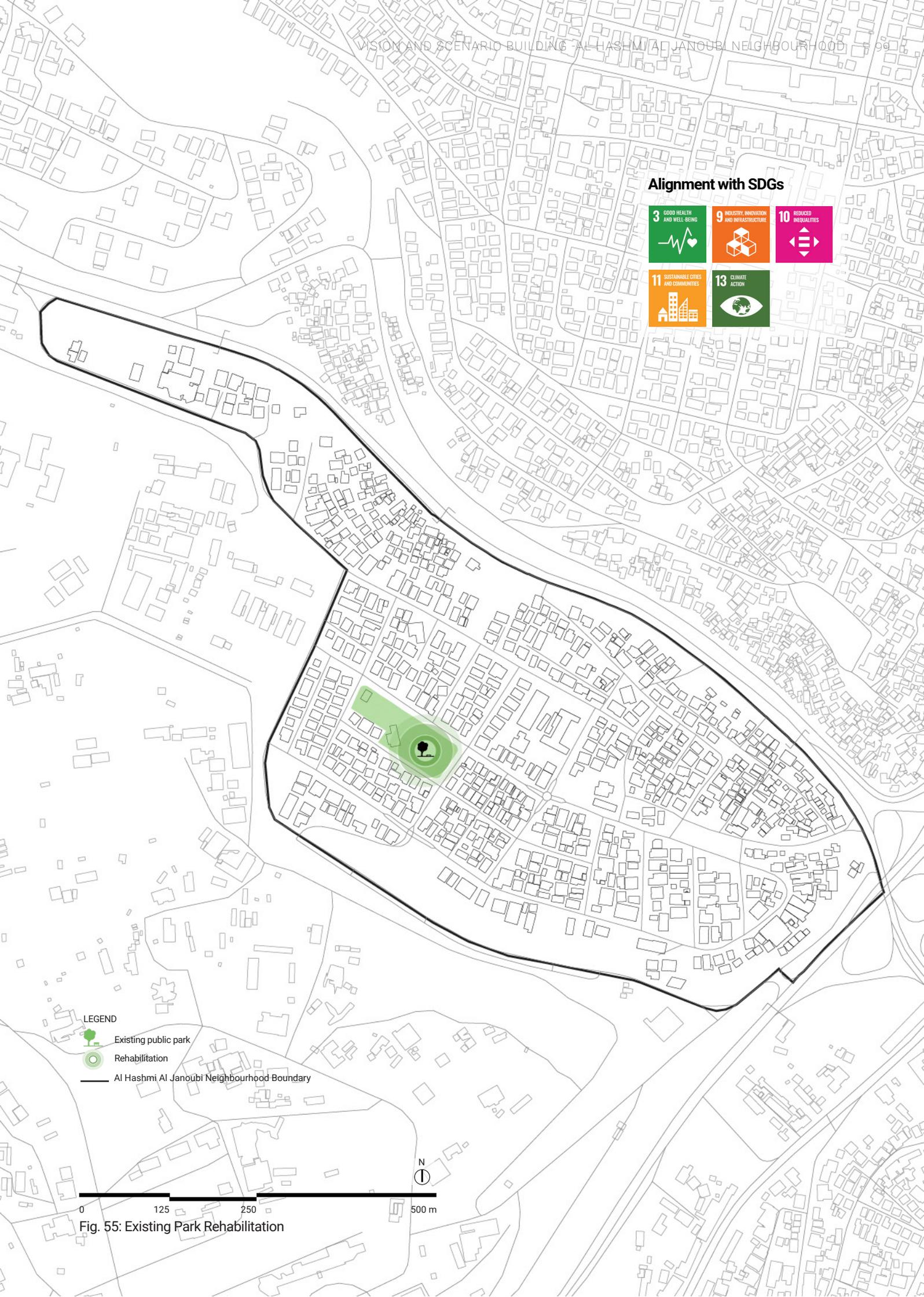


Fig. 54: Location of the Existing Public Schools at Al Hashmi Al Janoubi Neighbourhood



## REHABILITATING THE EXISTING PUBLIC PARK

Actions	Responsible Entity	Year (Quarters)																									
<b>01</b> Prepare the project budget , mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities.	GAM	<table border="1"> <tr><td colspan="4">█</td><td>2028</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2029</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2030</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2031</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2032</td></tr> </table>	█				2028	□	□	□	□	2029	□	□	□	□	2030	□	□	□	□	2031	□	□	□	□	2032
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<b>02</b> Prepare the Design RFP for the bidding process and announce the bid. The RFP must include conducting a technical assessment in a participatory manner with the local community, developing the concept and detailed design drawings for rehabilitating the existing park, and preparing the construction RFP.	GAM	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2028</td></tr> <tr><td>█</td><td>□</td><td>□</td><td>□</td><td>2029</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2030</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2031</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2032</td></tr> </table>	□	□	□	□	2028	█	□	□	□	2029	□	□	□	□	2030	□	□	□	□	2031	□	□	□	□	2032
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<b>03</b> Hold the bid evaluation and selection and accordingly negotiate and award the contract.	GAM	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2028</td></tr> <tr><td>□</td><td>█</td><td>□</td><td>□</td><td>2029</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2030</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2031</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2032</td></tr> </table>	□	□	□	□	2028	□	█	□	□	2029	□	□	□	□	2030	□	□	□	□	2031	□	□	□	□	2032
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<b>04</b> Conduct technical assessment and community consultation sessions to identify challenges, needs, and opportunities. Prepare and validate the concept design with the key stakeholders and the local community.	Consultant under the supervision of GAM	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2028</td></tr> <tr><td>□</td><td>█</td><td>□</td><td>□</td><td>2029</td></tr> <tr><td>█</td><td>□</td><td>□</td><td>□</td><td>2030</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2031</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2032</td></tr> </table>	□	□	□	□	2028	□	█	□	□	2029	█	□	□	□	2030	□	□	□	□	2031	□	□	□	□	2032
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<b>05</b> Prepare and finalize the detailed design drawings for the rehabilitation of the existing park and obtain the needed approvals	Consultant under the supervision of GAM	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2028</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2029</td></tr> <tr><td>□</td><td>█</td><td>□</td><td>□</td><td>2030</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2031</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2032</td></tr> </table>	□	□	□	□	2028	□	□	□	□	2029	□	█	□	□	2030	□	□	□	□	2031	□	□	□	□	2032
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<b>06</b> Prepare the construction RFP for the bidding process and announce the bid.	Consultant under the supervision of GAM	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2028</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2029</td></tr> <tr><td>□</td><td>□</td><td>█</td><td>□</td><td>2030</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2031</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2032</td></tr> </table>	□	□	□	□	2028	□	□	□	□	2029	□	□	█	□	2030	□	□	□	□	2031	□	□	□	□	2032
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<b>07</b> Hold the bid evaluation and selection and accordingly negotiate and award the contract.	GAM & Consultant	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2028</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2029</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2030</td></tr> <tr><td>█</td><td>□</td><td>□</td><td>□</td><td>2031</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2032</td></tr> </table>	□	□	□	□	2028	□	□	□	□	2029	□	□	□	□	2030	█	□	□	□	2031	□	□	□	□	2032
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### Alignment with SDGs

<b>3</b> GOOD HEALTH AND WELL-BEING	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE	<b>10</b> REDUCED INEQUALITIES
<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES	<b>13</b> CLIMATE ACTION	

#### LEGEND

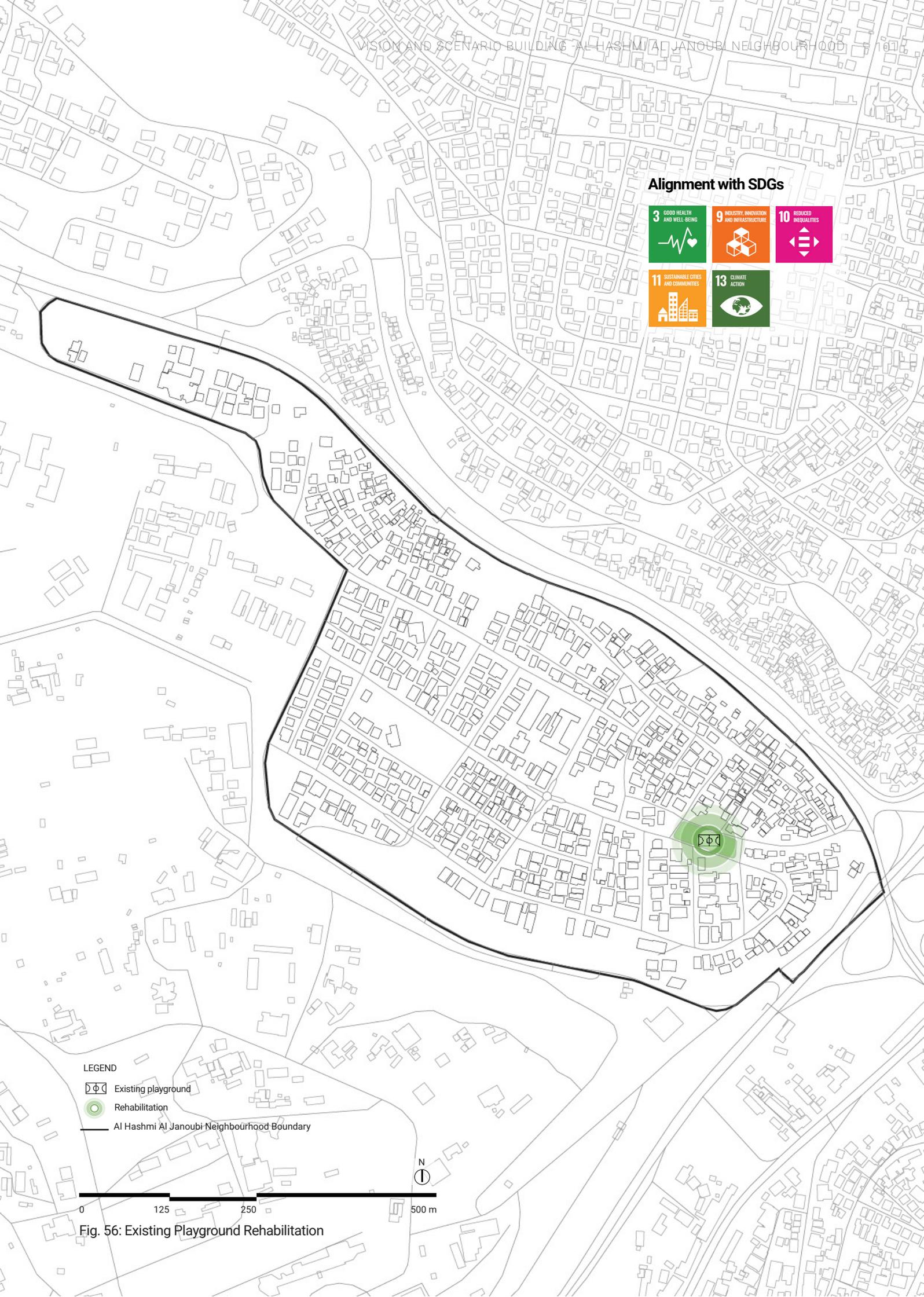
- Existing public park
- Rehabilitation
- Al Hashmi Al Janoubi Neighbourhood Boundary

0 125 250 500 m

Fig. 55: Existing Park Rehabilitation



Alignment with SDGs



LEGEND

-  Existing playground
-  Rehabilitation
-  Al Hashmi Al Janoubi Neighbourhood Boundary



0 125 250 500 m

Fig. 56: Existing Playground Rehabilitation

- **Mid Term Phase Actions/Time Frame**

NO.	PROJECT /ACTION
	<b>Upgrading the Water and Sewerage Networks' in the REMAINING Areas Project</b>
01	Prepare the project budget, mobilize resources, prepare the detailed work plan, and identify the roles
02 & 03	Prepare the design RFP for the bidding process, hold the bid evaluation, and select consultant.
04	Conduct technical assessment and identify connecting points
05	Prepare and finalize the detailed design drawings
06 & 07	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor.
08	Implementation of the construction work*
	<b>Upgrading the Road and Sidewalk Networks in the REMAINING Areas Project</b>
01	Prepare the project budget
02	Develop the concept and detailed designs for the roads and sidewalks
03 & 04	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor.
05	Implementation of the construction work*
	<b>Upgrading the Existing Public Schools Project</b>
01	Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities
02 & 03	Prepare the expansion design RFP for the bidding process, hold the bid evaluation, and select consultant
04	Develop the concept design
05	Finalize the detailed design drawings and obtain needed approvals
06 & 07	Prepare the construction & rehabilitation RFP, hold the bid evaluation, & select contractor
08	Start and finalize construction and rehabilitation work; & Operate upgraded public schools
	<b>Encouraging Mixed Use Development Project</b>
01	Transform the existing land use of the identified areas from residential to mixed use
	<b>Rehabilitating the Existing Public Park Project</b>
01	Prepare the project budget, mobilize resources, prepare the detailed work plan, and identify the roles
02 & 03	Prepare the design RFP for the bidding process, hold the bid evaluation, and select consultant.
04	Conduct technical assessment, conduct community consultation sessions, and develop concept
05	Prepare and validate the concept design with the key stakeholders and the local community
06	Prepare and finalize the detailed design drawings
07 & 08	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor.
09	Implementation of the construction work
	<b>Rehabilitating the Existing Playground Project</b>
01	Prepare the project budget, mobilize resources, prepare the detailed work plan, and identify the roles
02 & 03	Prepare the design RFP for the bidding process, hold the bid evaluation, and select consultant.
04	Conduct technical assessment, conduct community consultation sessions, and develop concept
05	Prepare and validate the concept design with the key stakeholders and the local community
06	Prepare and finalize the detailed design drawings
07 & 08	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor.
09	Implementation of the construction work

\* Actions to be coordinated and aligned due to spatial overlap

Table. 4: Action plan for the mid term phase (2028-2032).



## Long-Term Phase (2033 -2037)

The identified projects that can be implemented within the long-term phase of this optimal scenario action plan include:

- Constructing a new public school.
- Improving residential buildings in critical and substandard conditions.

This section covers the actions needed for each project and the implementation sequence to follow during the period between 2033 and 2037.

Throughout the year 2033, the budget should be prepared to start mobilizing resources and seeking a financier/donor (if needed) to support the implementation of the above mentioned projects. This includes securing the needed land plots for the school construction project.

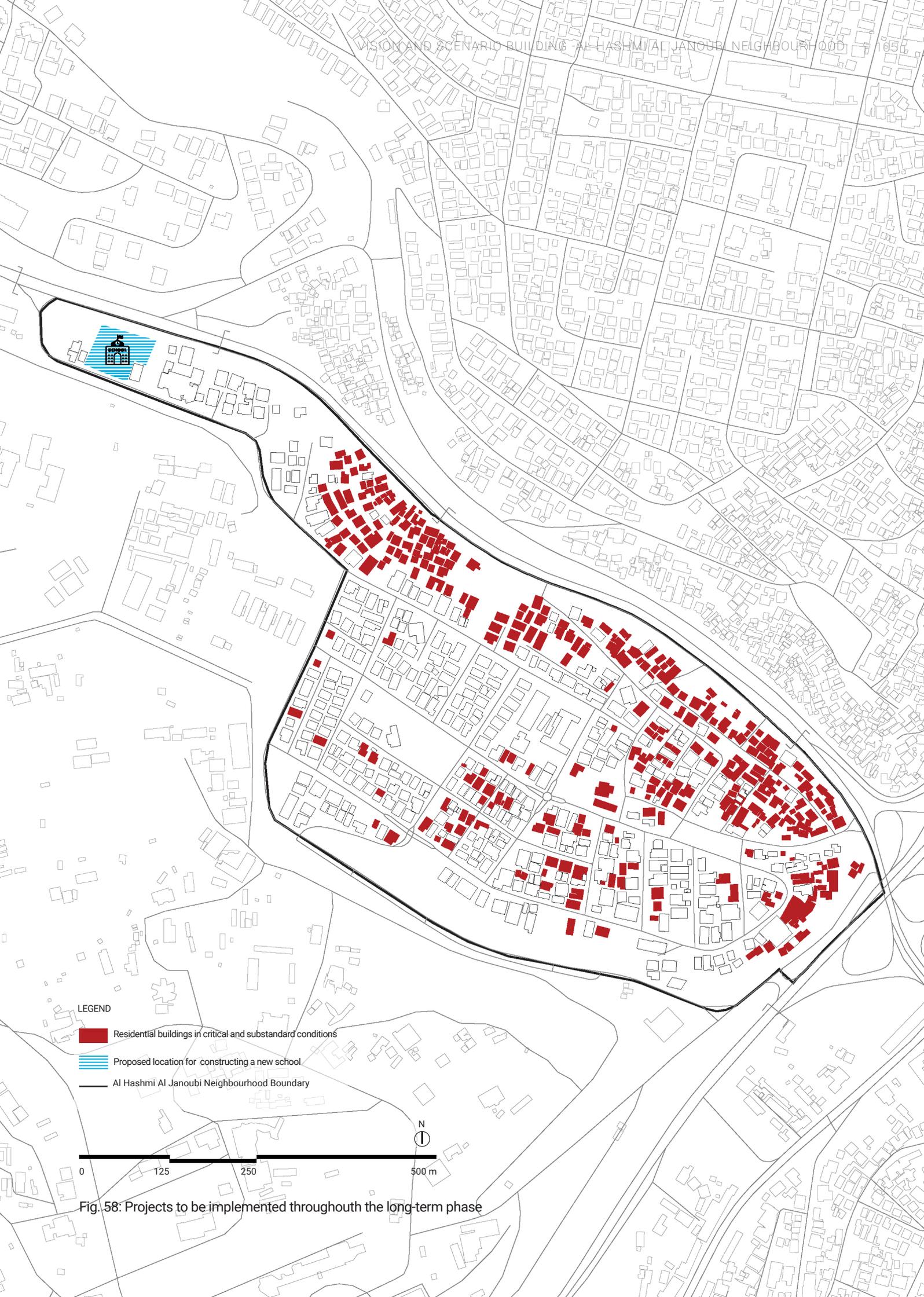
The pre-construction phase for improving the residential buildings and constructing the school should begin in 2034. This includes preparing the RFP for developing the concept and detailed design for the bidding process, holding the bid evaluation, and selecting a consultant. The consultant, in coordination with the relevant entity, should then start conducting the needed studies, developing the concept and detailed design drawings, and, upon approval, preparing the construction RFP for the implementation bidding process. After the evaluation and selection of the contractor, the implementation should take place between 2036 and 2037. The constructed school should be operational in 2037. It is worth noting here that the actions for improving the residential buildings in critical and substandard conditions must include community consultation sessions to engage the residents throughout the project process, which will

support the identification of the needs, challenges, and available opportunities, as well as the development of the design. The estimated number of beneficiaries of the project are around 4000 inhabitants.

The following pages present the breakdown of actions and the proposed time frame for each project.

ICON	PROJECT	LONG TERM PHASE (2033-2037)				
		2033	2034	2035	2036	2037
	Constructing a new school					
	Improving residential buildings in critical and substandard conditions					

Fig. 57: The projects/implementation time-line of the long term phase



LEGEND

- Residential buildings in critical and substandard conditions
- Proposed location for constructing a new school
- Al Hashmi Al Janoubi Neighbourhood Boundary

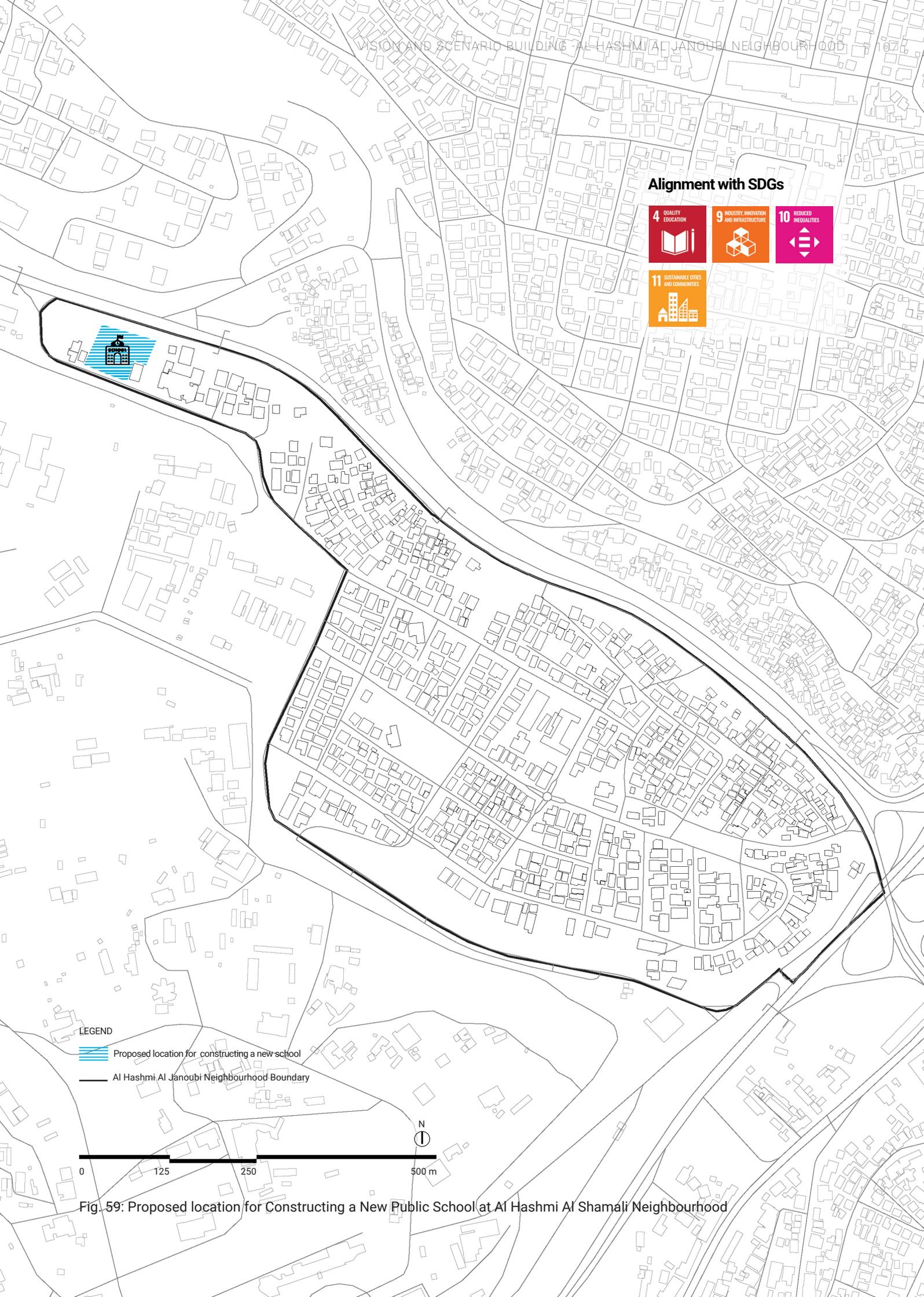


Fig. 58: Projects to be implemented throughout the long-term phase



## CONSTRUCTING A NEW PUBLIC SCHOOL PROJECT

Actions	Responsible Entity	Year (Quarters)																									
<b>01</b> Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities	Ministry of Education (MOE)	<table border="1"> <tr><td colspan="4">■</td><td>2033</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	■				2033	□	□	□	□	2034	□	□	□	□	2035	□	□	□	□	2036	□	□	□	□	2037
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<b>02</b> Prepare the design RFP for the bidding process and announce the bid. The RFP must include developing the concept and detailed designs.	MOE	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>■</td><td>□</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	■	□	□	□	2034	□	□	□	□	2035	□	□	□	□	2036	□	□	□	□	2037
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<b>03</b> Hold the bid evaluation and selection and accordingly negotiate and award the contract.	MOE	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>□</td><td>■</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	□	■	□	□	2034	□	□	□	□	2035	□	□	□	□	2036	□	□	□	□	2037
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<b>04</b> Develop the concept design.	Consultant under the supervision of MOE	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>□</td><td>□</td><td>■</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	□	□	■	□	2034	□	□	□	□	2035	□	□	□	□	2036	□	□	□	□	2037
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<b>05</b> Finalize the detailed design drawings and obtain needed approvals.	MOE & Consultant	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>■</td><td>□</td><td>□</td><td>□</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	□	□	□	□	2034	■	□	□	□	2035	□	□	□	□	2036	□	□	□	□	2037
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<b>06</b> Prepare the construction RFP for the bidding process and announcing the bid.	MOE & Consultant	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>■</td><td>□</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	□	□	□	□	2034	□	□	■	□	2035	□	□	□	□	2036	□	□	□	□	2037
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<b>07</b> Hold the bid evaluation and selection and accordingly negotiate and award the contract.	MOE & Consultant	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>■</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	□	□	□	□	2034	□	□	□	■	2035	□	□	□	□	2036	□	□	□	□	2037
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<b>08</b> Implementation of the construction work	Contractor under the supervision of the MOE & Consultant	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2035</td></tr> <tr><td colspan="4">■</td><td>2036</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	□	□	□	□	2034	□	□	□	□	2035	■				2036	□	□	□	□	2037
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<b>09</b> Operate new school	MOE	<table border="1"> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2033</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2034</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2035</td></tr> <tr><td>□</td><td>□</td><td>□</td><td>□</td><td>2036</td></tr> <tr><td>■</td><td>□</td><td>□</td><td>□</td><td>2037</td></tr> </table>	□	□	□	□	2033	□	□	□	□	2034	□	□	□	□	2035	□	□	□	□	2036	■	□	□	□	2037
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**Alignment with SDGs**



**LEGEND**

 Proposed location for constructing a new school

 Al Hashmi Al Janoubi Neighbourhood Boundary



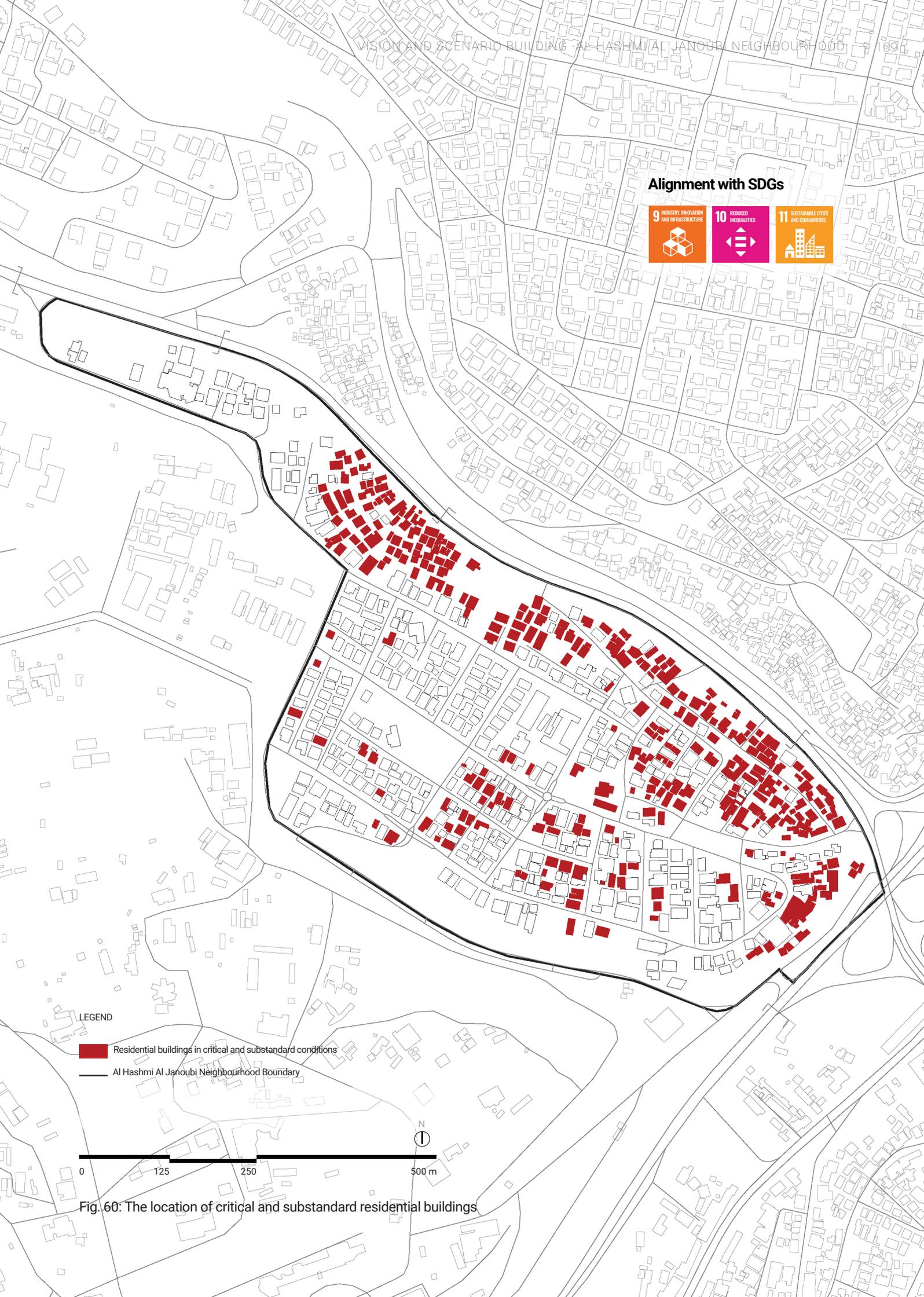
**Fig. 59: Proposed location for Constructing a New Public School at Al Hashmi Al Shamali Neighbourhood**



## IMPROVING RESIDENTIAL BUILDINGS IN CRITICAL AND SUB-STANDARD CONDITIONS PROJECT

Actions	Responsible Entity	Year (Quarters)																														
<b>01</b> Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities.	Responsible Committee from relevant governmental entities and the donor	<table border="1"> <tr><td>█</td><td></td><td></td><td></td><td></td><td>2033</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2034</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2035</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2036</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2037</td></tr> </table>	█					2033						2034						2035						2036						2037
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<b>02</b> Prepare the design RFP for the bidding process and announce the bid. The RFP must include developing the concept and detailed design	Responsible Committee from relevant governmental entities and the donor	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2033</td></tr> <tr><td>█</td><td></td><td></td><td></td><td></td><td>2034</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2035</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2036</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2037</td></tr> </table>						2033	█					2034						2035						2036						2037
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<b>03</b> Hold the bid evaluation and selection and accordingly negotiate and award the contract.	Responsible Committee from relevant governmental entities and the donor	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2033</td></tr> <tr><td></td><td>█</td><td></td><td></td><td></td><td>2034</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2035</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2036</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2037</td></tr> </table>						2033		█				2034						2035						2036						2037
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<b>04</b> Conduct the technical assessment and community consultation sessions to identify the needs, challenges, and opportunities	Consultant under the supervision of the responsible Committee from relevant governmental entities and the donor	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2033</td></tr> <tr><td></td><td></td><td>█</td><td></td><td></td><td>2034</td></tr> <tr><td>█</td><td></td><td></td><td></td><td></td><td>2035</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2036</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2037</td></tr> </table>						2033			█			2034	█					2035						2036						2037
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<b>05</b> Develop the concept design, conduct community consultation sessions, and gain the needed approvals.	Consultant under the supervision of the responsible Committee from relevant governmental entities and the donor	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2033</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2034</td></tr> <tr><td></td><td></td><td>█</td><td></td><td></td><td>2035</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2036</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2037</td></tr> </table>						2033						2034			█			2035						2036						2037
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<b>09</b> Implementation of the construction work.	Contractor under the supervision of the the responsible Committee from relevant governmental entities and the donor	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>2033</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2034</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2035</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>2036</td></tr> <tr><td>█</td><td></td><td></td><td></td><td></td><td>2037</td></tr> </table>						2033						2034						2035						2036	█					2037
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Alignment with SDGs



LEGEND

-  Residential buildings in critical and substandard conditions
-  Al Hashmi Al Janoubi Neighbourhood Boundary

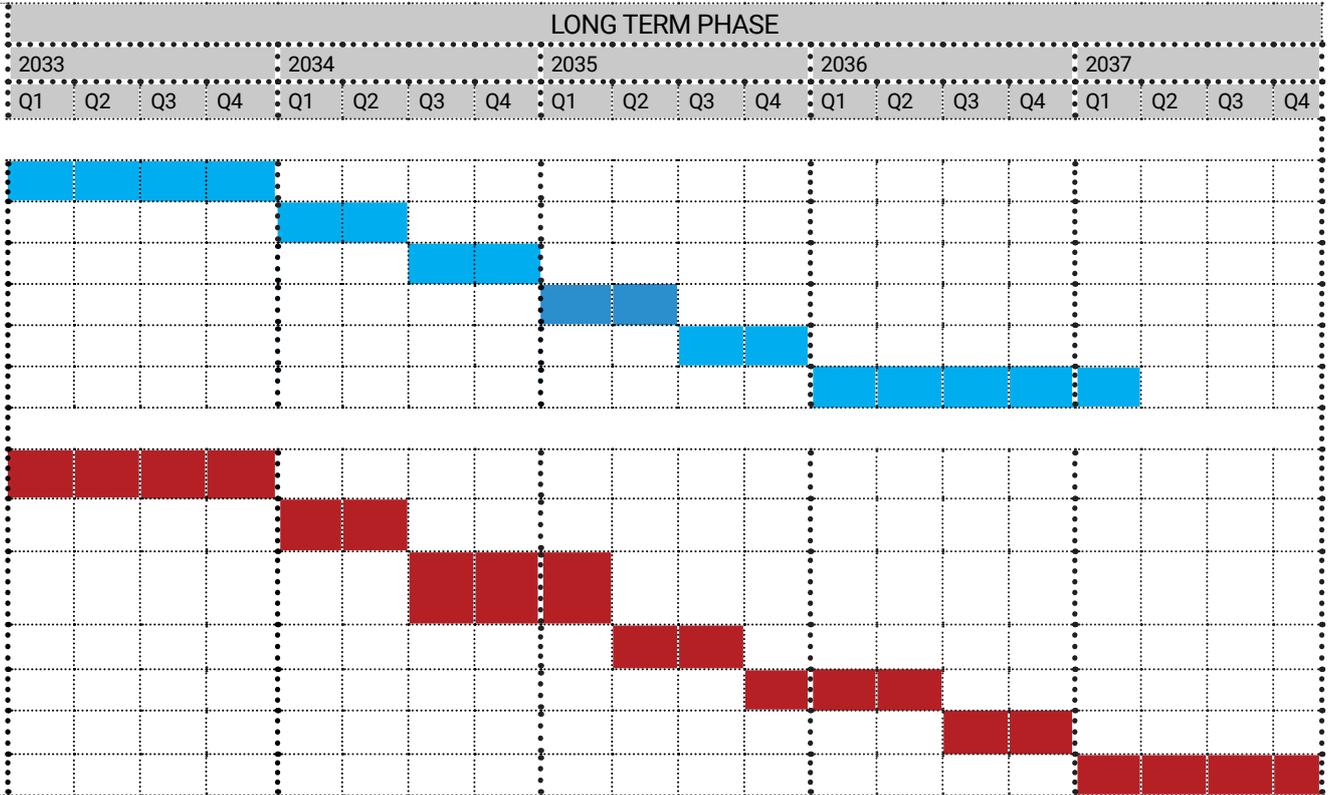


Fig. 60: The location of critical and substandard residential buildings

- **Long Term Phase Actions/Time Frame**

NO.	PROJECT /ACTION
	<b>Constructing a New School Project</b>
01	Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities
02 & 03	Prepare the design RFP for the bidding process, hold the bid evaluation, and select consultant
04	Develop the concept design
05	Finalize the detailed design drawings and obtain needed approvals
06 & 07	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor
08 & 09	Implementation of the construction work ; & Operate new school
	<b>Improving Residential Buildings in Critical and Substandard Conditions Project</b>
01	Mobilize resources, prepare the detailed work plan, and identify the roles and responsibilities
02 & 03	Prepare the design RFP for the bidding process, hold the bid evaluation, and select consultant
04	Conduct the technical assessment and community consultation sessions to identify needs, challenges, and opportunities
05	Develop the concept design, conduct community consultation sessions, and obtain needed approvals.
06	Finalize the detailed design drawings
07 & 08	Prepare the construction RFP for the bidding process, hold the bid evaluation, & select contractor
09	Implementation of the construction work

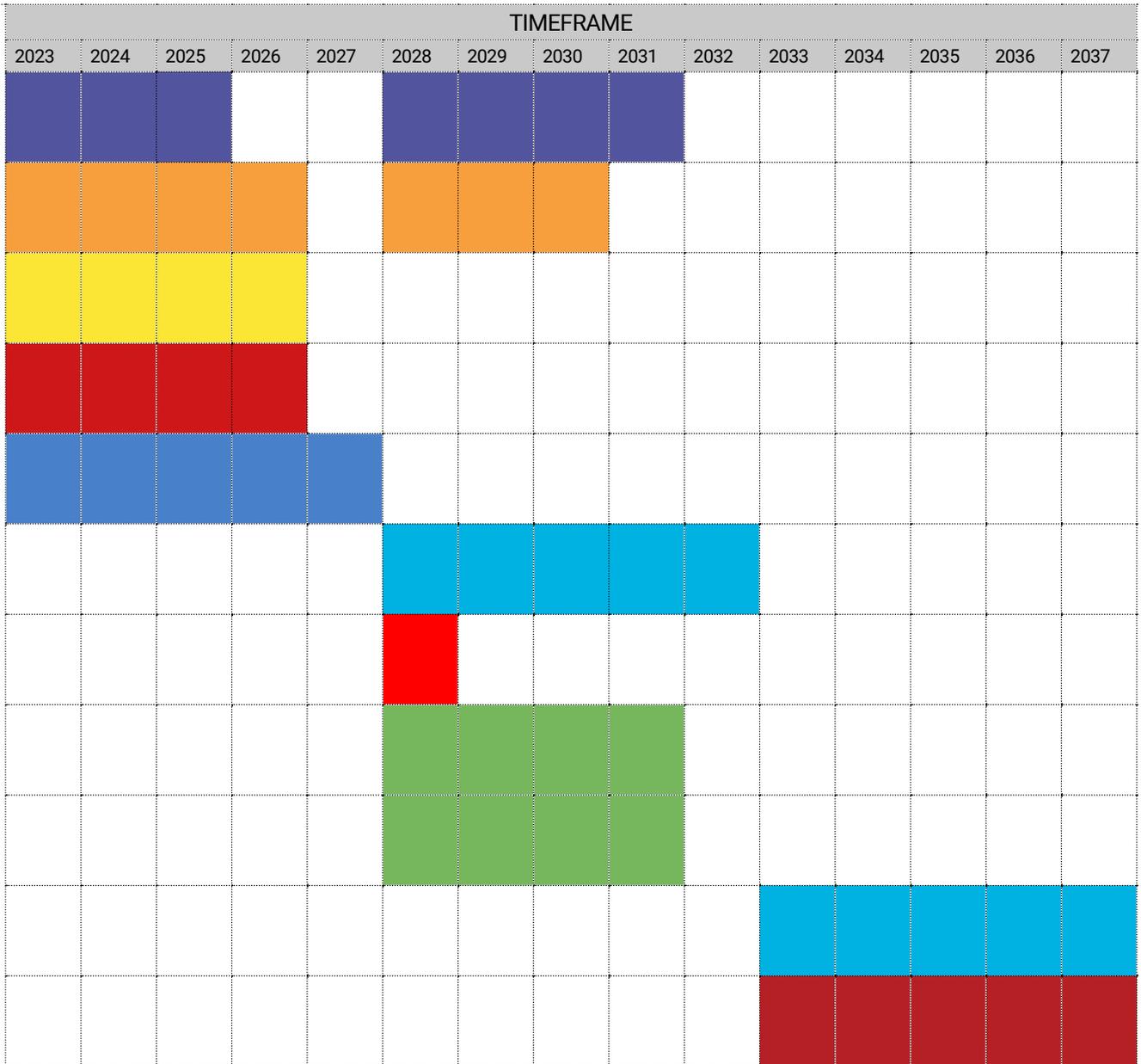
Table. 5: Action plan for the long term phase (2033-2037).



## Al Hashmi Al Janoubi Action Plan/Time Frame

ICON	PROJECT
	<b>Upgrading the Water and Sewerage Networks Project</b>
	<b>Upgrading the Road and Sidewalk Networks Project</b>
	<b>Upgrading the Existing Al Hashmi Al Shamali Comprehensive Health Centre Project</b>
	<b>Transforming Staircases into Social Steps Project</b>
	<b>Implementing Flood Mitigation Interventions Project</b>
	<b>Upgrading the Existing Public Schools Project</b>
	<b>Encouraging Mixed Use Development Project</b>
	<b>Rehabilitating the Existing Public Park Project</b>
	<b>Rehabilitating the Existing Playground Project</b>
	<b>Constructing a New School Project</b>
	<b>Improving Residential Buildings in Critical and Substandard Conditions Project</b>

Table. 6: Al Hashmi Al Janoubi Action Plan Time Frame





**05**

**ENDNOTES**

1 Building Footprints for Al Hashmi Al Janoubi Neighbourhood, 2022, Retrieved from <https://github.com/microsoft/GlobalMLBuildingFootprints>

2 Jordan in Figures 2019, Department of Statistics, 2019, Retrieved from [http://dosweb.dos.gov.jo/DataBank/JordanInFigures/Jorinfo\\_2019.pdf](http://dosweb.dos.gov.jo/DataBank/JordanInFigures/Jorinfo_2019.pdf)

3 5,800 refugees returned from Jordan to Syria in 2021 – UNHCR Batool Ghaith, Jordan Times, 2022. Retrieved from <https://www.jordantimes.com/news/local/5800-refugees-returned-jordan-syria-2021-%E2%80%94%94%20unhcr#:~:text=AMMAN%20%E2%80%94%20In%202021%2C%20approximately%205%2C800,when%20it%20comes%20to%20return%E2%80%9D>.

4 Amman Green City Action Plan, AECOM, 2021, Retrieved from [https://www.Amman.jo/site\\_doc/AmmanGreen2021.pdf](https://www.Amman.jo/site_doc/AmmanGreen2021.pdf)

5 Jordan in Figures 2015, Department of Statistics, 2015, Retrieved from <http://dosweb.dos.gov.jo/wp-content/uploads/2017/11/JordanInFigures2015.pdf>

6 22.8 Unemployment Rate during the first Quarter of 2022, Department of Statistics, 2022, Retrieved from [http://dos.gov.jo/dos\\_home\\_e/main/archive/Unemp/2022/Emp\\_Q12022.pdf](http://dos.gov.jo/dos_home_e/main/archive/Unemp/2022/Emp_Q12022.pdf)

7 Ibid.

8 Jordanian Unemployment Rate: Amman 2002-2017. Retrieved from <https://www.ceicdata.com/en/jordan/jordanian-unemployment-rate-by-region/jordanian-unemployment-rate-amman>

9 UN Jordan (2021), Jordan Common Country Analysis





06

**ANNEX A: QUESTIONNAIRE**

**What is the element that you are assessing?**

- Building
- Vacant Land
- Public Space
- Public Transportation Stop
- Solid Waste Dumpster
- Hazard Area (Threat)

**What is your current location?**

---

latitude (x.y °)

---

longitude (x.y °)

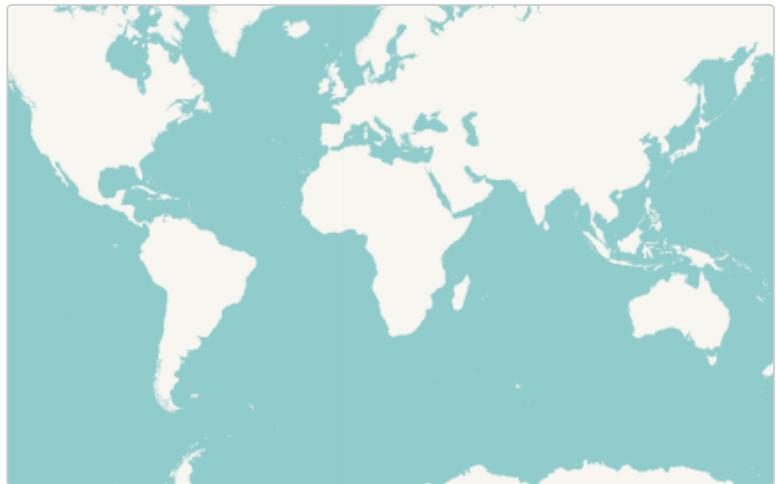
---

altitude (m)

---

accuracy (m)

---

**Please take a picture of the element you are assessing**

Click here to upload file. (< 5MB)

**Describe the hazard area? (any threats)**

---

**Is the public transportation stop formal?**

- Yes
- No

**Describe the public space you are assessing?**

- Park
- Road
- Playground
- Stairs

**Add the street name**

---

**Please add the code to the building**

---

**What is the current use of the building?**

- Residential
- Commercial
- Mixed Use
- Industrial
- Park
- Mosque
- School
- Health Care Facility
- Other

**How many shops are there?**

---

**What is the average rent in the building?**

---

**Please describe the current use?**

---

**How many are the total floors of the building?**

- 1
- 2
- 3
- 4
- 5
- 6
- 7

**How many floors are below street level?**

---

**Rate the condition of the public space**

- Good
- Fair
- Substandard
- Critical

**How many floors are the residential floors?**

---

**How many are floors are the other uses?**

---

**Rate the current condition of the building**

- Good
- Fair
- Substandard
- Critical

**Is the public space inclusive?**

- Yes
- No

**Does the public space need improvement?**

- Yes
- No

**Describe the needed action urgency for public space improvement?**

- Immediate- Short Term
- Moderate - Mid Term
- Mild - Long Term

**Describe the needed improvement?**


---

**What are the needed actions/interventions (short term) in the public space? if any**


---

**What are the medium term actions needed (if any)**


---

**What are the long term actions needed (if any)**


---

**Is there any economic activity at the building?**

- Yes
- No

**Is the economic activity formal or informal?**

- Formal
- Informal

**Please describe the economic activity (e.g. commercial, day care, etc..)**


---

**What is the range of fees at the economic activity?**


---

**What is the range of salaries at the economic activity?**


---

**Is the public park operational?**

- Yes
- No

**Is there any informal activity on ground?**

- Yes
- No

**Please describe the current informal activity use?**

---

**What is the nationality of the business owner?**

- Jordanian
- Syrian
- Palestinian with Jordanian Nationality
- Iraqi
- Palestinian
- Other

**How many workers are working there?**

---

**What are the nationalities of the workers?**

- Jordanian
- Palestinian
- Palestinian with Jordanian Nationality
- Syrian
- Iraqi
- Egyptian
- Others

**How many of the workers are Jordanians?**

---

**How many of the workers are Syrian refugees?**

---

**How many are Palestinian Refugees with Jordanian Nationalities?**

---

**How many are Palestinian Refugees?**

---

**How many are Iraqi Refugees?**

---

**How many are Egyptian Migrants?**

---

**Please specify the nationality and the number of workers of the other nationality?**

---

**What is the daily average income from the informal activity?**

---

**Please take a picture of the economic activity**

Click here to upload file. (< 5MB)

**Please take a picture of the informal activity**

Click here to upload file. (< 5MB)

**Is the public space inclusive?**

- Yes  
 No

**Is the public space accessible?**

- Yes  
 No

**Is there sidewalks on the road?**

- Yes  
 No

**How many sidewalks?**

- 1  
 2

**Describe the level of the sidewalk's walkability?**

- Walkable  
 Walkable with obstructions  
 Unwalkable  
 No sidewalk

**Sidewalk 2: Describe the level of the sidewalk's walkability?**

- Walkable
- Walkable with obstructions
- Unwalkable
- No sidewalk

**Is the sidewalk accessible?**

- Yes
- No

**Sidewalk 2: Is the sidewalk accessible?**

- Yes
- No

**Do the sidewalk need improvement?**

- Yes
- No

**Sidewalk 2: Do the sidewalk need improvement ?**

- Yes
- No

**Describe the needed intervention and the urgency??**


---

**Sidewalk 2: Describe the needed intervention and the urgency?**


---

**Take a picture of the sidewalk**

Click here to upload file. (< 5MB)

**Sidewalk 2: Take a picture of the sidewalk**

Click here to upload file. (< 5MB)

**Is there any informal activity on the sidewalk?**

- Yes
- No

**Sidewalk 2: Is there any informal activity on the sidewalk?**

Yes

No

**Describe the informal activity?**

---

**Sidewalk 2: Describe the informal activity?**

---

**Take a picture of the informal activity on the sidewalk**

Click here to upload file. (< 5MB)

**Sidewalk 2: Take a picture of the informal activity on the sidewalk**

Click here to upload file. (< 5MB)

**Any notes**

---



07

**ANNEX B: SCORING CRITERIA**

Priority Scoring Criteria		
Criterion		
<b>Technical Priority:</b> Rate the urgency to implement the project within the short term period of the action plan? (5 Points)		
Transformative Impact	Social Impact (20 Points)	<b>Provision of Basic Needs:</b> How many basic needs services does the project provide?
		<b>Inclusivity:</b> Does the project enhance the inclusivity of refugees and vulnerable groups
		<b>Safety:</b> How much does the project impact the safety of residents?
		<b>Well Being:</b> How much does the project improve the well-being of the residents?
	Environment Impact (20 Points)	<b>Natural Resource Consumption:</b> Rate the level of reduction the project can have on the natural resource consumption? (Water, fossil fuel)
		<b>Climate Mitigation:</b> Rate the potential level the project mitigates the climate change impact?
		<b>Climate Adaptation:</b> Rate the climate change adaptation potential level of the project?
		<b>Healthy Ecosystem:</b> Rate how much the project can contribute to creating a healthy ecosystem?
	Economic Impact (20 Points)	<b>Job Creation/livelihood opportunities:</b> How many job opportunities can the project create? (Direct and indirect)
		<b>Diversity:</b> Does the project diverse job opportunities?
	Spatial Impact (20 Points)	<b>% of Beneficiaries</b> from the project
		<b>Connectivity:</b> Does the project improve the connectivity of people to their basic needs?
		<b>Butterfly Effect of needed projects:</b> proximity of the project to the other needed projects and/or improves the residents' accessibility to the other projects
<b>Alignment with the relevant governmental plans:</b> is the project aligned with the existing relevant governmental plan/strategy (5 Points)		
<b>Key Stakeholder Assessment</b> (5 Points)		
<b>Local Community Assessment</b> (5 Points)		
<b>Total</b>		

Priority Scoring Criteria					
Scoring					Total
HIGH URGENCY = 5	No = 0	Medium urgency = 2			5
5	based on the no. of basic needs served: Basic needs: Food, water, medicine, education, recreation				20
Yes = 5	No = 0				
No impact= 0	low impact = 2	high impact = 5			
No impact= 0	low impact =2	high impact=5			20
No impact= 0	low impact =5	high impact=10			
No impact= 0	low impact =2	high impact=5			
No impact= 0	low impact =2	high impact=5			
No impact= 0	low impact =2	high impact=5			
No = 0	Indirect =10	direct =15			20
Yes= 5	No=0				
1%-20%=2	20%-40% = 4	40%-60%=6	60%-80%=8	80%-100%=10	20
Yes= 5	No=0				
to 1 project= 1	to 2 projects =2	3 to 5 projects =3	6 to 8=4	9 to 11=5	
Yes= 5	No=0				5
1%-20%=1	20%-40% = 2	40%-60%=3	60%-80%=4	80%-100%=5	5
1%-20%=1	20%-40% = 2	40%-60%=3	60%-80%=4	80%-100%=5	5
					100



**08**

**ANNEX C: INVESTMENT CARDS**

Urban Planning & Infrastructure in Migration  
Contexts-Jordan

## Unleashing the Potential for a Better Quality of Life in Al-Hashmi Al Janoubi Neighbourhood of Amman

Investment Card:

Upgrading the Critical Areas of the Water and  
Sewerage Network



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## General Information

	<b>PROJECT TITLE</b>	Upgrading the Critical Areas of the Water and Sewerage Network
	<b>PARTNERS</b>	Jordan Water Company (Miyuhana):
	<b>TIME FRAME</b>	3 Years
	<b>LOCATION</b>	Al Hashimi Al Janoubi neighborhood, Amman, Jordan
	<b>ESTIMATED BUDGET</b>	1,725,000 JD 2,428,800 US Dollars
	<b>SDGs ALIGNMENT</b>	   
	<b>TARGET BENEFICIARY GROUP</b>	Direct: Current population of Al Hashmi Al Janoubi: 19,589 inhabitants, in addition to the maximum capacity of the neighbourhood, which is 33,096 inhabitants, including the host community and refugees.
	<b>CONTACT PERSON</b>	Aya Hammad ayah.hammadmohd@un.org

## Upgrading the Critical Areas of the Water and Sewerage Network



### PROBLEM IDENTIFICATION

A capacity versus demand analysis was conducted on the existing water and sewerage networks, using the GIS capacity/demand assessment tool by factoring in the pipes' diameter and length, as well as the number of people in the neighbourhood currently being served as of 2022. The sufficiency of the existing water and sewerage networks were analysed, whereby high load means low network sufficiency. Accordingly, the assessment identified critical high-load areas that need immediate action and upgrading to accommodate the existing and future capacity of the neighbourhood as a proactive measure.



### PROJECT OBJECTIVE

The project aims to improve water provision in the identified critical areas of the water network, as well as the efficiency of the existing sewerage network in the identified critical areas within the Al Hashmi Al Janoubi Neighbourhood. This will improve access to adequate water supply, and sewerage services to the current and forecasted population of Al Hashmi al Janoubi neighbourhood.



### BENEFICIARIES

Direct beneficiaries include the current and forecasted residents of both Al Hashmi al Shamali and Al Hashmi Al Janoubi residents, as well as other neighbouring residents, including the host community and refugees; around 350,000 inhabitants.



### PROJECT IMPACT

Jordan is ranked as the second most water scarce country in the world. This project will enhance the water provision in the areas hosting most residents in the neighborhood. Since the pipes will be upgraded to ones with larger diameters, this would reduce the current load on the zones within the neighborhood. Furthermore, replacing the pipes with new ones would also assist in minimizing the water loss due to the existing deteriorated pipes. As for the sewerage network, the project will enhance the efficiency of the sewerage network in the high load areas in the same way, by replacing pipes with larger diameter ones which are able to better cope with the current and future load. This project is aligned with the

Greater Amman Municipality's Strategic Plan for 2022-2026 and supports the achievement of the 2030 Sustainable Development Agenda, specifically SDGs 3, 6, 9, and 11.



### PROJECT PARTNER

- **Jordan Water Company (Miyuhana):** Owner and implementer; Miyuhana will be responsible for the implementation, maintenance, and sustainability of the project.
- **Donor/financier:** A funding entity(s) is needed to support the implementation of the project on ground.



### PROJECT LIFE CYCLE

Feasibility, Detailed Design, Construction, Operation and Maintenance.



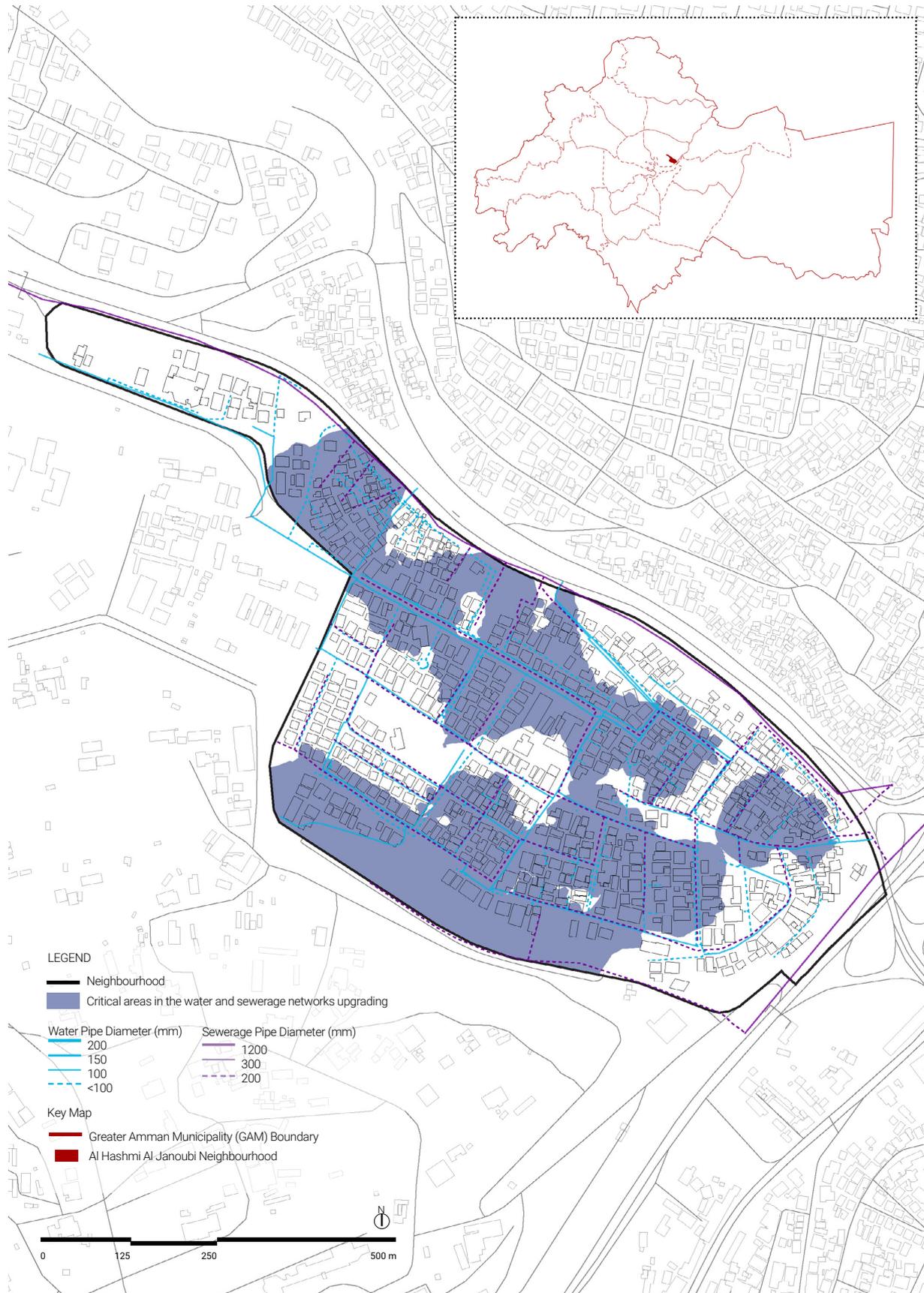
### PROJECT FINANCIALS

**Total cost and sum for the water and sewerage network upgrades:**

- Total Cost Per Meter: 375 JD/m = 528 US Dollars/m\*
- Total Pipe Lengths: around 4,600 meters
- Total Cost for the replacement of all sewerage pipes in the critical areas to 300 mm pipes, and all water pipes in the critical areas to 200 mm pipes: 1,725,000 JD / 2,428,800 US Dollars

**Current investment commitments and type (municipal budget, LOI):** External fund is needed

**Investment needs:** Detailed studies, Construction, Regular maintenance



Urban Planning & Infrastructure in Migration  
Contexts-Jordan

## Unleashing the Potential for a Better Quality of Life in Al-Hashmi Al Janoubi Neighbourhood of Amman

Investment Card:  
Upgrading of Road and Sidewalk Networks in  
Critical Areas



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## General Information

	<b>PROJECT TITLE</b>	Upgrading of Road and Sidewalk Networks in Critical Areas
	<b>PARTNERS</b>	Greater Amman Municipality (GAM)
	<b>TIME FRAME</b>	4 Years
	<b>LOCATION</b>	Al Hashimi Al Janoubi neighborhood, Amman, Jordan
	<b>ESTIMATED BUDGET</b>	3,161,588 JD 4,426,223 US Dollars
	<b>SDGs ALIGNMENT</b>	  
	<b>TARGET BENEFICIARY GROUP</b>	Direct Beneficiaries: The total population of the Al Hashmi Al Janoubi neighborhood, including the host community and refugees (around 20,000 inhabitants).
	<b>CONTACT PERSON</b>	Aya Hammad ayah.hammadmohd@un.org

## Upgrading the Critical Areas of the Road and Sidewalk Network



### PROBLEM IDENTIFICATION

The field investigation included an evaluation of the existing road and sidewalk infrastructure conditions, whereby critical areas in need of rehabilitation were identified. During consultations, the residents validated these results and further emphasized that the existing sidewalk and road networks are deteriorated and unsafe, which affects the residents' mobility and access to basic services.



### PROJECT OBJECTIVE

The project aims to improve the road and sidewalk infrastructure within Al Hashmi Al Janoubi Neighbourhood, specifically within the critical areas that were identified through the evaluation of the existing road and sidewalk infrastructure conditions.



### BENEFICIARIES

Direct Beneficiaries: The total population of the Al Hashmi Al Janoubi neighborhood, including the host community and refugees (around 20,000 inhabitants).



### PROJECT IMPACT

The project will promote walkability, enhance connectivity, and increase pedestrian safety while commuting for all residents and visitors. This project is aligned with the Greater Amman Municipality's Strategic Plan for 2022-2026 and supports the achievement of the 2030 Sustainable Development Agenda, specifically SDGs 3, 9, and 11.



### PROJECT PARTNER

- **Greater Amman Municipality (GAM):** Owner and implementer; GAM will be responsible for the implementation, maintenance, and sustainability of the project.
- **Donor/financier:** A funding entity(s) is needed to support the implementation the project on ground.



### PROJECT LIFE CYCLE

Feasibility, Concept Design, Detailed Design, Construction, and Maintenance.



### PROJECT FINANCIALS

#### Total cost for road and sidewalk rehabilitation:

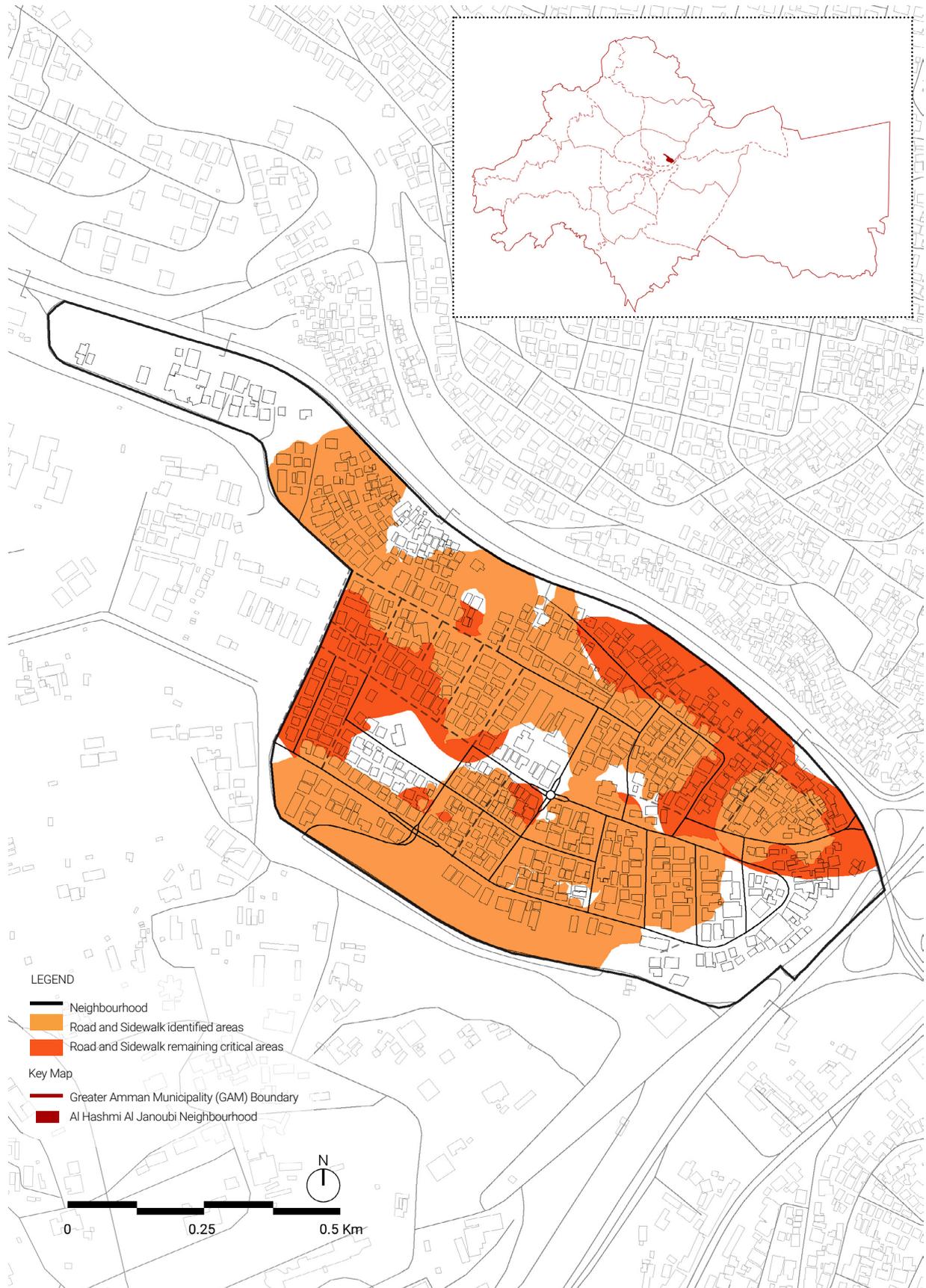
- Total Cost Per Meter: 37.5 Jordanian Dinar/m<sup>2</sup> = 52.5 US Dollars/m<sup>2</sup>\*
- Roads and sidewalks in the identified areas = 55,569 m<sup>2</sup>
- Cost for improving the road and sidewalk infrastructure in the identified areas: 2,083,838 JD / 2,917,373 US Dollars
- Roads and sidewalks in the remaining critical areas = 28,740 m<sup>2</sup>
- Cost for improving the road and sidewalk infrastructure in the identified critical areas: 1,077,750 JD / 1,508,850 US Dollars\*\*
- **Total cost for improving the road and sidewalk infrastructure in all identified areas:** 3,161,588 JD / 4,426,223 US Dollars
- 

\*(these are preliminary estimates)

#### Current investment commitments and type (municipal budget, LOI):

- Possible partial coverage by the municipal budget
- External fund is needed

**Investment needs:** Survey work, Detailed Design Development, Construction, Regular maintenance



Urban Planning & Infrastructure in Migration  
Contexts-Jordan

## Unleashing the Potential for a Better Quality of Life in Al-Hashmi Al Janoubi Neighbourhood of Amman

Investment Card:

### Transforming Staircases into Accessible Social Steps



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## General Information

	<b>PROJECT TITLE</b>	Transforming Staircases into Accessible Social Steps
	<b>PARTNERS</b>	Greater Amman Municipality (GAM)
	<b>TIME FRAME</b>	4 Years
	<b>LOCATION</b>	Al Hashimi Al Janoubi neighborhood, Amman, Jordan
	<b>ESTIMATED BUDGET</b>	300,000 JD 422,880 US Dollars
	<b>SDGs ALIGNMENT</b>	   
	<b>TARGET BENEFICIARY GROUP</b>	<p><b>Direct Beneficiaries:</b> The total population of Al Hashmi Al Janoubi neighbourhood, including the host community and refugees (around 20,000 residents currently)</p> <p><b>Indirect Beneficiaries:</b> Residents and visitors from nearby areas that use the stairs to reach the Bus Rapid Transit (BRT) station nearby, on Al Istiklal Street.</p>
	<b>CONTACT PERSON</b>	Aya Hammad ayah.hammadmohd@un.org

## Transforming Staircases into Accessible Social Steps



### PROBLEM IDENTIFICATION

All the outdoor stairs in the Al Hashmi Al Janoubi neighbourhood, a total of 16, were assessed as dangerous, inadequate, and in need of immediate rehabilitation. This has impacted the mobility of the local community and has hindered their access to basic services and economic opportunities. The improvement of the existing public staircases is among the most important projects needed in the neighbourhood.



### PROJECT OBJECTIVE

The project aims to transform the existing inadequate and dangerous public staircases in Al Hashmi Al Janoubi neighbourhood into innovative inclusive public spaces/ staircases. The project endeavors to achieve the following objectives:

- To enhance the accessibility and connectivity of the host community, refugees, and vulnerable people, including people with disabilities, elderly, and children, that are residing in the neighbourhood and nearby areas.
- To provide the option for innovative public spaces through using art, beautification, and green elements, etc., that may attract visitors and enhance the economic activity in the neighbourhood.
- To integrate green elements that would contribute to minimizing the impact of flash floods in and around the neighbourhood.
- To enhance social cohesion among refugees and host communities.



### BENEFICIARIES

**Direct Beneficiaries:** The total population of the Al Hashmi Al Janoubi neighbourhood, including the host community and refugees (around 20,000 residents currently)

**Indirect Beneficiaries:** Residents and visitors from nearby areas that use the stairs to reach the Bus Rapid Transit (BRT) station nearby, on the Al Istiklal Street.



### PROJECT IMPACT

The project will improve the 16 staircases at Al Hashmi Al Janoubi neighbourhood, enhancing the accessibility and connectivity of vulnerable people residing in the neighbourhood and nearby areas to their basic services, including refugees and the host community. Additionally, it will assist in creating a public space network and will facilitate the mobility of people in the area due to its proximity to one of the main BRT stations. This project is aligned with the Greater Amman Municipality's Strategic Plan for 2022-2026 and supports the achievement of the 2030 Sustainable Development Agenda, specifically SDGs 3, 9, 10 and 11.



### PROJECT PARTNER

- **Greater Amman Municipality (GAM):** Owner; GAM will be responsible for maintaining and sustaining the project.
- **Donor/financier:** A funding entity(s) is needed to support the implementation of the project on ground.
- **Arcadis:** A global design company, Arcadis will design some of the staircases.



### PROJECT LIFE CYCLE

Feasibility, Concept & Detailed Design\*\*, Construction, and Maintenance.

(\* Arcadis will design some of the staircases)



### PROJECT FINANCIALS

#### Total Cost for the 16 stairways:

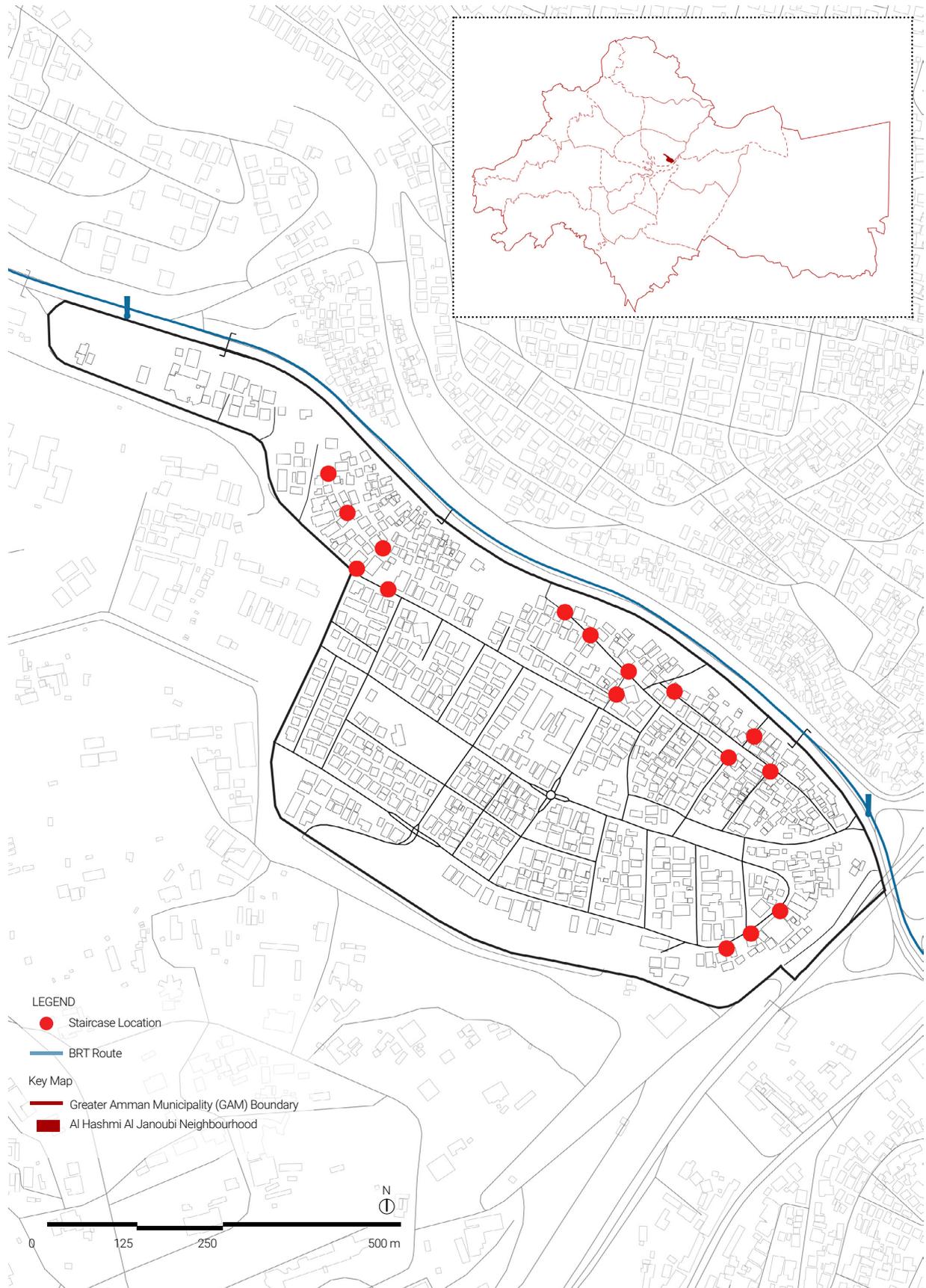
- Total Cost Per Meter: 625 JD/m = 881 US Dollars/m\*
- Total Cost of 16 stairways (approx. 30 m each): 300,000 JD / 422,880 US Dollars

\*(these are preliminary estimates)

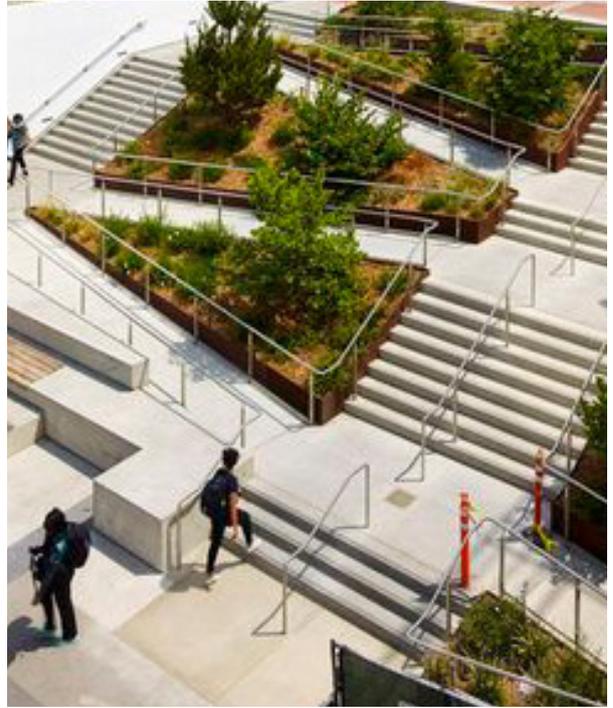
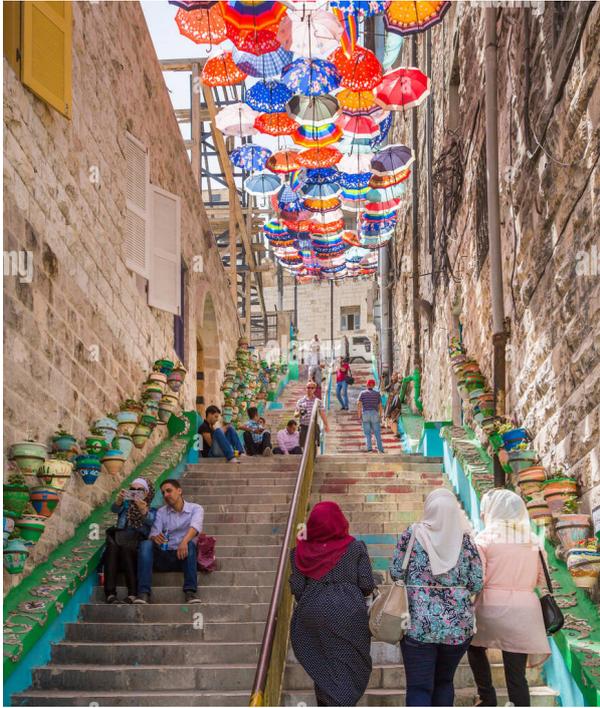
#### Current investment commitments and type (municipal budget, LOI):

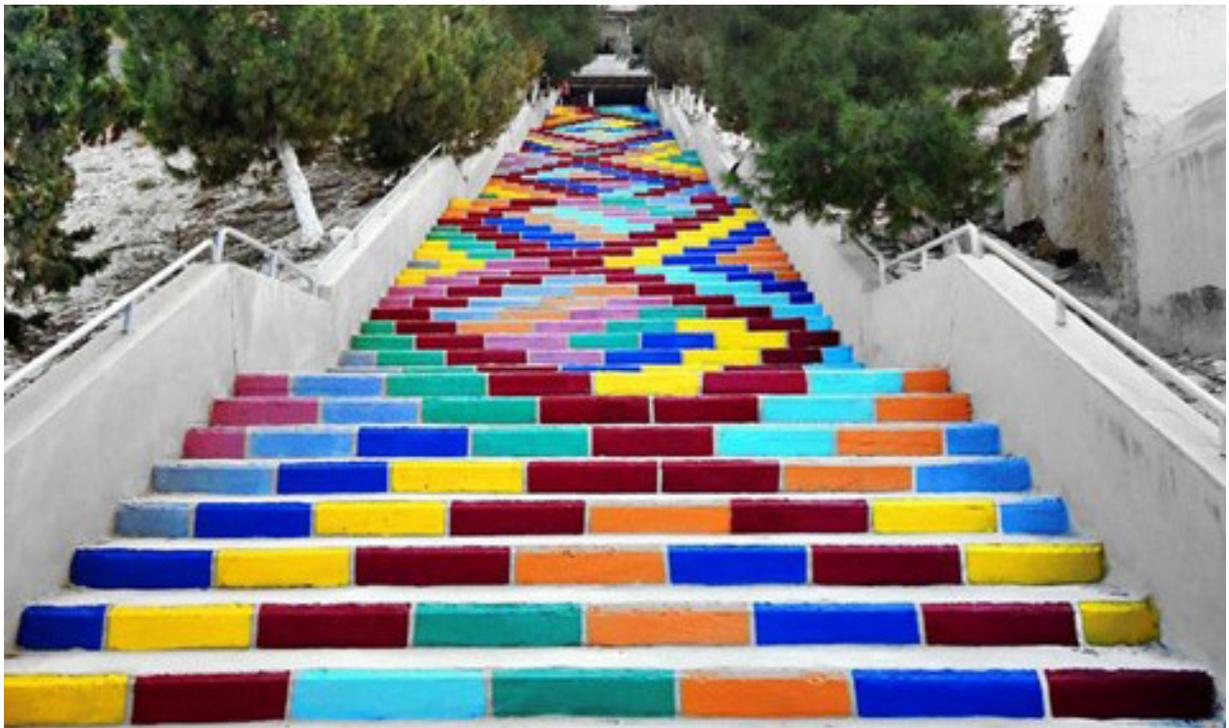
- Possible partial coverage by the municipal budget
- External fund is needed

**Investment needs:** Survey work, Concept Development, Detailed Design Development, Construction, and Regular Maintenance.



### Inspiration: Transforming Staircases into Accessible Social Steps





## Urban Planning & Infrastructure in Migration Contexts-Jordan

# Unleashing the Potential for a Better Quality of Life in Al-Hashmi Al Janoubi Neighbourhood of Amman

Investment Card:

### Upgrading the Existing Al Hashimi al Shamali Comprehensive Health Care Centre



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## General Information

	<b>PROJECT TITLE</b>	Upgrading the Existing Al Hashimi Al Shamali Comprehensive Health Care Centre
	<b>PARTNERS</b>	Ministry of Health (MoH)
	<b>TIME FRAME</b>	3 Years
	<b>LOCATION</b>	Al Hashimi Al Shamali neighborhood, Amman, Jordan
	<b>ESTIMATED BUDGET</b>	625,000 JD 880,200 US Dollars
	<b>SDGs ALIGNMENT</b>	  
	<b>TARGET BENEFICIARY GROUP</b>	Direct: The local community of Al Hashimi Al Janoubi, and the neighboring communities Indirect: Amman residents
	<b>CONTACT PERSON</b>	Aya Hammad ayah.hammadmohd@un.org

## Upgrading the Existing Al Hashimi al Shamali Comprehensive Health Care Centre



### PROBLEM IDENTIFICATION

The residents of Al Hashimi Al Janoubi face challenges with accessing healthcare. The neighbourhood has a primary healthcare centre, which lacks a 24-hour emergency centre, and the closest comprehensive health care centre is in the adjacent neighbourhood, Al Hashimi Al Shamali. Al Hashimi al Shamali comprehensive health care centre already serves residents from both neighbourhoods and needs rehabilitation, including further expansion and upgrading its services to better serve the current and forecasted increase in populations.



### PROJECT OBJECTIVE

This project aims to improve access to healthcare services for Al Hashimi Al Janoubi, and Al Hashimi Al Shamali residents by expanding and upgrading Al Hashimi Al Shamali comprehensive healthcare centre, which serves both neighbourhoods. Through spatial analysis, fieldwork, stakeholder engagement, and bilateral meetings with the Ministry of Health representatives, expanding and upgrading Al Hashimi al Shamali comprehensive healthcare centre was identified as a project necessary for the accessibility of residents to adequate healthcare. This project will be in coordination with the Ministry of Health (MoH), and the needed actions were validated with them.

Needed upgrades that have been identified include:

- **The rehabilitation of the current building:** replace floor tiles, paint walls, replace suspended ceiling, renovate doors and windows, renovate the roof waterproofing, replace water tanks, renovate outdoor plazas and parking areas, in addition to that, the renovations include electro-mechanical work like providing air conditioners, as well as renovating the sewerage and water networks in the building, as well as the water drainage system.
- **The expansion of its facilities through new construction:** the building can be expanded horizontally on two sides to the full height of the current building, where the estimated total area of the expansion is 450m<sup>2</sup>. The new spaces could be used for redistributing the sections and clinics in the centre, as well as expanding the dental clinic, general doctors clinics, and specialist clinics. The expansion and redistribution could be used to make the service easier for the users.
- **Provision of new furniture and medical equipment:** including office and clinic furniture, medical equipment

for family planning, ear checkup equipment, dental chairs, clinical equipment, as well as emergency centre equipment.



### BENEFICIARIES

Direct beneficiaries include the current and forecasted residents of both Al Hashimi al Shamali and Al Hashimi Al Janoubi residents, as well as other neighbouring residents, including the host community and refugees; around 350,000 inhabitants.



### PROJECT IMPACT

Al Hashimi Al Shamali comprehensive health care centre currently serves an estimate of 300,000 people and welcomes around 5,000 patients a day. Its services are under a lot of pressure and lack the capacity to adequately serve these current numbers as well as the forecasted increase in population. The rehabilitation and expansion of the comprehensive healthcare centre will mean better healthcare access and service provision for all residents in the area as well as patients treated from a wider catchment area. This project is aligned with the Greater Amman Municipality's Strategic Plan for 2022-2026 and supports the achievement of the 2030 Sustainable Development Agenda, specifically SDGs 3, 10 & 11.



### PROJECT PARTNER

- **Ministry of Health (MoH):** Owner and implementer; MoH will be responsible for the implementation, maintenance, and sustainability of the project.
- **Donor/financier:** A funding entity(s) is needed to fund the implementation of the project on ground.



### PROJECT LIFE CYCLE

Feasibility, Concept, Detailed Design, Construction, Operation and Maintenance

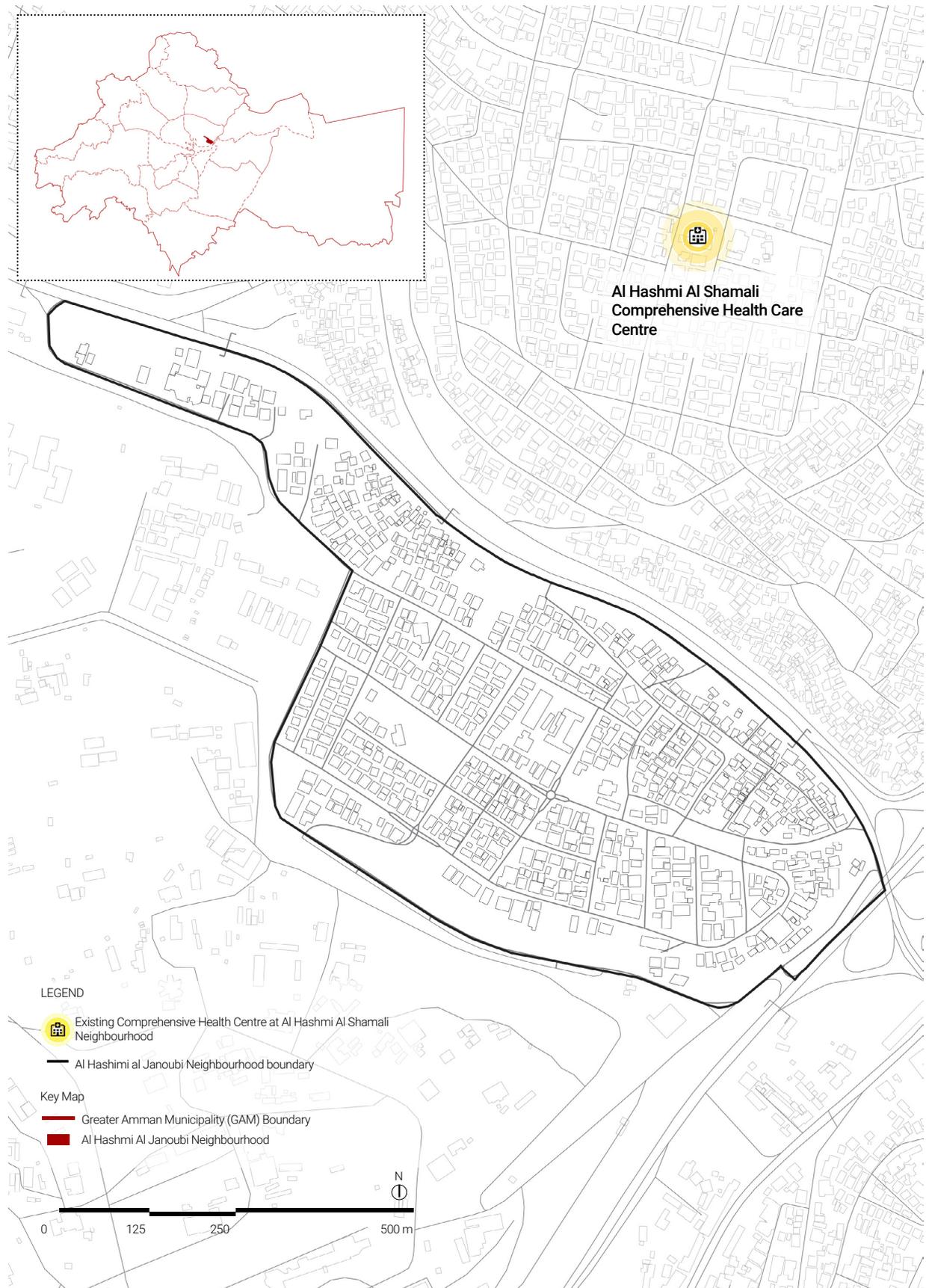


### PROJECT FINANCIALS

**Total Cost:** 625,000 Jordanian Dinars/ 880,200 US Dollars

**Current investment commitments and type (municipal budget, LOI):** External fund is needed

**Investment needs:** Feasibility, Concept, Detailed Design, Construction, Operation and Maintenance



Urban Planning & Infrastructure in Migration  
Contexts-Jordan

## Unleashing the Potential for a Better Quality of Life in Al-Hashmi Al Janoubi Neighbourhood of Amman

Investment Card:  
Implementing Flood Mitigation Interventions



**UN HABITAT**  
FOR A BETTER URBAN FUTURE



Swiss Confederation  
Federal Department of Economic Affairs,  
Education and Research EAER  
State Secretariat for Economic Affairs SECO



Greater  
Amman  
Municipality

## General Information

	<b>PROJECT TITLE</b>	Implementing Flash Flood Mitigation Interventions
	<b>PARTNERS</b>	Greater Amman Municipality (GAM)
	<b>TIME FRAME</b>	5 Years
	<b>LOCATION</b>	Al Hashimi Al Janoubi neighborhood peripheries, Amman, Jordan
	<b>ESTIMATED BUDGET</b>	The total cost for the 5 sites is around: 4.3 Million JD = 6 Million USD
	<b>SDGs ALIGNMENT</b>	  
	<b>TARGET BENEFICIARY GROUP</b>	<p>Direct Beneficiaries: Total Population of Al Hashmi Al Janoubi neighborhood, including the host community and refugees (around 20,000 residents currently).</p> <p>Indirect Beneficiaries: Residents of the Greater Amman Municipality.</p>
	<b>CONTACT PERSON</b>	Aya Hammad ayah.hammadmohd@un.org

## Implementing Flood Mitigation Interventions



### PROBLEM IDENTIFICATION

Flash floods have become a serious problem in Jordan due to rapid unplanned urbanization, the insufficient capacity of drainage systems, and climate change ramifications. Within this context, UN-Habitat conducted a "Flood Risk Assessment and Flood Hazard Mapping" study of Downtown Amman, which identified 120 high-priority locations where potential flood mitigation measures should be implemented, five of which are on the periphery of the Al Hashmi Al Janoubi neighbourhood. Through the visual inspections of the Al Hashmi Al Janoubi neighbourhood and the consultations with the community, flashfloods have been emphasized as a significant challenge in the area, and specifically linked to challenges with the storm-water drainage systems and the topography of the neighbourhood.



### PROJECT OBJECTIVE

The project aims to mitigate the effects of flashfloods on the neighbourhood of Al Hashimi Al Janoubi, through implementing interventions in 5 locations on the peripheries of the neighbourhood. The interventions include:

- The short-term solution of implementing Bio Retention/ Detention Areas in 4 out of 5 hotspot areas, which introduces a series of storm-water retention and detention elements around the upstream areas of the city.
- The solution of implementing a filter strip in the northern longitudinal area. Filter strips are vegetated strips of land designed to accept runoff as overland flow from upstream developments.



### BENEFICIARIES

- **Direct Beneficiaries:** Total Population of the Al Hashmi Al Janoubi neighborhood, including the host community and refugees (around 20,000 residents currently).
- **Indirect Beneficiaries:** Residents of the Greater Amman Municipality.



### PROJECT IMPACT

At the city and neighbourhood levels, the Greater Amman Municipality and local communities recognize the importance of climate change adaptation. They highlighted the issue of flash floods as a major concern, and that adaptive, strategic interventions would help enhance the communities' safety, resilience, and sustainability. Thus, this project, which has been identified through an evidence-based and participatory approach is an integral part of a network of mitigation

interventions (short, medium, and long-term). These were identified in the "Flood Risk Assessment and Flood Hazard Mapping", which aims to reduce flash flood risks on the residents of Amman. This project endeavours to address the growing problem of flash floods and mitigate the significant damage they cause for the residents of Amman, including loss of life as well as property. They are particularly acute for households that are encroaching on natural drainage areas (Wadis). This project is aligned with the Greater Amman Municipality's Strategic Plan for 2022-2026 and supports the achievement of 2030 Sustainable Development Agenda, specifically SDGs: 9, 11, and 13.



### PROJECT PARTNER

- **Greater Amman Municipality (GAM):** Owner and implementer, GAM will be responsible for the implementation, maintenance, and sustainability of the project.
- **Donor/financier:** A funding entity(s) is needed to support the implementation the project on ground.



### PROJECT LIFE CYCLE

Feasibility studies, Concept and Detailed Design, Construction, Periodic maintenance



### PROJECT FINANCIALS

#### Total cost and sum for sewerage network upgrades:

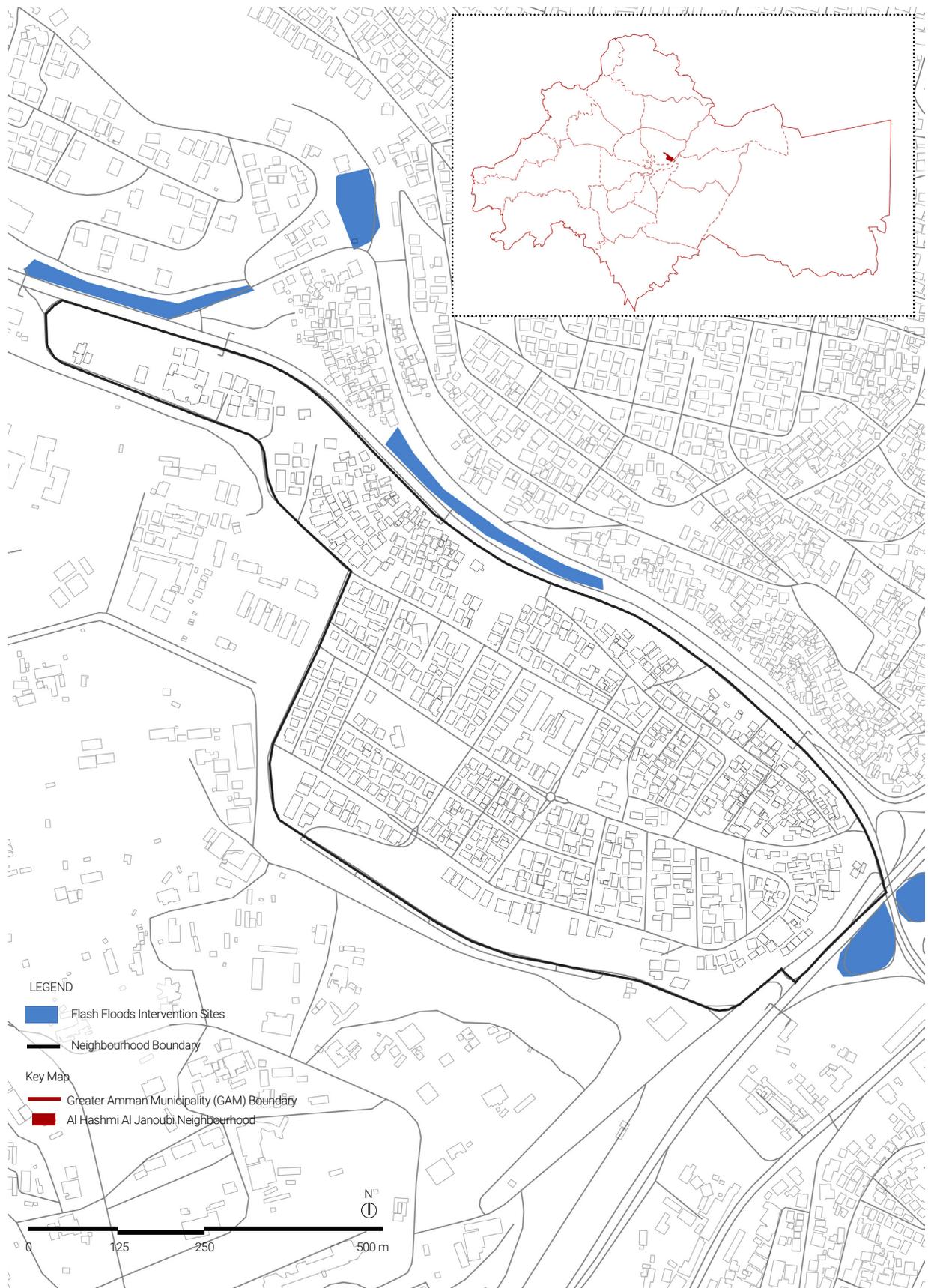
- Flood Mitigation Intervention (bio retention/detention projects) in four sites, based on our pilot project cost: 285 JD/m<sup>2</sup> = 401.3 USD/ m<sup>2</sup>. The intervention sites' total area is 14,750 m<sup>2</sup>.
- Total cost estimate for all four sites = 4,203,750 JD = around 5,919,183 US Dollars
- Flood Mitigation Intervention (Filter Strips): Around 25 - 37.5 JD/m<sup>2</sup>, and the site's total area is 5,105 m<sup>2</sup>.
- Approximate total cost = 127,625 - 191,438 JD = around 179,730 - 269,596 US Dollars
- **The total cost for the 5 sites is around:** 4.3 Million JD = 6 Million US Dollars

\*(these are preliminary estimates)

#### Current investment commitments and type (municipal budget, LOI):

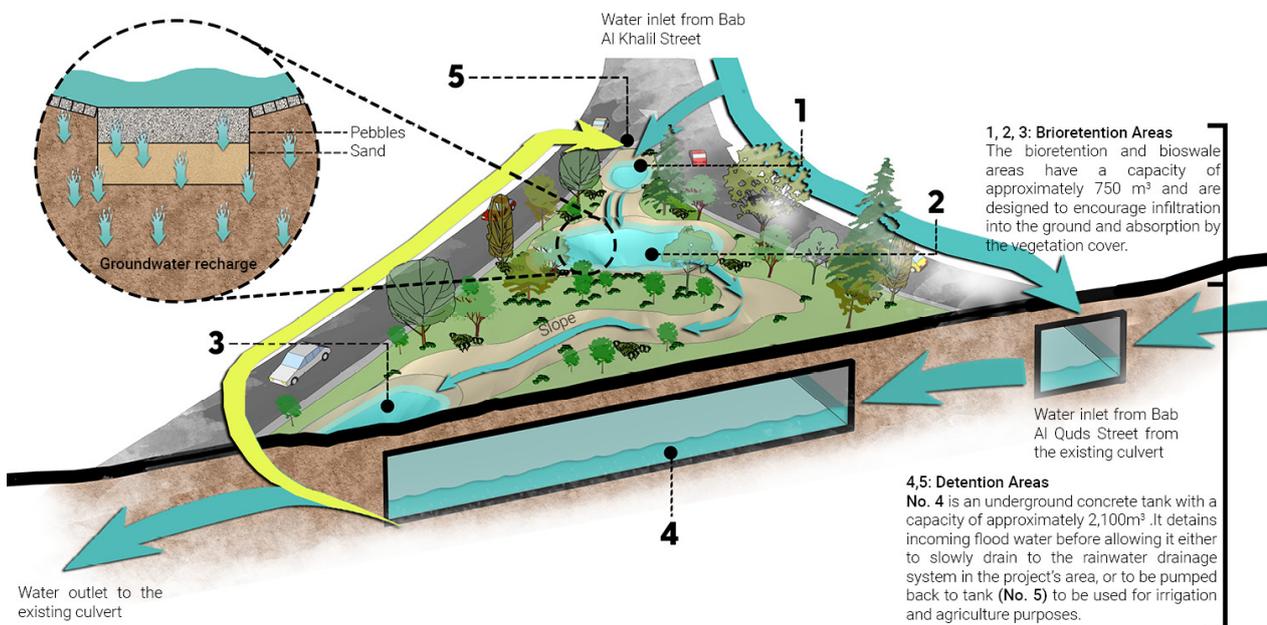
- External fund is needed

**Investment needs:** Detailed Studies, Concept & Detailed Design, and Construction



## UN-Habitat Flash Flood Intervention Project The case of: Al Zuhour Green Triangle Project

As part of the UN-Habitat conducted study: "Flood Risk Assessment and Flood Hazard Mapping" study of Downtown Amman, Al Zuhour Green Triangle was a pilot project implemented by UN - Habitat Jordan in one of the 120 locations in Amman.





During Construction



After Construction Final Project



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For more information, you  
can download the Amman  
Spatial Profile here:

**Amman**

