الخطة العمرانية

QATAR
NATIONAL
MASTER
PLAN

# Qatar National Development Framework 2032

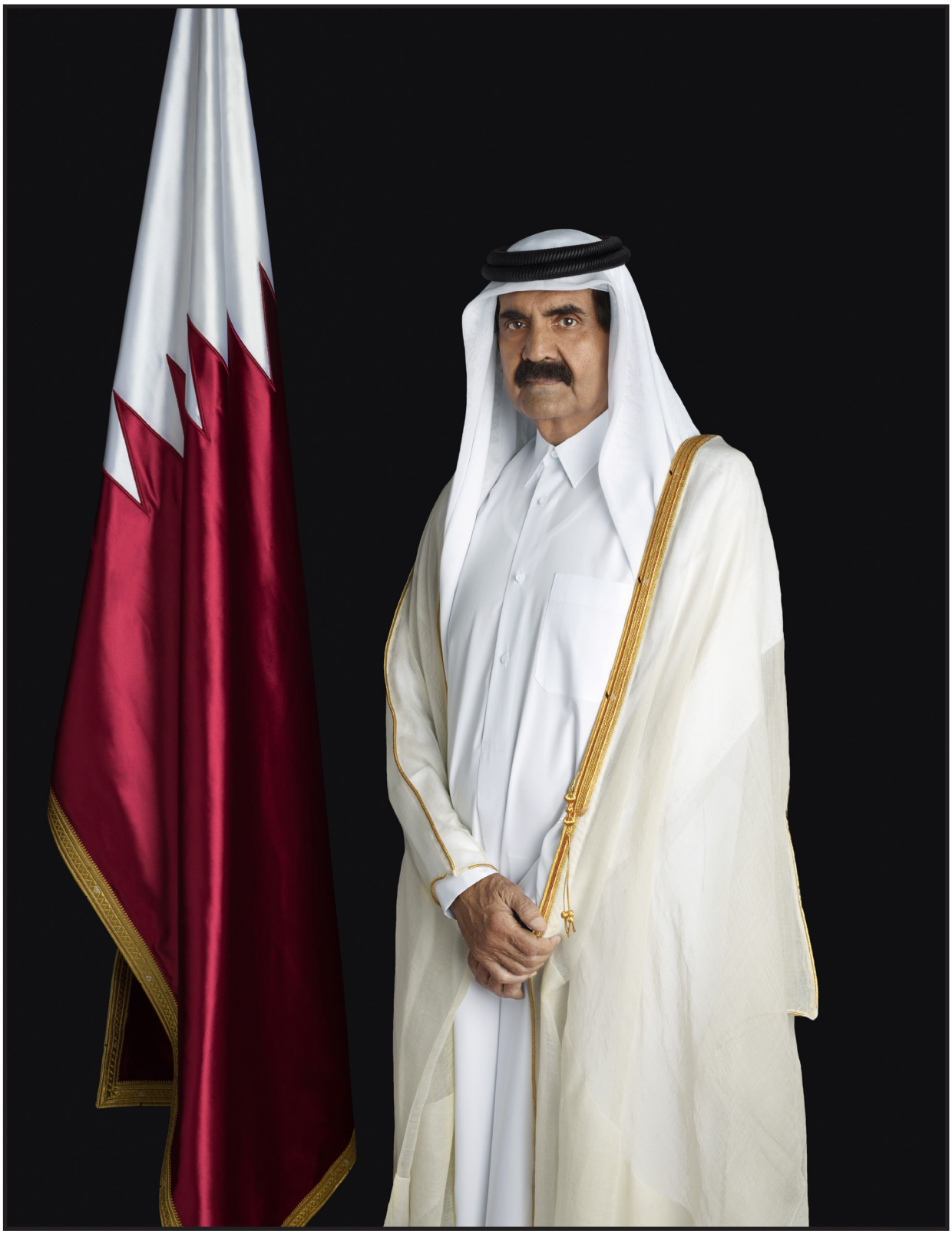
March 2016

حضرة صاحب السمو أمير دولة قطر

**الشيخ تميم بن حمد آل ثاني**

His Highness Emir of The State of Qatar

**SHEIKH TAMIM BIN HAMAD AL-THANI**



صاحب السمو الأمير الوالد

**الشيخ حمد بن خليفة آل ثاني**

His Highness The Father Emir

**SHEIKH HAMAD BIN KHALIFA AL-THANI**

معالي رئيس مجلس الوزراء ووزير الداخلية

**الشيخ عبدالله بن ناصر آل ثاني**

His Excellency Qatar's Prime Minister and Interior Minister

**SHEIKH ABDULLAH BIN NASSER AL-THANI**

# Explanatory Note



Preparation of the QNDF began in 2009 and a detailed draft was presented to His Highness the Emir in late 2011. The final version of the QNDF was approved by the Council of Ministers in April 2014 and adopted by Emiri Decree in December 2014. During the period between the plan's initial stakeholder consultation process and the approval of the final document, a number of changes have occurred necessitating minor revisions to the document. Organizational changes in some Ministries and government agencies have resulted in shifts in responsibilities and operations among these entities or in some cases, the creation of entirely new Ministries. Although this has not changed any of the substance of the QNDF document or its recommendations, it has required that the names of the stakeholders responsible for policy actions be revised where necessary to clearly identify their involvement in the policy actions.

One of the government structural changes with the most significant impact on the QNDF was the creation of the Ministry of Transport (MoT). Emiri Decree No. 16 of 2014 created the new Ministry and transferred the Ministry of Municipality and Urban Planning's transportation planning responsibilities to the new Ministry. The Decree also merged Mowasalat with this new Ministry, consolidating nearly all of Qatar's transport-related planning responsibilities within the MoT.

A subsequent organizational restructuring occurred in January 2016. Emiri Decree No. 4 of 2016 merged several Ministries and established new Ministries from existing Supreme Councils. Most notably for the QNDF, Ministry of Municipality and Urban Planning merged with the Ministry of Environment to form the Ministry of Municipality and Environment (MME). The Ministry of Transport also merged with the Ministry of Information and Communication Technology to form the Ministry of Transport and Communications (MoTC).

When reading this revised version of the QNDF, please note that those stakeholders responsible as Lead, or Key stakeholder or Consultative stakeholder for any proposed future policy action are identified by their updated name (e.g. MME and MoTC) in the Policy/ Policy Action Tables (e.g. EP 1, ENV 1, etc.) and other parts of the document as necessary and current as the date of publication of the document. These changes occur primarily in Sections C and D and in the Annexes. Where government entities are referenced as a source of information for the preparation of the QNDF document, their original names at the time of the document's writing are used (e.g. MMUP Transportation and Infrastructure Planning Department, Qatar National Food Security Program (QNFSP), Qatar Statistical Authority (QSA), etc.).

An abbreviation table has been added on page 5 which lists all of the stakeholder agencies referenced in the document along with their abbreviations and a description of those changes that have occurred since the QNDF's approval.

Another change which has occurred since the preparation of the QNDF is the establishment in 2014 of the Shahhaniya Municipality. The QNDF will be updated at the next review to reflect the new municipality, and a Municipal Spatial Development Plan (MSDP) will be prepared for Shahhaniya.

Finally, it should be noted that the QNDF was developed based on data from the 2010 census. All population assumptions and projections reference this data which is the most current official population count available at the time of publication.

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# Foreword



In light of Qatar's unprecedented physical, social and economic transformation, the Qatar National Vision (2030) was developed under the patronage of His Highness the Emir to guide all ministries and other governmental institutions of the State, in designing development strategies for all sectors across Qatar.

Based on the Qatar National Vision (2030), the Ministry of Municipality and Urban Planning (currently the Ministry of Municipality and Environment), created a national spatial development strategy as a foundation to shape and regulate all planning and development in the country (2014). This strategy is known as the "Qatar National Development Framework (QNDF)".

The Qatar National Development Framework deals with both the country's strengths and challenges. Qatar is known as a country with a distinctive natural environment that is blessed with ambitious people looking forward to the prospects of progress and prosperity. With the world's third largest natural gas reserves, Qatar's economic prosperity is guaranteed for generations to come. Its phenomenal economic growth and distinctive living environment have supported a steady increase in the population of citizens while also attracting great numbers of expatriates.

The QNDF reflects Qatar's legitimate economic aspirations, including greater economic diversity and the adoption of progressive economic methods and concepts. Qatar is striving to become internationally recognized as a center for quality education, high-end business and scientific research, that is a major destination attracting tourists, sports events, distinctive international conferences, and entertainment. Qatar hopes to accomplish all of this while preserving and enhancing its Islamic values, culture, heritage, and Qatari families' traditional communal values.

Through extensive data analysis and a deep understanding of the challenges that the country faces, the Qatar National Master Plan (QNMP) developed the national framework which includes an integrated set of strategies, policies, guidelines, and regulations applicable to national, municipality, city and town jurisdictions. It will ensure a higher standard of living for the current Qatari society and for future generations.

The principal strategic plan is the Qatar National Development Framework. It is a plan, for the future, to manage growth and build stronger, sustainable and livable communities.

The QNDF establishes the spatial framework to achieve national human, social, economic and environmental goals based on the Qatar National Vision 2030 and the population and economic projections by the Ministry of Development Planning and Statistics.

The key strategies include the establishment of urban growth boundaries to ensure land is utilized in a more efficient manner through the limitation of urban sprawl; the creation of mixed-use urban centers and transit oriented developments to boost commercial and community activities while alleviating traffic congestion; adopting international best practices in planning and design to ensure sustainable growth, and preservation of the natural environment. These plans and policies will guide the urban development of Qatar over the next twenty years.

After studies, consultation and integrated institutional interaction, the Council of Ministers approved the National Development Framework document by Decree no (77) in April (2014), and it was Ratified by his Highness The Emir in December (2014).

Urban Planning Sector at Ministry of Municipality and Environment is honored to present the Qatar National Development Framework.

In conclusion, the Ministry of Municipality and Environment is grateful for the assistance and advice received from Government Ministries and Agencies, Municipalities, the private sector and community representatives. It looks forward to the continuation of this collaboration to achieve the implementation of the Qatar National Development Framework, and the integrated policies and spatial plans for all of the municipalities and cities in the State of Qatar that will soon follow.

**His Excellency Mr. Mohammed bin Abdullah Al-Rumaihi**
**Minister of Municipality and Environment**

# Acknowledgements



The preparation of the Qatar National Development Framework (QNDF) has involved a large number of individuals from State agencies, municipalities and other public and private organizations over a period of 4 years. Although it is not possible to list everyone separately, their contributions to achieving the completion of the QNDF are acknowledged and greatly appreciated. Particular thanks are given to:

- Senior Managers and Technical Coordinators within State agencies
- Staff from the various departments of the Former Ministry of Municipality and Urban Planning
- Members of the QNMP Project Team (Former MMUP)
- Oriental Consultants Co. Ltd (QNMP Project Consultants)

**Special Thanks:**

**QNMP Steering Committee**

| | | |
|---|---|---|
| H.E. Abdul Rahman Bin Khalifa Al-Thani | Former Minister for Municipality and Urban Planning | Chairman |
| Eng. Ali Abdulla Al Abdulla | Former Assistant Undersecretary for Planning Affairs (MMUP) | Deputy Chairman |
| Brigadier General Abdulla Mohammed Al-Suwaidi | General Directorate of Civil Defense, Ministry of Interior | Member |
| Eng. Nasser Ali Al-Mawlawi | President, Ashghal (Public Works Authority) | Member |
| Mr. Abdulla Al-Nagar | Former General Manager Qatar Museum Authority | Member |
| Eng. Issa Hilal Al-Kawari | President, Kahramaa (Qatar General Electricity and Water Corporation) | Member |
| Mr. Mohamed Abdul Karim Almeer | Financial Consultant/Advisor Ministry of Economy and Commerce | Member |
| Mr. Hassan Jassim Badar | Manager, Engineering and General Services Department Mowasalat | Member |
| Mr. Ahmed Mohamed Darwish | Former Qatar Petroleum Executive | Member |
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| Dr. Saleh bin Mohammad Al-Nabit | Former Secretary-General, General Secretariat for Development Planning | Member |
| Mr. Ali Ahmed Al-Kawari | Former Assistant Secretary-General for Shared Services Supreme Council for Information and Communication Technology | Member |
| Mr. Youssef Ibrahim Al-Homar | Manager, Technical Affairs, Former Ministry of Environment | Member |
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| Mr. Mohammed Yousef Al-Mulla | Office of the Assistant Undersecretary for Planning Affairs (Former MMUP) | Steering Committee Secretary |

**QNMP Project Management Team (Former MMUP)**

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|---|---|
| Eng. Mohammed Abdul Qader Abu Erhama | Project Manager (2008 – 2009) |
| Eng. Abdul Rahman Jabir Sorour | Project Manager (2009 – 2011) |
| Eng. Abdulla Al-Karrani | Project Manager (2011 – present) |

**Qatar Government Ministries**
Ministry of Awqaf and Islamic Affairs
Ministry of Business and Trade
Ministry of Culture, Arts and Heritage
Ministry of Economy and Finance
- Government Housing

Ministry of Energy and Industry
Ministry of Environment
Ministry of Interior
Ministry of Justice
Ministry of Labour
Ministry of Municipality and Urban Planning
- Land Acquisition Department
- Central Planning Office
- Center for GIS
- General Cleaning Projects
- Land and Survey Department
- Public Gardens Department
- Urban Planning Department
- State Properties Department
- Transportation and Infrastructure Planning Department

Ministry of Social Affairs (Department of Housing)

**Government Agencies, Authorities and Corporations**
Ashghal (Public Works Authority)
Aspire Zone Foundation/Aspire Logistics
Civil Aviation Authority
General Secretariat for Development Planning
Hamad Medical Corporation
Kahramaa (Qatar General Electricity and Water Corporation)
Mowasalat
Permanent Population Committee
Primary Health Care Corporation
Private Engineering Office
Qatar Foundation
Qatar Green Building Council
Qatar Museum Authority
Qatar National Food Security Program
Qatar Olympic Committee
Qatar Port Management Company
Qatar Postal Services Company
Qatar Rail Company
Qatar Statistics Authority
Qatar Tourism Authority
Qatar University
Oreedoo
Supreme Committee Qatar 2022
Supreme Council for Education
Supreme Council for Family Affairs
Supreme Council of Information and Communication
Supreme Council for Heath

**Municipalities**
Al Daayen Municipality
Al Khor Municipality
Al Rayyan Municipality
Al Shamal Municipality
Al Wakra Municipality
Doha Municipality
Umm Slal Municipality

**Commercial Entities**
Barwa Real Estate
Gulf Organization for Research and Development
Katara Cultural Village
Msheireb Properties
Qatar Diar
Qatar Petroleum
- Dukhan Industrial City
- Mesaieed Industrial City
- Ras Laffan Industrial City

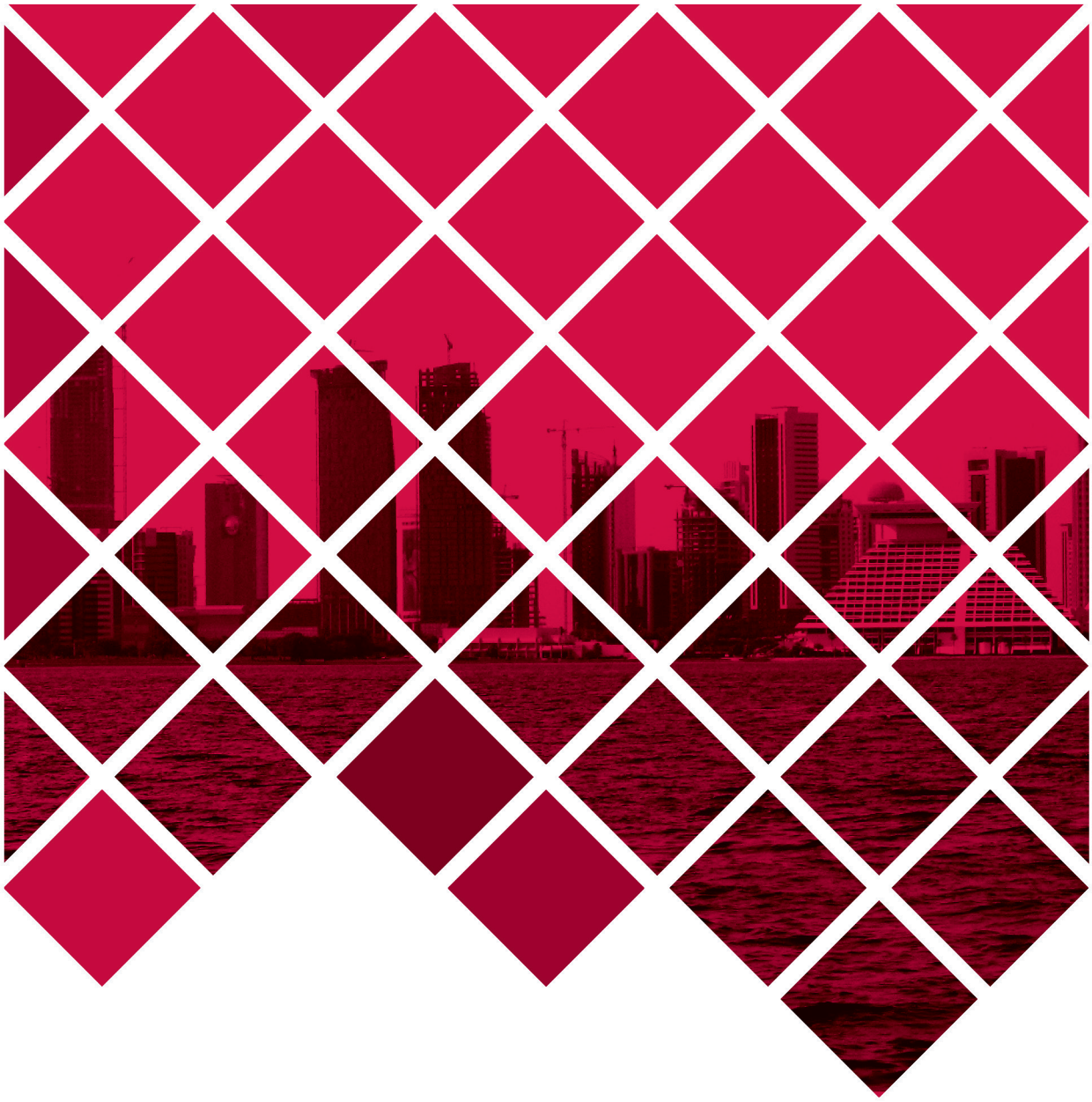
Vodafone Qatar

# Abbreviations



| Abbreviation | Agency |
|---|---|
| Ashghal | Public Works Authority (PWA) |
| Aspire | Aspire Foundation & Aspire Logistics |
| Barwa | Barwa Real Estate |
| CAA | Civil Aviation Authority |
| EQ | Enterprise Qatar<br>(merged in 2014 with the Qatar Development Bank) |
| GCP | General Cleaning Project - Ministry of Municipality and Environment |
| GORD | Gulf Organisation For Research and Development |
| GSDP | General Secretariat for Development Planning<br>(merged in June 2013 to form the Ministry of Development Planning and Statistics) |
| HIA | Hamad International Airport |
| HMC | Hamad Medical Corporation |
| ICT Qatar | Supreme Council of Information and Communication Technology<br>(merged in January 2016 to form the Ministry of Transport and Communications) |
| IPCC | Inter-Governmental Panel on Climate Change |
| Kahramaa | Qatar General Electricity and Water Corporation |
| Katara | Cultural Village Foundation |
| MEIA | Ministry of Endowment and Islamic Affairs |
| MDP&S | Ministry of Development Planning & Statistic |
| MME | Ministry of Municipality and Environment |
| MMUP | Ministry of Municipality and Urban Planning (merged in January 2016 to form the Ministry of Municipality and Environment as per the Emiri Decree No. 4 of 2016)<br>(Transportation Planning Department - TPD: Responsibility has been transferred to the Ministry of Transport and Communications as per the Emiri Decree No.16 of 2014) |
| MoADLSA | Ministry of Aministrative Development, Labor and Social Affairs |
| MoBT | Ministry of Business and Trade (Government Authority newly organized to form the Ministry of Economy and Commerce as per the Emiri Decree No.16 of 2014) |
| MoCAH | Ministry of Culture, Arts and Heritage (Government Authority newly organized to form the Ministry of Culture and Sports as per the Emiri Decree No.4 of 2016) |
| MoCS | Ministry of Culture and Sports |
| MoE | Ministry of Environment (merged in January 2016 to form the Ministry of Municipality and Environment as per the Emiri Decree No. 4 of 2016) |
| MoEC | Minsitry of Economy and Commerce |
| MoEF | Ministry of Economy and Finance (Government Authority newly organized to form the Ministry of Finance as per the Emiri Decree No.16 of 2014) |
| MoEHE | Ministry of Education and Higher Education |
| MoEI | Ministry of Energy and Industry |
| MoF | Ministry of Finance |
| MoI | Ministry of Interior |
| MoJ | Ministry of Justice |

| Abbreviation | Agency |
|---|---|
| MoL | Ministry of Labor (mereged in January 2016 to form the Ministry of Aministrative Development, Labor and Social Affairs as per the Emiri Decree No.4 of 2016) |
| MoPH | Ministry of Public Health |
| MoSA | Ministry of Social Affairs (mereged in January 2016 to form the Ministry of Aministrative Development, Labor and Social Affairs as per the Emiri Decree No.4 of 2016) |
| MoTC | Ministry of Transport and Communications |
| Mowasalat | Mowasalat (Government Owned Company - Ministry of Transport and Communications) |
| MP | Msheireb Properties |
| Ooredoo | Ooredoo Group Q.S.C. |
| PEO | Private Engineering Office |
| PHCC | Primary Health Care Corporation |
| PPC | Permanent Population Committee |
| PWRC | Permanent Water Resources Committee |
| Q2022 | Qatar 2022 Supreme Committee<br>(As per the Emiri Decree No.3 of 2014, the replacement of Qatar 2022 Supreme Committee with Supreme Committee for Delivery and Legacy) |
| QD | Qatar Diar Real Estate Company |
| QDB | Qatar Development Bank |
| QEZ | Qatar Economic Zone (Manateq was established in 2011 by the Minister of Business and Trade (Ministry of Economy and Commerce)) |
| QF | Qatar Foundation for Education, Science and Community Development |
| QGBC | Qatar Green Building Council |
| QMA | Qatar Museum Authority |
| QNFSP | Qatar National Food Security Programme<br>(QNFSP has been transferred to Ministry of Economy and Commerce) |
| QOC | Qatar Olympic Committee (Planning responsibility has been transferred to Minsitry of Culture and Sports as per the Emiri Decree No.4 of 2016) |
| QP | Qatar Petroleum |
| QPMC | Mwani - Qatar Ports Management Company |
| QPSC | Qatar Postal Services Company |
| QRail | Qatar Railways Company |
| QSA | Qatar Statistics Authority<br>(merged in June 2013 to form the Ministry of Development Planning and Statistics) |
| QTA | Qatar Tourism Authority |
| QU | Qatar University |
| SCDL | Supreme Committee for Delivery and Legacy |
| SCH | Supreme Council of Health (Government Authority newly organized to form the Ministry of Public Health as per the Emiri Decree No.4 of 2016) |
| SEC | Supreme Education Council (Government Authority newly organized to form the Ministry of Education and Higher Education as per the Emiri Decree No.4 of 2016) |
| Vodafone | Vodafone Qatar |



# Introduction

## 1.0 Purpose, Status and Content of the QNDF

The Qatar National Master Plan (QNMP) consists of:

- The Qatar National Development Framework (QNDF) which sets the strategic direction and policies to guide the future spatial growth of the country; and
- More detailed plans for the Municipalities and local areas within Municipalities which will be prepared under the umbrella of the QNDF.

This Introduction explains the purpose, status and content of the QNDF.

# 1.0 Purpose, Status and Content of the QNDF



## 1.1 What is the QNMP?

1.1.1 Against the backdrop of rapid economic expansion and urbanization, the Government of the State of Qatar has established a number of policy initiatives aimed at providing a long-term development framework to guide and manage the future growth of Qatar for the benefit of all its people.

1.1.2 The Qatar National Vision 2030 (QNV2030) prepared by the General Secretariat for Development Planning (GSDP), together with its National Development Strategy, is the foundation for these initiatives. The QNMP is the spatial representation of the QNV2030.

1.1.3 The QNMP is fully aligned with national policy directions such as GSDP's '2nd National Human Development Report - Advancing Sustainable Development' (2009). It has also been prepared in line with Qatar Statistics Authorities (QSA) The Millennium Development Goals Report (2008) and the GSDP's scenario for future growth and development.

1.1.4 The QNMP establishes a hierarchy of policy (Refer to Figure 1.1) to facilitate a proactive plan led planning system that supports and manages development through appropriate, efficient and effective institutional governance frameworks. The QNMP is comprised of three key components: the Qatar National Development Framework (QNDF); a Municipal Spatial Development Plan (MSDP) and Area Action Plans (AAPs) for each municipality (Refer to Figure 1.2); and other strategic master plans and strategies[1].

## 1.2 What is the QNDF?

1.2.1 The QNDF sets the strategic framework for sustainable development and provides plans for the country as a whole, for Metropolitan Doha and for the Municipalities that make up the nation's principal administrative structure (Refer to Figure 1.3).

1.2.2 It also provides the framework for the preparation of Municipal Spatial Development Plans that will eventually cover all the cities, towns and villages in the country.

1.2.3 The QNDF establishes principles, objectives, policies and implementation actions that must be followed by Government Ministries and other Government Agencies (Ministries and Agencies) and Municipalities to lead to the successful implementation of the QNDF.

1.2.4 The QNDF provides a disciplined framework for making spatial and land use decisions to guide the development of Qatar until the year 2032. Based on extensive data collection and analysis, the QNDF envisages the built future of Qatar and outlines the policies and actions required to achieve this vision. The QNDF provides decision-makers with the framework against which to assess future actions.

1 Including an Urban Design Compendium

**Figure 1.1 Qatar National Development Framework Hierarchy**

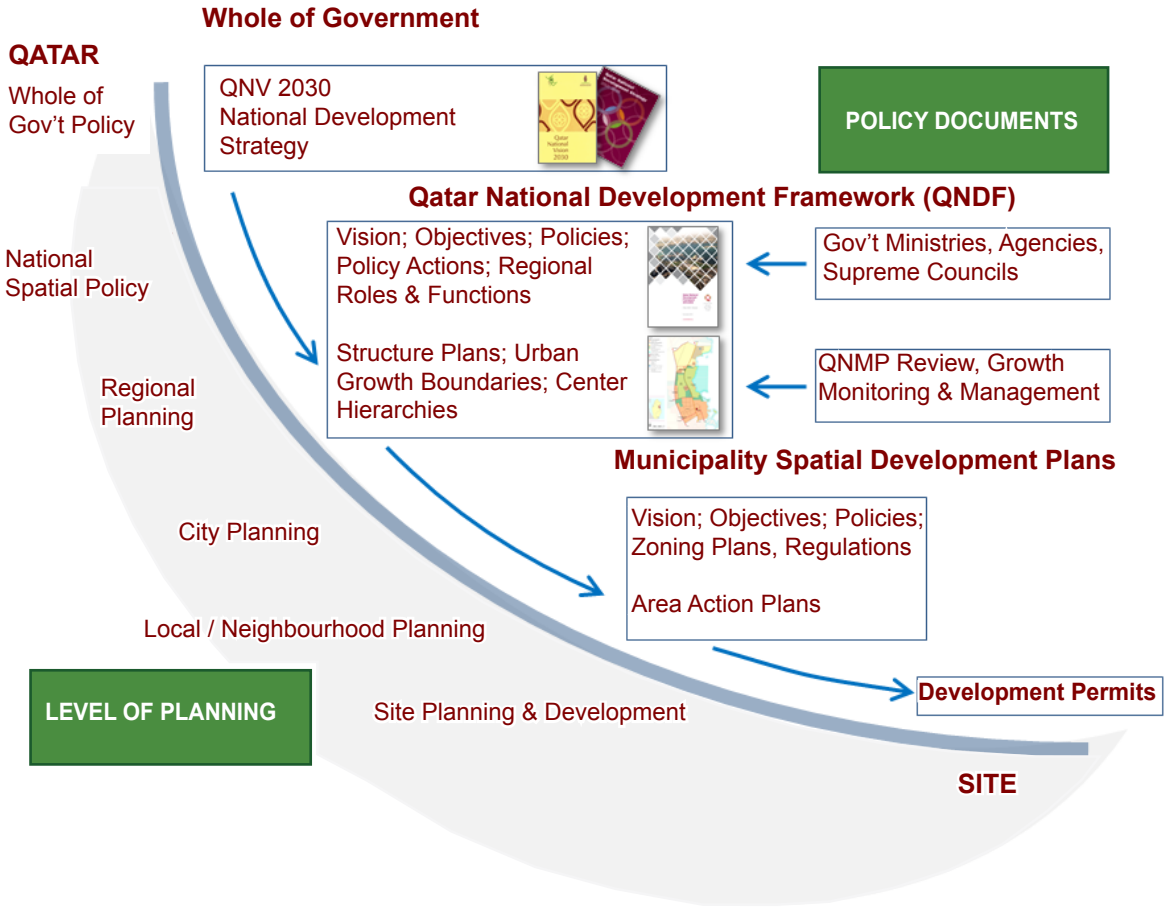
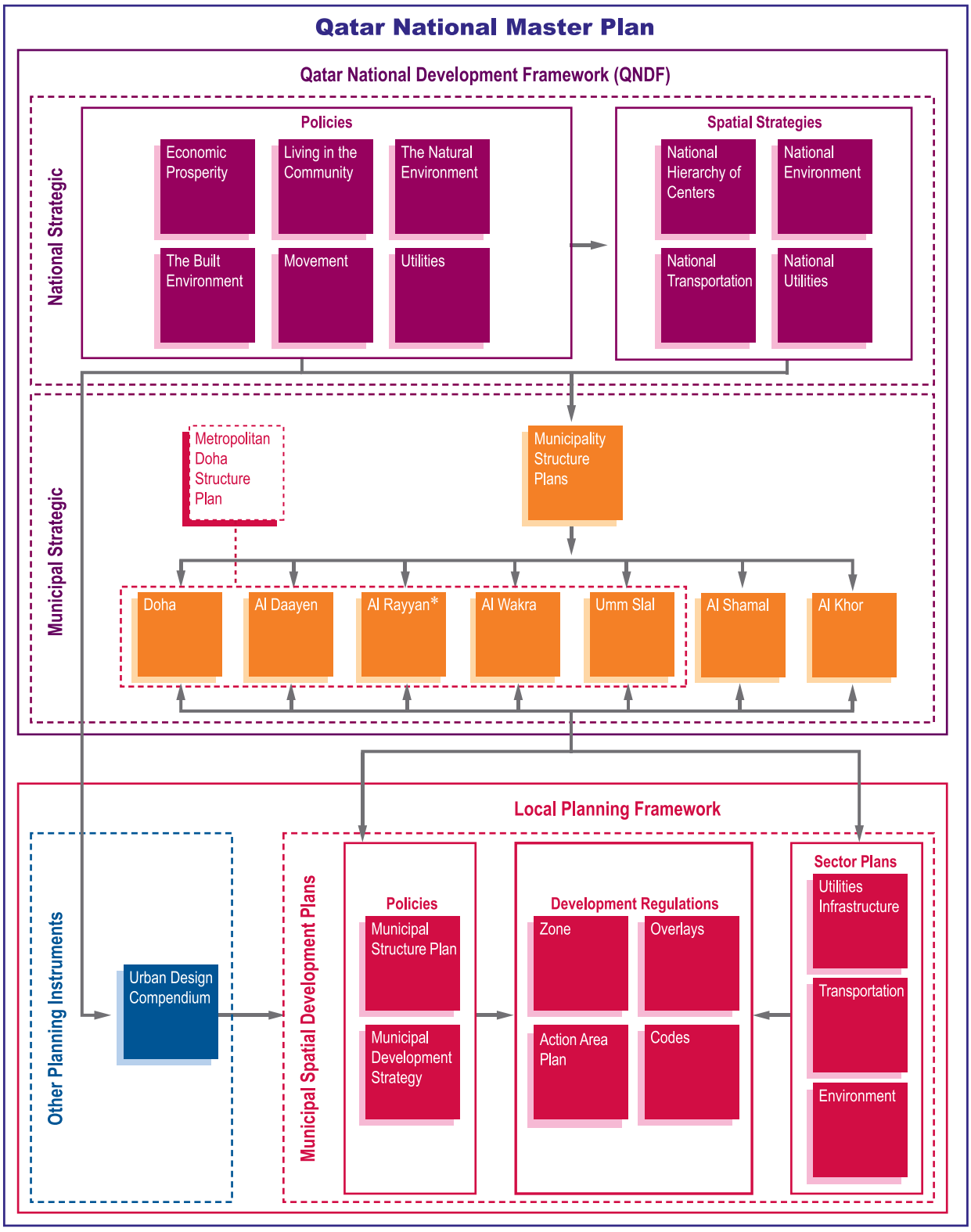



**Figure 1.2 Key Components of the Qatar National Master Plan**




* Now divided into Al Rayyan and Shahaniya Municipality

## Figure 1.3 Context - Qatar (2013)


Map Prepared: June, 2013

1.2.5 Applying the precautionary principle, there is a need to anticipate harm before it occurs. Under the precautionary approach it is the responsibility of future development to establish that it will not result in significant harm to the social, environmental, economic or infrastructure aspirations of the QNDF. In the absence of scientific certainty, a risk averse approach should be adopted, coupled with extensive monitoring and compliance assessment. In addition a comprehensive risk assessment analysis of the QNDF will be undertaken at regular intervals to address changing circumstances, and in response to major new policy initiatives by the Government.

1.2.6 To aid future monitoring and compliance assessment of QNDF policies and policy actions, a set of robust sustainable development indicators will be prepared where appropriate and implemented as an early priority of the QNDF. These indicators will not only assess national impacts, but will also take into consideration Gulf regional and global impacts that are likely to have a bearing on the future growth of Qatar.

**Status of the QNDF**

1.2.7 Strategic land use planning has been undertaken in Qatar for nearly 40 years. The first strategic plan, the Qatar Development Plan, was adopted in 1972 and was followed by a series of plans over the following twenty years. However, the most recent plan, the Physical Development Plan (PDP) for Qatar, was prepared more than 10 years ago, and due to rapid urbanization, is now well out of date.

1.2.8 The QNDF replaces the PDP and establishes new structure plans for all Municipalities. It is the principal policy plan for the physical development of Qatar and takes precedence over all other planning instruments. Where there is any inconsistency with any other plan, policy or regulation, the QNDF prevails. Any plans, policies and regulations being prepared or amended by Ministries and Agencies that relate to the physical development of Qatar must reflect and align with the QNDF.

1.2.9 The Regulatory Provisions of the QNDF are required to be taken into account in planning and development assessment decision-making processes, including:

- Ministries and Agencies' plans, policies and decisions
- Municipal Spatial Development Plans, policies and subsequent codes and other planning instruments, and
- Other Agencies' development assessment processes and decisions.

## 1.3 QNDF Planning Process

1.3.1 To translate QNV2030 and other national policy directions into physical and spatial development plans, policies and actions for implementation, a structured process was used to prepare the QNDF (Refer to Figure 1.4).

1.3.2 The QNDF provides the framework for managing growth, change, land use and development in Qatar to 2032. It also considers the State's potential management needs beyond 2032 to ensure planning decisions made today do not compromise options to meet longer term needs.

1.3.3 The implementation of the QNDF is based on three timeframes:

- Immediate – actions to be completed within 0-2 years;
- Short-medium term – actions to be completed within 3-5 years; and
- Medium-long term – actions to be completed within 6 years or more.

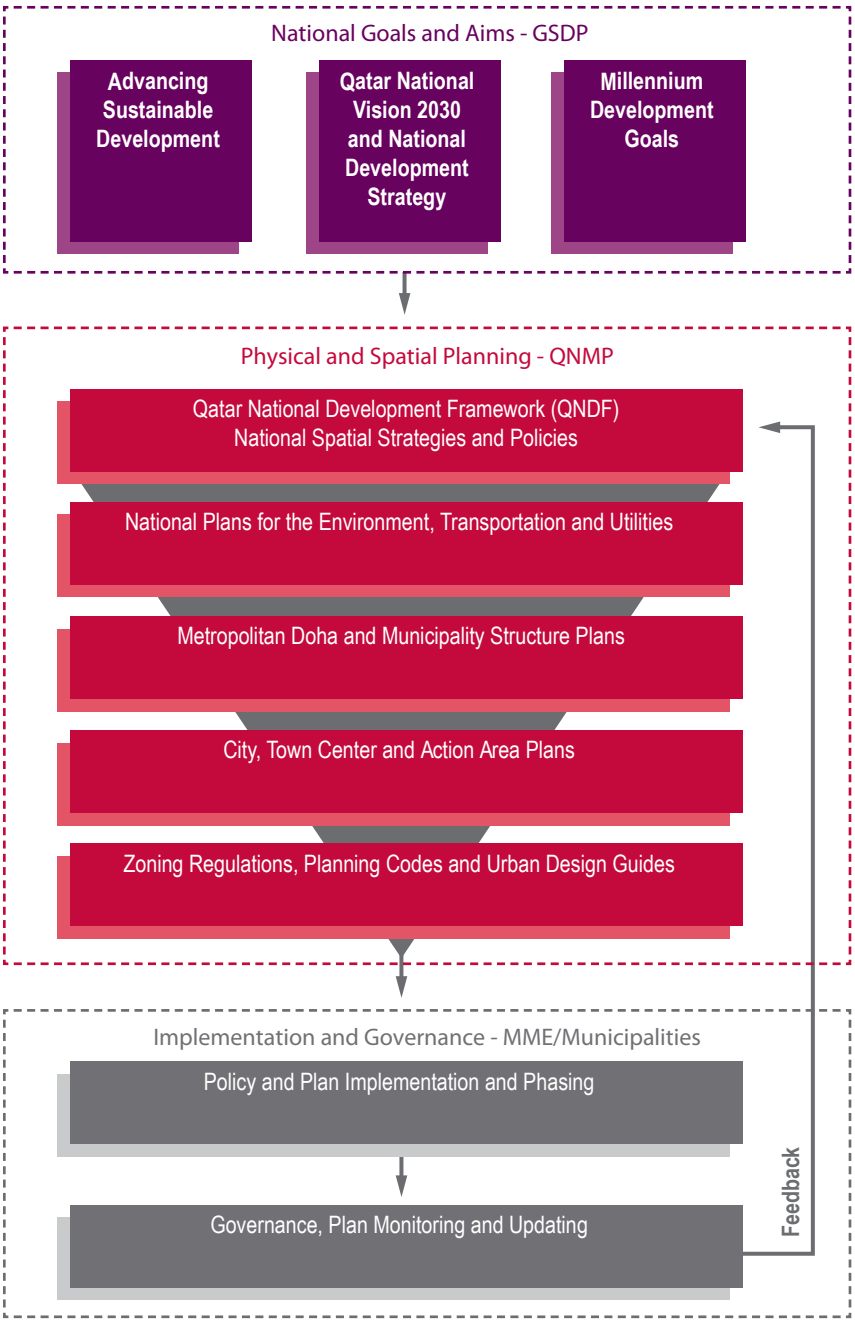
1.3.4 The QNDF is a comprehensive and long term spatial development goal for Qatar. To assist in its implementation, an extensive training program designed specifically for the Qatari context will be delivered to ensure the multi-disciplinary approach underpinning the QNDF is widely understood by key stakeholders. The training program includes seminars for senior managers, workshops for technical and operational staff, training of trainers and on the job training. The delivery of training has been phased and tailored exclusively for the target audience whilst ensuring sound understanding of key themes and principles in the decision-making process.

## 1.4 Amending or Replacing the QNDF

1.4.1 The QNDF will be regularly monitored and reviewed to ensure it continues to provide the most appropriate framework for managing growth and development in Qatar. The first formal review of the QNDF, informed by this monitoring, will be undertaken in 2017. Subsequent formal reviews of the QNDF will occur every five years thereafter.

1.4.2 The QNDF may, from time to time, be amended to ensure it is capable of responding to contemporary urban and strategic planning practices and to provide clarity where needed. The Minister responsible for Urban Planning can amend or replace the QNDF following appropriate procedures.

**Figure 1.4 The Qatar National Development Framework Preparation Process**



## 1.5 Content of the QNDF

1.5.1 The QNDF is comprised of five sections (Refer to Figure 1.5):

**A. Urban Living in the 21st Century**
Provides the background and the major challenges facing Qatar and the need for a comprehensive strategic framework to help guide its future.

**B. The Spatial Strategy**
The desired future for Qatar is outlined in the vision statement. To achieve this vision, 17 strategic planning objectives together with a national spatial strategy have been established to guide key elements of Qatar's development.

**C. Drivers of Change**
Detailed policy actions set out to achieve the 17 objectives, and ultimately, the vision statement, are framed. Key responsibilities and implementation timeframes have been established to aid implementation, monitoring and future reviews.

**D. Delivering the Strategy**
Whole of Government and stakeholder implementation strategies are identified to lead the success of the QNDF.

**E. Managing the Strategy**
Regulatory provisions that apply to applications for development are laid down.

1.5.2 To assist with interpretation and implementation of the QNDF by key Ministries and Agencies, the document has been structured around sectoral policies and actions in Section C (such as housing and community facilities, the natural environment, movement, etc). Criteria and guidelines to guide development are set out in several Schedules (Annex 1). To facilitate implementation, integration and monitoring of the QNDF, each policy has been cross-referenced through the Policy Matrix (Annex 2) and Implementation Responsibility Schedule (Annex 3).

**Figure 1.5 Structure of the QNDF**

# Section A: Urban Living in the 21st Century

## 2.0 Planning for Sustainable Growth

QNV2030, Advancing Sustainable Development and its Millennium Development Goals are at the heart of the country's National Development Strategy 2011-2016. GSDP's economic growth scenarios underpin the strategy and its population projection scenarios sets the scene for a transition from oil and gas dependency to a knowledge and service-based economy. The Qatar National Master Plan, its National Development Framework and its Area Plans provide the physical and spatial expression of these far-reaching goals and targets. To meet these targets, innovative national, and the subsequent Municipal Spatial Development Plans, policies and actions for implementation have been produced which will guide sustainable urban living well into the 21st Century.

# 2.0 Planning for Sustainable Growth



## 2.1 Qatar National Vision 2030, Sustainability and Other National Policy Directions

2.1.1 Through the wise insights of His Highness Sheikh Hamad Bin Khalifa Al-Thani, our beloved Father the Emir, a National Vision (Emir Decree No. 44 (2008)) has been prepared to set out the long term direction for the country, to inspire its people and to develop a set of common goals related to their future.

***"The National Vision aims at transforming Qatar into an advanced country by 2030, capable of sustaining its own development and providing for a high standard of living for all of its people for generations to come."***

2.1.2 The QNV2030 summarized 5 key challenges facing the country (refer to Figure 2.1) and identified 4 fundamental pillars of sustainable development to overcome these challenges, thereby building a society that promotes justice, benevolence and equality:

- Human Development
- Social Development
- Economic Development, and
- Environmental Development.

2.1.3 In recognizing its growing responsibility to raise awareness of sustainability and environmental challenges, the Government has produced its Second Human Development Report "Advancing Sustainable Development" (GSDP 2009). The Report focuses on sustainable development themes: environmental protection, economic growth and social equity.

2.1.4 In particular it seeks ***"to preserve and protect its unique environment"*** with the need for ***"a comprehensive urban development plan for Qatar that adopts a sustainable policy with regard to urban expansion and population distribution".***

2.1.5 Other national policy directions that have been used to guide the QNDF include: the QSA and GSDP population projections and economic scenarios; the Permanent Population Committee's Report on Population Policy of Qatar (2009); the emerging National Food Security Program; and the Environmental Protected Areas Decrees.

2.1.6 The QNDF provides the spatial and physical development context to these national policy directions and comes at a critical time in the country's changing urban environment. Founded in the QNV2030 the QNDF is designed to provide a blueprint for sustainable urban living and enhanced quality of life for Qatar and all its citizens.

2.1.7 The QNDF has been subject to the Strategic Environmental Assessment (SEA) process. The SEA is a powerful tool used to assess the possible impacts on existing and future environmental conditions (including socio-economic) that may result from implementing a plan, policy or program. This rigorous assessment process also improves the effectiveness of any such plan through the strategic consideration of different plan or policy options, taking into account environmental, social and economic considerations.

## 2.2 Current Planning Challenges

2.2.1 Qatar is enjoying a period of unparalleled prosperity with exceptional economic growth and increasing standards of living for its people. Major advances in the economy, human and social development continue to occur. However with this wealth has come formidable challenges to the future quality of life.

2.2.2 High rates of population growth, large increases in the ratio of expatriates to Qatari nationals in the labor force (including unskilled workers), rapid and unplanned urban development and environmental damage are all now impacting on quality of life (Refer to Box 1).

2.2.3 Rapid rises in disposable incomes have led to exponential growth in car ownership and with it, significant increases in road accidents and traffic congestion. The high rates of population growth and demand are increasingly straining Government resources to provide more schools, hospitals, other community facilities including parks and open spaces, and recreational and leisure activities.

2.2.4 The need for Qatar to act in harmony with its neighboring Gulf States in protecting the environment and the region's ecological system has also been recognized. Problems such as diminishing water and hydrocarbon resources, the effects of pollution and environmental degradation, and the impact of global warming on sea level and coastal urban development are all significant issues for the Gulf Region.

2.2.5 Rising sea levels will pose a significant risk to countries in the Gulf Region including Qatar. The Inter-Governmental Panel on Climate Change (IPCC) predicts that changes in temperatures, sea levels and weather patterns are all likely to deteriorate in the future, depending on the levels of future development. The problems will manifest in the form of both coastal region inundation and increasing salinity of soil and ground water resources.

2.2.6 The QNV2030 sees a proactive and significant regional role for Qatar in assessing the impact of climate change and mitigating its negative impacts, especially on countries of the Gulf. The QNDF fully supports this initiative and is directed towards achieving a more resource efficient urban development structure and way of life for the people of Qatar.

2.2.7 Mitigating negative impacts is only a partial solution to the challenges posed by climate change. The QNDF, through its relevant policies and policy actions, outlines a strong undertaking of adaptation measures to respond to and anticipate the risks posed by climate change.

Source: *MME*

## Box 1 Key Planning Challenges for Qatar

**Rapid and unprecedented development growth in Qatar over the past three decades has brought with it major challenges that the country needs to address. These include:**

- Urban development is expanding rapidly but quality of life standards (such as Qatari identity, sense of belonging, cultural heritage, etc.) and the nation's natural assets are in decline
- Large scale mega projects have tended to cater mainly for higher income groups, which have created low density, spatially fragmented developments, only accessible by private car
- The image of Doha as an international, sustainable and sophisticated city is stifled by the lack of quality public transport options, increasing traffic congestion and a degraded public realm
- Qataris' cultural preference is for low density villas on large plots, but due to urbanization pressures, sites can now only be provided in out of city center and urban fringe locations
- There is a lack of affordable housing options for the non-Qatari workforce who mainly live in a mix of older inner city housing stock, overcrowded villas, or temporary labor compounds with basic amenities
- Growth centers at Al Khor and Al Thakhira and Al Wakra/Al Wukair are developing in an ad hoc manner, with individual mega projects and residential compounds disconnected from more traditional Qatari neighborhoods
- QP Industrial Cities provide job opportunities for workers who live on site, but the residential communities are isolated from wider social and community networks
- Smaller settlements outside Metropolitan Doha and the Industrial Cities are suffering from a declining and aging population, limited local employment opportunities and fragmented provision of community facilities
- Sensitive environments are being degraded by urban and industrial activities, land reclamation and excavations, and major infrastructure projects with declines in air and water quality and loss of biodiversity
- Inefficient use and management of energy is increasing the level of green house gas emissions
- **The lack of an integrated Government policy on food security, sustainable water supply and environmental protection is creating pressures on the future of the agricultural industry and the nation's natural environment assets**
- The townscape and landscape of the country are being compromised by the location and massing of national utilities corridors through Qatar and major power and water structures along the coast
- Current zoning regulations are producing single use developments that frustrate opportunities for vibrant mixed-use developments, and result in monotonous urban environments.

Source: *MME*

Source: *MME*

## 2.3 Sustainable Guiding Principles

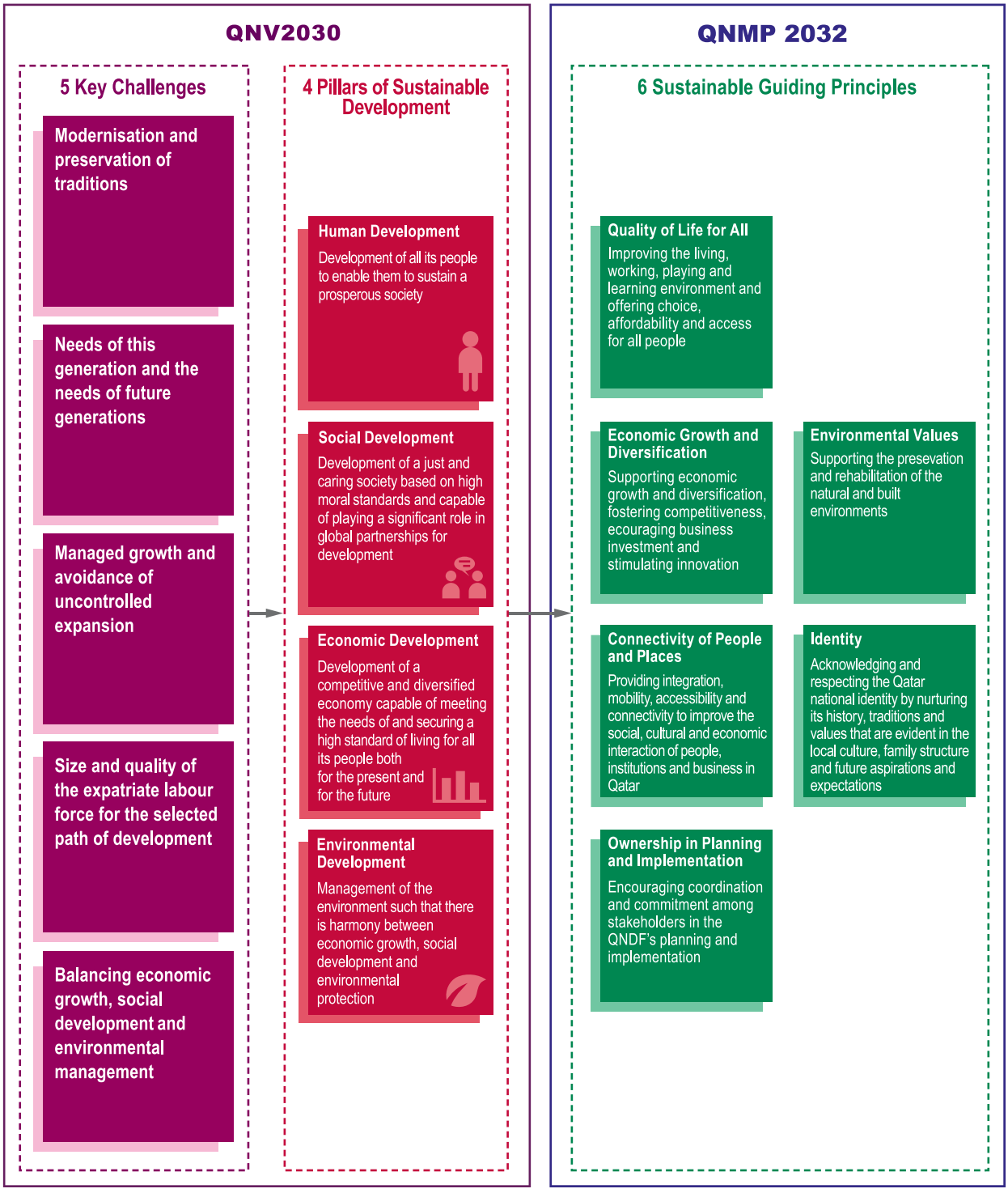
2.3.1 To address these key planning challenges, 6 Sustainable Guiding Principles were formed, based on best international practice, to provide the foundations for the strategic planning objectives, plans, policies and policy actions that make up the QNDF.

2.3.2 The QNDF Guiding Principles focus on Quality of Life for All, Environmental Values, Connectivity of People and Places, Economic Growth and Diversification, Identity, and Ownership in Planning and Implementation (Refer to Figure 2.1).

2.3.3 Based on these Principles, a robust sustainability assessment framework was established to critically examine the QNDF policies and policy actions and to establish benchmarks for achieving sustainable planning outcomes for the state of Qatar. Implementation of the QNDF spatial strategy, policies and policy actions must ensure "sustainable development outcomes" as directed by the QNV2030.

Source: *MME, MP, QMA*

**Figure 2.1 QNDF Sustainable Guiding Principles**



## 2.4 Foundations for Growth

2.4.1 To address the long term goals of the QNV2030 and the National Development Strategy 2011-2016, QSA/GSDP has provided a scenario of future economic growth and associated projections for both the local and expatriate populations. This scenario foresees a more skilled and productive labor force with an increasingly diversified and knowledge-based economy, with less dependency on oil and gas (Refer to Box 2).

2.4.2 QSA/GSDP forecasts average GDP growth per annum of around 4.5% per annum between 2010 and 2017, and then stabilizing at around 2.5% per annum between 2018-2032 (Refer to Table 2.1). GDP growth in the hydrocarbon sector is expected to peak in the short term and subsequently to stabilize beyond 2017, when the scale and pace of resource exploitation is predicted to slow down. This scenario, which is designed to make Qatar's National Vision a reality, has formed the foundation for the QNDF spatial development strategy.

2.4.3 In the long-term, the scenario foresees impressive GDP growth in trade, services and transport, and manufacturing with a move towards high-technology, high value-added industries including information and communication technology (ICT), media, education, health and tourism. In the short and medium term, a major driver of Qatar's economy is expected to be substantial infrastructure spending.

2.4.4 Total employment is predicted to peak to around 1.8 million in 2017 and then settle to around 1.6 million by 2032. This prediction, however, masks significant upward shifts in demand for higher skilled workers, balanced by major reductions in the construction work force around 2017 when current major development commitments are expected to be completed.

**Table 2.1**
**GDP and Employment Growth, Qatar (2010 – 2032)**

| | 2010 | 2017 | 2032 |
|---|---|---|---|
| GDP (2010 prices, QR million) | 454,100 | 664,185 | 1,054,226 |
| Total Employment | 1,269,000 | 1,804,000 | 1,691,000[1] |
| GDP Growth Rate (pa) | 4.5% (2010-2017) | | 2.5% (2017-2032) |

[1] Total employment at 2032 extrapolated from 2030 GSDP forecast

Source
*QSA/GSDP (2012)*

**Box 2 QSA/GSDP Economic Growth Scenario Summary**

**Emerging Global Environment:**

**Sharp but short slowdown (2009) followed by a gradual return to normalcy (2010-2030)**

**Emerging Domestic Environment:**

- Faster growth of higher value-added manufacturing and services output and levelling of hydrocarbons' output
- Due to advances in skill content of labor and capital deepening, fast productivity growth, comparable to that experienced in the past in the fastest growing economies of East Asia
- Forward looking and pro-active policies that help make Qatar's National Vision a reality and which largely avert stress

Source
*QSA/GSDP (2010)*

## 2.5 Population Growth and Distribution

2.5.1 As a result of rapid economic growth, Qatar's population has more than quadrupled from 369,079 in 1986 to 1,702,211 in 2010 (Refer to Table 2.2). The population of Doha as the capital city and principal urban center, grew from 217,294 in 1986 to 796,947 by 2010.

2.5.2 Industrial growth is being focused in Qatar Petroleum (QP) Industrial Cities at Ras Laffan, Dukhan and Mesaieed, as well as in the Doha Industrial Area and the Qatar Economic Zones (QEZ).

2.5.3 Other major towns such as Al Wakra and Al Wukair provide residential accommodation, community facilities and other services for surrounding areas and commuters to Doha and Mesaieed. Al Khor and Al Thakhira provide similar services for skilled workers in Ras Laffan and Doha.

2.5.4 Beyond these key settlements there are towns and villages, including Al Shahhaniya, Al Shamal and Simaisma which provide local service functions and offer a limited range of community facilities. Populations in some of these settlements increased up to 2004, but since that time have been affected by the rapid growth of housing and job opportunities and associated social facilities in and around Doha, which are stimulating rural-urban migration.

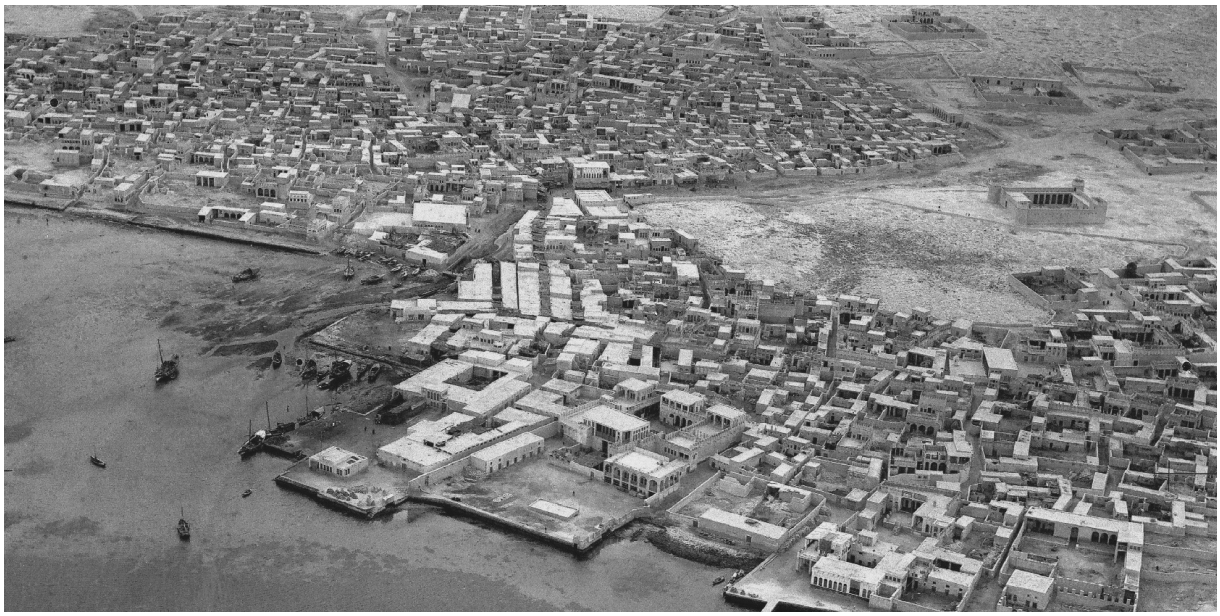
2.5.5 In terms of national land use, in 2009 urban development made up 6% of the total land area of Qatar; beyond the urban areas, 30% of the total was protected by Environmental Protected Areas (EPA), 4% was designated for agricultural purposes and over 68% was natural desert.

**Table 2.2 Population Growth, Qatar (1986 – 2032)**

| | Year | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1986 | 1997 | 2004 | 2008 | 2010 | 2017 | 2032[1] |
| Total Population | 369,079 | 522,023 | 744,029 | 1,448,479 | 1,702,211 | 2,545,000 | 2,520,000 |
| Growth Rate (pa) | | 3.80% | 6.10% | 23.70% | 8.80% | 7.10% | -0.1% |

[1] Total population at 2032 extrapolated from 2030 forecast scenario, which uses the year 2010 as the base year for forecasting purposes

Sources
*QSA/GSDP (2012)*



Source: *MP*

**Future Population Growth**

2.5.6 In the future, QSA/GSDP forecasts a national population of 2.3 million at 2030 which has been extrapolated to 2.5 million permanent resident at 2032 (Refer to Box 3).

2.5.7 Based on historical trends, and the current significant level of development commitments already made, the proportion of total population located within the wider Doha urban area, termed Metropolitan Doha for planning purposes, is forecast to stabilize between 80 to 85% of the total population or about 1.9 million.

2.5.8 The population within Metropolitan Doha will be mainly distributed in the Residential and Industrial mega-projects, Al Wakra and Al Wukair Master Planned areas; the proposed QNDF centers hierarchy; Qatari National Housing areas; and the existing urban areas.

2.5.9 Outside Metropolitan Doha, the expansion of QP Industrial Cities at Mesaieed, Ras Laffan and Dukhan, planned growth at Al Wakra, Al Wukair, Al Khor and Al Thakhira, and natural growth in other key cities and towns including Umm Qarn, Al Shamal and Al Shahhaniya will enable a sustainable population distribution and urban structure to emerge.

2.5.10 With the continued growth of Metropolitan Doha assured, the consolidation of the QP Industrial Cities Program and planned interventions in other towns and cities, the future spatial structure of Qatar to 2017 and beyond, has been largely fixed.

2.5.11 Based on the above, forecasts of population distribution in key centers have been derived (Refer to Figure 2.2) and will be provided in detail through the Municipal Spatial Development Plans.

Source: *MP*

## Box 3 Demand Forecasting

### Demand Forecasting

For the preparation of the National Development Strategy, the General Secretariat for Development Planning (GSDP) and the Qatar Statistics Authority (QSA) produced a scenario of national economic and demographic growth. This scenario foresees a shift away from the current dependency on oil and gas exploitation over the next 10-15 years, towards a knowledge-based and service sector-driven economy and is designed to make Qatar's National Vision a reality. This scenario has been used as the basis for the QNDF forecasts.

The scenario[1] provides forecasts for 5 year time periods from 2010 (the base year) to 2030. Projections are made of GDP growth by sector, forecasts of Qatari population by economic status, gender and age group, and of non-Qatari population by type of household by gender and age groups. The scenario also provides forecasts of labor demand by sector for Qataris and non-Qataris.

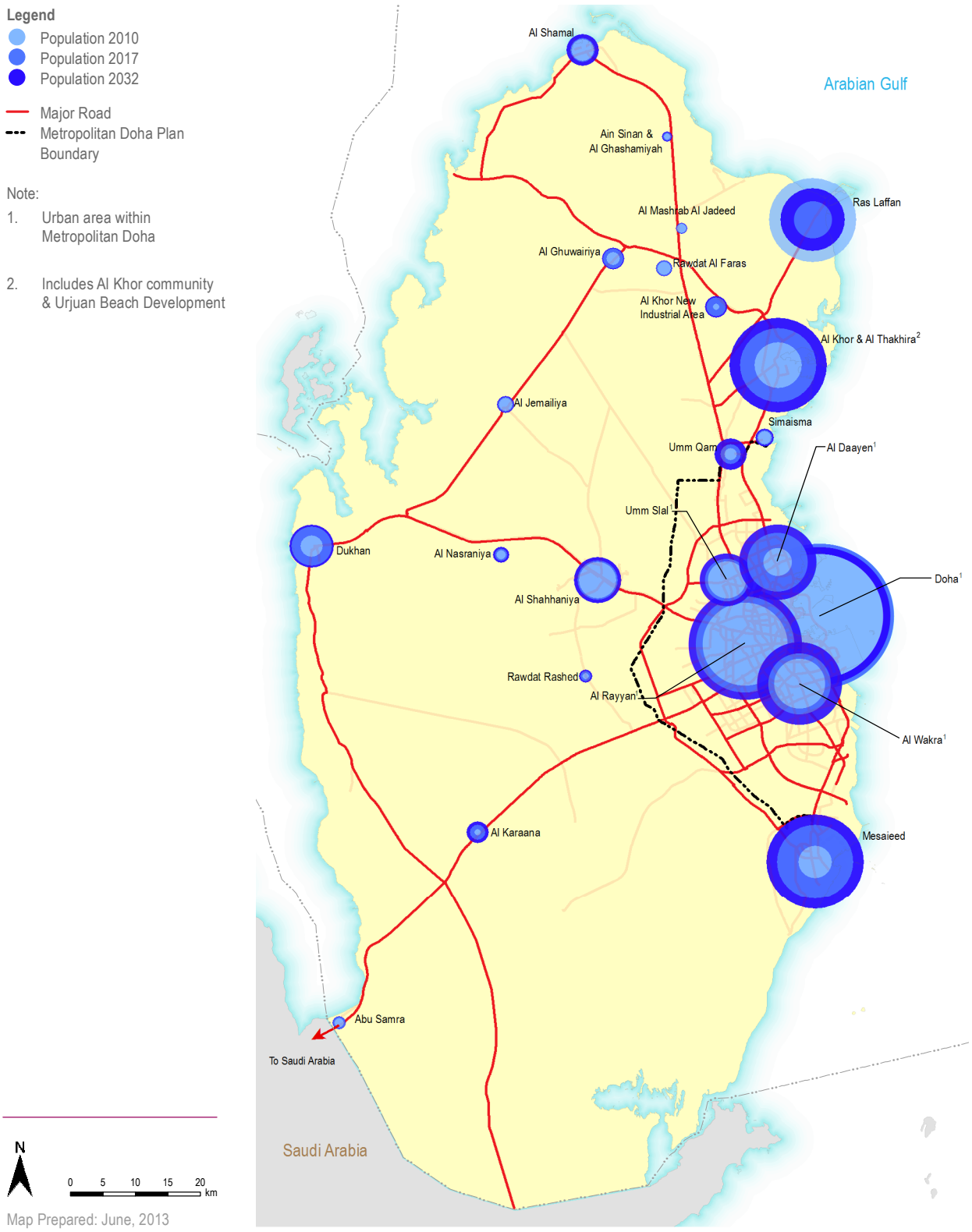
In the QNDF, these forecasts have been used as control totals and extrapolated from 2030 to 2032, in line with the agreed planning horizon. Taking account of past national Census information, the Real Estate Comprehensive Survey (2008) and developers' own estimates of target residential populations in committed 'mega' projects, long-term population growth and distributions were derived. The target permanent resident population and strategic population distribution of 2.5 million for Qatar and 1.9 million for Metropolitan Doha have then been used to determine demand for future housing, and for identifying future needs for transportation and utility facilities[2].

To allow for unforeseen contingencies and to ensure long term demand for land can be met beyond the plan period, the population forecast has been inflated by +10%. The drawing up of urban growth limits (new City Limits) and structure plan boundaries has allowed for this 10% contingency. In the case of Metropolitan Doha, this means sufficient land to accommodate at least 2.1 million population has been allowed within the plan boundary

[1] 'Qatar Population Projections 2010-2030', QSA /GSDP (2012)

[2] Excluding demand for power and water from QP Industrial Cities, which are assumed to be met by their embedded power and water facilities

## Figure 2.2 Forecast National Population Distribution (2010 – 2032)



## 2.6 The Growth of Doha

2.6.1 The existing Doha urban area has grown out from its origins around the port, the downtown souqs and the Emiri Diwan along the Corniche and along the major radial routes including Al Rayyan Road, Salwa Road, Al Muntazah Street and Al Matar Street (Refer to Figure 2.3).

2.6.2 In the downtown area, urban intensification has given rise to the replacement of traditional residential and local retailing with modern offices and apartment blocks. During this process many Qatari households have relocated to suburban areas in search of their preferred lower density neighborhood lifestyles.

2.6.3 More recently, iconic cultural complexes such as the Museum of Islamic Art and the Islamic Cultural Center along with innovative urban regeneration schemes such as Souq Waqif and Msheireb Downtown Doha are providing a strong cultural heritage focus for a revitalized downtown Doha.

2.6.4 Beyond downtown, the evolution of a system of ring roads connecting with the older radial route pattern has created a patchwork of land uses that has given rise to urban sprawl. Within these areas, the application of restrictive zoning regulations has led to the piecemeal development of medium and low density residential compounds and neighborhoods, including gated communities which are often of an identical and uninspiring design. Out of center shopping malls, education complexes and sports facilities have been developed in locations that can only be reached by private car, in the absence of quality public transport alternatives.

2.6.5 National and international transportation facilities, such as the airport and port have expanded within their inner city locations and are now enmeshed within the main built-up area of Doha. The combination of the lack of capacity for long term growth and increases in traffic congestion have prompted the Government to plan and build new strategic facilities for the Hamad International Airport (HIA) and the New Doha Port on green field sites further out of the city.

2.6.6 The growth of the strategic highway network and mega development projects have extended the urban area south west and north west, with a mix of high-end residential and commercial activities. These major new developments have however exacerbated problems of traffic congestion and increased demands for road space, whilst fragmenting the public realm.

2.6.7 The Doha urban area has now expanded well beyond its Municipality boundary and has engulfed built-up parts of Al Daayen, Umm Slal, Al Rayyan and Al Wakra Municipalities, as well as natural desert areas; by 2008 the urbanized area had reached 48 sq km.

2.6.8 By 2017, major residential commitments including the Pearl, Lusail, Barwa City and Barwa Al Baraha will be completed. Other major land use commitments include Education City, Medical City, Msheireb Downtown Doha, Barwa Commercial Avenue, Qatar Economic Zones 1 and 2, and Qatar University (Refer to Figure 2.4).

2.6.9 Including the Qatari national housing program, and planned expansion at Al Wakra and Al Wukair, current residential development commitments in the wider Doha urban area could provide sufficient capacity to accommodate 75% of the predicted national population growth over the plan period.

2.6.10 By 2017 Doha will be a single urbanized form some 40km in extent from Lusail in the north, through West Bay, Downtown Doha and the New International Airport in the middle, and extending south to Al Wakra and the New Doha Port. This new, contiguous urban form has been termed Metropolitan Doha (Refer to Box 4).

2.6.11 This emerging Metropolitan agglomeration will be linked via a network of highways, the Metro rail system (Red Line) and bus feeder networks. Strategic roads and in the long term, national rail links to Al Khor in the north and Mesaieed Industrial City in the south, will reinforce the land use/transportation framework and set this metropolitan development pattern for the foreseeable future.

**Box 4 Defining a Metropolis**

**Metropolitan Doha**

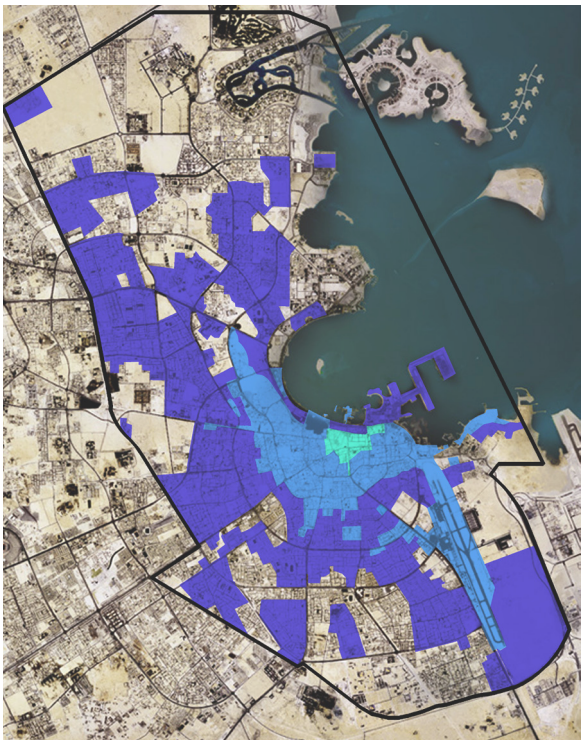
"Metropolis" comes from the Greek words mētēr meaning "mother" and pólis meaning "city"/"town". Today, Metropolis is used to describe an agglomeration of cities in which the center city (Doha for example) has a population of more than half a million people and in which the aggregate population (the urbanized area of Doha for example) has a population of more than one million people.

## Figure 2.3 Urban Growth of Doha (1947 – 2008)

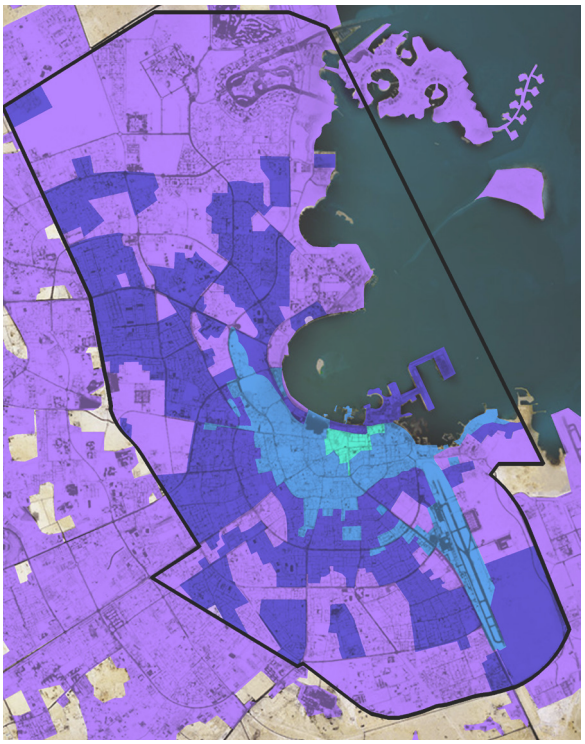
a. 1947

b. 1966

c. 1988



d. 2008

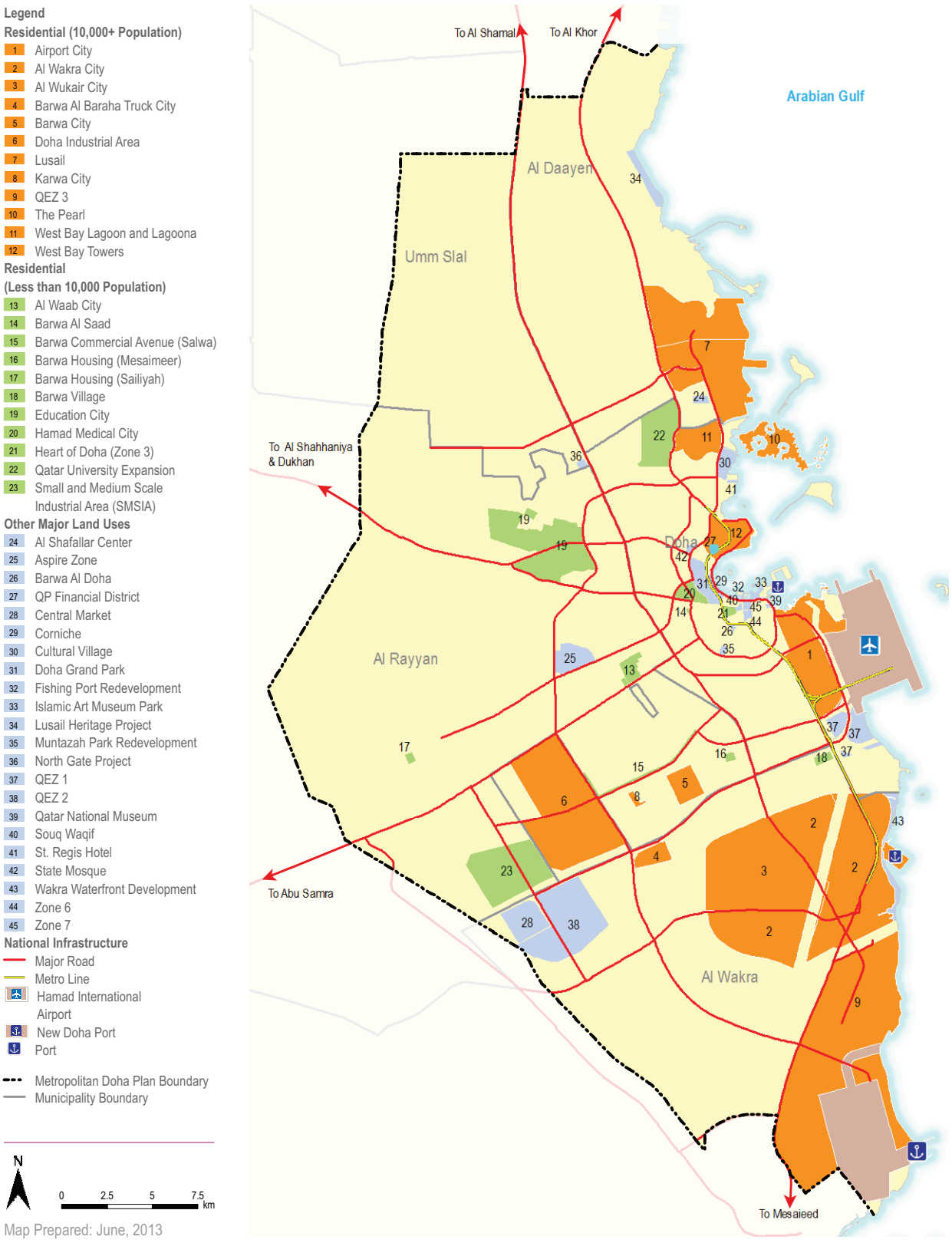


Source: *MME*

**Legend**

1947 1966 1988 2008 Doha City Limits (2006) Satellite Image (2008)

## Figure 2.4 Existing and Committed Large Scale Developments, Metropolitan Doha (2010)



Best practice planning principles and objectives have been used to shape Government-provided socio-economic forecasts and major developers' commitments and provide a sustainable urban growth strategy for Qatar. The spatial strategy will guide new development to a hierarchy of mixed-use, mixed density centers which will be highly accessible by a variety of transport modes. These centers will provide a strong attraction for public transit-oriented developments and 21st Century urban lifestyles. By adopting this approach, more efficient use of Government investments in transport and utility infrastructure can be made, and reductions in the number and length of car trips and carbon emissions will be experienced. In addition, greater consistency and direction is created for developers and the overall image and quality of life for residents and workers is improved. The National Spatial Strategy will be translated at the Municipality level through a series of Municipal Spatial Development Plans.

# Section B: The Spatial Strategy

# 3.0 The QNDF - Vision, Objectives and Spatial Strategy



*"Create a Role Model for Sustainable Urban Living and the most Livable Towns and Cities in the 21st Century"*

## 3.1 The QNDF Vision

3.1.1 The purpose of the QNDF is to provide an urban development framework that will better manage current land use commitments, whilst guiding future long term growth towards more sustainable locations.

3.1.2 In so doing, the QNDF will transform the Government's long term goals for the country into attractive and sustainable living environments for Qatar and all its people.

3.1.3 By adapting best practice planning principles and objectives to the Qatar context, a vision for the future urban development of the country has been established to: ***"Create a role model for sustainable urban living in the 21st Century and the most livable towns and cities"*** (Refer to Figure 3.1).

3.1.4 The QNDF is fully aligned with the QNV2030, the 6 Sustainable Guiding Principles and other national policy directions, and has evolved a physical and spatial strategy that has a firm foundation in sustainable development.

3.1.5 The QSA/GSDP projected growth targets lead to a predicted 2.5 million permanent resident population in Qatar by 2032. To sustain this growth and achieve the Government's ambitious economic diversification program, the QNDF promotes a robust and well-managed spatial planning framework to deliver sustainable urban lifestyle improvements.

**Figure 3.1**
**Generation of the QNDF 2032 Vision**

## 3.2 Strategic Planning Objectives

3.2.1 The strategic planning objectives provide the spatial development focus for achieving the QNDF vision. They are based on the 4 pillars and are derived from the 6 Sustainable Guiding Principles and best planning practice. They are used individually or in combination to address the key planning challenges.

3.2.2 Later the strategic planning objectives are used to frame policies and policy actions which are the main planning mechanisms through which the QNDF will be implemented and its progress monitored.

3.2.3 The policies and policy actions cover economic prosperity, living in the community (housing and community facilities), the natural and built environments, movement and utilities; the strategy for implementing the QNDF is also included.

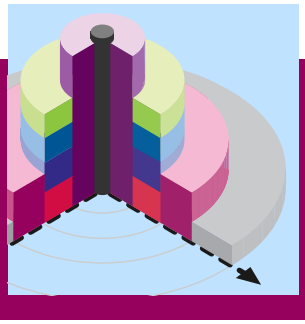
## Strategic Planning Objectives

**The QNDF is crucial to advancing sustainable development and producing a high quality urban lifestyle. The following strategic planning objectives have been generated to guide its preparation:**

**1**

Promote a high quality Capital City Precinct within Inner Doha, with 3 Capital City Centers (West Bay, Downtown Doha, Airport City) having a vibrant, attractive and sophisticated public realm where high quality lifestyle choices are achieved

**2**



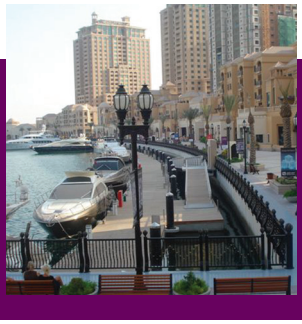
Develop a number of high quality mixed-use, mixed density centers as transit oriented development (TOD) based on the public transit system to achieve balanced growth and patterns of movement

**3**

Retain the cultural identity of rural/non-metropolitan communities and support enterprises that enhance the sustainability and livability of these communities

**4** Establish a high quality and integrated public transport network that results in a modal shift from private motor vehicles to public transport across Qatar.

**5** Ensure radial routes act primarily as public transit corridors designed to reduce private motor vehicle usage and environmental costs and promote orbital routes to aid the creation of balanced growth



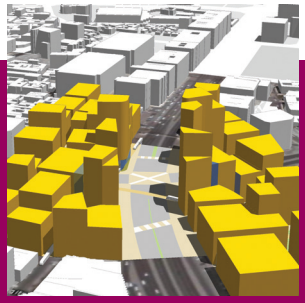
**6** Ensure mega projects and other large scale development are integrated into the wider community and contribute to the overall quality and sustainability of Qatar

**7** Promote equitable accessibility to community facilities and social amenities for all residents by co-locating them within key transit mixed-use centers

**8**

Develop a unique and high quality public realm which is equitably accessible and permeates throughout Qatar's urban areas

**9**



Plan and utilise urban block size, form and height to promote connectivity, a vibrant public realm, and improve environmental and social conditions that incorporate the best of both traditional and hi-tech solutions

**10**

Use density and building typologies to promote a wide range of accommodation types, including adequate affordable housing, for all residents

**11**

Create high quality residential neighborhoods that accord with the cultural identity and preferred lifestyles of Qataris

**12**

Maintain and enhance a distinctive identity for Doha based upon Qatari values and supporting a Qatar brand and the future growth of the city as a cultural center of the Gulf Region

**13**

Protect and enhance the natural, built and cultural environment to avoid adverse impacts from urban land uses

**14**

Ensure risks from climate change impacts are evaluated and mitigation measures are developed and implemented for land use planning and infrastructure development

**15**

Plan, coordinate, deliver, upgrade and manage transport and utilities infrastructure services in a timely and cost-effective manner to achieve sustainable urban communities, mixed-use centers, balanced growth, and environmental benefits for Qatar

**16**

Establish urban growth boundaries around Metropolitan Doha and other urban areas to ensure the efficient use and timely release of land

**17**

Develop a policy and plan led system that supports and manages development change processes through appropriate institutional governance frameworks

## 3.3 The National Spatial Strategy 2032

3.3.1 The National Spatial Strategy provides a roadmap for future investment in Qatar helping guide Government stakeholders and service providers in carrying out their sectoral plans and programs, and providing more consistency and direction for developers and investors.

3.3.2 A number spatial options were consider for the management of the future growth of Qatar including multi or polycentric urban structures and rural growth models, satellite cities around a central core and concentrated growth in one urban agglomeration.

3.3.3 Notwithstanding these investigations, the urban structure of Qatar has already been largely determined. The level of existing and committed development in and around Doha, the planned growth at Al Khor and Al Wakra, the QP Industrial Cities program and the location of existing key centres has led to the emergence of a polycentric structure.

3.3.4 In addition to their strategic locations, the relationship of these centers to each other and to their service catchments in a hierarchy and the mix of uses that exist or can be guided to each center in the future are major elements of the QNDF National Spatial Strategy.

3.3.5 The hierarchy of centers was identified using a sequential strategic assessment based on 5 key criteria:

- Level of existing population and employment density, economic investment and infrastructure
- Level of existing Government/Municipality office and community facility provision
- Potential accessibility to the future strategic transportation network
- Proximity of committed mega projects or other major Government developments including Qatari national housing schemes, and
- Availability of vacant land and potential for regeneration or urban infill.

3.3.6 The Spatial Strategy for Qatar to 2032 is therefore based on consolidating population and employment growth anticipated by the QSA/GSDP economic and demographic scenario, in a clearly structured hierarchy of Capital City, Metropolitan and Town Centers (Refer to Figure 3.2). These centers are principal determinants in the future urban structure of the country.

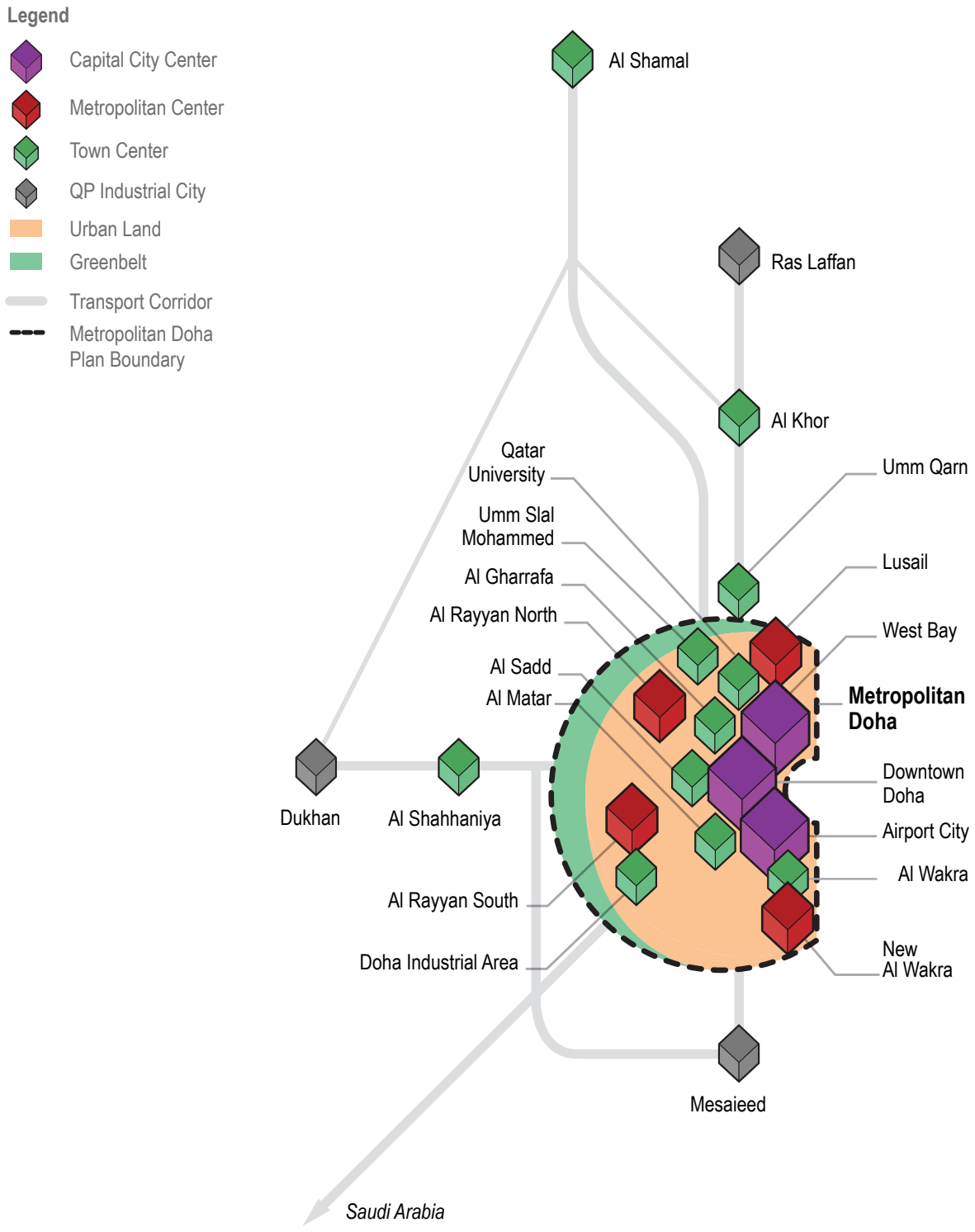
3.3.7 This hierarchical structure promotes mixed-use, mixed density centers and enables more efficient and equitable use of national level investment in transportation and utility infrastructure, which in combination, provide the sustainable development pattern that the QNV2030 strives to achieve.

3.3.8 Key recommendations to help implement the National Spatial Strategy include:

- Enforcing a Greenbelt policy to contain the urban area of Metropolitan Doha and act as a buffer between other key cities and towns and their rural and agricultural surrounds;
- Revising the Interim Zoning Regulations to introduce a land use structure that supports mixed-use, mixed density development and the hierarchical allocation of heights (or floor area ratio) to support the TOD concept and enable the successful growth of key centers.

3.3.9 The resulting National Spatial Strategy for 2032 is shown in Figures 3.3 and 3.3a.

**Figure 3.2 Spatial Strategy Concept (2032)**



## Figure 3.3 National Spatial Strategy (2032)

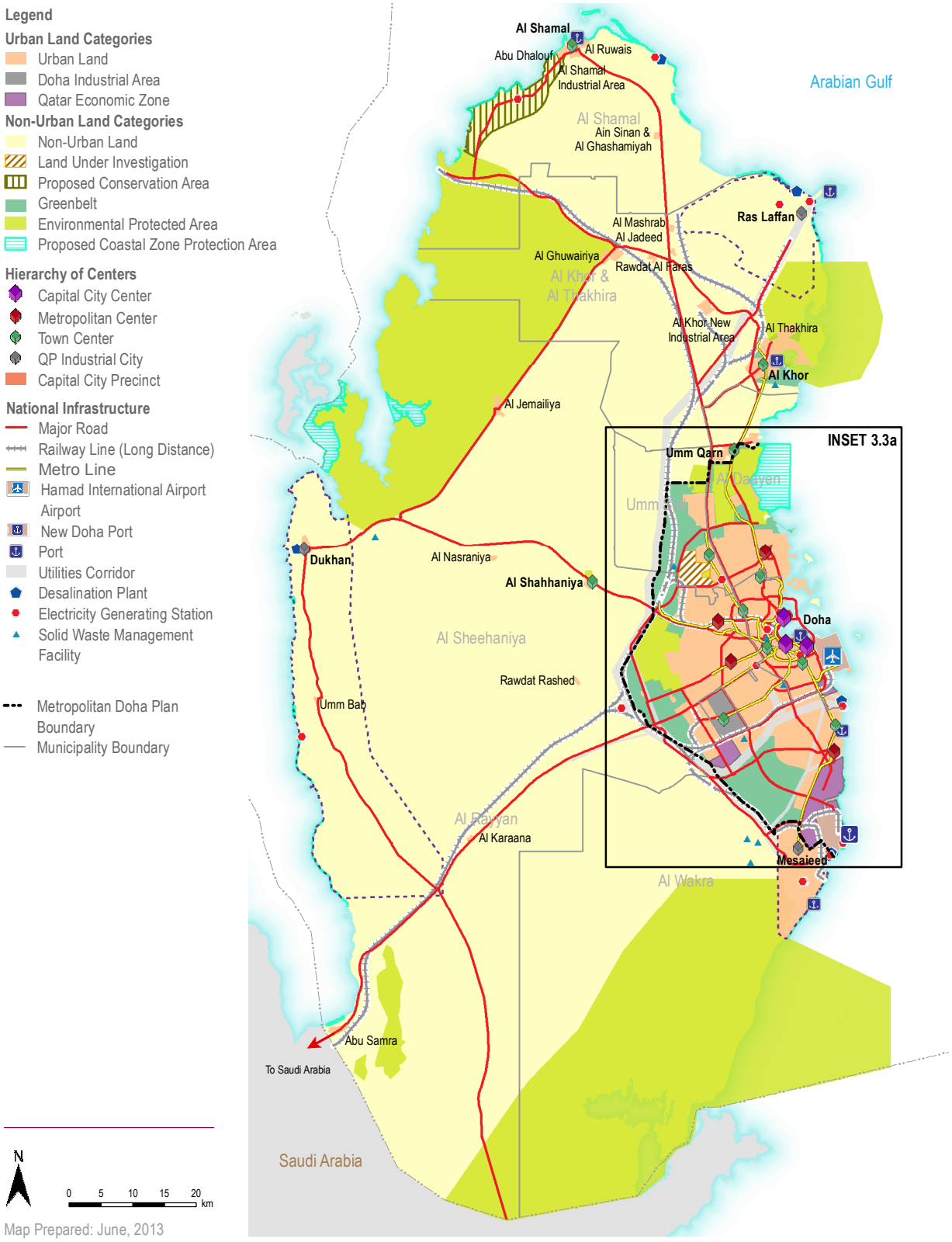
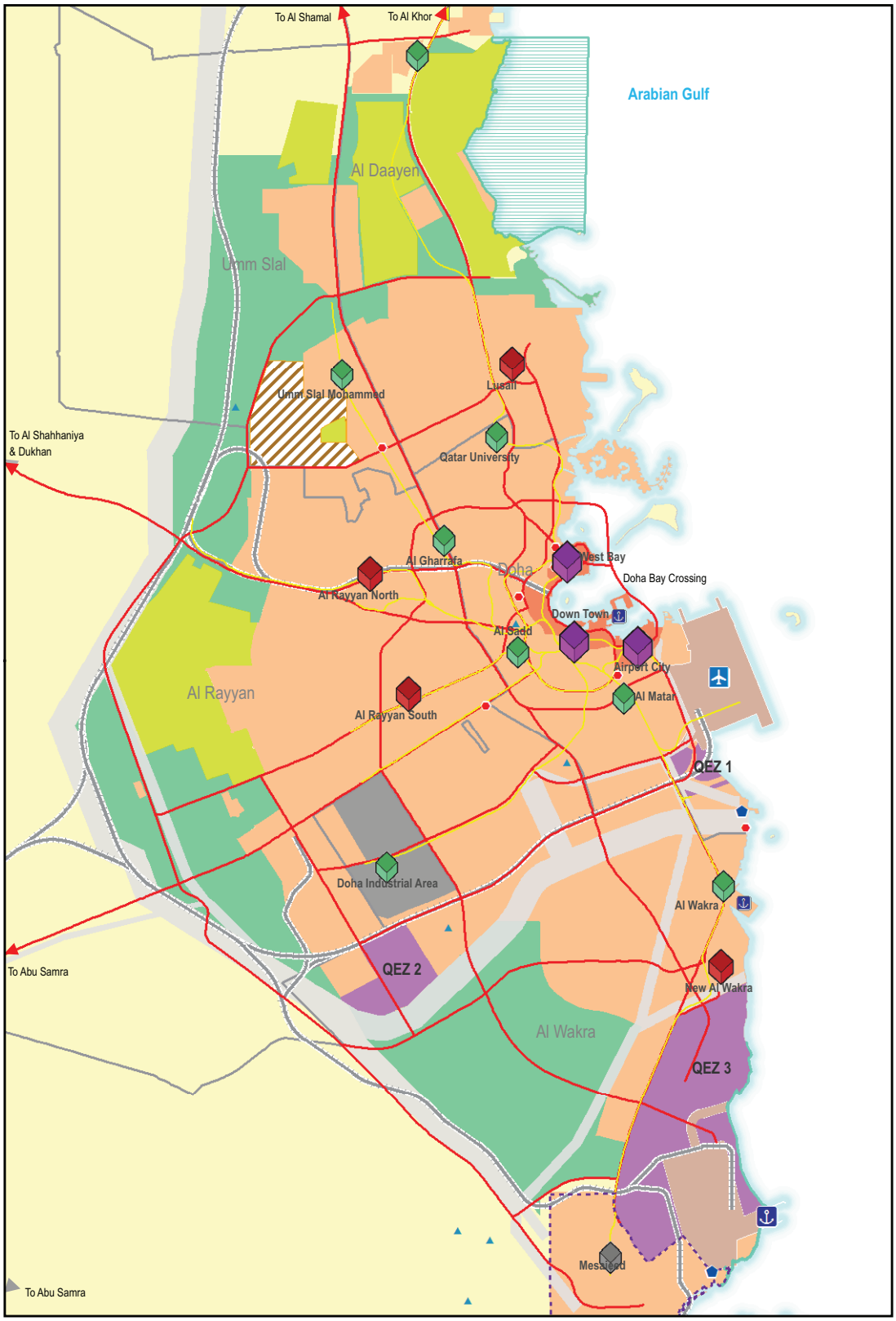


**Figure 3.3a National Spatial Strategy – Metropolitan Doha INSET (2032)**



## 3.4 Hierarchy of Mixed-Use Centers

3.4.1 Through the implementation of the QNDF, future residential, retail, office, leisure, Government, community and cultural activities will be concentrated in a hierarchy of mixed-use, mixed density centers surrounded by lower density Qatari communities (Refer to Figure 3.4).

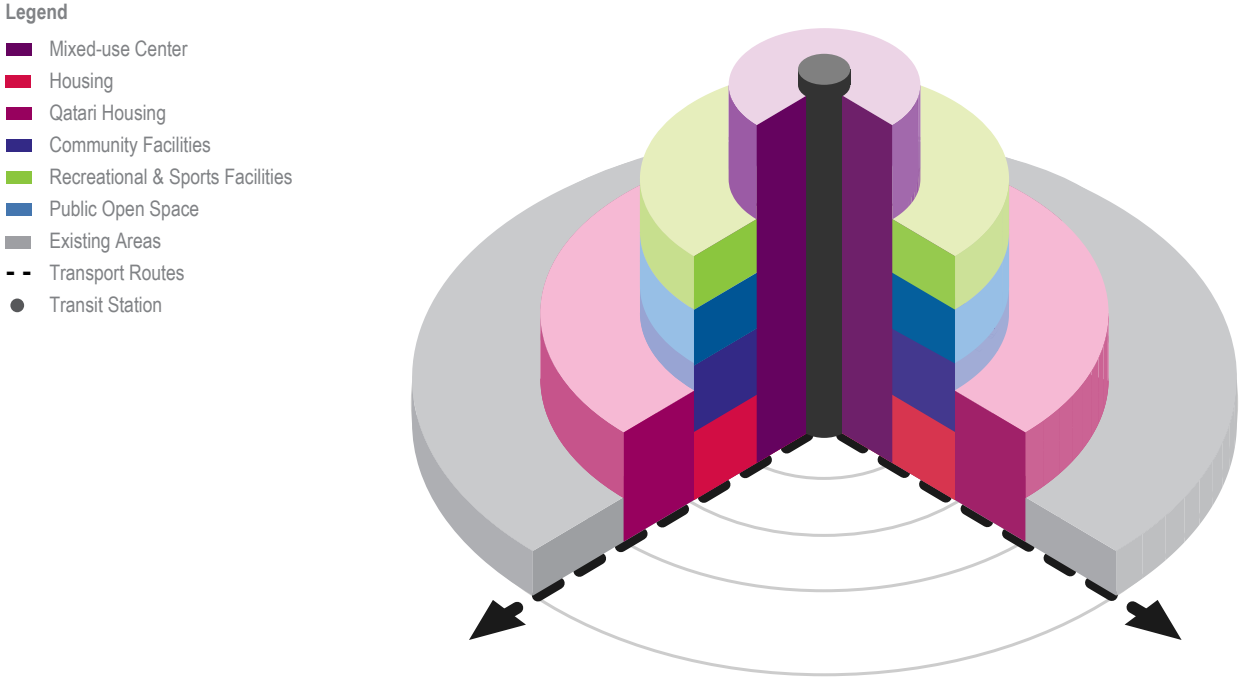
3.4.2 The key benefits of providing a hierarchy of mixed-use, mixed density centers include:

- **Reducing the need to create major new settlements outside the existing urban areas**
- **Making more efficient use of existing and new infrastructure**
- **Reducing the urban footprint and impact on the natural environment**
- **Improving livability and avoid further urban sprawl**
- **Helping foster urban regeneration within the existing built-up areas**
- **Creating economic growth by co-locating a mix of land uses and concentrating goods and services more efficiently**
- **Providing appropriate locations for Government investment in public transport, health, education, cultural and entertainment facilities which provide a focus for community and social interaction and**
- **Encouraging multi-purpose trips and shorter travel distances to reduce demand for private travel to support walking, cycling and public transport.**

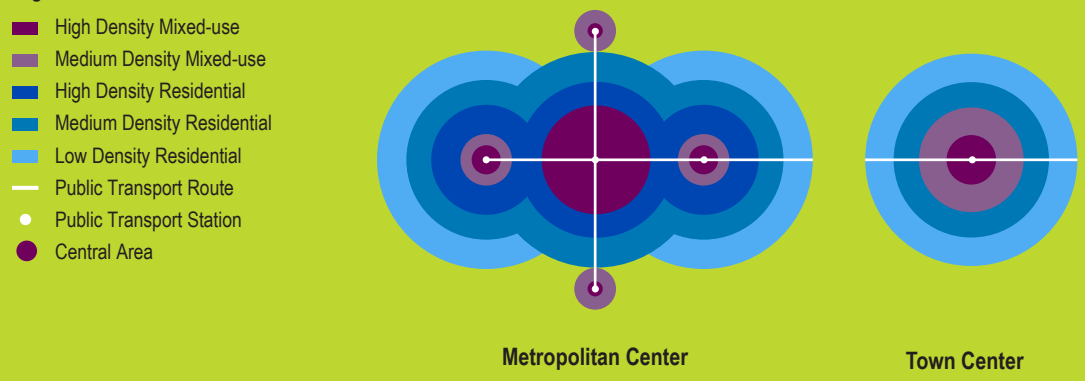
3.4.3 These mixed-use centers will be connected through a state of the art integrated public transport system comprising Metro rail and bus transit routes, livable, walkable streets and an attractive pedestrian-friendly public realm (Refer to Box 5).

3.4.4 These centers will become the location of choice for expatriate workers and their families, who will make up approximately 80% of the total 2032 population. High quality TOD and public transportation facilities targeted at this stakeholder group will reduce their need for car-based travel.

**Figure 3.4 Concept for Mixed-Use, Mixed Density Centers**



## Box 5 Mixed-use Centers and Transit Oriented Development (TOD)




The spatial strategy for Metropolitan Doha supports a hierarchy of mixed-use centers which cluster residential, office, retail, leisure, government community and cultural activities. TOD underpins the centers by focusing medium and higher density development activities with high capacity, high frequency public transport facilities and services, optimizing accessibility and economies of scale and reducing the need to travel by private car.

The key benefits of TOD are:

- improved connectivity between homes, services and employment, reducing the need for car based travel, thereby reducing Qatar's carbon footprint;
- optimized real estate development potential and investment returns on infrastructure investment in public transportation;
- a sense of community identity through the creation of centralized accessible urban spaces;
- a containment of urban sprawl, resulting in reduced land take and more efficient use of expensive highway and utility infrastructure; and
- reduced journey times and less traffic congestion.

Each center is defined by layers of density and land use activity radiating outwards from the public transport node. High levels of ridership and a critical mass of pedestrians flowing between transit hubs and places of work, recreation and home are achieved through a balance of interconnected land use activities.

Capital, Metropolitan and Town Centers in Metropolitan Doha are characterized by a core of high density 200-300pph (approximately 50-75 dwellings per hectare) and concentrated employment activities (e.g. retail and office), gradually merging with a medium density periphery 60-200pph (approximately 15-50 dwellings per hectare) and increased proportions of housing and community uses. The optimal range for Capital, Metropolitan and Town Centers is 30-70% commercial, 40-60% residential and 5-15% community facilities. Elsewhere town centers will have densities and a pattern of use in keeping with the community that they support.

District and Local Centers serve the communities daily and weekly needs and are within walkable distance of the catchment population, These centers are defined by medium density and support an optimal range of 10-40% commercial, 50-80% residential and 10-15% public facilities, with a lower density residential periphery.

The land size of the center will be dictated by a reasonable walking distance from its central core, normally a public transit station and public space. The concentration of density and mixed land uses around this core will ensure that the majority of people are within an easy walking distance of 250m from public transit, defined as 10-15 minutes in the Qatari climatic context, and their daily and weekly needs.

The distribution of density and land uses within centers actively encourages walking which in turn will reduce the number of trips generated by vehicle and increase health benefits through informal exercise.

3.4.5 To achieve these objectives, urban centers need to be more than shopping and service providers. They should also attract high-end creative and knowledge-based businesses and generate local jobs through the provision of attractive, high quality and affordable premises.

3.4.6 Big box and bulky goods retail activities generally occupy large sites. Out-of-center development is inconsistent with the National Spatial Strategy and policy framework, as it diminishes urban center vitality and detracts from economic growth by diluting public and private investment.

3.4.7 Sites for such uses should be located on the periphery of urban centers or along major arterial spines with good vehicular access and poor public transport access. If there is no room in a center, their out-of-center location should be assessed for community need and potential impact on the:

- primacy and functionality of surrounding urban centers;
- pedestrian convenience and transport system efficiency; and
- amenity of surrounding residential neighborhoods.

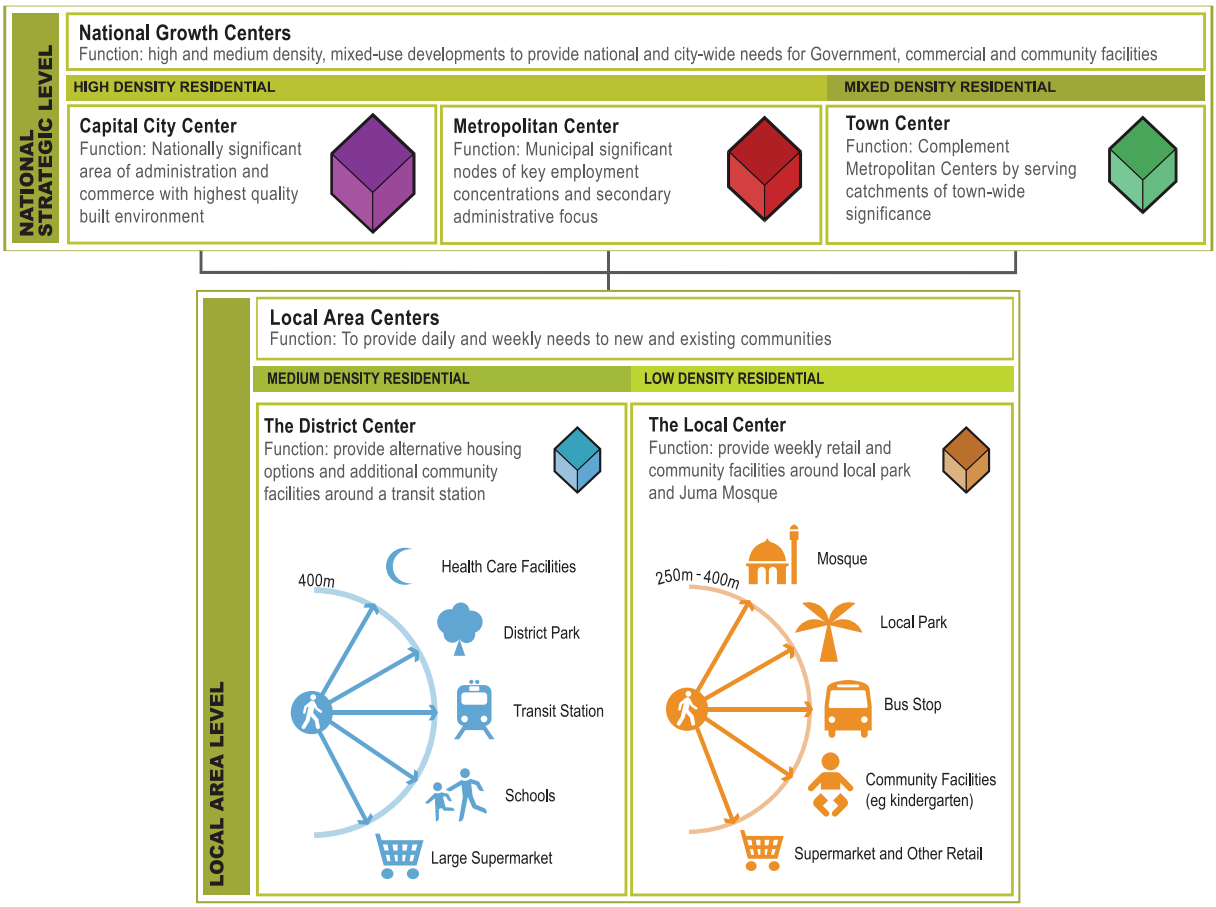
### Capital City Centers

3.4.8 The three Capital City Centers are the primary urban centers for Qatar. They are the focus for Government administration, retail, commercial office, and specialized personal and professional services. In addition, these centers accommodate cultural, entertainment, health and education facilities of national and international significance.

3.4.9 The planned distribution of facilities and services for each type of center was derived from benchmarking of existing regional and international cities' provision, and previous plans and studies carried out by MMUP (Refer to Box 6).

3.4.10 As the largest centers of employment and residential population, these centers generate and attract a high number of transport trips. Linked by the Corniche, these centers are the focus of Doha's radial road system, around which a comprehensive public transport system will be developed.

**Box 6 Hierarchy of Centers**



Source: *MME*

**Metropolitan Centers**

3.4.11 Doha's Metropolitan Centers serve catchments of city-wide significance and accommodate key employment concentrations. They also serve business, major comparison and convenience retail, and service uses. These urban centers provide a secondary administrative focus, accommodating municipal-level offices of health, education, cultural and entertainment facilities. Metropolitan Centers also serve as key focal points for employment and residential development.

3.4.12 As major trip generators, these urban centers typically have existing or planned, dedicated public transport, including rail and bus, and comprise key nodes in the metropolitan public transport system. Residential development densities in Metropolitan Centers should be around 200-300pph (approximately 50–75 dwellings per hectare).

**Town Centers**

3.4.13 Town Centers complement the Metropolitan Centers by serving catchments of town-wide significance and accommodating key employment concentrations. They also provide business, service, and both comparison and major convenience retail functions.

3.4.14 With a secondary, town-wide administration focus, they accommodate district or branch offices of Government facilities, and cultural and entertainment facilities of city-wide significance. These centers are typically located around key suburban or inter-urban public transport stations, and provide frequent public transport services to link the center with surrounding communities. Residential development densities in Town Centers should range from 60-300pph (approximately 15–75 dwellings per hectare within Metropolitan Doha or 15–50 dwellings per hectare outside of Metropolitan Doha).

**Managing the Growth of Centers**

3.4.15 In preparing the Municipality Spatial Development Plans, measures to support and reinforce the roles of these urban centers will be developed. This includes identifying center boundaries and determining the potential extent of each center's growth (including residential development opportunities).

3.4.16 Area Action Plans will be prepared as part of the Municipal Spatial Development Plans and will provide detailed, site-based local planning to guide implementation. Urban design principles, and the quality, functionality and interrelationships between building forms and public spaces will also be considered in creating Municipal Spatial Development Plans.

## 3.5 Urban and Rural Development

3.5.1 The key policy position of the QNDF is the consolidation and efficient management of future growth around key urban centers. The majority of this future growth will be located within Metropolitan Doha supported by a highly accessible network of mixed-use centers and mega projects which are existing or under development. Most of Qatar's population and employment is centered on Doha and the country's International Airport and Port are also located there.

### Metropolitan Doha

3.5.2 Metropolitan Doha will accommodate nearly 85% of the national population and provide 90% of total employment by 2032. Because of the size and importance of the capital city to national well-being, the spatial strategy in Metropolitan Doha is reflected in a hierarchy of centers and systems that includes Capital City Centers, Metropolitan Centers and Town Centers (Refer to Figure 3.5).

3.5.3 To better manage and guide this strategic growth over the long term, a new Metropolitan Doha planning area has been defined. Based on the existing urban area, major commitments and subdivisions including land earmarked for future Qatari homes, this future urbanized area is expected to cover 81 sq km. This estimate allows for long term population growth as well as regeneration and replacement of existing land uses.

3.5.4 To provide for long term food security and other national government projects, and to ensure future urban development is contained within sustainable limits, land has been allocated for the creation of a Greenbelt around the urban area. The resulting long term planning area of 128 sq km has been used to determine the plan boundary for the wider Doha area now referred to as Metropolitan Doha. Figure 3.6 provides an illustration of the vision for Doha Capital City in 2032 .

**Figure 3.5**
**Development of Metropolitan Doha**

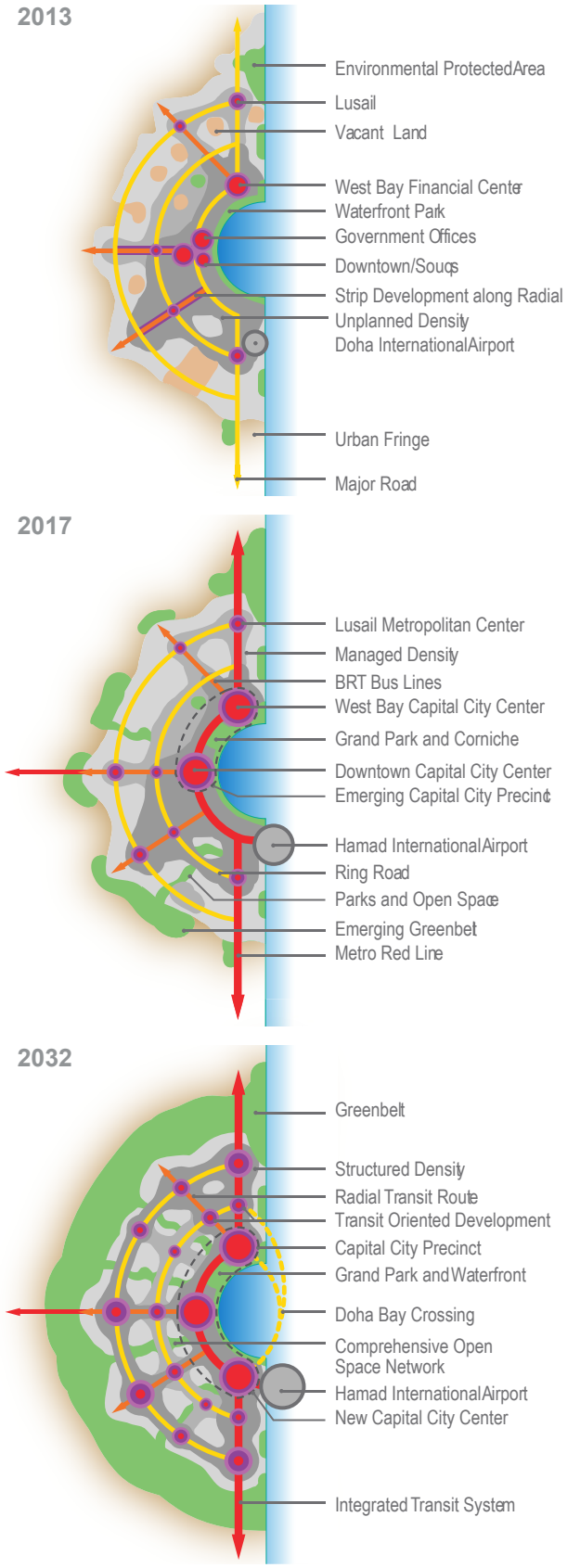


**Figure 3.6** **Vision for Doha Capital City (2032)**


### QP Industrial Cities

3.5.5 To help balance the dominant position of Doha and produce a more sustainable development pattern, future industrial, commercial and residential growth will also be encouraged in Qatar Petroleum (QP) Industrial Cities, in the Qatar Economic Zones (QEZ), and in selected cities and towns throughout the country. Supporting transport and utility infrastructure and community facility provision are also programmed.

3.5.6 In the case of the Industrial Cities, Ras Laffan, Dukhan and Mesaieed are strategically positioned to deliver Qatar's on-and off-shore oil and gas production and provide related employment opportunities for the foreseeable future.

3.5.7 In the short term, the QP Industrial Cities will continue to grow independently but over time will be integrated with surrounding communities' physical and social infrastructure networks to sustain long term growth. A comprehensive range of community facilities is programmed for delivery to the cities in the north, west and south east of the country to achieve this objective and to provide more sustainable urban forms.

### Municipalities and Rural Settlements

3.5.8 The QNDF also promotes the achievement of a critical mass of population and community facilities to sustain long term growth in all Municipalities and settlements outside Metropolitan Doha and QP Industrial Cities. Al Shamal, Al Khor and Al Shahhaniya in particular will act as centers of commercial and social activities for the surrounding communities whilst providing municipality and community facilities for residents and businesses in their catchments.

3.5.9 Expansion of these settlements will be based on their traditional roles and local economic activities such as farming, fishing and small scale tourism-related activities. These settlements will also provide an alternative choice of housing and life-style locations for people who do not wish to live in larger urban centers. It is important to ensure that the social and economic life of these settlements, and the needs of their residents, are supported by employment opportunities, community facilities and other support services.

3.5.10 In the north-west, future sustainable tourism, potential leisure developments and the fishing industry will be guided to Al Shamal and Al Ruwais. In the north-east, Al Khor and Al Thakhira will continue to expand to a level consistent with standalone urban centers. Committed and other proposed developments such as Urjuan Beach Development will be directed to support a consolidated urban structure and sustainable long term growth.

3.5.11 Al Shahhaniya will continue to be the main service center for the largely rural and agricultural central area of the country. It will also be the centre of the new Shahhaniya Municipality created in 2014 and covers an area formerly part of the Al Rayyan Municipality. To sustain this growth, the existing rural activities related to camel racing, Arabian Oryx breeding and the national botanical gardens will be better integrated into the future urban structure of the settlement.

**Greenbelts**

3.5.12 Outside urban growth boundaries for Metropolitan Doha and other major centers, Greenbelts will be established to maintain compact urban areas and provide opportunities for the expansion of agricultural activities to secure future food supplies and further the National Food Security Program. The Greenbelts will also serve as visual and physical transitions between the built-up areas of towns and cities and the natural desert beyond.

**Environment and Heritage**

3.5.13 Qatar's national system of EPAs includes mangroves, salt marshes (sabkhas), coral reefs, sea grass beds, coastal islands, sand dunes, rock desert (Hamada), shallow valleys (wadis) and depressions that collect fine sand. The flora and fauna of Qatar are unique. Shahhaniya Wildlife Park, Ras Osheirij and Al Mas'habiya have bred thousands of gazelle and hundreds of the Arabian Oryx.

3.5.14 As of 2013, EPAs covered approximately 30% (3,495 sq km) of the country, a significant increase from 1% in 1990. Protection and conservation of these Areas, which are threatened by natural and man-made urban and coastal pressures, are high priorities of the PEO and MME, and are strongly supported in the QNDF.

3.5.15 Within the proposed Aquifer Protection Zone (which covers much of the northern part of Qatar) the better management of certain types of development combined with rejuvenation strategies, are priorities to provide for the gradual replenishment and protection of natural ground water resources.

3.5.16 Throughout Qatar a more sensitive understanding of the built environment and cultural heritage is required. In the QNDF, emphasis is placed on quantitative and qualitative improvements in the design and provision of parks, gardens, walkways and open spaces. The use of best practice principles in new energy efficient building design whilst conserving the nation's historic and cultural assets is also promoted

Source: *MME*

Source: *MME*


Source: *MME*

**Movement**

3.5.17 Through the delivery of mixed-use, mixed density transit oriented developments, more sustainable living and travel patterns will be produced. Accessibility will be significantly improved for all community groups through the integration of bus, Metro rail and national/international long distance travel systems.

3.5.18 A well-integrated transport system and network of public transit services will allow safer, more efficient and convenient choices of travel modes. This will help to reduce the need for private vehicle travel and the construction of additional roadway capacity.

3.5.19 Bus and taxi services operated by Mowasalat within and from Metropolitan Doha will support the new Metro rail system and provide links north to Al Shamal, Al Khor and Ras Laffan, west to Al Shahhaniya and Dukhan and south to Abu Samra.

3.5.20 Outside Metropolitan Doha, long distance rail and bus services and selective highway improvements will improve accessibility to the QP Cities, Al Shamal/Al Ruwais, Al Khor/Al Thakhira and Al Shahhaniya and enhance national and international logistics to Bahrain and Saudi Arabia.

3.5.21 To better manage road traffic within Metropolitan Doha, area traffic control and demand management measures including on and off street parking controls and congestion charges in heavily-trafficked areas will be progressively introduced.

**Utilities Corridors**

3.5.22 The national utilities corridor links Mesaieed in the south east around Al Wakra, Doha and Al Khor to Ras Laffan. Secondary corridors link Mesaieed with Dukhan. These corridors, some of which 1.3km wide, incorporate health and safety buffers between and outside of facilities, which allow for their servicing and maintenance without disrupting local traffic, and contain sufficient land for future infrastructure requirements.

3.5.23 Whilst it is recognized that this infrastructure is of national importance, opportunities will be sought over the plan period to rationalize the width required to achieve a more efficient and productive use of non-operational land within utilities corridors. In addition to changes in future utility demands, improvements in technology that permit reduced safety clearances within corridors will be taken into account in the development assessment process, in line with international best practice.

# 4.0 Municipality Plan Framework



## 4.1 Introduction

4.1.1 The urbanized environment of Doha has grown significantly over the last 50 years. As a result, there is no discernible difference in the urban environment between Doha Municipality and neighboring municipalities. This has led to the need for a Metropolitan Doha planning area to manage existing and future growth.

4.1.2 To aid the preparation of Municipal Plans, a Structure Plan for Metropolitan Doha has been prepared. Structure Plans have also been created for Doha, Al Rayyan, Al Daayen, Umm Slal, Al Shamal, Al Khor and Al Thakhira, and Al Wakra Municipalities.

4.1.3 Municipality Structure Plans and narratives have been prepared for each Municipality to broadly describe the intended role of urban centers, future growth patterns and associated infrastructure priorities and to provide guidance on anticipated population growth and the housing requirements to accommodate this growth. The Structure Plans establish the spatial growth framework anticipated within the plan period, while the municipal narratives link strategic planning at the national level with municipal and local planning.

Source: *MME*

## 4.2 Metropolitan Doha Structure Plan

### Setting

4.2.1 Metropolitan Doha is an urban agglomeration comprised of the whole of Doha Municipality and the population centers of Al Rayyan, Al Daayen, Umm Slal and Al Wakra Municipalities.

4.2.2 Newer mega projects are spreading the urban area south west and north west, providing a mix of residential, commercial and recreational activities. Major commitments within the wider urban area include residential developments such as the Pearl, Lusail, Barwa City and Barwa Al Baraha, West Bay Towers and West Bay Lagoona. Other land use commitments include Education City, Medical City, Barwa Commercial Avenue, Qatar Economic Zone 1 (adjacent to Airport City) and Karwa City.

4.2.3 However much of the recent growth has been characterized by urban sprawl in all directions. This urban sprawl has left significant amounts of vacant land within the existing urban environment. This in turn has led to increased pressures to extend expensive infrastructure whilst producing a poor quality urban environment.

4.2.4 A summary of the key planning issues facing Metropolitan Doha is as follows:

- The lack of integrated land use and transport planning, combined with outdated zoning regulations, is detracting from Doha's international image as a vibrant modern Arabian city and compromising its aspirations to become the Gulf's leading capital
- Vacant lots, lack of quality public realm and haphazard distribution of community facilities combined with poor local connectivity are affecting the livability and enjoyment of Qatar's capital for residents and visitors alike
- Within Downtown Doha and along the Corniche around the old port access, and other key activity nodes, traffic congestion and delays are increasing at peak times
- New mega project developments are reducing residential densities in inner Doha, whilst outdated standards for some community facilities are forcing schools and other social services to move to cheaper but less accessible urban fringe locations
- Traditional heritage sites and Qatari cultural identity are being eroded through urban regeneration and redevelopment schemes, especially in Downtown Doha around the old port and souqs

Source: *MME*


Source: *MME*

**Future Growth Management**

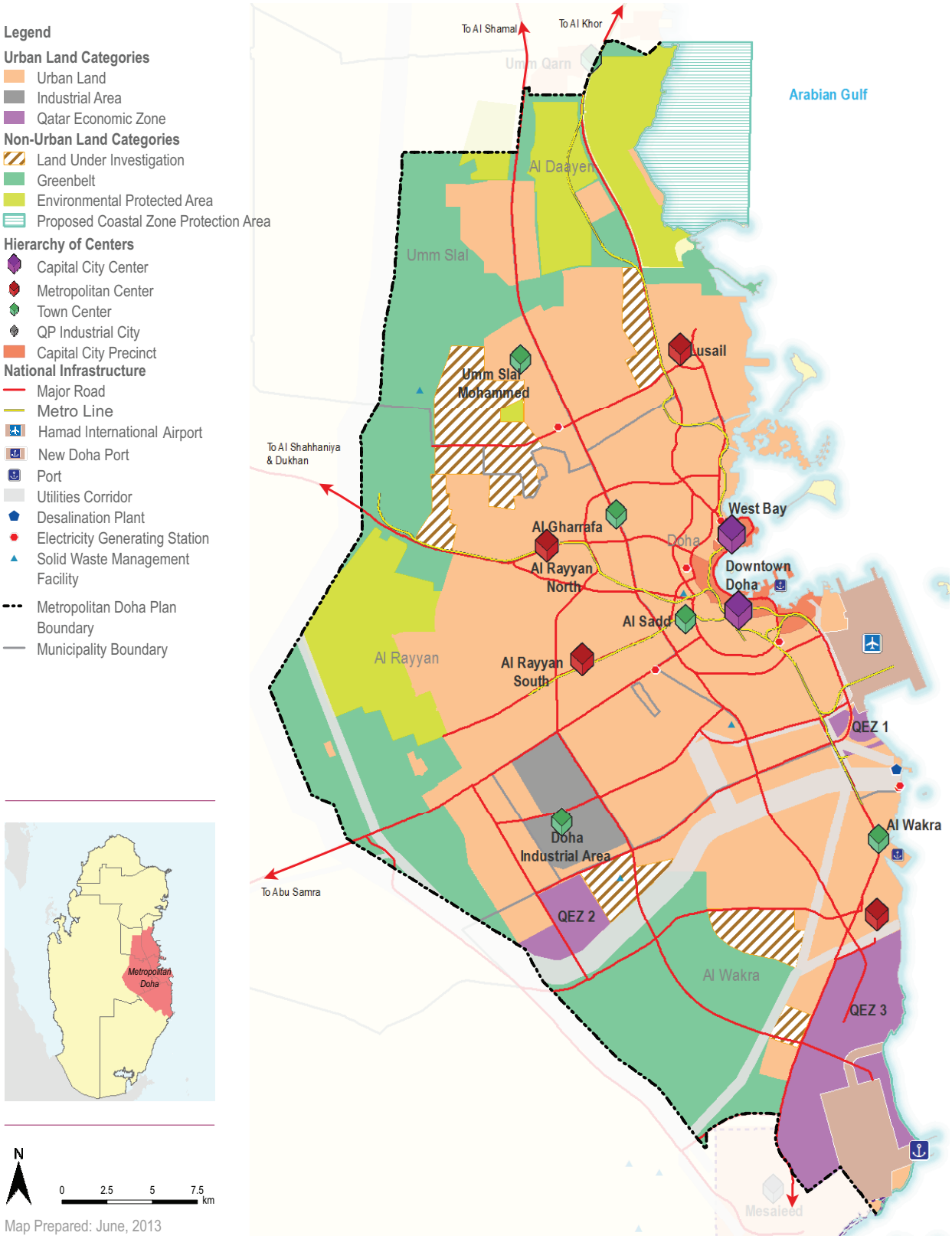
4.2.5 To ensure coordinated and efficient land use planning and development outcomes are achieved, it is important to treat this metropolitan area as a single entity for planning purposes. Each of the Municipalities that comprise Metropolitan Doha has a unique role to play in ensuring it contributes, as a whole, to this success.

4.2.6 The future development scenario for Metropolitan Doha will see the growth of mixed density, mixed-use centers to support the forecast population and employment growth, and enable efficient public transit across the metropolis, including the Qatar Integrated Rail System Metro network and rapid bus transit (Refer to Metropolitan Doha Structure Plan 2017 and 2032 in Figures 4.1 and 4.2).

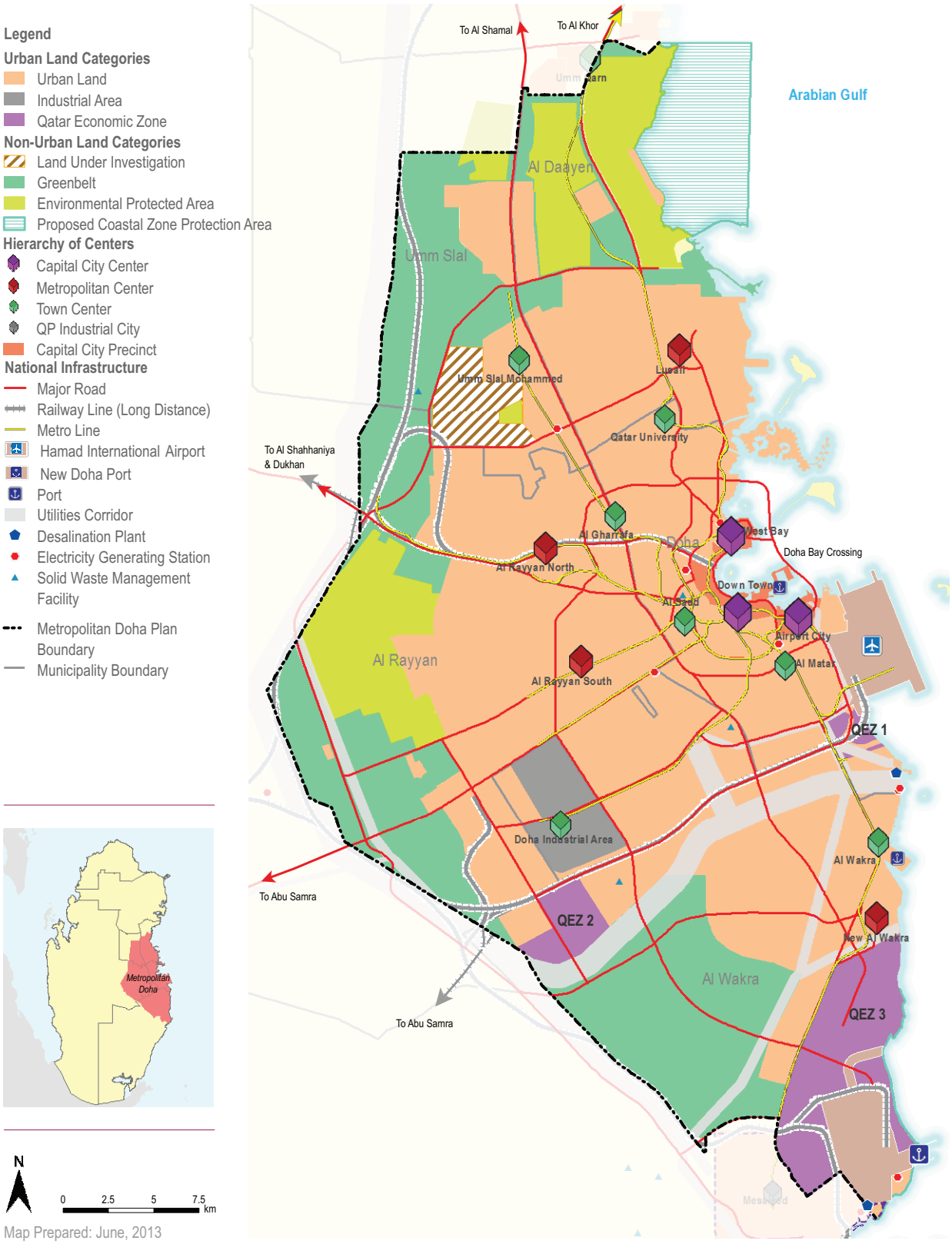
4.2.7 To meet future demand, the provision of community facilities, Government and commercial services, and supporting amenities will be located within urban centers which are strongly related to the existing centers of economic activity. These urban centers will be highly accessible via existing and proposed transportation networks.

4.2.8 Based on the existing built-up urban areas, major commitments and subdivisions, including land earmarked for future Qatari homes and for securing future food supplies, an area of 128 sq km has been estimated for the Metropolitan Structure Plan area. A Greenbelt to contain future urban sprawl has also been included in this area.

## Figure 4.1 Metropolitan Doha Structure Plan (2017)



## Figure 4.2 Metropolitan Doha Structure Plan (2032)



Source: *MME*

## 4.3 Roles and Responsibilities of Municipalities within Metropolitan Doha Structure Plan

### Doha Municipality

4.3.1 Doha Municipality has been, and will continue to remain, the commercial, cultural and administrative heart of Qatar. International, national and specialized business will be focused within the Capital City Precinct and its three Capital City Centers (of West Bay, Downtown Doha and Airport City) (Refer to Figure 4.3).

4.3.2 Elsewhere in Doha, there will be significant urban redevelopment of some Town Centers and residential areas to create vibrant and accessible neighborhoods. A greater diversity and mix of uses will be introduced into a new Town Center within the Doha Industrial Area to cater for the predominant worker population.

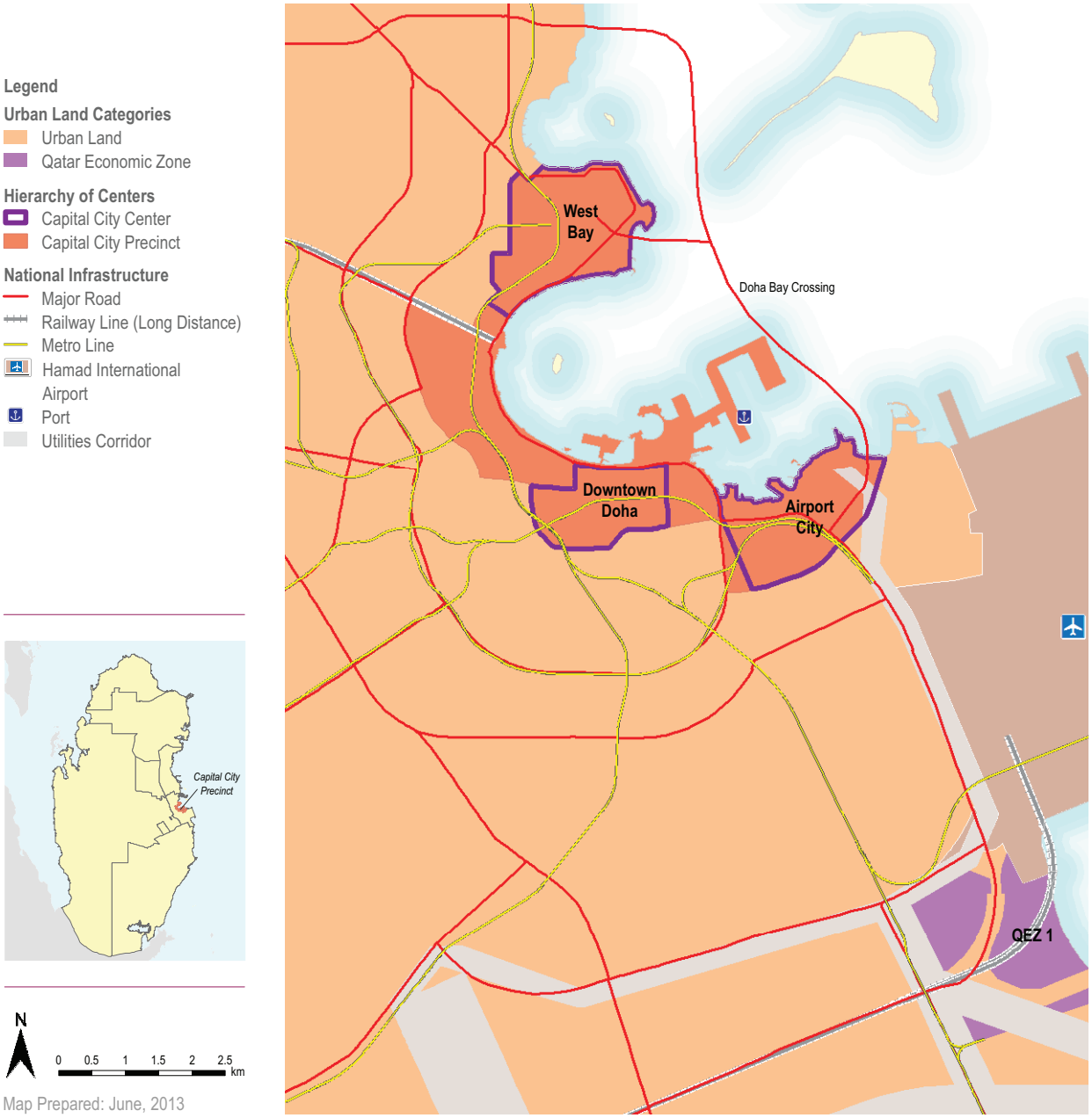
### Al Daayen Municipality

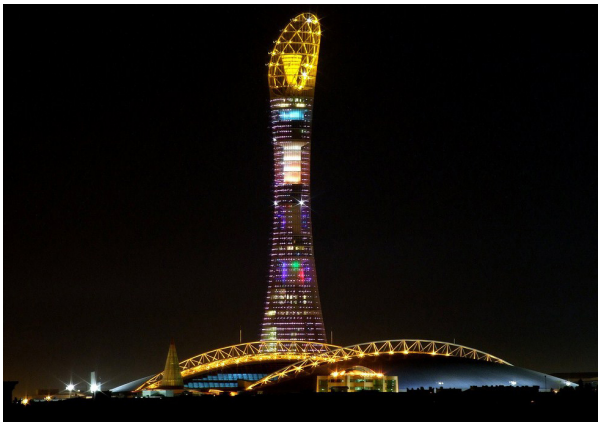
4.3.3 Al Daayen Municipality is a relatively new Municipality and is earmarked for substantial housing growth, primarily for Qataris. Substantial expatriate housing growth is also anticipated the Lusail mega project. Land adjoining Lusail and further north to Umm Slal Ali (which also straddles Umm Slal Municipality) will be the focus of mainly Qatari housing, supported by small scale District Centers, Government services and community facilities.

4.3.4 A significant inter-urban break has been established by the Al Wusail Environmental Protected Area between residential areas within Metropolitan Doha and the Umm Qarn/ Simaisma area. This inter-urban break, which is part of the Metropolitan Greenbelt, will provide a distinctive separation between urban settlements.

4.3.5 In the north of the Municipality, urban development will only be permitted within settlements with urban growth limits.

## Figure 4.3 Capital City Precinct (2032)





Source: *MME*

**Al Rayyan Municipality**

4.3.6 Al Rayyan Municipality is the second largest urbanized area within Metropolitan Doha. It contains a wide mix of housing types ranging from low density Qatari housing and traditional townships, through to single workers' accommodation and medium to high density expatriate villas and apartments.

4.3.7 New Metropolitan Centers are proposed for Al Rayyan North and Al Rayyan South, while a new Town Center is proposed for Al Gharrafa. The growth of these urban centers is expected to occur over the whole of the plan period with a gradual expansion of the scale and intensity of each center in response to market requirements.

4.3.8 The new center at Al Rayyan North is located at the northern edge of Education City. Al Rayyan North will leverage the planned Education City commercial development and introduce mixed use and government services to create a vibrant and high quality public realm.

4.3.9 The new center at Al Rayyan South is planned to serve as a major employment node. The reinforcement of this node as a Metropolitan Center will provide a range of retail, commercial, Government and community services to traditional Qatari and expatriate neighborhoods.

4.3.10 The remainder of the Municipality within the Metropolitan Doha boundary is Greenbelt and will be utilized for the National Food Security Program. Development in the rural central and western areas (outside Dukhan Industrial City) is not permitted except within designated growth limits, (such as Al Shahhaniya).

**Umm Slal Municipality**

4.3.11 The township of Umm Slal Ali (which also straddles Al Daayen Municipality) will be the focus of mainly Qatari housing and will be supported by small scale district centers, Government services and community facilities.

4.3.12 To the south, Al Karaitiyat and Umm Slal Mohammed (which also straddles Doha Municipality) will be the focus of primarily low density, suburban Qatari neighborhoods and low to medium density expatriate compounds. Umm Slal Mohammed will have a Town Center, the location, size and intensity of which, will be determined through the preparation of the municipal spatial development plan.

4.3.13 The remainder of the Municipality within the Metropolitan Doha boundary is Greenbelt and will be utilized primarily in support of the National Food Security Program. Development outside Metropolitan Doha is not permitted except within designated growth limits.

**Al Wakra Municipality**

4.3.14 Whilst the Al Wakra and Al Wukair townships are separated from Doha by the National Utilities Corridor, it is important to consider these historic townships in the context of long-term planning for Metropolitan Doha.

4.3.15 Al Wakra is quickly outgrowing its traditional town center and neighborhoods. The existing historical town center will be retained and reinforced as a mixed-use, mixed density, traditional Town Center supported by medium density residential development.

4.3.16 The New Al Wakra center will be developed over time into a Metropolitan Center to provide a range of medium to high density residential, retail, commercial, Government and community facilities and services.

4.3.17 Al Wukair is a traditional Qatari township with a range of low density Qatari and senior Qatari housing. Al Wukair will continue to be a traditional Qatari township, serviced by a District Center and further supported by the Al Wakra Town Center.

4.3.18 Development outside Metropolitan Doha is not permitted accept within designated growth limits and Mesaieed Industrial City, as maybe amended through the future spatial plan preparation.

## 4.4 Structure Plan for Doha Municipality

### Setting

4.4.1 Doha is the capital of Qatar and is located on the eastern coastline of the country. The Municipality covers 2% (209 sq km) of its land mass, including the Doha Industrial Area which is spatially disconnected from the main built-up part of Doha city.

4.4.2 It is Qatar's largest city, with about 50% of the nation's population living in the Municipality in 2008. It serves as the seat of Government, and is also the commercial and cultural center of the country. The International Airport and Port are also located there.

4.4.3 The existing Doha urban area has grown out from its origins near the port from Al Jasra and Al Salata around the Bay and along extensions of the major radial routes including Al Rayyan Road, Salwa Road, Al Muntazah Street and Al Matar Street. In this downtown area of Doha, urban intensification and redevelopment has led to the replacement of traditional housing and retailing, by modern offices and apartment blocks. During this process, Qatari households have decided to relocate to suburban areas in search of their preferred lower density villa lifestyle.

4.4.4 Numerous sites of historic and cultural significance near to the port have provided a focus for more recent urban redevelopments. Innovative urban regeneration schemes such as Souq Waqif and Msheireb Downtown Doha have benefitted from proximity to iconic cultural complexes such as the Museum of Islamic Art and the Islamic Cultural Center.

4.4.5 The existing International Airport, Doha Port and Doha Industrial Area have been overtaken by the urbanized area. Partly to offset increasing congestion and encroachment by adjacent uses, the new Hamad International Airport and the new Doha Port are being constructed outside of the current built-up area. These key pieces of infrastructure have been comprehensively and carefully planned to ensure they achieve the maximum benefits from existing and proposed strategic transportation infrastructure such as the Metro and long distance rail networks.


Source: *MME*

Source: *MME*

4.4.6 A summary of the key issues in Doha Municipality is as follows:

- Rapid urban sprawl is increasing transport and infrastructure costs, isolating communities, fragmenting the built environment and reducing standards of living for Qataris and non-Qataris
- In the absence of quality public transport, inner city traffic congestion, journey times, road accidents and parking demand are all increasing
- Qatari families, who prefer low density lifestyles, are having to relocate to outer suburbs to retain their identity and cultural values
- Vibrant street-level and traditional mixed-use is being replaced by car-oriented shopping malls in out of center locations, and
- Non-Qatari workers and their families have limited long term affordable housing options and public transport choices , resulting in increasing travel times to work, shop, school and recreation.

**Strategic Planning Objectives for Doha Municipality**

4.4.7 The QNDF strategic planning objectives that apply to Doha Municipality include:

- Promote a high quality Capital City Precinct that is on a par with other major international cities having a vibrant, attractive and sophisticated public realm where high quality lifestyle choices are achieved
- Ensure that mega projects and related large scale infrastructure facilities and networks are integrated with existing and planned urban development
- Facilitate a modal transfer to a high quality public transport system and ensure that radial routes act primarily as transit corridors, whilst promoting orbital road routes to enable a balanced urban growth structure
- Introduce a new density approach and building typologies in urban areas to promote a wide range of accommodation types
- Protect and enhance the natural and built environment, and
- Establish urban growth boundaries around Metropolitan Doha (and other urban areas) to ensure the efficient use and timely release of land.

## Future Growth Management

4.5.8 Doha Municipality will accommodate nearly 36% of the national population (Refer to Table 4.1) and provide 48% of total employment by 2032. Mixed-use, mixed density urban centers will be connected through: a state of the art integrated public transport system (comprising metro and bus transit routes); livable, walkable streets; and an attractive pedestrian-friendly public realm.

**Table 4.1**
**Population of Doha Municipality (2010 – 2032)**

| | Population |
|---|---|
| **2010**[1] | 797,000 |
| **2017** | 1,076,000 |
| **2032** | 916,000 |
| [1] 2010 population rounded | |

Sources
*National population forecasts from QSA/GSDP (2012), extrapolated to 2032 and distributed to Municipality,*

4.5.9 The Structure Plan for Doha Municipality 2032 is shown in Figure 4.4 and covers the period to 2032. In accordance with the QNDF hierarchy of urban centers, three Capital City Centers (West Bay, Downtown Doha and Airport City) will form the basis of the Capital City Precinct.

4.5.10 The spatial strategy also provides for international standards of landscaping and open space, innovative, energy-efficient building designs and traffic demand management measures to be applied within the Capital City Precinct to improve the quality of living and working. In the Precinct, major transport and utility infrastructure including metro and long distance rail routes will be located underground.

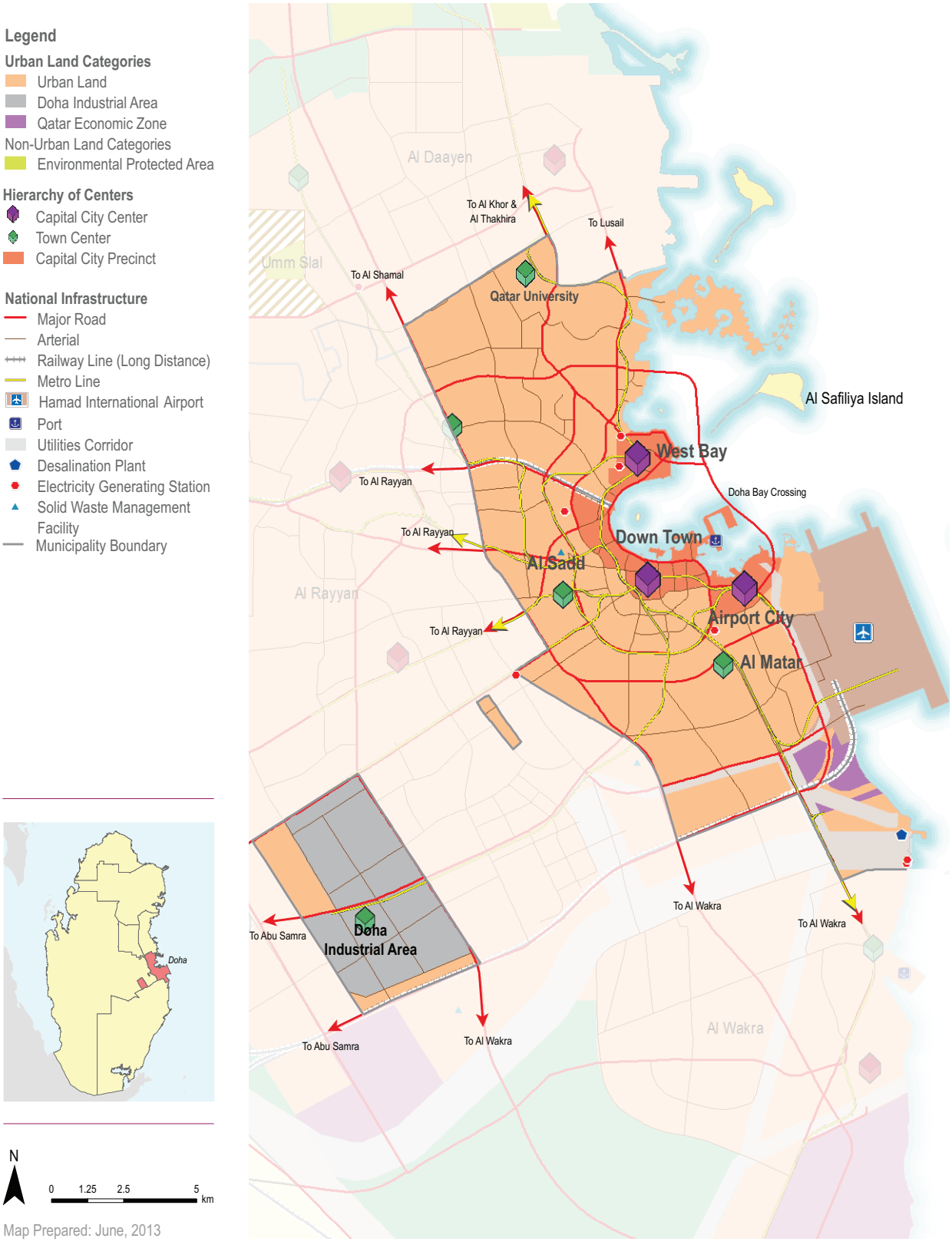
4.5.11 The Doha Municipality Spatial Development Plan identifies a transition zone between Downtown Doha and B-Ring to facilitate the redevelopment and rejuvenation of this key inner city residential and commercial area. This transition zone will seek to create vibrant medium density neighborhoods characterized by mixed use, public open space, a high quality public realm and walkable streets. Beyond the current plan period, this transition zone may accommodate further planned expansion of the Downtown Doha Capital City Center.

4.5.12 Characterized by high quality, architecturally renowned high rise buildings, West Bay will continue to grow as the Central Business District (CBD). New residential towers will be restricted, with a greater focus on mixed-use buildings that incorporate residential, commercial and community activities. It will also attract international and multinational company headquarter offices. An Area Action Plan will be prepared for West Bay to identify the key land uses, public realm and implementation actions required.

4.5.13 Downtown Doha will be redeveloped into the cultural heart of Doha. Old Doha is rich in heritage and contains irreplaceable heritage assets, street patterns and traditional neighbourhoods. Through Action Area Plans, these areas will be identified, protected and provided with new economic activities to reinforce the strong cultural and commercial identity of Downtown Doha. The built form of Downtown Doha will be sympathetic with existing cultural icons such as the Islamic Cultural Center and Souq Waqif and surrounding high density, mixed-use areas. In support of the economic vitality of this second Capital City Center, commercial activities and Government institutions will be supported through medium rise buildings surrounded by high quality streets and public spaces.

4.5.14 As urban growth and consolidation occurs, new Town Centers will be required at Al Matar and Qatar University to service future activities. These new Town Centers are not anticipated to fully mature before 2032. The development of the Qatar University Town Center will be planned in consideration of Qatar University's master plan and legacy opportunities associated with Qatar 2022 and future Olympic bids for Qatar.

## Figure 4.4 Doha Municipality Structure Plan (2032)



Source: *MME*

4.5.15 Towards 2017 and beyond, the existing Doha International Airport site will be redeveloped to eventually form the third Capital City Center. Airport City will be primarily aimed at providing facilities such as offices for high tech, value added and knowledge-based industries, a free zone, a technology incubator and sites for bulky goods storage. The redevelopment will focus on creating a high quality public realm with significant tracts of public open space adjoined by high and medium density residential development.

4.5.16 West of Downtown Doha, the existing strip shopping street along Al Sadd Street will be guided, over time, to form the basis of a new Town Centre with a range of mixed- use, mixed density development. An Area Action Plan will be produced to inform the detailed design and layout of the new Town Center. A high quality, high street-type environment is envisaged to support the inner city areas.

4.5.17 Doha Industrial Area although physically separate from the rest of the Municipality to the west, will benefit from a refocused and incrementally expanded commercial core to form a new Town Center with a range of community facilities to serve its manufacturing industrial and specialized residential catchment.

4.5.18 Within inner Doha, in particular the Capital City Precinct, the road network is made up of arterials. Roads in this area will not be upgraded and where opportunities arise within C Ring Road, their capacity for private cars will be reduced in favor of public transportation, pedestrian facilities and an enhanced public realm.

4.5.19 Transportation measures including Area Traffic Control (ATC), High Occupancy Vehicle (HOV) lanes and intensification of bus and taxi services will be adopted, and congestion charging mechanisms will be considered. Car parking will be better managed and regulated within this area, to relieve problems associated with local congestion and ad hoc parking.

4.5.20 The Metro Red Line will provide connections from Al Wakra, Airport City and the HIA in the south of the metropolitan area through Downtown Doha and West Bay within the Capital City Precinct to Lusail in the north.

4.5.21 By 2032 there will be four electricity generating stations and several primary substations within Doha Municipality. The extensive trunk water and Treated Sewage Effluent (TSE) pipeline network which covers the whole of Doha Municipality and the wider Metropolitan Doha Urban area introduced will be enhanced. The Municipality is served by four sewage treatment works (STW) located in the wider Metropolitan area.

## 4.6 Structure Plan for Al Rayyan Municipality[1]

**Setting**

4.6.1 Al Rayyan Municipality is geographically the largest Municipality and covers 50% of the total area of the country (5,792 sq km). It is comprised of two distinct components: Al Rayyan City, which forms a part of Metropolitan Doha and a vast rural hinterland to the west and south which contains many small settlements, farms, Dukhan Industrial City and Environmental Protected Areas.

4.6.2 The majority of development and approximately 85% of the population of the Municipality is concentrated within Al Rayyan City. The urban form outside of Metropolitan Doha is fragmented with dispersed low density residential development. Community facilities and Government services are scattered throughout the Municipality, which generates the need for additional car trips in the absence of suitable public transport services.

4.6.3 A number of mega projects (including Education City, Aspire Zone, Al Waab City) are under construction or have been recently completed, that attract visitors and students to this area.

4.6.4 Existing low density residential areas and Qatari neighborhoods will continue to characterize the urban form of the Municipality. In 2010, 47% of the total Qatari population lived in Al Rayyan Municipality. Extensive Qatari housing areas planned/under construction have led to expansion of the built-up area into open desert areas. A more sustainable approach to land delivery and urban design is envisaged in accordance with the QNDF.

4.6.5 QP Dukhan Industrial City is strategically positioned to deliver Qatar's on-shore and off-shore oil and gas production. The City Concession Area occupies 13% of Al Rayyan Municipality land and its Dukhan Township is the key town on the west coast.

4.6.6 A summary of the key issues in the Al Rayyan Municipality is as follows:

- The Qatari National Housing Program in the Municipality has created extensive but isolated Qatari neighborhoods resulting in a fragmented urban form and a poor quality townscape
- Outdated zoning regulations and piecemeal planning of Al Rayyan City expansion are eroding Qataris' cultural heritage and local identity
- Single use mega development projects lack integration with surrounding communities and social service networks, dislocating the evolving urban structure
- Environmental Protected Areas will need Government support and stewardship to conserve the nation's natural assets
- Leisure and recreational activities in the west of the Municipality around Al Shahhaniya and lack connectivity with the existing built-up area
- The planning of the Dukhan Industrial City complex has been largely carried out independent of the Government planning system, and the growth of nearby communities

**Strategic Planning Objectives for Al Rayyan Municipality**

4.6.7 The overarching QNDF objectives which will apply to Al Rayyan Municipality include:

- Develop high quality Metropolitan mixed-use, mixed density urban centers at Al Rayyan North and Al Rayyan South
- Integrate mega projects and related large scale infrastructure facilities and networks with existing and planned urban development
- Ensure radial routes act primarily as transit corridors, whilst promoting orbital road routes to enable a balanced urban growth structure
- Facilitate a modal transfer to a high quality public transport system
- Cluster community facilities and other uses at TOD urban centers
- Retain the cultural identity of communities and support enterprises that enhance the sustainability and livability of these communities.
- Introduce a new density approach and building typologies in urban areas to promote a wide range of accommodation types
- Protect and enhance the natural environment in the Environmental Protected Areas
- Maintain and enhance natural resources for the benefit of education, scientific research and limited (eco-) tourism uses.

1 The new Shahhaniya Municipality was created in 2014 and covers an area formerly part of the Al Rayyan Municipality. It is in the process of being established.

Source: *MME*

**Future Growth Management**

4.6.8 The expected population growth to 2032 in this Municipality is 2.3% per annum, with a total increase of more than 250,000 (Refer to Table 4.2). Most of the future population will be located within the proposed Metropolitan Doha Plan Boundary, in line with QNDF, mixed-use, mixed density principles.

**Table 4.2**
**Population of Al Rayyan Municipality (2010 – 2032)**

| | Population |
|---|---|
| **2010**[1] | 456,000 |
| **2017** | 671,000 |
| **2032** | 714,645 |
| [1] 2010 population rounded | |

Sources
*National population forecasts from QSA/GSDP (2012), extrapolated to 2032 and distributed to Municipality.*

4.6.9 The Al Rayyan Structure Plan is formed by two distinct parts, the urban area within Metropolitan Doha, and a vast rural area (Refer to Figure 4.5 and 4.5a). The area encompassed within Metropolitan Doha Structure Plan is subject to the policies of Metropolitan Doha. Urban development in the rural hinterland is not permitted except within designated City Limits, as may be amended through future Municipal Spatial Development Plan preparation.

4.6.10 The major development and growth will be in the Al Rayyan City area within Metropolitan Doha. Metropolitan Centers and Town Centers will be developed, and high quality, low density residential areas which respect local characteristics will be integrated with committed mega projects.

4.6.11 Al Rayyan will have two Metropolitan Centers, Al Rayyan North and Al Rayyan South, which will be connected with the Capital City Precinct and Town Centers through an integrated public transport system. These urban centers will be strategically located in relation to existing activity and transportation nodes near Education City and the Aspire Zone respectively. They will be subject to Action Area Plans to ensure a mixed density, mixed-use approach that meet the needs and expectations of the catchments served.

## Figure 4.5 Al Rayyan Municipality Structure Plan (2032)

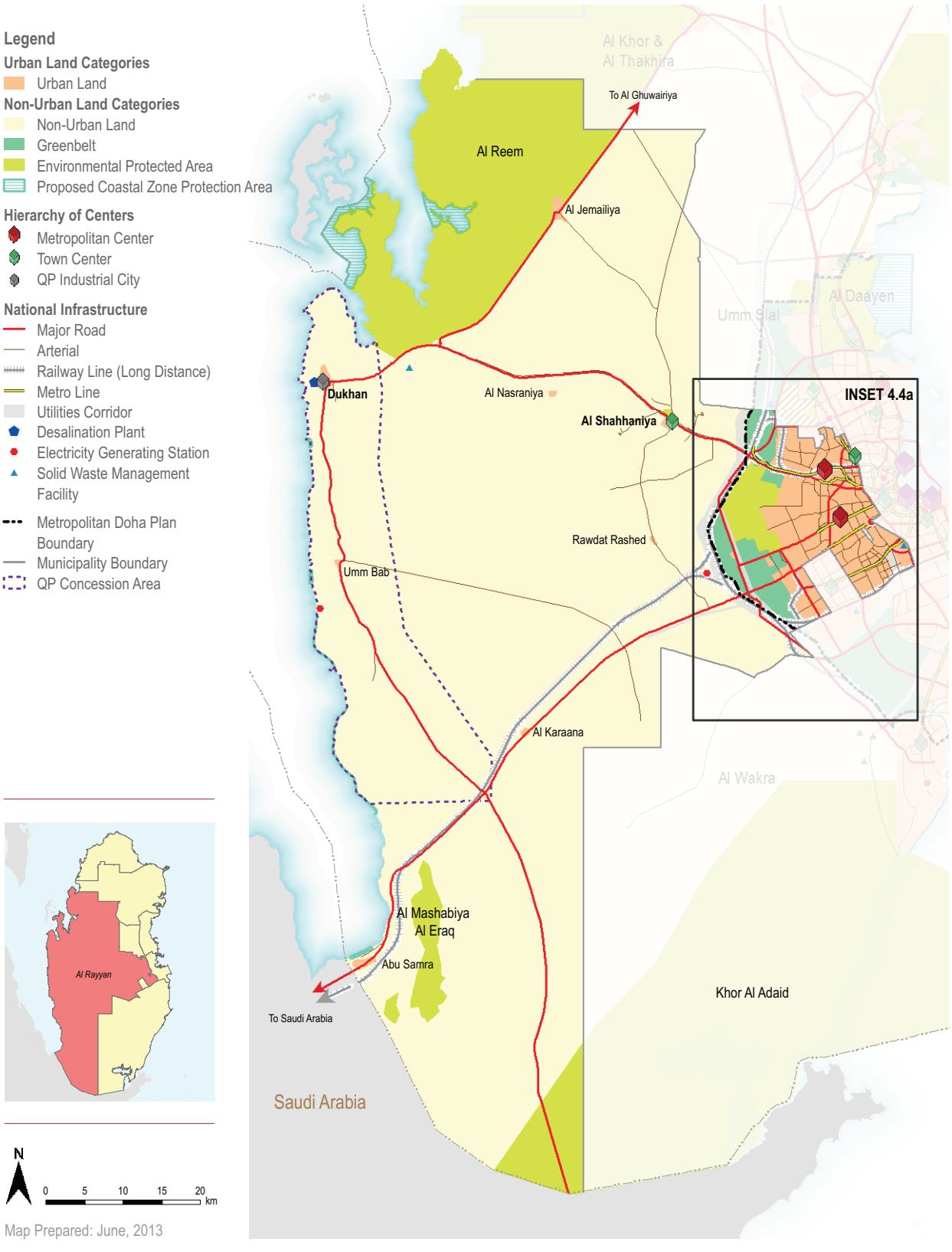
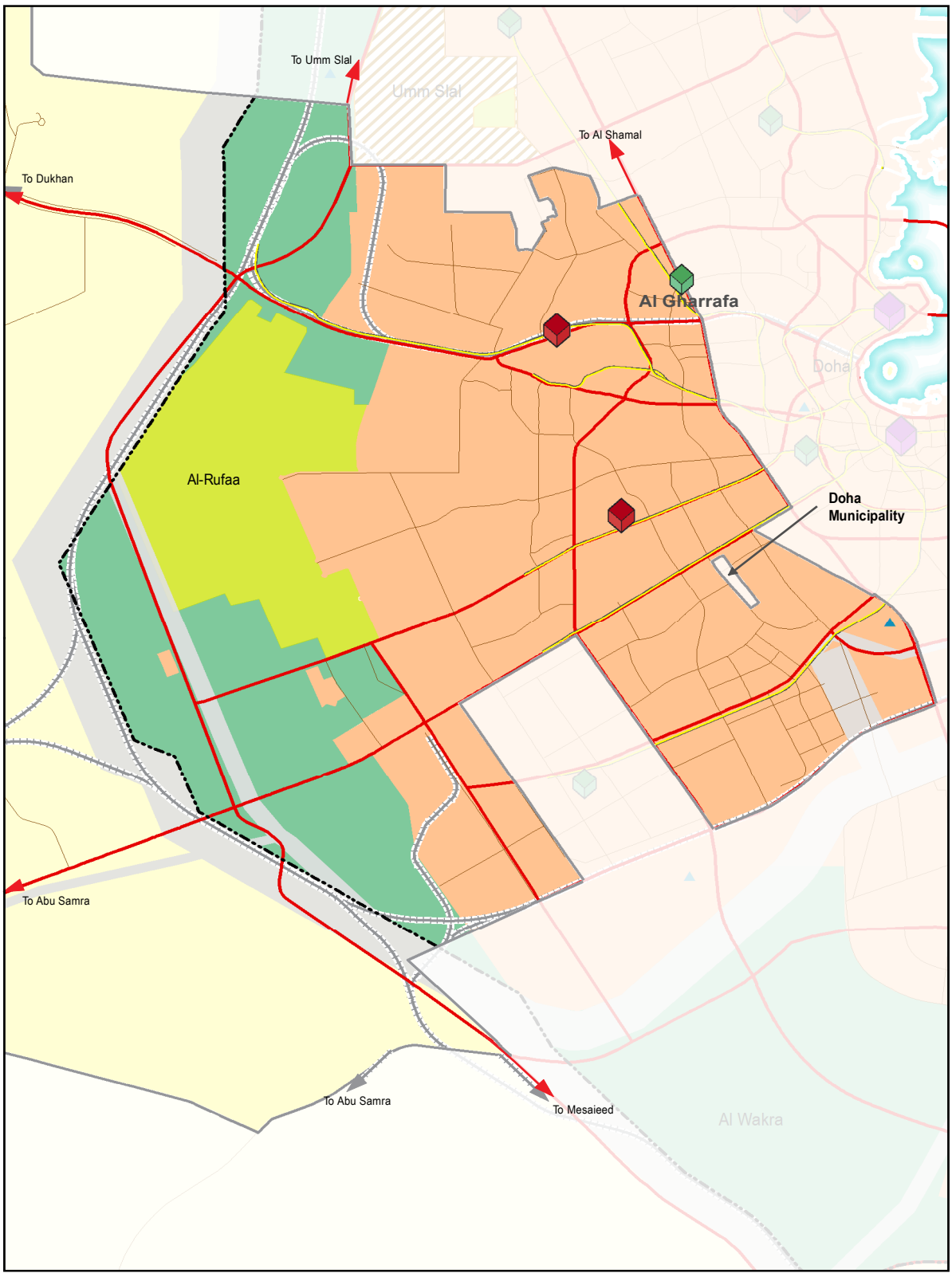


**Figure 4.5a Al Rayyan Municipality Structure Plan INSET (2032)**



Source: *MME*

4.6.12 There is a high concentration of population and employment activity located in Al Gharrafa. It is located north east of Education City, the Science and Technology complex and Al Rayyan North Metropolitan Center; its detailed location will take account of the existing Al Gharrafa complex and the Landmark hypermarket west of Madinat Khalifa. It is strategically located adjacent to the Al Shamal Road and will provide a range of community facilities and Government services to complement the existing major retail development, serving both north-west Doha, parts of Al Rayyan to the east and southern area of Umm Slal Municipality.

4.6.13 In order to promote balanced and sustainable growth across the rural hinterland, development of designated Town Centers and District Centers will be promoted by Government with clustering of community facilities and other local support services around transport nodes.

4.6.14 To sustain long term growth, Dukhan Industrial City complex will be provided with a greater range of community and Government services to serve the western part of the country, and over time become better integrated with adjacent settlements.

4.6.15 Al Shahhaniya will be developed as a Town Center and the main settlement in central Qatar. It will provide a range of community facilities and services to this large rural area. Activities associated with camel racing, Oryx breeding and the Qura'anic botanical garden will also be promoted, to assist integration with the existing settlement.

4.6.16 Al Rayyan is rich in natural resources which need to be protected from further urbanization pressures. These include the Environmental Protected Areas, desert landscapes, and sandy beaches near Dukhan, which have potential to be developed for eco-tourism and local recreation.

4.6.17 The Greenbelt policy will be strictly enforced to protect these natural assets, and create a definitive edge between key urban areas and the rural desert lands beyond.

4.6.18 Dukhan Road is proposed by Ashghal to be upgraded to freeway status outside of Metropolitan Doha. This road will connect the Al Rayyan North Metropolitan Center with Al Shahhaniya and Dukhan. Proposed long distance railway lines will link Doha to Saudi Arabia via Abu Samra. Four metro lines are proposed within the Metropolitan Doha part of the Municipality.

4.6.19 Over the plan period Kahramaa have programs to extend the water supply, and electricity service networks to support future growth and will connect Abu Samra, Umm Bab and Dukhan. Expansion of Doha South STW and three TSE balancing ponds are also proposed by Ashghal within the Municipality.

4.6.20 For security of the national electricity supply, an international (GCC-wide) 400kV grid is planned; the location of the grid connecting Ras Abu Fontas in Al Wakra Municipality to Saudi Arabia is committed through Al Rayyan Municipality.

## 4.7 Structure Plan for Al Daayen Municipality

### Setting

4.7.1 Al Daayen Municipality established in 2005 comprises 2.5% of Qatar (283 sq km) and is located on the eastern coast, north of Doha, immediately east of Umm Slal and south of Al Khor.

4.7.2 Almost three quarters of the land area of the Municipality falls within the proposed Metropolitan Doha Plan Boundary. The central eastern part of the Municipality which comprises the majority of the coastal landscape has been designated as the Al Wusail Environmental Protected Area.

4.7.3 To the north, the land is mainly flat and open with some farms lying above the Northern Aquifer.

4.7.4 A summary of the key planning issues in the Al Daayen Municipality is as follows:

- Traditional Qatari neighborhoods in the south are becoming enmeshed in the northern residential suburbs of Doha creating a fragmented and unattractive urban townscape
- Ad hoc planning and implementation of mega development projects and Qatari housing schemes has led to an unbalanced distribution of Government services and community facilities
- Although the location of the Lusail mega project in the east of the Municipality along the coast will absorb future high end residential growth for much of northern Doha, community facilities and social amenities are currently lacking
- The Municipality's landscape is dissected by national highway corridors-the Al Khor Road to the east and the Al Shamal Road in the west-but the majority of the population has limited access to public transit facilities and coastal amenities
- In the north which is largely rural and agricultural, the lack of an integrated Government policy on food security, sustainable water supply and environmental protection is creating pressures on the agricultural industry and natural environment

### Strategic Planning Objectives for Al Daayen Municipality

4.7.5 The QNDF strategic planning objectives that apply to Al Daayen Municipality include:

- Develop a high quality, mixed-use, mixed density Metropolitan Center at Lusail
- Create a unique and high quality Town Center at Umm Qarn with mixed-use, mixed density and medium height
- Support development of high quality low density residential areas through landscaping and urban design improvements
- Cluster social amenities and community facilities at mixed-use urban centers
- Facilitate modal transfer to high quality public and ambient modes of transport to improve accessibility within and between settlements, including between Doha and Al Khor
- Protect and enhance the natural environment, and control urban sprawl through the introduction of the Metropolitan Doha Green Belt
- Enforce development restrictions in the proposed Northern Aquifer Protection Zone and Environmental Protected Areas.

### Future Growth Management

4.7.6 By the year 2032 the population in the Municipality is estimated to reach approximately 218,000, five times the existing population. This total includes the Lusail mega project as well as the expansion of Qatari national housing schemes. This represents a growth rate of 8% per annum over the plan period (Refer to Table 4.3).

**Table 4.3**
**Population of Al Daayen Municipality (2010 – 2032)**

| | Population |
|---|---|
| **2010**[1] | 43,000 |
| **2017** | 173,000 |
| **2032** | 218,000 |

[1] 2010 population rounded

Sources

*National population forecasts from QSA/GSDP (2012), extrapolated to 2032 and distributed to Municipality.*


Source: *MME*

4.7.7 Currently 55% of the Municipality's population falls within the Metropolitan Doha Plan Boundary, but over the QNDF plan period this proportion is expected to increase to 87%, supported by the development and growth of mixed-use, mixed density urban centers with TOD.

4.7.8 In addition to serving the north of Doha, a Metropolitan Center will be developed in the Lusail mega project, with the inclusion of Governmental and commercial offices, residential, retail, hospitality, resort and entertainment facilities and services. Lusail will promote a community environment with open spaces, and opportunities to obtain freehold property.

4.7.9 Growth is also expected at Umm Qarn and around the Government complex, characterized by predominantly low density Qatari housing. A new Umm Qarn Town Center is proposed to serve the area to consolidate the provision of Government services and community facilities with new retail and office employment opportunities to support growth.

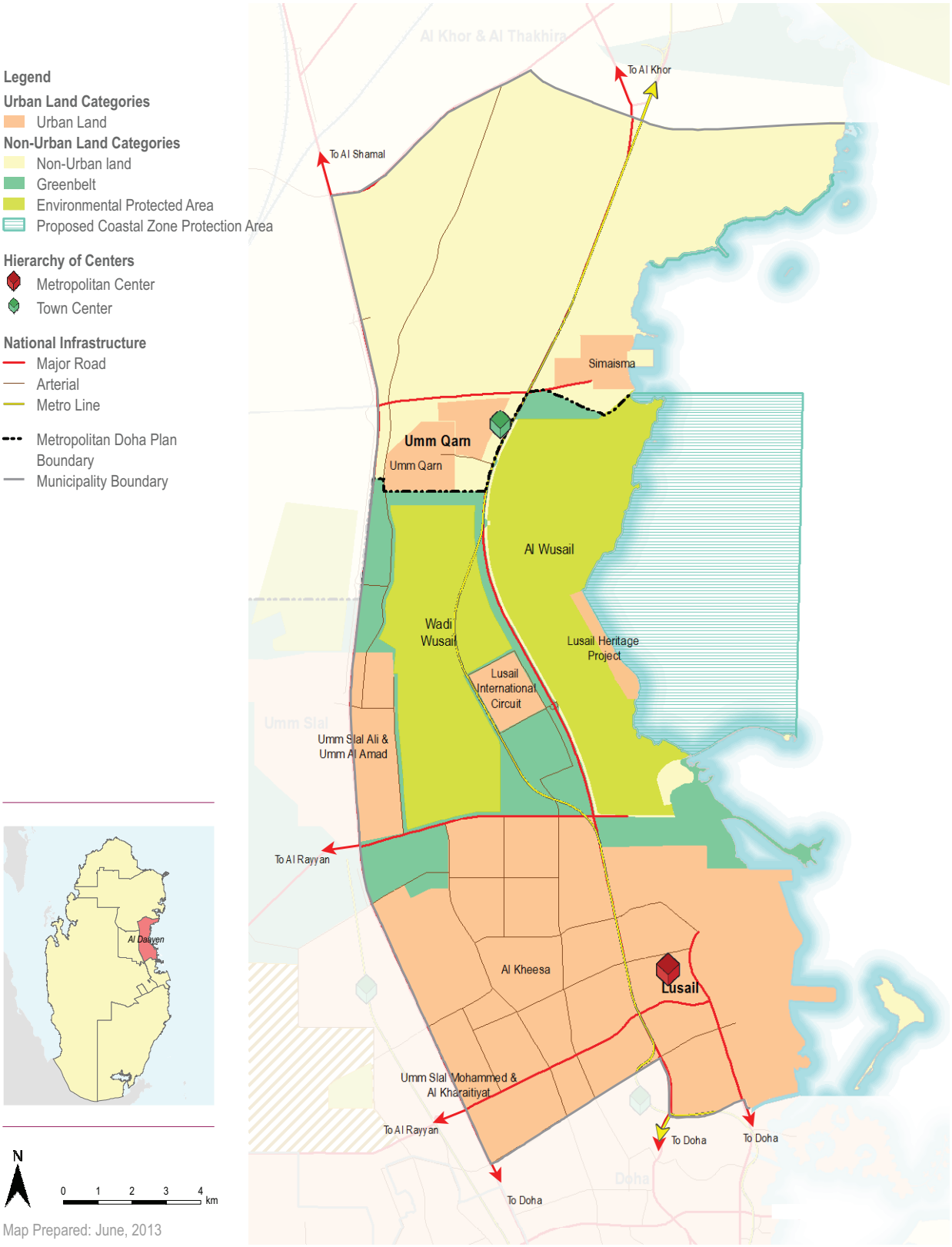
4.7.10 Other future growth is expected to occur within Al Kheesa and residential areas along Al Shamal Road, in accordance with the Metropolitan Doha Structure Plan. These areas will be characterized by predominantly low density Qatari housing (Refer to Figure 4.6).

4.7.11 Simaisma is expected to continue to grow naturally as a mainly residential dormitory area until 2032 supported by local services, when it is expected to have used up all the land within its City Limits.

4.7.12 The central area of the Municipality is within the Metropolitan Green Belt and the proposed Northern Aquifer Protection Zone, and includes the Al Wusail and Wadi Wusail areas Environmental Protected Area. To protect these environmentally sensitive areas, development will only be permitted within those settlements with designated City Limits.

4.7.13 Existing farms and farming settlements will be maintained largely in their current form.

**Figure 4.6 Al Daayen Municipality Structure Plan (2032)**



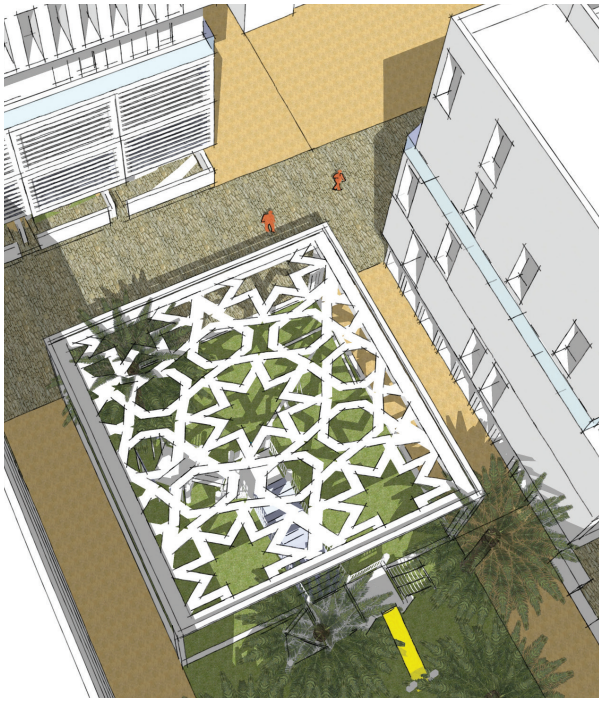
4.7.14 The long-term 2032 road network in the Municipality is assumed to be developed to accommodate the forecast population growth, in balance with public transport improvements. Al Shamal Road is designated to become a freeway with 4 lanes in each direction by the year 2032. This highway will represent the main corridor extending from Doha north to Al Shamal/Al Ruwais.

4.7.15 The Al Khor Road is proposed by Ashghal to become a freeway with 5 lanes in each direction extending north east to Al Khor/Ras Laffan. Two east-west expressways are also proposed by TMPQ within the Al Daayen Municipality: one will serve Simaisma and Umm Qarn, and the other will run south of Al Kheesa area. An east-west freeway, which is part of the Metropolitan orbital freeway, will also run through the Municipality, north of Al Kheesa providing links from north of Doha with the New Doha Port, Al Wakra and Mesaieed.

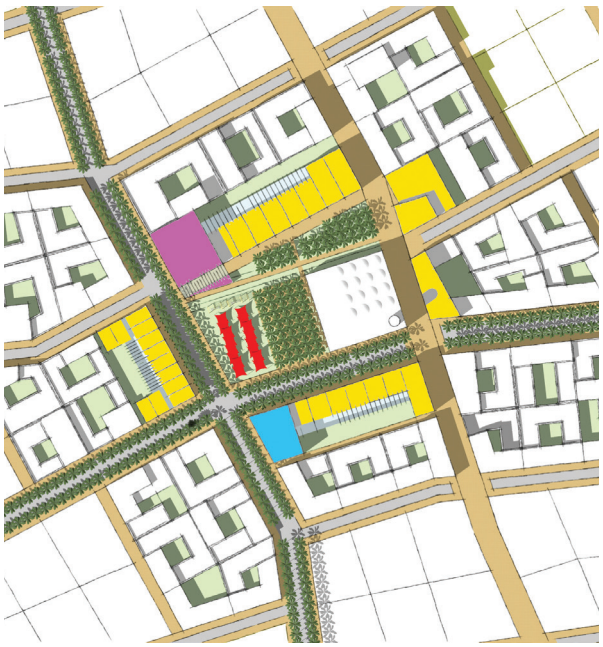
4.7.16 As part of the Qatar Integrated Railway System, the Metro Red Line will run adjacent to Al Khor Road. It is planned that this section of the line will be in operation by the year 2032 and currently there is discussion to extend this metro line up to Al Shamal via Al Khor City. The Mowasalat feeder bus services will be provided to support the Metro rail system along the major roads within the Municipality.

4.7.17 The water supply network and sewerage system will be expanded by Kahramaa to cover built-up areas of the Municipality within Metropolitan Doha, plus Umm Qarn and Simaisma with the addition of three new reservoirs.

4.7.18 New Electricity High Voltage (EHV) lines connecting Simaisma with Al Khor are proposed. A new ducting system is planned to be installed within Metropolitan Doha, Simaisma and Umm Qarn.



Source: *MME*



Source: *MME*

## 4.8 Structure Plan for Umm Slal Municipality

### Setting

4.8.1 Umm Slal is a geographically small Municipality and covers less than 2.7% of Qatar (317 sq km). Previously a part of the Al Daayen Municipality, Umm Slal was re-formed in 2005.

4.8.2 Unlike other Municipalities, Umm Slal has no coastline and is landlocked between Al Daayen to the east, Al Khor to the north, and Al Rayyan to the west and south. The existing Al Shamal Road traverses the eastern boundary of Umm Slal, whilst the north-south national utilities corridor bisects the Municipality into an eastern and a western section.

4.8.3 The Umm Slal landscape is predominantly flat and open, characterized by numerous farms overlying the proposed Northern Aquifer. The area is typical of Doha's urban fringe, with large walled villas and palaces mixed with vacant plots, construction sites and highway upgrading. The lack of effective planning and regulation enforcement has given rise to ad hoc urban sprawl which has created an unattractive and degraded built environment.

4.8.4 Cultural, historic and archaeological sites within the Municipality include Umm Slal Mohammed Fortress (Barzan Tower), which has recently been renovated and opened to the public. The palace of Sheikh Jassim Bin Mohammed Bin Jassim Al Thani is proposed to be restored and included within a heritage park. These sites will require careful management and protection from inappropriate development.

4.8.5 A summary of the key issues in the Umm Slal Municipality is as follows:

- The growing communities in the southern part of Umm Slal have become enmeshed with the northern expansion of Doha's residential suburbs
- Rapid urbanization has been accompanied by a deteriorating landscape and environmental quality, with the creation of large housing compounds interspersed with numerous vacant plots and characterised by uncontrolled urbanisation and a lack of parks and green spaces.
- This urban fringe landscape has been further affected by the national utilities corridor and the transportation corridors (the Al Shamal Road and Al Khor Road) that run north to south through the Municipality

Source: *MME*

- In the north which is largely rural and agricultural, the lack of an integrated Government policy on food security, sustainable water supply and environmental protection is creating pressures on the agricultural industry and natural environment, and
- This combination of factors has resulted in the loss of local image and identity, an unattractive local environment and fragmented provision of accessible commercial services and community facilities.

### Strategic Planning Objectives for Umm Slal Municipality

4.8.6 Strategic planning objectives for Umm Slal Municipality include:

- Create a mixed-use, mixed density Town Center with a distinctive architectural character in Umm Slal Mohammed.
- Control urban sprawl from Metropolitan Doha by introducing and enforcing a Greenbelt and inter-urban break between Umm Slal Ali and the rest of Metropolitan Doha's urban area, including Umm Slal Mohammed
- Facilitate the creation of high quality residential areas incorporating parks and green spaces, for Qataris and non-Qataris that contribute to a unique and distinctive identity for Umm Slal
- Facilitate modal transfer to high quality public and ambient modes of transport, and
- Promote agricultural activity based on sustainable water supply alternatives and enforce other development restrictions in the proposed Northern Aquifer Protection Zone.

Source: *MME*

**Future Growth Management**

4.8.7 Umm Slal's population will gradually increase by the year 2032 at a rate of about 3.8% per annum (Refer to Table 4.4). The future provision of community facilities, Government services, retail and office businesses will be located within the defined Town Center in Umm Slal Mohammed. This is particularly important in response to the growth expected to be associated with the relocation of many Qatari households to new peripheral suburban areas within the Municipality.

**Table 4.4**
**Population of Umm Slal Municipality (2010 – 2032)**

| | Population |
|---|---|
| **2010**[1] | 61,000 |
| **2017** | 104,000 |
| **2032** | 73,000 |
| [1] 2012 population rounded | |

Sources

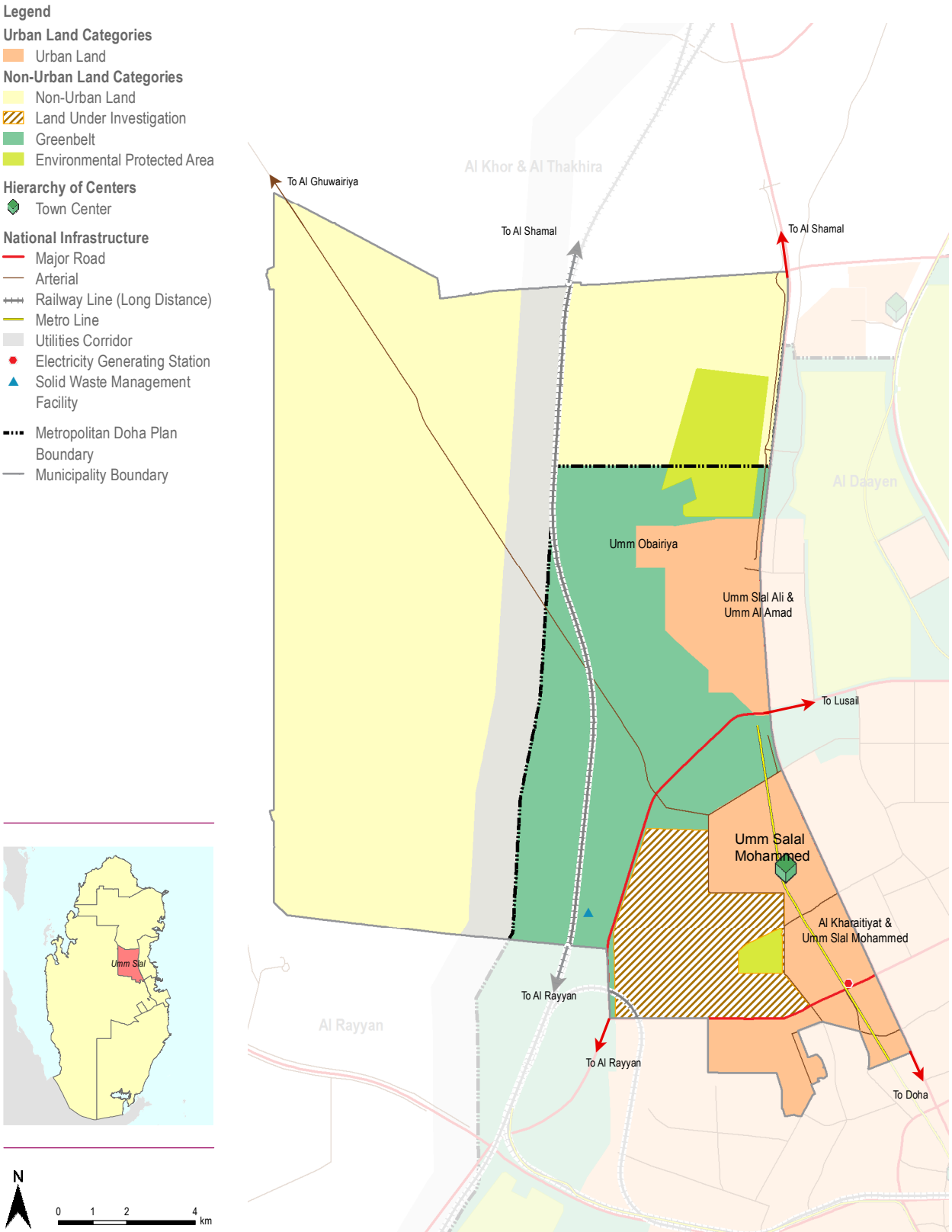
*National population forecasts from QSA/GSDP (2012), extrapolated to 2032 and distributed to Municipality.*

4.8.8 Future growth in the north of the Municipality will be will be constraint proposed by the proposed Northern Aquifer Protection Zone and the presence of farms (Umm Slal contains 50% of the country's livestock farms) (Refer to Figure 4.7). Existing agriculture practices will be affected by the 2012 moratorium on groundwater abstraction, although potential exists for sustainable farming enterprises to deliver national food security initiatives within the proposed Metropolitan Greenbelt through the use of desalinated water.

4.8.9 District and Local Centers will be identified and developed through the Municipal Plan process to support the daily and weekly population requirements.

4.8.10 The central area of the Municipality is within the Metropolitan Green Belt and the proposed Northern Aquifer Protection Zone. To protect these environmentally sensitive areas, development will only be permitted within those settlements with designated City Limits.

## Figure 4.7 Umm Slal Municipality Structure Plan (2032)



Source: *MME*

4.8.11 The long-term 2032 road network in Umm Slal Municipality will be developed to match economic growth in the area, with improvements to public transport. Al Shamal Road is designated to become a freeway with 4 lanes in each direction by the year 2032. Another freeway is proposed to run through the south eastern part of the Municipality south of Umm Slal Ali area. Other north-south and east-west arterial roads are proposed to be developed by Ashghal.

4.8.12 Bus services will be expanded as demand increases; a key challenge in delivering future viable public transportation services will be the relatively low density development in this area. The proposed Metro Line with several stations will service the southern part of Umm Slal. The proposed National Rail system Line which runs south to north along the national utilities corridor however makes no provision for stations within the Municipality boundary.

4.8.13 Umm Slal's urban areas are a part of Metropolitan Doha, and power and telecommunications coverage will be provided to all households. The water supply service will be expanded to cover the whole urban area within Metropolitan Doha.

4.8.14 A strategic water reservoir and several trunk water pipelines are planned along the national utilities corridor, adjacent to the existing EHV line from the south of Umm Slal Ali to Al Shahhaniya in Al Rayyan, and along the road to Mirqab Al Rashmah.

4.8.15 The Doha North STW is located in the western part of the Municipality (outside of Metropolitan Doha). A trunk TSE pipeline is also planned, and a TSE balancing pond proposed by Ashghal to be located at the Doha North STW.

## 4.9 Structure Plan for Al Shamal Municipality

**Setting**

4.9.1 The Al Shamal Municipality is the northern-most Municipality in Qatar. It covers 7% (860 sq km) of the total land mass of Qatar. It contains an attractive and environmentally sensitive coastline, with numerous sites of historic and cultural importance, as well as the Al Reem Biosphere Environmental Protected Area designated by UNESCO.

4.9.2 Al Shamal City together with its adjoining centers of Al Ruwais and Abu Dhalouf forms the prime urban settlement of this Municipality. The Municipality offers a peaceful living environment with attractive coastal and rural landscapes. Fishing and small scale commercial port activities complement this picture.

4.9.3 Inland the landscape is mainly flat and open with numerous farms overlying the Northern Aquifer from which they currently derive groundwater supplies for irrigation of agriculture.

4.9.4 The Municipality has many coastal sites of historic and cultural significance (including Zubarah Fort, Al Zubarah Village and Umm Suwaiyia Village). It also features areas of natural and scenic beauty, turtle breeding sites along sandy coastal beaches, shallow seas on the northern coastline, all of which will require careful management and protection from inappropriate development.

4.9.5 A summary of the key issues in the Al Shamal Municipality is as follows:

- Although the Municipality is blessed with an attractive, coastal and historic setting, the piecemeal development of Al Shamal City and its neighboring communities of Al Ruwais and Abu Dhalouf has resulted in a fragmented and inefficient development structure, with a deteriorating townscape
- The Al Shamal Industrial Area will need Government investment support to sustain long term growth given its relatively isolated location
- Inland, which is largely rural and agricultural, the lack of an integrated Government policy on food security, sustainable water supply and environmental protection is creating pressures on the future of the agricultural industry and the Municipality's natural environment assets

**Strategic Planning Objectives for Al Shamal Municipality**

4.9.6 The strategic planning objectives which apply to Al Shamal Municipality include:

- Protect and preserve the natural environment and historical resources, and promote sustainable tourism and leisure uses based on these resources
- Create a defined Town Center in Al Shamal is through the clustering of local level services and community facilities in a mixed-use setting
- Link public spaces in Al Shamal/Abu Dhalouf/Al Ruwais via an improved public realm including waterfront and Corniche style activities
- Create high quality low density residential areas that contribute to the unique and distinctive identity of the Municipality, and
- Enforce development restrictions in the proposed Northern Aquifer Protection Zone and Environmental Protected Areas.

Source: *MME*

**Future Growth Management**

4.9.7 The level of future population growth to 2032 is expected to be relatively modest, and capable of being readily accommodated within the existing city limits (Refer to Table 4.5). The careful management of this growth is particularly important in response to potential development pressures.

**Table 4.5**
**Population of Al Shamal Municipality (2010 – 2032)**

| | Population |
|---|---|
| **2010**[1] | 8,000 |
| **2017** | 21,000 |
| **2032** | 28,000 |
| [1] 2010 population rounded | |

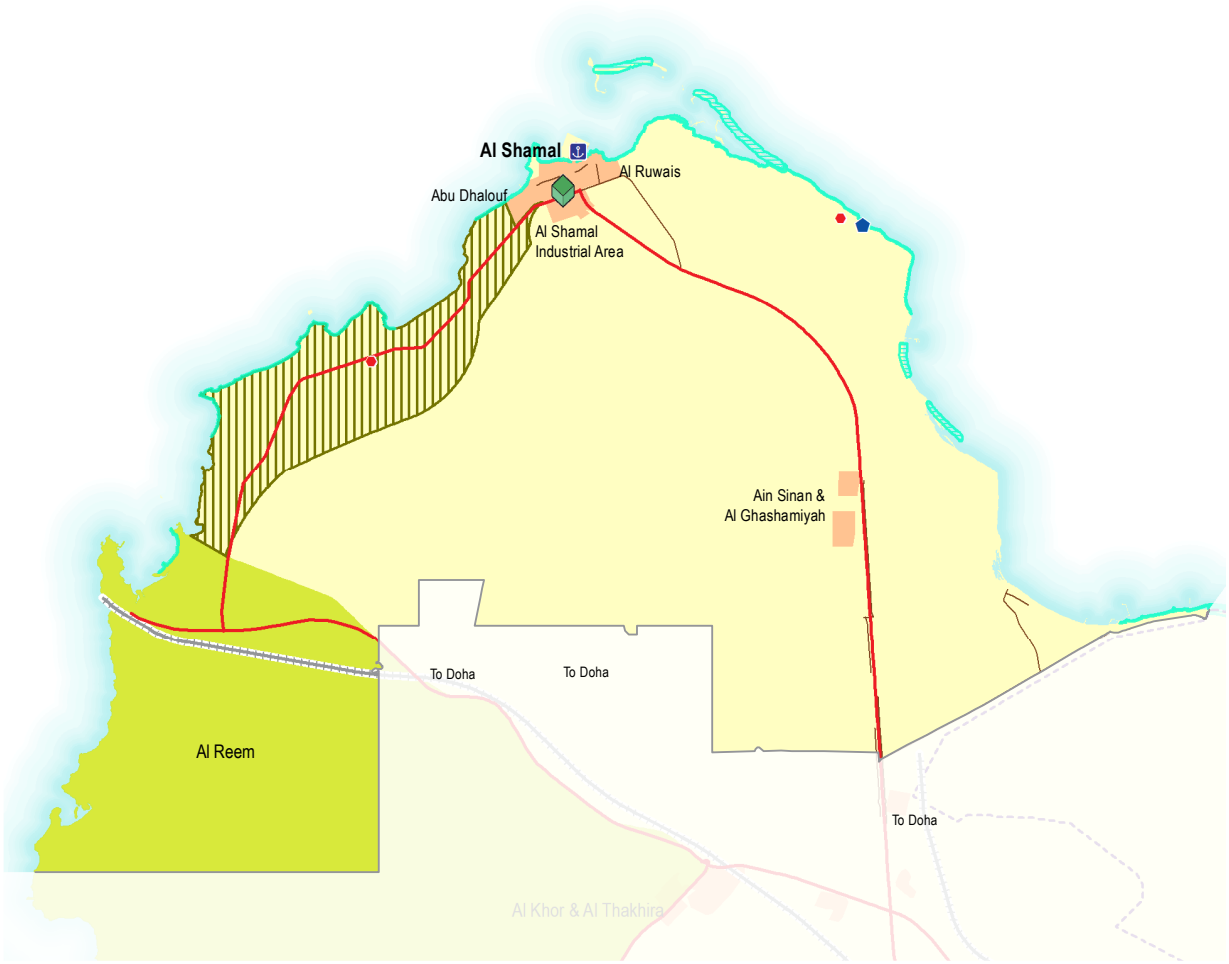
Sources
*National population forecasts from QSA/GSDP (2012), extrapolated to 2032 and distributed to Municipality.*

4.9.8 Spatially, growth in Al Shamal will be constrained by the proposed Northern Aquifer Protection Zone, proposed Al Shamal Conservation Area and proposed Coastal Zone Protection Areas, and the Al Reem Biosphere Environmental Protected Area. Existing agriculture practices will be affected by the moratorium on groundwater abstraction, although the potential exists for sustainable farming enterprises to deliver national food security initiatives using desalinated water.

4.9.9 Plans to expand the small commercial fishing port at Al Ruwais provide opportunities to develop coastal tourism and related leisure uses, which together with the area's rich cultural and historic assets have the potential to diversify economic activities and create local jobs in line with QNV2030.

4.9.10 Al Shamal City is proposed as a Town Center in accordance with the QNDF hierarchy of urban centers. It will act as the focus for commercial and social activities for the surrounding communities and rural catchment, and provide Municipality and community facilities for residents and businesses.

## Figure 4.8 Al Shamal Municipality Structure Plan (2032)




**Legend**

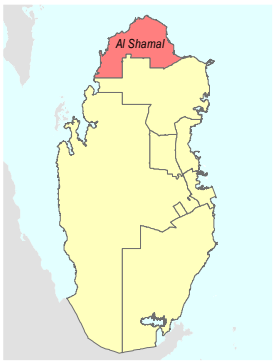
**Urban Land Categories**
- Urban Land

**Non-Urban Land Categories**
- Non-Urban Land
- Environmental Protected Area
- Proposed Conservation Area
- Proposed Coastal Zone Protection Area

**Hierarchy of Centers**
- Town Center

**National Infrastructure**
- Major Road
- Arterial
- Railway Line (Long Distance)
- Metro Line
- Port
- Desalination Plant
- Electricity Generating Station

- Municipality Boundary

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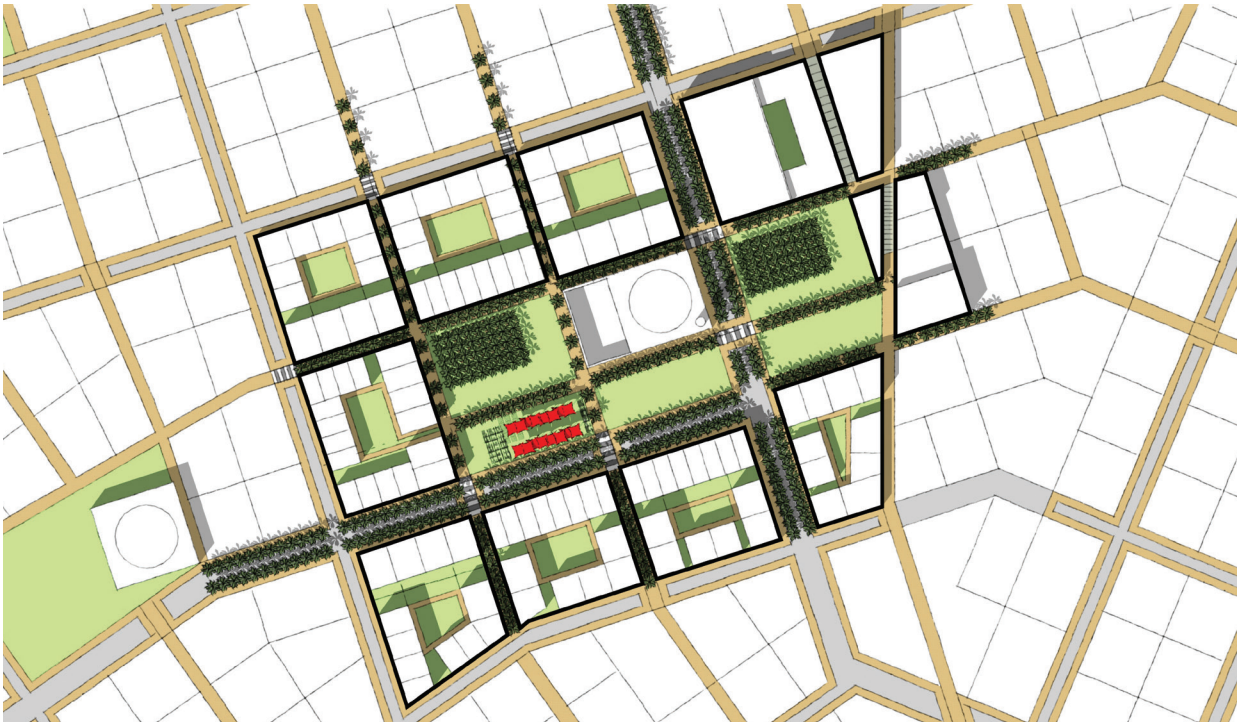
Map Prepared: June, 2013



Source: *MME*

4.9.11 The future Municipal Spatial Development Plan will promote the development of a compact and legible townscape which will help guide future investments and infrastructure and balanced provision of community facilities, improving urban amenity for existing and future residents and visitors.

4.9.12 The Municipality will remain predominantly rural in character, with clearly defined urban growth limits along the Al Shamal Road within which most forms of urban land uses will be permitted. Development outside this urban limit that is not directly related to rural industry and farming production will not be permitted.

4.9.13 For the purposes of protecting and preserving the natural environmental and historical resources, as well as promoting leisure and tourism activities, the development of the north-western coastal area will be managed and controlled through the designation of proposed Coastal Zone Protection Areas and the proposed Al Shamal Conservation Area.

4.9.14 Transport infrastructure will be provided in response to the level of demand from population and economic growth. Al Shamal Road proposed by TMPQ will become a freeway with 4 lanes in each direction by 2032, and will become the main corridor linking Al Shamal City with the south of the Municipality and the rest of Qatar. The road connecting Al Ruwais with Al Zubara is proposed to become an expressway.

4.9.15 Utility infrastructure needs will be addressed based on the future population and economical activities. The water supply and sewerage network is planned to be extended to cover all urban areas in Al Shamal, whilst a TSE network will be extended by Ashghal to Al Shamal City and Al Zubara from the Doha North Sewer Treatment Works in Umm Slal.

4.9.16 A new desalination plant is proposed by Kahramaa at Al Ghariya which will provide potable water to support urban development, and irrigation water. Providing sustainable alternative water supplies for irrigation purposes in this area is fundamental to the success of the Qatar National Food Security Program.

4.9.17 New power stations are proposed at Al Mamlaha and Al Khuwair Hissan. There is also a power station proposed in Ras Laffan Concession Area.

Source: *MME*

## 4.10 Structure Plan for Al Khor and Al Thakhira Municipality

### Background

4.10.1 The Structure Plan for Al Khor and Al Thakhira Municipality incorporates pre-existing Government-approved plans for Al Khor and Al Thakhira and updates key aspects in light of revised GSDP economic growth forecasts and other factors (Refer to Figure 4.9). These plans will be subject to further review as part of the QNDF updating process.

### Setting

4.10.2 Al Khor and Al Thakhira Municipality is located in the north of Qatar and is bound to the north by Al Shamal Municipality and to the south by Al Rayyan, Umm Slal and Al Daayen Municipalities. To the east and west lies the Arabian Gulf. It covers an area of approximately 1,603 sq km or 14% of Qatar's land mass.

4.10.3 Along the east coast is Al Thakhira Marine Reserve, an EPA which contains the largest mangrove wetlands in Qatar and includes mudflats, saltmarsh and coral reefs. Part of a second EPA along the west coast is the Al Reem Biosphere Reserve which extends into neighboring Al Shamal and Al Rayyan Municipalities. This EPA contains limestone cliffs, mesas, wadis, gravel plains and mud flats.

4.10.4 Much of the municipality lies over the proposed Northern Aquifer Protection Zone, which supplies groundwater for agricultural irrigation to the many farms located in the central of the Municipality

4.10.5 Al Khor City has a significant role as an activity center for the northern part of the country, with historical importance as production of purple dye and pearls. Al Khor City has the potential to be a tourism destination attracting residents and visitors due to its unique environmental and heritage features, and coastal location with attractive public beaches.

4.10.6 Ras Laffan Industrial City is located in the north east and has a dedicated port for the export of Liquified Natural Gas. Currently, some laborers live within the City, whilst some staff with families live outside in Al Khor Community. Because of its location, Al Khor City has an important role to support Ras Laffan for residential, amenity, and community services.

4.10.7 Other key settlements in the Municipality include Al Thakhira, Al Ghuwairiya and Rawdat Al Faras. There is also a Government-designated Industrial Area to the north west of Al Khor City. Al Khor is linked to Doha via a road which also connects Al Khor to the north west of Qatar including Al Shamal City. The national utilities corridor which connects Ras Laffan to Mesaieed in the south passes through the Municipality.

4.10.8 A summary of the key issues in the Al Khor and Al Thakhira Municipality is as follows:

- The rapid but ad hoc growth of residential developments around Al Khor City and Al Thakhira is resulting in a deteriorating townscape, increasing journey times and adverse environmental impacts especially near coastal environments
- The mainly Qatari neighborhoods at Al Thakhira are disconnected from Al Khor's commercial and community facilities, generating more car trips to shop and enjoy local amenities
- The proximity of Al Khor and Al Thakhira to Ras Laffan and the shortage of appropriately located labor housing (with access to minimum standards of community services, recreational facilities and retail opportunities) have led to a number of social and traffic impacts in these traditional communities
- Outside Al Khor and Al Thakhira, smaller rural settlements and the new Al Khor Industrial Area will need Government investment support to sustain future development
- Inland, which is largely rural and agricultural, the lack of an integrated Government policy on food security, sustainable water supply and environmental protection is creating pressures on the future of the agricultural industry and the Municipality's natural environment assets, and
- The planning of the Ras Laffan Industrial City complex and related utilities corridors to the north of Al Khor has been carried out largely independent of the Government planning system.

**Strategic Planning Objectives for Al Khor and Al Thakhira Municipality**

4.10.9 The strategic planning objectives that apply to the Municipality are:

- Protect and enhance the natural environment in the Environmental Protected Areas, and control urban sprawl through the introduction of a Greenbelt around Al Khor City
- Support the development of Al Khor City as the "Turquoise City", which has the distinctive character of an Arabian city, urban oasis and tourism destination with its rich historical and environmental resources.
- Create a unique and high quality Al Khor Town Center with mixed-use, mixed density, medium height form of development;
- Integrate and support mega projects (such as Urjuan Beach Development) in providing residential, services and community facilities to encourage compact city, mixed-use, growth principles
- Support development of high quality low density residential areas for Qataris in Al Thakhira township and sustain cultural identity through landscaping and urban design improvements and a range of community facilities
- Facilitate modal transfer to high quality public and ambient modes of transport to improve accessibility within and between Al Khor, Al Thakhira, Ras Laffan and Doha, and
- Cluster social amenities and community facilities at mixed-use centers.

**Future Growth Management**

4.10.10 Previous Government plans for Al Khor and Al Thakhira foresaw a combined population of 32,400 by 2032 resulting in a low average population density excluding Ras Laffan Industrial City. These plans have been reviewed with regard to compliance with the QNDF plans and policies and the following adjustments have been made:

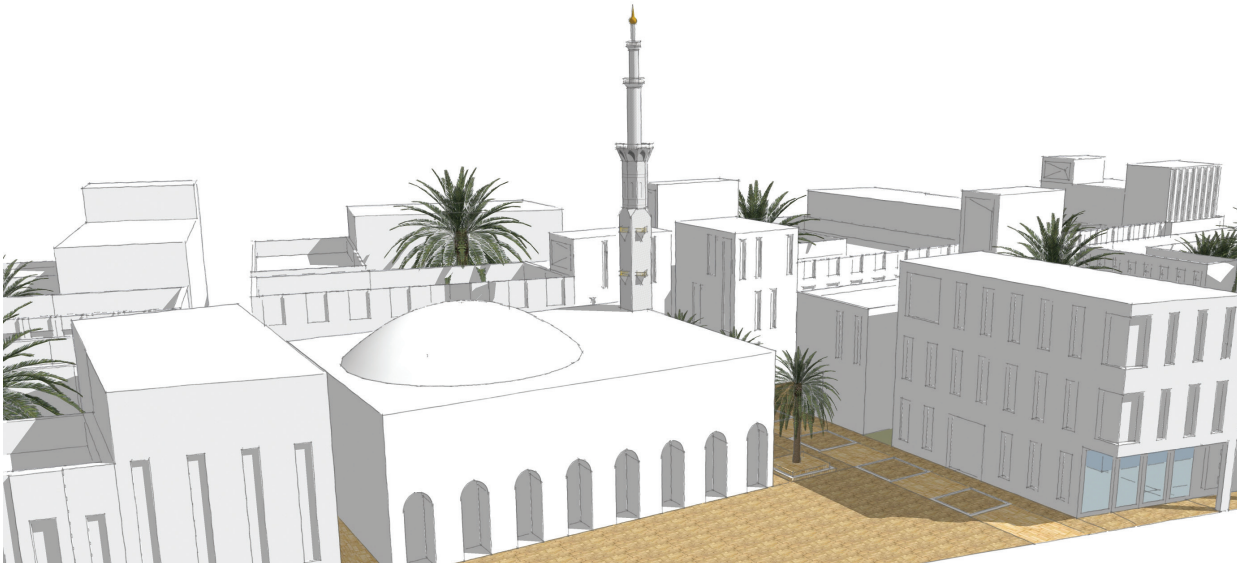
- The target population: in light of the GSDP scenario the previous forecasts have been adjusted and have also taken account of mega projects (Refer to Table 4.6).
- Public transportation infrastructure: revised route alignments of the National Rail System through the Municipality including possible Metro links have been taken into account
- Transit Oriented Development: stations on the proposed Metro and long distance railway lines will need to be integrated with mixed-use, mixed density and transit oriented developments (TOD) over the plan period
- Urban Structure: opportunities for consolidating the urban structure of Al Khor by locating facilities and services within the urban growth boundaries of Al Khor to produce more compact development
- Land take and utilities corridors: opportunities for rationalizing the future extent and land take of the national utilities corridor need to be taken into account, and
- Linkages with Ras Laffan Industrial City: the integration of future community facilities networks and Government services with Al Khor and Al Thakhira township needs to be considered.

**Table 4.6**
**Population of Al Khor and Al Thakhira Municipality including Ras Laffan Industrial City (RLIC) (2010 – 2032)**

| | Population |
|---|---|
| **2010**[1] | 194,000 |
| **2017** | 197,000 |
| **2032** | 206,000 |
| [1] 2010 population rounded | |

Sources

*National population forecasts from QSA/GSDP (2012), extrapolated to 2032 and distributed to Municipality.*



Source: *MME*

**Structure Plan for Al Khor and Al Thakhira Municipality (2032)**

4.10.11 Al Khor and Al Thakhira Municipality benefits from having features which include an attractive coastline, open rural landscapes, two Environmental Protected Areas and the proposed Northern Aquifer Protection Zone. It also benefits from Ras Laffan Industrial City which provides employment opportunities and housing for its workers. However, the appropriate balance of economic development of the hydrocarbons industry, alongside the preservation and protection of natural resources needs to be carefully managed.

4.10.12 The future development strategy for this Municipality will see Al Khor City developing into a key Town Center. Al Khor will incorporate Municipality functions and provide Government services and community facilities for its population and the wider northern area of Qatar. Other major commitments include the Urjuan Beach Development, the Ras Gas community in Al Khor and the Al Khor Industrial Area in the north-west.

4.10.13 Development is only permitted within designated growth limits and Ras Laffan Industrial City, which may be amended through future spatial plan preparation.

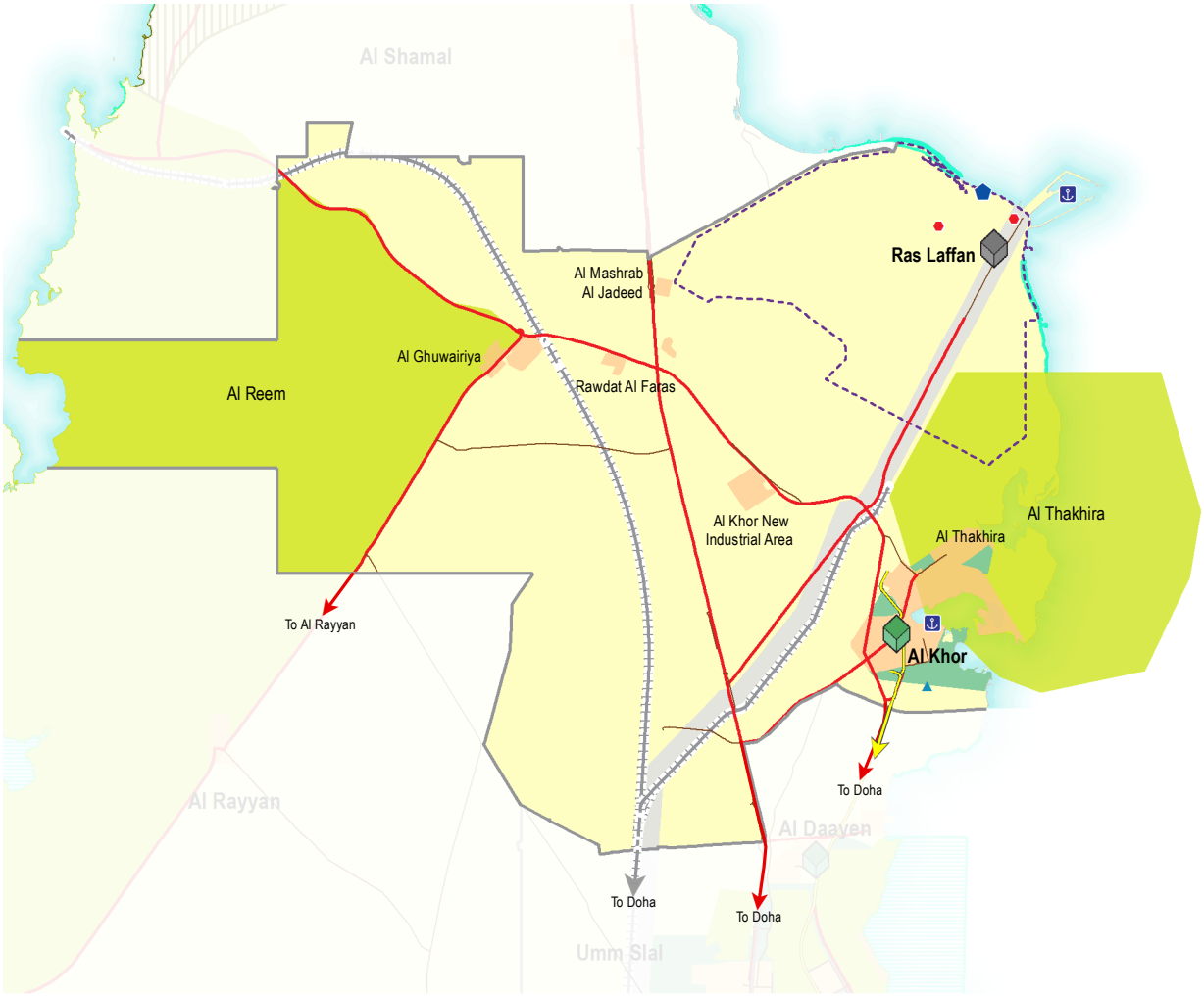
4.10.14 By 2017 the Al Khor Road will be upgraded to expressway status linking Doha and Lusail to Al Khor. By 2032 major roads which run from Al Khor towards Al Shamal City and the north of Qatar will be upgraded to freeways and expressways. The long distance railway will link the Municipality with Metropolitan Doha.

4.10.15 The proposed metropolitan rail Red Line will be extended to Al Khor. Opportunities for creating new centres (in accordance with the center hierarchy) around the finalised stations will be investigated.

4.10.16 Utility infrastructure needs will be addressed to support future economic growth to 2032, with plans by Ashghal to extend sewerage systems and the STW to serve Al Khor and Al Thakhira. The intention is also for TSE to be used for irrigation.

4.10.17 By 2017, Ashghal propose that towns and villages outside of Metropolitan Doha, not covered by mains sewerage will be provided with Package Treatment Works. The Municipality will also see extensions to its distribution mains at Al Khor City and construction of over 80km of pipeline for the Ras Laffan Water Transmission.

## Figure 4.9 Al Khor and Al Thakhira Municipality Structure Plan (2032)




**Legend**

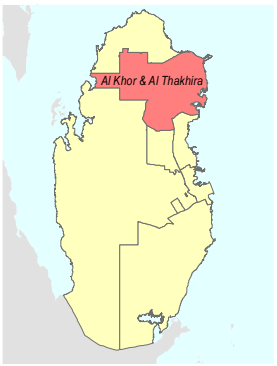
**Urban Land Categories**
- Urban Land

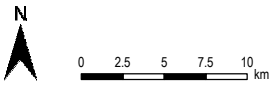
**Non-Urban Land Categories**
- Non-Urban Land
- Greenbelt
- Environmental Protected Area
- Proposed Coastal Zone Protection Area

**Hierarchy of Centers**
- Town Center
- QP Industrial City

**National Infrastructure**
- Major Road
- Arterial
- Long Distance Rail
- Metro Line
- Port
- Utilities Corridor
- Desalination Plant
- Electricity Generating Station
- Solid Waste Management Facility

- Municipality Boundary
- QP Concession Area



## 4.11 Structure Plan for Al Wakra Municipality

### Background

4.11.1 The Structure Plan for Al Wakra Municipality incorporates pre-existing Government-approved plans for Al Wakra and Al Wukair and updates key aspects in light of revised GSDP economic growth forecasts and other factors (Refer to Figure 4.10). These plans will be subject to further review as part of the QNDF updating process.

### Setting

4.11.2 Al Wakra Municipality is located in the southeast of Qatar and is bordered to the north by Metropolitan Doha and to the west by Al Rayyan Municipality. To the east lies the Arabian Gulf and to the south the national border which joins Saudi Arabia. It covers an area of approximately 2,520 sq km or 22% of Qatar. In addition to the main town of Al Wakra, other key settlements include Al Wukair a traditional Qatari township.

4.11.3 A large proportion of the Municipality is covered by the Environmental Protected Area, Khor Al Adaid, which contains a unique tidal lagoon, mobile sand dunes, rodahs, wadis and is nominated by UNESCO as a World Heritage site. The Sealine Beach Resort and beaches along the south east coast are popular destinations for residents due to the relatively easy access and informal desert activities which occur here.

4.11.4 The QP Concession Area and Industrial City at Mesaieed located in the north east of the Municipality, includes the heavy industrial area, port and community area. Laborers live within the Concession Area and there are residential communities for skilled workers and some community facilities such as a hospital. The national utilities corridor from Ras Laffan runs west of the Doha Metropolitan area to connect to Mesaieed and its port.

Source: *MME*

4.11.5 A summary of the key issues in the Al Wakra Municipality is as follows:

- Within the Municipality, individual mega projects such as Barwa Village and Qatar Economic Zone (QEZ 2) lack integration with existing commercial centers, community facilities and local amenities, further fragmenting the Municipality's urban form
- Significant new transport investments in or adjacent to the Municipality including the new Hamad International Airport (HIA), the New Doha Port, Qatar Economic Zone 3 (QEZ 3) and in the longer term the nearby Airport City will create additional pressures on the Municipality's roads and intersections
- The traditional Qatari way of life and cultural identity of Al Wukair township is increasingly under threat from rapid urbanization and population growth as Metropolitan Doha expands southwards
- The townscape and landscape of the Municipality are significantly compromised by the location and massing of national utilities corridors through the north and power and water structures such as the Ras Abu Fontas along the coast, and
- The planning of the Mesaieed Industrial City complex and related utilities corridors has been largely carried out independent of the Government planning system, even though it is closely linked economically and physically to Metropolitan Doha.

Source: *MME*

### Strategic Planning Objectives for Al Wakra Municipality

4.11.6 The QNDF overarching objectives apply to Al Wakra Municipality. Some specific objectives include:

- Protect and enhance the natural environment and Environmental Protected Area at Khor Al Adaid and control urban sprawl through the introduction of the Metropolitan Doha Greenbelt
- Create a unique and high quality New Al Wakra Metropolitan Center based on TOD principles
- Enhance the historic Town Center at Al Wakra with mixed-use, mixed density, medium height form of development
- Support development of high quality low density residential areas for Qataris in Al Wukair and preserve cultural identity through landscaping and urban design improvements and the introduction of a range of community facilities
- Facilitate modal transfer to high quality public and ambient modes of transport to improve accessibility within and between Al Wakra, Al Wukair, Doha, Airport City and Mesaieed, and
- Co-locate social amenities, community facilities and TOD at mixed-use centers in line with public transport networks.

### Future Growth Management

4.11.7 Previous Government plans for Al Wakra and Al Wukair foresaw a combined population of 240,000 by 2032 resulting in a low average population density, excluding Mesaieed Industrial City. These plans have been reviewed with regard to compliance with the QNDF plans and policies and the following adjustments have been made:

- The target population: in light of the GSDP scenario the previous forecasts have been adjusted and have also taken account of recent mega projects including Barwa City (Refer to Table 4.7)
- Public transportation infrastructure: revised route alignments of the National Rail System through the Municipality including possible Metro links have been taken into account
- Transit Oriented Development: stations on the proposed Metro and long distance railway lines will need to be integrated with mixed-use, mixed density and transit oriented developments (TOD) over the plan period
- Linkages with Airport City: Airport City will become one of the three Capital City Centers within Metropolitan Doha and a key activity node after 2017. Linkages between Airport City and Al Wakra urban centers need to be fully integrated
- Land take and utilities corridors: opportunities for rationalizing the future extent and land take of the national utilities corridor need to be taken into account, and
- Linkages with Mesaieed Industrial City: the integration of future community facilities networks and Government services with Al Wakra town needs to be considered.

**Table 4.7**
**Population of Al Wakra Municipality including Mesaieed Industrial City (MIC) (2010 – 2032)**

| | Population |
|---|---|
| **2010** | 141,000 |
| **2017** | 303,000 |
| **2032** | 369,000 |

Sources
*National population forecasts from QSA/GSDP (2012), extrapolated to 2032 and distributed to Municipality.*

**Structure Plan for Al Wakra Municipality (2032)**

4.11.8 The National Spatial Strategy incorporates the urban area of Al Wakra in the future agglomeration termed Metropolitan Doha; New Al Wakra is planned to become a Metropolitan Center in accordance with the QNDF Hierarchy of Centers and there will be a Town Center based on the existing activity node at Al Wakra.

4.11.9 Development outside Metropolitan Doha is not permitted accept within designated growth limits and Mesaieed Industrial City, as maybe amended through the future spatial plan preparation.

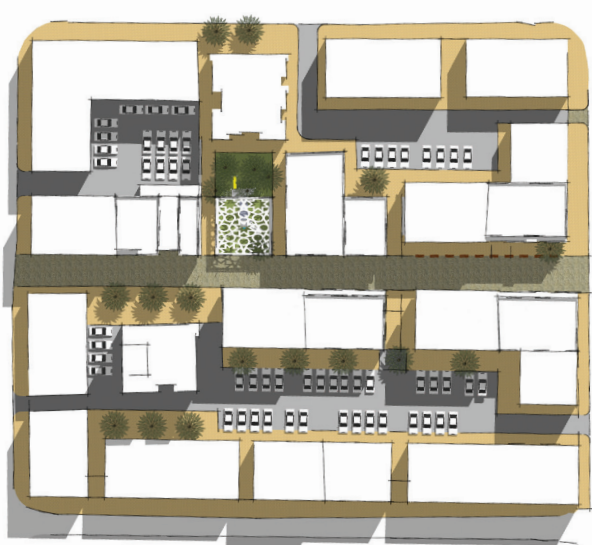
4.11.10 Mesaieed Industrial City is planned by QP to have a large residential area with a population of 121,000 by 2032, and will be integrated into the physical and social infrastructure of this Municipality. Nearby the New Doha Port and National Logistics Center will help generate future employment and contribute to a diversified economy.

4.11.11 Al Wakra Municipality benefits from having extensive natural areas that are internationally recognized alongside the presence of the Mesaieed QP Concession Area. The appropriate balance of economic diversification and creation of downstream industries associated with the hydrocarbons industry, alongside the preservation and protection of flora and fauna in the Environmental Protected Area and natural desert needs to be carefully managed.

4.11.12 The Doha expressway and Wakra bypass are currently under construction by Ashghal. The Al Wukair Expressway is proposed in the TMPQ to facilitate the land uses at Al Wakra and Al Wukair with 2 lanes per direction by 2032.

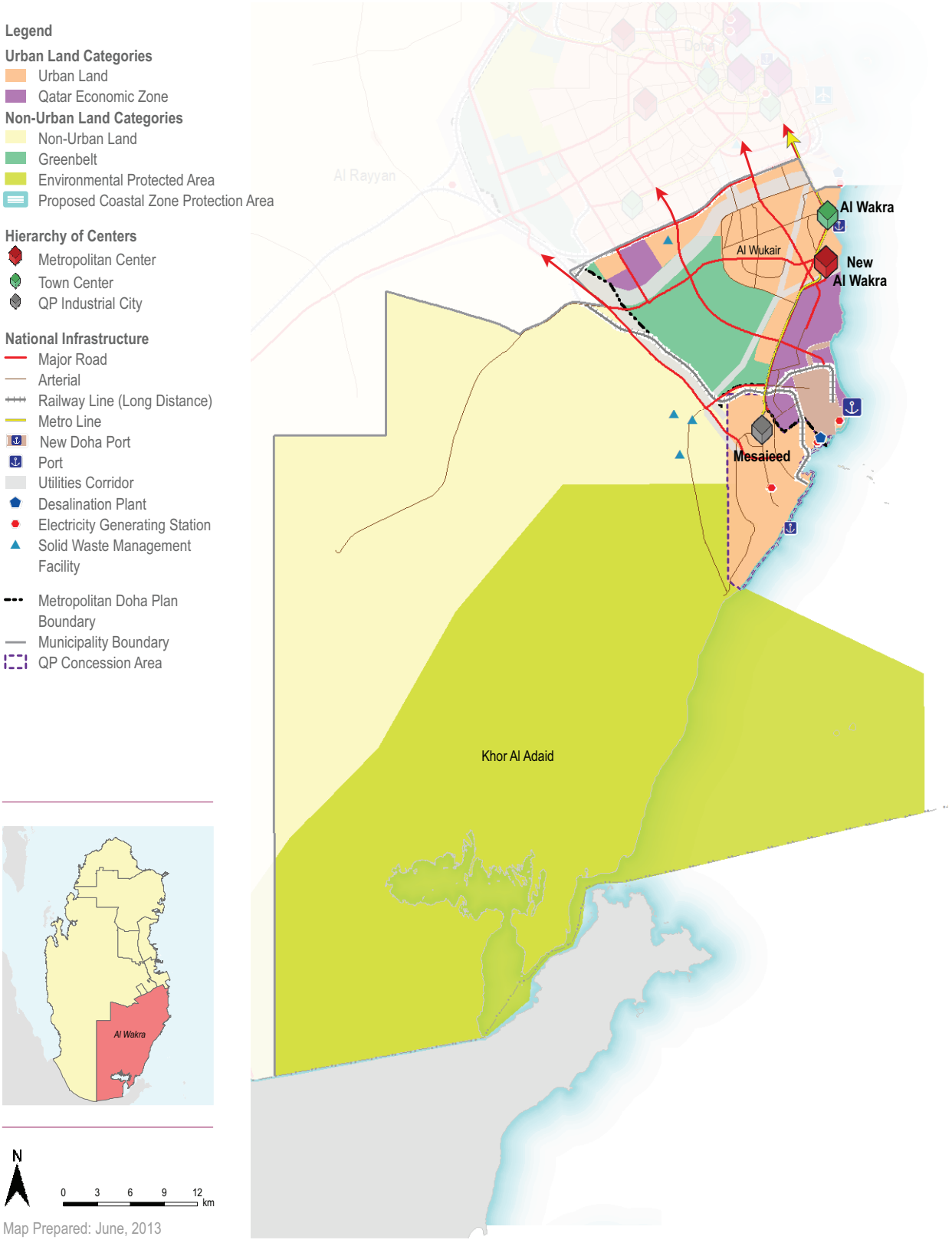
4.11.13 Opportunities to rationalize the national utilities corridor which bounds Al Wakra and Al Wukair to the north will be examined in consultation with Kahramaa to reduce the land take and its environmental impact.

4.11.14 In addition to the expansion of the EHV line network, as part of the GCC-wide 400kV grid connection, a link to Saudi Arabia is also committed through the Municipality.



Source: *MME*

## Figure 4.10 Al Wakra Municipality Structure Plan (2032)



The National Spatial Strategy, together with planning strategies for the environment, transportation and utilities, provides the physical development framework within which policies for key economic, social and environmental sectors will be implemented. The policies and related policy actions focus on delivering a balanced hierarchy of mixed-use, mixed density, transit-oriented centers designed to promote compact city growth principles, provide a clearly structured urban form and improve the quality of life for Qataris and visitors alike. These key drivers of change include policies on industry and commerce, housing and community facilities, the built and natural environments, and movement and utilities. Ministries and Agencies with responsibilities for physical and spatial planning, as well as those charged with delivering specific policy actions, are also identified.

# Section C: Drivers of Change

# 5.0 Economic Prosperity



## 5.1 Context

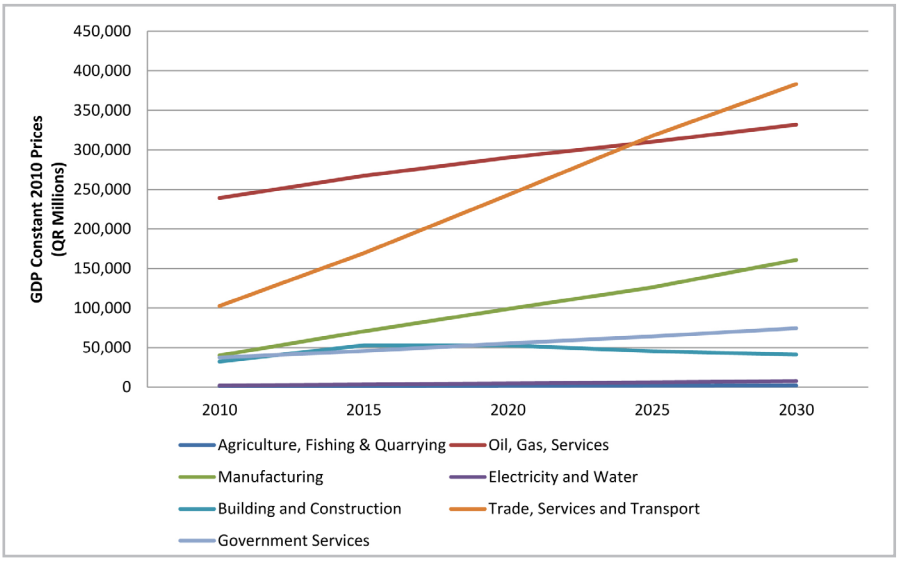
5.1.1 Qatar's economy has seen impressive growth at approximately 8% per annum between 2004 and 2007, and Qataris now enjoy the third highest GDP per capita in the world[2], which has brought with it some significant challenges.

5.1.2 The QNV2030 and QSA/GSDP economic and population projections signal a sustainable path for future development. The scenario is based on the promotion of value-added industries, especially those derived from hydrocarbons whilst supporting economic diversification, innovation and entrepreneurship. Encouraging the service industry is a key priority.

5.1.3 In terms of contribution to GDP, the QSA/GSDP scenario forecasts growth in the hydrocarbon sector to stabilize. From 2015, GDP growth in trade, services and transport and manufacturing is predicted. The construction sector is predicted to continue to rise from current high levels, in the lead up to the 2022 FIFA World Cup Qatar™ (Refer to Figure 5.1).

5.1.4 As economic diversification materializes, a move towards high-technology, high value-added industries including information and communication technology, media, education, health and tourism is expected. Significant changes in the demographic and employment composition of the workforce will follow, which will lead to changes in demand for housing, community facilities and transportation services.

**Figure 5.1 GDP Growth by Sector (2010 – 2030)**




Source
*QSA/GSDP (2012)*

2 Second Human Development Report - Advancing Sustainable Development (2009)

5.1.5 Some of the key issues affecting economic prosperity in the country include:

- The QSA/GSDP scenario is highly reliant on rapid development of the manufacturing sector from 2017 to 2032: this will require continued attraction and retention of an international/expatriate skilled workforce (Refer to Table 5.1)
- Qatar's economic development needs to improve qualitatively through support for high tech business parks whilst fostering technological advancement and research and development (R&D)
- Competition for highly qualified entrepreneurs and knowledge workers is influenced by quality of life factors: providing an attractive living environment to secure their participation is thus essential
- The planning of the QP Industrial Cities and related utilities corridors has been largely carried out independent of the Government planning system
- The Doha Industrial Area consists of a mix of industrial and residential uses which is producing unsustainable living and working conditions and impacting the environment
- The level of planned shopping mall/retail space development far exceeds the overall forecast requirement driven by the rate of projected population growth
- Smaller settlements outside Doha and the Industrial Cities are suffering from declining employment opportunities and fragmented provision of community facilities
- In the north of the country which is largely rural and agricultural, the lack of an integrated Government policy on food security, sustainable water supply and environmental protection is creating pressures on the future of the agricultural industry.

**Table 5.1**
**Employment Forecast by Major Economic Sector, Qatar (2010 – 2032)**

| | Employment | | |
|---|---|---|---|
| **Major Economic Sector** | **2010** | **2017** | **2032[1]** |
| **Primary Sector (Oil, Gas, Agriculture, Mining, Fishing)** | 188,050 | 187,659 | 155,845 |
| **Building and Construction** | 506,296 | 699,429 | 250,054 |
| **Manufacturing** | 100,633 | 174,115 | 221,962 |
| **Tertiary Sector (Finance, Trade, Hotel, Tourism and Social Services)** | 559,891 | 827,711 | 1,149,610 |
| **Total** | 1,269,403 | 1,804,250 | 1,690,701 |

[1] Total employment at 2032 extrapolated from 2030 GSDP/QSA scenario (2012)

Sources
QSA/GSDPscenario (2012)

5.1.6 A number of objectives, policies and policy actions have been developed to address these issues and support the spatial development of Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

## 5.2 Support For The Industrial Sector

### QP Industrial Cities

5.2.1 The oil and gas (hydrocarbons) industry is a fundamental component of the national economy of Qatar, contributing over 60% of total GDP in 2008, with positive multiplier effects throughout the economy. The QNV2030 aims to leverage the wealth from hydrocarbons to diversify the economy; the priority is to move directly to high technology and high value-added industries.

5.2.2 Qatar Petroleum (QP) is responsible for developing the hydrocarbon sector and has established Industrial Cities at Ras Laffan, Mesaieed and Dukhan. To ensure the long term economic and social sustainability of the industrial cities, and attract and retain skilled workers and their families, a full range of employment opportunities and community facilities will need to be introduced, as well as a variety of responsive housing types.

### QP Industrial Cities

**The purpose of this policy is to sustain long term growth in and integration of QP Industrial Cities within the context of the QNDF**

**Policy EP1: QP Industrial Cities**

**Encourage sustainable long-term growth of, and integration within QP Industrial Cities, through an appropriate mix of land uses, transportation services and community facilities**

| Policy Actions | | |
|---|---|---|
| 1. Identify and enforce the designated buffer zones associated with QP Industrial City Concession Area growth boundaries to restrict incompatible land uses and safeguard strategic transportation access connections (road, rail and sea) | Short-Med | **QP**<br>**MME**<br>Ashghal |
| 2. In consultation with QP, prepare transition strategies for the future sustainable growth of QP Industrial Cities (Mesaieed, Ras Laffan and Dukhan) consistent with the QNDF and QP plans, commitments and investments | Short-Med | GCP<br>MoTC<br>Kahramaa<br>MoEI |
| 3. As part of the transition strategies, plan and manage the provision of sites for the co-location of community facilities and public transport services to serve the Industrial Cities' wider catchment in accordance with Schedule 2A, and changing demand over the plan period | Short-Med | MoI<br>PHCC<br>MoEC |
| 4. As part of the transition strategies, opportunities for the relocation of noxious industries from existing industrial areas, including Doha Industrial Area, will be explored and optimized | Short-Med | MoPH<br>MoEHE |

### Manufacturing and Value-Added Industries

5.2.3 Much of the leading research into R&D hubs (especially IT-based) suggests that lifestyle, the built working environment, telecommunication infrastructure and a vibrant city play a leading role in deciding where such hubs locate and thrive. Success of the manufacturing sector (including high technology activities such as electrical machinery and electronics) is dependent on creating an environment that is attractive to international talent and investors, and provides attractive regulatory, financial, economic and physical conditions.

5.2.4 Qatar already has some key ingredients for a successful manufacturing sector including energy, access to capital and labor, low taxes, improving port infrastructure, a committed truck route and handling facilities and a strategic location in the Gulf. It now needs to capitalize on these assets in its move to improve productivity and add value to its industrial base.

5.2.5 Qatar is progressing the transition to a knowledge-based economy through the creation of three Qatar Economic Zones (QEZ) located at the Doha Industrial Area/Small and Medium Enterprise zone (SMSIA), the future Airport City and Mesaieed (Refer to Figure 5.2).

5.2.6 Development constraints to successfully achieving this transition include lack of integration between industrial zones, and limited support for the development of small and medium enterprises (SME). In addition there has been a persistent undersupply of sites and facilities for SMEs inhibiting local economic development and restraining the incubation and establishment of knowledge based industries (Refer to Figure 5.3).

5.2.7 Improving the coordination and integration of industrial areas and economic zones, including infrastructure and transportation investments, and promoting economic clustering are key priorities. The QNDF's role is to provide the spatial development framework to support a value-added manufacturing sector.

### Manufacturing and Value Added Industries

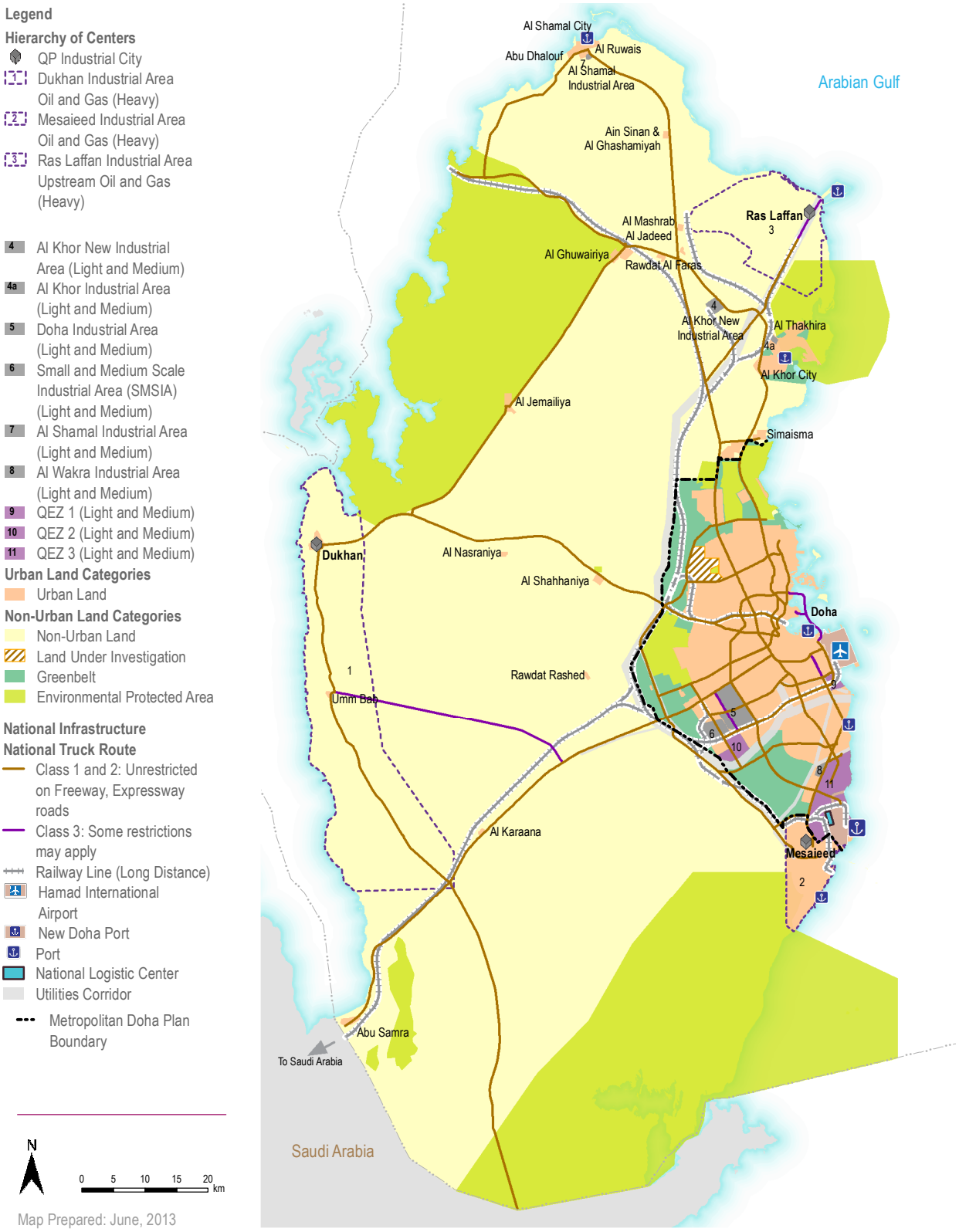
**The purpose of this policy is to encourage and sustain medium and light (non-hydrocarbon) industries to foster a diversified economy**

**Policy EP2: Industrial Areas**

**Encourage sustainable development of a range of medium and light industrial uses by introducing mixed-use activities**

| Policy Actions | | |
|---|---|---|
| 1. Within designated industrial areas, including Doha Industrial Area, opportunities for the relocation of noxious industries, to sites in Mesaieed Industrial City will be explored | Immediate | **MME**<br>Ashghal<br>GCP<br>Kahramaa<br>MoEC<br>MoEI<br>Mowasalat<br>PHCC<br>QF<br>MoPH<br>MoEHE |
| 2. Within designated industrial areas, including QEZ1 and QEZ2, applications for medium and light industries identified in Schedule 4A will need to demonstrate achievement of all of the following criteria:<br>a. adequate and appropriate accommodation and housing types<br>b. a range of integrated public spaces and community facilities in accordance with Schedule 6<br>c. access to good public transport systems and shaded pedestrian and cycle ways<br>d. integrated utility provision and management<br>e. compliance with environmental management standards | Immediate | |
| 3. Within designated industrial areas, applications for mixed-use development will be encouraged | Immediate | |
| 4. Outside designated industrial areas, new industrial development or the expansion of existing industrial uses (medium and light) will not be permitted unless it uses an existing industrial building or site and is served by existing and appropriate transport and utility infrastructure networks | Immediate | |

## Figure 5.2 National Industrial Development Commitments (2032)



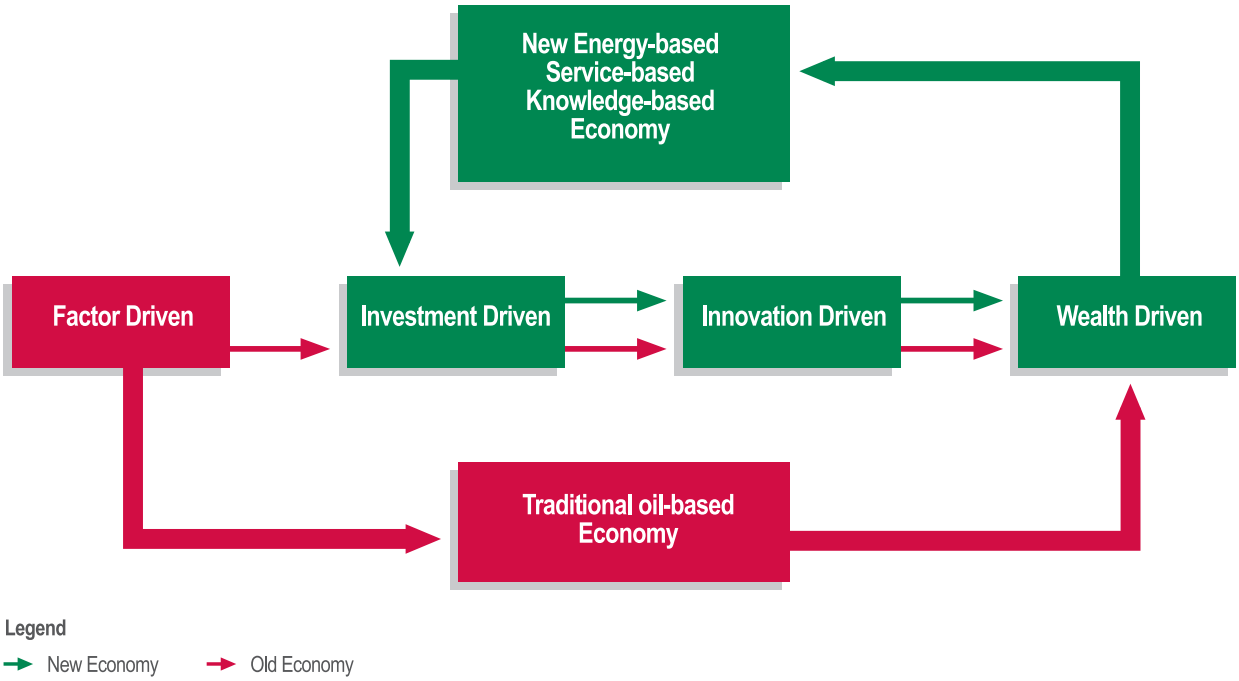
### Knowledge Clusters

5.2.8 Knowledge-based industries are also complementary to the objectives of the GSDP scenario as they are intensive in the use of technology and human capital, and they promote economic diversification. Priority knowledge-based industries are biotechnology, engineering, aerospace industries, environmental industries, information technology, health and education: Education City in Al Rayyan Municipality is a good example of a knowledge-based education cluster. These activities often start up as SMEs, which require support, either through direct links to research institutes, hospitals or industries, before accruing complementary and supporting services to form a knowledge cluster.

5.2.9 Creating an attractive and efficient urban environment for knowledge-based industry clustering is also imperative. This includes offering affordable sites and office space for start-up companies, technology incubators, research and development (R&D) facilities, and for manufacturing and assembly, and showrooms for industrial-related activities. Access to affordable land and buildings within existing industrial clusters for specialized activities is also a significant requirement.

5.2.10 The rapidly emerging 'green economy'–which includes renewable energy sources, organic produce and products, green buildings, alternative fuels, carbon reduction, amongst others - provides a timely opportunity for Qatar and its ambitions towards achieving the aims of the QNV2030. Current and proposed Government initiatives such as the Qatar National Food Security Program (QNFSP), Gulf Sustainability Assessment System (GSAS) for green buildings and the Clean Technology Investment Fund support the development of a low-carbon innovation center in Qatar and will create new labor market opportunities and increased investments within this sector.

**Figure 5.3 Knowledge-Based Industries**



### SMEs and Knowledge-Based Industries

**The purpose of this policy is to locate SMEs in mixed-use centers**

**Policy EP3: Small and Medium Enterprise Development**
**Encourage Small and Medium Enterprises to increase economic diversification**

| Policy Actions | | |
|---|---|---|
| 1. In consultation with Qatar Development Bank, prepare planning and development guidelines and identify sites to establish SME hubs | Immediate | **MME**<br>**QDB**<br>Ashghal<br>Kahramaa<br>MoEC<br>MoEI<br>QF<br>QGBC |
| 2. Applications for SMEs within SME hubs located on sites in mixed-use centers, or within the Small and Medium Enterprise Industrial Area (SMSIA) and existing mega projects will be permitted | Immediate | |
| 3. Within SMSIA, applications for mixed-use development will be encouraged | Immediate | |
| 4. Within SMSIA, applications for industries identified in Schedule 4B will not be permitted | Immediate | |

**The purpose of this policy is to locate knowledge-based industrial activities in mixed-use centers**

**Policy EP4: Knowledge-Based Industries**
**Encourage clustering of knowledge-based industries in mixed-use centers**

| Policy Actions | | |
|---|---|---|
| 1. Applications for knowledge-based industries identified in Schedule 5 located within mixed-use centers and mega projects will be permitted | Immediate | **MME**<br>Ashghal<br>MoTC<br>Kahramaa<br>MoEC<br>Ooredoo<br>QF<br>QU<br>MoEHE<br>Vodafone |
| 2. The provision of ICT infrastructure for knowledge-based industries located within mixed-use centers and mega projects will be prioritized through the establishment of an Infrastructure Planning Task Force | Immediate | |

## 5.3 Rural Industries

5.3.1 Qatar currently imports over 90% of its food requirements[3]. Agriculture, livestock and fisheries contribute less than 1% of GDP and 2% of employment[4], and are projected to decline over the plan period unless there is a positive policy intervention.

5.3.2 Farming activities are situated in central and northern Qatar and are privately operated. Agricultural production for local consumption is restricted due to scarcity of irrigation water, soil deficiency and adverse climatic conditions. Over the Northern Aquifer, farms continue to extract groundwater at a rate of four times the natural recharge rate, whilst inefficient irrigation practices contribute to the overuse of this natural resource (Refer to Box 7).

5.3.3 The fisheries sector has the potential to contribute more to the national economy given the country's expansive coastline. However production is limited due to a lack of basic facilities and support services provided in fishing ports at Doha, Al Ruwais, Al Khor and Al Wakra.

5.3.4 Fish habitat protection and conservation zones are required to ensure fish stocks continue to replenish naturally allowing for sustainable harvesting. In other parts of the world, aquaculture has proven to be an economical method for producing seafood. The establishment of such enterprises should be encouraged providing they are located in suitable areas that minimize or avoid impact on the environment.

5.3.5 The QNFSP proposes a change in direction and aims to redress the food deficit and promote efficiencies in production. The QNFSP is an important opportunity to achieve a productive utilization of rural land for food production.

Source: *MME*

**Box 7 Rural Industries and Groundwater Resources**

**Rural Industries and Groundwater Resources**

Over-exploitation of groundwater resources for farming in the proposed Northern Aquifer Protection Zone is a critical issue that cannot be addressed by planning policy alone. Complementary initiatives are necessary to promote sustainable farming practices, and require support from MME, Ashghal and the private sector. These include:

- Develop and expand modern irrigation technology to decrease groundwater usage
- Develop a more advanced waste water treatment system to support the use of TSE for production or for recharging groundwater aquifers
- Expand education programs on water conservation to on-site farm managers and workers
- Link Government support including agricultural subsidies, soft loans and tax benefits to farms that make significant improvements in water consumption efficiency.

The Qatar National Food Security Program (QNFSP) also recognizes this issue and aims to develop other sources of irrigation water including a desalination plant, and possibly TSE, to increase water supply for irrigation and reduce pressure on the Northern Aquifer.

3 Qatar National Food Security Conference (13th-14th January 2010)
4 GSDP (2012)

## Diverse Rural Economies

**The purpose of this policy is to promote rural industries contributing to a diversified economy**

**Policy EP5: Rural Industries including Farming, Fishing and Livestock Activities**

**Maintain existing and facilitate new rural industries supported by economic and social infrastructure to sustain and develop rural communities**

| Policy Actions | | |
|---|---|---|
| 1. Provide a range of housing, accommodation, community facilities and infrastructure within rural communities to promote the creation of complementary rural industries | Immediate | **MME**<br>**MoEC**<br>Ashghal<br>Kahramaa<br>MoEI<br>QTA |
| 2. Where available, use of TSE and other suitable sources of irrigation water in farming and livestock activities | Short-Med | |
| 3. Establish fish habitats to protect the sustainability of the fishing industry, as part of the Integrated Coastal Zone Management Plan | Short-Med | |
| 4. Applications for development at the fishing ports of Doha, Al Ruwais, Al Khor and Al Wakra which incorporate a mix of the following uses will be permitted:<br>a. Boat maintenance yards, supporting facilities and basic amenities for fishermen<br>b. Wholesale and retail fish markets including sea food hubs<br>c. Tourism, leisure and recreation facilities complementary to the fishing industry | Short-Med | |
| 5. Promote the creation of an aquaculture industry to help achieve food security and protect natural fish stocks | Immediate | |
| 6. Promote the creation of common facilities for fodder and livestock production, processing, storage and distribution to market | Immediate | |

Source: *MME*

Source: *MME*

## National Food Security

**The purpose of this policy is to safeguard national food security**

**Policy EP6: National Food Security**

**Identify and safeguard land and water resources required to achieve national food security**

| Policy Actions | | |
|---|---|---|
| 1. Support the Qatar National Food Security Program by identifying, mapping and protecting suitable arable lands and fishing grounds for farming, livestock, aquaculture, hydroponics and providing the required infrastructure | Immediate | **MME**<br>**MoEC**<br>Ashghal<br>Kahramaa<br>MoEI<br>QTA |
| 2. Preserve and utilise the Greenbelt around Metropolitan Doha and other key centers to help achieve the Qatar National Food Security Program objectives | Immediate | |

Source: *MME*

## 5.4 Retail and Office Development

5.4.1 Traditional retail shopping has been located at street and neighborhood level in Downtown Doha, including Grand Hamad Street, between A and B Ring Roads, and between C and D Ring Roads. Rapid economic and urban expansion, higher incomes and car ownership have led to the proliferation of standalone malls in out of center locations. This has led to a deterioration of the viability and vitality of traditional retailing downtown.

5.4.2 The distinctive high rise commercial office developments in West Bay have helped establish Qatar within the global economy. West Bay is characterized by a patchwork of vacant plots of land and iconic office towers where international and multinational companies and banks, five star hotels and Government Ministries have all been recently established. Rapid expansion of commercial office space has however created an oversupply with some empty towers across Doha's skyline.

5.4.3 Contrasting with the oversupply of high end commercial properties, there is a shortage of medium to low end commercial properties. These lower end properties are crucial in supporting new and innovative enterprizes as part of the emerging diversified economy.

5.4.4 In the retail sector, shopping patterns are changing due to the rise of malls and 'big-box' shopping centers retail in suburban locations. This trend has restricted accessibility for some community groups, many of whom continue to depend on more traditional strip and on-street retail. The ad hoc development of major retailing activities is generating further demand for car-based shopping trips, whilst continued expansion is pointing to oversupply.

5.4.5 To support the sustainability of pedestrian-accessible neighborhoods and provide vibrant centers for shopping, leisure and entertainment, there is an urgent need to promote mixed-use centers and re-establish on-street retailing at the heart of local communities.

Source: *MME*

**Retail and Office Development**

**The purpose of this policy is to sustain long term viability and vitality of centers by clustering commercial office and retail activities**

**Policy EP7: Retail and Commercial Office Development**

**Consolidate and expand retail and commercial office development in mixed-use centers**

| Policy Actions | | |
|---|---|---|
| 1. Establish Guidelines for the conduct of Social and Economic Impact Assessments (SEIA) incorporating Needs Assessments | Immediate | **MME**<br>Ashghal<br>Kahramaa<br>MoEC<br>QD<br>QF<br>MDP&S<br>QTA |
| 2. Within mixed-used centers identified in Schedule 1 applications for retail and commercial development and re-development will be permitted | Immediate | |
| 3. Applications for Major Development will not be permitted unless the development has been assessed in the context of its impact on neighboring center retail and office sites by way of an SEIA, and has been determined to have no significant adverse effects | Immediate | |
| 4. Establish a GIS-based data base for monitoring industrial, retail and commercial office development and update on an annual basis | Short-Med | |

Source: *MME*

## 5.5 Tourism

5.5.1 Qatar Tourism Authority (QTA) is responsible for developing the general policy for tourism and exhibitions in the country, as well as showcasing the tourist and historical landmarks of the State.

5.5.2 Well-established cultural and historical attractions in Downtown Doha include the Museum of Islamic Art, the Qatar Islamic Cultural Center, Souq Waqif, Gold Souq and related souqs. Outside Doha, business visitors and residents are also attracted to the Inland Sea, the Singing Sand-dunes and Al Zubarah Fort.

5.5.3 Qatar is well-positioned to serve the Meetings, Incentives, Conferences and Exhibitions (MICE) market. In addition to lengthening the average visitor stay of 1.5 nights, QTA's aim over the short term is to see a 30% increase in leisure trips to Qatar. In supporting this aim, the Authority is developing international tourism-related convention and conference facilities and complementary infrastructure. In addition to the existing Doha Exhibition Center, the new Doha Convention Center and Tower and the proposed Qatar National Convention Center will strengthen this aim.

5.5.4 Hotels in Qatar are predominately four or five star rated luxury properties, offering close to 7,000 rooms (as at 2009) with the majority located within Doha. New hotel projects with a total inventory of about 18,000 additional hotel rooms and serviced apartments will be completed in Qatar by 2017, rising to 29,000 rooms by 2032. This number of rooms would be sufficient to accommodate an estimated 3.8million visitors per year (assuming 70% occupancy).

5.5.5 Complementing QTA's MICE strategy, QNDF policies seek to sustain nature based eco-tourism and promote conservation of terrestrial, marine and coastal resources.

5.5.6 Qatar's national system of Environmental Protected Areas includes mangroves, salt marshes (sabkhas), coral reefs, sea grass beds, coastal islands, sand dunes, rock desert (Hamada), shallow valleys (wadis) and depressions that collect fine sand. The flora and fauna of Qatar are unique. Shahhaniya Wildlife Park, Ras Osheirij and Al Mas'habiya have bred thousands of gazelle and hundreds of the Arabian Oryx.

5.5.7 The potential for appropriate scale eco-tourism activities connected with these attractions remains to be examined through the Municipal Spatial Development Plan process. With the relatively short distances from the major centers of population, control of access and management of visitations will be prime concerns.

Source: *MME*

Source: *MME*

### Tourism-Related Activities

**The purpose of this policy is to promote niche tourism businesses based on national heritage, culture, environment and business-related activities to support a diversified economy**

**Policy EP8: Tourism Activities**

**Develop Qatar as a unique and competitive niche destination for business and high end leisure tourism**

| Policy Actions | | |
|---|---|---|
| 1. Develop a Tourism Master Plan and Strategy to identify target market segments, including MICE, cultural heritage, sport, education, eco-tourism, recreation, leisure and supporting infrastructure requirements related to tourism development | Short-Med | **MME**<br>**QTA**<br>MoEC<br>MoCS<br>Mowasalat<br>PEO<br>SCDL<br>QD<br>QMA |
| 2. Outside Environmental Protected Areas designated by MME, applications for development in the tourism sector including 4 and 5 star hotels and tourism resorts which accord with Guidelines established in the Tourism Master Plan will be permitted | Short-Med | |

## 5.6 Developer Contributions

5.6.1 Well-planned and coordinated development infrastructure is fundamental to the economic and social well-being of any community. Development infrastructure refers to land and/or works related to the provision of basic community infrastructure such as: water supply, sewerage reticulation, roads, bikeways, public transport facilities, public parks infrastructure, and affordable housing. All of these items have a great influence on the standard of living, mobility and lifestyle choices of a community.

5.6.2 To date, various Ministries and Agencies have borne the sole responsibility and cost of providing this infrastructure. As urbanization has proceeded, new communities have been established and older areas redeveloped. In many cases private developers have enjoyed the benefits of this development without contributing to the cost of building or upgrading much of the infrastructure required to support this growth.

5.6.3 Developer contributions are a fair and equitable way in which this essential infrastructure can be provided to support growth, on a user pays system. Because developers will reap the benefits of the development, they should also contribute to a fair proportion of the cost of the infrastructure required to service the expected population.

5.6.4 Developer contributions are easy to apply as they directly reflect the level of planned development activity and its value. The level of contribution will be set through the development assessment process. They generally involve a onetime charge applied to new development and can be applied as a cash charge or as physical infrastructure related to that charge. Developer contributions are also a useful mechanism to cater for unanticipated growth which results in a shortfall of facilities and services, thereby allowing the Government to provide the necessary infrastructure to cater for the demand.

**Developer Contributions**

**The purpose of this policy is to make more efficient use of public sector resources and investments**

**Policy EP9: Developer Contributions**

**Ensure developers contribute to the whole of project costs of new developments to increase supply and choice of housing and community facilities and services**

| Policy Actions | | |
|---|---|---|
| 1. Prepare and adopt the regulation for developers to contribute to cost sharing and/or gifting of land, for the provision and maintenance of facilities and services including (but not limited to): strategic infrastructure; off-site infrastructure; public transportation; the betterment of adjacent areas; the provision of low income or affordable housing; community facilities; landscaping; and public art | Short-Med | **MME**<br>Ashghal<br>Kahramaa<br>MEIA<br>MoF |
| 2. Enforce commitments to developer contributions through the planning and development assessment process | Short-Med | QMA<br>MoEHE |

# 6.0 Living in the Community



## 6.1 Context

6.1.1 The provision of a range of affordable housing, and community facilities (schools, health services and places for people to walk and enjoy) is critical to improving quality of life. The QNDF promotes policies which aim to progressively improve quality of life for citizens and to achieve the region's most livable urban environment.

6.1.2 The demand for housing in Qatar's urban areas has increased in recent years due to rapid population expansion and has placed a strain on the supply of housing. Major housing developments and mega projects (such as the Pearl, Lusail and Al Waab City) have contributed to a massive expansion of housing supply and increase in the urban footprint (Refer to Figure 6.1).

6.1.3 Land currently zoned for single family and multi-family residential use (developed and vacant) totals approximately 24,000ha or about 50% of the 2008 urbanized area of Metropolitan Doha. Approximately 7,500ha or 30% of this land is lying vacant. Coupled with inefficient distribution of roads, utility sites and public transport services, the urban area resembles a patchwork of development that lacks structure and integration.

6.1.4 Other demands such as the National Housing Program for Qataris have put a strain on the supply of suitable residential land. About 21,000ha of land is currently under study for potential supply of housing for Qatari households, 85% of which is located outside the Metropolitan Doha growth boundary. This increasingly separates Qatari families from urban centers and the community facilities they require, and contributes to increased urban sprawl.

6.1.5 Non-Qatari households are in need of affordable housing and require a diversity of housing options. The GSDP economic scenario will produce a significant shift in the household structure of workers and their families coming to Qatar, and has potential to exacerbate this problem. The introduction of mixed-use developments will help to address the issue of supply housing choice for Non Qataris.

6.1.6 Approximately 20% of the existing Metropolitan Doha residential housing stock has been identified as being of poor quality and in need of replacement. Many of these premises are being utilized by low income workers and are typically overcrowded. Significant redevelopment and regeneration potential exists, particularly in inner Doha areas, which can assist in increasing housing supply and providing opportunities for subsidized housing schemes, introduction of local services and facilities and creation of better living environments.

6.1.7 A summary of the key issues in the housing sector is as follows:

- Qataris prefer to live in low density villas on large plots in traditional neighborhoods, but due to rapid urbanization, sites for such developments are now only available in out of center and urban fringe locations
- The traditional way of life and cultural identity of Qatari neighborhoods and townships is increasingly under threat from rapid urbanization and population growth
- Urban sprawl requires expensive investments in highway and utilities connections, generates more car trips to work, shop and play, and increases Qatar's carbon footprint
- Mega project developments have tended to concentrate on higher income groups and have produced gated communities and compounds, which fragment the urban fabric
- For lower income non-Qataris there are limited housing options and an under-provision of affordable housing
- The mainly expatriate construction workforce is housed in temporary labor camps on site or in urban fringe locations which lack public transport services and local amenities
- Vacant lots, lack of quality public realm and haphazard distribution of community facilities combined with poor local connectivity are affecting the livability and enjoyment of Qatar's capital for residents and visitors alike

6.1.8 A number of objectives, policies and policy actions have been developed to address these issues and support the spatial development of Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

Source: *MP*

## Figure 6.1 Vacant Residential Land, Metropolitan Doha

**Legend**

**Urban Land Categories**
- Urban Land
- Vacant Residential Land [1]

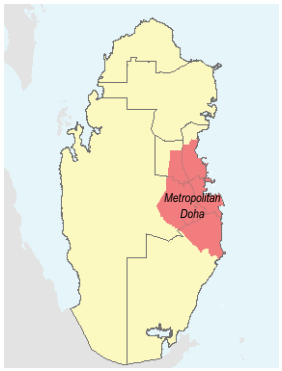
**Non-Urban Land**
- Land Under Investigation
- Greenbelt
- Environmental Protected Area

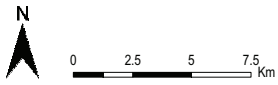
**Qatari Residential Land**
- Legally Adopted for Qatari Residential
- Under Study

- Metropolitan Doha Plan Boundary
- Municipality Boundary
- Mega Projects

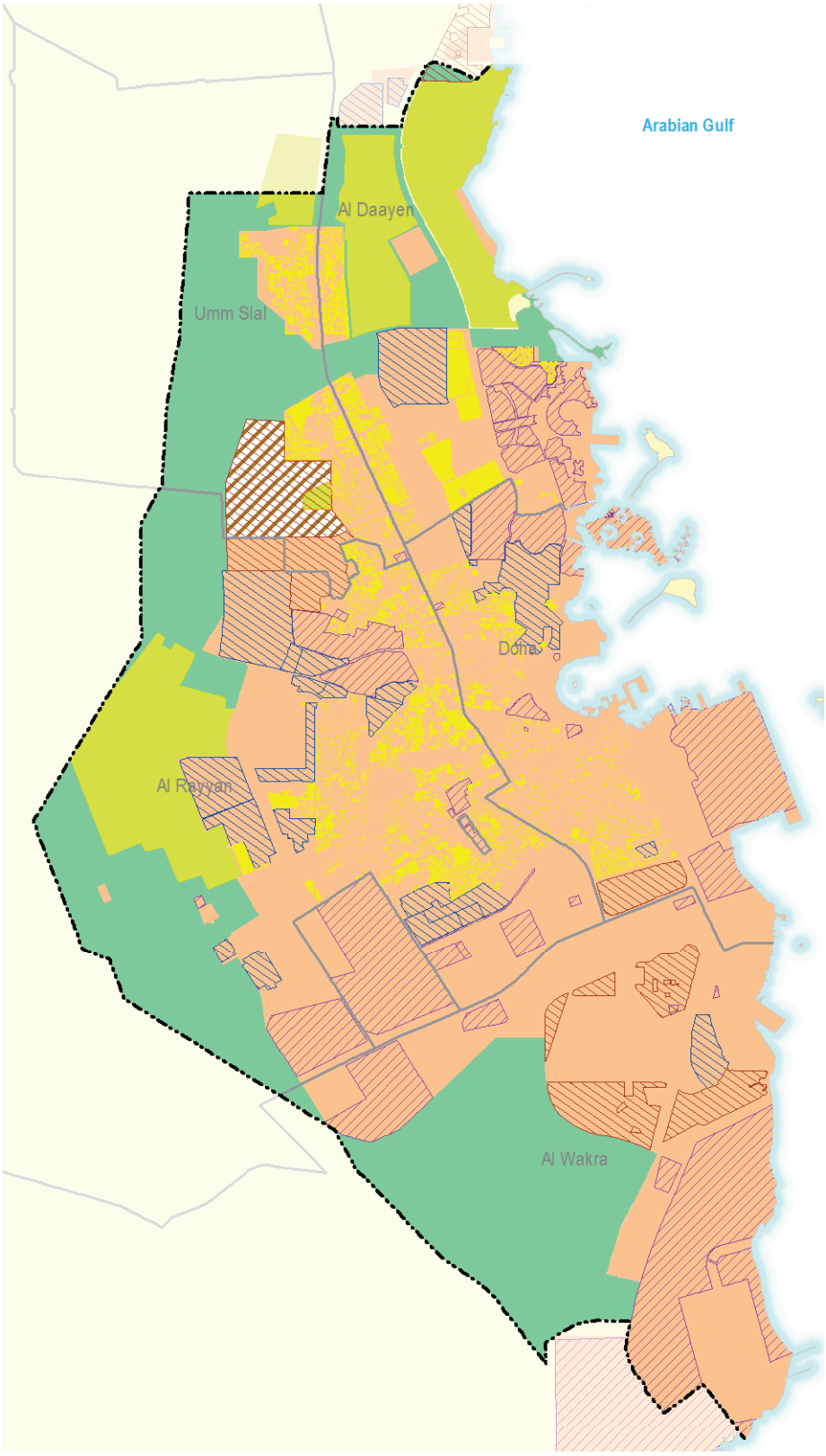
**Note:**

1. Vacant land based on 2007 Land Use Survey. Zoned for residential in Zoning Regulation/LIC, 2009




Map Prepared: June, 2013



## 6.2 Housing For Qataris

6.2.1 Under the Government's National Housing Program (NHP) male Qataris who marry are provided with free land plots once in their lifetime, to establish a family home. The current allocation is 625 sqm within Doha Municipality and 1,000 sqm elsewhere in Qatar. Assuming this program continues it is estimated that nationally 3,200ha of land is required for future Qatari homes over the plan period.

6.2.2 The supply of vacant Government land zoned for residential use within Doha Municipality (120ha) is seriously constrained. However, although there is sufficient land earmarked for Qatari housing up to 2032 in Metropolitan Doha as a whole, most of the new sites are located in generally un-serviced locations on the urban fringe, which exacerbates the urban sprawl problem (Refer to Figure 6.1).

6.2.3 Outside of the Metropolitan Doha limits, there are vast areas earmarked for housing and adequate land to supply about 68,000 housing units (each on 1,000 sqm plot). This land far exceeds the land required to supply about 3,000 housing units forecast for populations outside of Doha by 2032.

6.2.4 Under the Government's Public Housing Program (PHP) free housing is allocated to Qatari persons who are classified as widows, divorcees, low–income or those with special needs. It is estimated that by 2032 there will be an additional demand for 12,000 dwellings throughout Qatar to meet that program demand. The majority of this housing needs to be co-located with essential services, links to public transport and employment opportunities.

6.2.5 High levels of income and changing lifestyle preferences have increased demand from Qataris to purchase investment homes, build second homes and holiday homes. Up to 2032 it is estimated that there could be a demand for an additional 5,000 dwelling units for these purposes.

6.2.6 In order to move towards a more efficient and sustainable urban structure and to provide for future sources of Qatari housing supply in Metropolitan Doha, consideration should be given to reducing the size of plots in locations outside Doha Municipality. Opportunities to develop sites through Government acquisition and redevelopment of existing developed sites, urban regeneration schemes and cash in lieu of land should also be explored.

6.2.7 It is also prudent to review the current building design and community facilities guidelines aimed at creating attractive neighborhoods for Qataris. The review should include exploring a variety of housing typologies to achieve a more compact and sustainable urban form. Housing units within TOD centers should be designed in such a way that they would be attractive alternatives for some Qataris in the longer term.

## Land for Qatari Housing

**The purpose of this policy is to secure the provision of suitable sites for Qatari homes in accordance with the quality of life preferred by Qatari households**

**Policy LC1: Qatari Housing Land**

**Ensure that sufficient land is available to cater for future demand by Qatari households**

| Policy Actions | | |
|---|---|---|
| 1. In accordance with current Government policy prepare a phasing strategy which identifies and releases sustainable sites for the Qatari NHP based on achieving the following criteria:<br>a. located on vacant Government-owned land zoned for residential purposes;<br>b. provided with utilities, community facilities and public transportation services<br>c. designed in accordance with best practice planning principles and accords with National Planning Codes and Standards<br>Priority allocation of land should target Metropolitan Doha prior to 2017 and then Al Khor, Al Daayen, Al Shamal and Al Rayyan | Immediate | **MME**<br>**QD**<br>MP<br>Ashghal<br>MoTC<br>Kahramaa<br>MoADLSA<br>Mowasalat<br>QGBC<br>MDP&S<br>MoEHE |
| 2. Land earmarked for Qatari housing outside of Metropolitan Doha and other urban centers that is not required for development before 2032 will be:<br>a. deferred for future NHP land requirements beyond the current plan period; or<br>b. considered for re-allocation for other more appropriate uses (such as the National Food Security Program); or<br>c. retained in its current non-urban form pending future reviews of the QNDF and Municipality Spatial Development Plans | Immediate | |
| 3. Establish a GIS-based database for monitoring residential land supply and demand for Qatari housing, update and publish annually, for use by the development industry, Ministries and Agencies | Immediate | |
| 4. Review and revise the NHP including the policy of providing land to Qataris that already have land, and investigate new opportunities for allocating attractive dwellings within mega projects, apartments within mixed-use, mixed density centers, town houses in urban regeneration schemes, Government acquisition and redevelopment of existing developed sites and cash in lieu of land | Immediate | |
| 5. Create opportunities for Qataris to purchase investment and second homes through the introduction of innovative urban regeneration and urban redevelopment projects including transit-oriented development projects within Metropolitan Doha and other urban centers | Short-Med | |
| 6. In accordance with current Government policy prepare a phasing strategy which identifies and schedules the release of suitable sites and development projects to allocate public housing for the Qatari PHP within mixed-use, mixed density centers, close to public transport and community facilities | Med-Long | |

## 6.3 Housing for Non-Qataris

6.3.1 The GSDP scenario projects a major shift in the composition of the non-Qatari population as the economy diversifies away from hydrocarbon production and construction, towards knowledge-based industries and the service sector. This will lead to a change in the structure of the workforce from unskilled and semi-skilled workers towards more skilled workers, who will need more housing choices.

6.3.2 The supply of new dwelling units in mega projects located within Metropolitan Doha has tended to cater for higher income groups and has largely ignored lower income households, resulting in decreasing levels of affordability and availability for this segment of the market.

6.3.3 Sufficient urban land for the housing needs of non-Qataris outside the Metropolitan Doha growth boundary is available up to 2017.

6.3.4 The supply of new dwelling units in mega projects and in Al Wakra and Al Wukair, is estimated to provide 123,000 new units by 2017. The balance of demand will need to be met through the development of vacant non-Government land currently zoned for residential uses. Urban regeneration and redevelopment schemes including replacement of overcrowded and dilapidated stock will also add to the supply of housing.

6.3.5 As a result of shifts in the household structure foreseen in the GSDP scenario, a range of housing options will be needed. Mixed-use schemes, urban regeneration and intensification at TOD centers, with replacement of overcrowded and dilapidated stock will all contribute to providing more housing choice and improving the overall quality of life for non-Qataris.

## Housing for Non-Qataris

**The purpose of these policies is to efficiently manage the future supply of residential land and housing types**

### Policy LC2: Residential Land Supply

**Manage the supply of residential land to ensure the efficient delivery of future land with appropriate levels of infrastructure for development in balance with expected future demand**

| Policy Actions | | |
|---|---|---|
| 1. Establish a GIS-based data base for monitoring residential land supply and demand for non-Qatari housing, update and publish annually, for use by the development industry, Ministries and Agencies | Immediate | **MME**<br>**MoADLSA**<br>MDP&S<br>QD<br>QF<br>QP |
| 2. Applications for urban purposes (other than National Significant Projects), including residential, on non-urban classified land will not be permitted | Immediate | |

### Policy LC3: Mixed Density Housing Supply

**Achieve a range of mixed density housing in and around mixed-use centers and efficient public transport systems**

| Policy Actions | | |
|---|---|---|
| 1. Applications for mixed density residential development on sites within mixed-use centers and within urban renewal projects will be permitted | Immediate | **MME**<br>**MoADLSA**<br>MoEC<br>MoEI<br>Mowasalat<br>MP<br>PEO<br>QD<br>QP |
| 2. Establish an Urban Renewal Authority comprising public and private sector stakeholders to identify and develop urban renewal projects and identify opportunities for private sector participation in the delivery of projects for mixed density residential development in and around mixed-use centers | Short-Med | |
| 3. Establish Guidelines for the conduct of a Real Estate Impact Study and determine the types of development that will be required to undertake a Real Estate Impact Study as part of the development assessment process | Immediate | |

## 6.4 Housing Choice and Affordability

6.4.1 Within older downtown areas, deteriorated and poorly-serviced housing and apartments have been internally subdivided and rented out to low income expatriates, creating predominantly male, ethnic-based enclaves. There is also a proliferation of multi-families occupying single residential accommodation units, which offers one type of housing solution for this group. Many of these areas are being re-developed for up-market housing, further exacerbating the pressure for affordable housing. However, there appears few other affordable housing options for these types of household. A definition of affordable housing is provided in Box 8.

6.4.2 The lack of mixed-use development that would provide a range of housing choice, when combined with a lack of an affordable and comprehensive public transport system has resulted in social isolation and a relatively low quality of life for these section of the community. Proactive steps to encourage mixed-use community development including local employment opportunities, in order to achieve an adequate level of self containment need to be undertaken in these locations and in mega projects[5].

Source: *MME*

6.4.3 Redevelopment and regeneration of inner Doha residential areas, whilst maintaining as much as possible their existing character and function, will provide more housing options (including subsidized housing for low income groups), local services and more livable communities.

**Box 8 Affordable Housing**

**Affordable Housing**

Affordable housing has been defined in terms of the proportion of non-Qatari households who are likely to be unable to afford housing rents at market rates. Qatari households who fall into this category are catered for through the Public Housing Program.

The 2006/2007 Household Income and Expenditure Survey (HIES-QSA 2008) provides an indication of the number of low income households likely to be affected by issues of housing affordability. HIES highlighted that nearly two-thirds of the non-Qatari households[1] received less than the median household income of QR 15,000 per month, whilst one third earns less than QR 10,000 per month. Of this amount typically 40% or QR 4,000 would be spent on accommodation.

According to the Public Opinions Survey (2008), although the average rent of non-Qataris households was QR 4,200, the majority (40%) of the non-Qatari population were paying between QR 2,000-4,000 per month. Although the data are not strictly comparable and rental levels have declined since the time the HIES was carried out, due to the global economic recession, it is likely that a proportion of the lowest income households will still be unable to afford market rents for decent housing accommodation.

1 Excluding workers living in small and large gatherings

5 Mega projects are defined in terms of residential provision to incorporate not less than 150 dwelling units.

## Affordable Housing

**The purpose of this policy is to ensure the availability of decent affordable housing and the creation of strong, vibrant and livable communities with a broad mix of ages, genders, families and income levels**

**Policy LC4: Affordable Housing**

**Provide for the development of decent affordable housing on land classified as urban, that has safe and convenient access to community services and public transport**

| Policy Actions | | |
|---|---|---|
| 1. Prepare a National Housing Strategy containing policies and actions to integrate and coordinate a sustainable response to the provision of housing for all sectors of the market | Immediate | **MME**<br>**MoADLSA**<br>MP<br>Ashghal<br>Kahramaa<br>QD<br>QF<br>QGBC |
| 2. As part of the work of the proposed Urban Renewal Authority, establish mechanisms to ensure effective compliance, enforcement and monitoring of actions related to affordability | Immediate | |
| 3. These mechanisms will include establishing a GIS-based data base for monitoring affordable housing land supply and demand monitoring system as part of the overall residential land supply and demand monitoring system | Immediate | |
| 4. Applications for urban renewal projects in and around mixed-use centers, including mega projects, and major residential projects that have 30 or more housing units, or provide housing for 150 or more workers, or any other development that is expected to generate 100 or more vehicle trip ends (sum of departures and arrivals) during the AM or PM peak hour will be required to demonstrate a commitment to the provision of affordable housing, or equivalent developed contribution in order to be approved | Short-Med | |
| 5. Use a range of development approaches to achieve desired affordable housing and urban renewal outcomes, including (but not limited to): lot amalgamations, lot size variance, transfer of development rights, Public-Private Partnerships, and acquisitions | Immediate | |

## 6.5 Housing For Workers

6.5.1 A suitable housing location and conditions are significant issues for unskilled and low-skilled workers. There are two general groups, those workers that live on site (such as those in the construction or oil and gas sectors) and those that reside in urban housing stock or purpose-built accommodation (such as the manufacturing and services sectors). The latter can be broken down into large and small gatherings.

6.5.2 Currently there is a severe undersupply of housing and purpose-built accommodation for workers. The result is overcrowding of existing accommodation, poor living conditions, the proliferation of a large number of workers occupying one residential accommodation unit (large and small gatherings) and the marginalization of these workers by denying them access to some community facilities. In recognizing the issue, the Government has fast tracked and delivered developments such as Barwa Al Baraha Truck City and Karwa City, providing new housing supplies for these groups. The planned QEZ3 together with the extension to Truck City and the SMSIA zone, have the capacity to accommodate an approximate 126,000 workers.

6.5.3 Notwithstanding the current deficiencies of workers accommodation, the GSDP scenario anticipates a reduction in the number of temporary construction workers from 2017 onwards, when many of the mega projects will have been completed. The demand for worker accommodation after this period will generally reduce as a consequence. However, local requirements may still need to be managed where the construction of specific mega projects is ongoing.

### Housing for Workers

**The purpose of this policy is to improve quality of life for workers by providing higher standards of accommodation and local amenity**

**Policy LC5: Worker Accommodation**

**Improve the standard of living for workers through the establishment of high quality integrated housing schemes**

| Policy Actions | | |
|---|---|---|
| 1. Prepare a national Worker Accommodation Strategy containing policies, regulations and guidelines for the sustainable provision of worker accommodation that meets minimum standards for living conditions and access to community services, recreational facilities and retail opportunities. | Immediate | **MME**<br>**MoEC**<br>Ashghal<br>GORD<br>MP<br>MoI<br>MoADLSA<br>PHCC<br>SCDL<br>QD<br>QF<br>QGBC<br>QP<br>MoPH |
| 2. Undertake a review of all existing worker accommodation and where it is determined that the accommodation does not meet planning and design standards, enforce upgrades or require relocation to an approved site. Non-conforming accommodation should not be allowed to expand | Short-Med | |
| 3. Where project sites are in isolated locations, the location of temporary worker accommodation will be provided on or adjoining the project site and will be supplied with at least minimum standards of local amenity, recreational and support services in accordance with the worker accommodation planning and design standards | Short-Med | |
| 4. Undertake public-private-partnership structured projects for selected worker housing schemes | Short-Med | |

## 6.6 Community Facilities

6.6.1 The QNV2030 envisages Qatar to be an advanced country "capable of sustaining its own development and providing for a high standard of living for all of its people for generations to come". In the context of attracting and retaining high skilled expatriates, quality and cost-effective community facilities are particularly important.

6.6.2 Community facilities cover: education facilities, health facilities, religious facilities, emergency services, Government and social service facilities, and open space and recreation facilities. They include buildings, spaces and amenities that support communities, groups, families and individuals to meet their social needs, make the most of their potential and achieve community wellbeing.

6.6.3 Community spaces are used in a variety of ways. They can be for arts, cultural, educational, recreational and leisure activities and important gathering points in civil defence emergencies. Community spaces may support informal and formal activities and gatherings and help strengthen communities by bringing people together, contributing to individual wellbeing and a sense of community.

6.6.4 Some of the key issues affecting community facility provision include:

- Fragmented planning and provision of community facilities is disadvantaging those socio-economic groups that do not have access to cars or public transport
- Although mega development projects are increasing the supply of housing for some income groups, the supply of and linkages with community facilities is often uncoordinated
- The total number of private schools has decreased, even though there has been a rapid increase of students, due to the lack of suitable and affordable sites in built up areas that meet current school planning standards
- The health service structure is fragmented due to an absence of comprehensive planning and standards of provision, which has produced an inequitable distribution of facilities and services
- In central Doha, many mosque sites do not meet current capacity or accessibility standards, even though they have been designated as important historical buildings to be restored
- There are no comprehensive standards for the distribution of Government service facilities, such as post offices, Ministry of Information offices or youth centers, whilst the high cost of land and premises has forced some to move to the urban fringe
- Emergency service networks are often not considered in the planning stages of new developments resulting in either under-provision or absence of these essential services
- There is an uneven distribution of parks and recreation facilities in Qatar, whilst their provision is not always related to population catchment size, user group needs or existing urban structures.

Source: *MME*

6.6.5 A number of objectives, policies and policy actions have been developed to address these issues and support the spatial development of Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

## 6.7 Planning and Coordination of Community Facilities

6.7.1 To keep pace with rapid urbanization and demographic change, Government agencies responsible for community facilities have been expanding their services. However, a lack of coordination has resulted in a fragmented distribution of single use sites throughout the country and poor accessibility for community groups without access to motorized transport, to the services that are offered.

6.7.2 The GSDP scenario anticipates continued demographic change: non-Qatari family population is forecast to increase from 18% of the total in 2008 to 60% in 2032. In support of the aims of QNV2030, community facilities should be strategically planned and co-located to sustain community growth and attract and retain the anticipated skilled workforce.

6.7.3 Figures 6.2 and 6.3 provide an overview of the Planning Guidelines for the provision of Community Facilities and their distribution. It is important to note that some variations to this model may occur due to unique demographic conditions, differing requirements of community services providers, and the recent completion of numerous major community facilities.

### Community Facilities

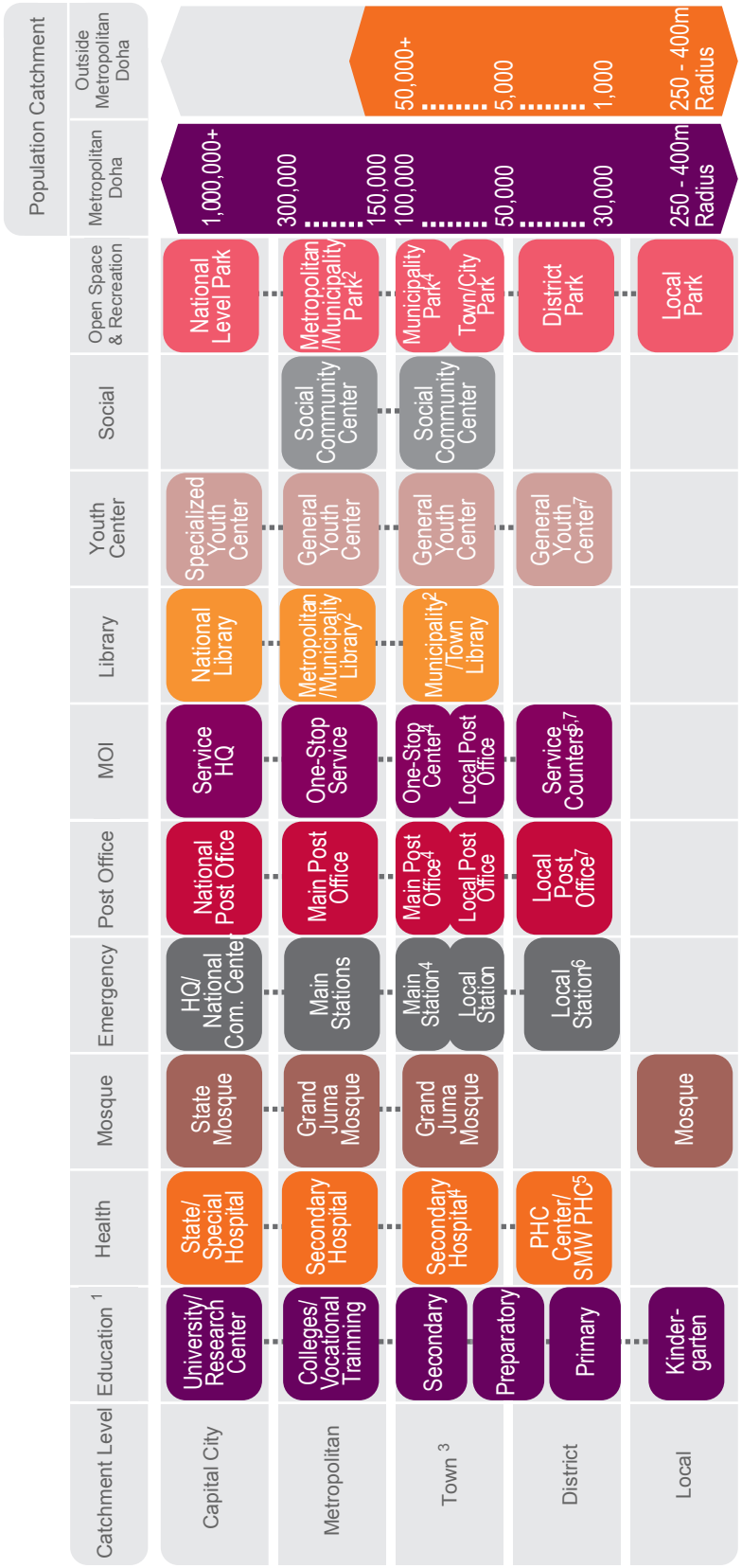
**The purpose of this policy is to coordinate and equitably distribute community facilities to improve accessibility and quality of life for residents**

**Policy LC6: Community Facilities**

**Co-locate community facilities and create opportunities for the shared use of these facilities to improve social cohesion, accessibility and choice for all**

| Policy Actions | | |
|---|---|---|
| 1. Create a Community Facilities Task Force to plan, coordinate and implement the provision, location and co-location of community facilities consistent with the mixed-use, mixed density approach articulated in the National Spatial Strategy and the projected needs of each community | Short-Med | **MME**<br>HMC<br>MEIA<br>MoCS<br>MoI<br>PHCC<br>SCDL<br>QGBC<br>QMA<br>MoPH<br>MoEHE |
| 2. As part of the work of the Task Force:<br>a. revise standards for the provision, location and co-location of community facilities<br>b. identify and provide sites for the co-location of community facilities in accordance with the newly revised standards<br>c. implement innovative ways to deliver such services at the local level | Short-Med | |

**Figure 6.2 Planning Guidelines for the Provision of Community Facilities**




**Notes**

1 Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities
2 Applies only to Metropolitan Centers
3 QP Industrial Cities are expected to provide community facilities required in the Town level
4 Applies only to Town Centers which have wider service coverage outside Metropolitan Doha
5 Ensure the coordination and equitable distribution of community facilities in line with the spatial strategy to enhance viability and public access
6 Requirements will be identified according to the catchment area based on the target response time
7 Applies only to District Centers outside Metropolitan Doha and Al Khor

## Figure 6.3 Planning Guidelines for the Distribution of Community Facilities

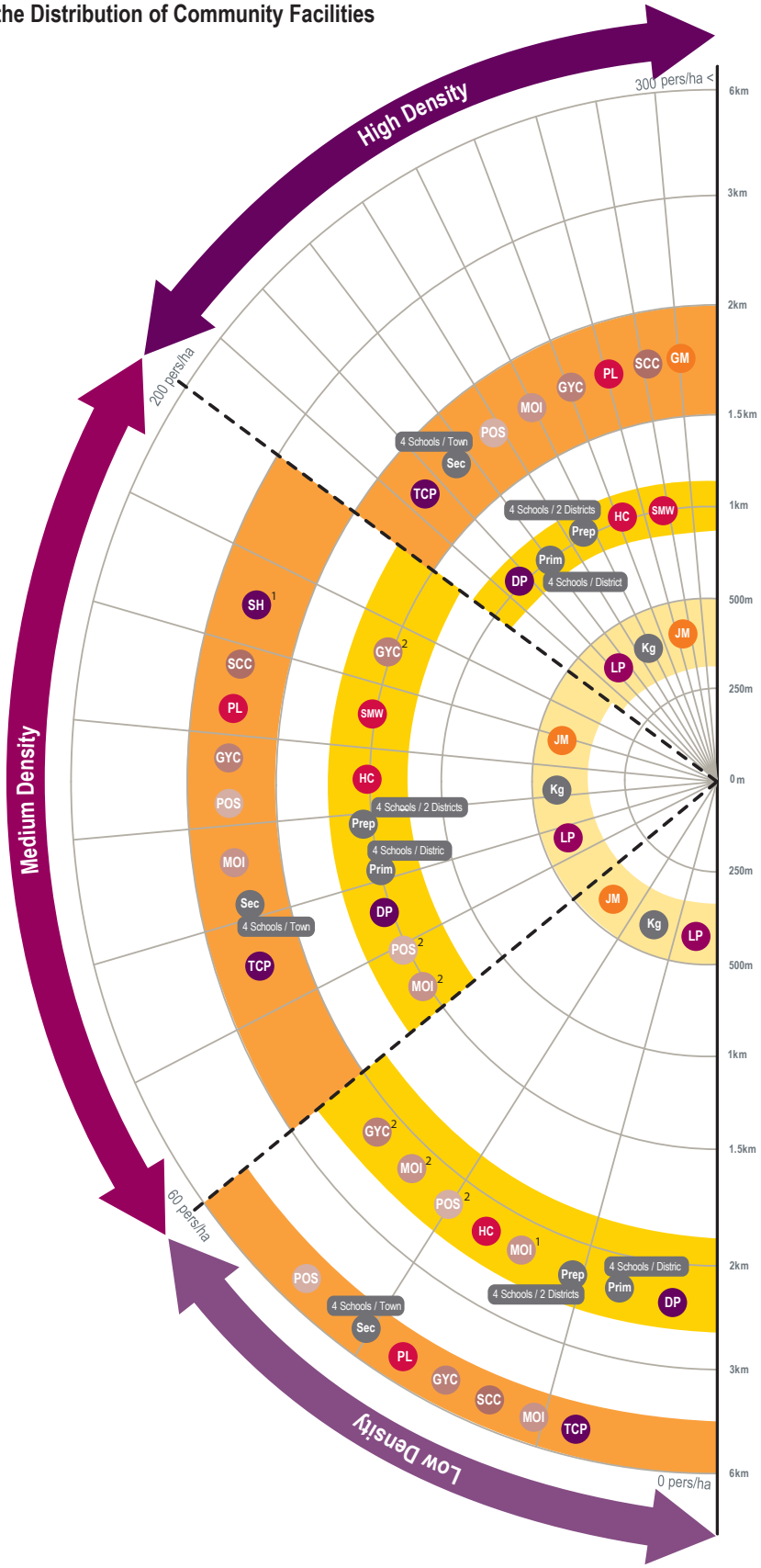
### Legend

- Town
- District
- Local Area
- POS Post Office
- MOI MOI Service Center
- GYC General Youth Center
- SCC Social Community Center
- PL Public Library (Municipality/Town Library)
- Sec Secondary School
- Prep Preparatory School
- Prim Primary School
- Kg Kindergarten
- SH Secondary Hospital
- HC PHC Center
- SMW SMW PHC Center
- GM Grand Juma Mosque
- M Mosque
- TCP Town/City Park
- DP District Park
- LP Local Park

### Notes

1 Applies only to Town Centers which have wider service coverage outside Metropolitan Doha

2 Applies only to District Centers outside Metropolitan Doha and Al Khor



## 6.8 Support for Education Sector Facilities

6.8.1 Education in Qatar is provided by Government Schools (public and independent schools) and private schools. With population growth, the number of students has been rapidly increasing with half of all students now enrolled in private schools.

6.8.2 Through the QNV2030, Qatar aims to build a modern, world-class education system. To achieve this vision, the Supreme Education Council's (SEC) Education Reform Project (ERP) "Education for a New Era" (2004) was introduced to expand the capacity of quality schools. Further demographic change will increase demand for new schools, and place pressures on school facilities, requiring improvements in accessibility and distribution.

6.8.3 Schools are essential community facilities necessary for the growth of strong residential communities. Therefore it is important that the timely and equitable distribution of schools throughout the community reflects the standards provided in Schedule 7.

### Education Facilities

**The purpose of these policies is to achieve a world-class education system by improving accessibility to a range of educational facilities consistent with the Government's Education Reform Project**

**Policy LC7: Location of Government and Private Schools**

**Co-locate sites for education facilities that are accessible via a range of transport modes**

| Policy Actions | | |
|---|---|---|
| 1. As part of the work of the Community Facilities Task Force revise the standards for the provision, the re-introduction of the school zoning system and the co-location of education facilities with complimentary community and recreational facilities which are accessible via a range of transport modes and that are located within the communities they serve | Short-Med | **MME**<br>**MoEHE**<br>Ashghal<br>GORD<br>MoEC<br>QGBC |
| 2. Identify and provide sites for education facilities in accordance with the newly revised standards and new school zoning system | Short-Med | |
| 3. Priority consideration should be given to sites adjoining existing facilities that provide opportunities to co-locate and share open space and sporting grounds | Short-Med | |
| 4. Redundant public school sites will be safeguarded for re-use by private schools or other community facilities | Immediate | |

**Policy LC8: Higher Education and Learning Institutions**

**Ensure higher education and learning institutions are accessible via a range of transport modes and include mixed-use to create more vibrant and livable communities**

| Policy Actions | | |
|---|---|---|
| 1. Identify, safeguard and provide sites for higher education and learning institutions in mixed-use centers, in the Capital City Precinct and Metropolitan Centers in accordance with Schedules 2A and 6A | Immediate | **MME**<br>**MoEHE**<br>**QF**<br>**QU**<br>QGBC<br>QMA |
| 2. Introduce mixed-use activities in higher education and learning institutions, research centers, universities, colleges and vocational training institutions | Short-Med | |

## 6.9 Support for Health Sector Facilities

6.9.1 Efficient and accessible health services are essential community facilities for improving quality of life standards. One of the four pillars of the QNV2030 supports the development of a world–class integrated health care system that meets the needs of existing and future generations.

6.9.2 To meet the rapid increase in demand, the Supreme Council for Health (SCH) has initiated new health care facility projects. Unfortunately, due to a lack of coordination, there has been a mismatch between demand and supply which has led to an uneven distribution of health care facilities. Further demographic changes forecasted will increase pressure on the provision of health services requiring improvements in facility planning and coordination.

### Health Facilities

**The purpose of this policy is to improve the coordination and provision of health service facilities (hospitals, Primary Health Care (PHC) Centers, Single Male Worker (SMW) hospitals)**

**Policy LC9: Location of Health Service Facilities**

**Co-locate sites for health service facilities in areas that are accessible via a range of transport modes**

| Policy Actions | | |
|---|---|---|
| 1. As part of the work of the Community Facilities Task Force establish standards for the provision, location and co-location of health facilities that are: accessible via a range of transport modes; located within the centres and communities they serve; and in accordance with Schedules 6 and 8 | Immediate | **MME**<br>**HMC**<br>**PHCC**<br>**MoPH**<br>QGBC |
| 2. PHC Centers, SMW/PHC centers and private health service facilities, other than hospitals, will be located in mixed-use centers | Immediate | |
| 3. Identify and provide sites for health facilities in accordance with the MoPH standards | Short-Med | |

## 6.10 Support for Religious Facilities

6.10.1 Qatar is an Islamic nation and nearly 80% of its resident population is Muslim. Mosques play an integral part in the daily life of Muslims and easy access to them is critical. With rapid increases of population and urban growth, the Ministry of Endowment and Islamic Affairs (MEIA) will need to increase provision and equitable distribution of these facilities to meet future demand (Refer to Figure 6.4).

Source: *MME*

**Religious Facilities**

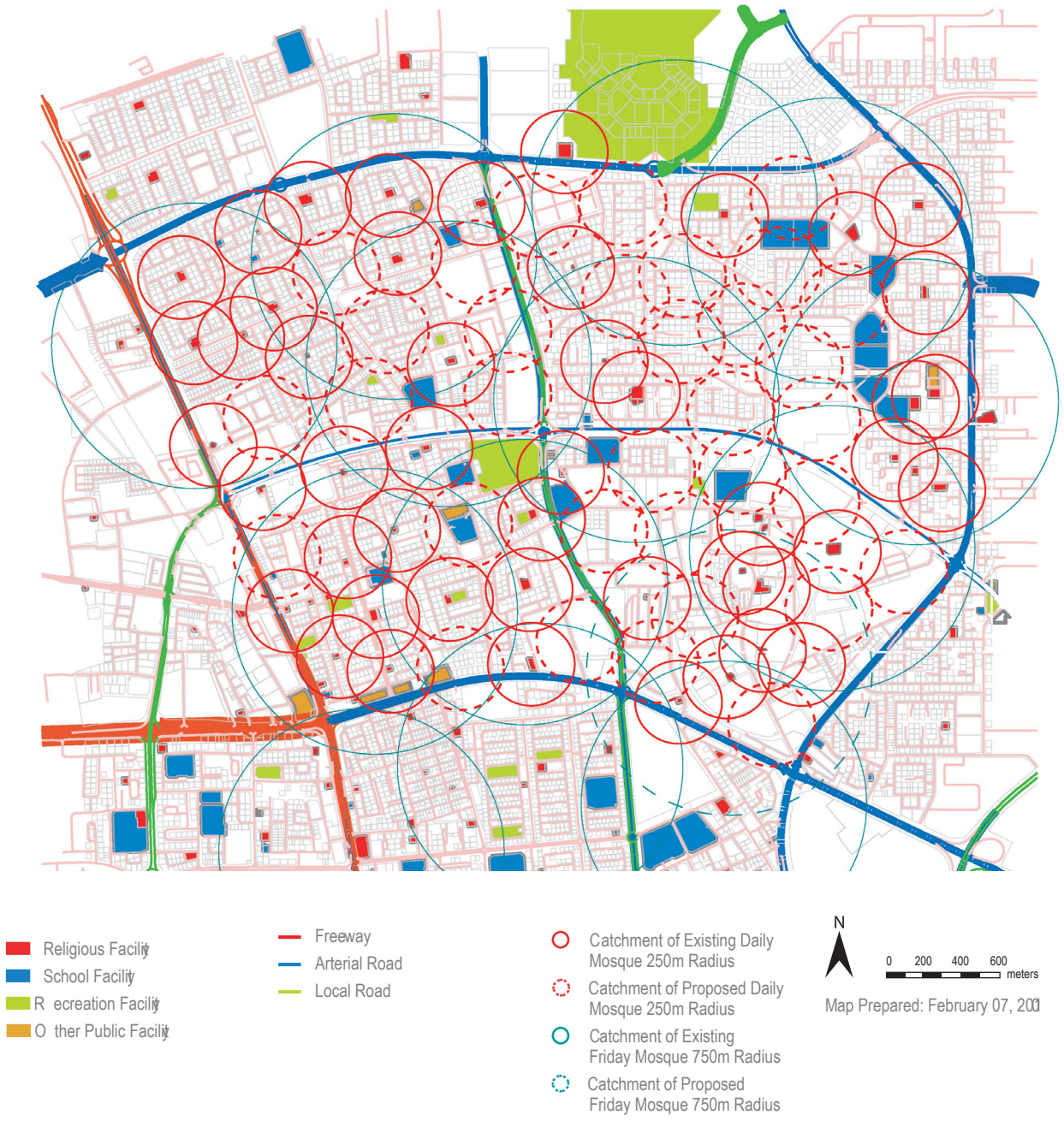
**The purpose of this policy is to enable equitable distribution of religious facilities to underpin the religious and social foundation of Qatar**

**Policy LC10: Location of Religious Facilities**

**Religious facilities will be located in highly accessible places to enhance quality of life and social cohesion**

| Policy Actions | | |
|---|---|---|
| 1. As part of the work of the Community Facilities Task Force, and in consultation with MEIA, revise the standards for the provision, location and co-location of religious facilities consistent with the National Spatial Strategy, Schedule 9 and projected needs for religious facilities | Immediate | **MME**<br>**MEIA**<br>Ashghal<br>QGBC<br>QMA<br>QTA |
| 2. Identify and provide sites, including sites in mixed-use centers, for religious facilities in accordance with the newly revised standards | Short-Med | |
| 3. Safeguard the setting of the State Mosque to protect key visual corridors and to prevent obtrusive adjoining development | Immediate | |
| 4. Identify and protect historic mosques registered as heritage buildings by Qatar Museum Authority (QMA) and MEIA | Immediate | |

**Figure 6.4 Catchment Area of Mosques**



## 6.11 Support for Emergency Response Service Facilities

6.11.1 The emergency response service is provided by the Ministry of Interior (MoI) (civil defense and police) and Hamad Medical Corporation (HMC) (ambulance services). It has been expanded to cover the rapid increase in population and urbanized areas of Doha and other major centers (including Al Rayyan and Al Khor).

6.11.2 Current response times have been adversely affected by the unequal distribution of facilities and by an absence of a clear street and property address system. Further demands are expected due to the projected increase in population and economic diversification program.

### Emergency Response Service Facilities

**The purpose of this policy is to improve emergency service response times throughout Qatar to enhance safety and security**

**Policy LC11: Integrated Emergency Response Service Facilities**

**Provide highly accessible sites and improved addressing system for integrated emergency response service facilities**

| Policy Actions | | |
|---|---|---|
| 1. As part of the work of the Community Facilities Task Force, and in consultation with MoI, establish standards for the provision, location and co-location of emergency response facilities and communications infrastructure that satisfies required response times and in accordance with guidelines in Schedules 6 and 10 | Short-Med | **MME**<br>**Ashghal**<br>**HMC**<br>**MoI**<br>PHCC<br>QGBC<br>QP<br>MoPH |
| 2. Identify and provide sites for emergency response facilities in accordance with the newly established standards | Short-Med | |
| 3. Establish a coherent property address and signage system to reduce response times | Immediate | |
| 4. Utilise intelligent transport systems and area traffic control to provide priority for emergency service vehicles | Short-Med | |
| 5. In consultation with relevant Ministries and Agencies, prepare a disaster mitigation and business continuity plan that includes the identification of locations for temporary living, evacuation routes and essential supply centers | Immediate | |

## 6.12 Support for Government and Social Facilities

6.12.1 Government and social facilities include Municipality Offices, post offices (Qatar General Postal Corporation), Ministry of Interior service centers (MoI), public libraries and youth centers (Ministry of Culture and Sports (MoCS)), and social community centers.

6.12.2 In response to the growth in population and diversified demand, agencies responsible for providing Government and social facilities are expanding their services. However planning and coordination of these services is fragmented leading to an uneven distribution of facilities which generates additional car trips and energy costs for some users.

### Government and Social Service Facilities

**The purpose of this policy is to provide an equitable level of accessibility to Government and social service facilities to aid community cohesion and improve livability**

**Policy LC12: Co-location of Government and Social Service Facilities**

**Achieve co-location of Government and social service facilities in mixed-use centers to improve accessibility and choice**

| Policy Actions | | |
|---|---|---|
| 1. As part of the work of the Community Facilities Task Force, and in consultation with relevant Ministries and Agencies, establish standards for the provision, location and co-location of Government and social service facilities at mixed-use centers in accordance with the National Spatial Strategy, guidelines in Schedules 6A and 11, and the projected needs of service providers | Immediate | **MME**<br>**MoI**<br>**QPSC**<br>MoCS<br>QGBC<br>QF<br>MoADLSA |
| 2. Identify and provide sites for the co-location of Government and social service facilities in accordance with the newly established standards | Short-Med | |

Source: *MME*

Source: *MME*

## 6.13 Provision of Open Space and Leisure Facilities

6.13.1 Open space, recreation and leisure activities are essential to the physical, social and spiritual well-being of the individual and community. However, the quality, quantity and distribution of current activities and facilities throughout Qatar is variable and in some location inadequate.

6.13.2 Equitably distributed and conveniently accessible landscaped open spaces, parks and other facilities that offer a wide range of leisure pursuits will be important factors in the fulfillment of the QNV2030 goal of "nature and man in harmony". They are also important elements in achieving good urban design outcomes and livability aspirations particularly within higher density residential communities.

Source: *MME*

**Open Space, Recreation and Leisure Facilities**

**The purpose of these policies is to establish a world class system of open space, recreational and leisure facilities**

**Policy LC13: Public Open Space and Recreational Facilities**

**Provide a range of high quality networked, open space and recreational facilities, linked through the promotion of active transport, which meet the lifestyle needs of all user groups while improving community health and well-being**

| Policy Actions | | |
|---|---|---|
| 1. As part of the work of the Community Facilities Task Force, and in consultation with relevant Ministries and Agencies, establish planning and design standards for the provision of open space and recreational facilities | Immediate | **MME**<br>**Ashghal**<br>**PEO** |
| 2. Prepare a comprehensive National Open Space Needs Assessment Study to identify and develop public open space and recreational facilities required to service existing and future populations | Short-Med | Kahramaa<br>MoADLSA<br>SCDL<br>QD |
| 3. Prepare a comprehensive Open Space and Recreation Facilities Strategy and supporting Master Plan (including an Implementation Strategy for land acquisitions and developer contributions), which consolidates, integrates and coordinates all open space and recreational facilities programs (such as the National Sports Venue Master Plan) and identifies the locations, types and implementation priorities for all public open space and recreation facilities in Qatar | Immediate | QF<br>QMA<br>MoCS<br>QTA |
| 4. Ensure existing and planned open space and recreational facilities maximize shared or multi-use opportunities with other users (schools, sporting clubs, community groups, etc) | Short-Med | |
| 5. Ensure all public open space and recreational facilities are accessible by pedestrian and cycle routes which are attractive safe and barrier free (pedestrian footpaths, sikkas, bikeways, etc) | Short-Med | |

Source: *MME*

Source: *MME*

**Policy LC14: Community Recreation and Leisure Opportunities**

**Enhance active and passive recreation and leisure facilities to improve quality of life of all residents**

| Policy Actions | | |
|---|---|---|
| 1. Introduce supporting uses including small scale retailing and local amenities into existing and future recreational facilities to sustain vitality and viability of existing communities. Existing recreational facilities include:<br>a. Camel Race Track (Al Shahhaniya)<br>b. Breeding Center of Arabian Oryx (Al Shahhaniya)<br>c. Proposed Botanic Garden (Al Shahhaniya) | Short-Med | **MME**<br>PEO<br>QMA<br>QTA |
| 2. Establish pedestrian walkways and bikeways along the foreshore of all coastal communities | Short-Med | |
| 3. Applications for coastal waterfront development will not be permitted unless they provide direct public access and facilities such as pedestrian walkways, bikeways, public art, and refreshment facilities and public conveniences along the foreshore through developer contributions and Government programs | Immediate | |

# 7.0 The Natural Environment



## 7.1 Context

7.1.1 The QNV2030 emphasizes the "management of the environment such that there is harmony between economic growth, social development and environmental protection." Encompassed in the QNDF vision is the promotion of environmental sustainability.

7.1.2 Qatar has a unique natural, terrestrial and coastal landscapes consisting of limestone cliffs, mesas, a tidal lagoon within an area of mobile sand dunes, wadis, sabkhas and gravel plains. The sand dunes of Khor Al Adaid, the sculptural outcrops of Bir Zekreet, the circular depressed Rodah basins, and Karst caves are distinct features in a predominantly stone-covered barren Hamada desert. The characteristics of Qatar's coastal ecosystem includes corals, sea grass and mangrove.

7.1.3 Qatar has nearly one thousand terrestrial flora and fauna species. Biodiversity inventory suggests almost 78% of these species are rare. In particular, the Arabian Oryx and a number of bird species are identified as threatened and/or vulnerable. Environmental factors such as high temperature, strong winds, low rainfall and low nutrient availability, make the recovery of the terrestrial ecosystem very slow.

7.1.4 Qatar's geomorphology can be summarized as follows:

- Soil: In general soil is characterized as water deficient and containing poor concentration of organic matter. This places limits on agricultural usage to only 5% of the total land area of Qatar;
- Geology: Qatar is mainly a flat limestone peninsula with an abundance of hydrocarbon resources (including its territorial waters); and
- Ground water: Significant concentration of poor quality groundwater is also observed in the shallow groundwater reserves. Management and disposal of this groundwater has also proven to be a significant challenge for construction sites.

7.1.5 Desert corridors are significant, open space passages linking desert areas with the sea. These corridors are used to support the presence and movement of flora and fauna, and will need protection and conservation from rapid urbanization.

7.1.6 Unprecedented development and expansion activities have resulted in very poor air quality and excessive demand on water usage. Kharamaa estimates that 99% of the potable water is being supplied from desalination, which also has the potential to cause considerable environmental impact.

Source: *MME*

7.1.7 While Qatar has become rapidly urbanized , Qataris have retained a strong cultural connection with the natural environment. The balance between managing existing and future urban and industrial development and accommodating enjoyment of the natural environment is a key challenge.

7.1.8 Through Emiri Decrees, approximately 30% of the total land of Qatar has been designated for environmental conservation and protection. Box 9 provides details of these Environmental Protected Areas; their locations are illustrated in Figure 7.1.

7.1.9 Protecting and conserving the environment is integral to the strategic planning objectives contained in the QNDF. Environmental management, protection and conservation functions are largely within the domain of the Ministry of Municipality and Environment, and MME will also have a key role as the planning authority in achieving sustainable development outcomes through the adoption and implementation of appropriate policies and regulations.

7.1.10 Some of the key issues facing the environmental sector include:

- The rapid increase in urbanization, particularly in and around Doha has resulted in increasing demand for energy, transportation and water, which is causing a significant increase in $CO_2$ gas emissions (Refer to Table 7.1) and declines in air and water quality
- The demand for industrial and housing development has resulted in the excessive quarrying of construction materials, a significant increase in the generation of dust and solid waste and dumping in Abu Nakhla lagoon
- The quality of coastal waters is deteriorating due to major coastal developments both from land reclamation and dredging, resulting in loss of biodiversity (terrestrial and marine, including prime fish-breeding habitats)
- Inland, which is largely rural and agricultural, the lack of an integrated Government policy on food security, sustainable water supply and environmental protection is creating pressures on the future of the agricultural industry and the country's natural environmental assets
- The long term effects of climate change, rising sea levels, sand storms and desertification will have long term impacts on Qatar and its regional neighbors
- Although Environmental Impact Assessments (EIA) and Strategic Environmental Assessments (SEA) are supported by regulations, the fast rate of urban and industrial development is increasing pressures for effective environmental management plans and systems, to conserve the nation's natural assets

7.1.11 A number of objectives, policies and policy actions have been developed to address these issues and support the spatial development of Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

Source: *MME*

**Table 7.1**
**Regional and International Carbon Dioxide Emission (2009)**

| | Per Capita $CO_2$ Emission (metric tonnes per year) | World Rank |
|---|---|---|
| **Country** | **2009** | |
| Qatar | 44.0 | 1 |
| Kuwait | 30.3 | 3 |
| UAE | 22.6 | 5 |
| Bahrain | 20.7 | 7 |
| United States | 17.3 | 10 |
| Saudi Arabia | 16.1 | 11 |
| Singapore | 6.4 | 53 |

Sources
*2009 $CO_2$ emissions (metric tons per capita)*
*World Bank (http://data.worldbank.org/indicator/EN.ATM.CO2E.PC*

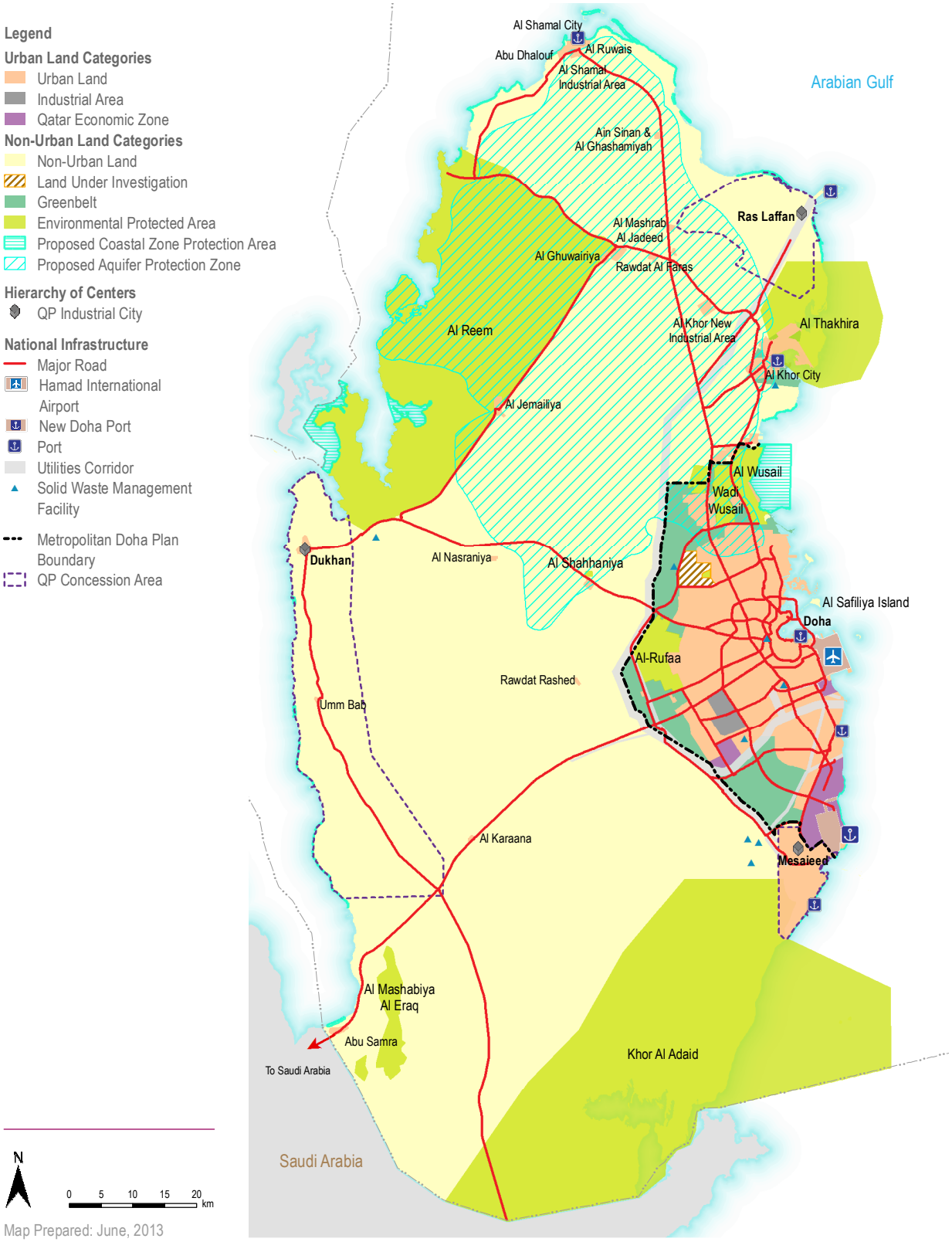
## Box 9 Designated Environmental Protected Areas (2013)

**Environmental Protected Areas**

1. **Al Reem**
   (1,154 sq km) Decree No.7/2005
   Designated as a Man and Biosphere Reserve by UNESCO
   A large region in the northwest of Qatar (Al-Zubara archeological site and Al Ishiriq wildlife breeding center), containing limestone cliffs, mesas, wadis, sabkhas, gravel plains and mud flats and shallow sea water rich in sea grass beds. Ostrich and Sand Gazelle have been reintroduced. Fauna include Hawksbill and Green Turtles, Dugong, Spiny-tailed lizard, Ethiopian Hedgehog, Red Fox and a large number of birds.
2. **Al Thakhira Reserve**
   (294 sq km, plus marine area) Decree No.6/2006
   This reserve is located on the east coast and contains the largest mangrove wetlands in Qatar. It includes mudflats, saltmarsh, sabkhas, coral reefs, sea grass beds. Fauna includes over 130 species of birds, Hawksbill Turtle and Spiny-tailed Lizard.
3. **Al Wusail**
   (35 sq km) Decree No.8/2005
   This reserve has a rich ecosystem including a large number of migrating birds such as Phoenicopteridae (flamingoes). This fenced reserve, located on the east coast includes gravel plains, sabkhas and coastal system. Fauna includes Spiny-tailed Lizard, Red Fox and a large number of birds, including long-distance migrants. The reintroduction of Arabian Oryx and Sand Gazelle is planned.
4. **Khor Al Adaid**
   (1,833 sq km) Decree No.1/2007
   This reserve is located 80km south of Doha. Known as the Inland Sea, it contains a unique tidal lagoon within an area of mobile sand dunes, rohdas, wadis, mesas and sabkhas. Ethiopian Hedgehog, Red Fox, Sand Gazelle (natural and reintroduced) and Arabian Hare are present. Khor Al Odaid is a prime tourist asset, popular for camping. It has also been nominated as a UNESCO World Heritage Site.
5. **Al Eraiq**
   (55 sq km) Decree No.1/2006
   Located in the southwest corner of Qatar. Gravel plain, sand sheets, wadis and mesa can be found here. There are also reintroduced Sand Gazelle, Arabian Oryx, Arabian Hare and a large number of birds.
6. **Al Shahhaniya**
   (1 sq km) Declared a Protected Area in 1979
   Located in central Qatar directly west of Al Rayyan, it is a fenced breeding facility for Arabian Oryx and Sand gazelle. The visitor center is a public attraction.
7. **Al Wusail**
   (35 sq km) 2010
8. **Al Rafa**
   (53 sq km) 2010
   Located in the Al Raayan Municipality and against the western edge of Metropolitan Doha.
9. **New Al Mashabiya**
   (5 sq km) 2013
   Located in the southwest of Qatar, approximately 120km from Doha. The reserve was established with the aim of resettling the Arabian Oryx and Reem Gazelle in their original environment. There is a fenced breeding facility for the native Sand Gazelle. Arabian Hare, Arabian Oryx, ostrich and birds are also present.
10. **Sunai**
    (4 sq km) 2013
    Located to the north of Umm Slal Ali and on the western side of the Al Shamal Highway.
11. **Umm Qarn**
    (25 sq km) 2013
    Located to the east of Umm Slal Mohammed and adjoining the western and northern boundaries of the Lusail International Raceway.
12. **Wadi Sultan**
    (1 sq km) 2013
    Located to the south of Umm Slal Mohammed and on the eastern edge of the urban fringe of Metropolitan Doha.

Source
*2013 General Directorate for Natural Reserves, Private Engineering Office.*

## Figure 7.1 National Environment (2032)



## 7.2 Protecting and Enhancing the Natural Environment

7.2.1 The overall aim of the QNDF is to ensure that Qatar develops and grows in a way in which respects the environment, the use of natural resources, past history and cultural values and the manner in which human and economic activity is integrated with natural processes. In addition to the immediate impacts of development, decision-makers need to consider the cumulative long-term impacts of development on existing and future generations.

7.2.2 The identification and implementation of sustainability principles to development activities at the planning, design and construction stages will minimize potential impacts on the environment and ensure benefits to society and the economy for current and future generations.

7.2.3 Achieving sustainable development necessitates a change in mind-set in consumption and production patterns. Pending the implementation of these changes, a precautionary approach is advocated in the planning, assessment and construction of development activities. The precautionary approach (Refer to Box 10) involves avoiding significant adverse environmental impacts, despite the lack of scientific certainty.

**Sustainability**

**The purpose of this policy is to mitigate the effects of human activity to promote and protect the natural environment and resources for the benefit of current and future generations**

**Policy ENV1: Sustainable Planning and Development**

**Use the precautionary approach in the planning, assessing, construction, monitoring and on-going enforcement of development and infrastructure to ensure impacts on the natural environment are minimized**

| Policy Actions | | |
|---|---|---|
| 1. In the absence of a defined sustainability assessment tool, a precautionary approach[1] will be used in consultation with relevant stakeholders to achieve sustainable development outcomes to prevent the risk of environmental degradation. | Short-Med | **MME**<br>Ashghal<br>Barwa<br>GORD<br>Kahramaa<br>MoEC<br>MoEI<br>QD<br>QF<br>QGBC<br>QMA<br>QP<br>QRail<br>MDP&S |
| 2. Progressively develop and implement a sustainability assessment tool to support the EIA and SEA processes for the planning, design and assessment of projects. This tool will include the preparation and implementation of Guidelines (objectives, criteria, acceptable outcomes, best practice guidelines, etc.) to monitor and report on the following impacts of change:<br>a. Water and energy usage<br>b. Greenhouse gas emissions<br>c. Air, water and noise pollution<br>d. Urban development and transport impacts<br>e. Biodiversity and habitat conservation<br>f. Climate hazards risk, coastal erosion, sea level rise, and storm events<br>g. Scenic and landscape amenity<br>h. Open space and recreational amenities<br>i. Cultural and historical values and amenities | Short-Med | |

[1] Precautionary Approach - Rio Declaration (1992): Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation

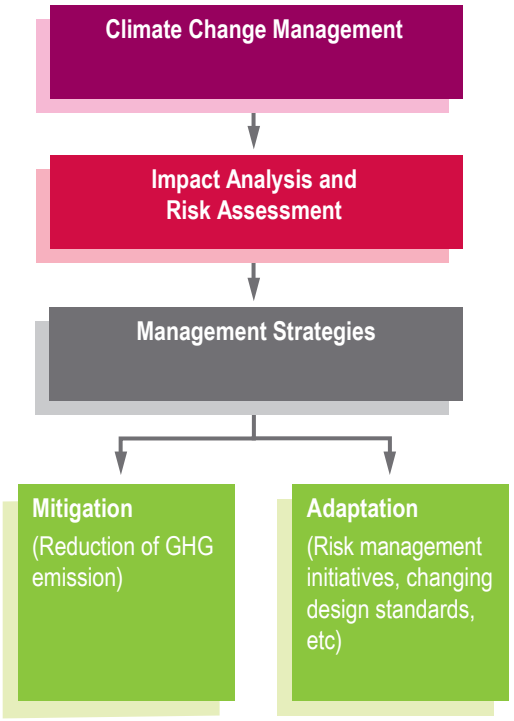
## 7.3 Climate Change

7.3.1 Climate change poses a significant risk to Gulf countries including Qatar. Qatar needs to develop effective strategies and actions to mitigate the risks from climate change. Prior to developing any strategy a detailed risk evaluation needs to be undertaken.

7.3.2 Reducing greenhouse gas emissions alone will not eliminate the risk altogether. Adapting to climate change through risk management measures (such as changing building design standards, raising community awareness, enforcing implementation of disaster management plans and business continuity plans) will need to be integrated within a comprehensive strategy to deal with the threat posed by climate change (Refer to Figure 7.2).

7.3.3 There are a number of utilities infrastructure that are located in close proximity to the coastal environment. Existing and future utilities infrastructure will need to be able to cope with the effects of climate change through rising sea levels and coastal flooding. It will be necessary to identify utilities infrastructure that is susceptible to the impacts of climate change, including sea level rise. Adaptation measures may be necessary for existing and future utilities infrastructure to reduce their vulnerability or strengthening their resilience to the impacts of climate change.

**Figure 7.2 Climate Change Management**




**Box 10 Precautionary Approach**

| Precautionary Approach |
| --- |
| In order to protect the environment, the precautionary approach shall be widely applied by agencies/ the proponent of a proposed activity according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. It implies - a willingness to take action in advance of scientific proof [or] evidence of the need for the proposed action on the grounds that further delay will prove ultimately most costly to society and nature, and, in the longer term, selfish and unfair to future generations. |

### Climate Change Management

**The purpose of this policy is to accurately assess the risk posed by climate change and to establish a strategy to minimize the risk to life, economic activities, infrastructure and the natural environment.**

**Policy ENV2: Climate Change Management**

**Safeguard humanlife, life, public health, culture, heritage, infrastructure, development, economic activities and the natural environment of Qatar from the potential impacts of climate change in the Gulf region**

| Policy Actions | | |
|---|---|---|
| 1. Using locally relevant data, undertake a comprehensive assessment of risk posed by climate change on:<br>a. Coastal flooding due to potential sea level rise (property damage, risk to human life, etc)<br>b. Infrastructure<br>c. Business and economic activities<br>d. Development<br>e. Natural environment<br>f. Water security | Short-Med | **MME**<br>Ashghal<br>Barwa<br>CAA<br>GORD<br>MDP&S<br>Kahramaa<br>MoEC<br>QD<br>QF<br>QGBC<br>QP<br>QRail |
| 2. Based on the evaluated risk, develop a set of adaptation strategies to deal with the existing and future risks that are irreversible. Measures such as adoption of internationally accepted climate change sensitive land use and infrastructure development standards, raising community awareness, development and implementation of disaster management and business continuity plans, etc. | Short-Med | |
| 3. Develop a national GHG emission reporting system in order to monitor Qatar's emissions within the planning horizon. All development and construction activities will need to report on their design and operational emissions | Short-Med | |
| 4. As a mitigation measure prepare and implement a strategy on reducing GHG emissions from land use changes, infrastructure development, utilities and transport networks (and services) and mega projects, using appropriate targets and indicators<br>(Note: The strategy should include compensatory offset mechanisms in the short-term and trading schemes in the long-term) | Short-Med | |

## 7.4 Natural Environment Management

### National Environment Management Plan

7.4.1 A sound environmental management framework is essential for building a modern state, as well as laying the foundation for a sustainable environment. Qatar needs to develop integrated sustainable development indicators to provide reliable information for evidence-based decision-making.

7.4.2 Environmental management in Qatar can be traced back to the establishment in 1981 of the Permanent Environment Protection Committee. Since that time there has been a steady evolution in the institutions handling environmental management, along with several legislative decrees on environmental protection, including Law No.30/2002 on EIA and SEA.

7.4.3 Constraints on institutional and human resource capacity, as well as gaps in related data and research, have restricted the effectiveness of these institutions and decrees. Enforcement of regulatory controls has been unable to keep pace with Qatar's rapid development.

### Environmental Management

**The purpose of this policy is to identify and protect environmentally sensitive areas**

**Policy ENV3: National Environment Management Plan**

**Identify, protect and manage environmentally sensitive areas to conserve and enhance the natural environment for current and future generations**

| Policy Actions | | |
|---|---|---|
| 1. Prepare a National Environment Management Plan (NEMP) containing policies and actions to promote and ensure the sustainable use and stewardship of terrestrial, coastal and aquatic environmentally sensitive areas and habitats, including existing Environmental Protected Areas (Refer to Box 11) | Immediate | **MME**<br>**PEO**<br>Ashghal<br>Kahramaa<br>MoEI<br>QMA<br>QP<br>QTA |
| 2. As part of the NEMP consideration will be given to including the following environmentally sensitive areas:<br>a. the seaward extensions of the Al Reem Protected Area and Al Wusail Protected Area to include the adjacent coastal areas to create a cohesive natural unit, and to provide additional protection to Dugong which are categorized as a threatened species on the IUCN Red List<br>b. the Jaow Al Hamar area, in the south of the country, and the Jabel Al-Jassasiya area in the north, to provide protection for fossils and rock carvings respectively | Immediate | |
| 3. Develop National Marine Spatial Plan which include interlinked system of Plans, Maps, Policies and Regulations, that brings together multiple users of the ocean to ensure sustainable development of Marine Environment | Immediate | |

## Box 11 The National Environment Management Plan

**The National Environment Management Plan**

The National Environment Management Plan (NEMP) will contain specific policies and management actions to protect, rehabilitate and enhance terrestrial, coastal and aquatic environmental resources and amenities. The NEMP should cover:

- Identification of issues and needs
- Development of protocols and procedures for gathering and monitoring of relevant data
- Setting of clear objectives
- Review of the Environmental Protected Area boundaries
- Preparation of zoning plans for each Protected Area to promote effective management and implementation of area specific actions
- Development of specific actions and benchmarking the actions
- Actions to include establishment and monitoring of environmental parameters by regulatory authorities on:
  a. gas emissions and odour
  b. air quality
  c. water quality including drainage, groundwater and coastal
  d. noise levels
  e. soil contamination
- The development of strategies to protect natural habitats that provide for protected species
- The system will include appropriate benchmarks and award schemes for environmental excellence
- Reviewing of the adequacy of Law No 19/2004 in promoting and enforcing appropriate development controls in the Protected Areas
- Identification of international collaboration opportunities (and needs) and development of protocols and procedures to promote collaboration
- Review of Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) requirements
- Providing guidelines and procedures on protection and conservation resource usage for eco-tourism, education and awareness-raising,
- Development of a publicly accessible web-based environmental data base.

Source: *MME*

Source: *MME*

### Coastal Zone Management

7.4.4 The coastal environment of Qatar is the permanent and migratory home to many nationally and internationally protected species of birds, fish, reptiles and mammals, and provides turtle nesting areas and fish habitats essential for their conservation.

7.4.5 Marine environments provide natural amenities that are highly valued by people and contribute to human welfare. The sea and coastline are of great spiritual and cultural significance to the people of Qatar. The benefit of these assets include aesthetic enjoyment, recreation, artistic and spiritual fulfillment, intellectual development, food and wealth.

7.4.6 Most of Qatar's urbanization and economic activity is concentrated along the coast where the major urban centers of Doha, Al Khor and Al Wakra are situated as well as the major industrial areas of Ras Laffan and Mesaieed, and mega projects such as Lusail and the Pearl.

7.4.7 In addition to this, residential and tourism development has increasingly restricted public access to the coastline and foreshores. This restriction prevents the wider public from enjoying and participating in leisure activities along the coastline.

7.4.8 A deterioration of the coastal environment has been documented including hydrological and shoreline changes, and water pollution. Doha Bay is now faced with critical water quality and sedimentation problems. The effects of these urbanization problems together with the long term impact of climate change and sea level rises require an integrated approach to future management of the coastal zone.

### Coastal Zone Management

**The purpose of this policy is to safeguard, restore and enhance the coastal environment, processes and ecosystems for existing and future generations**

**Policy ENV4: Integrated Coastal Zone Management**

**Achieve effective management and use of coastal land and marine environment to protect and sustain the nation's valuable coastal assets**

| Policy Actions | | |
|---|---|---|
| 1. Prepare an Integrated Coastal Zone Management Plan which includes the identification, monitoring and management of coastal zone assets, Coastal Zone Protection Areas, biodiversities and their habitats, including fish habitats | Immediate | **MME**<br>Ashghal<br>GORD<br>Kahramaa<br>MoEI<br>MoEC<br>QP<br>QTA |
| 2. Pending the completion of the Integrated Coastal Zone Management Plan, the precautionary approach will be used to identify all possible impacts and develop mitigation measures to prevent the risk of environmental degradation in the Coastal Zones | Immediate | |
| 3. Applications for development in, or that has the potential to impact on, designated Coastal Zone Protection Areas or areas subject to erosion, inundation, storm surge and sea level rise, will not be permitted | Immediate | |
| 4. Developments proposed in other coastal locations must address the following criteria:<br>a. provide an Environmental Impact Assessment and relevant related studies<br>b. comply with the zoning requirements for the land concerned<br>c. produce compact not linear or isolated development<br>d. provide a natural extension, contiguous with existing urban areas<br>e. incorporate a phasing strategy which facilitates the economic provision of infrastructure and community facilities<br>f. minimize and manage any environmental impacts | Immediate | |

Source: *MME*

Source: *MME*

### Biodiversity

7.4.9 It is important that biodiversity in Qatar is recognized and that the cultural and environmental value it provides is made known to the community. Existing flora and fauna must be protected along with habitats for migratory species. The loss or endangerment of species and habitat should be redressed as far as practicable. All major development will include measures that will significantly contribute to biodiversity, for example through tree planting and public realm landscaping.

7.4.10 Emphasis will be placed on the planning and assessment of development activities, whether at sea or on land, to ensure they are specifically designed to co-exist with habitats that are important to a wide variety of biological species, and where possible, to minimize all interactions.

### Biodiversity

**The purpose of this policy is to protect and enhance native flora, fauna and habitats to enhance, promote and safeguard Qatar's biodiversity**

**Policy ENV5: Biodiversity**

**Safeguard biodiversity in Qatar from development pressures to preserve the natural environment for existing and future generations**

| Policy Actions | | |
|---|---|---|
| 1. Complete, implement, monitor and report on the National Biodiversity Management Plan | Short-Med | **MME** |
| 2. Identify areas that contain significant habitats of biodiversity and prepare a Habitat Conservation Strategy that includes enhancement and rehabilitation measures through sensitive planting and habitat creation in buffer zone | Short-Med | Ashghal<br>GORD<br>MDP&S<br>Kahramaa |
| 3. Outside of proposed Coastal Zone Protection Areas and Environmental Protected Areas, applications for development will identify natural landscapes, habitats and vegetation at threat and incorporate proposals and strategies for their retention and protection during and after construction | Immediate | PEO<br>QD<br>QF<br>MoEC<br>QP<br>QTA |

### Safeguarding Groundwater Resources

7.4.11 Qatar is facing acute pressures on water resources due to rapid urban growth and continued population increase. Of the three sources of water in Qatar, namely groundwater, desalinated water, and treated sewage effluent (TSE), groundwater is the only natural source.

7.4.12 The country's current water strategy is to use groundwater for agriculture, desalination plants to provide potable water, and TSE to irrigate fodder crops and landscaping. Constraints on the continued use of groundwater supplies will increase the demand for potable water for the use of irrigation to secure national food production.

7.4.13 The proposed Northern Aquifer Protection Zone, which covers approximately 29% of Qatar's total land mass, aims to preserve the northern aquifer and its water quality through the conservation of the rawdah/wadi areas which naturally recharge groundwater. In the event of any failure with the desalination plants, (for example in the event of a national disaster), it will be important to safeguard an emergency supply of potable water.

### Groundwater Resources

**The purpose of this policy is to protect groundwater resources from excessive usage and contamination**

**Policy ENV6: Protection of Groundwater Resources**

**Safeguard groundwater resources, recharge wells and permitted groundwater abstraction facilities to ensure water security**

| Policy Actions | | |
|---|---|---|
| 1. Prepare and implement a National Groundwater Management Strategy to identify, protect, rejuvenate and enhance groundwater quality and availability | Immediate | **Ashghal**<br>**MME**<br>GORD<br>Kahramaa<br>PWRC<br>MoEC<br>QP |
| 2. Undertake an audit and establish an inspection, enforcement and monitoring program for septic systems within the proposed Northern Aquifer Protection Zone | Immediate | |
| 3. Progressively establish reticulated sewerage systems for all urban areas within the proposed Northern Aquifer Protection Zone | Med-Long | |
| 4. Applications for development involving the interference of, or discharge of contaminants to, the proposed Northern Aquifer Protection Zone, groundwater resources, or within 300m of a recharge well or licensed groundwater abstraction facility, will not be permitted without prior permission from the Ministry of Municipality and Environment and the Permanent Water Resources Committee (PWRC) | Immediate | |
| 5. Applications for development in the proposed Northern Aquifer Protection Zone must include recharging measures utilizing stormwater | Immediate | |

### High Impact Land Uses

7.4.14 A number of land uses, while essential, can generate operational effects that are not compatible with high quality urban living due to dust, noise, odor or emissions either from the land use itself or traffic associated with the land use. It is best practice to separate these high impact land uses from other general land use forms through buffer zones.

### High Impact Land Uses

**The purpose of this policy is to protect adjoining land uses from high impact activities whilst ensuring the continued operation of the high impact activities**

**Policy ENV7: High Impact Land Uses and Buffer Zones**

**Implement buffer zones between high impact land uses and adjoining land uses to safeguard the natural and built environments, whilst ensuring the continued operation of the high impact land use**

| Policy Actions | | |
|---|---|---|
| 1. Buffer zones for high impact land uses, as identified in Schedule 14, will be established in collaboration with the Ministry of Municipality and Environment through the EIA process | Immediate | **MME**<br>Ashghal<br>CAA<br>GCP<br>Kahramaa<br>PEO<br>QD<br>MoEC<br>QP<br>QRail<br>QTA |
| 2. For new high impact land uses, any buffer zone identified or required through the EIA process will be incorporated within the high impact land use | Immediate | |
| 3. For new development adjoining existing high impact land uses, any buffer zones required to mitigate the impact of the high impact use will be incorporated within the new development | Immediate | |

## 7.5 Hazardous and Non-hazardous Waste Management

7.5.1 The General Cleaning Project (GCP) is the principal agency for solid waste management (SWM) including solid waste collection and transportation to landfills, operation of compost plants and landfill management. At present, current waste collection and transportation is operated by a series of small and large container and compaction vehicles.

7.5.2 Qatar currently recycles 8-9% of its domestic and bulky waste, and continued growth in waste Unit Generation Rates (UGR) is projected, in line with population growth. The authorities are under increasing pressure to close the Umm Al Afai domestic waste landfill due to its incompatibility with surrounding land uses. It is expected this will occur once the Domestic Solid Waste Management (DSWMC) facility near Mesaieed becomes operational.

7.5.3 The closure of the Umm Al Afai domestic waste landfill will require an engineered approach with post closure operation and monitoring, and the development of suitable interim land use until the landfill stabilizes. Under the closure plan, bulky wastes will be used as land filling materials to prepare the landform for a beneficial afteruse.

7.5.4 By 2020, with the increased waste amount generated and the anticipated closure of the Umm Al Afai landfill, new intermediate treatment and disposal facilities and waste-to-energy (WTE) plants will be needed.

7.5.5 For the treatment of bulky wastes, the provision of a separate facility is required (the New Solid Waste Management Center-NSWMC). The NSWMC will be undertaken in phases with completion targeted at 2032; following the sanitary landfill, a first Waste to Energy plant (WTE1) will be provided. A second WTE(WTE2) is promoted in the NSWMC from 2021.

7.5.6 In order to achieve the sustainability aims of QNV2030, there is a need to reduce the current reliance on landfill by collecting, sorting and processing recyclable material. Increasing waste minimization, coupled with the need for environmental protection and rising public awareness, drives the need for a more sustainable approach to all aspects of waste management from generation through to disposal.

7.5.7 Ambitious targets for waste minimization, recycling, and recovery for energy are required. To be achieved, these targets will require the sustainable management of waste under an integrated SWM plan to produce a more efficient and environmentally-friendly system. Planning guidelines for hazardous and non-hazardous waste management are shown in Box 12 and 13 respectively.

**Hazardous and Non-Hazardous Waste Management**

**The purpose of these policies is to more efficiently manage the collection, treatment and disposal of hazardous and non-hazardous waste to minimise the impact on the natural environment**

**Policy ENV8: National Waste Management Strategy**

**Establish new waste management infrastructure, facilities and systems within an integrated National Waste Management Strategy that provides sustainable waste reduction, recycling and disposal solutions for all (hazardous and non-hazardous) waste**

| Policy Actions | | |
|---|---|---|
| 1. Create and implement an integrated National Waste Management Strategy to reduce waste and promote recycling and reuse | Immediate | **GCP**<br>**MME** |
| 2. Applications for development will need to include waste management measures, the use of recycled materials and provide for recycling to be used in the final development in order to be approved | Short-Med | GORD<br>MDP&S<br>Kahramaa |
| 3. Prepare and implement public awareness campaigns and education on waste management, waste reduction, reuse and recycling and develop supporting laws and regulations | Short-Med | MoEC<br>MoEI<br>QGBC<br>QP<br>QRail |

## Box 12 Planning Guidelines for Non-hazardous Waste Management

### Non-hazardous Waste Management Guidelines

Measures to minimize waste, maximize re-use and opportunities for the use of recycled material will be progressively introduced. Residual waste should be managed through product stewardship and best available technologies. The following sequence of the 3R initiatives (Reduce, Re-use and Recycle) should be followed and commitments made for their achievement by service providers and operators over the plan period:

**Principle 1: Waste Hierarchy**

- Reduction of waste
- Re-use of waste
- Recycling (or Recovery) of materials
- Intermediate treatment of waste
- Sanitary landfill.

**Principle 2: Product Stewardship**

To increase the current recycling rates, Qatar will need to adopt 'product stewardship'. The concept supports environmental protection around the product, where all stakeholders involved in the lifespan of a product are held responsible in reducing its environment impact. For example manufacturers are responsible for planning for, and if necessary, paying for recycling or disposal of the product at the end of its product life.

**Principle 3: Best Available Technologies for Local Conditions (BATLoc)**

The use of modern technologies that are compatible with the solid waste composition and amounts generated in Qatar will be introduced.

Gradual introduction of source separation and separate collection will be implemented to support recycling and feed intermediate treatment facilities downstream with "non-combustible" waste. This includes combustible waste for Waste to Energy (WTE) facilities and putrescible organic waste for compost plants.

Since Qatar has a high share of putrescible organic content in domestic waste, compost plant facilities are proposed. WTE plants are proposed to reduce the volume of the waste sent to landfill. This can reduce waste volume by 70–80%. Sanitary landfill shall be supported to deal with rejected waste from the intermediate treatment facilities upstream in the system.

**Principle 4: Best Available Technologies for Protecting the Environment (BATProE)**

Modern technologies also need to be consistent with sustainable development and protect the surrounding environment. WTE facilities require careful operation due to potential effects on the surrounding air and soils. Likewise, compost plants need to produce high quality compost and not cause harm when applied as soil conditioner.

**Principle 5: Targets**

- 20% of domestic waste to be composted, and 30% to be recycled (paper, plastic and metal) by 2032;
- Zero growth in domestic waste unit generation rates (UGR), with the UGR of 1.65kg/cap/day capped at the same rate up to the year 2032;
- 40% of bulky waste to be recycled by 2032;
- Zero growth in bulky waste (produced from consumption and not development activities), with the target UGR capped at 3.4 kg/cap/day for the waste from consumption activities

**Principle 6: Monitoring and Reporting**

Plans and proposals that provide source separation and separate collection will need to be gradually introduced over the plan period with the regulatory authority establishing technical guidelines and standards for design, development and operation.

The GCP will also be tasked with introducing monitoring systems to update data on waste arising and waste management capacity requirements. The information will be used to review and update the pattern of waste management facilities and apportionment over the length of the plan period as part of a five year waste management monitoring framework

## Box 13 Planning Guidelines for Hazardous Waste Management

**Hazardous Waste Management Guidelines**

The solid waste hierarchy principles set out in Box 9 also apply to hazardous waste management. Service providers and operators will work together to identify the capacity gap in dealing with hazardous waste and provide and maintain direction on the need for hazardous waste management capacity as set out in the Hazardous Waste Management Framework Toward 2032.

**Principle 1: Waste Hierarchy**

Plans, proposals and strategies that provide waste minimization technologies including the change or replacement of input and materials and production processes by which waste generation is reduced and modified will be supported. For waste generation that cannot be avoided or minimized, wastes should be exchanged between industries. For wastes that cannot be recycled or reused, treatment should consider the removal of hazardous wastes by incineration or neutralization.

**Principle 2: Clear Definition of Roles of Waste Generators and the Government**

Waste generators shall hold total responsibility for their wastes and shall not pose adverse effects on human health and the environment during its generation, storage, collection/transportation, and treatment to disposal. Most generators have no treatment facility; as a consequence, a centralized hazardous waste treatment facility is required off-site.

**Policy ENV9: Sites for Waste Management Facilities**

**Identify and provide sites for waste management facilities in pursuit of an integrated National Waste Management Strategy, QNV2030 and international best practice**

| Policy Actions | | |
|---|---|---|
| 1. Identify and provide sites for waste management facilities for all urban communities and industrial areas in accordance with the Waste Management Facilities Towards 2032 Framework and the following criteria:<br>a. Good access to strategic transport routes<br>b. Sufficient capacity for the target service life (approx 20 years)<br>c. Long term expansion potential beyond 2032, and<br>d. Optimum location between the five transfer stations | Short-Med | **MME**<br>Ashghal<br>GCP<br>MoEC<br>QRail |
| 2. Applications for new hazardous and non-hazardous waste projects will need to demonstrate achievement of the following criteria:<br>a. The minimization of waste in the design and construction phases of development such as the separation of different waste materials for recycling and reuse<br>b. The recording of waste statistics to determine trends and predict future disposal requirements<br>c. The use of recycled materials in construction and the specification of recycled materials by developers and other key stakeholders wherever possible<br>d. The provision of infrastructure that facilitates and meets the needs of residents, business and industry for segregating waste at source, collection and recycling of waste materials<br>e. The incorporation of sufficient space to separate and store segregated waste streams to allow efficient collection<br>f. The adoption of best international practice techniques suitable to the Qatari context, and<br>g. The use of site waste management plans for development projects | Immediate | |

# 8.0 The Built Environment



## 8.1 Context

8.1.1 The current built form of Qatar, its city, towns and villages is largely a product of the evolution of the transport system and, in more recent times, the application of rigid zoning regulations. Just as the ancient cities were shaped by the pedestrian, the renaissance cities by horse and cart, and the industrial cities by the railroad, the modern city has been dominated and shaped by the motorcar. The associated effects of car dependence has resulted in a shift from compact cities to urban sprawl, from community-based neighborhoods to isolated suburbs scattered along highways, from pedestrianized, active streets to a car-dominated public realm. These inherent problems of the car society need to be resolved.

8.1.2 The urban spatial structure of Qatar has been further fragmented by unplanned, out of sequence development, that promotes urban sprawl. The QNDF structures its urban growth principles through a hierarchy of Capital City, Metropolitan and Town Centers. The interconnection of these scales of urban development emerge through the structure planning and Area Action Plans that follow the QNDF; however, the growth principles establish a foundation for managing urban growth, for compact cities, for revitalization of urban areas and a return to human-scale design principles that recreate places in which continuity and public space are re-established for the pedestrian.

8.1.3 This new spatial structure presents challenges that require a new way of thinking about land use zoning, building design, landscape and public realm design and integration with transport and utility networks. The image and identity of the city is reflected in its physical form. For Doha, the values of lively streets, crowded sidewalks, active public squares and social interaction have been taken over by an environment dominated by vehicles, single land use zonings, large building frontages, unattractive or non-existent public realm and pedestrian-unfriendly tower buildings. These elements are affecting the image of the country's capital city as a place to live, work and visit, nationally, regionally and internationally.

8.1.4 Elements of Qatar's cultural and social past need to be preserved, but the fine grain of the traditional house type, souq, street and sikka network is being eroded. Conserving, adapting and retrofitting urban areas are urgently required instead of mega project-scale urban redevelopment.

8.1.5 Some of the key issues affecting the built environment include:

- Urban growth and sprawl is driven mainly by large scale and uncoordinated developments which are fragmenting the livability of cities and towns and destroying townscape quality
- The absence of distinctive centers and gateways, together with the lack of cohesive public realm and signage strategies have contributed to a nondescript urban form and difficulties in way finding and legibility for residents and visitors alike
- Excessive highway construction and right-of-way standards, combined with a lack of facilities for pedestrians and cyclists is severing communities and reducing local connectivity and amenity
- Outdated zoning regulations are producing single use building typologies which contribute to the loss of local identity, whilst producing monotonous and uninspiring neighborhoods

- Although Qatar is a coastal nation, there is a significant under provision of recreational and leisure facilities in coastal locations for the community to enjoy, and
- Rapid demolition and deterioration of historic buildings and sites and an over -reliance on replica buildings are depriving areas and communities of their genuine historical and cultural value.

8.1.6 A number of objectives, policies and policy actions have been developed to address these issues and support the spatial development of Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

8.1.7 The QNDF provides a built environment framework that promotes a new urban spatial strategy embracing compact city principles. The policies that follow on from the framework focus on improvements and innovation to how Qatari cities, towns and neighborhoods grow through a spatial framework and design language that recognise environmental, cultural and economic factors.

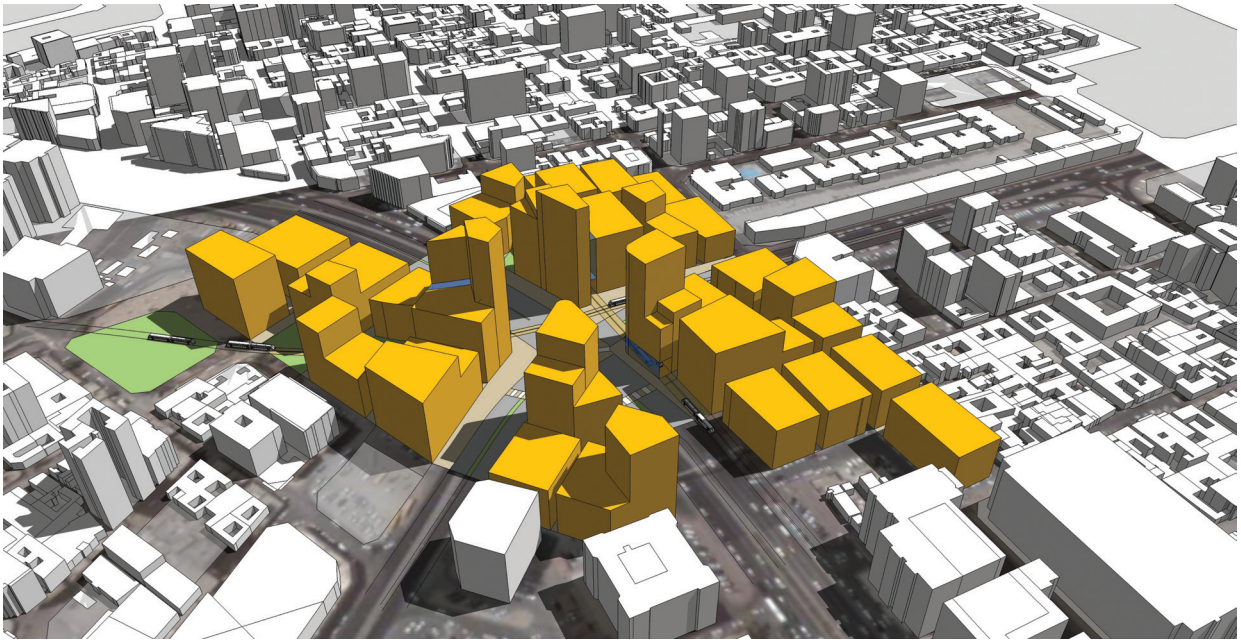
## 8.2 Creating the Urban Spatial Structure

8.2.1 The way in which the urban spatial structure is arranged affects many aspects of how cities function and has implications for accessibility, sustainability, safety, social equity, social capital, cultural creativity and economics.

8.2.2 The major growth in Qatar has occurred within the Doha Metropolitan area. The roles of urban centers, districts and neighborhoods have become unclear amidst out of center commercial development, linear commercial strips and the development of isolated suburbs.

8.2.3 Compact city models such as transit-oriented development, traditional neighborhood development, and livable cities are promoted as better tools to manage growth, foster social and community infrastructure, provide economic vitality and a high quality of living.

8.2.4 Outside Metropolitan Doha, City and Town Centers will continue to support community growth in smaller rural towns and villages. The growth of these centers needs to consider future population and employment needs, as well catchment areas for a range of community facilities.



Source: *MME*

## Managing Urban Growth

**The purpose of these policies is to manage urban growth through a defined urban spatial structure**

### Policy BE1: Establish a Hierarchy of Centers

**Establish a hierarchy and network of urban centers to provide the focus for the provision, consolidation and growth of housing, employment and social interaction in cities and towns**

| Policy Actions | | |
|---|---|---|
| 1. Prepare Capital City/Metropolitan/Town Center Plans for all identified centers (Refer to Figures 3.3 & 3.3A and Schedules 1) | Immediate | **MME**<br>Ashghal<br>HMC<br>Kahramaa<br>MP<br>PEO<br>PHCC<br>QD<br>QF<br>QRail<br>MoEHE |
| 2. Direct growth to the primary centers (where capacity has been identified) being the Capital City Centers and Metropolitan Centers, while supporting a series of secondary transit-oriented Town Centers along strategic transport routes | Immediate | |
| 3. Create Capital City Centers at West Bay, Downtown Doha and Airport City as distinctive and specialized mix use centers that focus on business, commercial and cultural, and high tech knowledge uses respectively (Refer to Figures 3.3 & 3.3A and Schedules 1) | Immediate | |
| 4. Establish new Metropolitan Centers at Al Rayyan North, Al Rayyan South, Lusail and New Al Wakra, and new Town Centers at Al Shamal, Umm Qarn, Umm Slal Mohammed, Al Matar and Qatar University as mixed-use, mixed density centers (Refer to Figures 3.3 & 3.3A and Schedules 1) | Immediate | |
| 5. Redevelop and regenerate the existing Town Centers at, Al Khor, Al Shahhaniya, Al Gharaffa, Al Saad, Al Wakra and Doha Industrial Area as mixed-use, mixed density centers | Immediate | |
| 6. The centers hierarchy, and role and function of the identified centers will be embodied in the Municipality Structure Plans and Capital City/Metropolitan/Town Center plans and other Planning Instruments to allow for renewal at different urban scales (Refer to Box 14) | Immediate | |

### Box 14 Centers Area Action Planning

**Develop a Centers Area Action Plan that establishes planning principles and provides guidelines to resolve complex design issues in centers. Ensure that designs for centers:**

- **Provide for growth and change**
- **Promote and inspire good urban design**
- **Integrate land use, density and public transport**
- **Promote social equity**
- **Promote a vibrant local economy**
- **Preserve the serenity**
- **Become vibrant, interesting destinations**
- **Promote integrated and co-ordinated development between private and public stakeholders**
- **Protect and enhance the vibe of the neighbourhood**
- **Encourage improvement and appropriate renewal of city, metropolitan, town, district and local centers**

Source: *MME*

**Policy BE2: Promote a Mix of Uses**

**Promote a mix of use activities within centers to create vibrant and sustainable neighborhoods**

| Policy Actions | | |
|---|---|---|
| 1. Encourage a range of economic activity and business synergies | Immediate | **MME**<br>Ashghal<br>Kahramaa<br>MP<br>QD<br>QF<br>QP<br>QRail |
| 2. Diversify and broaden the mix of uses appropriate to the type of center and the needs of the population served | Immediate | |
| 3. Provide places and locations for all types of economic activity and employment | Immediate | |
| 4. Review current single zoning land use regulations and establish horizontal and vertical application of mixed-use developments | Immediate | |

Source: *MME*

**Policy BE3: Integrate Large Single Use Activities**

**Integrate existing large single use activities with complementary land uses, services and community facilities to create sustainable and vibrant mixed-use environments**

| Policy Actions | | |
|---|---|---|
| 1. Identify and integrate existing large single use activities with complimentary land uses, public transport, complementary service industry and community facilities within the Municipality Structure Plans and Capital City/Metropolitan/Town Center plans and other Planning Instruments. These activities include (amongst others) the following:<br>• Old Doha Port<br>• New Doha Port<br>• Corniche Redevelopment Area/Grand Park<br>• Airport City<br>• Qatar University<br>• Education City<br>• Doha Industrial Area and Qatar Economic Zones (QEZ 1-3)<br>• Botanical Gardens and Camel Race Track (Al Shahhaniya) | Immediate | **MME**<br>Ashghal<br>HMC<br>Mowasalat<br>MP<br>PEO<br>PHCC<br>SCDL<br>QD<br>QF<br>QMA<br>QP<br>QPMC<br>QRail<br>QTA<br>MoPH |


Source: *MME*

**Policy BE4: Managing Urban Growth**

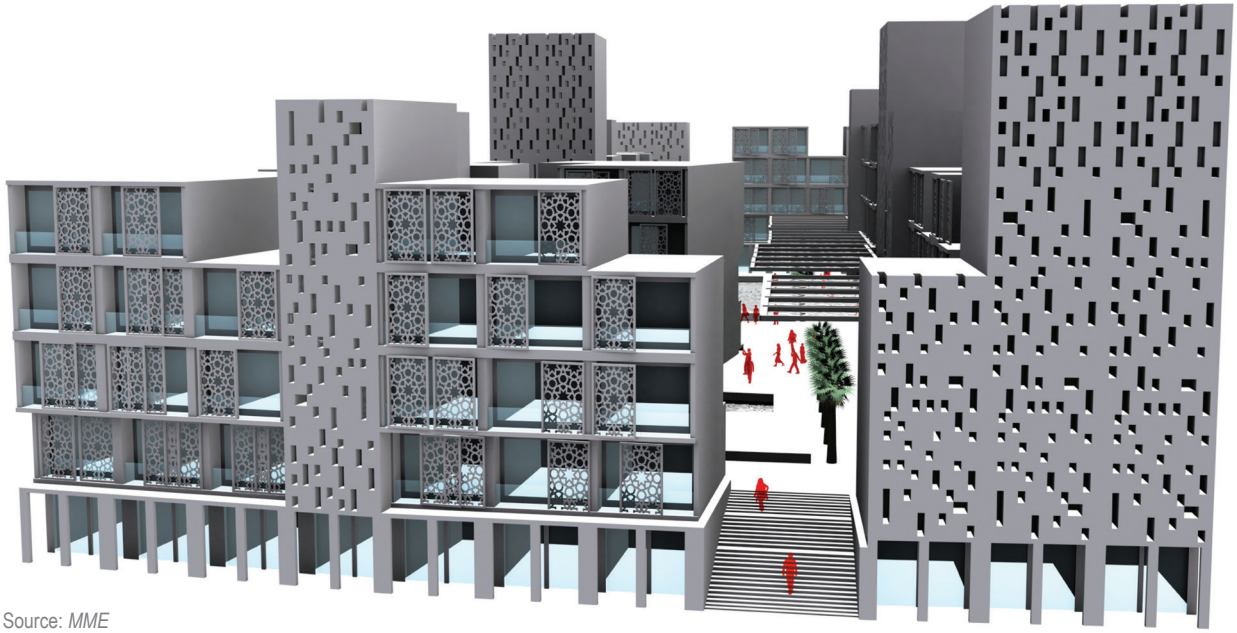
**Manage urban growth to provide adequate urban land for future needs and contain urban sprawl**

| Policy Actions | | |
|---|---|---|
| 1. Development for urban purposes on non-urban land will not be permitted | Immediate | **MME** |
| 2. Monitor and review land categorized as urban land to ensure adequate supply is available for future urban growth needs | Immediate | |

**Policy BE5: Greenbelts**

**Safeguard non-urban land outside urban growth boundaries for food security and other national interests and to provide a visual transition between the built up area and the desert**

| Policy Actions | | |
|---|---|---|
| 1. Establish Greenbelts around Metropolitan Doha and other urban centers identified in Schedule 1 | Immediate | **MME**<br>**MoEC**<br>MP |
| 2. Within Greenbelts, applications for development, other than for agriculture and National Significant Projects, will not be permitted | Immediate | |



Source: *MME*

**Policy BE6: Livable Neighborhoods**

**Promote integration of housing, workplaces, shopping, recreation and community facilities, linked by walking, cycling, and public transport networks to a mix and level of activity that attracts people, creates a safe environment, stimulates interaction and provides a lively community focus**

| Policy Actions | | |
|---|---|---|
| 1. Focus new mixed density residential development around Capital City Centers, Metropolitan Centers, Town Centers, District Centers and Local Centers | Immediate | **MME**<br>Ashghal<br>HMC<br>Kahramaa<br>MEIA<br>MP<br>PEO<br>PHCC<br>QD<br>QF<br>QGBC<br>QP<br>MoPH<br>MoEHE |
| 2. Establish an urban structure where networks of neighborhoods are clustered to support the center hierarchy | Immediate | |
| 3. Create and implement a sustainable Qatari Neighborhood Model typology that incorporates traditional Qatari housing and community values | Immediate | |
| 4. Promote compact neighborhoods using models such as (Refer to Box 15):<br>• **Qatari Neighborhood Model**<br>• **Traditional Neighborhood Development and**<br>• **Livable Neighborhoods** | Immediate | |

## Box 15 Housing Typologies

| Type | Proto Type | Arial View | | Description |
|---|---|---|---|---|
| • Qatari Neighborhood |  |  |   | • New residential developments, with housing turned inwards on a cul de sac, block arrangements almost equal in frontage and depth<br>• Low Density<br>• Villa type<br>• Fence around each property<br>• Fereej style of living often still exists |
| • Traditional Neighborhood |  |  |  | • Sikkas and Courtyard Houses<br>• Linked street pattern found in Doha's earliest neighborhoods<br>• Mainly courtyard housing typology<br>• High Density<br>• Old Arabic style architecture<br>• Used for large gatherings<br>• Privacy is very important |
| • Livable Neighborhood |  |  |  | • Medium Density mixed-use<br>• Multi-story apartments<br>• Retail at ground level<br>• Pool room intrinsic to family values |

## 8.3 Enhancing the Urban Form

8.3.1 Urban centers must be easily understood from their physical appearance. Capital City Centers, Metropolitan Centers and Town Centers will provide a sense of destination within the visual landscape. Streets and public spaces will be places of shared use within an aesthetically-pleasing, comfortable and safe public realm.

8.3.2 The current urban fabric is proliferated with bland, poorly-designed, stand alone buildings, that display no consideration for the setting, context, climate, nor integrate with adjoining structures or the public realm. Opportunity now exists to reconsider and retrofit the built form and fabric, through a renewed approach to building typology models, lot configuration, built form, scale and materials, and design regulations. Qatar must define its own identity and architectural characteristics, through context, culture and innovation.

8.3.3 The urban skyline of modern Doha is a significant feature that is globally recognizable. The shape of Doha Bay and the public realm of the Corniche provide an outdoor setting in which to view and enjoy the backdrop of the city. The design of tall buildings within Doha needs to reflect and enhance this skyline. Views from within Doha to the water are also important. Views can occur through large corridors (road rights of way) or be street level views between buildings. Acknowledgement and protection of existing and recognition of future view corridors are important elements within the urban form.

Source: *MME*

### Enhancing Urban Form

**The purpose of this policy is to create an attractive and recognizable identity for the Capital City Precinct**

**Policy BE7: Attractive and Recognizable Capital City Precinct**

**Promote and enhance Doha's physical identity through the design of the Capital City Precinct that encourages the distinctive use of space, form and materials with an emphasis on pedestrian and transit accessibility**

| Policy Actions | | |
|---|---|---|
| 1. Develop and promote the Corniche as the symbolic and visual linkage between the three Capital City Centers and the heart of the city's public realm and open space strategy | Immediate | **MME**<br>Ashghal<br>Kahramaa<br>MoCS<br>MP<br>PEO<br>QD<br>QF<br>QMA<br>QTA |
| 2. Identify sites for landmark buildings to enrich the quality and identity of the Doha skyline | Immediate | |
| 3. Identify and protect visual corridors to the sea and to landmark buildings | Immediate | |
| 4. Create an easily recognizable streetscape through landmarks and gateways | Immediate | |
| 5. Utilize public art as a tool to promote Doha as a recognizable city | Immediate | |


Source: *MME*

### Livable and Vibrant Centers

**The purpose of these policies is to create livable and vibrant centers**

**Policy BE8: Urban Form and Permeability**

**Promote an efficient structure in terms of distribution of built form and open space that recognizes the value of permeability and movement in defining urban space and character**

| **Policy Actions** | | |
|---|---|---|
| 1. Encourage the use of horizontal and vertical elements in mixed-use developments | Immediate | **MME**<br>MoCS<br>MP |
| 2. Establish a street block typology that promotes circulation and pedestrian permeability | Immediate | |
| 3. Develop a block structure that promotes activation, visual interest and urban vitality | Immediate | |
| 4. Promote perimeter block design, including traditional courtyard forms, in the centers as a means to:<br>• **define both public and private spaces**<br>• **accommodate different density of developments required for the different centers**<br>• **promote strong public facades that physically define and socially address the urban space**<br>• **promote permeability through the block** | Immediate | |
| 5. Ensure convenient and sheltered pedestrian connectivity between individual buildings through innovative site layout and building design | Immediate | |

### Livable and Vibrant Centers

8.3.4 A sufficient density is a pre-requisite of vitality and for creating and sustaining viable centers and neighborhoods. Designing for density is a component of creating a distinct, lively and vibrant public realm through the integration of built form with land uses and amenity considerations. Designing for density will ensure that the centers and neighborhood models promoted in the QNDF will be economically viable and socially sustainable.

**The purpose of these policies is to create livable and vibrant centers**

**Policy BE9: Design for Density**

**Ensure that designing for density is a primary component in the creation of urban centers**

| Policy Actions | | |
|---|---|---|
| 1. Develop centers in accordance with Schedules 2A and 2B, and ensure the density is achieved through a variety of building typologies to promote housing choice (Refer to Box 16 and Box 17) | Immediate | **MME**<br>Ashghal<br>HMC<br>Kahramaa<br>MoCS<br>MP<br>PEO<br>PHCC<br>QD<br>QF<br>QP<br>MoPH<br>MoEHE |
| 2. Ensure that the allocation of density promotes walkability and cycling to centers and open space and community services | Immediate | |
| 3. Ensure that the allocation of density recognizes the importance of arriving at destinations and the transition from low density (edge of neighborhood) to high density (the core of the center) | Immediate | |

Source: *MME*

Source: *MME*

## Box 16 DEFINING DENSITY

**Net Density:** The number of dwellings per hectare on land devoted solely to residential development. While it includes private driveways and private open space, it does not include public infrastructure.

**Gross Density:** The number of dwellings per hectare of a given land area, including public infrastructure such as roads, open space and in some instances non-residential development (e.g. schools and shops).

### LOW DENSITY

**Typical Built Form**

Low density housing comprises of single to 2+P detached, semi-detached and compound villas on reasonably large allotments, with small-to-medium setbacks to side boundaries, relatively large setbacks to the street, and reasonable areas of private open space.

**Approximate Gross Density**

0-60 persons per hectare

**Typical Locations**

Low density housing occurs on greenfield development sites on the fringes of metropolitan Doha, within rural townships and within established suburban areas throughout metropolitan Doha.

### MEDIUM DENSITY

**Typical Built Form**

Medium density housing development ranges from 3-5 floors detached, semi-detached and apartments on allotments with zero to small setbacks to side boundaries and the street and with limited private open space.

**Approximate Gross Density**

60-120 persons per hectare

**Appropriate Locations**

Medium density housing should occur within and adjoining District and Town Centres within metropolitan Doha and in Town Centres outside metropolitan where it is close to public transport, shops, community services and facilities, and large areas of public open space.

### HIGH DENSITY

**Typical Built Form**

High density development includes residential flat and apartment buildings 5 floors in height or greater, but may include alternative housing forms which deliver higher dwelling yields. High density housing development includes high-rise development.

**Approximate Gross Density**

200-300 persons per hectare

**Appropriate Locations**

High density development should occur in locations of intense activity with excellent public transport links. High density housing development in Qatar will be largely limited to locations within the C-Ring Road, Al Sadd, the Capital City Precinct, Metropolitan and Town Centres within metropolitan Doha and in certain instances, in District Centres within metropolitan Doha where they form a TOD along major public transport routes.

## Box 17 DESIGNING FOR DENSITY

**Why good design is important:**

- Housing at higher densities more complex and bulkier than standalone villas
- Has a greater impact on urban environment, infrastructure and social services
- Design therefore becomes critical as a contributor to good outcomes

**Good design provides:**

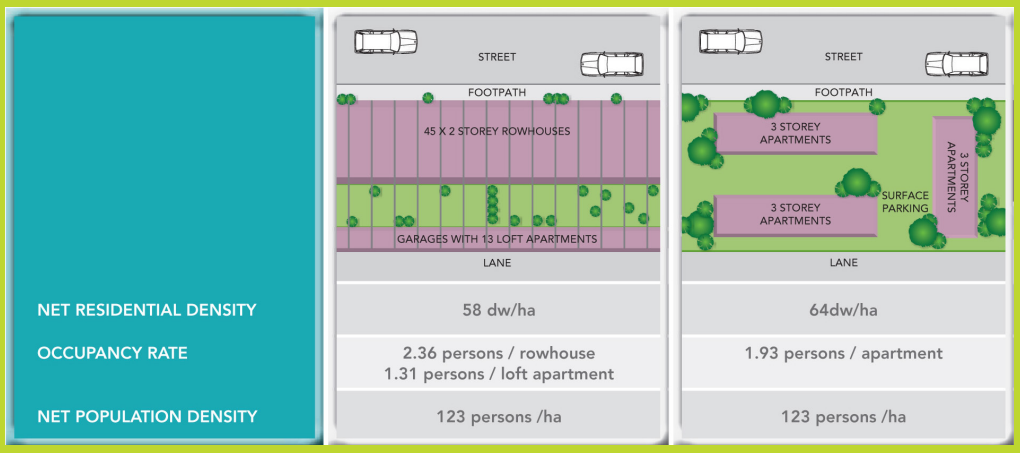
- improvements in public transport usage and integration of transport services
- density housing at strategic locations near TOD centres
- opportunities for increased private investment and business innovation
- improved overall urban quality
- opportunities for walking and cycling
- a range of housing choices for various lifestyles and age groups
- for communities that offer fair access for all to services and employment opportunities.

**Good design ensures:**

- walking, cycling and public transport is planned and supported
- key destinations, such as shops, schools and medical centres, are within walking distance
- good streetscape integration and enhanced public space surveillance
- high quality public transport is accessible to residents
- high quality building design which contributes to the function, attractiveness and conviviality of an area
- adequate public areas are provided within walking distance (up to 800 metres), including open space and a variety of places for social interaction

**Principles of good design:**

- Mixed density development should be integrated with surrounding development, in areas with connected street networks, mixed land uses, public transport and with supporting infrastructure including walkways, public areas and cycle paths.
- Higher density does mean more buildings




- The larger the size of each dwelling, the lower the net density for the same building type

## Building Design

**The purpose of this policy is to ensure that building design considers the local context**

**Policy BE10: Lot and Building Typology**

**Review current typologies and encourage innovation that considers the local context and culture to promote a better urban fabric**

| Policy Actions | | |
|---|---|---|
| 1. Prepare an Urban Design Compendium (Refer to Box 18) that includes design guidelines for a series of housing typologies including the following:<br>• Qatari housing<br>• Mixed-use centers<br>• High density residential<br>• Medium density residential<br>• Low density residential<br>• Affordable housing<br>• Labor housing/compounds | Immediate | **MME**<br>Ashghal<br>Kahramaa<br>MoCS<br>MP<br>QD<br>QF<br>QP<br>MoEHE |
| 2. The design of new housing typologies should consider the changing demographics and household formation including the needs of an ageing population, inclusive design, housing affordability, adequacy of supply, decency standards, development economics and feasibility and market trends | Immediate | |

## Policy BE11: Building Design in the Local Context, the Past and the Future

**Develop a design language through a series of publications and undertake pilot projects that promote high quality urban design and urban architecture**

| Policy Actions | | |
|---|---|---|
| 1. Within the Urban Design Compendium (Refer to Box 18) ensure that:<br>• Buildings define space<br>• Buildings mediate between private and public space and provide graduations between the two<br>• Buildings have a dialogue with neighboring buildings and the public realm<br>• Buildings have compositions that create rhythm and repose and hold the eye<br>• Buildings have substantial tactile and decorative materials that weather gracefully<br>• Buildings strengthen local character and identity<br>• Buildings integrate with their context<br>• Buildings incorporate inclusive design<br>• Buildings allow and provide for a continuity of public space ranging from streets to parks and plazas.<br>• Buildings allow and provide for permeability between buildings, linking the public realm through publicly accessible rights of way. | Immediate | **MME**<br>Ashghal<br>Kahramaa<br>MoCS<br>MP<br>QD<br>QF<br>QMA<br>QP<br>MoEHE |
| 2. Establish a National Design Panel that assesses the design of all major developments within Qatar | Immediate | |
| 3. Ensure the above Urban Design Compendium is used within the development assessment, monitoring and regulatory frameworks | Immediate | |
| 4. Encourage innovation through Government-led pilot projects by identifying landmark and exemplary projects and instigate processes including design competitions to promote excellence in design and planning | Immediate | |

Source: *MME*

Source: *MME*

**Box 18 Urban Design Compendium Information**

**The Urban Design Compendium will include guidance on:**

- Urban form (movement framework, neighborhood unit, precinct development, block and street pattern, lot orientation, land use, density, massing and form, energy and resource efficiency, open space networks, landscape planning, legibility, way finding)
- Connectivity (walking and cycling, public transport, streets and traffic, parking and servicing)
- Place-making (character and identity, sense of place, great streets, continuity and enclosure, legibility, adaptability, diversity, destinations)
- Implementation (charettes, master plans, pattern books, development guidelines and development controls)
- Elements of traditional Arabic built environment (heritage and culture, contemporary interpretations, Arabic architectural elements)
- Applications of urban design (mixed land uses, multiple transportation nodes, community character, Arabic transect, TOD characteristics)
- Urban settlement types (cities, TOD, towns, villages etc)
- Building typologies (principles for building typologies)

## 8.4 Enhancement of Public Areas

8.4.1 The provision of accessible, welcoming, visually interesting and people-friendly public places are valuable ways to enhance the amenity of localities such as Town Centers, mixed-use neighborhoods and recreational parks. It is also important for areas surrounding iconic buildings and within institutional precincts such as Education City and the HIA.

8.4.2 The use of public art features such as sculptures, street furniture, landscaping, shaded structures, water fountains, murals, children's play equipment, and the introduction of striking visual treatments and landscape planting into major roadways, are also ways of achieving a pleasant community amenity and creating a local identity.

8.4.3 Proposals by the Qatar Museum Authority to establish a contributions scheme for the provision of public art, as part of the capital works budget for significant urban development and infrastructure projects, will play an important role in achieving good public domain amenities for residents and visitors. This is a way that many city destinations around the world gain a unique international recognition. Such a scheme needs to be accompanied by a master plan and suitable institutional arrangements.

**Enhancement of Public Areas**

**The purpose of the policy is to create recognizable, vibrant, attractive and functional public spaces**

**Policy BE12: Local Amenity and Public Spaces**

**Improve local amenity by creating attractive, functional and accessible public spaces**

| Policy Actions | | |
|---|---|---|
| 1. Establish a public art contributions scheme and institutional arrangements as part of the capital works budget for significant urban development and infrastructure projects | Immediate | **MME**<br>**QMA**<br>Ashghal<br>Kahramaa<br>PEO<br>QD<br>QF<br>QP<br>MoEHE |
| 2. Develop a Public Art Master Plan committed to improving the overall appearance and visual amenity of urban areas. The Public Art Master Plan shall ensure provision of public art that: | Immediate | |
| a. contributes to cultural identity and creates a distinctive sense of place | | |
| b. can be enjoyed, and experienced by people of different ages and cultural backgrounds | | |
| c. responds to themes of people and place – both past and present | | |
| d. relates well to the built and natural environment | | |
| e. exemplifies artistic excellence and integrity | | |
| f. responds to the challenge of climate change through sustainable design and fabrication | | |
| g. is appropriate and safe in public contexts and is easily maintained | | |
| h. helps to build stronger, more connected communities | | |
| 3. Integrate Public Art features and amenities into urban renewal projects, new developments, major urban upgrades and new major infrastructure projects (such as transit stops) to create community identity and way finding elements through site-specific creative design | Immediate | |
| 4. Implement procedures for early collaboration of relevant stakeholders to achieve high quality Public Art outcomes | Immediate | |

Source: *MME*

**Policy BE13: Create Active Streets and Public Spaces**

**Promote human scale street and public square design to create active, attractive, vibrant and diverse opportunities for social, cultural and economic growth**

| Policy Actions | | |
|---|---|---|
| 1. Create urban centers with activated street frontages, arcades canopies and places that take advantage of climatic factors | Immediate | **MME**<br>Ashghal<br>Kahramaa<br>MoCS<br>QD<br>QF<br>QP<br>MoEHE |
| 2. Promote diversity and mixture of land uses and block sizes within urban centers | Immediate | |
| 3. Provide civic spaces as places for community gatherings | Immediate | |
| 4. Ensure that public squares and spaces respect a human scale in their design and development | Immediate | |
| 5. Enable pedestrian-prioritized streets that are well-shaded by trees, buildings shade structures and canopies | Immediate | |

## Landscape Design

**The purpose of these policies is to utilize hard and soft landscaping treatments as primary tools in the design of the public realm and open spaces**

### Policy BE14: Landscape Design of Streets

**Create an appropriate and attractive scale and character of landscape design within the public realm**

| Policy Actions | | |
|---|---|---|
| 1. Create and implement Landscape Design Guidelines to ensure minimum levels of appropriate landscaping are provided:<br>a. Promote the principle of landscape urbanism<br>b. Positively contribute to the overall city and urban realm image<br>c. Ensure seamless integration of utility infrastructure features into the public realm<br>d. Enhance pedestrian and cycle areas to encourage usage<br>e. Ensure pedestrian and cycle areas are free of barriers and steps<br>f. Frame buildings and add interest to blank facades and walls<br>g. Maintain human scale and define walkways and public spaces<br>h. Promote the use of durable local plant species and introduce other complimentary species<br>i. Clearly define features such as main building entrances, boundaries, public art and signage, and street furniture<br>j. Stabilize embankments through the use of hard and soft landscaping techniques<br>k. Promote the use of native, regional and climatic adaptive plan species appropriate for use within an urban environment<br>l. Promote the landscape treatment of street rights of way as part of the open space network<br>m. Ensure the landscape design (hard and soft treatments) contributes to the physical safety and comfort of pedestrians and cyclists<br>n. Use landscape treatment to distinguish different levels in the street hierarchy<br>o. Use street trees to unify areas and neighborhoods with distinct character<br>p. Use landscaping to create human scale enclosure where existing building heights dominate the streetscape<br>q. Use landscaping to direct views and provide way-finding the streetscape<br>r. Use special paving to give distinctive accents to areas with unique identity<br>s. Ensure that a variety of planting has been used to heighten and enliven the users perception of change in color, light, ground slope, smells, sounds and textures<br>t. Promote activity and vibrancy through the integration of public art within primary streets identified within the street hierarchy<br>u. Use public art in streetscapes to brand and create identity | Immediate | **Ashghal**<br>**MME**<br>QMA |

## Policy BE15: Landscape Design of Open Spaces

## Use Landscape Design to Ensure Open Spaces are Vibrant and Visually Interesting

| Policy Actions | | |
|---|---|---|
| 1. Use indigenous and regionally or climatic appropriate plan species and introduce an arid landscape typology in the design of open spaces | Immediate | **MME**<br>Ashghal<br>Kahramaa<br>MoCS<br>QD<br>QF<br>QMA<br>QP<br>QTA<br>MoEHE |
| 2. Ensure that the design of open spaces recognizes the cultural sensitivity of including spaces for men, women and children, incorporating cultural preferences, within the same open space | Immediate | |
| 3. Ensure that open space is efficiently integrated with the wider public realm, through barrier-free open spaces and the provision of pedestrian and cycle routes through open space areas | Immediate | |
| 4. Identify strategies for providing open space in neighborhoods that are appropriately scaled and useable day and night throughout the year | Immediate | |
| 5. Encourage civic open space areas in urban centers that are appropriately scaled and useable day and night throughout the year | Immediate | |
| 6. Use public art in open spaces to create a sense of joy and delight, stimulate play and creativity, promote communication amongst viewers and reinforce a sense of place and aid in way-finding | Immediate | |

Source: *MME*

## Heritage and Conservation

**The purpose of this policy is to safeguard and make accessible the historical and cultural traditions of the country**

**Policy BE16: Conservation Areas**

**Protect, conserve and enhance the cultural heritage of Qatar, whilst contributing towards the national tourism strategy**

| Policy Actions | | |
|---|---|---|
| 1. Prepare and implement a National Heritage Strategy and a Cultural Master Plan that identifies, protects and allows for controlled redevelopment of nationally important archaeological, cultural and historic buildings, sites and contextual areas | Immediate | **MME**<br>**QMA**<br>Ashghal<br>Kahramaa<br>MoCS<br>MP<br>PEO<br>QD<br>QF<br>QP<br>QTA<br>MoEHE |
| 2. Based on the national inventory establish Conservation Areas to protect traditional villages, forts and other buildings and artifacts of cultural heritage. The following locations will be considered for priority designation and protection:<br>a. Downtown Doha (Zones 4 and 5, Al Asmakh and Al Najada) the original intricate street and sikka pattern, built-to-lines of continuous building facades and building heights<br>b. North west coastline of Qatar from Zubara Fort to Al Shamal - the abandoned and traditional forts and villages along the coastline | Immediate | |
| 3. Applications for development within Conservation Areas will need to include developer commitments to the retrofitting or reuse of listed buildings that preserve their historic or cultural character and materials, rather than comprehensive redevelopment | Immediate | |
| 4. Within and outside of proposed Conservation Areas, adopt best practice conservation measures when retrofitting or reusing buildings included on the national inventory | Immediate | |

Source: *MME*

# 9.0 Movement



## 9.1 Context

9.1.1 Transport touches the lives of all Qataris and expatriates, and contributes profoundly to the social, economic, environmental and cultural wellbeing of the nation. Transport includes not only roads and road infrastructure, but also the systems, facilities and services that move people and freight within and outside of the country. These include road networks, public transport, bicycle and pedestrian facilities, airports, ports and logistics.

9.1.2 The transport sector therefore has a major role to play in supporting the QNV2030. However, mainly due to its unprecedented rapid economic growth, Qatar faces a number of challenges to achieve a high quality transport network.

9.1.3 The current fragmented approach to the planning and development of transport infrastructure has led to inconsistencies, and often inadequate infrastructure. This is evident in areas where the coordination of mega projects, land use planning, road infrastructure planning, road infrastructure construction, and public transport operations are the responsibility of a variety of Ministries, Agencies, and the private sector.

### Road Networks

9.1.4 The use of the private motor vehicle has increased exponentially in the last few years leading to various negative social, economic and environmental impacts. This high level of car usage is a historic consequence of increasing levels of income and vehicle ownership, supported by road-focused capital works programs. The lack of public transport services exacerbates the problem whilst disadvantaging lower income groups.

9.1.5 The Government's Transport Master Plan Qatar (TMPQ) has influenced the formulation of both the national and Metropolitan Doha road networks based on a given land use scenario. The TMPQ provides direction for the implementation of transport infrastructure on the road network and also in the development of high quality, safe, and efficient public transport systems (Refer to Figure 9.1).

### Public Transport

9.1.6 Mowasalat is the exclusive service provider of urban and inter-urban public transportation comprising buses and taxis within and between Metropolitan Doha, Al Khor, Al Shamal, Dukhan and Mesaieed. It also provides school bus services and private hire bus and coach services. Whilst the bus services are well-established, frequency, reliability, safety and the availability of information can be variable. Taxi services are being improved, but their distribution and availability is fragmented, with a concentration around major activity hubs such as shopping malls, hotels and the airport. Demand however exceeds supply at peak times, though this situation is expected to improve through the use of advanced information and communication systems

### Cycling and Pedestrian Facilities

9.1.7 Urban development has discouraged walking and cycling at the expense of providing for the motor car. In addition to this, cycling and pedestrian facilities are often under-provided or non-existent thereby further reducing the incentive to use these modes of transport. For many trips, walking and cycling are the most energy-efficient and effective means of mobility, minimizing the environmental impacts of travel and providing direct benefits for personal health and social well-being, which will help in combatting the rise in diabetes.

### Airports

9.1.8 Hamad International Airport (HIA), located east of downtown Doha, is the hub for the national carrier Qatar Airways. It began operating in 2014 on a new reclaimed site immediately east of the airport. The HIA has significantly increased air travel operations and efficiency, and is a cornerstone of Qatar's economic and tourism development strategy.

9.1.9 It is intended that the Emiri Airforce will continue to operate out of the old International Airport for the immediate period. Part of the site (excess to operational requirements) and the land to east is proposed to be redeveloped into a cultural and sports hub, complimenting the role and function of Airport City as the third Capital City Center.

### Ports

9.1.10 The existing commercial port in downtown Doha is adversely affected by constraint on land and port access impacting local amenity caused by the movement of heavy goods through the Corniche. To improve access and throughput capacity, the Government is developing a new port 35km south of Doha at Mesaieed. It is important that the New Doha Port is integrated with other strategic modes of transport. Redevelopment options for the existing port site are currently under consideration

### Logistics

9.1.11 Road infrastructure is an essential component of an efficient and integrated Qatar logistics system. Because of its versatility, road-based freight is expected to continue its dominant role into the future

9.1.12 A summary of the key issues affecting movement of people and goods in Qatar is as follows:

- There is no over-arching Agency to plan and coordinate transport projects with land use schemes
- The only forms of public transport available at present are taxi and bus services which operate in mixed traffic conditions without the benefit of dedicated road space
- The provision of parking facilities has not kept pace with demand particularly in high activity hubs such as West Bay, whilst management and enforcement of parking regulations are fragmented

**Figure 9.1**
**Energy Efficiencies of Transport Modes**


Source
*Energy Efficiency of Transport Modes Revisited, A. Kaspura (2009)*

- Facilities for pedestrians and cyclist are under-provided in the car-dominated transport system, which reinforces the use of private cars even for short trips
- The number of fatalities and injuries resulting from road accidents is unacceptably high; contributory factors include unsafe road user behaviours, excessive speed and lack of pedestrian and cycling facilities
- With the introduction of the HIA and expansion of Qatar Airways operations, increasing demands will be placed on landside facilities and accessibility , as well as on the surrounding environment
- Operations at the New Doha Port (and the surrounding QEZ3, as well as Mesaieed Industrial City) will require high standard road links to the national road network to enable efficient movement of trucks, pending the introduction of long distance rail systems in the longer term; expansion of port operations will place increasing pressures on current logistics systems

Source: *MME*

9.1.13 A number of objectives, policies and policy actions have been developed to enable an integrated transport strategy that supports the spatial development of Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

## 9.2 Integrated Transport Strategy

9.2.1 A key focus of the QNDF is to mitigate the effects of high private vehicle usage and the creation and promotion of high quality public transport. Existing forms of public transport, which are currently limited to bus and taxi services, will be significantly enhanced, with new forms of public transport being introduced including water-based public transport, bus rapid transit, Metro rail, tram and long distance rail systems.

9.2.2 Integrated with the existing public transport system, the Doha Metro will enable car-users to switch to rail travel, thereby alleviating traffic congestion, whilst helping create attractive transit-oriented urban centers.

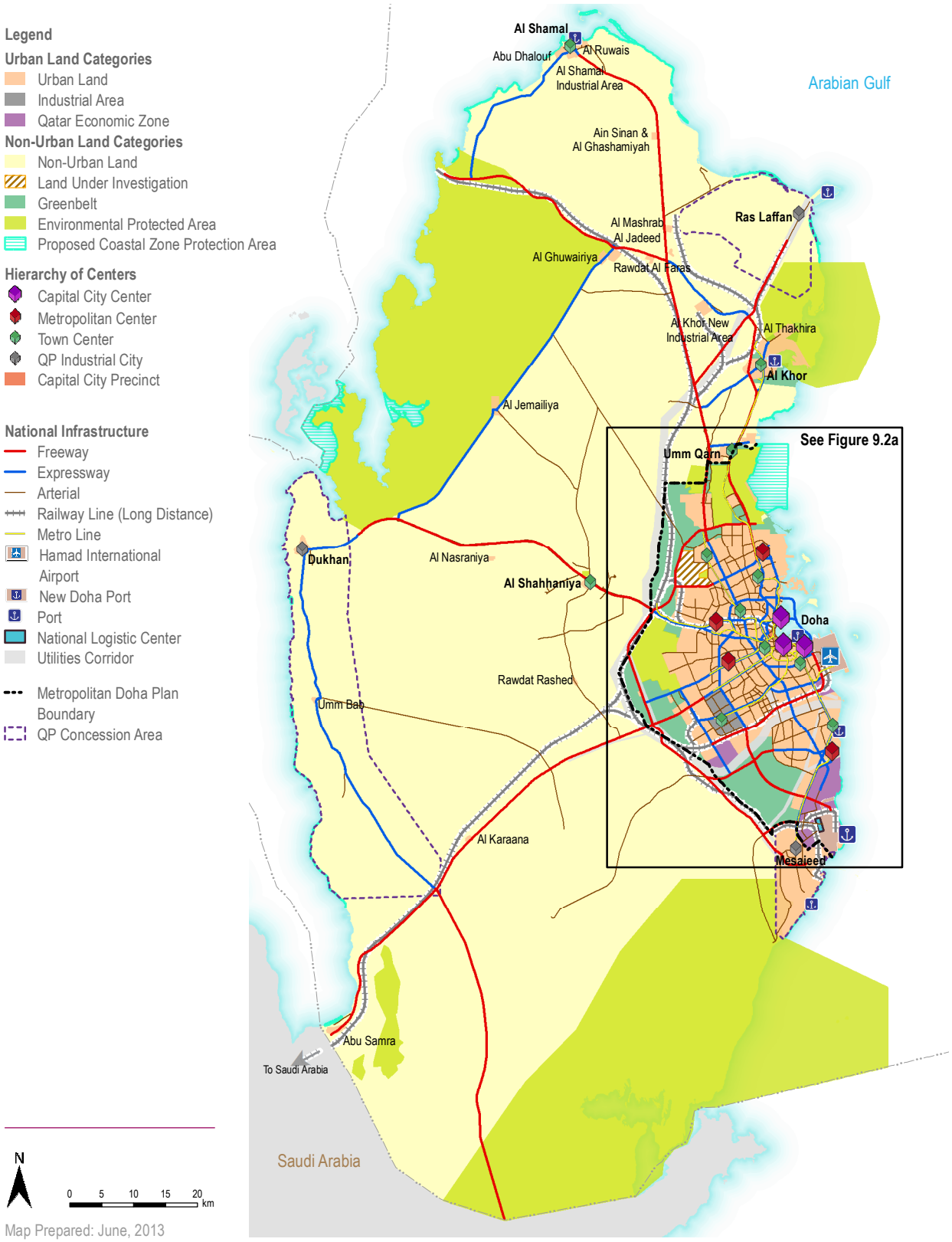
9.2.3 Long distance rail lines integrated with air and maritime gateways will reduce the need for highway-based passenger and freight movements in the longer term. The introduction of more efficient and environmentally-friendly rail-based systems, together with more extensive use of buses, will also help to reduce Qatar's carbon footprint, thereby contributing to the achievement of QNV2030.

9.2.4 The planning and design of these public transportation networks will need to be integrated with land use proposals, including TOD, to ensure improvements in accessibility, community cohesion and economic efficiency are realized. TOD provides opportunities for increasing transit accessibility, through integration of transport facilities with a mix of land uses and, when appropriate, provides off-peak parking at public sites. Limiting the provision of parking spaces around the TOD stations will in turn discourage private vehicles from entering those areas and help create a pedestrian-friendly environment.

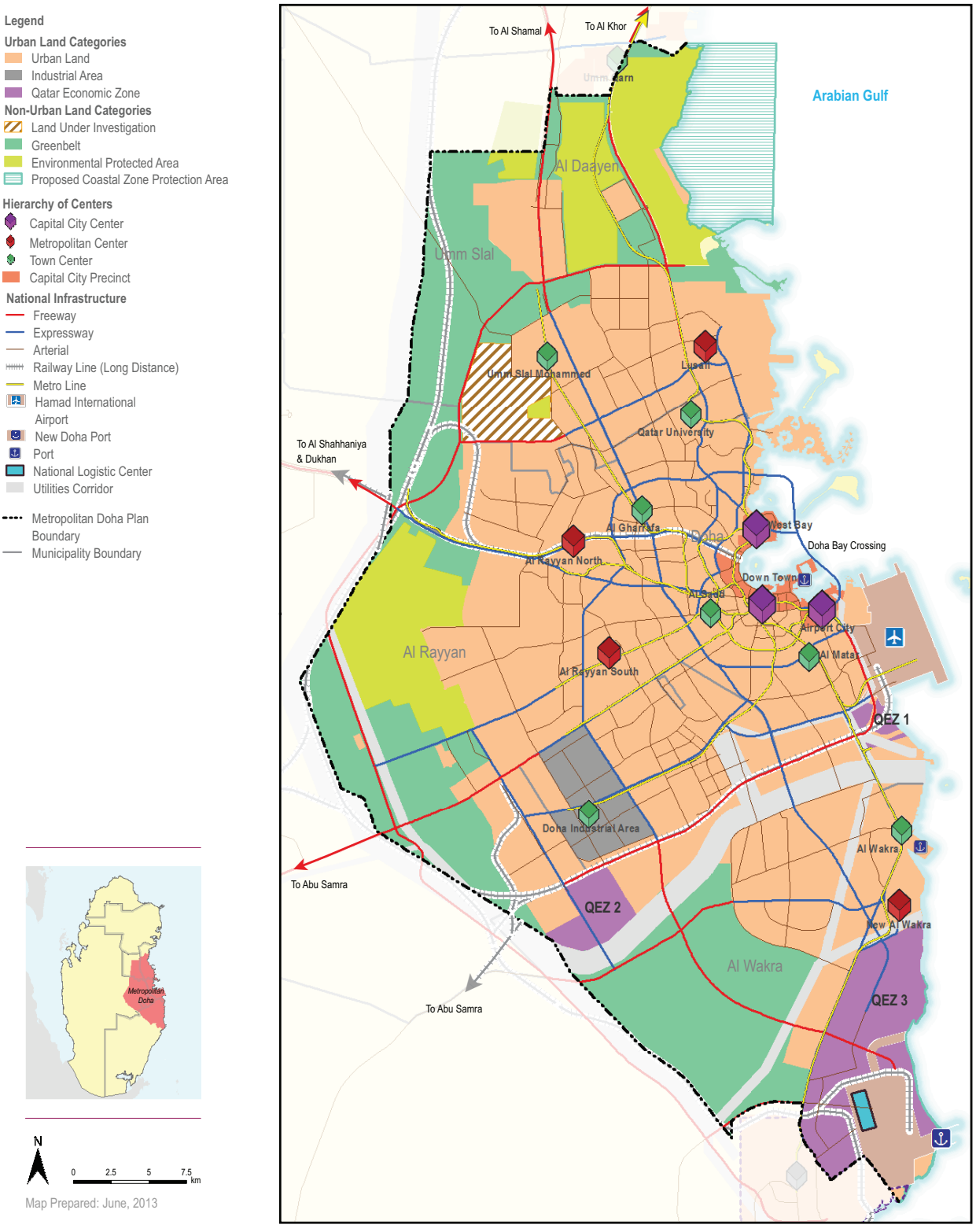
9.2.5 A number of objectives, policies and policy actions have been developed to enable an integrated transport strategy that supports the spatial development of Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

9.2.6 Figures 9.2 and 9.2a illustrate the transportation network for Qatar and for Metropolitan Doha in 2032, showing key road, rail, air and maritime facilities and their connectivity with urban centers in accordance with the national spatial strategy.

## Figure 9.2 National Transportation Networks (2032)



## Figure 9.2a Metropolitan Doha Transportation Networks (2032)




Source: *MME*

## 9.3 Public Transport

9.3.1 Developing an integrated public transport system reliant on public and private sector partnership requires the efficient integration of the different public transport elements to include urban, national and international services. Qatar also wishes to reduce its carbon footprint and comply with international undertakings on emissions as well as protect its air quality and quality of living. Enhancing the quality and frequency of public transport is an important step towards achieving this aim.

9.3.2 As a key policy initiative, the Government has embarked on the phased implementation of a public transport investment program (including bus and rail systems) which will take priority over new highway construction. However, the implementation of transit infrastructure will require considerable time, particularly so in the case of the proposed Doha Metro where significant segments are earmarked for underground alignment (especially in the Capital City Precinct).

9.3.3 In the short to medium term, the planning, design and implementation of the Doha Metro system and facilities will be undertaken in a logical, staged manner to enable integration with existing land use developments and committed mega projects, as far as practicable.

9.3.4 A hierarchy of public transport will be established with the Metro Rail being the foremost priority. In addition to rail, priority will also be given to improving bus facilities and networks, including bus rapid transit with dedicated right of way where feasible.

## High Quality, Integrated, Public Transport

**The purpose of this policy is to establish a high quality, safe, attractive and integrated public transport network**

**Policy M1: Integrated Public Transport Network**

**Enhance existing forms of public transport with the introduction of safe, reliable and efficient on-road networks and the integration of new public transport systems that provide high quality travel choices which offer an attractive alternative to travelling by car**

| Policy Actions | | |
|---|---|---|
| 1. Create an Integrated Transport Authority responsible for multi-modal planning, regulation, delivery and management of transport infrastructure and services across Qatar focusing on:<br>a. The preparation and implementation of strategic transport plans within the framework provided by the QNDF and the development of multi-modal and mode-specific transport initiatives consistent with those plans<br>b. The planning, regulation, improvement and management of all forms of land- and water-based public transport<br>c. The planning, improvement, operation and management of the arterial and expressway network<br>d. The planning and implementation of initiatives which promote a change in user attitudes and behaviour towards sustainable transport, including walking and cycling and measures which promote the more efficient use of private cars<br>e. The coordination of sustainable transport measures with the assessment and approval of new development<br>f. The efficient movement of freight in parallel with initiatives for the improved movement of people | Immediate | **MoTC**<br>**MME**<br>**Ashghal**<br>**QRail**<br>Barwa<br>GORD<br>MoEC<br>Mowasalat<br>MP<br>SCDL<br>QTA<br>Aspire<br>MoEHE |
| 2. Ensure the planning, design and implementation of new public transport networks, particularly stations, are integrated with existing and committed land uses to create mixed-use, mixed density TOD hubs, in line with international best practice | Immediate | |
| 3. Through the development assessment process and the Development Contribution Scheme, ensure developers contribute to cost sharing for the provision of public transport infrastructure | Short-Med | |
| 4. Within the Capital City Precinct ensure that public transport is planned and implemented to integrate with other modes of public transport, fit harmoniously with the public realm, has minimal visual impact and does not create physical barriers to pedestrian and cycle movement and permeability | Short-Med | |

| | | |
|---|---|---|
| 5. An Integrated Transport Strategy is to be developed which will specify and programme the implementation of:<br>a. a public transport hierarchy to ensure suitable public transport provision across different spatial areas, with particular emphasis on promoting the use of the Doha Metro;<br>b. immediate and short-term improvements to the user experience, quality, availability and reliability of conventional bus services to promote modal shift and engender positive attitudes towards public transport;<br>c. Bus Rapid Transit and express bus services along key corridors as an interim or longer-term alternative to new Metro lines;<br>d. the development of water-based public transport services;<br>e. measures to support the integration of public transport systems and safe and efficient interchange with other travel modes;<br>f. initiatives to improve access to public transport for pedestrians of all mobility levels;<br>g. Travel Demand Management initiatives to promote changes in travel behaviour in favour of sustainable forms of travel.<br>h. Create and implement the "Keep Doha Moving Strategy" to identify and implement immediate and short-term initiatives to ensure the on-going and efficient operation of the existing road and logistics network through the Qatar 2022 construction phase | Immediate | |

Source: *MME*


Source: *MME*

## 9.4 Highways, Traffic Management and Safety

9.4.1 The QNDF establishes the National Spatial Strategy upon which the future growth of Qatar will be moulded. This strategy is based on a substantially lower forecast population and a re-focused spatial framework than that on which the TMPQ was originally based. It is now necessary to review the TMPQ to ensure it continues to remain relevant and provides for the needs of future growth. The implementation of the revised TMPQ will provide the foundation upon which future road (and rail) transport rests. It will also assist MME and Ashghal in prioritizing highway maintenance and upgrading programs over the plan period.

9.4.2 The road network must fulfil a variety of functions including:

- linking urban centers and industrial cities in the spatial strategy
- providing strategic accessibility for international traffic, and
- maintaining public access to sites of historical, cultural and touristic importance.
- providing connections to other modes of transportation

9.4.3 The road network in metropolitan Doha and in other urban areas will be reviewed from the public realm, community connectivity and non-motorized road users standpoints; and opportunities will be explored to reclassify functional categories of those roads to create vibrant and connected communities whilst balancing the mobility needs of all road users.

9.4.4 Reducing road accident levels and improving driving and road safety standards are important elements in enhancing the quality of life in Qatar. The high incidence of traffic fatalities in Qatar has in recent years catalyzed public concern. Some success is already being achieved through, for example the use of international-standard road designs, closed circuit television monitoring (CCTV) of intersections, segregation of non-motorized users from travel lanes and pedestrian facilities.

9.4.5 The Ministry of Interior has initiated a Road Safety Campaign with a view to improving overall safety and achieving accident reductions, with the “Three E’s”, (integrated engineering, enforcement and education), intrinsically linked in a systematic approach to improving road safety. The safe design of new infrastructure to meet the requirements of all potential road users and the retro-fitting of low cost safety design features that benefit cyclists and pedestrians are priorities of the QNDF (Refer to Box 19).

Source: *MME*

### Road Network Management and Safety

**The purpose of this policy is to ensure the efficient and safe management of the road network**

**Policy M2: Road Network Management and Safety**

**Develop, operate and manage a safe, effective and efficient road network that balances and provides modal choice for all users**

| Policy Actions | | |
|---|---|---|
| 1. Review the TMPQ based on the Qatar National Development Framework and the Integrated Transport Strategy, ensuring the most efficient use of the existing infrastructure and network | Immediate | **MoTC**<br>**MME**<br>**Ashghal**<br>MoEC<br>MP<br>QRail |
| 2. Revise the road hierarchy and Highway Design Manual based on the revised TMPQ and Integrated Transport Strategy | Immediate | |
| 3. Within Metropolitan Doha: | Short-Med | |
| a. Establish Intelligent Transport Systems, Area Traffic Control and Transportation Management Center | | |
| b. Introduce priority measures along key road corridors for mass public transport services | | |
| c. Undertake a feasibility study into the potential for implementation of congestion charging in heavily-trafficked areas | | |
| 4. Support the Government's road safety program by: | Short-Med | |
| a. Revising existing street design standards to ensure priority is given to the safety of pedestrians, cyclists and other vulnerable road users | | |
| b. Retrofitting low cost safety design features to protect those who are most vulnerable from serious injury or death through road traffic accidents | | |

Source: *MME*


Source: *MME*

**Box 19 Road Safety Action Plan**

| Road Safety Theme | Intervention |
|---|---|
| **Road Environment** | Safe design of new infrastructure, to meet the safety requirements of all its potential road users including the provision of city street lighting, highway lighting and sign illumination<br>Retro-fitting of low cost safety design features to reduce injury severity (e.g. median dividers on rural roads; separation and calming for motorcyclists, cyclists and pedestrians; traffic roundabouts at risky junctions)<br>Systematic safety audits of road designs to ensure compliance with safety standards and regulations<br>Systematic reviews to identify road hazards and remedial treatments<br>Systematic maintenance of all safety features of the road environment, especially signs, markings and pavement surface quality |
| **Speed Management** | General deterrence-based police enforcement and education to ensure compliance with speed limits e.g. speed cameras |
| **Safety Belts and Management** | General deterrence-based police enforcement and education to ensure compliance with front/back/child restraints and cycle/motor cycle helmet standards and rules |
| **Drink Driving** | General deterrence-based police enforcement and education to ensure compliance with legal alcohol limits |
| **Novice Drivers** | Graduated driver licensing system to control and reduce the exposure of novice and young drivers to risk |
| **Vehicle Safety** | Harmonisation with international best practice and systematic inspection and certification to ensure industry compliance with standards and rules |
| **Commercial Vehicles** | General deterrence-based police enforcement and education to ensure compliance with safe loads, driving hours and vehicle standards |
| **Child Safety** | Traffic safety education in the core school curriculum |
| **Emergency Medical Services** | Pre-hospital care and victim recovery targeted to high-risk corridors |

Source
*The World Report on Road Traffic Injury Prevention, The World Bank, Washington DC (2004)*

## 9.5 Parking

9.5.1 The QNDF, as well as the TMPQ, advocates a reduction of car dependency by encouraging a transportation modal shift and the development of TODs. By adopting the above approaches it is estimated parking demand can be reduced by 25%. However, as the current level of parking supply within Metropolitan Doha is less than 50% of estimated future demand, parking supply and use still needs to be managed.

9.5.2 Current levels of inner city congestion and ad hoc parking are problematic and are expected to worsen in the immediate future. Generally the location, supply and pricing of parking influence development opportunities, property values, and urban form. As part of enhancing the public realm and creating livable and sustainable communities in Metropolitan Doha, and to a lesser extent at other major cities and towns, the planning, management and enforcement of parking plays a major role in influencing the link between transportation, land uses and travel behavior.

9.5.3 Where there is insufficient on-site car parking available, the Government has been committed to providing multi-story community car parking facilities. The need for these facilities has arisen directly as a result of inconsistent application of zoning regulations and inadequate provision of on-site parking provision.

Source: *MME*

9.5.4 Parking policy therefore needs to be considered holistically as part of integrated metropolitan, city and local area land use and transport strategies. In particular the planning, coordination and design of mixed-use, mixed density transit-oriented centers will play a significant role in shaping parking policy.

### Parking Management, Allocation and Enforcement

**The purpose of this policy is to resolve current parking issues, introduce better management methods and formulate city-wide parking strategies**

**Policy M3: Parking Management , Allocation and Enforcement**

**Prepare and enforce a city-wide parking strategy that encourages parking to occur in the desired locations and assists modal transfer to high quality public transport**

| Policy Actions | | |
|---|---|---|
| 1. Undertake a needs assessment for parking across Metropolitan Doha and create a Parking Management Strategy based on the Integrated Transport Strategy, that incorporates park and ride facilities, area wide allocation, pricing and enforcement of parking, including increased penalties for infringements, greater enforcement measures, and greater public awareness programs | Immediate | **MoTC**<br>**MME**<br>**MoI**<br>MoF<br>QRail |
| 2. As part of the Parking Management Strategy identify innovative and future proof car parking models/concepts which can be adapted to other uses once modal shift has reduced the demand for car parks. | Immediate | |
| 3. Ensure all revenue generated through parking fees, fines and other parking-related income is invested in improving public transport within Qatar | Short-Med | |

## 9.6 Transportation Impact Assessment

9.6.1 The MoTC has established guidelines and procedures for Transportation Impact Studies (TIS). These guidelines provide Ministries, Agencies, private landowners and consultants with standards, objectives and criteria to be used in the preparation and evaluation of traffic impact and parking studies as part of the development assessment process.

9.6.2 To improve the efficiency of the TIS process, and thereby the use of transport resources and investments, a Transport and Parking Manual for Qatar is needed. In accordance with the guidelines contained in the Manual, a Developer Contributions regulation will be introduced to enable developers to contribute to cost sharing for off-site transport infrastructure and services including public transport facilities. The level of contribution will be assessed in relation to the level of trips generated by the proposed development.

### Transport and Parking Requirements in New Development

**The purpose of this policy is to ensure that traffic and parking impacts arising from the new development are identified and mitigated to create more livable, vibrant and pedestrian-friendly communities**

**Policy M4 :Transport and Parking Requirements in New Development**

**Ensure developers identify, quantify and contribute to the cost and provision of off-site transport infrastructure, public transport and parking management**

| Policy Actions | | |
|---|---|---|
| 1. Revise the TIS Guidelines to include provisions for identifying and charging developer contributions towards the cost of off-site transport infrastructure, public transport and community car parking facilities | Immediate | **MoTC**<br>**MME**<br>**Ashghal**<br>GORD<br>QRail |
| 2. Create a Transport and Parking Manual (including trip generation and parking rates and standards) for Qatar to be used in the preparation, assessment and construction of new development | Immediate | |
| 3. Applications for development will not be permitted unless they demonstrate compliance with the Transport and Parking Manual | Short-Med | |
| 4. Through the Transport and Parking Manual and TIS process, reduce on-site parking at the workplace, and in particular at urban centers, where a high level of public transport service is available | Short-Med | |

Source: *MME*

## 9.7 Facilities for Cyclists and Pedestrians

9.7.1 For many trips, walking and cycling are the most energy-efficient, safe and effective means of transport. Their impact on the environment is minimal, and they promote health and social well-being, consistent with the QNV2030 and the QNDF.

9.7.2 The Qatar National Bicycle Master Plan recommends enhanced facilities for cyclists and pedestrians within the road network. These facilities are to be designed to improve local connectivity between land use and transport facilities (especially rail and bus) while avoiding the need to use higher-capacity roads. The Plan also recommends design criteria as well as guidance for the retrofitting of bikeways along existing roads.

9.7.3 The planning and design of complete streets incorporating facilities for pedestrians and cyclists, and their integration with other transport infrastructure and services, in mixed-use developments is therefore fundamental to improving accessibility options and quality of life.

## Cycling and Walking

**The purpose of this policy is to improve connectivity of people and places**

**Policy M5: Facilities for Pedestrians, Cyclists and those with Special Needs**

**Ensure priority is given to providing facilities for cyclists, pedestrians and the disabled to improve connectivity of people and places, including retrofitting of low cost safety design features in the road network**

| Policy Actions | | |
|---|---|---|
| 1. Ensure proposals for development in urban centers (including TODs) prioritize facilities for cyclists, pedestrians and the disabled and are consistent with recommendations of the National Bicycle Master Plan. | Immediate | **MoTC**<br>**MME**<br>**MoI**<br>**MoADLSA**<br>Ashghal<br>GORD<br>SCDL<br>QRail<br>QTA |
| 2. Utilize differing street cross-sections and design standards to support transit and pedestrian use, consistent with the QNDF hierarchy of road types | Short-Med | |
| 3. Develop and implement a Metropolitan Walking and Cycling Action Plan with a focus on the urban core of the city, including the Capital City Precinct, to deliver quick wins in safe non-motorised infrastructure, promote non-motorized modes and improve connectivity | Short-Med | |
| 4. Develop a Plan to address the mobility needs of physically challenged people | Short-Med | |


Source: *MME*

## 9.8 Airports

9.8.1 The settlement pattern of Qatar with a single major urban hub (Metropolitan Doha) and a relatively small number of Industrial Cities and lower density centers, precludes the need for more than one commercial airport in the country. Together with the extensive road and rail upgrades committed or being planned throughout the country, this means the HIA will operate as Qatar's only commercial airport for the foreseeable future.

9.8.2 The HIA has substantially expanded Qatar's passenger and air freight capacity. The importance of the HIA to Qatar's economy means that efficient landside access and egress to major centers of population and industry will need to be safeguarded. The control of adjacent incompatible land uses that would disrupt or constrain the efficient flow of passengers and freight to and from the airport will need effective management through the planning and development assessment process.

### Airports

**The purpose of these policies is to ensure new airport complexes are well connected to the strategic transport network, contribute to a diversified economy and minimize adverse impacts on the environment**

**Policy M6: Hamad International Airport**

**Ensure the Hamad International Airport is well-connected to the strategic transport network and is supported by compatible economic activities**

| Policy Actions | | |
|---|---|---|
| 1. Promote efficient access to the HIA by: | Immediate | **MoTC**<br>**CAA**<br>**MME**<br>GORD<br>QP<br>QRail<br>QTA |
| a. Ensuring strategic transport routes to the HIA support efficient and reliable journeys, particularly for public transport and freight | | |
| b. Safeguarding against inappropriate development which will compromise the efficiency and reliability of strategic transport routes connecting to the HIA | | |
| 2. Ensure activities in locations around HIA that are compatible with airport operations and that can derive benefit from co-location | Immediate | |
| 3. Applications for development that have an adverse effect on airport operations (including activities generating noise complaints) will not be permitted | Immediate | |

Source: *HIA*

## 9.9 Ports

9.9.1 Scheduled to open in 2016, the New Doha Port will significantly improve Qatar's foreign goods trade (mainly imports for domestic/commercial consumption). The importance of the port to Qatar's economy means that efficient landside access and egress to major centers of population and industry will need to be safeguarded. The control of adjacent incompatible land uses that would disrupt or constrain the efficient flow of goods and services to and from the port will need effective management through the planning development assessment process.

9.9.2 The New Doha Port will also have the capacity to accommodate large luxury cruise ships (albeit in an industrial environment some 30km from central Doha). As an alternative, once the new port is open to traffic, the Qatar Tourism Authority with the Ministry of Economy and Commerce propose to convert the existing Doha port into an international cruise terminal as part of a mixed-use, urban regeneration project.

9.9.3 The ongoing rapid development of Doha is creating a new opportunity for waterborne transport as part of an integrated metropolitan transport strategy. The dynamic growth of West Bay, the development of luxury residential waterfronts such as at The Pearl and Lusail, and the potential regeneration of the existing port in Downtown Doha, create the potential for a Doha Bay ferry service, with possible north-south extensions.

9.9.4 It is critical that such services are integrated with land-borne public transport services to ensure seamless modal transfers which aid viability.

### New Doha Port

**The purpose of this policy is to ensure the New Doha Port is well connected to the strategic transport network and minimizes adverse impacts on the environment**

**Policy M7: New Doha Port**

**Ensure the New Doha Port is supported by compatible economic activities and is well connected to strategic transportation networks**

| Policy Actions | | |
|---|---|---|
| 1. Safeguard designated truck and transportation routes from inappropriate development that may compromise the use of the port's strategic transportation network | Immediate | **MoTC**<br>**MME** |
| 2. Encourage activities in locations around New Doha Port that are compatible with seaport operations and can derive benefit from co-location | Short-Med | **MoEC**<br>QP<br>QPMC |
| 3. Applications for development that have an adverse effect on port operations will not be permitted | Immediate | QRail<br>QTA |

## Maritime Transport

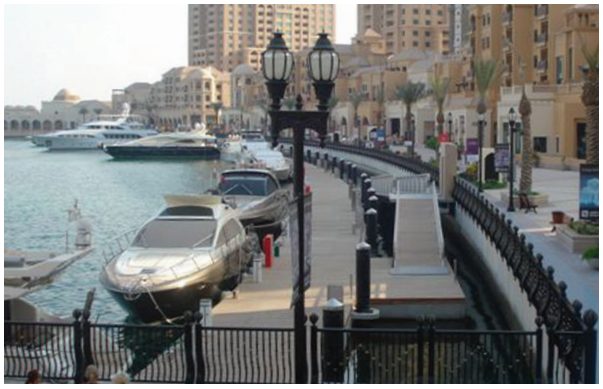
**The purpose of this policy is to make efficient use of existing maritime assets and provide sustainable transport options for residents and tourists**

**Policy M8: Maritime Transport**

**Integrate port infrastructure and facilities into the land use/transport framework and urban structure to contribute to a diversified economy and sustain long term growth**

| Policy Actions | | |
|---|---|---|
| 1. Establish a redevelopment and regeneration master plan for the existing Doha port incorporating facilities for cruise liners, related leisure and tourism activities, commercial and recreational fishing activities integrated with the Integrated Transport Strategy by water-based transport services which connect mega project developments and other key waterfront destinations. | Short-Med | **MoTC**<br>**MME**<br>**MoEC**<br>**QTA**<br>PEO<br>QPMC |
| 2. Prepare a feasibility study to establish a high speed international ferry service between Al-Shamal and Bahrain. | Short-Med | |


Source: *MME*



Source: *MME*

## 9.10 Logistics and Border Crossings

9.10.1 In the short term, Qatari border points of entry/exit for travelers and freight will be air (HIA) for cargo and passengers, maritime (New Doha Port, Mesaieed and Ras Laffan, Al Shamal) for cargo, and land (Dukhan, Abu Samra) for freight and passengers.

9.10.2 In the longer term there will also be land border crossings via long distance and freight rail to the GCC and additional services associated with the regeneration of the existing port in Downtown Doha.

9.10.3 The identification of a national truck route, combined with an integrated rail freight terminal and logistics center in the vicinity of the New Port of Doha, are therefore essential to ensure the efficient movement of trucks and goods. Delays and safety hazards to other road user will also be reduced.

### Logistics Centers

**The purpose of this policy is to encourage efficient freight transport operations whilst upgrading safety and enhancing environmental amenity**

**Policy M9: Logistics Centers**

**Establish an integrated road, rail and logistics strategy to encourage efficient freight transport operations, safe use of transport infrastructure and improvements to environmental amenity**

| Policy Actions | | |
|---|---|---|
| 1. Prepare and implement a National Freight and Logistic Strategy for the coordination and integration of designated freight routes, long-distance and freight rail networks, freight terminals and logistic centers | Immediate | **MoTC**<br>**Ashghal**<br>**MME**<br>MoEC<br>QP<br>QPMC<br>QRail |
| 2. On designated freight routes and in the Capital City Precinct within C Ring Road, enforce restrictions on heavy commercial vehicles without special permits from re-entering urban centers identified in the National Spatial Strategy | Short-Med | |
| 3. Encourage activities in locations around designated logistic centers that are compatible with logistics operations and can derive benefit from co-location | Short-Med | |
| 4. Applications for development that have an adverse effect on designated logistics centers' operations will not be permitted | Immediate | |

# 10.0 Utilities



## 10.1 Context

10.1.1 The provision of high quality utilities supports the QNV2030 and the MDP&S economic and demographic scenario. The capacity and reliability of electricity and water supply, waste water disposal and improved telecommunications can contribute to a competitive advantage in the global economy, as well as significant improvements in the nation's quality of life.

10.1.2 A critical part of successful growth management is linking the demand for land with utility planning and equitable funding, in a timely manner. To date this has been a significant challenge due to rapid population growth and urban development, which have strained the capacities of utilities providers to deliver serviced development sites.

10.1.3 The physical infrastructure associated with network utilities can create adverse impacts on land and water resources including groundwater and the coastal environment. The provision of land within dedicated corridors and highway rights of way for utility transmission and distribution networks can create physical and social severance within and between communities and neighborhoods. Accordingly, there is a need to carefully balance the likely environmental impacts of infrastructure provision against the requirements of an efficient and effective network utility.

10.1.4 Energy is required for water desalination and sewage treatment. Conversely, energy can be reclaimed from wastewater and solid waste. Opportunities for the generation of electricity from treated waste and wastewater need to be investigated and developed.

10.1.5 The pattern and extent of future urban development needs to be carefully planned and integrated with the provision of utility services, so that it does not encroach or interfere with the siting and operation of the required utility infrastructure facilities. An integrated approach to the demand, supply and management of utilities associated with current and future land uses will mitigate such adverse impacts in an efficient and equitable manner.

**Water**

10.1.6 Qatar has a water scarce environment and is reliant on water from desalination for the majority of its potable water needs. The Northern Aquifer provides water for irrigation and some potable water, and has been identified as a strategic element in ensuring Qatar's water security.

10.1.7 Water consumption in Qatar is high. The production of potable water from desalination is energy-dependent and results in greenhouse emissions. The Northern Aquifer has been severely depleted due to over abstraction and its quality has been affected by salt water intrusion. The current potable water supply storage capacity is limited to 3 days. Kahramaa is developing plans to provide potable water storage for 7 days which will ensure security of supply in emergency conditions. The majority of the additional storage will be located in a series of bulk-water reservoirs.

10.1.8 There is approximately 30% water loss due to water leakage during water transmission and distribution. Kahramaa is in the process of reducing the amount of water leakage to an acceptable level in line with international standards.

**Wastewater**

10.1.9 Wastewater collection and treatment is vital to ensure adverse environmental, amenity and human health impacts are avoided. Wastewater collection and treatment has also had difficulty in responding to the recent rapid rate of urban development. The current wastewater network within Metropolitan Doha contributes to the presence of shallow groundwater, localized sewage overflows, and water quality impacts on groundwater and the coastal environment. Wastewater treatment facilities create issues such as odor, impacts on water quality and waste management in terms of the disposal of sludge.

10.1.10 Another significant issue is the disposal of the treated wastewater or Treated Sewage Effluent (TSE). TSE is not just treated wastewater, it is also a resource that can be further utilized for irrigating landscaping and fodder crops, district cooling and industrial processes.

Source: *MME*

10.1.11 Ashghal the Public Works Authority is currently expanding the wastewater network including sewerage connections, wastewater treatment facilities, and distribution of TSE, with further expansion proposed.

**Stormwater and Groundwater Drainage**

10.1.12 Urban development significantly increases the intensity and volume of stormwater runoff, whilst high groundwater adversely affects efficient drainage. Poor maintenance has led to much of the existing infrastructure becoming clogged with refuse and silt thereby preventing efficient operation.

10.1.13 Significant advancements in the use of gross pollutant traps have occurred over the last ten years. Much of the existing infrastructure is older than this and does not enjoy the benefits of these advancements. The combination of these effects causes local flooding and washes contaminants and sediments into coastal waters and beaches.

**Electricity**

10.1.14 Domestic energy accounts for approximately 22% of total energy consumption in Qatar, of which air conditioning represents the largest single demand. Significant efforts are being made to increase supply capacity to meet the steady growth in demand. This has included a significant expansion of the electricity transmission and distribution network as well as the development of the Gulf Cooperation Council 400kV power grid.

10.1.15 Additional electricity supply capacity is required by 2018 as a result of increased demand and the decommissioning of existing electricity generation facilities. Renewable energy generation options include solar thermal power generation which would likely be located inland where solar irradiation is the highest. Two possible sites are identified on Figure 10.1. It is likely that large land areas would be required for such facilities. This source of energy is consistent with the GSDP scenario and a diversified economy.

**Telecommunications**

10.1.16 To support the aims of the QNV2030 and the shift to a more diversified, high-skilled economy, investment in the telecommunications sector is vital. Progress in the provision of equipment and network components has been rapid in recent years and both capacity and capability have been improved.

10.1.17 To accommodate these advances, it is important for service providers to install a sufficient number of conduits (ducts) to major new urban developments, especially in high tech knowledge-based clusters, as alterations after the completion of construction is complex and problematic.

10.1.18 A summary of the key issues affecting the utilities sectors is as follows:

- Due to rapid urbanization, fragmented planning mechanisms and the sporadic location of projects including Qatari housing schemes, the provision of utility facilities and services is often out of synch with land use developments, especially where sites are in urban fringe locations
- Qatar is an excessive user of energy and water resources as measured by international norms
- The national utilities corridors take up large tracts of land, physically severing communities and the landscape, which detracts from the livability of the urban environment and the enjoyment of the open desert
- The location and operation of major utility facilities and structures impacts negatively on the attractive and valuable coastal and marine environments
- Planning for QP Industrial Cities future growth including utility infrastructure and networks is currently carried out independently of the Government planning system

10.1.19 A number of objectives, policies and policy actions have been developed to enable an integrated transport strategy that supports the spatial development for Qatar to 2032. Key stakeholder responsibilities and time frames have also been identified to aid implementation and the monitoring of effectiveness.

## 10.2 Integrated Utilities Strategy

10.2.1 The scale of future Government investment in electricity generation, potable water production and sewage treatment is significant. Coordination and planning between water, energy and solid waste management service providers needs further integration with land use planning to harness better value from finite resources, such as land, and the efficient provision of infrastructure to support planned growth.

10.2.2 A National Utilities Master Plan will be prepared in collaboration with the utility service providers' to integrate forecasts of future strategic needs based on the National Spatial Strategy for input to the Qatar Infrastructure Plan and Program (QIPP) (Refer to Box 20). The QIPP will provide a comprehensive and integrated program of capital works required to support the spatial development objectives of the QNDF.

10.2.3 The solid waste, energy and water cycles are linked at all levels. Waste energy from electricity generation can provide energy for desalination and industry, organic waste and sewage sludge can produce energy at landfill sites, treatment works or incineration sites as is proposed with the Doha Solid Waste Management Center.

10.2.4 Through the promotion of mixed-use, mixed density urban centers incorporating high-tech knowledge-based industries, more opportunities will be created for home-based working using the latest telecommunications technologies.

10.2.5 The QNDF strategy will also reduce the need to travel and will aid the lowering of the nation's carbon footprint. In such developments, it will be essential that provision is made for the supply, maintenance and future growth in use of Next Generation Broadband, Telephony and Digital Communication Systems.

10.2.6 Water management is a critical issue for Qatar and it will be necessary to improve efficiency and to develop new water supply facilities. An additional potable water supply will be required by 2015 as a result of increased demand for water and the decommissioning of existing desalination facilities. The location of new potable water facilities has a spatial impact that will need to be carefully planned and managed to ensure adverse effects are mitigated.

10.2.7 A Water Master Plan will be required that must address the current challenges and incorporate a range of strategies such as improving the use and distribution of potable water and the incorporation of water- sensitive urban design techniques.

10.2.8 The wastewater network and treatment facilities will need to be carefully planned, managed and integrated with existing and proposed urban development, whilst ensuring adverse impacts are avoided, mitigated or remedied.

10.2.9 A Wastewater and Treated Sewage Effluent Master Plan will be required to address the current challenges and incorporate a range of strategies such as improving the collection, treatment and disposal of wastewater, the distribution and use of TSE, and the incorporation of water-sensitive urban design techniques.

10.2.10 It will be necessary to further expand and enhance the stormwater and groundwater drainage network in order to reduce environmental effects and reduce the risk of flooding. A Stormwater and Groundwater Drainage Master Plan will be required to address the current challenges and introduce a range of strategies such as improving the treatment of existing and proposed discharges and the incorporation of water-sensitive urban design techniques.

10.2.11 Most of the existing stormwater and groundwater drainage systems are either undersized or require a significant maintenance program for improved efficiency in operation. This program should include regular cleaning and upgrading where needed. A comprehensive Asset Management Plan, supported by an easily accessible asset database, will be required to compliment the maintenance program.

10.2.12 Additional electricity supply capacity is required by 2018 as a result of increased demand and the decommissioning of existing electricity generation facilities. The location of new electricity generation facilities and primary substations will have a spatial impact that will need to be carefully planned and managed to ensure adverse impacts are mitigated.

Source: *MME*

10.2.13 The location and operation of telecommunication facilities and structures to meet the rapid advancement in technologies and demand has resulted in greater potential for adverse effects such as visual intrusion due to the proliferation of structures, location and size of structures, noise impacts and radio-frequency emissions.

10.2.14 Telecommunication organizations and utility service providers will benefit from sharing existing sites. In sensitive locations, such as the Capital City Precinct, trunk facilities will be placed underground to minimize adverse impacts on visual amenity.

10.2.15 Figures 10.1 and 10.1a depict the 2032 Utilities networks at National and Metropolitan Doha Levels respectively, whilst below individual service requirements are identified.

**Integrated Utility Infrastructure**

**The purpose of this policy is to ensure utilities infrastructures are planned, managed and operated in an integrated and coordinated approach across the whole of Government**

**Policy U1: Integrated Provision and Distribution of Utility Infrastructure**

**Achieve the efficient provision and distribution of strategic utility infrastructure to sustain urban development**

| Policy Actions | | |
|---|---|---|
| 1. Establish a regulatory authority to coordinate, integrate and manage whole-of-government infrastructure planning and program delivery linked to budget cycles and approval. This entity will:<br>a. Prepare and implement an integrated Qatar Infrastructure Plan and Program (QIPP) that consolidates sector master plans to identify timeframes, resolve conflicting priorities and establish budgets, for the provision of strategic infrastructure to support committed growth in the QNDF including:<br>• National Utilities Master Plan (NUMP)<br>• Asset Management and Maintenance Program<br>• Transport Master Plan Qatar<br>b. Liaise, coordinate and monitor the implementation of utility infrastructure in major and special urban development projects including urban regeneration schemes | Immediate | **MME**<br>**Ashghal**<br>**Kahramaa**<br>**MDP&S**<br>GCP<br>MoTC<br>PEO<br>MoEC<br>QP<br>QRail<br>Ooredoo<br>Vodafone |

## Box 20 National Utilities Master Plan

**National Utilities Master Plan (NUMP)**

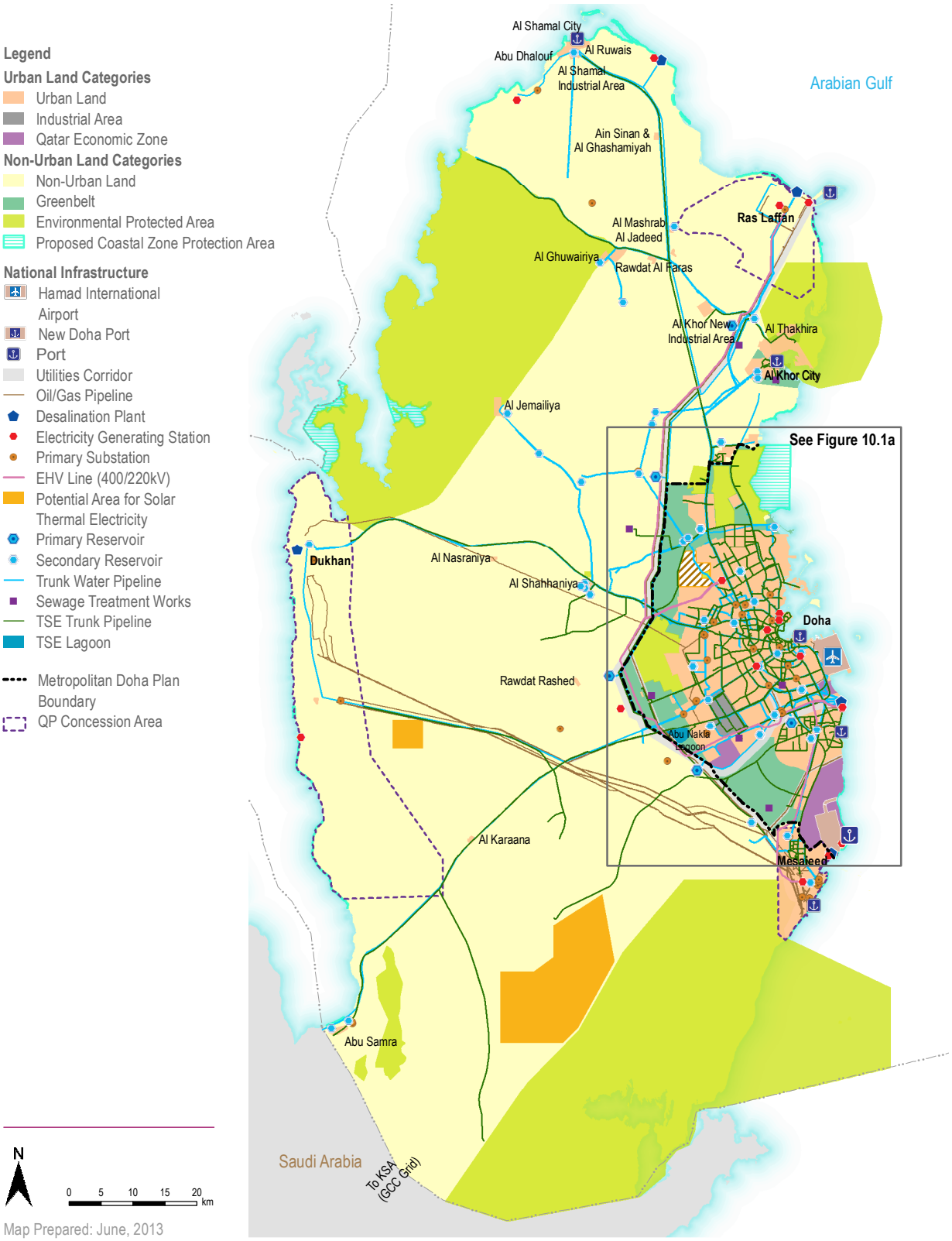
A National Utilities Master Plan will be prepared in collaboration with the utility service providers' to integrate forecasts of future strategic needs based on the National Spatial Strategy for input to the Qatar Infrastructure Plan and Program (QIPP). The future location of all major utilities infrastructure improvements will be described and mapped on Municipality Spatial Development Plans. The Utilities Master Plan will provide for the establishment and coordination of effective implementation procedures. The Utilities Master Plan should cover:

- Electricity
- Water
- Storm Water
- Sanitary Sewage
- Treated Sewage Effluent
- Telecommunications

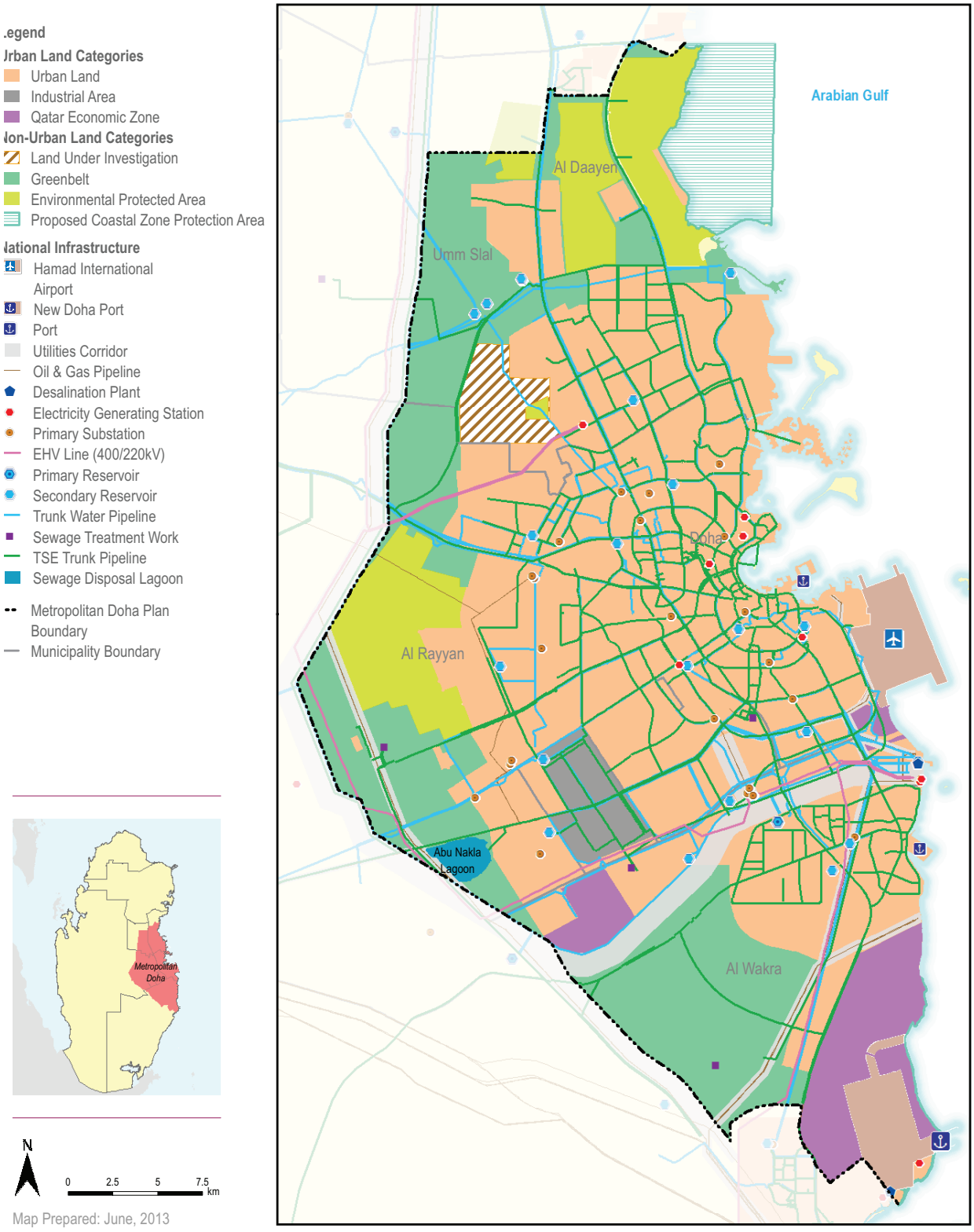
In preparing the NUMP, the following will be considered:

- Encouraging water conservation through educating and raising the awareness of the local community
- Planning and promoting waste water management projects that involve non-conventional water resources
- Managing storm water as part of the urban cycle recognizing natural resources and floodplain ecosystem where feasible
- Establishing an operation and maintenance program for infrastructure facilities and services
- Setting targets for the sustainable use of water and energy resources and waste generation and monitor achievement of targets, performance and quality of services
- Financial and revenue strategies to finance, operate, maintain and replace trunk infrastructure throughout its operational life

## Figure 10.1 National Utilities Networks (2032)



## Figure 10.1a Metropolitan Doha Utilities (2032)



## 10.3 Managing the Impacts of Utilities

10.3.1 The provision of utilities infrastructure has potential impacts on people, the built environment and the natural environment. These impacts can occur due to the discharge of contaminants from the processes involved in the provision of the utilities service such as water and air discharges associated with electricity and potable water production, and discharges as a result of the disposal of wastes including wastewater and sludge.

10.3.2 The operation of utility infrastructure can also result in noise and odor impacts. The size, location and proliferation of utility infrastructure also have the potential to impact on the visual amenity of particular areas. Electromagnetic radiation from electricity transmission and radio-frequency emissions from telecommunications equipment also has the potential for adverse health impacts.

10.3.3 It is necessary to ensure the impacts from utilities infrastructure are appropriately managed to avoid, remedy or mitigate such impacts. A range of options can be used to manage these impacts including taking a precautionary approach to limit the intensity of operation of utility infrastructure in line with established world health and safety standards. Such impacts include:

- contamination of the groundwater aquifers
- adverse impacts to air quality
- noise impacts to sensitive environments
- adverse impacts to coastal environments and protected areas
- detraction from cultural and heritage values of sites, buildings, areas and places
- adverse impacts to amenity values including visual impacts from the size and location of utility services infrastructure and the proliferation of structures
- health impacts from radio-frequency emissions from telecommunications equipment and electro-magnetic radiation from electricity transmission lines

10.3.4 It is also important to recognize and protect existing utilities infrastructure from being compromised by inappropriate or sensitive land uses to ensure they can continue to be operated and maintained. In the first instance, utilities infrastructure should seek to internalize their impacts. However it is acknowledged that this is not always achievable and accordingly restrictions need to be placed on locating high impact or sensitive activities where they could be adversely affected by the utility infrastructure.

### Minimizing Impacts of Utilities Infrastructure

**The purpose of this policy is to minimize the impacts of utilities infrastructure on the environment**

**Policy U2: Minimize Impacts of Utilities Infrastructure**

**Avoid, remedy or mitigate adverse impacts on people, the built environment and the natural environment, while enabling the development and operation of utilities infrastructure**

| Policy Actions | | |
|---|---|---|
| 1. Establish regulations for the safe location of infrastructure facilities (including radio and electro-magnetic radiation from telecommunication facilities) that adversely impact the environment | Immediate | **Ashghal**<br>**Kahramaa** |
| 2. Create a Utility Design Manual to ensure land take for utility structures is minimized and that constructed infrastructure is complimentary to the surrounding urban realm | Immediate | **MME**<br>GCP<br>GORD<br>MoTC |
| 3. Applications for new utility infrastructure will incorporate commitments to enhance the natural and built environment through the provision of, or developer contributions to, community infrastructure such as parks, public art and waterbodies | Immediate | PEO<br>SCDL<br>MoEC |
| 4. Encourage innovative utility provision solutions (such as zero carbon, zero waste and plugged-in-place concepts) | Immediate | QP<br>QRail |
| 5. Undertake an audit and establish an inspection, enforcement and monitoring program for septic systems | Immediate | Ooredoo<br>Vodafone |
| 6. Establish regulations that restrict and control the use of septic tanks | | |

## 10.4 Locating Utility Infrastructure

10.4.1 In the planning and locating of utility infrastructure, it is important to understand and plan for the practical constraints associated with the development, upgrading, maintenance, operation and distribution of that utility.

10.4.2 The existing National Utilities Corridor is an existing physical resource that has been developed to provide a location for strategic trunk infrastructure including QP pipelines and to provide safe separation between other utilities and QP pipelines.

10.4.3 In addition to the existing National Utilities Corridor, it is also important to ensure that local and neighborhood utility infrastructure is located and distributed in an efficient manner that reduces the need for additional land.

10.4.4 The current rights-of-way throughout Qatar include separated 'corridors' for individual infrastructure. This has led to excessively wide rights-of-way which negatively impacts on the livability of neighborhoods, safety of pedestrians, the creation of streetscapes and building forms that are not at scale with pedestrians, and an increased land-take thereby reducing land available for other key community facilities such as parks.

10.4.5 A growing population results in an increased demand for utilities infrastructure which has the potential to increase the requirement for land (to site and distribute the utility) and to negatively impact on visual amenity. By co-locating utilities infrastructure (including distribution networks), there is the potential to reduce land take, increase network efficiencies, enhance network coverage and reduce these impacts.

Source: *MME*

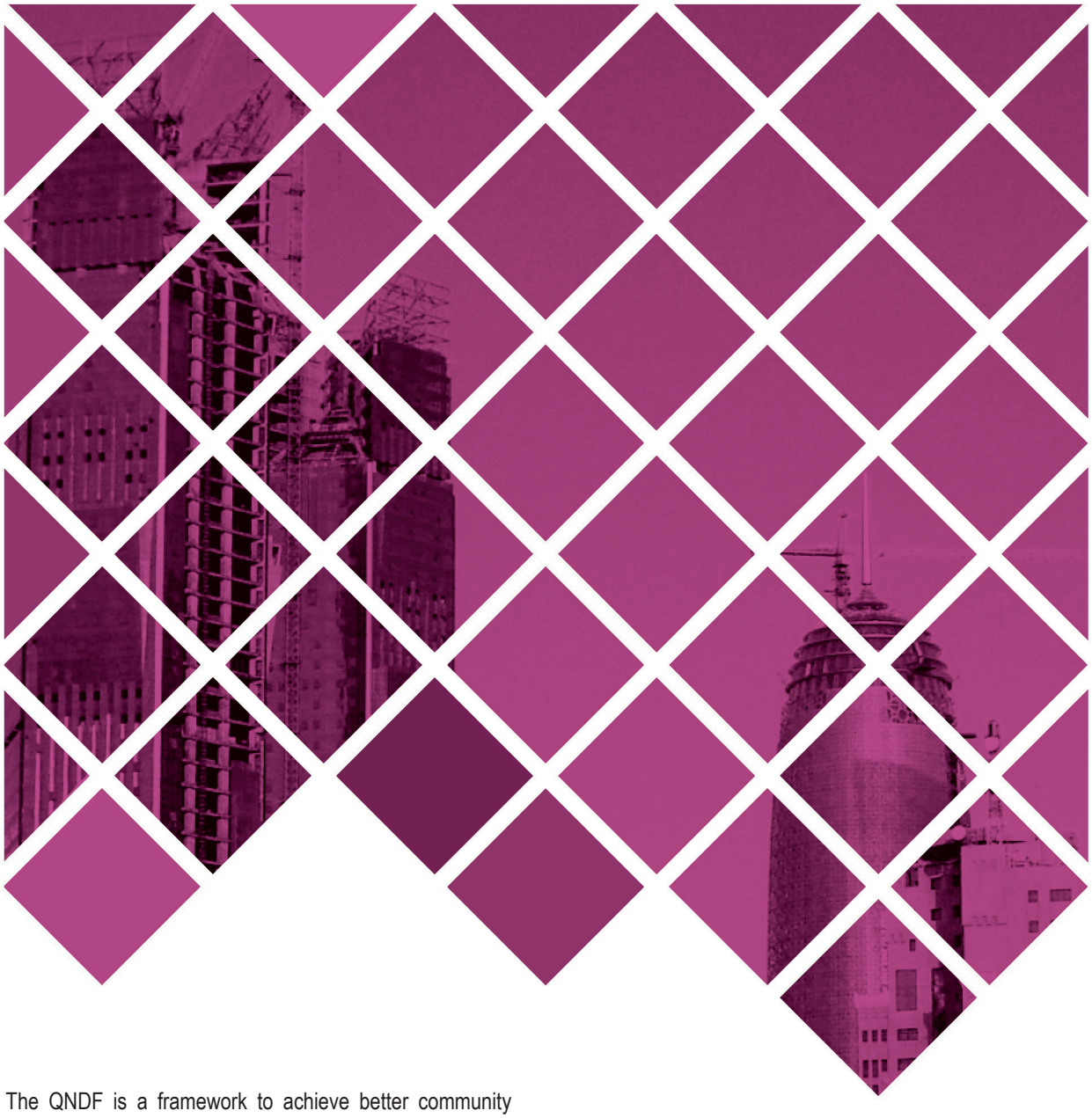
Source: *MME*

**The purpose of this policy is to ensure utilities infrastructure, including distribution networks, are planned and constructed in an efficient manner**

**Policy U3: Location of Utilities Infrastructure**

**Plan and construct utility infrastructure to reduce land take requirements whilst ensuring their safe and ongoing viability**

| Policy Actions | | |
|---|---|---|
| 1. Establish criteria for the selection of sites for the following nationally-significant utility infrastructure in the National Utilities Master Plan:<br>• Electricity Generating Stations<br>• Electricity Transmission Grids<br>• Solar and Wind Farms<br>• Water Desalination Plants<br>• Water Transmission Storage Facilities<br>• Sewage Treatment Works<br>• Sewage Treatment (Package) Works<br>• Septage and Sludge Treatment Plants<br>• TSE Balancing Lagoons<br>• Sludge Disposal Sites<br>• District Cooling Facilities | Immediate | **MME**<br>**Kahramaa**<br>**Ashghal**<br>GCP<br>MoTC<br>PEO<br>SCDL<br>MoEC<br>QP<br>QRail<br>Ooredoo<br>Vodafone |
| 2. Designate and safeguard sites for existing and future nationally significant utility infrastructure | Immediate | |
| 3. As a key task of the Infrastructure Planning Task Force, revise the standards for the provision, location and co-location of district and neighborhood utilities infrastructure consistent with the mixed-use, mixed density approach articulated in the National Spatial Strategy and the projected needs of each community. Particular attention will be given to investigating best practice in the co-location of infrastructure within right-of-way corridors, including underground tunnels within the Capital City Precinct | Immediate | |
| 4. Identify and provide sites for district and neighborhood utilities infrastructure and corridors in accordance with the newly revised standards | Immediate | |
| 5. As part of the new Highway Design Manual, incorporate revised typical road cross sections and utilities corridors within the rights-of-way in accordance with the newly revised co-location standards | Immediate | |



The QNDF is a framework to achieve better community outcomes for Qatar in terms of preserving the natural environment, more livable cities, less congestion and more equitable access to centers and community services. It will also provide the Government with a leading edge tool to better manage strategic and urban development and a growing population. It is both a national, and a statutory, plan. Successful implementation of the QNDF will require cooperation from community stakeholders and the coordination and review of Government Ministries and Agencies' core business activities, infrastructure programs, plans and services. Policy actions have been categorized into implementation timeframes to aid the ordered delivery of the plan and to assist future reviews of the QNDF. Regulatory provisions have been established as part of the QNDF to ensure future growth occurs in the most appropriate areas and that land is utilized more efficiently. In addition to this, a much needed, upgraded and expanded planning governance structure has been proposed to better implement the QNDF and carry forward the program of plan-making and regulatory control updating.

# Section D: Delivering the Strategy

## 11.0 Implementation Strategy

# 11.0 Implementation Strategy



## 11.1 Background

11.1.1 The current system of managing and assessing development is piecemeal wherein each Ministry and Agency considers its own individual requirements in isolation of the broader Government and development requirements. The current system for managing and assessing development can also be quite lengthy for applicants with a lack of clear processes, timeframes or accountabilities.

11.1.2 There are a number of different zoning controls and development regulations applying separately to the cities and towns of Qatar. In addition, there are a number of areas that have no zoning controls and development regulations and there is a lack of consistency about how they are prepared, presented and applied.

11.1.3 As a result there is an increased burden on Government Ministries and Agencies in preparing and managing the system, an increased burden on the development industry in interpreting system requirements and greater uncertainty for the community in understanding what type of development is anticipated for their neighborhood.

## 11.2 Legislative Context

11.2.1 There is no comprehensive planning law in Qatar to guide the preparation of development plans and policies, nor for their monitoring and updating. Instead there are ad hoc laws and regulations which apply to various aspects of the development control (management) process. These include:

- Laws establishing and /or amending City Limits (eg. Law no. 16/1988 for Doha City Limits)
- Law no. 4/1985 on Building Regulations and amendments
- Building Permits Procedure, prepared by the Building Permit Complex of MME
- Doha Interim Zoning Maps & Regulations (Zones 1-68) Updated April 2008, prepared by the Planning Department of UPD within MME
- Al Khor Regional Structure Plan 2008, prepared by Surbana and the Planning Department of UPD within MME
- Al Khor City Zoning Plan and Regulations 2008, prepared by Surbana and the Planning Department of UPD within MME
- Al Thakhira Zoning Plan and Regulations 2008, prepared by Surbana and the Planning Department of UPD within MME
- Al Wakra Zoning Plan and Regulations 2008, prepared by Surbana and the Planning Department of UPD within MME
- Al Wukair Zoning Plan and Regulations 2008, prepared by Surbana and the Planning Department of UPD within MME
- Guidelines and Procedures for Reviewing and Approving of Traffic Impact Studies, prepared by the Planning Department of UPD within MME
- Law no. 30/2002 on Environmental Impact Assessments
- Need for an EIA licence, and TIS and utility service providers approvals

11.2.2 Nevertheless these laws and regulations have been taken into account in preparing the QNDF and have provided important guidance on the preparation of policies and policy actions.

## 11.3 QNDF Legal Status

11.3.1 The preparation of the QNDF has its origins in national policy including the QNV2030, Advancing Sustainable Development and The Millennium Development Goals. It has also taken account of other Ministries and Agencies' plans and proposals (as far as these were available) and has undergone an extensive Government stakeholder consultation process.

11.3.2 The adoption of the QNDF by Emiri Decree provides statutory authority to the Qatar National Development (QND) Regulatory Provisions and gives them the effect of law. This includes the effect of the urban growth boundary on limiting the location and extent of urban development.

11.3.3 All Ministries and Agencies' strategies, plans, and policies which have a spatial or land use impact, are required to reflect the vision, strategic planning objectives and policies of the QNDF.

11.3.4 The QNDF also provides the strategic policy context within which the more detailed plans at the Action Area level and other Agencies' plans (such as QP, QD, PEO, Barwa and QF) will be prepared and implemented. These plans must be consistent with the QNDF and associated regulations and guidelines.

11.3.5 In order to enable the successful implementation of the QNDF and to establish a strong foundation for future planning and growth management, recommendations have been made for a new, integrated planning and development assessment process with improved compliance and enforcement.

11.3.6 Similarly, a new streamlined and more consistent local planning framework is proposed. Municipal Spatial Development Plans (MSDPs) for each municipality are being prepared and work has commenced on the drafting of comprehensive planning legislation for Qatar. By utilizing a standardized local planning framework, zoning systems and development controls will be consistently applied and monitored whether living or working in Doha, Al Wakra or Al Shamal. A standardized local planning framework will also make it easier for the development industry to understand and comply with development controls. Managing and updating a standardized local planning framework will also be easier for MME.

11.3.7 The success of any framework for the management of growth and development is dependent on the appropriateness and effectiveness of compliance and enforcement procedures. It is important that the regulatory planning authority is enabled through a number of tools to take action if a development does not have the required permission, or where the conditions of permission have not been met. Such tools may include (amongst others) fines, rectification works and demolition orders.

## 11.4 Managing Development

11.4.1 The Spatial Strategy forms the foundation for addressing the drivers of change in the QNDF and establishes the spatial framework for the country to achieve the strategic planning objectives. The QNDF allocates all land into one of two national land use categories: Urban Land and Non-Urban Land.

11.4.2 Urban Land includes land suitable for urban purposes, Industrial Land and Qatar Economic Zone land. Non-Urban Land includes Greenbelts, Environmental Protected Areas and Land Under Investigation. These categories provide the strategic land use context for the Regulatory Provisions of the QNDF.

### Urban Land Use Categories

11.4.3 Urban land use categories are types of land considered potentially suitable for urban development. This includes existing urban areas and sites to accommodate a variety of urban uses such as housing, industry, business, community facilities, tourism activities, sport, recreation and public open space.

11.4.4 Urban land use categories include:

- Urban Land: land that is currently being used for, or is potentially suitable for, urban purposes
- Industrial Land: land that is strategically important for the economic stability and growth of the country including QP Industrial Cities, and
- Qatar Economic Zone: land that has been identified within a defined zone to which specific regulations apply designed to encourage foreign investment.

11.4.5 The inclusion of land in an urban land use category does not imply that it can or will be developed for urban purposes. Urban land use categories includes land that may not be suitable for urban development because of physical, environmental, ecological, cultural and open space constraints and/or requirements.

**Non-Urban Land Use Categories**

11.4.6 Non-urban land use categories are types of land considered not suitable for urban development in this plan period. Non-urban land use include lands that have landscape (desert areas), rural production or other non-urban values and include agricultural areas, natural resources, groundwater areas, ecologically significant areas, sabkhas, coastal lands and inter-urban breaks.

11.4.7 Non-urban land use categories include:

- Non-Urban Land: land that is outside of existing urban areas or that is surplus to forecasted requirements of the QNDF, and includes desert areas and inter-urban landscape breaks
- Greenbelt: land intended to contain urban growth within the boundaries of Metropolitan Doha and other urban centers. It includes the natural desert beyond, that is surplus to forecast requirements of the QNDF and can be utilized as part of the National Food Security Program or for large scale Governmental uses
- Environmental Protected Area: land that has significant ecological or environmental value requiring protection from inappropriate development, and
- Land Under Investigation: land that is currently not considered necessary, but potentially may be suitable, for urban purposes dependent upon appropriate timing, the timely provision of infrastructure and the resolution of other constraints such as environmental, ecological, cultural, etc.

11.4.8 The QND Regulatory Provisions restrict the following in Non-Urban land use categories:

- Further fragmentation or subdivision of land
- Urban development, and
- Residential development associated with tourist accommodation.

11.4.9 The QND Regulatory Provisions support the economic diversification of communities outside Metropolitan Doha by allowing a range of developments in non-urban land use categories including:

- Small scale tourist accommodation facilities
- Sport and recreation facilities, and
- Projects declared a National Significant Project by the Minister for Urban Planning using the process established in Section 12.6 of the QND Regulatory Provisions.

11.4.10 The QNDF and the QND Regulatory Provisions apply to all development applications. These revised regulations do not preclude the requirements for TIS, EIA and utility provider approvals, which will be integrated through the revised development assessment process.

## 11.5 Implementing the QNDF

11.5.1 The QNDF will be implemented through managing private sector investments and coordinating public sector programs and commitments. The identification of a hierarchy of urban centers to provide a focus for future mixed-use, mixed density developments will give clarity, direction and confidence to the private sector. Other benefits of this framework approach include the provision of greater access to and choice of transport for all community groups, better urban image and identity and potential for improved quality of life.

11.5.2 Because of its strategic level of planning and cross-sectoral approach, the QNDF provides a framework for integrated planning and policy actions. Ministry and Agency programs and projects can be better coordinated and implemented, leading to the more efficient use of land and other resources, and the reduction of environmental impacts and Qatar's carbon footprint.

11.5.3 Consideration has also been given within the QNDF to the scale of resources needed for capital expenditure and the priority for implementation of the various actions that have been identified. A key priority will be to ensure the short term nature (i.e. 0-10 years) of many of the investment programs of the various Ministries and Agencies identified does not compromise the long term strategy that is being promoted through the QNDF (i.e. 10-20 years +).

11.5.4 It has been assumed that the current levels of public sector investment are maintained in line with population growth and demand, and that long term development growth and investment requirements are not prejudiced because of any short term funding shortfall or other adverse change mechanism.

## 11.6 Governance Strengthening for Implementation

11.6.1 The adoption and implementation of the QNDF and the roll out of its vision, objectives and policies to key Ministry and Agency stakeholders will be supported through a wide range of governance initiatives and legislative improvements.

11.6.2 Legislative improvements are closely linked to the need for upgraded planning governance structures at national, Metropolitan Doha and Municipality levels. These will be required to handle the expanded role and responsibilities that a more comprehensive and inclusive development planning and regulatory control system will necessitate.

11.6.3 An Implementation Committee will be established and managed by the MME to oversee the implementation of the QNDF strategy, policy and policy actions, and to report progress to Government annually. This Committee will also resolve any spatial planning policy differences between Ministries and Agencies. A key function of the Implementation Committee will be to ensure that the QNDF supports and remains consistent with the QNV2030 and the Qatar National Development Strategy (QNDS) for which the MDP&S is responsible.

11.6.4 The Implementation Committee will be supported by a group of Technical Coordinators drawn from senior members of key Ministries and Agencies. This group will be convened on a regular basis by the MME.

11.6.5 Because implementation of the QNDF is a "whole of Government" responsibility, governance arrangements to strengthen cooperation and integration between Ministries and Agencies are important to the success of the QNDF.

11.6.6 The MME will assist this process through training and capacity-building for partner Ministries and Agencies. It will also work closely with the MDP&S, in programs established to strengthen the operational performance of Ministries and Agencies when implementing the QNDS. The QNDF provides the spatial expression of the objectives of the QNDS.

11.6.7 To ensure effective implementation of the QNDF, Ministries and Agencies will also be requested to align their infrastructure and service delivery programs and budgets with the QNDF strategy. This will include the preparation of the Qatar Infrastructure Plan and Program (QIPP) by MDP&S which will provide a comprehensive and integrated program of capital works required to support the spatial development objectives of the QNDF and complement the QNDF National Utilities Network.

11.6.8 Public sector investment programs will be coordinated and focused through the formation of specific Task Forces charged with planning, integrating and implementing area or topic based plans and actions including urban regeneration schemes, affordable housing programs, environmental protection and cultural heritage projects, and transport demand management initiatives.

11.6.9 The preparation of the QIPP and the work of the Task Forces will be overseen by the QNDF Implementation Committee and will inform the Government's annual budget process.

## 11.7 Implementation by Ministries and Agencies

11.7.1 Implementation of the QNDF strategy, policies and policy actions, is a "whole of Government" responsibility. The objectives and policies contained in the QNDF will therefore need to be reflected in the decisions, corporate plans, business programs, and service delivery functions of Ministries and Agencies. Implementation of QNDF policy actions relevant to specific Ministries and Agencies will be their responsibility and will include an onus to regularly report to MME and Government on the degree to which implementation has progressed.

11.7.2 Ministries and Agencies responsible for the implementation of specific policy actions have been identified in the Implementation Responsibility Schedule (Refer to Annex 3). There are three broad categories of responsibility based on lead Ministry or Agency, key stakeholder and consultative stakeholder.

11.7.3 **Lead Agency** is the identified Ministry or Agency responsible for directing and implementing the action. It is also responsible for reporting on an annual basis to the MME on the progress of implementation.

11.7.4 **Key Stakeholder Agencies** are Ministries or Agencies identified as key stakeholders in the determination of policy and/or decisions arising from the implementation of the policy action. They are responsible for supporting the Lead Agency and must provide all reasonable assistance to ensure the policy action is successfully implemented.

11.7.5 **Consultative Stakeholder Agencies** are Ministries or Agencies identified as key stakeholders to be consulted at various times in the implementation of the policy action. They must provide all reasonable assistance and meaningful input to ensure policy action is successfully implemented.

11.7.6 Implementation of the policy actions may include a variety of actions, such as preparing new plans or strategies, planning for, coordinating and constructing new infrastructure and community facilities, reviewing and revising capital expenditure programs, and reviewing and revising business systems and processes.

## 11.8 Implementation by the Development Industry

11.8.1 The QNDF and the QND Regulatory Provisions apply to all development applications. These revised regulations do not preclude the requirement for Transportation Impact Study (TIS), Environmental Impact Assessment (EIA) and utility provider approvals which will be integrated through the revised planning and development assessment process.

11.8.2 Within defined urban growth boundaries, applications for major new development outside identified mixed-use growth centers including transit hubs will not be permitted.

11.8.3 Outside defined urban growth boundaries, greenbelts will be established with a land use focus on securing long term agriculture for food production. Together with landscaping, a distinctive visual buffer will be created to mark the transition from the built-up areas of towns and cities to the natural desert beyond.

11.8.4 Only in exceptional circumstances will applications for development be permitted outside urban growth boundaries. Such cases might arise for example where the development is in the national interest (e.g. national security or to secure future food supplies) and must be declared a National Significant Project as outlined in section 12.6 of the QND Regulatory Provisions.

11.8.5 Criteria to determine the need for a TIS and an EIA and the granting of an environmental licence will be integrated as part of the new planning and development assessment process.

## 11.9 Monitoring and Updating

11.9.1 Monitoring and reporting on the progress of the implementation of the QNDF to the Government, key stakeholders and civil society leaders, will be a key component of implementation.

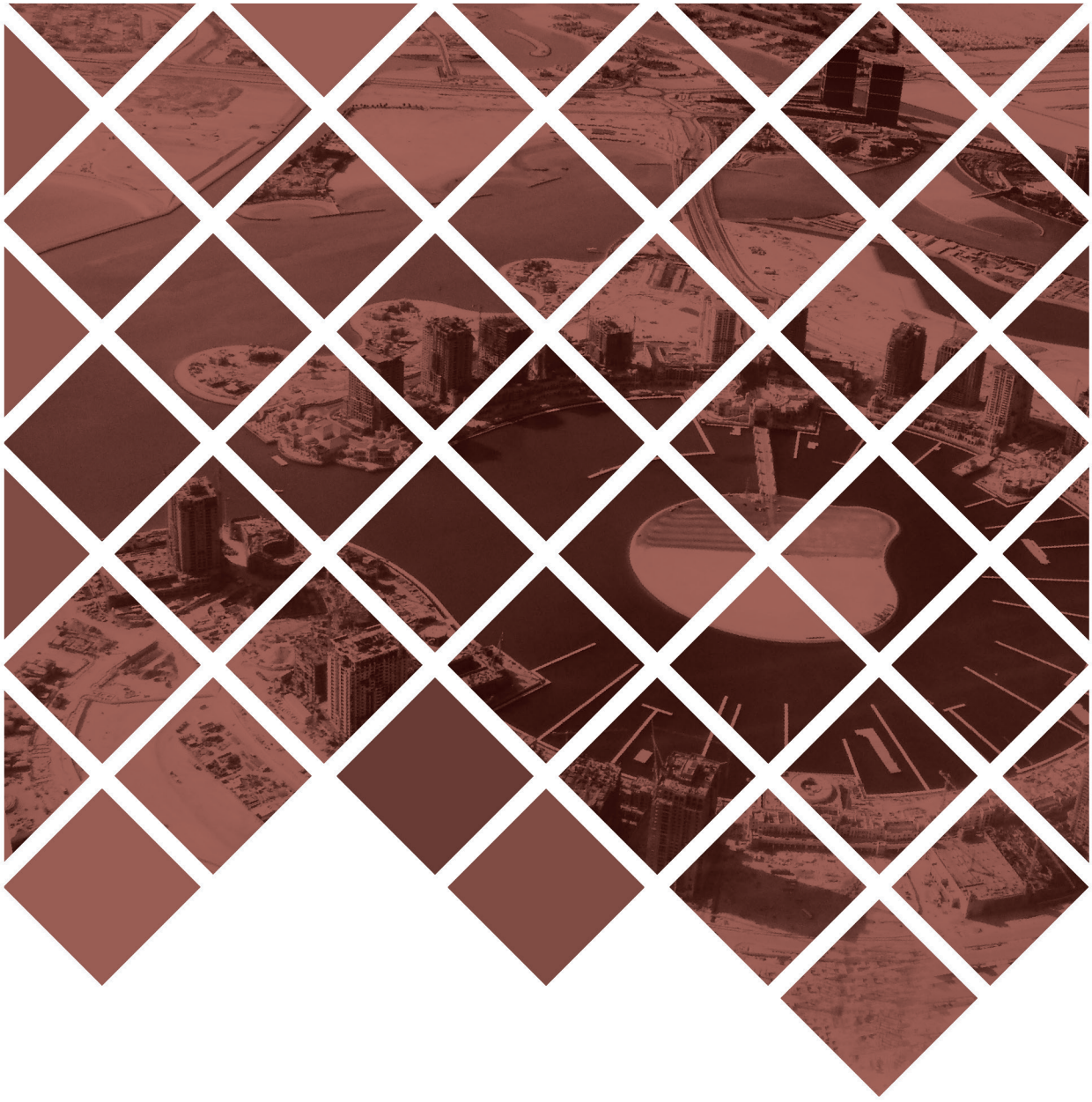
11.9.2 Monitoring is essential for an effective strategy and should contain clear targets or measurable outcomes to assist this process. The strategic planning objectives and Implementation Responsibility Schedule included in the QNDF will form a useful basis for this exercise, the results of which can be used to update and amend future plans and policies.

11.9.3 Supporting information will be provided where applicable, including a number of key performance indicators, to assist measuring the success of implementation.

11.9.4 The Implementation Committee will collate and submit an annual QNDF Monitoring Report to the Government, outlining the progress of each Ministry and Agency against the Implementation Schedule. Consideration will be given to whether the QNDF is achieving the outcomes anticipated and is expected to continue to meet the forecasted needs.

11.9.5 The Monitoring Report will identify (and where necessary, include statements of reason for not achieving):

- Progress of implementation against the timetable and milestones for governance and legislative improvements
- Progress of implementation of the policies and policy actions in the sectoral strategies. This should also include progress against any relevant national and Municipality targets eg. on community facilities provision
- Progress of transport and utility infrastructure providers against the programs established in support of the development strategy
- Any unintended effects identified from implementing the policies and policy actions
- Any policies or policy actions that may need to be re-aligned to reflect changes due to technological improvements, major changes in demand or significant shifts in guidance issued by the Government, and
- The re-prioritization of any policy actions in response to the monitoring process.



# Section E: Managing the Strategy

## 12.0 Qatar National Development Regulatory Provisions

The National Spatial Strategy forms the foundation for the drivers of change in the QNDF and establishes the spatial framework for the country to achieve the strategic planning objectives. The QNDF allocates all land into one of two national land use categories: Urban Land and Non-Urban Land.

Urban Land includes the categories of Urban Land; Industrial Land and Qatar Economic Zone land. Non-Urban Land includes Greenbelt; Environmental Protected Area; and Land Under Investigation. These categories provide the spatial context for the Regulatory Provisions of the QNDF.

The QNDF and the QND Regulatory Provisions apply to all development applications. These Regulatory Provisions do not preclude the requirements for TIS, EIA and utility provider approvals, which will be integrated through the revised planning and development assessment process.

# 12.0 Qatar National Development Regulatory Provisions



## 12.1 Preliminary

### 12.1.1 Title

These Regulatory Provisions may be cited as the Qatar National Development Regulatory Provisions.

### 12.1.2 Regulatory Provisions apply to applications for development

These Regulatory Provisions apply in addition to any relevant matters applying under interim regulations or existing City/ Town Master Plan regulations for assessing and deciding a development application.

### 12.1.3 QND Regulatory Provisions Prevail

1. The QNDF and these Regulatory Provisions are the principal planning instruments governing the physical development of Qatar and where there is any inconsistency with any other regulation, plan, policy or code, the QNDF and these Regulatory Provisions prevail
2. Any regulations, plans, policies and codes being prepared or amended by Government Ministries and Other Government Agencies, that relate to the physical development of Qatar, must reflect and align with the QNDF and these Regulatory Provisions

### 12.1.4 QND Regulatory Provisions do not exclude other regulations

1. These Regulatory Provisions do not exclude or prevent other applicable regulations by Government Ministries and Other Government Agencies from applying to development

### 12.1.5 Definitions

The Supplement to these Regulatory Provisions defines the terms used in the regulations.

### 12.1.6 Land divided into categories

1. The QNDF allocates all land in Qatar into one of two main categories:
   a. Urban Land, including Urban Land; Industrial Land and Qatar Economic Zone
   b. Non-urban Land, including Greenbelt, Environmental Protected Area and Land Under Investigation

### 12.1.7 When these Regulatory Provisions do not apply

1. These Regulatory Provisions do not apply to:
   a. Development that is exempt from making a development application; or
   b. Applications for development located on land in the Urban Land, Industrial Land or Qatar Economic Zone categories; or
   c. Applications for a residential dwelling or associated dwellings on an existing lot provided the total number of dwellings does not exceed 4; or
   d. Applications for development that were lodged with Ministry of Municipality and Environment before the date of commencement; or
   e. Development that is generally in accordance with a development approval given by the Ministry of Municipality and Environment before the date of commencement; or

f. Development that is:
   i. declared to be a National Significant Project; and
   ii. confirmed in writing by the Minister for Municipality and Environment to be exempt from these Regulatory Provisions

2. Subsection (1)(d) and (e) applies even if further development permits are needed to facilitate an approval

## 12.2 Non-urban Land and assessable development

12.2.1 **Development for an urban purpose in the Non-urban Land category is not permitted.**

12.2.2 **Subsection 12.2.1 does not apply if the proposed use is for:**

1. outdoor recreation; or
2. a restaurant, café, or function room that has capacity for no more than 100 people and does not include residential development; or
3. a small scale tourist accommodation facility and does not include residential development

12.2.3 **When establishing a new urban purpose in the Non-urban Land category that complies with these Regulatory Provisions:**

1. a submission must be made to the Minister for Municipality and Environment providing details of:
   a. The location of the land; and
   b. The proposed urban purpose; and
   c. Evidence of compliance

## 12.3 Greenbelt and assessable development

12.3.1 **Development for an urban purpose in the Greenbelt category is not permitted.**

12.3.2 **Subsection 12.3.1 does not apply if the proposed use is for:**

1. outdoor recreation; or
2. the achievement of the National Food Security Program; or
3. for primary industry

12.3.3 **When establishing development in accordance with section 12.3.2:**

1. a submission must be made to the Minister for Municipality and Environment providing details of:
   a. The location of the land; and
   b. The proposed urban purpose; and
   c. Evidence of compliance

## 12.4 Environmental Protected Area and assessable development

12.4.1 **Development for an urban purpose in the Environmental Protected Area category is not permitted.**

12.4.2 **Subsection 12.4.1 does not apply if the proposed use is:**

1. confirmed in writing by the Minister for Municipality and Environment to be exempt from these Regulatory Provisions

## 12.5 Land Under Investigation and assessable development

12.5.1 **Development for an urban purpose in the Land Under Investigation category is not permitted.**

12.5.2 **Subsection 12.5.1 does not apply if the proposed use is for:**

1. outdoor recreation; or
2. the construction or provision of infrastructure

## 12.6 Declaring National Significant Projects

12.6.1 **The Minister for Municipality and Environment may declare any of the following types of project to be a National Significant Project if, in his opinion, the project:**

1. is a project of national importance to the State; or
2. is an infrastructure facility; or
3. is a project that is economically, environmentally or socially significant to the State; or
4. affects an interest of the State or Gulf Region

12.6.2 **In deciding to declare a project to be a National Significant Project, the Minister may have regard to any of the following:**

1. the public interest or the general welfare of persons in the area in which the project is to be undertaken;
2. whether an environmental license is likely to be required;
3. any other matter the Minister considers relevant

12.6.3 **The Minister may decide to:**

1. Declare the project a National Significant Project and may attach conditions that limit or control the project; or
2. Not declare the project a National Significant Project.

12.6.4 **The Ministers decision is final and no appeals or representations may be made in respect to his decision.**

## 12.7 Amending or replacing the QNDF

12.7.1 **The Minister for Municipality and Environment may, at anytime:**

1. amend the QNDF; or
2. replace the QNDF with a new national development framework

12.7.2 **When amending the QNDF, or making a new national development framework, the Minister for Municipality and Environment must:**

1. prepare a draft national development framework
2. carry out a period of consultation with Government Ministries and Other Government Agencies and any other entity or individual the Minister deems appropriate, for a period of not less than 40 business days
3. make available the draft national development framework for inspection and purchase
4. accept all signed written submissions about any aspect of the draft national development framework by any person who provides their full name, address and contact details
5. finalize the draft national development framework considering every properly made submission
6. produce a report for public inspection detailing how properly made submissions were dealt with in finalizing the draft national development framework

## 12.8 Making Minor Amendments to the QNDF

12.8.1 **A minor amendment means an amendment correcting or changing:**

1. an explanatory matter about the QNDF; or
2. the format or presentation of the QNDF; or
3. a grammatical or mapping error in the QNDF; or
4. a factual matter incorrectly stated in the QNDF; or
5. redundant or outdated terms

12.8.2 **The Minister for Municipality and Environment may, at anytime, make a minor amendment to the QNDF.**

12.8.3 **When making a minor amendment to the QNDF, the Minister for Municipality and Environment, must:**

1. Produce a report for public inspection detailing what minor amendment was made and for what purpose

## 12.9 Giving effect to a new or amended (including minor amendments) National Development Framework

12.9.1 After the Minister for Municipality and Environment has finalized the draft national development framework, that Minister must seek an Emiri Decree stating the day the national development framework and supporting Regulatory Provisions commences.

## 12.10 Qatar National Development Regulatory Provisions Supplement Dictionary

12.10.1 **Assessable Development** means any development that requires planning approval prior to commencement.

12.10.2 **Development** is any of the following activities:

a. carrying out building work
b. reconfiguring a lot
c. rezoning

12.10.3 **Development Application** means an application for approval to undertake development.

12.10.4 **Intensive Animal Husbandry** means the use of premises for commercial or other non-domestic operations involving the raising, keeping or farming of animals requiring supplementary feeding and containment in feedlots, sheds, pens, ponds or tanks.

12.10.5 **Land Under Investigation** is land that is currently not considered necessary, but potentially may be suitable, for urban purposes dependent upon environmental constraints, appropriate timing and the timely provision of infrastructure.

12.10.6 **Minister for Municipality and Environment** means the Minister responsible for the Government department that has primary responsibility for urban planning and development.

12.10.7 **National Significant Project** means a project declared a National Significant Project by the Minister for Municipality and Environment using the process established in the Qatar National Development Regulatory Provisions of the QNDF.

12.10.8 **Non-urban Land** is that land identified in the QNDF Structure Plans which is considered not suitable for development for urban purposes and includes areas set aside Environmental Protected Areas, city green-belt, desert land, small scale tourist accommodation and primary industry.

12.10.9 **Outdoor Recreation** means a recreation or sports activity that:

a. has a direct connection to the rural, natural or resource value of the premises; and
b. is performed outside of a building; and
c. requires areas of open space; and
d. may include work necessary to manage safety and ecological impacts

12.10.10 **Primary Industry** means agriculture, apiculture, aquaculture, horticulture, and pastoral industry and includes intensive animal husbandry.

12.10.11 **Short Term Temporary Accommodation** means accommodation provided for a period not exceeding 3 months.

12.10.12 **Small Scale Tourist Accommodation Facility** means a facility that makes units or space available for separate hire over a short term by tourists or travelers including, but not limited to a holiday cabin, a motel room, a hotel room, an apartment, a guesthouse, a camping site and a caravan park site provided:

a. the total number of separate units or spaces made available is no more than twenty; and
b. the total capacity of the facility is for no more than 100 people; and
c. the gross floor area for tourist accommodation is no more than 1000sq m.

The term does not include medium to long stay and permanent accommodation.

12.10.13 **Reconfiguring a Lot** means:

a. creating lots by subdividing another lot; or
b. amalgamating 2 or more lots; or
c. rearranging the boundaries of a lot by registering a new plan of subdivision; or
d. dividing land into parts by agreement rendering different parts of a lot immediately available for separate disposition or separate occupation; or
e. creating an easement giving access to a lot from a constructed road

12.10.14 **Temporary Accommodation** means accommodation that is intended to be provided on site, or immediately adjoining a site, for a period of not more than three years and:

a. contains a sleeping compartment, whether or not it is used; or
b. is a building that contains facilities required to service a sleeping compartment

12.10.15 **Tourist Accommodation** means residential development that is not used for permanent accommodation and includes a small scale tourist accommodation facility.

12.10.16 **Urban Land** is that land identified in the QNDF Structure Plans which is considered potentially suitable for development or redevelopment for urban purposes and includes uses such as housing, industry, business/commercial, community facilities, tourist facilities, sport, recreation and urban open space.

The identification of land in the Urban Land use category does not imply that it can be developed for urban purposes. Urban Land includes land that may not be suitable for urban development because of physical, environmental, ecological, cultural and open space constraints and/or requirements.

12.10.17 **Urban Purpose** means a residential, industrial, retail, commercial, sporting, recreational or community activity normally found in a city or town.

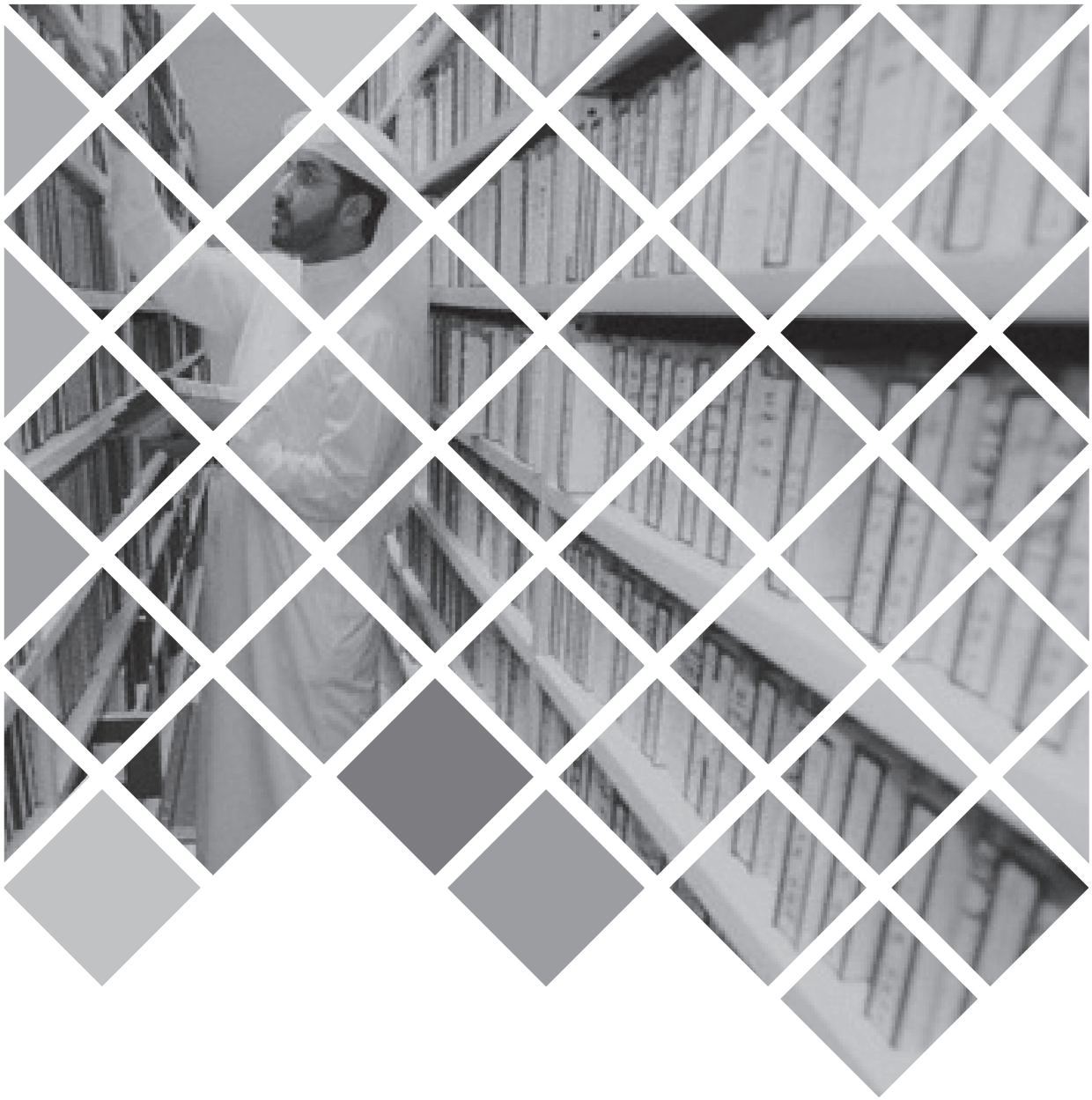
The term includes a tourist facility that does not have a direct connection with the rural, natural or resource value of the surrounding area, including, for example, a general theme park, water slide or go kart track.

The term does not include a purpose reasonably associated with a predominant non-urban purpose for which the land or surrounding area is used, including, for example:

a. farm workers accommodation on a farm
b. a mechanical repair workshop for farm machinery or vehicles
c. vehicle storage associated with transporting rural produce or resources; or
d. a produce store predominantly selling local produce

The term also does not include:

a. a single residential dwelling on a lot;
b. other purposes incidental to the purpose a single residential dwelling on a lot, for example:
    i. home based business; or
    ii. relatives accommodation
c. tourist accommodation, including, for example:
    i. farm stay and bed and breakfast accommodation
    ii. other tourist accommodation up to a maximum of 20 accommodation units;
d. service station;
e. local shop, if the floor area for retail purposes does not exceed 250sq m;
f. restaurant, café or function room catering for no more than 100 persons;
g. sporting, recreation or community purpose predominantly serving a local area;
h. extractive industry, including, for example, crushing and screening;
i. aeronautical facilities;
j. emergency services facilities;
k. water cycle management infrastructure;-
l. waste management facilities;
m. wholesale nursery;
n. aquaculture; or
o. animal boarding facility



# Annexes

# Annex 1 Schedules and Guidelines



## Schedule 1 QNDF Hierarchy of Centers

The following Schedule provides the hierarchy of Capital City, Metropolitan and Town Centers within which applications for major[1] new mixed-use development schemes or regeneration schemes will be permitted[2]

| | Center | Location |
|---|---|---|
| Strategic | Capital City | • West Bay[3]<br>• Downtown Doha[3]<br>• Airport City |
| | Metropolitan | • Al Rayyan North[4]<br>• Al Rayyan South<br>• New Al Wakra[4]<br>• Lusail |
| | Town | • Al Wakra<br>• Umm Slal Mohammed[4]<br>• Al Gharrafa<br>• Al Sadd[4]<br>• Al Matar<br>• Qatar University<br>• Doha Industrial Area<br>• Al Khor[4]<br>• Al Shamal[4]<br>• Umm Qarn[4]<br>• Al Shahhaniya |
| | QP Industrial Cities | • Ras Laffan<br>• Dukhan<br>• Mesaieed |
| Local Area | District and Local | District Centers and Local Centers will be identified through the Municipal Spatial Development Plan preparation process. The following criteria are used to define these centers:<br>• Proximity to other District Centers, Town Centers and Metropolitan Centers<br>• Accessibility to the strategic highway network and public transport services<br>• Relationship to catchment population for delivery of services (Refer to Schedule 2B)<br>• Relationship to existing built form and local characteristics<br>• Proximity to existing economic activities, community facilities and infrastructure |

[1] A major development is defined as follows:
- A residential development that has 30 or more housing units, or provides housing for 150 or more workers, or
- Any other development that is expected to generate 100 or more vehicle trip ends (sum of departures and arrivals) during the AM or PM peak hour

[2] Specific locations for each center are subject to more detailed planning studies, and will evolve as part of the Area Plan process. Each center will develop over time in response to a variety of factors including land availability, developer interest and Government interventions and priorities

[3] Incorporates Government Ministry or Agency office functions

[4] Incorporates Municipality administration office function

## Schedule 2A Mix of Land Uses permitted within Capital City, Metropolitan and Town Centers

The following Schedule provides a guide to the type of land uses that will be permitted within centers identified in Schedule 1

| Centers | Catchment Population | Description of Uses |
|---|---|---|
| **Capital City Center**[1] | National Population (2 million+) | • Provides a specialist national or international level focus supported by a mix of uses and serves the whole of Qatar (refer to Schedule 3 for details)<br>• Medium and high density residential development<br>• Community facilities provided in accordance with Schedule 6A |
| **Metropolitan Center** | 150,000-300,000 | • Provides multi-purpose commercial services including:<br>  • department stores<br>  • major supermarkets<br>  • discount department stores<br>  • hotels<br>  • entertainment and restaurants<br>  • commercial offices for professional services, trade and tourism, communications and logistics companies etc.<br>• Medium and high density residential development<br>• Community facilities provided in accordance with Schedule 6A |
| **Town Center** | 50,000-100,000 Inside Metropolitan Doha<br><br>5,000+ Outside Metropolitan Doha | • Provides commercial services needs including:<br>  • supermarkets<br>  • discount stores<br>  • convenience stores<br>  • entertainment and local restaurants<br>  • commercial offices for local businesses (e.g. building companies, real estate agents).<br>• Mixed density residential development<br>• Community facilities provided in accordance with Schedule 6A |
| **QP Industrial Cities** | 25,000-120,000 | as above |

[1] Refer to Schedule 3 for specialized land uses in each Capital City Center

## Schedule 2B Mix of Land Uses permitted within District and Local Centers

The following Schedule provides a guide to the type of land uses that will be permitted within District and Local Centers

| Centers | Catchment Population | Description of Uses |
|---|---|---|
| **District Center** | 30,000-50,000 Inside Metropolitan Doha<br><br>1,000 - 5,000 Outside Metropolitan Doha | • Provides daily and weekly convenience shopping needs including:<br>  • supermarkets<br>  • convenience stores<br>  • local shops (e.g. bakery, dry cleaners).<br>• Medium density residential development<br>• Community facilities provided in accordance with Schedule 6B |
| **Local Center**[1] | < 400m radius | • Provides daily convenience shopping requirements<br>• Community facilities provided in accordance with Schedule 6B |

[1] District and Local Centers will be identified in Municipal Spatial Development Plans

## Schedule 3 Mix of Land Uses Permitted within the Capital City Precinct

| In addition to residential and community facilities, the following Schedule provides a guide to the type of land uses that will be permitted in the Capital City Precinct | |
|---|---|
| **Within Capital City Centers** | |
| **West Bay** | • Mixed-use Central Business District (CBD) with a focus on financial institutions<br>• International and multinational company HQ, banks and businesses<br>• 5 star hotels and business hotels<br>• High quality public realm<br>• State of the art public transportation and TOD[1] |
| **Downtown Doha** | • Mixed-use Commercial District with a focus on culture and heritage<br>• Business hotels<br>• Government Ministries and Agencies<br>• Doha Cultural Quarter[2]<br>• High quality public realm<br>• State of the art public transportation and TOD[1] |
| **Airport City**[3,4] | • Mixed-use Commercial District with a focus on high technology knowledge-based businesses<br>• Business hotels<br>• High quality public realm<br>• State of the art public transportation and TOD[1] |
| **Outside of Capital City Centers** | |
| • Government Institutions<br>• Law Courts<br>• Major department stores and specialized consumer goods<br>• General Post Office<br>• National monuments, parks and waterfront corniche<br>• Grand Juma Mosque<br>• National and international museums<br>• Major leisure, recreation, tourism and entertainment facilities<br>• Business hotels<br>• State of the art public transportation and TOD[1] | |
| [1] All major new transport infrastructure to be routed underground<br>[2] Including Islamic Cultural Center, Downtown Doha Conservation Area (Zones 4 and 5) heritage buildings, Souq Waqif and the Gold Souq<br>[3] Airport City is expected to be developed after HIA is fully operational<br>[4] Subject to any height restrictions imposed by the Civil Aviation Authority (CAA) | |

## Schedule 4A Light and Medium Industries

| The following Schedule provides the list of light and medium industries permitted within identified mixed-use industrial areas | |
|---|---|
| **Light Industry** [1] | Assembly, storage and wholesale distribution of pre-manufactured parts including:<br>• electronics, computers and small machinery<br>• prefabricated building materials<br>• food and beverage related products<br>• textiles<br>• agricultural products<br>• repair of personal and household appliances<br>• motor vehicle services and repairs (not including panel beating) |
| **Medium Industry** | Manufacturing of materials into products including:<br>• machinery, equipment and components<br>• food related products<br>• textiles<br>• leather<br>• sign-making<br>• wood products<br>• printing<br>• building materials<br>• electrical equipment<br>• transport equipment<br>• motor vehicle repairs (including panel beating) and<br>• pharmaceuticals |

[1] Light industrial processes by definition do not adversely affect local amenity through the production of noise, light or air pollutants, or waste materials

## Schedule 4B Industries Prohibited in the Small and Medium Enterprise Industrial Area (SMSIA)

| The following Schedule provides the list of industries prohibited from being developed in the SMSIA | |
|---|---|
| **SMSIA** | Industries prohibited in the SMSIA include:<br>• precast factories<br>• ready mix concrete factories<br>• concrete blocks factories<br>• interlock factories<br>• bitumen factories<br>• bakeries<br>• printing workshops<br>• lubricants and oil recycling factories and<br>• industries lacking the use of technological innovations |

## Schedule 5 Knowledge-Based Industries[1]

| The following Schedule provides the list of knowledge-based industries permitted within mixed-use centers |
|---|
| • Green Technologies including Biotechnology and Renewable Energy<br>• Electronics<br>• Telecommunications and Information Technology<br>• Health<br>• Education<br>• Media and Communications<br>• Creative Industries<br>• Aerospace and Aeronautical Engineering<br>• Pharmaceuticals |
| Support activities include |
| • Consulting<br>• Research and Development<br>• Technology Incubators<br>• Showrooms |

[1] Knowledge-based industries are defined as industries which are intensive in the use of technology and applied learning

## Schedule 6A Planning Guidelines for the Provision of Community Facilities

The following Schedule provides Planning Guidelines for the provision of Community Facilities according to the population catchment to be served[1]

| Catchment Level | Metropolitan Doha (MD) | | Outside of Metropolitan Doha (MD) | |
|---|---|---|---|---|
| | Centers | Community Facilities | Centers | Community Facilities |
| **Capital City** | **Capital City Centers**<br>• Downtown Doha<br>• West Bay<br>• Airport City | • Government Office HQ[2]<br>• National Post Office[2]<br>• National Museum[2]<br>• National Library[2]<br>• National Level Park[2]<br>• Emergency Response Service HQ[2]<br>• Special Youth Center<br>• Specialized Education Research Center | | |
| **Metropolitan** | **Metropolitan Centers**<br>• Al Rayyan North[3]<br>• Al Rayyan South<br>• New Al Wakra<br>• Lusail | • Municipality Administrative Office[3]<br>• Grand Juma Mosque<br>• Secondary Hospital<br>• MoI One Stop Center<br>• Metropolitan/Municipality Library[3]<br>• Emergency Response Main Station<br>• General Youth Center<br>• Main Post Office<br>• Metropolitan/Municipality Park<br>• College/Vocational Training Center | | |
| **Town/ Industrial City** | **Town Center**<br>• Al Sadd[3]<br>• Umm Slal Mohammed[3]<br>• Al Wakra[3]<br>• Al Gharrafa<br>• Al Matar<br>• Qatar University<br>• Doha Industrial Area | • Municipality Office[3]<br>• Grand Juma Mosque<br>• MoI Service Counter<br>• Local Post Office<br>• General Youth Center<br>• Social Community Center<br>• Town/Municipality Library[3]<br>• Town /Municipality Park<br>• Emergency Response Local Station[5]<br>• Secondary School<br>• Multi-Level Private Schools<br>• SMW hospital (near Industrial Area)[6] | **Town Center**<br>• Al Khor[3,4]<br>• Al Shahhaniya[4]<br>• Al Shamal[3]<br>• Umm Qarn[3]<br><br>**QP Industrial City**<br>• Ras Laffan<br>• Mesaieed<br>• Dukhan | Same as Town Centers in MD. Centers which have wider service coverage[4] will have additional functions such as:<br>• Secondary Hospital<br>• Emergency Response Main Station<br>• Municipality Park<br>• Main Post Office<br>• MoI One Stop Center |

1 Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities

2 Community facilities to be located in the Capital City Precinct

3 Location of Municipality Administration Office

4 Centers which have wider service catchment for some community facilities

5 Only for selected District Centers to cover the catchment area within target response time

6 Only for selected Town Centers near designated Industrial Areas

## Schedule 6B Planning Guidelines for the Provision of Community Facilities within District and Local Centers

The following Schedule provides Planning Guidelines for the provision of Community Facilities according to the population catchment to be served[1]

| Catchment Level | Metropolitan Doha | Outside of Metropolitan Doha |
|---|---|---|
| | **Community Facilities** | **Community Facilities** |
| **District** | • PHC/SMW PHC Center<br>• District Park<br>• Preparatory School<br>• Primary School<br>• Emergency Response Local Station[2] | • PHC/SMW PHC Center<br>• District Park<br>• Preparatory School<br>• Primary School<br>• Emergency Response Local Station[2]<br>• Local Post Office<br>• General Youth Center<br>• MoI Service Counter |
| **Local** | • Juma Mosque<br>• Kindergarten<br>• Local Park | • Juma Mosque<br>• Kindergarten<br>• Local Park |

1 Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities

2 Only for selected District Centers to cover the catchment area within target response time

## Schedule 7 Planning Guidelines for the Provision and Location of Education Facilities

The following Schedule provides Planning Guidelines for the provision and location of Education Facilities by the level of facility[1]

| Facility | No. of Schools (Metropolitan Doha (MD) and Al Khor) | | No. of Schools (Outside of MD and Al Khor) |
|---|---|---|---|
| **Primary School** | 4 Schools/ District[2] | 2 x Government Schools (1 for Boys and 1 for Girls)[2]<br>2 x Private Schools (1 for Boys and 1 for Girls)[4] | 2 Schools (1 for Boys and 1 for Girls)/ District[3] |
| **Preparatory School** | 4 Schools/ 2 Districts[2] | 2 x Government Schools (1 for boys and 1 for Girls)[2]<br>2 x Private Schools (1 for Boys and 1 for Girls)[4] | 2 Schools (1 for Boys and 1 for Girls) in every 2 Districts[3] |
| **Secondary School** | 4 Schools/ Town[2] | 2 x Government Schools (1 for Boys and 1 for Girls)[2]<br>2 x Private Schools[4] | 2 Schools (1 for Boys and 1 for Girls)/ Town[3] |
| **Multi-level School** | | 10 x Private Schools/ Town[5] | |

1 Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities

2 No. of schools based on the capacity of 625 students/school (existing Government standards for Independent schools)

3 School size will be flexible (smaller than equivalent schools in Metropolitan Doha)

4 No. of private schools is based on the capacity of existing standards for Independent schools, adjusted according to the actual capacity of private schools

5 No. of schools/town based on the capacity of 1,800 students/school adjusted based on the actual capacity of schools

**Guidelines for the Location of Facilities**

- Primary and preparatory schools (Government): equitably distributed in local residential areas, and at district centers
- Secondary school (Government): located in strategic locations accessible via a range of transport modes
- Primary or preparatory school (private-single level/small scale): distributed in local residential areas
- Secondary (private), multi-level (private), and large scale schools: located at strategic locations accessible via a range of transport modes
- School sites will be co-located to promote sharing of play areas/school recreation facilities, transportation services, parking spaces at locations accessible via a range of transport modes.

## Schedule 8 Planning Guidelines for the Provision and Location of Health Service Facilities

| The following Schedule provides Planning Guidelines for the provision and location of Health Facilities by level of facility[1] | | | |
|---|---|---|---|
| **Facility** | **Facility Type** | **Catchment Level** | **Guidelines for the Location of Facilities** |
| **Hospital** | **Tertiary Hospital** | Capital City | Hospital site will be located at mixed-use centers, accessible via a range of transportation modes<br><br>Hospital sites should not be near high impact uses as defined in Schedule 14 |
| | **Secondary Hospital** | Metropolitan and Town Center outside of MD which has wider service coverage | |
| | **SMW Hospital** | Town near a designated Industrial Area<br>Catchment population: 100,000+(SMW) | |
| **PHC Center** | **General PHC Center** | District Catchment population: 30,000 - 50,000 (Metropolitan Doha and Al Khor)<br>1,000 – 5,000 (Rural Area) | PHC Centers will be located at mixed-use District Centers, co-located with local shops and other community facilities with good public transport access |
| | **SMW PHC Center** | Selected District<br>Catchment population: 50,000-100,000 (SMW) | SMW PHC Centers will be located close to SMW population catchments (e.g. Doha, Al Khor and Al Wakra Industrial Areas, QEZ3 and Mesaieed IC etc.)<br>SMW PHC Centers to be co-located in mixed-use centers with retail, open spaces, and other service facilities, and have good public transport access |

[1] Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities

## Schedule 9 Planning Guidelines for the Provision and Location of Mosques

The following Schedule provides Planning Guidelines for the provision and location of Mosques by level of facility [1]

| Facility | Facility Type | Catchment Level | Guidelines for Location |
|---|---|---|---|
| Mosque | State Mosque | Capital City | • co-located with national level park<br>• setting to be safeguarded to protect views from and to the State Mosque<br>• accessible by a range of transport modes |
| | Grand Juma Mosque | Metropolitan/Town | • located at identified mixed-use centers (Metropolitan/Town Centers)<br>• located with an urban plaza (open space) |
| | Juma Mosque | Local (within 400m radius) | • located along arterial roads, but should not be at a major junction, nor directly accessed from arterial roads<br>• located at local centers, where residents in the area can access without crossing major roads<br>• co-located with local parks, local shops and kindergartens, and shared parking areas |
| | Daily Mosque | Neighborhood (within 250m radius) | • located at local centers, easily accessible by walking from all residential units in the area without crossing arterial roads<br>• co-located with neighborhood parks and local daily shops and<br>• connected with the pedestrian network |

[1] Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities

## Schedule 10 Planning Guidelines for the Provision and Location of Emergency Response Service Stations

The following Schedule provides Planning Guidelines for the provision and location of Emergency Response Service Stations (ERSS) by level of facility[1]

| Facility | FacilityjType | Catchment Level | Target Response Time and Risk Level (Mol)[1] | | |
|---|---|---|---|---|---|
| Civil Defense Station | Service HQ | Capital City | Risk Levels | Area | Target Response Time |
| | Main Station | Metropolitan, Town with wider service coverage, Al Khor and Al Shahhaniya | Special Risk Area | Industrial Area /Airport | Max. 3 minutes |
| | | | High Risk Area | Capital City Precinct | Max. 4 minutes |
| | | | | Other Centers | Max. 6 minutes |
| | Local Station | Location to cover the catchment area within the target response time | Medium Risk Area | Residential Areas | Max. 10 minutes |
| | | | Low Risk Area | Non-Urban Areas | 15 minutes |
| Ambulance Station | Service HQ | Capital City | Target Response Time and Risk Levels (HMC)[2] | | |
| | | | Area Types | Target Response Time | Catchment Radius |
| | Main Station | Metropolitan, Town (with wider service coverage; Al Khor and Al Shahhaniya) | High-Rise Area | within 8 minutes | 4km radius |
| | | | Med-Rise Area | within 8 minutes | 5km radius |
| | | | Low-Rise Area | within 8 minutes | 6km radius |
| | Local Station | Location to cover the catchment area within the target response time | Rural Area | within 15 minutes | 20km radius |
| Police Stations | Service HQ | Capital City | | | |
| | Main Station | Metropolitan, Town (with wider service coverage; Al Khor and Al Shahhaniya) | | | |
| | Local Station | Town, selected District | | | |
| Guidelines for the Location of ERSS | | • Emergency response service stations will be located at sites with good access to the strategic highway network<br>• Co-location of emergency response service stations is recommended | | | |

1 Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities

Sources

1 *Ministry of Interior, (2008)*

2 *Hamad Medical Corporation, (2008)*

## Schedule 11 Planning Guidelines for the Provision and Location of Government and Social Service Facilities

The following Schedule provides Planning Guidelines for the provision and location of Government Service Facilities by level of facility[1]

| Facility | Facility Type | Catchment Level | Guidelines for the Location of Facilities |
|---|---|---|---|
| **Post Office** | National Post Office | Capital City | To be located in identified mixed-use centers.<br>Should have good access from a range of transportation modes |
| | Main Post Office | Metropolitan/Town (Outside Metropolitan Doha) | |
| | Local Post Office | Town (in Metropolitan Doha)/ District (Outside of Metropolitan Doha) | |
| **MoI One Stop Service Centers** | MoI Service HQ | Capital City | Should have good access from a range of transportation modes. (public transportation and road networks)<br>Service counters are recommended to be accommodated in the major community facilities in mixed-use centers |
| | MoI One Stop Center | Metropolitan/Town (outside Metropolitan Doha) | |
| | One Stop Center/ MoI Service Counter | Town (in Metropolitan Doha)/District (Outside of Metropolitan Doha) | |
| **Public Libraries** | National Library Special Library | Capital City | Library facilities will be co-located with other community facilities and commercial facilities at mixed-use centers<br>Town level branch library will be located in Youth Centers, subject to coordination and agreement by the Ministry of Culture and Sports |
| | Metropolitan / Municipality Library | Metropolitan/Town (center of Municipality) | |
| | Town Library | Town | |
| **Youth Centers** | General Youth Center | Metropolitan/Town/District (Outside of MD) | Youth Centers will have access via a range of transportation modes<br>Location of Special Youth Centers will be based on their specialties |
| | Special Youth Center | Near the Town/selected District | |
| **Social Community Centers** | Social Community Center | Metropolitan/Town | Social development centers will be located in General Youth Centers, subject to coordination between Ministry of Aministrative Development, Labor and Social Affairs and the Ministry of Culture and Sports |

[1] Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities

## Schedule 12 Planning Guidelines for the Provision and Location of Sports Facilities

| The following Schedule provides Planning Guidelines for the provision and location of Sports Facilities by level of facility[1] | | | |
|---|---|---|---|
| **Facility** | **Catchment Level** | **Planning Criteria (Catchment population)** | **Guidelines for the Location of Facilities** |
| **Football** | **Town** | 1 pitch/50,000-100,000 | Multi purpose grass pitches shall be located at Town/City Park |
| **Cricket** | **Town** | 1 pitch/50,000-100,000 | Multi purpose grass pitches shall be located at Town/City Park |
| **Roller skating** | **Town** | 1 course/50,000-100,000 | Paved area or course shall be located at Town/City Park |
| **Jogging** | **Town** | 1 course/50,000-100,000 | Soft paving shall be located at Town/City Park |
| **7-a-side mini-soccer** | **District** | 1 pitch/ 30,000-50,000 | Multi purpose grass pitches shall be located at District Park |
| **Volleyball** | **District** | 1 court/30,000-50,000 | Paved court shall be located at District Park |
| **Tennis** | **District** | 2 courts/30,000-50,000 | Two hard surfaced court shall be located at District Park |
| **Basketball** | **Local** | 1 court/3,000 | A hard surfaced court shall be located at Local Park |
| [1] Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities | | | |

Sources

1 *Hong Kong Planning Standards and Guidelines, Hong Kong (2007)*

2 *Open Space Guidelines and Standards, National Recreation and Parks Association, USA (1996)*

## Schedule 13 Planning Guidelines for the Provision and Location of Parks

| The following Schedule provides Planning Guidelines for the provision and location of Parks by level of facility[1] | | | | | |
|---|---|---|---|---|---|
| **Facility** | **National Level Park** | **Metropolitan/ Municipality Park** | **Town Park** | **District Park** | **Local Park** |
| **Catchment Level** | **National** | **Metropolitan** | **Town** | **District** | **Local** |
| **Planning Criteria (Pop. Served)** | 2 million+ | 100,000-300,000 | 50,000-100,000 | 30,000-50,000 | 3,000 with Catchment Radius<400m |
| **Site Area Range (ha)** | N/A | 60-200 | 5-15 | 2-5 | 0.4-2 |
| **Type of Use** | Comprehensive | Comprehensive | Comprehensive | Multi-Purpose | Single Purpose |
| **Public** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Family Only** | Specific Days | Specific Days | ✓ | ✓ | ✓ |
| **Women Only** | Segregated Area | Segregated Area | Segregated Area | Segregated Area | ✓ |
| **Children Play Area** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Sports Facilities** | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Guidelines for the Location of Parks** | National level Parks will be located at the focus of national interest and activity, or on large scale sites near the strategic transport network | These parks will accommodate different types of uses. Family days can be arranged by schedule. Parks within the area can be used for family or sports and/or public purposes | Town Parks will accommodate different types of uses. Town Parks within a city can have a specific use such as family or sports and/or public use | District Parks will accommodate several types of use. District Parks can have a specific use such as family or sports and/or public use | Local Parks will be co-located with Juma Mosques at local centers. Each park will have a single use and will be strategically distributed through the District according to the demographic character of the area |
| 1 Subject to local variations according to particular demographic composition, existing provision, co-location opportunities and proximity to other facilities | | | | | |

Sources

1 *Open Space Guidelines and Standards, National Recreation and Parks Association, USA (1996)*
2 *Level of Services Standards, Municipal Research & Services Center of Washington, USA (1994)*
3 *Hong Kong Planning Standards and Guidelines (2007)*
4 *Planning Codes, Qatar (1987)*
5 *Final National and Regional Official Physical Development Plan, Qatar (1996)*
6 *Community Facilities Standards in Dubai Urban Area, UAE (2003)*
7 *Dubai Parks and Open Space Standards, UAE (2007)*
8 *Third Kuwait Plan Review, Kuwait Municipality (2005)*
9 *Physical Panning Standards, Supreme Committee for Town Planning, Oman (1989)*
10 *Oman Physical Planning Standards, Supreme Committee for Town Panning, Oman (2001)*
11 *Supplementary Planning Guidance, Mayor of London, UK (2008)*

## Schedule 14 High Impact Land Uses

| The following Schedule provides the list of High Impact Uses that will not be permitted in centers | | | |
|---|---|---|---|
| **Incompatible Land Uses** | **Buffer Distance Guidance** | **Source** | **Potential Uses permitted in Buffer Zones[3]** |
| **Airports** | Determined by Noise Exposure Forecast Contours and by public safety zone | 1 | Subject to detailed study |
| **Oil, Gas & Petrochemical uses** | Undertake a Strategic Risk Assessment for the whole site or a Quantitative Risk Assessment for individual sites | 1 | Subject to detailed study |
| **Noxious & Hazardous industries** | Undertake a Strategic Risk Assessment for the whole site or a Quantitative Risk Assessment for individual sites | 1 | Subject to detailed study |
| **Chemical Fertilisers** | 1,000m | 2 | Amenity areas and roads |
| | 1000 - 2000m | 3 | Amenity areas and roads |
| **Steel & Iron Products** | 500 - 1,000m | 2 & 3 | Amenity areas, passive recreation, roads |
| **Medium Industries (general)** | 30m without chimney; 200m with chimney. | 4 | Amenity areas, roads, passive recreation uses, active recreational facilities (50m to 200m subject to height of chimney stack), and non-sensitive uses including compatible commercial activities. All proposals for sensitive uses within 500m should be referred to MME |
| **Food Manufacturing** | 100 - 500m | 2 | Amenity areas, roads, passive recreation uses, active recreational facilities (50m to 200m subject to height of chimney stack), and non-sensitive uses including compatible commercial activities. All proposals for sensitive uses within 500m should be referred to MME |
| | 200 - 500m | 3 | |
| **Quarries and Stone Crushing Plants** | 200 - 500m | 2 | Amenity areas, roads, passive recreation uses |
| **Brick Works** | 300- 1000m | 3 | Amenity areas, roads, passive recreation uses |
| **Concrete Batching Plants** | 100m | 3 | Amenity areas |
| | 300-500m | 3 | Amenity areas |

## Schedule 14 High Impact Land Uses (Continued)

| The following Schedule provides the list of High Impact Land Uses that will not be permitted in centers | | | |
|---|---|---|---|
| **Incompatible Land Uses** | **Buffer Distance Guidance** | **Source** | **Potential Uses permitted within Buffer Zones[3]** |
| **Asphalt Mixing Plants** | 500m | *8* | Amenity areas |
| | 1000m | *3* | |
| **Construction & Demolition Waste Facilities** | 1,000m | *4 & 5* | Amenity areas, roads, compatible industrial uses, & carparks |
| **Electricity Generating Power Station/ Desalination Plant** | 3,000-5,000m | *3* | Undertake a Strategic Risk Assessment for the whole site or a Quantitative Risk Assessment for individual sites to determine potential land uses |
| **Sewage Treatment Works (STW)** | STW capacity 100,000 population-1,000m | *6* | Amenity areas, passive recreation, roads |
| | Large STW-600m buffer | *7* | |
| | STW capacity 50,000 population-400m | *8* | |
| **Sites for Landfill** | 250m | *4* | Amenity areas |
| | 500m from residential area | *3* | |
| | 100m from surface water<br>200-500m from residences<br>1,500-3,000m from airports | *2* | |
| **Other Forms of Solid Waste Disposal,Recycling and Composting** | 100 - 200m | *2* | Amenity areas, roads, compatible industrial uses and car parks |
| **Incinerators** | 500 - 1000m | *3* | Amenity areas, roads |
| **Waste Transfer Stations** | 300m | *2 & 4* | Amenity areas, roads, compatible industrial uses and car parks |
| **Animal Rearing including Poultry Farms** | 400-500m | *2* | Amenity areas, roads, compatible industrial uses and car parks |
| | 200m | *4* | |
| **Slaughter House** | 300m | *4* | Amenity areas, roads, compatible industrial uses and car parks |
| | 500-1000m | *3* | |
| | 500m | *2* | |

## Schedule 14 High Impact Land Uses (Continued)

The following Schedule provides the list of High Impact Land Uses that will not be permitted in centers

| Incompatible Land Uses | Buffer Distance Guidance | Source | Potential Uses permitted within Buffer Zones[3] |
|---|---|---|---|
| **Offensive Trades[2]** | 200m | *4* | Amenity areas |
| | 300 - 500m | *2* | |

1 No buffer distance specified

2 Offensive trades includes leather production, treatment of organic wastes, tannery, glue manufacture, animal feed manufacturing, processing of manure etc.

3 Landscaping is recommended in all cases

4 In cases of high impact land uses which emit odors, noise, dust or air pollution, the buffer zone should be studied in the context of wind direction

5 The data provided above is for guidance only. The guidance takes into account a dense urban environment (Hong Kong) and a low density urban environment (Australian cities). All proposals for the development of such uses will be subject to EIA as part of the revised planning and development assessment process. The location of Buffer Zones will be determined on a case by case basis in consultation with relevant Government Ministries and Agencies

Sources

1 *Oriental Consultants Co., Ltd. (2009)*
2 *EPA Victoria, Australia*
3 *EPA West Australia (2005)*
4 *Hong Kong, Planning Standards and Guidelines (2007)*
5 *Western Australia EPA Guidance for the Assessment of Environmental Factors*
6 *WA Buffer Zone Policy, Bulletin AQ2/86*
7 *ACT Buffer Zone Policy*
8 *Victoria Buffer Zone Policy*

# Annex 2 | Policy Matrix



| | QNDF Chapter | Economic Prosperity | | | |
|---|---|---|---|---|---|
| | Policy Reference | EP1 | EP2 | EP3 | EP4 |
| | Planning Policies | QP Industrial Cities | Industrial Areas | Small and Medium Enterprise Development | Knowledge-Based Industries |
| Strategic Planning Objectives | Policy links / Page No. | P.99 | P100 | P.103 | P.103 |
| | 1. High Quality, Capital City Precinct (Doha) | ○ | ○ | ○ | ● |
| | 2. Develop a number of high quality mixed-use, mixed density centers as transit oriented development (TOD's) | ● | ● | ● | ◒ |
| | 3. Retain the cultural identity of rural/ non-metropolitan communities | ● | ● | ● | ● |
| | 4. Establish a high quality and integrated public transport network | ● | ● | ● | ● |
| | 5. Ensure radial routes act primarily as transit corridors | ○ | ◒ | ◒ | ◒ |
| | 6. Ensure mega projects and other large scale developments are integrated into the wider community | ● | ● | ● | ● |
| | 7. Promote equitable accessibility of public facilities and social amenities to all residents | ● | ● | ● | ● |
| | 8. Develop a unique and high quality public realm which is equitably accessible and permeates throughout Qatar's urban areas | ○ | ● | ● | ● |
| | 9. Utilise and plan urban block size, form and height to promote connectivity, a vibrant public realm | ○ | ● | ● | ● |
| | 10. Use density and building typologies to promote a wide range of accommodation types | ● | ● | ● | ● |
| | 11. Create high quality residential neighborhoods that accord with the cultural identity and preferred lifestyles of Qataris | ○ | ○ | ○ | ○ |
| | 12. Maintain and enhance a distinctive identity for Doha which supports a Qatar 'brand' | ○ | ● | ● | ● |
| | 13. Protect and enhance the natural, built and cultural environment to avoid adverse impacts from land uses | ● | ● | ● | ● |
| | 14. Ensure risks from climate change impacts are evaluated and mitigation measures are developed and implemented for land use planning and infrastructure development | ● | ● | ● | ● |
| | 15. Plan, coordinate, upgrade and deliver infrastructure services and utilities in a timely and cost-effective manner | ● | ● | ● | ● |
| | 16. Establish urban growth boundaries around Metropolitan Doha and other urban areas to ensure the efficient use and timely release of land | ○ | ○ | ○ | ○ |
| | 17. Develop a plan led system that supports and manages development change processes through appropriate institutional governance frameworks | ○ | ○ | ○ | ○ |

**Relationship with Planning Objective**

● Strong ◒ Limited ○ No Relationship

| | QNDF Chapter | Economic Prosperity | | | |
|---|---|---|---|---|---|
| | Policy Reference | EP5 | EP6 | EP7 | EP8 |
| | Planning Policies | Rural Industries including Farming, Fishing and Livestock Activities | National Food Security | Retail and Commercial Office Development | Tourism Activities |
| Strategic Planning Objectives | Policy links / Page No. | P.105 | P.106 | P.107 | P.109 |
| | 1. High Quality, Capital City Precinct (Doha) | ○ | ○ | ● | ● |
| | 2. Develop a number of high quality mixed-use, mixed density centers as transit oriented development (TOD's) | ○ | ○ | ● | ● |
| | 3. Retain the cultural identity of rural/non-metropolitan communities | ● | ● | ◒ | ● |
| | 4. Establish a high quality and integrated public transport network | ○ | ○ | ● | ● |
| | 5. Ensure radial routes act primarily as transit corridors | ○ | ○ | ● | ○ |
| | 6. Ensure mega projects and other large scale developments are integrated into the wider community | ○ | ○ | ● | ● |
| | 7. Promote equitable accessibility of public facilities and social amenities to all residents | ● | ○ | ● | ◒ |
| | 8. Develop a unique and high quality public realm which is equitably accessible and permeates throughout Qatar's urban areas | ○ | ○ | ● | ◒ |
| | 9. Plan and utilize urban block size, form and height to promote connectivity, a vibrant public realm | ○ | ○ | ● | ○ |
| | 10. Use density and building typologies to promote a wide range of accommodation types | ○ | ○ | ● | ○ |
| | 11. Create high quality residential neighborhoods that accord with the cultural identity and preferred lifestyles of Qataris | ○ | ○ | ○ | ○ |
| | 12. Maintain and enhance a distinctive identity for Doha which supports a Qatar 'brand' | ○ | ○ | ○ | ● |
| | 13. Protect and enhance the natural, built and cultural environment to avoid adverse impacts from land uses | ● | ● | ◒ | ● |
| | 14. Ensure risks from climate change impacts are evaluated and mitigation measures are developed and implemented for land use planning and infrastructure development | ● | ● | ◒ | ○ |
| | 15. Plan, coordinate, upgrade and deliver infrastructure services and utilities in a timely and cost-effective manner | ◒ | ● | ● | ○ |
| | 16. Establish urban growth boundaries around Metropolitan Doha and other urban areas to ensure the efficient use and timely release of land | ○ | ● | ○ | ○ |
| | 17. Develop a plan led system that supports and manages development change processes through appropriate institutional governance frameworks | ○ | ○ | ○ | ○ |

**Relationship with Planning Objective**

● Strong ◒ Limited ○ No Relationship

| | Living In The Community | | | | | | |
|---|---|---|---|---|---|---|---|
| EP9 | LC1 | LC2 | LC3 | LC4 | LC5 | LC6 | LC7 |
| Developer Contributions | Qatari Housing Land | Residential Land Supply | Mixed Density Housing Supply | Affordable Housing | Labor Accommodation | Community Facilities | Location of Government and Private Schools |
| P.110 | P.115 | P.117 | P.117 | P.119 | P.120 | P.122 | P.125 |
| ● | ● | ● | ● | ● | ○ | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ○ | ● | ● | ○ | ● | ● | ○ | ○ |
| ● | ◒ | ● | ● | ● | ● | ● | ● |
| ● | ◒ | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ○ | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ◒ | ◒ |
| ● | ● | ● | ● | ● | ● | ◒ | ◒ |
| ○ | ● | ○ | ○ | ○ | ○ | ● | ● |
| ○ | ◒ | ● | ● | ● | ● | ● | ● |
| ○ | ◒ | ◒ | ◒ | ◒ | ◒ | ◒ | ◒ |
| ○ | ○ | ◒ | ● | ● | ◒ | ● | ◒ |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ○ | ◒ | ◒ | ◒ | ◒ | ◒ | ○ | ○ |
| ◒ | ○ | ○ | ○ | ○ | ● | ◒ | ◒ |

| | QNDF Chapter | Living In The Community | | | |
|---|---|---|---|---|---|
| | Policy Reference | LC8 | LC9 | LC10 | LC11 |
| | Planning Policies | Higher Education and Learning Institutions | Location of Health Service Facilities | Location of Religious Facilities | Integrated Emergency Response Service Facilities |
| Strategic Planning Objectives | Policy links / Page No. | P.125 | P.126 | P.127 | P.129 |
| | 1. High Quality, Capital City Precinct (Doha) | ● | ● | ● | ● |
| | 2. Develop a number of high quality mixed-use, mixed density centers as transit oriented development (TOD's) | ● | ● | ● | ● |
| | 3. Retain the cultural identity of rural/ non-metropolitan communities | ○ | ◒ | ● | ◒ |
| | 4. Establish a high quality and integrated public transport network | ● | ● | ● | ● |
| | 5. Ensure radial routes act primarily as transit corridors | ● | ● | ◒ | ● |
| | 6. Ensure mega projects and other large scale developments are integrated into the wider community | ● | ● | ◒ | ● |
| | 7. Promote equitable accessibility of public facilities and social amenities to all residents | ● | ● | ● | ● |
| | 8. Develop a unique and high quality public realm which is equitably accessible and permeates throughout Qatar's urban areas | ● | ● | ● | ● |
| | 9. Plan and utilize urban block size, form and height to promote connectivity, a vibrant public realm | ◒ | ◒ | ◒ | ◒ |
| | 10. Use density and building typologies to promote a wide range of accommodation types | ● | ◒ | ○ | ○ |
| | 11. Create high quality residential neighborhoods that accord with the cultural identity and preferred lifestyles of Qataris | ○ | ● | ● | ○ |
| | 12. Maintain and enhance a distinctive identity for Doha which supports a Qatar 'brand' | ● | ● | ● | ● |
| | 13. Protect and enhance the natural, built and cultural environment to avoid adverse impacts from land uses | ◒ | ◒ | ● | ◒ |
| | 14. Ensure risks from climate change impacts are evaluated and mitigation measures are developed and implemented for land use planning and infrastructure development | ◒ | ◒ | ◒ | ● |
| | 15. Plan, coordinate, upgrade and deliver infrastructure services and utilities in a timely and cost-effective manner | ● | ● | ● | ● |
| | 16. Establish urban growth boundaries around Metropolitan Doha and other urban areas to ensure the efficient use and timely release of land | ○ | ○ | ○ | ○ |
| | 17. Develop a plan led system that supports and manages development change processes through appropriate institutional governance frameworks | ◒ | ◒ | ◒ | ◒ |

**Relationship with Planning Objective**

● Strong ◒ Limited ○ No Relationship

| | | | The Natural Environment | | | | |
|---|---|---|---|---|---|---|---|
| LC12 | LC13 | LC14 | ENV1 | ENV2 | ENV3 | ENV4 | ENV5 |
| Co-location of Government and Social Service Facilities | Public Open Space and Recreational Facilities | Community Recreation and Leisure Opportunities | Sustainable Planning and Development | Climate Change Management | National Environment Management Plan | Integrated Coastal Zone Management | Biodiversity |
| P.130 | P.131 | P.132 | P.137 | P.139 | P.140 | P.142 | P.143 |
| ● | ● | ● | ○ | ○ | ○ | ○ | ○ |
| ● | ● | ● | ○ | ● | ○ | ○ | ○ |
| ◒ | ● | ● | ◒ | ○ | ● | ● | ● |
| ● | ● | ● | ○ | ● | ○ | ○ | ○ |
| ● | ● | ● | ○ | ● | ○ | ○ | ○ |
| ● | ● | ● | ● | ● | ● | ○ | ○ |
| ● | ● | ● | ○ | ○ | ○ | ○ | ○ |
| ● | ● | ● | ○ | ○ | ○ | ○ | ○ |
| ◒ | ● | ● | ○ | ● | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ● | ○ | ○ | ○ |
| ● | ● | ● | ○ | ○ | ○ | ○ | ○ |
| ● | ● | ● | ○ | ○ | ○ | ○ | ○ |
| ◒ | ● | ● | ● | ● | ● | ● | ● |
| ● | ◒ | ◒ | ● | ● | ● | ● | ● |
| ● | ● | ○ | ● | ● | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ● | ● | ○ | ◒ |
| ◒ | ◒ | ○ | ● | ● | ● | ● | ○ |

| | QNDF Chapter | The Natural Environment | | | |
|---|---|---|---|---|---|
| | Policy Reference | ENV6 | ENV7 | ENV8 | ENV9 |
| | Planning Policies | Protection of Groundwater Resources | High Impact Land Uses and Buffer Zones | National Waste Management Strategy | Sites for Waste Management Facilities |
| | Policy links / Page No. | P.144 | P.145 | P.146 | P.148 |
| Strategic Planning Objectives | 1. High Quality, Capital City Precinct (Doha) | ○ | ● | ● | ● |
| | 2. Develop a number of high quality mixed-use, mixed density centers as transit oriented development (TOD's) | ○ | ● | ● | ● |
| | 3. Retain the cultural identity of rural/ non-metropolitan communities | ● | ● | ● | ● |
| | 4. Establish a high quality and integrated public transport network | ○ | ○ | ○ | ○ |
| | 5. Ensure radial routes act primarily as transit corridors | ○ | ○ | ○ | ◒ |
| | 6. Ensure mega projects and other large scale developments are integrated into the wider community | ○ | ● | ● | ○ |
| | 7. Promote equitable accessibility of public facilities and social amenities to all residents | ○ | ○ | ○ | ○ |
| | 8. Develop a unique and high quality public realm which is equitably accessible and permeates throughout Qatar's urban areas | ○ | ○ | ○ | ○ |
| | 9. Plan and utilize urban block size, form and height to promote connectivity, a vibrant public realm | ○ | ○ | ○ | ○ |
| | 10. Use density and building typologies to promote a wide range of accommodation types | ○ | ○ | ○ | ○ |
| | 11. Create high quality residential neighborhoods that accord with the cultural identity and preferred lifestyles of Qataris | ○ | ○ | ○ | ○ |
| | 12. Maintain and enhance a distinctive identity for Doha which supports a Qatar 'brand' | ○ | ● | ○ | ○ |
| | 13. Protect and enhance the natural, built and cultural environment to avoid adverse impacts from land uses | ● | ● | ● | ● |
| | 14. Ensure risks from climate change impacts are evaluated and mitigation measures are developed and implemented for land use planning and infrastructure development | ● | ● | ● | ● |
| | 15. Plan, coordinate, upgrade and deliver infrastructure services and utilities in a timely and cost-effective manner | ● | ○ | ● | ● |
| | 16. Establish urban growth boundaries around Metropolitan Doha and other urban areas to ensure the efficient use and timely release of land | ◒ | ◒ | ○ | ○ |
| | 17. Develop a plan led system that supports and manages development change processes through appropriate institutional governance frameworks | ● | ● | ● | ● |

**Relationship with Planning Objective**

● Strong ◒ Limited ○ No Relationship

| The Built Environment | | | | | | | |
|---|---|---|---|---|---|---|---|
| BE1 | BE2 | BE3 | BE4 | BE5 | BE6 | BE7 | BE8 |
| Establish a Hierarchy of Centers | Promote a Mix of Uses | Integrate Large Single Use Activities | Managing Urban Growth | Greenbelts | Livable Neighborhoods | Attractive and Recognizable Capital City Precinct | Urban Form and Permeability |
| P.151 | P.152 | P.153 | P.154 | P.154 | P.155 | P.157 | P.158 |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ◒ | ● | ● | ● | ○ | ○ |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ◒ | ◒ | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ○ | ○ | ○ | ● | ● | ○ | ○ | ○ |

| | QNDF Chapter | The Built Environment | | | |
|---|---|---|---|---|---|
| | Policy Reference | BE9 | BE10 | BE11 | BE12 |
| | Planning Policies | Design for Density | Lot and Building Typology | Building Design in Local Context, the Past and the Future | Local Amenity and Public Spaces |
| Strategic Planning Objectives | Policy links / Page No. | P.159 | P.163 | P.164 | P.166 |
| | 1. High Quality, Capital City Precinct (Doha) | ● | ● | ● | ● |
| | 2. Develop a number of high quality mixed-use, mixed density centers as transit oriented development (TOD's) | ● | ● | ● | ● |
| | 3. Retain the cultural identity of rural/ non-metropolitan communities | ● | ● | ● | ● |
| | 4. Establish a high quality and integrated public transport network | ● | ● | ● | ● |
| | 5. Ensure radial routes act primarily as transit corridors | ● | ● | ● | ● |
| | 6. Ensure mega projects and other large scale developments are integrated into the wider community | ● | ● | ● | ● |
| | 7. Promote equitable accessibility of public facilities and social amenities to all residents | ● | ● | ● | ● |
| | 8. Develop a unique and high quality public realm which is equitably accessible and permeates throughout Qatar's urban areas | ◒ | ● | ● | ○ |
| | 9. Plan and utilize urban block size, form and height to promote connectivity, a vibrant public realm | ● | ● | ● | ● |
| | 10. Use density and building typologies to promote a wide range of accommodation types | ● | ● | ● | ● |
| | 11. Create high quality residential neighborhoods that accord with the cultural identity and preferred lifestyles of Qataris | ◒ | ● | ● | ○ |
| | 12. Maintian and enhance a distinctive identity for Doha which supports a Qatar 'brand' | ● | ● | ● | ● |
| | 13. Protect and enhance the natural, built and cultural environment to avoid adverse impacts from land uses | ● | ● | ● | ● |
| | 14. Ensure risks from climate change impacts are evaluated and mitigation measures are developed and implemented for land use planning and infrastructure development | ● | ● | ● | ◒ |
| | 15. Plan, coordinate, upgrade and deliver infrastructure services and utilities in a timely and cost-effective manner | ● | ● | ◒ | ● |
| | 16. Establish urban growth boundaries around Metropolitan Doha and other urban areas to ensure the efficient use and timely release of land | ● | ○ | ○ | ● |
| | 17. Develop a plan led system that supports and manages development change processes through appropriate institutional governance frameworks | ○ | ○ | ● | ● |

**Relationship with Planning Objective**

● Strong ◒ Limited ○ No Relationship

| The Built Environment | | | | Movement | | | |
|---|---|---|---|---|---|---|---|
| BE13 | BE14 | BE15 | BE16 | M1 | M2 | M3 | M4 |
| Create Active Streets and Public Spaces | Landscape Design of Streets | Landscape Design of Open Spaces | Conservation Areas | Integrated Public Transport Network | Road Network Management and Safety | Parking Management , Allocation and Enforcement | Transport and Parking Requirements in New Development |
| P.167 | P.168 | P.169 | P.165 | P.177 | P.180 | P.182 | P.183 |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ○ | ○ | ● | ○ | ○ | ○ | ○ |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ○ | ● | ● | ◒ | ◒ |
| ○ | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ◒ | ● | ○ | ● | ● |
| ● | ● | ● | ○ | ○ | ○ | ○ | ○ |
| ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ○ | ○ | ○ |
| ● | ● | ● | ● | ● | ● | ○ | ○ |
| ● | ● | ● | ◒ | ● | ● | ◒ | ● |
| ● | ◒ | ◒ | ● | ● | ○ | ◒ | ● |
| ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ● | ● | ● | ● | ● |

| | QNDF Chapter | Movement | | | |
|---|---|---|---|---|---|
| | Policy Reference | M5 | M6 | M7 | M8 |
| | Planning Policies | Facilities for Pedestrians, Cyclists and those with Special Needs | Hamad International Airport | New Doha Port | Maritime Transport |
| Strategic Planning Objectives | Policy links / Page No. | P.185 | P.186 | P.187 | P.188 |
| | 1. High Quality, Capital City Precinct (Doha) | ● | ● | ● | ● |
| | 2. Develop a number of high quality mixed-use, mixed density centers as transit oriented development (TOD's) | ● | ● | ● | ● |
| | 3. Retain the cultural identity of rural/ non-metropolitan communities | ○ | ○ | ● | ● |
| | 4. Establish a high quality and integrated public transport network | ● | ● | ● | ● |
| | 5. Ensure radial routes act primarily as transit corridors | ● | ● | ● | ● |
| | 6. Ensure mega projects and other large scale developments are integrated into the wider community | ● | ● | ● | ● |
| | 7. Promote equitable accessibility of public facilities and social amenities to all residents | ◒ | ○ | ○ | ○ |
| | 8. Develop a unique and high quality public realm which is equitably accessible and permeates throughout Qatar's urban areas | ● | ● | ● | ● |
| | 9. Plan and utilize urban block size, form and height to promote connectivity, a vibrant public realm | ● | ○ | ○ | ○ |
| | 10. Use density and building typologies to promote a wide range of accommodation types | ○ | ○ | ○ | ○ |
| | 11. Create high quality residential neighborhoods that accord with the cultural identity and preferred lifestyles of Qataris | ● | ● | ● | ● |
| | 12. Maitian and enhance a distinctive identity for Doha which supports a Qatar 'brand' | ● | ● | ● | ● |
| | 13. Protect and enhance the natural, built and cultural environment to avoid adverse impacts from land uses | ● | ● | ● | ● |
| | 14. Ensure risks from climate change impacts are evaluated and mitigation measures are developed and implemented for land use planning and infrastructure development | ● | ● | ● | ● |
| | 15. Plan, coordinate, upgrade and deliver infrastructure services and utilities in a timely and cost-effective manner | ● | ● | ○ | ○ |
| | 16. Establish urban growth boundaries around Metropolitan Doha and other urban areas to ensure the efficient use and timely release of land | ○ | ○ | ○ | ○ |
| | 17. Develop a plan led system that supports and manages development change processes through appropriate institutional governance frameworks | ● | ○ | ○ | ● |

**Relationship with Planning Objective**

● Strong ◒ Limited ○ No Relationship

| Movement | Utilities | | |
|---|---|---|---|
| M9 | U1 | U2 | U3 |
| Logistics Centers | Integrated Provision and Distribution of Utility Infrastructure | Minimize Impacts of Utilities Infrastructure | Location of Utilities Infrastructure |
| P.189 | P.195 | P.199 | P.201 |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ○ | ○ | ○ | ○ |
| ● | ● | ● | ● |
| ○ | ◒ | ◒ | ◒ |
| ○ | ○ | ○ | ○ |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ○ | ● | ● | ● |
| ○ | ○ | ○ | ○ |
| ● | ● | ○ | ● |

# Annex 3

# Implementation Responsibility Schedule



| Agency Responsibility Table State | EP1.1 | EP1.2 | EP1.3 | EP1.4 | EP2.1 | EP2.2 | EP2.3 | EP2.4 | EP3.1 | EP3.2 | EP3.3 | EP3.4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | | | | | | | | | | | | |
| GCP | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| GORD | | | | | | | | | | | | |
| HIA | | | | | | | | | | | | |
| HMC | | | | | | | | | | | | |
| Kahramaa | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Katara | | | | | | | | | | | | |
| MDP&S | | | | | | | | | | | | |
| MEIA | | | | | | | | | | | | |
| MME | ● | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | | | | | | | | | | | | |
| MoCS | | | | | | | | | | | | |
| MoEC | | ■ | ■ | ■ | ● | ● | ● | ● | ● | ● | ● | ● |
| MoEHE | | ■ | ■ | ■ | | ■ | ■ | | | | | |
| MoEI | ■ | ■ | ■ | ■ | ● | ● | ● | ● | ■ | ■ | ■ | ■ |
| MoF | | | | | | | | | | | | |
| MoI | | ■ | ■ | ■ | | | | | | | | |
| MoPH | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| MoTC | | ■ | ■ | | | | | | | | | |
| Mowasalat | | | | | | ■ | ■ | ■ | | | | |
| MP | | | | | | | | | | | | |
| Ooredoo | | | | | | | | | | | | |
| PEO | | | | | | | | | | | | |
| PHCC | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | | | | | | | | | | | | |
| QDB | | | | | | | | | ● | ● | ● | ● |
| QF | | | | | | | | | ■ | ■ | ■ | ■ |
| QGBC | | | | | | | | | ■ | ■ | ■ | ■ |
| QMA | | | | | | | | | | | | |
| QP | ▲ | ● | ● | ● | | | | | | | | |
| QPMC | | | | | | | | | | | | |
| QPSC | | | | | | | | | | | | |
| QRail | | | | | | | | | | | | |
| QTA | | | | | | | | | | | | |
| QU | | | | | | | | | | | | |
| SCDL | | | | | | | | | | | | |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Short-Medium 3 - 5 years | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| Medium-Long 6+ years | | | | | | | | | | | | |

Legend

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| Agency Responsibility Table State | EP4.1 | EP4.2 | EP5.1 | EP5.2 | EP5.3 | EP5.4 | EP5.5 | EP5.6 | EP6.1 | EP6.2 | EP7.1 | EP7.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | ■ | ■ | ■ | ● | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | | | | | | | | | | | | |
| GCP | | | | | | | | | | | | |
| GORD | | | | | | | | | | | | |
| HIA | | | | | | | | | | | | |
| HMC | | | | | | | | | | | | |
| Kahramaa | ■ | ■ | ■ | ● | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Katara | | | | | | | | | | | | |
| MDP&S | | | | | | | | | | | ● | |
| MEIA | | | | | | | | | | | | |
| MME | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | | | | | | | | | | | | |
| MoCS | | | | | | | | | | | | |
| MoEC | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| MoEHE | ■ | ■ | | | | | | | | | | |
| MoEI | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | | | | | | | | | |
| MoPH | | | | | | | | | | | | |
| MoTC | ■ | ■ | | | | | | | | | | |
| Mowasalat | | | | | | | | | | | | |
| MP | | | | | | | | | | | | |
| Ooredoo | ■ | ■ | | | | | | | | | | |
| PEO | | | | | | | | | | | | |
| PHCC | | | | | | | | | | | | |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | | | | | | | | | | | ■ | ■ |
| QDB | | | | | | | | | | | | |
| QF | ■ | ■ | | | | | | | | | ■ | ■ |
| QGBC | | | | | | | | | | | | |
| QMA | | | | | | | | | | | | |
| QP | | | | | | | | | | | | |
| QPMC | | | | | | | | | | | | |
| QPSC | | | | | | | | | | | | |
| QRail | | | | | | | | | | | | |
| QTA | | | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QU | ■ | ■ | | | | | | | | | | |
| SCDL | | | | | | | | | | | | |
| Vodafone | ■ | ■ | | | | | | | | | | |
| Immediate 0 - 2 years | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Short-Medium 3 - 5 years | | | | ✓ | ✓ | ✓ | | | | | | |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| EP7.3 | EP7.4 | EP8.1 | EP8.2 | EP9.1 | EP9.2 | LC1.1 | LC1.2 | LC1.3 | LC1.4 | LC1.5 | LC1.6 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ■ | ■ | | | ● | ● | ● | ● | ■ | ■ | ■ | ● | Ashghal |
| | | | | | | | | | | | | Aspire |
| | | | | | | | | | | | | Barwa |
| | | | | | | | | | | | | CAA |
| | | | | | | | | | | | | GCP |
| | | | | | | | | | | | | GORD |
| | | | | | | | | | | | | HIA |
| | | | | | | | | | | | | HMC |
| ■ | ■ | | | ● | ● | ● | ● | ■ | ■ | ■ | ● | Kahramaa |
| | | | | | | | | | | | | Katara |
| | ● | | | | | ■ | ■ | ■ | ■ | ■ | ■ | MDP&S |
| | | | | ● | ● | | | | | | | MEIA |
| ▲ | ▲ | ● | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | MME |
| | | | | | | ● | ● | ● | ● | ● | ● | MoADLSA |
| | | ■ | ■ | | | | | | | | | MoCS |
| ● | ● | ● | ● | | | | | | | | | MoEC |
| | | | | ■ | ■ | ● | ● | ■ | ■ | ■ | ● | MoEHE |
| | | | | | | | | | | | | MoEI |
| | | | | ● | ● | | | | | | | MoF |
| | | | | | | | | | | | | MoI |
| | | | | | | | | | | | | MoPH |
| | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | MoTC |
| | | ■ | ■ | | | ■ | ■ | ■ | ■ | | ■ | Mowasalat |
| | | | | | | ■ | ■ | ■ | ● | ● | ■ | MP |
| | | | | | | | | | | | | Ooredoo |
| | | ■ | ■ | | | | | | | | | PEO |
| | | | | | | | | | | | | PHCC |
| | | | | | | | | | | | | PPC |
| | | | | | | | | | | | | PWRC |
| ■ | ■ | ■ | ■ | | | ● | ● | ● | ● | ● | ● | QD |
| | | | | | | | | | | | | QDB |
| ■ | ■ | | | | | | | | | | | QF |
| | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | QGBC |
| | | ■ | ■ | ■ | ■ | | | | | | | QMA |
| | | | | | | | | | | | | QP |
| | | | | | | | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| | | | | | | | | | | | | QRail |
| ■ | ■ | ▲ | ● | | | | | | | | | QTA |
| | | | | | | | | | | | | QU |
| | | ■ | ■ | | | | | | | | | SCDL |
| | | | | | | | | | | | | Vodafone |
| ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | | | Immediate 0 - 2 years |
| | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | | Short-Medium 3 - 5 years |
| | | | | | | | | | | | ✓ | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | LC2.1 | LC2.2 | LC.3.1 | LC3.2 | LC3.3 | LC4.1 | LC4.2 | LC4.3 | LC4.4 | LC4.5 | LC5.1 | LC5.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | | | | | | ■ | ■ | ■ | | ■ | ■ | ■ |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | | | | | | | | | | | | |
| GCP | | | | | | | | | | | | |
| GORD | | | | | | | | | | | ■ | ■ |
| HIA | | | | | | | | | | | | |
| HMC | | | | | | | | | | | | |
| Kahramaa | | | | | | ■ | ■ | ■ | | ■ | | |
| Katara | | | | | | | | | | | | |
| MDP&S | ● | | | | | | | | | | | |
| MEIA | | | | | | | | | | | | |
| MME | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| MoCS | | | | | | | | | | | | |
| MoEC | | | ■ | ■ | ■ | | | | | | ● | ● |
| MoEHE | | | | | | | | | | | | |
| MoEI | | | ■ | ■ | ■ | | | | | | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | | | | | | | | ■ | ■ |
| MoPH | | | | | | | | | | | ■ | ■ |
| MoTC | | | | | | | | | | | | |
| Mowasalat | | | ■ | ■ | ■ | | | | | | | |
| MP | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Ooredoo | | | | | | | | | | | | |
| PEO | | | ■ | ■ | ■ | | | | | | | |
| PHCC | | | | | | | | | | | ■ | ■ |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QDB | | | | | | | | | | | | |
| QF | ■ | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QGBC | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QMA | | | | | | | | | | | | |
| QP | ■ | ■ | ■ | ■ | ■ | | | | | | ■ | ■ |
| QPMC | | | | | | | | | | | | |
| QPSC | | | | | | | | | | | | |
| QRail | | | | | | | | | | | | |
| QTA | | | | | | | | | | | | |
| QU | | | | | | | | | | | | |
| SCDL | | | | | | | | | | | ■ | ■ |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | |
| Short-Medium 3 - 5 years | | | ✓ | ✓ | | | | | ✓ | | | ✓ |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| LC5.3 | LC5.4 | LC6.1 | LC6.2 | LC7.1 | LC7.2 | LC7.3 | LC7.4 | LC8.1 | LC8.2 | LC9.1 | LC9.2 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ■ | ■ | | | ● | ■ | ■ | ■ | | | | | Ashghal |
| | | | | | | | | | | | | Aspire |
| | | | | | | | | | | | | Barwa |
| | | | | | | | | | | | | CAA |
| | | | | | | | | | | | | GCP |
| ■ | ■ | | | ■ | ■ | ■ | ■ | | | | | GORD |
| | | | | | | | | | | | | HIA |
| | | ● | ● | | | | | | | ● | ● | HMC |
| | | | | | | | | | | | | Kahramaa |
| | | | | | | | | | | | | Katara |
| | | | | | | | | | | | | MDP&S |
| | | ● | ● | | | | | | | | | MEIA |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | MME |
| ● | ● | | | | | | | | | | | MoADLSA |
| | | ■ | ■ | | | | | | | | | MoCS |
| ● | ● | | | ■ | ■ | ■ | ■ | | | | | MoEC |
| | | ■ | ■ | ● | ● | ● | ● | ● | ● | | | MoEHE |
| | | | | | | | | | | | | MoEI |
| | | | | | | | | | | | | MoF |
| | | ● | ● | | | | | | | | | MoI |
| ■ | ■ | ■ | ■ | | | | | | | ● | ● | MoPH |
| | | | | | | | | | | | | MoTC |
| | | | | | | | | | | | | Mowasalat |
| ■ | ■ | | | | | | | | | | | MP |
| | | | | | | | | | | | | Ooredoo |
| | | | | | | | | | | | | PEO |
| ■ | ■ | ● | ● | | | | | | | ● | ● | PHCC |
| | | | | | | | | | | | | PPC |
| | | | | | | | | | | | | PWRC |
| ■ | ■ | | | | | | | | | | | QD |
| | | | | | | | | | | | | QDB |
| ■ | ■ | | | | | | | ● | ● | | | QF |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QGBC |
| | | ■ | ■ | | | | | ■ | ■ | | | QMA |
| ■ | ■ | | | | | | | | | | | QP |
| | | | | | | | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| | | | | | | | | | | | | QRail |
| | | | | | | | | | | | | QTA |
| | | | | | | | | ● | ● | | | QU |
| ■ | ■ | ■ | ■ | | | | | | | | | SCDL |
| | | | | | | | | | | | | Vodafone |
| | | | | | | | ✓ | ✓ | | ✓ | ✓ | Immediate 0 - 2 years |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | Short-Medium 3 - 5 years |
| | | | | | | | | | | | | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | LC9.3 | LC10.1 | LC10.2 | LC10.3 | LC10.4 | LC11.1 | LC11.2 | LC11.3 | LC11.4 | LC11.5 | LC12.1 | LC12.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | | ■ | ■ | ■ | ■ | ● | ● | ● | ● | ■ | | |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | | | | | | | | | | | | |
| GCP | | | | | | | | | | | | |
| GORD | | | | | | | | | | | | |
| HIA | | | | | | | | | | | | |
| HMC | ● | | | | | ● | ● | ● | ● | ● | | |
| Kahramaa | | | | | | | | | | | | |
| Katara | | | | | | | | | | | | |
| MDP&S | | | | | | | | | | | | |
| MEIA | | ● | ● | ● | ● | | | | | | | |
| MME | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | | | | | | | | | | | ■ | ■ |
| MoCS | | | | | | | | | | | ■ | ■ |
| MoEC | | | | | | | | | | | | |
| MoEHE | | | | | | | | | | | | |
| MoEI | | | | | | | | | | | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | | | ● | ● | ● | ● | ● | ● | ● |
| MoPH | ● | | | | | ■ | ■ | ■ | ■ | ● | | |
| MoTC | | | | | | | | | | | | |
| Mowasalat | | | | | | | | | | | | |
| MP | | | | | | | | | | | | |
| Ooredoo | | | | | | | | | | | | |
| PEO | | | | | | | | | | | | |
| PHCC | ● | | | | | ■ | ■ | ■ | ■ | ■ | | |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | | | | | | | | | | | | |
| QDB | | | | | | | | | | | | |
| QF | | | | | | | | | | | ■ | ■ |
| QGBC | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | ■ | ■ |
| QMA | | ■ | ■ | ■ | ● | | | | | | | |
| QP | | | | | | ■ | ■ | | | ■ | | |
| QPMC | | | | | | | | | | | | |
| QPSC | | | | | | | | | | | ● | ● |
| QRail | | | | | | | | | | | | |
| QTA | | ■ | ■ | ■ | ■ | | | | | | | |
| QU | | | | | | | | | | | | |
| SCDL | | | | | | | | | | | | |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | | ✓ | | ✓ | ✓ | | | ✓ | | ✓ | ✓ | |
| Short-Medium 3 - 5 years | ✓ | | ✓ | | | ✓ | ✓ | | ✓ | | | ✓ |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| LC13.1 | LC13.2 | LC13.3 | LC13.4 | LC13.5 | LC14.1 | LC14.2 | LC14.3 | ENV1.1 | ENV1.2 | ENV2.1 | ENV2.2 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ■ | ■ | ● | | | | ■ | ■ | ● | ■ | Ashghal |
| | | | | | | | | | | | | Aspire |
| | | | | | | | | ■ | ■ | ■ | ■ | Barwa |
| | | | | | | | | | | | | CAA |
| | | | | | | | | | | | | GCP |
| | | | | | | | | ■ | ■ | ■ | ■ | GORD |
| | | | | | | | | | | | | HIA |
| | | | | | | | | | | | | HMC |
| ■ | ■ | ■ | ■ | ■ | | | | ■ | ■ | ● | ■ | Kahramaa |
| | | | | | | | | | | | | Katara |
| | | | | | | | | ■ | ■ | ■ | ■ | MDP&S |
| | | | | | | | | | | | | MEIA |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | MME |
| ■ | ■ | ■ | ■ | ■ | | | | | | | | MoADLSA |
| ● | ● | ● | ■ | ■ | | | | | | | | MoCS |
| | | | | | | | | ■ | ■ | ■ | | MoEC |
| | | | | | | | | | | | | MoEHE |
| | | | | | | | | ■ | ■ | | | MoEI |
| | | | | | | | | | | | | MoF |
| | | | | | | | | | | | | MoI |
| | | | | | | | | | | | | MoPH |
| | | | | | | | | | | | | MoTC |
| | | | | | | | | | | | | Mowasalat |
| | | | | | | | | | | | | MP |
| | | | | | | | | | | | | Ooredoo |
| ● | ● | ● | ■ | ■ | ■ | ■ | ■ | | | | | PEO |
| | | | | | | | | | | | | PHCC |
| | | | | | | | | | | | | PPC |
| | | | | | | | | | | | | PWRC |
| ■ | ■ | ■ | ■ | ■ | | | | ■ | ■ | ■ | ■ | QD |
| | | | | | | | | | | | | QDB |
| ■ | ■ | ■ | ■ | ■ | | | | ■ | ■ | ■ | ■ | QF |
| | | | | | | | | ■ | ■ | ■ | ■ | QGBC |
| ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | | | QMA |
| | | | | | | | | ■ | ■ | ■ | ■ | QP |
| | | | | | | | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| | | | | | | | | ■ | ■ | ■ | ■ | QRail |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | QTA |
| | | | | | | | | | | | | QU |
| ■ | ■ | ■ | ■ | ■ | | | | | | | | SCDL |
| | | | | | | | | | | | | Vodafone |
| ✓ | | ✓ | | | | | ✓ | | | | | Immediate 0 - 2 years |
| | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | Short-Medium 3 - 5 years |
| | | | | | | | | | | | | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | ENV2.3 | ENV2.4 | ENV3.1 | ENV3.2 | ENV3.3 | ENV4.1 | ENV4.2 | ENV4.3 | ENV4.4 | ENV5.1 | ENV5.2 | ENV5.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | ■ | ■ | | | | | | | | | | |
| GCP | | | | | | | | | | | | |
| GORD | ■ | ■ | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| HIA | | | | | | | | | | | | |
| HMC | | | | | | | | | | | | |
| Kahramaa | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Katara | | | | | | | | | | | | |
| MDP&S | ■ | ■ | | | | | | | | ■ | ■ | ■ |
| MEIA | | | | | | | | | | | | |
| MME | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | | | | | | | | | | | | |
| MoCS | | | | | | | | | | | | |
| MoEC | | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| MoEHE | | | | | | | | | | | | |
| MoEI | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | | | | | | | | | |
| MoPH | | | | | | | | | | | | |
| MoTC | | | | | | | | | | | | |
| Mowasalat | | | | | | | | | | | | |
| MP | | | | | | | | | | | | |
| Ooredoo | | | | | | | | | | | | |
| PEO | | | ● | ● | ● | | | | | ● | ● | ● |
| PHCC | | | | | | | | | | | | |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | ■ | ■ | | | | | | | | ■ | ■ | ■ |
| QDB | | | | | | | | | | | | |
| QF | ■ | ■ | | | | | | | | ■ | ■ | ■ |
| QGBC | ■ | ■ | | | | | | | | | | |
| QMA | | | ■ | ■ | ■ | | | | | | | |
| QP | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QPMC | | | | | | | | | | | | |
| QPSC | | | | | | | | | | | | |
| QRail | ■ | ■ | | | | | | | | | | |
| QTA | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QU | | | | | | | | | | | | |
| SCDL | | | | | | | | | | | | |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ |
| Short-Medium 3 - 5 years | ✓ | ✓ | | | | | | | | ✓ | ✓ | |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| ENV6.1 | ENV6.2 | ENV6.3 | ENV6.4 | ENV6.5 | ENV7.1 | ENV7.2 | ENV7.3 | ENV8.1 | ENV8.2 | ENV8.3 | ENV9.1 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ■ | ■ | ■ | ■ | ■ | | | | ■ | Ashghal |
| | | | | | | | | | | | | Aspire |
| | | | | | | | | | | | | Barwa |
| | | | | | ■ | ■ | ■ | | | | | CAA |
| | | | | | ■ | ■ | ■ | ▲ | ● | ▲ | ■ | GCP |
| ■ | ■ | ■ | ■ | ■ | | | | ■ | ■ | ■ | | GORD |
| | | | | | | | | | | | | HIA |
| | | | | | | | | | | | | HMC |
| ■ | ● | ▲ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | Kahramaa |
| | | | | | | | | | | | | Katara |
| | | | | | | | | ■ | ■ | ■ | | MDP&S |
| | | | | | | | | | | | | MEIA |
| ▲ | ▲ | ● | ▲ | ▲ | ▲ | ▲ | ▲ | ● | ▲ | ● | ▲ | MME |
| | | | | | | | | | | | | MoADLSA |
| | | | | | | | | | | | | MoCS |
| ● | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | MoEC |
| | | | | | | | | | | | | MoEHE |
| | | | | | | | | ■ | ■ | ■ | | MoEI |
| | | | | | | | | | | | | MoF |
| | | | | | | | | | | | | MoI |
| | | | | | | | | | | | | MoPH |
| | | | | | | | | | | | | MoTC |
| | | | | | | | | | | | | Mowasalat |
| | | | | | | | | | | | | MP |
| | | | | | | | | | | | | Ooredoo |
| | | | | | ■ | ■ | ■ | | | | | PEO |
| | | | | | | | | | | | | PHCC |
| | | | | | | | | | | | | PPC |
| ■ | ■ | ■ | ● | ● | | | | | | | | PWRC |
| | | | | | ■ | ■ | ■ | | | | | QD |
| | | | | | | | | | | | | QDB |
| | | | | | | | | | | | | QF |
| | | | | | | | | ■ | ■ | ■ | | QGBC |
| | | | | | | | | | | | | QMA |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | QP |
| | | | | | | | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| | | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QRail |
| | | | | | ■ | ■ | ■ | | | | | QTA |
| | | | | | | | | | | | | QU |
| | | | | | | | | | | | | SCDL |
| | | | | | | | | | | | | Vodafone |
| ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | Immediate 0 - 2 years |
| | ✓ | | | | | | | | ✓ | ✓ | ✓ | Short-Medium 3 - 5 years |
| | | | | | | | | | | | | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | ENV9.2 | BE1.1 | BE1.2 | BE1.3 | BE1.4 | BE1.5 | BE1.6 | BE2.1 | BE2.2 | BE2.3 | BE2.4 | BE3.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | | | | | | | | | | | | |
| GCP | ■ | | | | | | | | | | | |
| GORD | | | | | | | | | | | | |
| HIA | | | | | | | | | | | | |
| HMC | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | ■ |
| Kahramaa | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Katara | | | | | | | | | | | | |
| MDP&S | | | | | | | | | | | | |
| MEIA | | | | | | | | | | | | |
| MME | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | | | | | | | | | | | | |
| MoCS | | | | | | | | | | | | |
| MoEC | ■ | | | | | | | | | | | |
| MoEHE | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | |
| MoEI | | | | | | | | | | | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | | | | | | | | | |
| MoPH | | | | | | | | | | | | ■ |
| MoTC | | | | | | | | | | | | |
| Mowasalat | | | | | | | | | | | | ■ |
| MP | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Ooredoo | | | | | | | | | | | | |
| PEO | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | ■ |
| PHCC | | ■ | ■ | ■ | ■ | ■ | ■ | | | | | ■ |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QDB | | | | | | | | | | | | |
| QF | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QGBC | | | | | | | | | | | | |
| QMA | | | | | | | | | | | | ■ |
| QP | | | | | | | | ■ | ■ | ■ | ■ | ■ |
| QPMC | | | | | | | | | | | | ■ |
| QPSC | | | | | | | | | | | | |
| QRail | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QTA | | | | | | | | | | | | ■ |
| QU | | | | | | | | | | | | |
| SCDL | | | | | | | | | | | | ■ |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Short-Medium 3 - 5 years | | | | | | | | | | | | |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| BE4.1 | BE4.2 | BE5.1 | BE5.2 | BE6.1 | BE6.2 | BE6.3 | BE6.4 | BE7.1 | BE7.2 | BE7.3 | BE7.4 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Ashghal |
| | | | | | | | | | | | | Aspire |
| | | | | | | | | | | | | Barwa |
| | | | | | | | | | | | | CAA |
| | | | | | | | | | | | | GCP |
| | | | | | | | | | | | | GORD |
| | | | | | | | | | | | | HIA |
| | | | | ■ | ■ | ■ | ■ | | | | | HMC |
| | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Kahramaa |
| | | | | | | | | | | | | Katara |
| | | | | | | | | | | | | MDP&S |
| | | | | ■ | ■ | ■ | ■ | | | | | MEIA |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | MME |
| | | | | | | | | | | | | MoADLSA |
| | | | | | | | | ■ | ■ | ■ | ■ | MoCS |
| | | ● | ● | | | | | | | | | MoEC |
| | | | | ■ | ■ | ■ | ■ | | | | | MoEHE |
| | | | | | | | | | | | | MoEI |
| | | | | | | | | | | | | MoF |
| | | | | | | | | | | | | MoI |
| | | | | ■ | ■ | ■ | ■ | | | | | MoPH |
| | | | | | | | | | | | | MoTC |
| | | | | | | | | | | | | Mowasalat |
| | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | MP |
| | | | | | | | | | | | | Ooredoo |
| | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | PEO |
| | | | | ■ | ■ | ■ | ■ | | | | | PHCC |
| | | | | | | | | | | | | PPC |
| | | | | | | | | | | | | PWRC |
| | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QD |
| | | | | | | | | | | | | QDB |
| | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QF |
| | | | | ■ | ■ | ■ | ■ | | | | | QGBC |
| | | | | | | | | ■ | ■ | ■ | ■ | QMA |
| | | | | ■ | ■ | ■ | ■ | | | | | QP |
| | | | | | | | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| | | | | | | | | | | | | QRail |
| | | | | | | | | ■ | ■ | ■ | ■ | QTA |
| | | | | | | | | | | | | QU |
| | | | | | | | | | | | | SCDL |
| | | | | | | | | | | | | Vodafone |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Immediate 0 - 2 years |
| | | | | | | | | | | | | Short-Medium 3 - 5 years |
| | | | | | | | | | | | | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | BE7.5 | BE8.1 | BE8.2 | BE8.3 | BE8.4 | BE8.5 | BE9.1 | BE9.2 | BE9.3 | BE10.1 | BE10.2 | BE11.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | ■ | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | | | | | | | | | | | | |
| GCP | | | | | | | | | | | | |
| GORD | | | | | | | | | | | | |
| HIA | | | | | | | | | | | | |
| HMC | | | | | | | ■ | ■ | ■ | | | |
| Kahramaa | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |
| Katara | | | | | | | | | | | | |
| MDP&S | | | | | | | | | | | | |
| MEIA | | | | | | | | | | | | |
| MME | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | | | | | | | | | | | | |
| MoCS | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| MoEC | | | | | | | | | | | | |
| MoEHE | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |
| MoEI | | | | | | | | | | | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | | | | | | | | | |
| MoPH | | | | | | | ■ | ■ | ■ | | | |
| MoTC | | | | | | | | | | | | |
| Mowasalat | | | | | | | | | | | | |
| MP | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Ooredoo | | | | | | | | | | | | |
| PEO | ■ | | | | | | ■ | ■ | ■ | | | |
| PHCC | | | | | | | ■ | ■ | ■ | | | |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | ■ | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |
| QDB | | | | | | | | | | | | |
| QF | ■ | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |
| QGBC | | | | | | | | | | | | |
| QMA | ■ | | | | | | | | | | | ■ |
| QP | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |
| QPMC | | | | | | | | | | | | |
| QPSC | | | | | | | | | | | | |
| QRail | | | | | | | | | | | | |
| QTA | ■ | | | | | | | | | | | |
| QU | | | | | | | | | | | | |
| SCDL | | | | | | | | | | | | |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Short-Medium 3 - 5 years | | | | | | | | | | | | |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| BE11.2 | BE11.3 | BE11.4 | BE12.1 | BE12.2 | BE12.3 | BE12.4 | BE13.1 | BE13.2 | BE13.3 | BE13.4 | BE13.5 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Ashghal |
| | | | | | | | | | | | | Aspire |
| | | | | | | | | | | | | Barwa |
| | | | | | | | | | | | | CAA |
| | | | | | | | | | | | | GCP |
| | | | | | | | | | | | | GORD |
| | | | | | | | | | | | | HIA |
| | | | | | | | | | | | | HMC |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | Kahramaa |
| | | | | | | | | | | | | Katara |
| | | | | | | | | | | | | MDP&S |
| | | | | | | | | | | | | MEIA |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | MME |
| | | | | | | | | | | | | MoADLSA |
| ■ | ■ | ■ | | | | | ■ | ■ | ■ | ■ | ■ | MoCS |
| | | | | | | | | | | | | MoEC |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | MoEHE |
| | | | | | | | | | | | | MoEI |
| | | | | | | | | | | | | MoF |
| | | | | | | | | | | | | MoI |
| | | | | | | | | | | | | MoPH |
| | | | | | | | | | | | | MoTC |
| | | | | | | | | | | | | Mowasalat |
| ■ | ■ | ■ | | | | | | | | | | MP |
| | | | | | | | | | | | | Ooredoo |
| | | | ■ | ■ | ■ | ■ | | | | | | PEO |
| | | | | | | | | | | | | PHCC |
| | | | | | | | | | | | | PPC |
| | | | | | | | | | | | | PWRC |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QD |
| | | | | | | | | | | | | QDB |
| ■ | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QF |
| | | | | | | | | | | | | QGBC |
| ■ | ■ | ■ | ● | ● | ● | ● | | | | | | QMA |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QP |
| | | | | | | | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| | | | | | | | | | | | | QRail |
| | | | | | | | | | | | | QTA |
| | | | | | | | | | | | | QU |
| | | | | | | | | | | | | SCDL |
| | | | | | | | | | | | | Vodafone |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Immediate 0 - 2 years |
| | | | | | | | | | | | | Short-Medium 3 - 5 years |
| | | | | | | | | | | | | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | BE14.1 | BE15.1 | BE15.2 | BE15.3 | BE15.4 | BE15.5 | BE15.6 | BE16.1 | BE16.2 | BE16.3 | BE16.4 | M1.1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ● |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | ■ |
| CAA | | | | | | | | | | | | |
| GCP | | | | | | | | | | | | |
| GORD | | | | | | | | | | | | ■ |
| HIA | | | | | | | | | | | | |
| HMC | | | | | | | | | | | | |
| Kahramaa | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Katara | | | | | | | | | | | | |
| MDP&S | | | | | | | | | | | | |
| MEIA | | | | | | | | | | | | |
| MME | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ● |
| MoADLSA | | | | | | | | | | | | |
| MoCS | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| MoEC | | | | | | | | | | | | ■ |
| MoEHE | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| MoEI | | | | | | | | | | | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | | | | | | | | | |
| MoPH | | | | | | | | | | | | |
| MoTC | | | | | | | | | | | | ▲ |
| Mowasalat | | | | | | | | | | | | ■ |
| MP | | | | | | | | ■ | ■ | ■ | ■ | ■ |
| Ooredoo | | | | | | | | | | | | |
| PEO | | | | | | | | ■ | ■ | ■ | ■ | |
| PHCC | | | | | | | | | | | | |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| QDB | | | | | | | | | | | | |
| QF | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| QGBC | | | | | | | | | | | | |
| QMA | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ● | ● | ● | ● | |
| QP | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| QPMC | | | | | | | | | | | | |
| QPSC | | | | | | | | | | | | |
| QRail | | | | | | | | | | | | ● |
| QTA | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QU | | | | | | | | | | | | |
| SCDL | | | | | | | | | | | | ■ |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Short-Medium 3 - 5 years | | | | | | | | | | | | |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| M1.2 | M1.3 | M1.4 | M1.5 | M2.1 | M2.2 | M2.3 | M2.4 | M3.1 | M3.2 | M3.3 | M4.1 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ● | ● | ● | ● | ● | ● | ▲ | ▲ | | | | ● | Ashghal |
| ■ | ■ | ■ | ■ | | | | | | | | | Aspire |
| ■ | ■ | ■ | ■ | | | | | | | | | Barwa |
| | | | | | | | | | | | | CAA |
| | | | | | | | | | | | | GCP |
| ■ | ■ | ■ | ■ | | | | | | | | ■ | GORD |
| | | | | | | | | | | | | HIA |
| | | | | | | | | | | | | HMC |
| | | | | | | | | | | | | Kahramaa |
| | | | | | | | | | | | | Katara |
| | | | | | | | | | | | | MDP&S |
| | | | | | | | | | | | | MEIA |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | MME |
| | | | | | | | | | | | | MoADLSA |
| | | | | | | | | | | | | MoCS |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | MoEC |
| ■ | ■ | ■ | ■ | | | | | | | | | MoEHE |
| | | | | | | | | | | | | MoEI |
| | | | | | | | | ■ | ■ | ● | | MoF |
| | | | | | | | | ● | ● | ■ | | MoI |
| | | | | | | | | | | | | MoPH |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | MoTC |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | Mowasalat |
| ■ | ■ | ■ | ■ | | | | | | | | | MP |
| | | | | | | | | | | | | Ooredoo |
| | | | | | | | | | | | | PEO |
| | | | | | | | | | | | | PHCC |
| | | | | | | | | | | | | PPC |
| | | | | | | | | | | | | PWRC |
| | | | | | | | | | | | | QD |
| | | | | | | | | | | | | QDB |
| | | | | | | | | | | | | QF |
| | | | | | | | | | | | | QGBC |
| | | | | | | | | | | | | QMA |
| | | | | | | | | | | | | QP |
| | | | | | | | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| ● | ● | ● | ● | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QRail |
| ■ | ■ | ■ | ■ | | | | | | | | | QTA |
| | | | | | | | | | | | | QU |
| ■ | ■ | ■ | ■ | | | | | | | | | SCDL |
| | | | | | | | | | | | | Vodafone |
| ✓ | | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | Immediate 0 - 2 years |
| | ✓ | ✓ | | | | ✓ | ✓ | | | | | Short-Medium 3 - 5 years |
| | | | | | | | | | | | | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | M4.2 | M4.3 | M4.4 | M5.1 | M5.2 | M5.3 | M5.4 | M6.1 | M6.2 | M6.3 | M7.1 | M7.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashghal | ● | ● | ● | ■ | ■ | ■ | ■ | | | | | |
| Aspire | | | | | | | | | | | | |
| Barwa | | | | | | | | | | | | |
| CAA | | | | | | | | ▲ | ● | ● | | |
| GCP | | | | | | | | | | | | |
| GORD | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | |
| HIA | | | | | | | | | | | | |
| HMC | | | | | | | | | | | | |
| Kahramaa | | | | | | | | | | | | |
| Katara | | | | | | | | | | | | |
| MDP&S | | | | | | | | | | | | |
| MEIA | | | | | | | | | | | | |
| MME | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| MoADLSA | | | | ● | ● | ● | ● | | | | | |
| MoCS | | | | | | | | | | | | |
| MoEC | | | | | | | | | | | ● | ● |
| MoEHE | | | | | | | | | | | | |
| MoEI | | | | | | | | | | | | |
| MoF | | | | | | | | | | | | |
| MoI | | | | ● | ● | ● | ● | | | | | |
| MoPH | | | | | | | | | | | | |
| MoTC | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ |
| Mowasalat | | | | | | | | | | | | |
| MP | | | | | | | | | | | | |
| Ooredoo | | | | | | | | | | | | |
| PEO | | | | | | | | | | | | |
| PHCC | | | | | | | | | | | | |
| PPC | | | | | | | | | | | | |
| PWRC | | | | | | | | | | | | |
| QD | | | | | | | | | | | | |
| QDB | | | | | | | | | | | | |
| QF | | | | | | | | | | | | |
| QGBC | | | | | | | | | | | | |
| QMA | | | | | | | | | | | | |
| QP | | | | | | | | ■ | ■ | ■ | ■ | ■ |
| QPMC | | | | | | | | | | | ■ | ■ |
| QPSC | | | | | | | | | | | | |
| QRail | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QTA | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QU | | | | | | | | | | | | |
| SCDL | | | | ■ | ■ | ■ | ■ | | | | | |
| Vodafone | | | | | | | | | | | | |
| Immediate 0 - 2 years | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | |
| Short-Medium 3 - 5 years | | ✓ | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ |
| Medium-Long 6+ years | | | | | | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

| M7.3 | M8.1 | M8.2 | M9.1 | M9.2 | M9.3 | M9.4 | U1.1 | U2.1 | U2.2 | U2.3 | U2.4 | Agency Responsibility Table State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ▲ | ▲ | ■ | ■ | ▲ | ▲ | ▲ | ▲ | ▲ | Ashghal |
| | | | | | | | | | | | | Aspire |
| | | | | | | | | | | | | Barwa |
| | | | | | | | | | | | | CAA |
| | | | | | | | ■ | ■ | ■ | ■ | ■ | GCP |
| | | | | | | | ● | ■ | ■ | ■ | ■ | GORD |
| | | | | | | | | | | | | HIA |
| | | | | | | | | | | | | HMC |
| | | | | | | | ● | ● | ● | ● | ● | Kahramaa |
| | | | | | | | | | | | | Katara |
| | | | | | | | ● | | | | | MDP&S |
| | | | | | | | | | | | | MEIA |
| ● | ● | ● | ● | ● | ● | ● | ▲ | ▲ | ▲ | ▲ | ● | MME |
| | | | | | | | | | | | | MoADLSA |
| | | | | | | | | | | | | MoCS |
| ● | ● | ● | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | MoEC |
| | | | | | | | | | | | | MoEHE |
| | | | | | | | | | | | | MoEI |
| | | | | | | | | | | | | MoF |
| | | | | | | | | | | | | MoI |
| | | | | | | | | | | | | MoPH |
| ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ■ | ■ | ■ | ■ | ■ | MoTC |
| | | | | | | | | | | | | Mowasalat |
| | | | | | | | | | | | | MP |
| | | | | | | | ■ | ■ | ■ | ■ | ■ | Ooredoo |
| | ■ | ■ | | | | | ■ | ■ | ■ | ■ | ■ | PEO |
| | | | | | | | | | | | | PHCC |
| | | | | | | | | | | | | PPC |
| | | | | | | | | | | | | PWRC |
| | | | | | | | | | | | | QD |
| | | | | | | | | | | | | QDB |
| | | | | | | | | | | | | QF |
| | | | | | | | | | | | | QGBC |
| | | | | | | | | | | | | QMA |
| ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QP |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | QPMC |
| | | | | | | | | | | | | QPSC |
| ■ | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | QRail |
| ■ | ● | ● | | | | | | | | | | QTA |
| | | | | | | | | | | | | QU |
| | | | | | | | | ■ | ■ | ■ | ■ | SCDL |
| | | | | | | | ■ | ■ | ■ | ■ | ■ | Vodafone |
| ✓ | | | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Immediate 0 - 2 years |
| | ✓ | ✓ | | ✓ | ✓ | | | | | | | Short-Medium 3 - 5 years |
| | | | | | | | | | | | | Medium-Long 6+ years |

**Legend**

■ Consultative Stakeholder ● Key Stakeholder Agency ▲ Lead Agency

| Agency Responsibility Table State | U2.5 | U2.6 | U3.1 | U3.2 | U3.3 | U3.4 | U3.5 |
|---|---|---|---|---|---|---|---|
| Ashghal | ▲ | ▲ | ● | ● | ● | ● | ● |
| Aspire | | | | | | | |
| Barwa | | | | | | | |
| CAA | | | | | | | |
| GCP | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| GORD | ■ | ■ | | | | | |
| HIA | | | | | | | |
| HMC | | | | | | | |
| Kahramaa | ● | ● | ● | ● | ● | ● | ● |
| Katara | | | | | | | |
| MDP&S | | | | | | | |
| MEIA | | | | | | | |
| MME | ● | ● | ▲ | ▲ | ▲ | ▲ | ▲ |
| MoADLSA | | | | | | | |
| MoCS | | | | | | | |
| MoEC | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| MoEHE | | | | | | | |
| MoEI | | | | | | | |
| MoF | | | | | | | |
| MoI | | | | | | | |
| MoPH | | | | | | | |
| MoTC | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Mowasalat | | | | | | | |
| MP | | | | | | | |
| Ooredoo | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| PEO | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| PHCC | | | | | | | |
| PPC | | | | | | | |
| PWRC | | | | | | | |
| QD | | | | | | | |
| QDB | | | | | | | |
| QF | | | | | | | |
| QGBC | | | | | | | |
| QMA | | | | | | | |
| QP | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QPMC | | | | | | | |
| QPSC | | | | | | | |
| QRail | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| QTA | | | | | | | |
| QU | | | | | | | |
| SCDL | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Vodafone | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Immediate 0 - 2 years | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Short-Medium 3 - 5 years | | | | | | | |
| Medium-Long 6+ years | | | | | | | |

**Legend**

▲ Lead Agency ● Key Stakeholder Agency ■ Consultative Stakeholder

# Annex 4 Glossary



| Terminology | Description |
|---|---|
| 2022 FIFA World Cup Qatar™ | 2022 Fédération Internationale de Football Association (International Federation of Association Football) World Cup QatarTM |
| Action Area Plan (AAP) | AAPs are a component of the Municipal Spatial Development Plan prepared to provide locally focused planning guidance for local areas. AAPs seek to: establish a shared vision for the local area; address key local planning issues and capitalise on opportunities; establish an integrated approach to local planning; and sensibly manage future development outcomes. |
| Active Open Space | Recreation open space which contains outdoor recreation facilities, mainly for the core activities including games facilities. |
| Active Transport | Relates to physical activity undertaken as a means of transport. This includes travel by foot, bicycle and other non-motorised vehicles. It also includes public transport to meet longer distance trip needs as public transport generally involves some walking or cycling to pick-up and from drop-off points. Active transport does not include walking, cycling or other physical activity that is undertaken for recreation. |
| Activity Node | An identifiable group of uses usually having a concentration of activities at a particular location. |
| Affordable Housing | Housing for sale or rent developed through some combination of zoning incentives, cost-effective construction techniques, and governmental subsidies to meet the needs of households who cannot afford accommodation through the open market. |
| Ancillary Use | A structure or use that is subordinate, incidental to, and customarily found in connection with the principal use allowed on a lot by the zoning law. |
| Aquifer | Permeable water-bearing formation capable of yielding exploitable quantities of water from underground sources. |
| Aquifer Protection Zone | A zone that has been established to prevent contamination and depletion of the groundwater resources within the aquifer area. |
| Assessable Development | Any development that requires planning approval prior to commencement. |
| Biodiversity | Diversity among and within plant and animal species in an environment. |
| Brownfield Site | Abandoned, idled, or underused industrial and commercial facilities available for re-use where expansion or redevelopment is complicated by real or perceived environmental contamination. |
| Buffer Zone | A defined distance which separates incompatible activity from a particular area or thing which is to be protected or enhanced. |
| Built Environment | A description of the man-made features of the environment. |
| Bus Rapid Transit (BRT) | BRT is a high-capacity, urban public-transit system using special buses operating within their own dedicated street lane or special right-of-way corridor. |
| Capital City Precinct | A defined geographical area within Metropolitan Doha against which specific policies and policy actions will be applied to create an internationally recognised city with a vibrant, attractive and sophisticated public realm where high quality lifestyle choices are achieved. |
| Centers Hierarchy | An ordered structure of mixed-use, mixed-density urban centers providing a range of services to their surrounding population catchment. These centers which comprise Capital, Metropolitan, Town, District and Local centers, form the spatial urban structure of Qatar. |
| Central Business District (CBD) | The traditional core of a city, characterized by a relatively high concentration of business activity. |
| Climate Change | A long-term change in the earth's climate, especially a change due to an increase in the average atmospheric temperature. |
| Coastal Zone | The area of land and sea along the coast, including estuaries, onshore areas and offshore areas, wherever they form an integral part of the coastal system. |
| Community Facilities | Facilities used for education, health, religion, emergency services and other community services. |
| Conservation Areas | Areas designated for the purpose of conserving or protecting natural and heritage resources, environmental quality and wildlife habitats. |

| Terminology | Description |
|---|---|
| Consultative Stakeholder Agencies | Are Ministries or Agencies identified as key stakeholders to be consulted at various times in the implementation of the policy action. They must provide all reasonable assistance and meaningful input to ensure policy action is successfully implemented. |
| Contaminated Land | Land which has been polluted or harmed in some way rendering it unfit for safe development and most practical uses. |
| Cumulative Environmental Impact | The accumulated sum of all individual environmental impacts as a result of a particular development or place. |
| Development | Development is any of the following activities:<br>a. carrying out building work<br>b. carrying out operational work<br>c. reconfiguring a lot<br>d. rezoning |
| Development Application | Means an application for approval to undertake development. |
| Environmental Impact Assessment | Process used to identify the environmental and social impacts of a project prior to decision-making to reduce adverse impacts. |
| Environmental Protected Area (EPA) | An EPA is land that has significant ecological or environmental value requiring protection from inappropriate development |
| Environmentally Sensitive Areas (ESA) | An ESA is land that has, or with remedial action could achieve, desirable environmental attributes that contribute to the retention and/or creation of wildlife habitat, soil stability, water retention or recharge, vegetative cover and similar vital ecological functions. |
| General Secretariat for Development Planning (GSDP) | The GSDP provides advice to the Government on Qatar's national development aspirations. It is responsible for preparing and managing the implementation of national development strategies to achieve the goals of the Qatar National Vision 2030. The GSDP was merged into the newly created Ministry of Development Planning and Statistics in June 2013. |
| Greenbelt | A buffer area of rural land between the utility corridor and the urban boundary of Metropolitan Doha, which provides a physical and visual transition from built-up areas of towns and cities to the natural desert beyond. Urban uses are prohibited in this area which may be used for agriculture expansion, open space, low impact recreational and environmental activities, suitable infrastructure purposes and can be utilized as part of the National Food Security Program or for large scale Governmental uses |
| Gross Domestic Product (GDP) | GDP is the market value of all officially recognized final goods and services produced within a country in a given period. GDP per capita can be used as a general indicator of a country's standard of living. |
| Groundwater | Subsurface water occupying in the saturated portions of soils or geological formations. |
| Guiding Principles | Strategic planning principles that guide integrated decision making. |
| Heritage Area | Natural and/or cultural environments that are of special value for the present community and for future generations. |
| Institutional Arrangements | The manner in which public agencies and other entities are organized to undertake specific roles, responsibilities and functions for the implementation of QNDF2032 policies and policy actions. |
| Institutional Effectiveness | The systematic, explicit and documented process of measuring performance against the strategic objectives and vision of an organisation and the needs and expectations of its stakeholders. |
| Institutional Framework | The relationship or transaction between two or more parties and encompasses the rules that govern rights and obligations that the parties have to observe. |
| Key Stakeholder Agencies | Are Ministries or Agencies identified as key stakeholders in the determination of policy and/or decisions arising from the implementation of the policy action. They are responsible for supporting the Lead Agency and must provide all reasonable assistance to ensure the policy action is successfully implemented. |

| Terminology | Description |
|---|---|
| Knowledge Based Industries | Are industries which are intensive in the use of technologies and applied learning, including green technologies, telecommunications, media etc. |
| Land Under Investigation | land that is currently not considered necessary, but potentially may be suitable, for urban purposes dependent upon appropriate timing, the timely provision of infrastructure and the resolution of other constraints such as environmental, ecological, cultural, etc. |
| Large Gathering | A group of persons (seven or more with usually no family relation) of the same gender usually sharing a housing unit. |
| Lead Agency | is the identified Ministry or Agency responsible for directing and implementing the action. It is also responsible for reporting on an annual basis to the MME on the progress of implementation. |
| Major Development | Means development involving any one or more of the following-<br>a. the winning and working of minerals or the use of land for mineral-working deposits;<br>b. waste management facilities<br>c. the provision of dwelling houses/units where -<br>i. the number of dwelling houses/units to be provided is 10 or more; or<br>ii. the development is to be carried out on a site having an area of 0.5 hectares or more<br>d. the provision of a building or buildings where the gross floor area to be created by the development is 1,000 square meters or more; or<br>e. development carried out on a site having an area of 1 hectare or more |
| Mass Transit | A transport system for the movement of passengers in large numbers, such as Metro rail, Bus Rapid Transit, etc. |
| Master Plan | A comprehensive spatial plan which describes and maps the form of urban development in a region, municipality, local area or precinct. It shows future land uses, built form and urban design requirements, development regulations, major infrastructure and public facilities. |
| Mega-project | Large-scale development projects carried out by private and/or government sector, classified as such due to its size and impact on the wider community and environment. |
| Metropolis | From the Greek words mētēr meaning “mother” and pólis meaning “city”/”town” means an agglomeration of cities in which the centre city has a population of more than half a million people and in which the aggregate population has a population of more than one million people. |
| Metropolitan Doha | The developed area of Doha bordered by the Utility Corridor and the metropolitan Greenbelt, and encompassing Doha municipality and the urban areas of Al Rayyan, Al Daayen, Umm Slal and Al Wakra municipalities. |
| Minister for Municipality and Environment | Means the Minister responsible for the Government department that has primary responsibility for urban planning, development and environment. |
| Mixed Use Development | A mix of residential, retail, commercial, institutional, or other compatible land uses in an urban location such as a town center, neighborhood, or building. Such development is usually located around public transit nodes (TOD’s) with retail and commercial uses in ground floor street frontage spaces of residential buildings. This encourages safe and convenient access for residents and workers to services, jobs, public transport and community amenities in the surrounding area. |
| Municipal Spatial Development Plan (MSDP) | A regulatory spatial land use plan for the municipality which may contain a Structure Plan, Town Center Plans, Action Area Plans, and detailed land use zones and regulations designed to inform and enforce decisions on future land use development within the whole of the municipality. |
| National Food Security Program (NFSP) | The NFSP was established by Qatar to reduce the nation’s reliance on food imports by developing and implementing a comprehensive range of sustainable, long-term solutions for agricultural production and self-sufficiency in food production. |
| National Housing Program | Governmental program for the provision of land for housing for Qatari citizens. |
| National Significant Project | Means a project declared a National Significant Project by the Minister for Municipality and Environment using the process established in the Qatar National Development Regulatory Provisions of the QNDF2032. |

| Terminology | Description |
|---|---|
| National Spatial Strategy 2032 | Is an integrated set of urban strategies, planning objectives, policies and policy actions in the form of a master plan to address the physical impacts of future population and economic growth expectations for Qatar to 2032 and is a component of the QNDF2032. |
| Natural Environment | The natural environment, encompasses all living and non-living things occurring naturally on Earth or some region thereof and includes geographical and topological features, air, air quality and climate. |
| Non-urban land | Is land considered not suitable for urban development in this plan period and includes lands that have landscape (desert areas), rural production or other non-urban values and includes agricultural areas, |
| Permanent Worker | Means low or unskilled construction workers employed in the construction industry servicing long-term and permanent construction activities |
| Permanent Worker Accommodation | Means dwellings intended for the permanent accommodation of workers, is located within the urban area on sites with good accessibility to labor markets, strategic transportation networks and is constructed with minimum building standards, amenities, community services and recreational facilities. |
| Policy | A directive set by an agency in order to achieve its goals and objectives. |
| Policy Action | An action required to be undertaken by one or more stakeholders to achieve the outcomes of the Policy. |
| Pool Room | A habitable room within a residential dwelling for playing billiards and the displaying of (sentimentally and/or commercially) valuable gifts and/or possessions. |
| Precautionary Approach | Means a willingness to take action in advance of scientific proof or evidence of the need for the proposed action on the grounds that further delay will prove ultimately most costly to society and nature, and, in the longer term, selfish and unfair to future generations. |
| Primary Industry | Means agriculture, apiculture, aquaculture, horticulture, and pastoral industry and includes intensive animal husbandry. |
| Prohibited Uses | Land use activities which are not permitted to occur in a given zone. |
| Public Realm | Includes all exterior places, linkages and built form elements that are physically and/or visually accessible regardless of ownership. |
| Public Transit | A system of regular, scheduled urban transport services used by the general public which includes buses, trams, light rail, suburban rail, ferries and rapid transit services such as metro rail and bus rapid transit. |
| Qatar Economic Zone | Land that has been identified within a defined zone to which specific regulations apply designed to encourage foreign investment. |
| Qatar National Development Framework (QNDF2032) | The national spatial development strategy for Qatar to the year 2032, containing Structure Plans for the nation as a whole, for Metropolitan Doha and each Municipality. The plan is supported by 17 Strategic Planning Objectives, more than 60 Policies and over 200 Policy Actions for managing growth and building sustainable and livable communities. |
| Qatar National Development Strategy (QNDS 2011-2016) | QNDS 2011-2016 prepared by the GSDP in collaboration with Government agencies, is the first 5 year implementation plan for achieving the objectives of the QNV 2030. |
| Qatar National Master Plan (QNMP) | A program of work undertaken by the Ministry of Municipality and Environment, to address and plan for the spatial needs of Qatar in response to future population and economic growth, and the urban development objectives of the QNV2030 and QNDS 2011-2016. |
| Qatar National Vision 2030 (QNV 2030) | QNV 2030 prepared by the GSDP sets out the long-term outcomes for Qatar based upon the four pillars of Social, Economic, Human, and Environmental development. It provides a framework within which national strategies and implementation plans can be developed and implemented by Government agencies. |

| Terminology | Description |
|---|---|
| Reconfiguring a Lot | Means:<br>a. creating lots by subdividing another lot; or<br>b. amalgamating 2 or more lots; or<br>c. rearranging the boundaries of a lot by registering a new plan of subdivision; or<br>d. dividing land into parts by agreement rendering different parts of a lot immediately available for separate disposition or separate occupation; or<br>e. creating an easement giving access to a lot from a constructed road |
| Redevelop | See “Urban Regeneration” |
| Regenerate | See “Urban Regeneration” |
| Regulatory Provisions | Are the detailed rules which provide legal force to land use plans, and which regulate how and what land uses may be undertaken in particular areas (e.g. height and set-back limits, density controls, parking and open space requirements etc.) |
| Serenity | An acute feeling of peacefulness and calm brought about by ones outlook and not necessarily directly influenced by the immediate environment. |
| Short Term Temporary Accommodation | Means accommodation provided for a period not exceeding 3 months. |
| Small Gatherings | A group of persons of the same gender usually staying in one housing unit. They live as a group (collectively) but there is no family relation between them. Their number ranges between 2 and 6 persons. |
| Small Scale Tourist Accommodation Facility | means a facility that makes units or space available for separate hire over a short term by tourists or travellers including, but not limited to a holiday cabin, a motel room, a hotel room, an apartment, a guesthouse, a camping site and a caravan park site provided:<br>a. the total number of separate units or spaces made available is no more than twenty; and<br>b. the total capacity of the facility is for no more than 100 people; and<br>c. the gross floor area for tourist accommodation is no more than 1000sq m.<br>The term does not include medium to long stay and permanent accommodation |
| Stakeholder | Any person or group with a vested interest in the outcome of a project or plan. |
| Stakeholder Engagement | A process involving a range of activities and interactions between stakeholders over the life of a project. |
| Strategic Environmental Assessment | Systematic process for evaluating the environmental consequences of policies, plans, programmes or proposals to ensure that they are addressed on par with economic and social considerations and early in the decision-making process. |
| Structure Plan | A generalized spatial plan to guide the preparation of more detailed master plans for specific areas, by defining the broad distribution of future land uses, the location and nature of trunk infrastructure, and other key strategic features such as transport corridors, public facilities and environmentally protected areas. |
| Subdivision of land | see “Reconfiguring a Lot” |
| Sustainable Development | Development that aims to meets the needs of the present generation without harming the ability of future generations to meet their needs. |
| Sustainable Long Term Growth | See “Sustainable Development” |
| Temporary Accommodation | Means accommodation that is intended to be provided on site, or immediately adjoining a site, for a period of not more than three years and:<br>a. contains a sleeping compartment, whether or not it is used; or<br>b. is a building that contains facilities required to service a sleeping compartment |
| Temporary Worker | Means low or unskilled construction workers employed in the construction industry servicing the infrastructure and construction program for the 2022 FIFA World Cup Qatar™. This population figure has been generated by the General Secretariat for Development Planning. |

| Terminology | Description |
|---|---|
| Temporary Worker Accommodation | Means dwellings intended for the temporary accommodation of workers, is located close or within the urban area on sites with good accessibility to labor markets, strategic transportation networks and is constructed with minimum building standards, amenities, community services and recreational facilities. |
| The Vibe | The general intent, premise and feeling behind an intrinsic value or principle that is hard to acutely describe in words. |
| Tourist Accommodation | Means residential development that is not used for permanent accommodation and includes a small scale tourist accommodation facility. |
| Transit Oriented Development (TOD) | Means urban development located around public transport services and stations characterized by mixed uses and higher density urban development. TOD neighborhoods are typically located within a walkable distance (400m – 800m) of a public transit station. They comprise relatively high-density development at the TOD location with progressively lower-density development spreading outward from the center. |
| Transit System | A transport system for the movement of passengers in large numbers, such as Metro rail, Bus Rapid Transit, etc. |
| Treated Sewerage Effluent (TSE) | Effluent that has been treated through chemical, biological, and mechanical means, for reuse. |
| Urban Design | A process of giving form, shape, and character to groups of buildings/landforms and structures, to whole neighbourhoods, and the city. |
| Urban Growth Boundary | The jurisdictional limit of urban development for Metropolitan Doha and each municipality, which prevents urban sprawl onto adjoining rural and greenbelt areas retained for non-urban uses such as agriculture and low impact recreational and environmental activities. It encourages a compact form of urban development which is more efficient and cost effective to service with infrastructure and transport services. |
| Urban Land | Is land considered potentially suitable for development or redevelopment for urban purposes and includes uses such as housing, industry, business/commercial, community facilities, tourist facilities, sport, recreation and urban open space. Urban Land also includes land that may not be suitable for urban development because of physical, environmental, ecological, cultural and open space constraints and/or requirements. |
| Urban Purpose | Means a residential, industrial, retail, commercial, sporting, recreational or community activity normally found in a city or town. |
| Urban Regeneration | Are the strategies to change the built environment in order to stimulate economic growth and social improvement |
| Urban Renewal | The process where an urban neighbourhood or area is improved and rehabilitated. The renewal process can include demolishing old or run-down buildings, constructing new, up-to-date housing, or adding in features. |
| Urban Sprawl | Uncontrolled spreading of urban development into areas adjoining the edge of a city. |
| Urban Structure | A morphological /functional appraisal and analysis of towns, cities and other settlements makes possible to identify their structure. |
| Zoning | Classification of land into different spatial areas or districts based on compatible uses/activities. Land use development in zones is controlled by regulations such as plot size and site coverage, density and height of buildings, minimum set-backs, parking, and requirements for open space and other related aspects. |

**Map Disclaimer**

The information on maps in this document is not intended for reference to specific parcels of land, and should be treated as indicative only. In some parts of the mapping, one layer obscures another; this is not meant to imply any order of importance or priority.

The Ministry of Municipality and Environment does not guarantee or make any representations as to the accuracy or completeness of the information shown on these maps, nor does it accept any responsibility or liability for any loss or damage arising from their use.

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