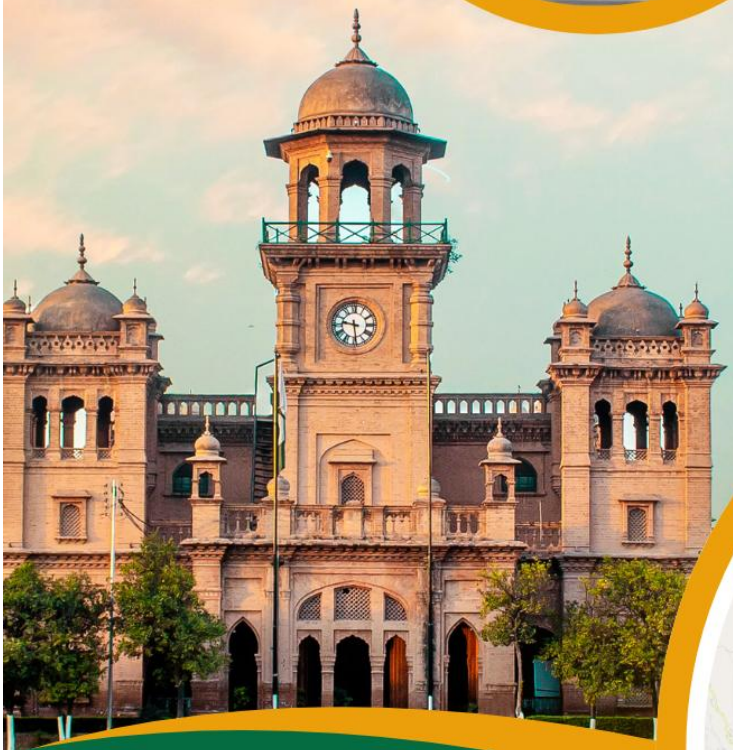
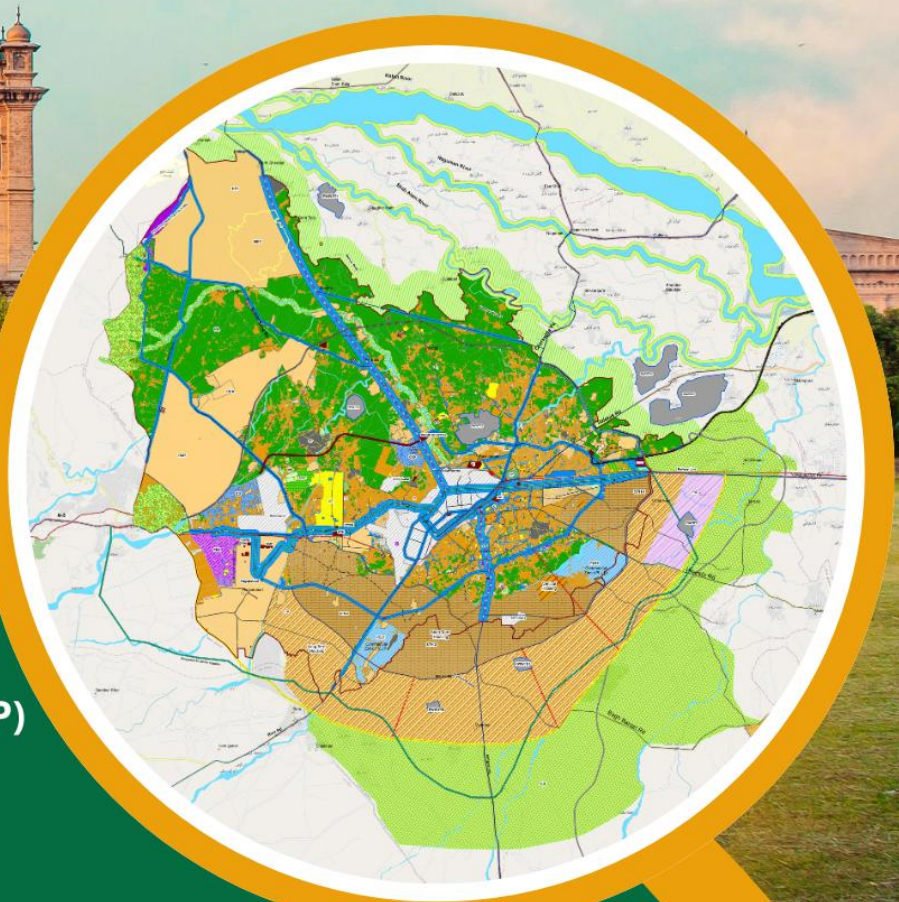
PESHAWAR CITY MASTER PLAN, 2024-44

VOLUME I





MASTER PLAN PROJECT (MPP)

URBAN POLICY AND PLANNING UNIT

DECEMBER, 2024

URBAN POLICY UNIT
Planning and Development Department
GOVERNMENT OF KHYBERPAKHTUNKHWA

LUBCA

PEPAC PVT LTD & Associate

Reviewed by:

SHEHER SAAZ
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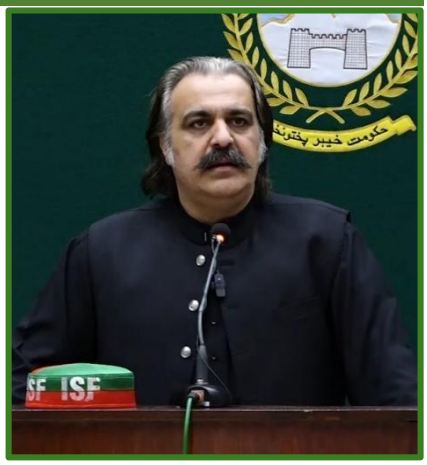
MESSAGE FROM CHIEF MINISTER, KHYBER PAKHTUNKHWA



Khyber Pakhtunkhwa, the third most populated province of Pakistan, is experiencing rapid urbanization due to various push and pull factors. Lack of proper planning has resulted in overcrowding of all major urban centres coupled with traffic congestion, environmental pollution and ribbon development along main roads. Insufficient investment in urban infrastructure, lack of trained human resources and poor management of key infrastructure are the causes of weak coverage and low service quality. A significant proportion of the urban population continues to live in dilapidated environments and urban slums. The current provincial government has introduced a policy shift from "containing urbanization" to "managing urbanization", adopting an integrated approach that capitalizes on the potential of cities and that can convert this constraint into an opportunity and transform the cities to be engines of economic growth.

The provincial government is aware of these challenges for which it has prioritized an innovative planning approach that would bridge the gap between urban and rural development. Through coordinated efforts, district land use plans for districts and master plans for urban centres across the province have been developed. These master plans are designed to address core urban issues such as traffic congestion, provision of affordable housing, traffic and transportation problems, unemployment, lack of education facilities and healthcare facilities, and environmental degradation. These plans provide clear and actionable road maps for decision-makers to guide them towards sustainable development, ensuring that both urban and rural areas can meet the needs of growing populations while safeguarding natural resources for future generations.

These achievements wouldn't have been possible without the dedicated and untiring efforts of the Master Plan Project, Urban Policy and Planning Unit of the Planning and Development Department, Government of Khyber Pakhtunkhwa. I would like to extend my gratitude to all stakeholders, community members and local government officials whose contributions have been instrumental in shaping these comprehensive plans.

Looking ahead, these master plans stand as a testament to our government's unwavering commitment to fostering sustainable, inclusive and resilient urban development. Together, we will ensure that Khyber Pakhtunkhwa's cities and towns continue to thrive as hubs of economic activity, cultural heritage, and community well-being, securing a prosperous future for all generations to come.

Mr. Ali Amin Gandapur
Chief Minister
Government of Khyber Pakhtunkhwa

MESSAGE FROM THE MINISTER LOCAL GOVERNMENT, ELECTIONS, AND RURAL DEVELOPMENT DEPARTMENT, GoKP

The Government of Khyber Pakhtunkhwa is committed to fostering a well-planned, resilient, and sustainable urban future for our cities. Recognizing the rapid pace of urbanization and its associated challenges, we have taken a proactive approach to urban planning and development that aligns with national priorities and international commitments, including the Sustainable Development Goals (SDGs).

Through the Master Plans for Cities, we are laying the foundation for balanced regional development, economic growth, and environmental sustainability. These plans will guide future investments in infrastructure, housing, transportation, and public services to ensure that our cities remain inclusive, competitive, and climate-resilient. Our focus is to bridge the urban-rural divide by ensuring equitable resource allocation and extending modern infrastructure.

The Master Plans represent a vision for progress, prosperity, and sustainability. With strong political will, coordinated action, and community participation, we are determined to transform our cities into hubs of opportunity, innovation, and well-being for all.

The Urban Policy and Planning Unit of the Planning and Development Department played a pivotal role in preparing these master plans. These master plans truly reflect the collaborative efforts of a wide range of stakeholders including provincial line departments, district administration, NGOs, local political leadership, and the public at large. I extend my sincere gratitude to UPU and all those who have contributed their expertise and efforts towards creating plans that will not only tackle present challenges but also lay the foundation for a sustainable urban future.

Mr. Arshad Ayub Khan
Minister, LGE & RD Department
Government of Khyber Pakhtunkhwa

MESSAGE FROM ADDITIONAL CHIEF SECRETARY, PLANNING & DEVELOPMENT DEPARTMENT, GOVERNMENT OF KHYBER PAKHTUNKHWA

The rapid urbanization across Khyber Pakhtunkhwa has created both opportunities and challenges. On the one hand, urbanization is transforming the socio-economic landscape of the province while on the other, it has caused urban issues such as unplanned expansion, inadequate infrastructure, traffic congestion, and increased pressure on public resources. To enhance the economic vitality of urbanization and reduce its negative impacts, there is an urgent need of structured and sustainable urban planning to fully realize the potential of our urban centres.

The formulation of master plans for the towns and cities is a crucial step towards achieving this goal. These plans will provide comprehensive frameworks to guide towards the planning of towns and cities, optimize land use, improving economic productivity and ensuring the equitable distribution of resources. Sustainability remains a key priority in the plans, emphasizing environmental protection while aligning resources to meet the growing needs of the urban population. The master plans will serve as structured guidelines for local authorities, district administrations and municipalities to systematically undertake and implement future development initiatives. These plans support the achievements of core urban needs such as housing for all, transportation and public facilities ensuring that cities evolve into resilient, liveable and economically viable centers that can meet the aspirations of residents.

The Urban Policy and Planning Unit (UPU) of the Planning and Development Department played a pivotal role in preparing these master plans. The plans truly reflect the collaborative efforts of a wide range of stakeholders including line departments, district administration, NGOs, local political leadership, and the community. I extend my sincere gratitude to UPU and all those who have contributed their expertise towards developing master plans that will not only tackle present challenges but would also lay the foundation for sustainable urban growth.

As we move forward with implementation, I am pleased to announce that the projects identified in these master plans shall be included in the upcoming Annual Development Programmes (ADPs) to ensure their timely execution and alignment with provincial priorities. I am confident that these master plans will serve as benchmarks for urban development. They are testament to the government's commitment to foster well-planned and thriving urban centers that support the prosperity and well-being of citizens for all the times.

Mr. Ikram Ullah Khan
Additional Chief Secretary
Planning and Development Department
Government of Khyber Pakhtunkhwa

MESSAGE FROM THE SECRETARY LOCAL GOVERNMENT, KHYBER PAKHTUNKHWA

The Peshawar Master Plan of 2024-2044 represents a significant milestone in our efforts to foster sustainable urban development and shape the future of the city. As Peshawar continues to grow, there is an increasing need for structured, sustainable, and visionary planning to accommodate rising population, promote economic growth and ensure equitable access for all citizens to essential services and resources.

At the Local Government Elections & Rural Development (LGE&RD) Department, we are committed to undertake initiatives that contribute to the overall prosperity of Khyber Pakhtunkhwa. The aim is to ensure that each part of the province benefit from development strategies. This master plan is a reflection of that vision — offering a comprehensive framework that addresses immediate urban challenges while laying the foundation for long term, resilient growth.

The Peshawar Master Plan of 2024-2044 has been designed to maintain an equilibrium between urban expansion and the preservation of valuable cultural heritage and environmental resources including prime agricultural land in the peri-urban limits. The plan will create investment and employment opportunities and will generate revenue for further development and enhance the overall quality of life for the people of Peshawar. Moreover, it underscores the importance of collaboration among public institutions, stakeholders and residents in shaping an inclusive, sustainable and prosperous urban centers.

I would like to commend the Urban Policy & Planning Unit (UPPU) of the Planning and Development Department and all stakeholders for their dedication and hard work in developing this master plan. The successful implementation of the plan will not only transform Peshawar but would also serve as a model for other cities throughout the province.

We resolve our commitment to fostering inclusive growth, ensuring that development opportunities are accessible to all and contributing to a brighter and more prosperous future for the people of Khyber Pakhtunkhwa.

Dr. Amber Ali Khan
Secretary LGE & RD Department
Government of Khyber Pakhtunkhwa

ACKNOWLEDGMENTS

First of all, I am extremely grateful to almighty Allah who enable me and my team to successfully complete this gigantic work of the preparation of Master Plan of Peshawar City. The preparation of the Peshawar City Master Plan 2024-2044 has been a collaborative and dedicated effort aimed at ensuring the sustainable development of Peshawar, the vibrant capital of Khyber Pakhtunkhwa. This report reflects the collective commitment of all stakeholders towards a rational, balanced, and systematic use of resources to address the city's unique challenges and guide its future growth and development. This Master Plan forms an integral part of the Government of Khyber Pakhtunkhwa broader initiatives to promote sustainable urban development across the province. It addresses critical aspects of urban management, including housing, transportation, socio-economic development, and environmental sustainability, providing a comprehensive framework for sustainable growth of Peshawar City.

I extend my sincere gratitude to the worthy Additional Chief Secretary P & DD, Secretary, P & DD, Government of KP for entrusting me and my team with this significant initiative. Special thanks to my existing and former Executive Directors, UPU including Mr. Zubair Asghar Qurashi, Mr. Adeel Shah (current Secretary, P and DD), Mr. Inayatullah Waseem, Mr. Shah Mehmud, Mr. Abdul Basit, Mr. Iftikhar, and Mr. Fazal Khaliq (current ED, UPU) for their insightful leadership and support throughout the planning process. I am also thankful to all my colleagues in UPU and MPP especially Dr.Muhammad whose expertise and efforts during the conceptualization, data collection, analysis, and review phases were instrumental in shaping this detailed master plan. I am deeply thankful to the officials of the District Administration, including Commissioner Peshawar Division, Deputy Commissioner Peshawar, and other key officials for their cooperation, guidance, and active involvement during the course plan making. Their local insights, support, and valuable feedback have greatly enriched the plan, ensuring its relevance to the unique context of Peshawar.

Special recognition is due to PEPAC Pvt Ltd & Associates for their dedicated efforts in preparing this report. The team's technical expertise, unwavering commitment, and hard work were instrumental in the successful completion of this master plan. I am also thankful to Mr. Khurram Farid, (Sheher Saaz Pvt. Ltd) and his team for reviewing various drafts of the PCMP. Their valuable inputs have greatly enhanced the quality of the plan. Finally, I express my appreciation to everyone who contributed to this plan in various capacities. This plan represents a shared vision for a sustainable, prosperous, and resilient future Peshawar city.

As this master plan is the first of its kind and will not be free from errors, however, I am fully optimistic about the successful implementation of this plan. In due course of time the plan will be reviewed and necessary changes will be made in future revisions. Together, let us work toward building a thriving and sustainable Peshawar for generations to come.

Adnan Salim,
Project Director, Master Plan Project
Urban Policy Unit, P & DD

EXECUTIVE SUMMARY

Located in the north-west, Khyber Pakhtunkhwa (KP) is the third-largest province of Pakistan by population. It has an average annual growth rate of 2.89% that is a relatively higher than the national average of 2.40% estimated by the Pakistan Bureau of Statistics in 2017 whilst the urban population stood at 5.7 million. The urban growth of KP has grown rapidly mainly due to socio-political situation of the province brought by the Afghan influx and the law-and-order situation in the districts that abut Afghanistan. Subsequently, the urban centres in KP, especially Peshawar, are growing rapidly in haphazard and unplanned manner, mainly promoting ribbon development owing to lack of comprehensive planning initiatives by the Provincial and Local Governments.

Considering the challenging scenario, then Prime Minister of Pakistan (Mr. Imran Khan) has directed the provincial and local governments to prepare Master Plans of cities and towns that would inform and direct the urban growth, encourage high-density development while protecting the prime agricultural and environmentally significant land. The Urban Policy & Planning Unit of the Planning and Development Department, Government of KP has commissioned the preparation of Master Plans of Provincial, Divisional and District Headquarters of KP province. This initiative includes the preparation of Peshawar City Master Plan 2044 that would inform and direct the future growth of Peshawar city in a sustainable way to efficiently enhance its productivity and functioning whilst improving the quality of life of its residents. The PEPAC Pvt Ltd & Associates has been hired as the Consultant by UPPU to prepare Master Plan for Peshawar City. The basic objective of the Peshawar City Master Plan 2044 is to suggest sustainable, compact and environmentally friendly proposals for the future development of Peshawar City.

Peshawar, being the provincial headquarter, is one of the major cities of Pakistan and the primate city of Khyber Pakhtunkhwa. Peshawar is considered one of the oldest living cities of the Indian Sub-continent, however, due to lack of integrated planning practices, this ancient city suffers from various deep-rooted urban problems especially massive urban sprawl and ad-hoc planning and development. To ensure balanced development between urban and rural areas the government of Khyber Pakhtunkhwa had already developed and approved a district level development plan for Peshawar. The land use plan of Peshawar District consists of residential, commercial, agriculture, industrial, recreational, and other proposals. In that district plan, the government has proposed that the Peshawar city will grow in the southern direction while the northern side of the city and district will be preserved to protect the prime agriculture land and orchards. However, due to security and other issues the southern side of the city experienced less development as compared to the northern half of the city and the same pattern will continue in the near future.

The consultant has kept that in consideration while developing different proposals for the city of Peshawar. The city was calculated to have the population of approximately 2.7 million in 2017 which has anticipated to have increased up to approximately 3.4 million in 2024 and will continue to increase up to approximately 6 million by 2044. Considering the increase of approximately 2.2 million people in just 20 years, different zones have been proposed for development of Peshawar City. The proposed residential zones in the Peshawar City Master

Plan presents a comprehensive and strategic solution to meet the city's housing demands through 2044. By leveraging housing supply from both the public and private real estate sectors, as well as infill development, the plan effectively accommodates the incremental population. Efforts have been made to align the PCMP housing proposals with the approved District Land Use Plan of Peshawar (2019), ensuring that future growth is equally directed towards both North and South of the City that support sustainable urban expansion.

The plan emphasizes land efficiency through a blend of compact development and sustainable growth, particularly through the Transit-Oriented Development (TOD) approach. This innovative strategy encourages high-density, mixed-use developments near public transport networks, promoting walkable, pedestrian-friendly communities that reduce the strain on infrastructure. A balanced combination of horizontal and vertical development—including multi-story housing—allows for optimal land use, providing ample housing while maintaining urban green spaces and other essential infrastructure.

Enhancing the urban environment, the plan proposes a significant increase in recreational spaces, from the current 839.90 acres to 951.76 acres by 2044. These include neighbourhood parks, linear plantation along the railway track passing from centre of the city, urban forests, botanical gardens, and adventure parks, fostering an active and vibrant community. The zoning strategy allows for diverse recreational uses and emphasizes the creation of green corridors, promoting environmental sustainability and improving the city's liveability.

To accommodate Peshawar's growing population and boost economic activities, the PCMP designates further 5,126.73 acres of land for commercial and allied development, distributed across various zones. These zones are distributed across different types of development, including Proposed Commercial Zones, Linear Commercial Development, and High-Density Mixed-Use Zones.

The Proposed Commercial Zones, comprising of 2,195.9 acres' land, are focused on creating concentrated commercial hubs along key roads such as Bari Road and Phandu Road. These zones are designed to integrate modern commercial activities with parking facilities to mitigate traffic congestion.

The Mixed-Use Commercial Zone, covering an area of 1,880.09 acres approx, aims to establish commercial corridors along primary and secondary roads, and designated spots ensuring accessibility and a balanced distribution of commercial activities across the city. Lastly, the High-Density Mixed-Use Zone, spanning over an area of 1,050.31 acres, promotes ground-floor commercial spaces with upper residential or office units. This mixed-use development concept is intended to foster economic vibrancy while addressing the city's need for commercial space, housing, and sustainable urban growth. Each commercial area will allocate 10% of its land for parking to ease traffic issues and reduce on-street parking challenges.

The High-Order Central Facilities Zone, spanning over an area of 847 acres, is designed to accommodate key civic and institutional functions, including administrative offices, hospitals, universities, and cultural centres. This zone is strategically placed along the Bus Rapid Transit (BRT) system and the proposed Ring Road to enhance connectivity and accessibility. The

PCMP envisions a gender-inclusive urban environment, with museums, theatres, and public spaces integrated to enrich the cultural fabric of the city.

In alignment with sustainable agriculture goals, the PCMP advocates for conservation practices such as tunnel farming, agroforestry, and organic farming. Proposals to support local food systems and promote sustainable agriculture research are embedded in the zoning regulations, ensuring that prime agricultural land, within the urban limits of the city, is preserved and utilized efficiently.

The Industry Comprehensive Proposal for Peshawar highlights the city's evolving industrial landscape, which plays a critical role in its economic growth. Covering an existing industrial area of 843.85 acres, the city also hosts key economic zones like the Peshawar Industrial Estate, Hayatabad Economic Zone, and the Pak-Afghan Economic Zone. These zones are an integral part of the overall industrial activities of the city for creating jobs, and enhancing regional trade, particularly through the strategic opportunities presented by the China-Pakistan Economic Corridor (CPEC). With a focus on expanding advanced industrial facilities, such as automation plants and heavy industrial setups, Peshawar is positioning itself as a hub for both local and foreign investment, which will contribute to the city's economic stability and growth over the coming decades. The zoning regulations emphasize appropriate land uses for light-medium and medium industrial activities, ensuring safe, sustainable, and efficient industrial development.

Planning for the healthcare facilities is an integral component of the Peshawar City Master Plan. The PCMP proposes a comprehensive strategy to address healthcare needs by ensuring equitable access and sustainable infrastructure development. It includes the provision of 89.74 acres of land for neighborhood-level healthcare facilities, targeting underserved areas. The plan emphasizes expanding Basic Health Units (BHUs), dispensaries, and maternal and child healthcare centers, aiming to meet requirements of the National Reference Manual (NRM) standards and WHO requirements for hospital beds. Zoning regulations are outlined to support health facilities, including hospitals, research centers, and support services, integrated with urban planning for better accessibility and fulfilling needs for the future population.

Quality education is considered a key to success; Therefore, Peshawar City has proposed significant expansion of educational facilities of all kinds by designating 110.68 acres of land for new institutions to meet future demand. Most of the existing educational facilities are located within the built-up areas with minimal or no opportunity for further expansion, therefore special emphasis has been given to vertical development to optimize urban space. The plan equally focuses on creating new accessible education zones with modern facilities, including schools, colleges, universities, research centers, and vocational institutions. The proposals aim to integrate education into the urban landscape while promoting land-use efficiency. The proposed zoning regulations support the development of educational infrastructure, ensuring a balanced mix of educational, social, and community facilities to serve the growing population until 2044.

The environment of Peshawar City has greatly deteriorated during the last few decades and further waning day by day. The environment protection and improvement proposals have been given including linear plantation along the major roads, water channels and other areas, which

shall be protected at all costs. Further, conserving agriculture land and orchards within the city boundary, development of urban forests at various places, and improvement of areas of high pollution have been given.

In 2014 the Government of Khyber Pakhtunkhwa (GoKP) established the Peshawar Water and Sanitation Services Company also known as WSSP. The purpose of the WSSP was to establish a city-wide single autonomous, corporate sector water and sanitation utility for Peshawar (first of its kind in the country). The WSSP is responsible for the provision of water supply, sanitation and solid waste management services to the people of Peshawar city. WSSP has its own Water Supply and Sanitation Master Plan and the PCMP will further complement the WSSP services particularly through the identification of unserved areas, areas located beyond the WSSP current master plan and also areas where new development will take place. Regarding water supply, sanitation, and sewerage, even though there are over 600 functional tube-wells within the city, they have been found wanting to meet the requirement of the coming 2.2 million population. Due to continuous extraction through tube-wells, the water table of Peshawar city is constantly dropping, therefore the construction of new tube-wells will further worsen the water supply situation in Peshawar. Therefore, to ensure constant supply of fresh water to the residents of Peshawar, the provision of water through surface water sources is the only sustainable solution. The PCMP proposed the water for domestic purposes should be supplied via Mohmand Dam (surface water) to the city. However, since implementation of that plan is not expected immediately, the consultant has suggested a few tube-wells and other related proposals to cater the demand of future population of proposed residential and commercial zones.

Mobility and accessibility are important components of the PCMP. To improve the traffic congestion and transportation problems in Peshawar, the existing roads shall be improved along with construction of newly proposed roads. Beside the widening of existing roads and construction of new roads, the PCMP has also proposed the construction of under-passes, fly-overs and interchanges at suitable locations. These interventions shall provide better connectivity in Peshawar city and would improve level of service of major roads. Moreover, the provision of footpaths and service lanes along major roads, improvement in junction geometry and public transport services shall improve the overall mobility and pedestrian movement within the city.

Due to its geographic location and prevailing climate changes the city of Peshawar is facing multiple kind of natural hazards including flash floods, urban flooding, and heat waves etc. The PCMP has proposed different strategies to reduce the impacts of such incidence on the residents of the city of Peshawar. Implementation of the PCMP proposals will also enhance security situation in the city.

Table of Contents

List of Figures

List of Tables

List of Maps

List of Acronyms

GoKP	Government of Khyber Pakhtunkhwa
KP	Khyber Pakhtunkhwa
MC	Municipal Corporation
NC	Neighbourhood Council
NEAP	National Environmental Action Plan
NEQs	National Environmental Quality Standards
NGO	Non-Governmental Organisations
OHR	Overhead Reservoir
PASDEC	Pakistan Stone Development Company
PDA	Peshawar Development Authority
PDMA	Provincial Disaster Management Authority
PDSSP	Punjab Devolved Social Services Programme
PEA	Pakistan Environmental Agency
PEPC	Pakistan Environmental Protection Council
PPA	Provincial Protection Agencies
PCMP	Peshawar City Master Plan
RBC	Reinforced Brick Concrete
RCC	Reinforced Cement Concrete
THQ	Tehsil Headquarter
TMA	Tehsil Municipal Authority
ToRs	Terms of Reference
UIB	Upper Indus Basin
UN	United Nations
UPPU	Urban Policy & Planning Unit
VC	Village Council
WSSP	Water and Sanitation Services Peshawar

Chapter 1: Project Background

1.1. Project Scope

The Province of Khyber Pakhtunkhwa (KP) is located in the northwest region of Pakistan with an area of 101,741 km². It is the third most populous province, with a population of 35 million with 52% males and 48% females, comprising of 11.9% of Pakistan's total population. In 1998, its population was 17.7 million, showing an annual growth rate of 2.89%, which exceeds the national average of 2.40%. Factors such as a high fertility rate and both temporary and permanent internal migration have contributed to this population growth.

The province of Khyber Pakhtunkhwa is strategically located and has the third-largest provincial economy in Pakistan. The province contributes 10% of Pakistan's GDP and 20% of mining output. The major sectors contributing to the national and provincial economy are hydel electricity, mining, forestry and agriculture by generating sufficient revenue.

The urban centers in the Province of Khyber Pakhtunkhwa have been neglected in the past. This has resulted in unregulated urban growth, with less-than-optimal infrastructure, inefficient institutions and poor quality and outreach of civic services, which has led to low quality of life.

In Khyber Pakhtunkhwa the process of urban development is being carried out with no proper planning mechanism and is confronted with various basic hurdles. The urban areas of the province are lacking integrated urban planning that has resulted in tremendous strain on urban land, civic infrastructure and services. Lack of proper planning has been raising several issues in every urban center including divisional headquarters; such as urban sprawl, lack of institutional reforms, unregulated and unplanned growth, traffic congestion, air pollution, poor investment and weak management of key infrastructure.

Encroachment is one of the many serious issues in almost all cities and towns causing severe congestion on roads, bazaars and streets. Vendors and shopkeepers place products in front of their shops on footpaths and pavements. These encroachments on major sites of the cities need to be removed through effective enforcement. On the other hand, the trend of road-widening and constructing under/overhead passes is only a short-term plan to fix the problem. To overcome such problems there should be long term Master Plans that technically cover all aspects of urban planning in major cities under the supervision of a single government entity.

Another critical feature of our cities is the lack of proper city limits or boundaries. Our cities are continuously growing in all directions causing the emergence of slums and squatter settlements. The formation of slums is one of the biggest challenges faced by urban centres of Khyber Pakhtunkhwa. The slums are usually characterized with the lack of services, narrow streets, illiteracy, unemployment, high rates of poverty, and low socioeconomic status of its inhabitants. These slums are commonly seen as "breeding grounds" for social problems such as crime, drug addiction, alcoholism, high rates of mental illness and extremism.

For resolving issues in the urban areas of Khyber Pakhtunkhwa, the Urban Policy Unit has taken important steps to tackle the problems of inefficient land-use planning, lack of zoning regulations, ineffective building bylaws, growth of urban sprawl, lack of institutional reforms, identification and up-gradation of slums, encroachment, lack of clear urban boundaries,

unavailability of civic facilities and ineffective urban legislation & enforcement. The most significant initiative of the Urban Policy Unit is to prepare long term Master Plans for all the divisional and district headquarter cities of Khyber Pakhtunkhwa including the provincial capital Peshawar, Divisional HQs Mardan, Abbottabad, Kohat, Mingora, Bannu and DI Khan and other major cities of KPK including NMDs. The Provincial Working Development Party (PDWP) has recently revised the ADP Scheme for the Master Planning with a total cost of Rs. 537.051 million. The Master Plan is vital for the integrated and sustainable urban development of the province.

The overall objective of the Master Plan is to ensure equity and social inclusion, economic productivity, quality of life, environmental sustainability and finally infrastructure provision. Collectively these objectives will create a perception of a prosperous city. Other important features of the study are building urban growth centers, high rise development areas within the cities and new expanding areas. The Master Plan is a futuristic plan containing the best model of urban planning in the world. Beside the seven divisional headquarters (Peshawar, Mardan, Mingora, Abbottabad, Kohat, Bannu and DI Khan), the Project will also prepare Master Plans for major urban centers of NMDs of KP.

For the Peshawar City Master Plan 2044, the services of the PEPAC Pvt Ltd & Associates consultant have been hired through a competitive bidding process. Peshawar, the capital of Khyber Pakhtunkhwa in Pakistan, is the country's sixth-largest city. Situated in the central part of Khyber Pakhtunkhwa, Peshawar lies in the Peshawar Valley, predominantly inhabited by Pashtuns, the second-largest ethnic group in Pakistan. Located in the eastern part of the historic Khyber Pass within the Valley of Peshawar, the city has a rich history dating back to at least 539 BCE, making it one of South Asia's oldest cities. Peshawar holds the distinction of being the capital of the Gandhara civilization, solidifying its status as one of the country's oldest continuously inhabited cities.

This master plan was completed under the following TORs:

Land-use/land Suitability Analysis

a. Mapping of the historical growth trends of the city:

To understand the pattern and direction of the spatial growth of Peshawar City the consultants conducted extensive research on the historical urban growth trends and drivers of urban growth over the period of last twenty years. To identify trends and direction of spatial growth the consultants used various sources for mapping the trends over the last 20 years period including municipal records, population census, libraries and archives, Aerial photographs satellite images and other published and unpublished data and records. The latest GIS techniques were used for plotting historical growth trends on GIS maps of the city-region and articulating the drivers of urbanization and urban spatial growth.

b. Housing trends and needs assessment through projected population growth estimates:

The provision of housing for all is a basic objective of the Peshawar City Master Plan, therefore, the growth pattern and projected growth needs over the next 20 years (2044) were properly analyzed and mapped.

c. Density Maps

The conservation of prime agriculture land located around the city is another important aspect of the Peshawar City Master Plan. Therefore, to reduce urban sprawl and horizontal development, there is a need to promote high-density mixed-use development. To achieve this objective the PCMP devised policy guidelines for the establishment of high-density mixed-use development within the existing urban boundaries including the future growth areas. The consultants carried out an extensive mapping exercise to show the existing and proposed high-density mixed-use development.

d. Development of Land Use Base Map

For all kinds of spatial planning including master plans the preparation of a comprehensive base map is a pre-requisite. Beside other mapping techniques the consultants also used open-source satellite imageries (fresh and archives) to develop an up-to-date map of Peshawar city including its surrounding areas in order to support suitability analysis of existing and proposed land uses for urban development and other ancillary uses. After preparation of land cover map then extensive field surveys were carried out to identify the specific use of each parcel of land. The consultants prepared Base map with the following details:

a. Contour lines drawn at contour interval of 5 meters.
b. Boundaries (District, Tehsil, City, Neighborhood, UC, Ward)
c. All major and minor streets, roads, railway lines and airports (including encroachments)
d. Water supply, sanitation, sewer, SNGPL and telephone networks
e. Water bodies (springs, streams, rivers and other water bodies)
f. Residential (planned and unplanned areas, sprawl, building heights – single, double or multi-storey, density)
g. Commercial and Mixed Areas (heights – single, double or multi story and types retail, wholesale and warehouses)
h. Industrial (all types)
i. Amenities (education, health, religious building, banks, police stations, libraries, and community halls etc.)
j. Parks and playgrounds
k. Brown fields (for re-development)
l. Open spaces (agriculture of all types, vacant and graveyards etc.).
m. Land Management

e. Taxation and Revenue Generation

It is of key importance that urban planning and associated work should be sustainable over long time. To ensure that the entities (Land Use and Building Control Authority, Development Authorities and TMAs etc) responsible for implementation of the Peshawar City Master Plan the consultant conducted a detailed study of the current urban taxation structure and sources including property tax, land tax, capital value tax, stamp duty and proposed suggestions for improvement. Implementation of the PCMP proposals regarding municipal taxation will

increase revenue of LU&BCA and TMAs many folds and will ensure sustainability of these organizations.

f. Governance and Institutions

Good governance and efficient institutions are a key to the successful implementation of policies and plans. To ensure that for implantation of the Peshawar City Master Plan required legal and institutional framework are in placed the consultants objectively analysed and assessed the existing relevant laws/byelaws and institutional capacity of relevant organization responsible for implementation and monitoring of the Master Plan. The consultant also proposed improvements in the existing laws & byelaws and institutional structure(s) for better implementation of the Master Plan.

g. Land-use Regulations and Plans

The consultants also studied and analysed all existing urban planning, development and environment-related national, provincial laws and regulations (byelaws) and proposed a new set of zoning regulations for each land use zone. The consultants provide extensive input in formulation of Building Regulation 2024 and Housing Schemes Regulations 2024.

h. Environment

To reduce pollution and create healthy living environment for the residents of Peshawar city the consultant studied various sources of air, noise, and soil and water pollution. The consultants use state of the art techniques and equipment for identification of the level of air, water and noise pollution at various points of the city. The consultant carried out the following surveys:

a. Air quality survey at various points of the city Water quality analysis (drinking water supply and water sources)
b. Soil contamination surveys
c. Soil and geological survey/data
d. Analysis of Noise level at various points of the city
e. Identification of environmentally sensitive areas

Based on scientific analysis of these surveys the consultant proposed various policy measures for enhancing environmental quality of the city.

i. Demography, livelihood and housing

The successful implementation of the master plan proposals mainly lies on accurate assessment of the city's demographic pattern, livelihood sources and housing conditions. For the purpose of analysis the consultants divided the city into various zones, calculated its population densities, identified major economic activities and studies housing and related facilities in each zone. Based on these assessments the consultant formulated proposals to revitalize the existing economic base and socioeconomic structure of the city. The consultant conducted the following surveys:

a) Housing surveys including house age, height, occupancy and condition surveys.

b) Accessibility surveys for emergencies and other vehicles
c) Household economic conditions/Livelihood surveys,

. The consultants also identified areas with lack of municipal services (slums) and formulated proposals for its rehabilitation/up-gradation.

j. Urban Transportation, Mobility & Accessibility

One of the major issues of Peshawar city is traffic congestion and lack of reliable public transport. To resolve the urban transport, mobility and accessibility issues of the city the consultants thoroughly studied the existing traffic and transportation system of the city. To have better understanding of the existing situation the consultant conducted various transportation surveys explored the possible constraints and available opportunities and proposed viable solutions for easing traffic and transportation issues within the city the consultant conducted the fallowing surveys:

i. Developed a detailed road and parking inventory
ii. Origin-Destination, and Cordon Surveys
iii. Traffic counts at various roads and junctions of the city and identified the bottleneck areas to determine roads and junction capacities
iv. Conducted Public Transport User Interview Surveys and Household Interview Survey (HIS's)
v. To improve internal accessibility in the city the consultant carried out a comprehensive Traffic Signage Survey The consultant also conducted a detailed study on the parking issues of the city and identified suitable areas for the development of on-street and off-street parking lots.
vi. Through mobility surveys the consultant devised strategies for the establishment of synergy between land-use and urban transport. Further, identified areas suitable for Transit Oriented Development (TOD)

J. Historical/Social/Culture Heritage Development

Peshawar is renowned for its rich history, busy & colourful bazaars, and rich cultural heritage, making it a popular destination for local and foreign tourists alike. It's also known as a gateway to the historic Khyber Pass, a melting spots of cultures, and a centre for traditional cuisine. One of the basic objectives of the Peshawar City Master Plan is to preserve the historical and cultural land scape of Peshawar. Therefore, the thoroughly studied and mapped all existing historical monuments/places, socio-cultural heritage of the city and proposed appropriate guidelines for the development of these localities and to capitalize the cityscape to create social, cultural hubs and identify opportunities within and of the city.

k. Urban Design, Public Realm Quality of Life

Urban Design and Public Realm is an integral part of the PCMP. Through various surveys and techniques, the consultant analysed the existing building lines, identified all public spaces, studied in detail vistas, sidewalks, street lighting, monuments, and parks etc. and formulated actionable proposals for improvements. and identified potential areas for new parks, playgrounds and public open spaces. To make the city more attractive and beautify the consultants proposed various urban beautification projects.

l. Water Supply, Sanitation and Solid Waste Management

In Peshawar city WSSP is responsible for the provision of water supply, sanitation and solid waste management services. To provide municipal services to the local residents in a systematic and informed manner the WSSP prepared the Water Supply and Sanitation Master Plan in 2014 and revised it in 2017. However, the PCMP will further complement the WSSP services particularly through the identification of un-served areas, areas located beyond the WSSP current master plan and also areas where new development will take place. The consultants in close coordination with the consultant with the support of WSSP and other relevant stakeholders (TMAs and PHED) did profiling of all Municipal services including the identification of new and existing sources of water supply. Analysed the existing solid waste management practices and jointly identified land areas for development Sanitary Land Fill Sites and Sewerage Treatment Plants (STP).

m. Citizens Behaviour Communication (BCC)

BCC is the strategic use of communication approaches to promote changes in knowledge, attitudes, norms, beliefs and behaviours. The provision of physical infrastructure without associated BCC strategies may not be able to achieve the desirable goal of sustainable development. For development of the BCC strategies to ensure that the master plan will be sustainable for a long run the consultants conducted Perception and Behavioural Surveys of local population focusing on issues of urban responsibility using Knowledge, Attitude, and Practice (KAP) methodology based on a valid statistical sample. The purpose of the KAP surveys was to investigate the reasons for and incentives and disincentives of citizens to behave responsibly while utilizing municipal services especially their behaviour towards solid waste management, public transport usage (BRT), use of public spaces and other social services.

n. National and international best practice (references)

The preparation and implantation of master plans in Pakistan, especially in Khyber Pakhtunkhwa is not common. In the past various types of spatial plans including structure plan and master plans were prepared for Peshawar but these plans were never implemented. Therefore, to prepare a rational comprehensive master plan for Peshawar review of the international best practices was included the study Terms of Reference (ToRs). The consultants reviewed planning laws and master plans of various countries having similar socio-economic condition similar to Pakistan including India, Sari Lanka and Malysia and based on the lesson learned developed the PCMP proposals. Studies for the fringe areas were specifically conducted to discouraged sprawl and ensure conversation of prime agriculture land in the vicinity of Peshawar city.

Task C – Master Plan Strategic Scenario Development/Mapping

a. Identified suitable land parcels based on multi-criteria analysis for various activities through viable projections for housing of all income groups, space required for commercial and industrial activities and other necessary components of the city.
b. Mapped existing Land-use pattern and provided options for future development;

c. Identified areas having potential for mixed-use development (residential, work, leisure, services etc.)
d. Identified areas suitable for infilling, intensification and re-development
e. Mapped the natural eco-system and environmental resources of Peshawar city
f. A map with detailed inventory of existing features including topographical and natural constraints was developed,
g. Mapped all the wetlands, agricultural lands, aggregate resources, groundwater recharge areas, floodplains, fisheries, wildlife and environmental conservation areas.
h. Mapped the existing road and transportation network including railways and airports.
i. Prepared a detailed inventory of the allied infrastructure of the Peshawar city to support Master Plan proposals.

Task D – Preparation of Master Plan Proposals (Action Plans)

For successful implementation of the Master Plan, the consultant developed detailed and comprehensive Master Plan proposals (action plans) for various sectors of the master plan, including the following:

i) Action Plan for zoning, intensification/densification and land management.
ii) Action Plan for future housing of all income groups.
iii) Action Plan for slums upgradation/informal settlements.
iv) Action plan for health facilities
v) Action plan for educational facilities
vi) Action Plan for Quality of Life
vii) Action Plan for WATSAN and Solid Waste Management (SWM)
viii) Action Plan for Transportation and Traffic Management as well as Parking Lots
ix) Action Plan for Municipal Services.
x) Action Plan for Environmental Management, ii. Disaster Risk Reduction and iii. Emergency Planning.
xi) Action Plan for Rural Urban Fringe and Regional Development.
xii) Action Plan for Tourism Development, Cultural and Heritage Conservation /preservation
xiii) Action Plan for Economic Development, ii. Commercialization, iii. Industrialization and investment attraction.
xiv) Action Plan for Security Measures of the city
xv) Action Plan for Legal/Regulatory and Institutional Framework implementing MASTER PLAN
xvi) Action Plan for Behavioral Change Communication (BCC) Structure composition of the Report

The Peshawar City Master Plan report is structured into three volumes along with a separate detailed report:

Volume I: Master Plan – Offers a comprehensive overview of the core strategies, proposals, and planning framework for Peshawar City.

Volume II: Scenario/Sectoral Maps – Presents a collection of maps illustrating zoning, infrastructure networks, environmental factors, and other key spatial elements essential for urban planning.

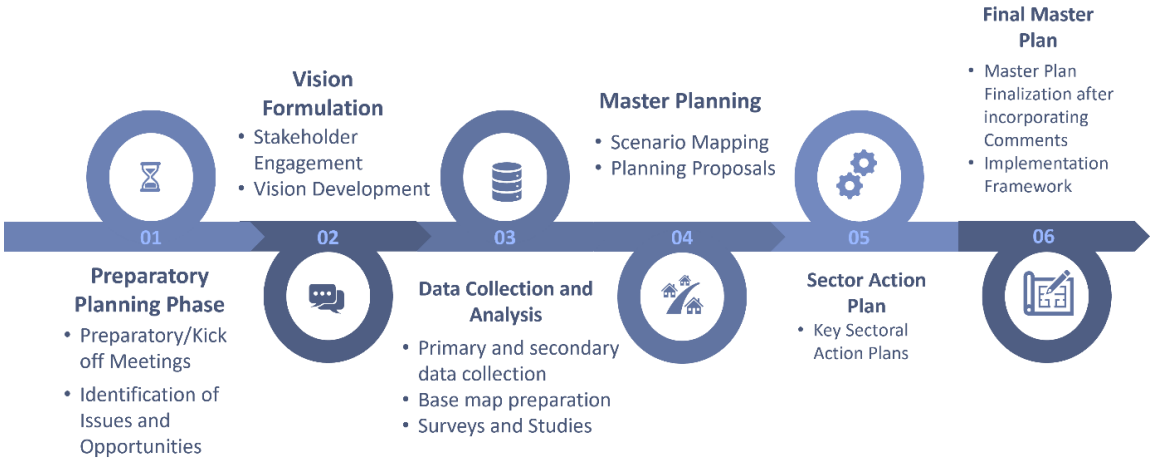
Volume III: Action Plans – Details implementation strategies, key initiatives, and step-by-step execution plans for proposed developments.

In addition, a separate Detailed Master Plan Report provides in-depth background studies, analyses, methodologies, and insights from Task C, along with relevant information from Task B.

The Peshawar City Master Plan was developed through the following Five (05) phases:

- Preparatory Planning Phase
- Vision Formulation
- Data Collection & Analysis
- Master Planning/zoning
- Action Plans

Figure 1: Master Plan Methodology - Peshawar Study Area



Source: Devised by Consultant

1.1.1. Methodology for Data Collection

Data was gathered from both primary and secondary sources. For Primary data collection various surveys, including Household Information Survey (HIS), Traffic and Transportation Surveys, Environmental Surveys were conducted with a structured questionnaire for each survey, and data was collected by well-trained enumerators using Android-based software. The surveys conducted for the Peshawar City Master Plan encompassed various aspects, providing a comprehensive assessment of the city's socio-economic conditions, land use, transportation, and environmental factors. The details of each survey are as below:

- **Household Information Survey (HIS)**

A structured questionnaire was used to collect The Household Information through a structured questionnaire consisted of various aspect of the household, including household demographics, educational status, health status, employment and income, household facilities (availability and

access), and access to and utilization of services and amenities (refer to the Inception Report for details). As per the Terms of Reference (ToR), data was collected from 1% of the total households, amounting to 2,360 households. The sample size was proportionally allocated to each Neighbourhood Council (NC) and Village Council (VC) to ensure a fair representation of the population. A systematic random sampling approach was used within each NC/VC, ensuring a 95% confidence interval with a 5% margin of error, making the sample more representative and statistically reliable.[1]

- **Land Use Survey:** A GIS-based base map (1:2000 scale) was created by digitizing a raster map from Google's satellite imagery and dividing it into grids. Android-based software was used for the detailed land use survey, conducted by trained local surveyors. The survey documented land uses, administrative boundaries, contour lines (10-meter intervals), road networks, infrastructure, civic amenities, and brownfields. To ensure accuracy, the base map integrated historical maps and remote sensing imagery and was divided into sheets for ground truthing through on-site verification. Each parcel was assessed for land use, building conditions, and stories, with spatial and attribute data processed in GIS labs for analysis.
- **Transportation Survey:** Various transportation surveys, including the Origin & Destination (O&D) Survey, Traffic Count Survey, Parking Inventory Survey, and Intersection Survey, were conducted across the city. The detailed methodology, maps, and questionnaires for each survey are provided in the Background Study and Analysis Report (Volume III).
- **Environmental Survey:** Various environmental surveys, including drinking water quality, noise, air, and soil assessments, were conducted at multiple locations across the city with an EPA-approved laboratory. The detailed methodology, maps, and results of each survey are provided in the Background Study and Analysis Report (Volume – III).

i. Secondary Data Collection

Secondary data was gathered from both published and unpublished government departmental data and reports, Census data, government publications, public records, historical and statistical documents, business reports, journals, and research papers, among others.

1.2. Introduction

1.2.1. District Peshawar

Peshawar, the historic and capital city of Khyber Pakhtunkhwa, spans over an area of 1,518 sq.km and holds significant economic, political, historical, and military importance. As a dynamic urban centre, it ranks 8th in population growth nationwide. Geographically, the

[1] Let there are N Neighborhood councils, where data should be collected from the field. Then N=N1+N2+N3+N4……Nh=∑Ni
A total of 'n' sample should be studied for analysis. The size of total sample is:
n=n1+n2+n3+……. nh=∑ni
The sample size of each Neighborhood Ccouncil is:
ni =n*Ni/N
Where: ni=sample selected from each NC, n=Total sample size, Ni=population of each NC and N=Total population of all NCs

district is bordered by district Nowshera in the east, district Charsadda to the north, district Mohmand to the north and district Khyber to the west and south.

District Peshawar holds a unique strategic position as a key trade corridor for Central Asian countries and maintains significant proximity to important cities in the region, as shown below. It also plays a crucial economic, political, historical, and military role.

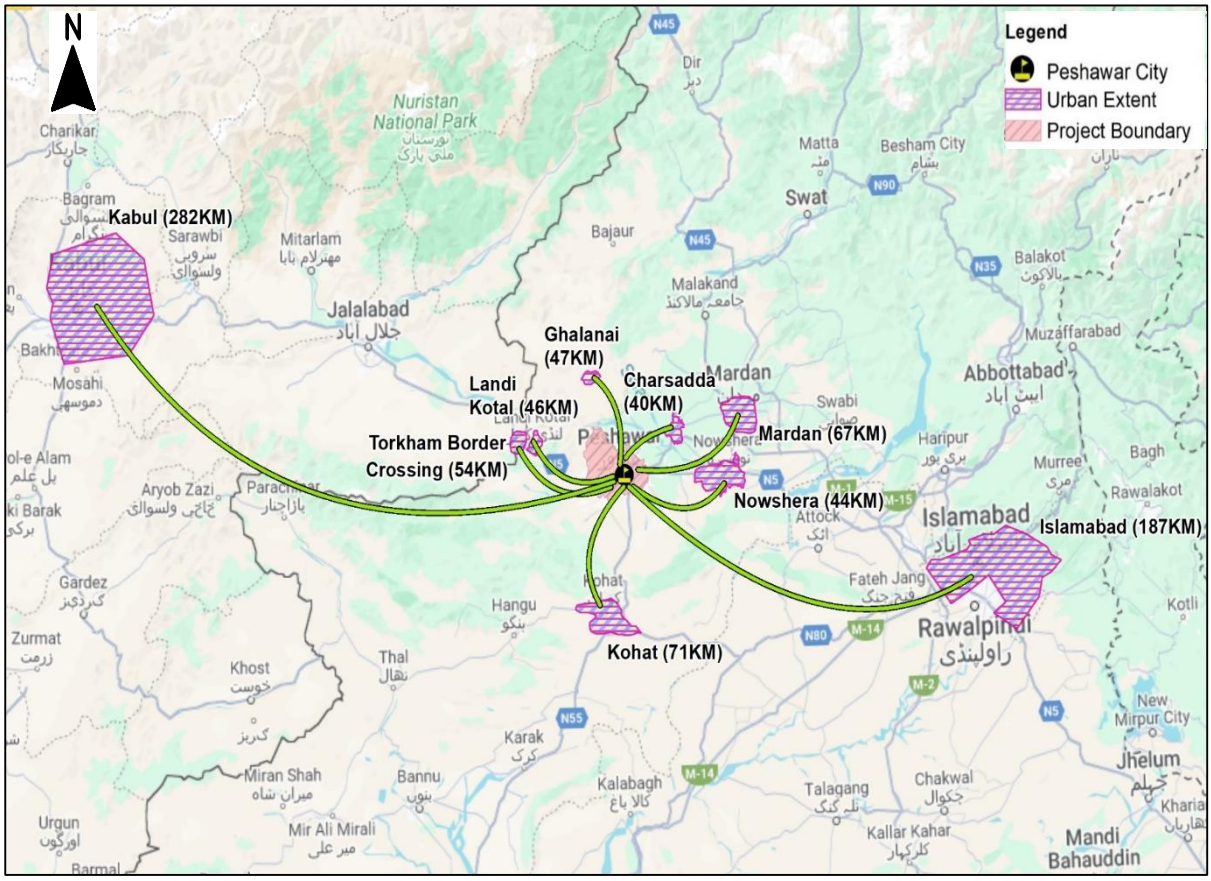


Figure 2: Proximity/strategic importance of district Peshawar

Its strategic location, coupled with socio-economic factors, Afghan immigration, and internal migration, has driven rapid population growth. Situated 160 km west of Islamabad, Peshawar has a rich history as the heart of the Gandhara civilization and has been ruled by Persians, Greeks, Kushans, Afghans, Mughals, Sikhs, and the British. It was designated a city district in 2001, following the separation of Charsadda in 1988 and Nowshera in 1990. As of the 2023 census, Peshawar has a population of 4.75 million, with 40% residing in urban areas. The literacy rate stands at 53.28%, and Pashto is the predominant language, spoken by 93% of the population. The city is home to major institutions such as the University of Peshawar, University of Engineering and Technology, Agriculture University and Khyber Medical University but still struggles with educational challenges, including overcrowded schools and limited access to education for girls.

Administratively, Peshawar is divided into seven tehsils and 357 councils, with municipal governance managed by tehsil administrations and a city council. As a key economic and

cultural centre, the city is undergoing infrastructure improvements to address urbanization challenges and promote sustainable growth.

1.2.2. Geographical Setting

Peshawar City is located in the famous valley of Peshawar in the central-western part of the province, delimited by districts of Nowshera in the East, Charsadda in the North, the merged district Mohmand in the Northwest, and Khyber in the Southwest. The district is situated in the Peshawar Valley near the Eastern end of the world-famous and ancient Khyber Pass, neighbouring the Afghanistan border which is expanded towards the West. The recorded history of the city dates back to at least 539 BC, making it the ancient most living city in Pakistan and one of the oldest cities in South Asia[2].

1.2.3. Topography

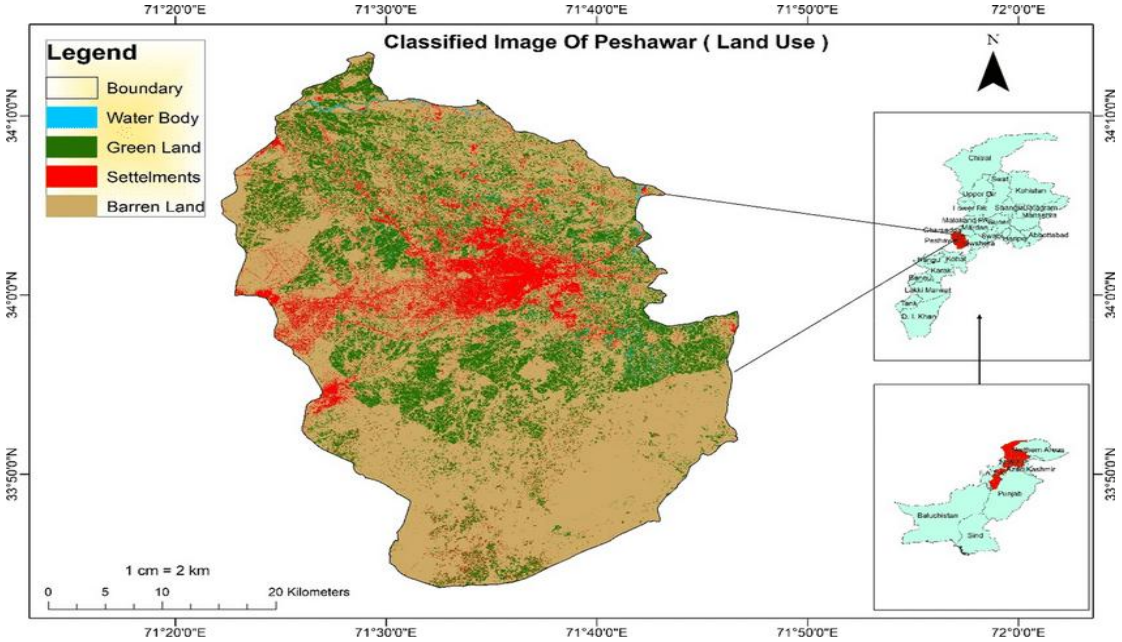
Peshawar district is situated near the eastern end of the Khyber Pass and sits mainly on the Iranian plateau along with the rest of the Khyber-Pakhtunkhwa. The Peshawar Valley (the greater Peshawar region consist of the district of Peshawar, Charsadda, on entering the Peshawar Plain, the Kabul River split into several channels. Its two main distributaries are the Adizai and Nagoman rivers. The Adizai River flows from west to east forming a boundary between Peshawar and Charsadda districts. Shah Alam is another important channel branching from the right bank of the Naguman River, which again merges with the Naguman River further. in the East. The sub-soil strata of District Peshawar are composed of gravels, boulders, and sands overlain by silts and clays. Sand, gravel, and boulders are important aquifers. that extends to a depth of about 200 feet (61 m) and further confined water-bearing aquifers occur at depths greater than 400 feet (120 m).[3]

1.2.4. Physiography

Except for the eastern region, the valley is surrounded by mountains, which are offshoots of the Hindu Kush Mountain ranges. In the east, these mountains have a small opening near Attock through which the Kabul River drains into, the Indus River. The area of the valley does not include the tribal territories adjoining the districts, which is approximately 9583 sq. km, but with the tribal territories, the area increases to about 13,087 sq. km.

[2] Peshawar: Oldest Living City in South Asia". Dawn. 3 July 2010. Retrieved on 24 September 2022
[3] ADB (2017) Peshawar Sustainable Bus Rapid Transit Corridor Project

Figure 3: Physical Geography of Peshawar District[4]



Source: Basit, Abdul & Amin, Noor & Shah, Syed & Ahmad, Imran. (2024). Greenbelt conservation as a component of the ecosystem, ecological benefits, and management services: evidence from Peshawar City, Pakistan.

1.2.5. Seismic Condition

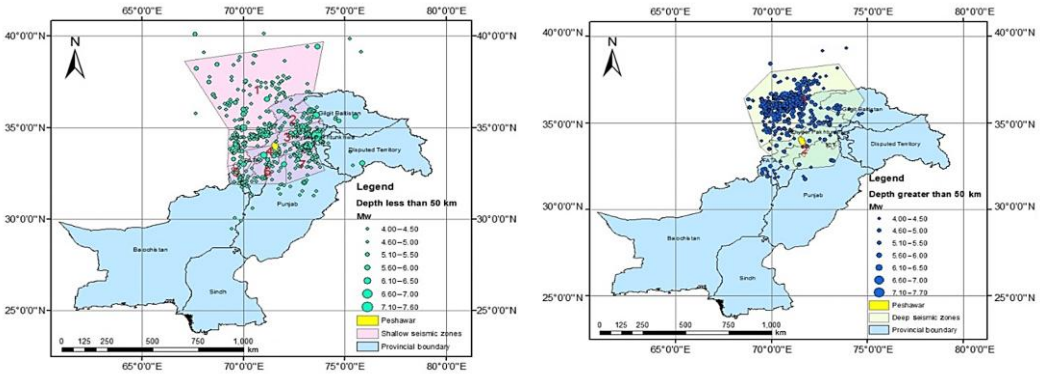
A seismic hazard assessment must be considered for the Planning of a city at the broader as well as at the project level. Pakistan is situated at the junction of three tectonic plates, namely the Indian, Eurasian, and Arabian. Due to the continental plate drift of the Indian Plate and Asian Plate, Pakistan has suffered from devastating earthquakes in the past. The seismic zone map of Pakistan is shown below in Figure-4.

According to MOHW-PEC-NEPAK (2007), Peshawar is placed in Zone 2B. Zone 2B has Peak Ground Acceleration (PGA) in the range of 0.16g to 0.24g for a return period of 475 years and is considered to be at a 'Moderate' risk of a major earthquake event.[5]

[4] Basit, A., Amin, N.U., Shah, S.T. *et al*. Greenbelt conservation as a component of ecosystem, ecological benefits and management services: evidence from Peshawar City, Pakistan. *Environ Dev Sustain* (2021). https://doi.org/10.1007/s10668-021-01890-3

[5] Khalid.M1, Ahmad.N, Khan.U, et al, Seismic hazard maps of Peshawar District for various return periods, Nat. Hazards Earth Syst. Sci., 20, 1639–1661, 2020 https://doi.org/10.5194/nhess-20-1639-2020

Figure 4: Seismic Hazard Map of Peshawar District[6]



(a) Shallow crustal earthquake (b) Deep subduction zone earthquake

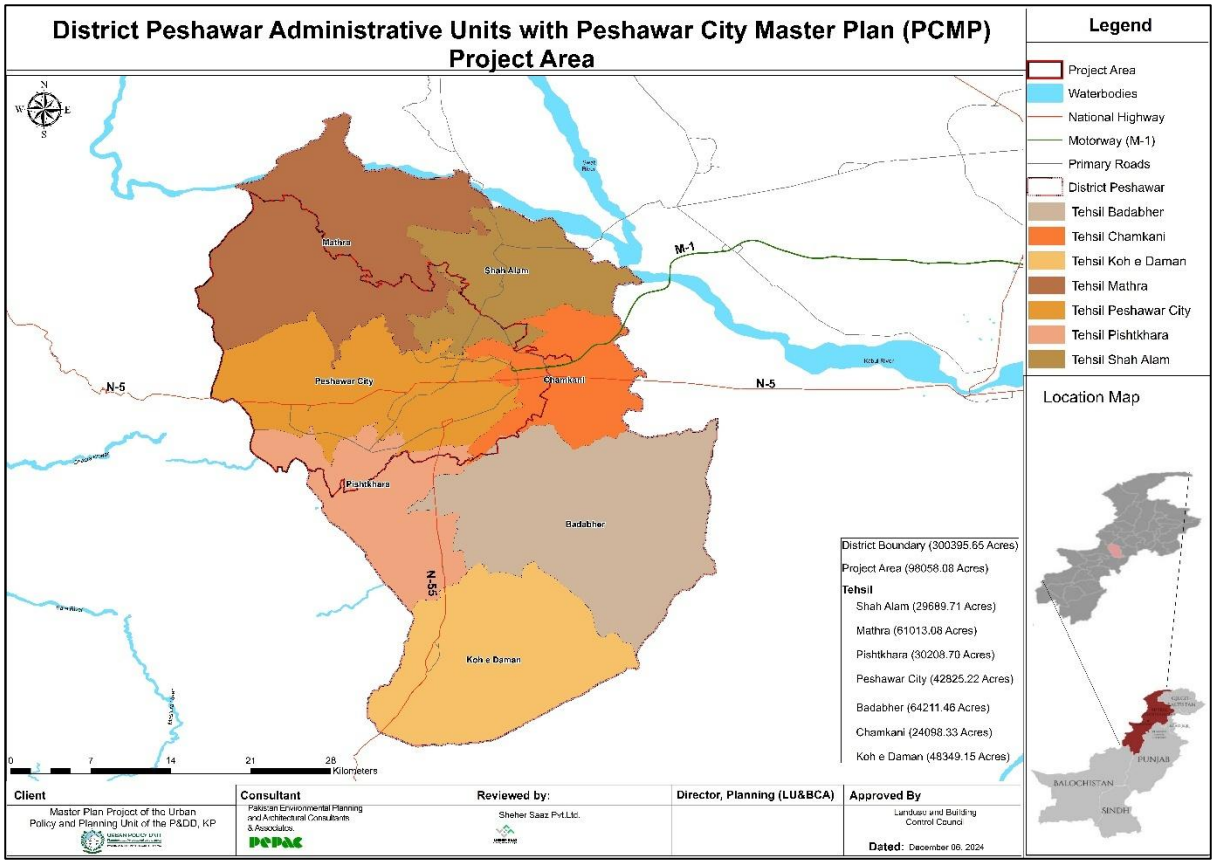
Source: Mahmood, K., Ahmad, N., Khan, U., and Iqbal, Q.: Seismic hazard maps of Peshawar District for various return periods

1.2.6. Project Area Profile

Peshawar, as the capital of Khyber Pakhtunkhwa, continued to function as a pivotal administrative centre. The district of Peshawar was traditionally divided into several administrative units known as tehsils. Over time, these tehsils have been adjusted to accommodate population growth and administrative needs.

Under the amended Local Government Act 2013 (2019), Peshawar District is divided into Six (06) Tehsils and the Capital Metropolitan Government Peshawar (CMGP). These are further subdivided into 130 urban Neighbourhood Councils (NCs) and 227 rural Village Councils (VCs). Peshawar Cantonment, though central to the city, is administratively separate and excluded from the study, but its population is included in the overall count. The Peshawar City Master Plan Project (PCMP) area, including the Cantonment, is 396.83 sq. km, with a total population of 2,868,714 as per census-2017, and covers 130 of 131 NCs and 77 VCs. The detail is given in below Map and Table:

[6] Mahmood, K., Ahmad, N., Khan, U., and Iqbal, Q.: Seismic hazard maps of Peshawar District for various return periods, Nat. Hazards Earth Syst. Sci., 20, 1639–1661, https://doi.org/10.5194/nhess-20-1639-2020, 2020.



Map 1: District Peshawar Administrative Units with PCMP

Table 1: District Peshawar and Project area profile

Major Profile Elements	District Peshawar	Project Area
Area (sq.km)	1216	396.83
Population 2017 (PBS Census) (Persons)	4,263,724	2,868,714
Population 2017 (NC's)	2,079,639	2,079,639
Population 2017 (VC's)	2,252,992	789,075
Population 2017 (Cantonment) (Persons)	---	72,350
Population 2023 (PBS Census) (Persons)	4758762	3,404,248
Population 2022 (Persons)	---	3,404,248
Population 2042 (estimated) (Persons)	---	5,696,078
Existing Growth Rate 2017	3.99%	3.72%
Projected Growth Rate 2042	---	3.21%
No. of NC's	130 out of 131	150.15 sq.km
No. of VC's	77 out of 227	213.80sq.km
Overlapping area of District Peshawar and Khyber		32.88 sq.km

Source: Calculated by the consultant

The details of these administrative units, along with other information regarding the NCs and VCs of the study, are provided in the table below:

Table 2: Administrative Units and Population of the Peshawar city Master Plan, 2024-44					
Sr. No	Tehsil Name	NC /VC Name	Type	Population 2017	Area (Acres)
1	Pishtkhara	Achini Bala	VC	12,780	1,672.51
2	Mathra	Shahi Payan	VC	13,747	2,202.07
3	Peshawar City	Haji Banda	VC	6,055	460.91
4	Peshawar City	Shaheen Town-I	NC	10,431	77.92
5	Peshawar City	Palosi Talarzai	NC	12,871	1,139.03
6	Peshawar City	Regi Yousafzai	VC	7,158	525.80
7	Peshawar City	Regi Aftezai	VC	7,220	785.15
8	Peshawar City	Palosi Maghdarzai	NC	11,731	660.56
9	Mathra	Haryana Payan	VC	4,744	1,640.27
10	Mathra	Kaniza	VC	8,063	132.81
11	Peshawar City	Dhaki Nalbandi	NC	16,321	90.58
12	Peshawar City	Shah Qabool	NC	3,146	30.69
13	Peshawar City	Temar Garhi	NC	15,980	19.00
14	Peshawar City	Sharif Abad	NC	15,491	31.21
15	Chamkani	Musazai	VC	19,152	2,012.98
16	Mathra	Main Mathra	VC	8,621	2,145.00
17	Peshawar City	Mughal Zai	NC	34,018	854.28
18	Peshawar City	Garhi Qamar Din	NC	29,182	662.55
19	Peshawar City	Peshawar Cantonment	Cantonment		3,557.90
20	Peshawar City	Sabaz Pir	NC	12,679	19.18
21	Peshawar City	Khan Mast Colony	NC	15,260	51.16
22	Peshawar City	Zargarabad-I	NC	12,624	22.27
23	Peshawar City	Zargarabad-II	NC	11,141	26.03
24	Peshawar City	Shabaz Town	NC	14,170	79.00
25	Peshawar City	Sheikh Abad-I	NC	13,137	60.98
26	Peshawar City	Sheikh Abad-II	NC	11,382	20.17
27	Peshawar City	Sardar Gul Colony	NC	14,691	13.38
28	Peshawar City	Chishti Abad	NC	7,807	33.82
29	Peshawar City	Sikander Town	NC	14,363	127.47
30	Peshawar City	Imran Abad	NC	16,586	38.77
31	Peshawar City	Rahim Abad	NC	11,382	20.86
32	Peshawar City	Saeed Abad	NC	13,064	22.12
33	Peshawar City	Shaheen Muslim Town-I	NC	19,874	36.25
34	Peshawar City	Nodeh Payan	NC	14,750	156.71
35	Peshawar City	Afridi Abad	NC	20,382	150.70
36	Peshawar City	Asia-II	NC	13,150	32.23
37	Peshawar City	Mohmand Abad	NC	11,512	113.45
38	Peshawar City	Garib Abad	NC	13,301	164.38
39	Shah Alam	Essa Khel	VC	10,287	206.67
40	Peshawar City	MC Colony	NC	27,466	69.20
41	Peshawar City	Gul Abad	NC	13,471	116.63
42	Peshawar City	Achini Payan	NC	14,924	291.50
43	Peshawar City	Gorgatri	NC	14,658	40.72
44	Peshawar City	Asia-I	NC	15,998	34.42
45	Peshawar City	Asia-III	NC	9,931	27.85
46	Peshawar City	Wapda House	NC	11,843	163.91
47	Mathra	Gharii Fazle Haq	VC	5,465	328.82
48	Peshawar City	Miskeen Abad/ Rasheed Garhi	NC	11,865	57.65
49	Peshawar City	Wali Abad	NC	14,598	72.40
50	Peshawar City	Beri Bagh	NC	15,603	51.35
51	Peshawar City	Sheikh Amir Abad	NC	12,976	38.23

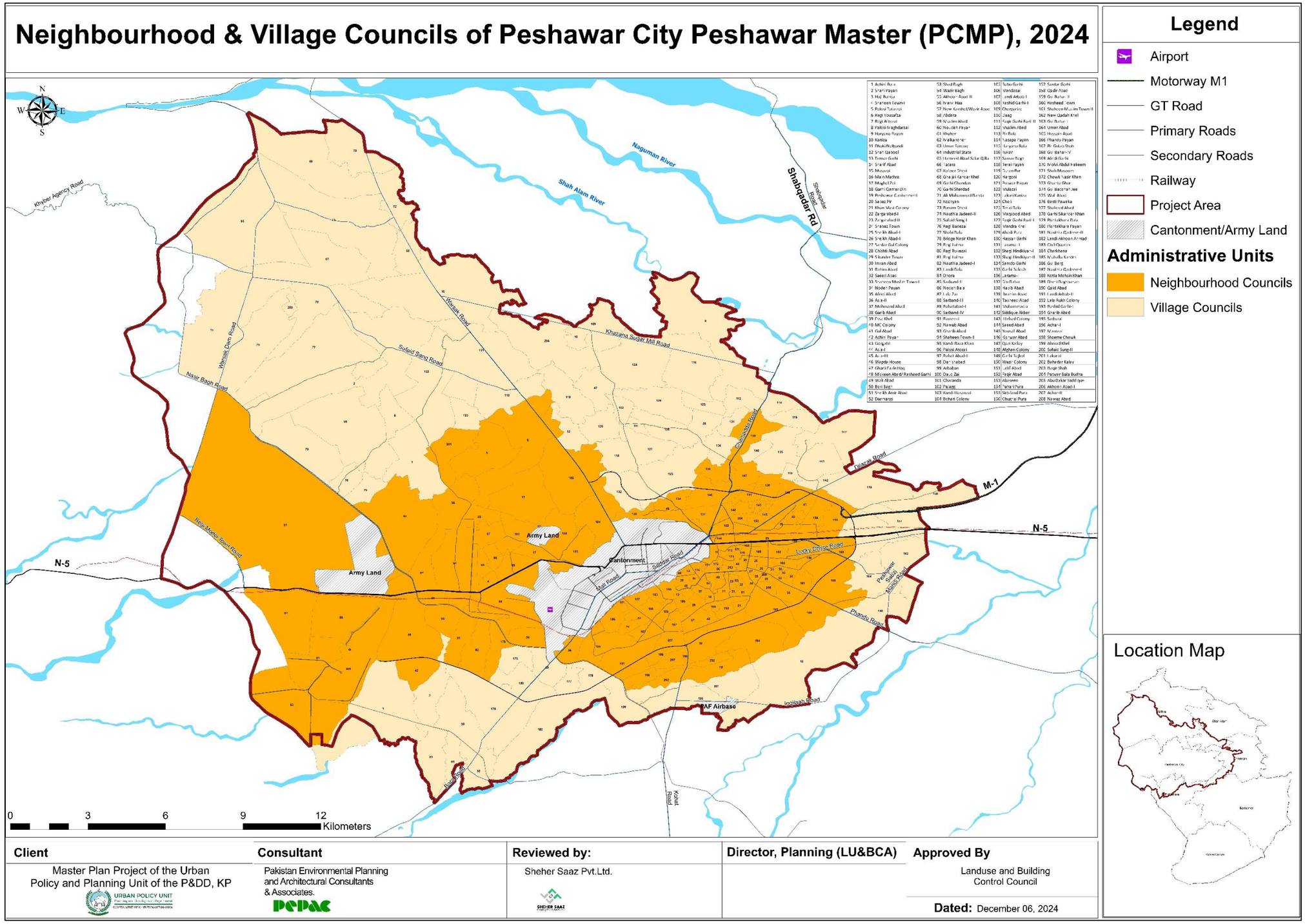
Table 2: Administrative Units and Population of the Peshawar city Master Plan, 2024-44					
Sr. No	Tehsil Name	NC /VC Name	Type	Population 2017	Area (Acres)
52	Mathra	Darmangi	VC	6,512	238.63
53	Peshawar City	Shad Bagh	NC	2,383	11.45
54	Peshawar City	Wazir Bagh	NC	9,445	54.84
55	Peshawar City	Akhoon Abad-II	NC	11,419	25.53
56	Peshawar City	Marvi Haa	NC	7,388	28.65
57	Peshawar City	New Kakshal/Wazir Abad	NC	13,581	38.63
58	Peshawar City	Abdara	NC	9,682	200.79
59	Peshawar City	Muslim Abad	NC	15,849	86.02
60	Pishtkhara	Noudeh Payan	VC	7,940	267.37
61	Pishtkhara	Khyber	NC	25,063	501.89
62	Peshawar City	Malkandher	NC	12,294	1,300.89
63	Pishtkhara	Umar Farooq	NC	36,209	1,209.03
64	Peshawar City	Industrial State	NC	13,972	900.02
65	Mathra	Hameed Abad Salar Qilla	VC	9,917	2,341.68
66	Peshawar City	Tatara	NC	15,659	719.13
67	Mathra	Kafoor Dheri	VC	4,613	1,476.53
68	Mathra	Ghaljai Kandar Khel	VC	9,087	355.55
69	Mathra	Garhi Chandan	VC	10,444	1,381.02
70	Mathra	Garhi Sherdad	VC	9,917	661.69
71	Mathra	Ali Muhammad Banda	VC	10,581	1,556.01
72	Mathra	Kochyan	VC	5,325	428.14
73	Mathra	Panam Dheri	VC	5,583	2,119.40
74	Peshawar City	Nauthia Jadeed-II	NC	11,623	62.96
75	Mathra	Sufaid Sung-I	VC	13,437	1,057.72
76	Peshawar City	Regi Badezai	VC	5,744	205.26
77	Mathra	Shahi Bala	VC	25,434	1,807.36
78	Mathra	Bridge Nasir Khan	VC	6,064	867.46
79	Peshawar City	Regi Lalma	VC	6,706	1,084.34
80	Peshawar City	Regi Rukezai	VC	8,643	1,340.54
81	Peshawar City	Regi Lalma	NC	6,706	7,133.02
82	Peshawar City	Nauthia Jadeed-I	NC	16,430	72.23
83	Pishtkhara	Landi Bala	VC	9,494	470.66
84	Peshawar City	Dhora	NC	20,797	270.22
85	Pishtkhara	Sarband-II	VC	16,535	221.33
86	Peshawar City	Nodeh Bala	NC	40,811	857.04
87	Peshawar City	Lala Zar	NC	35,708	516.99
88	Pishtkhara	Sarband-III	VC	3,536	323.22
89	Peshawar City	Rahatabad-I	NC	18,965	189.70
90	Pishtkhara	Sarband-IV	VC	3,440	645.98
91	Peshawar City	Rameezi	NC	15,370	276.80
92	Peshawar City	Nawab Abad	NC	12,503	353.97
93	Peshawar City	Gharib Abad-1	NC	11,456	94.54
94	Peshawar City	Shaheen Town-II	NC	20,036	867.39
95	Peshawar City	Kandi Raza Khan	NC	6,500	100.67
96	Peshawar City	Palosi Atozai	NC	16,101	482.38
97	Peshawar City	Rahat Abad-II	NC	6,000	195.94
98	Peshawar City	Danishabad	NC	17,145	816.02
99	Peshawar City	Arbaban	NC	17,959	211.20
100	Peshawar City	Daud Zai	NC	18,093	404.63
101	Peshawar City	Charanda	NC	21,343	333.79
102	Shah Alam	Pajaggi	VC	8,777	139.16
103	Peshawar City	Kandi Hasanzai	NC	17,336	330.29
104	Peshawar City	Behari Colony	NC	14,011	368.45
105	Peshawar City	Babu Garhi	NC	29,505	1,268.76
106	Peshawar City	Mandozai	NC	15,656	332.92
107	Peshawar City	Landi Arbab-I	NC	17,367	125.01

Table 2: Administrative Units and Population of the Peshawar city Master Plan, 2024-44					
Sr. No	Tehsil Name	NC /VC Name	Type	Population 2017	Area (Acres)
108	Peshawar City	Rashid Garhi-II	NC	15,491	47.51
109	Mathra	Charpariza	VC	8,265	458.11
110	Mathra	Daag	VC	9,076	504.50
111	Shah Alam	Faqir Garhi Fazil-II	VC	15,394	75.63
112	Shah Alam	Muslim Abad	VC	7,165	232.00
113	Mathra	Pir Bala	VC	8,241	510.58
114	Shah Alam	Nasapa Payan	VC	10,158	214.48
115	Mathra	Haryana Bala	VC	19,796	990.32
116	Shah Alam	Kukar	VC	16,158	244.33
117	Shah Alam	Samar Bagh	VC	11,660	706.85
118	Mathra	Terai Payan	VC	6,022	319.11
119	Chamkani	Hargoni	VC	5,176	480.61
120	Mathra	Putwar Payan	VC	6,011	1,541.02
121	Mathra	Mulazai	VC	17,997	1,146.82
122	Mathra	Lakari Kaniza	VC	6,845	223.80
123	Mathra	Choli	VC	10,713	867.38
124	Mathra	Terai Bala	VC	5,071	311.96
125	Shah Alam	Maqsood Abad	VC	17,380	380.32
126	Shah Alam	Faqir Garhi Fazil-I	VC	15,394	379.96
127	Shah Alam	Mandra Khel	VC	6,151	515.40
128	Shah Alam	Ahadi Pura	VC	12,016	166.54
129	Peshawar City	Hassan Garhi	NC	10,062	117.08
130	Shah Alam	Larama-II	VC	16,718	134.10
131	Peshawar City	Shagi Hindkiyan-I	VC	10,431	209.05
132	Peshawar City	Shagi Hindkiyan-II	VC	8,241	923.98
133	Peshawar City	Samdo Garhi	NC	15,456	94.60
134	Chamkani	Garhi Baloch	VC	6,638	449.75
135	Shah Alam	Larama-I	VC	18,246	232.73
136	Peshawar City	Din Bahar	NC	18,070	154.58
137	Shah Alam	Habib Abad	NC	18,246	316.58
138	Shah Alam	Ibrahim Abad	NC	14,222	254.45
139	Shah Alam	Tauheed Abad	VC	13,357	112.78
140	Chamkani	Muhammadia	VC	11,074	394.32
141	Chamkani	Siddique Akbar	VC	13,347	131.05
142	Peshawar City	Ittehad Colony	NC	6,402	49.99
143	Peshawar City	Saeed Abad	NC	13,064	167.60
144	Peshawar City	Yousaf Abad	NC	16,891	36.56
145	Peshawar City	Kishwar Abad	NC	16,904	341.96
146	Chamkani	Qazi Kallay	NC	42,627	192.20
147	Peshawar City	Afghan Colony	NC	18,753	138.43
148	Peshawar City	Garhi Rajkol	NC	26,448	229.53
149	Chamkani	Wazir Colony	NC	20,864	162.95
150	Chamkani	Latif Abad	NC	23,053	108.02
151	Peshawar City	Faqir Abad	NC	13,064	156.12
152	Peshawar City	Abaseen	NC	13,794	59.91
153	Chamkani	Pahari Pura	NC	27,426	292.68
154	Chamkani	Sirbiland Pura	NC	30,105	256.26
155	Chamkani	Chughal Pura	VC	16,541	531.26
156	Chamkani	Sardar Garhi	VC	11,226	352.00
157	Peshawar City	Qadir Abad	NC	16,246	167.68
158	Peshawar City	Gul Bahar-II	NC	19,356	73.12
159	Peshawar City	Rasheed Town	NC	19,356	77.27
160	Peshawar City	Shaheen Muslim Town-II	NC	17,845	99.37
161	Chamkani	New Qadah Khel	VC	3,622	539.47
162	Peshawar City	Gul Bahar-I	NC	14,363	79.60
163	Chamkani	Umar Abad	VC	2,383	437.24

Table 2: Administrative Units and Population of the Peshawar city Master Plan, 2024-44					
Sr. No	Tehsil Name	NC /VC Name	Type	Population 2017	Area (Acres)
164	Peshawar City	Hussain Abad	NC	10,382	56.65
165	Chamkani	Phandu Payan	VC	15,534	434.65
166	Peshawar City	Pir Gulab Shah	NC	14,250	39.83
167	Peshawar City	Gul Bahar-IV	NC	16,627	681.25
168	Chamkani	Afridi Garhi	NC	9,716	187.56
169	Peshawar City	Molvi Abdul Hakeem	NC	14,250	16.14
170	Peshawar City	Shah Masoom	NC	12,679	32.40
171	Peshawar City	Chowk Nasir Khan	NC	13,454	51.22
172	Peshawar City	Ghanta Ghar	NC	10,621	31.89
173	Peshawar City	Gul Badshah Jee	NC	16,321	39.51
174	Pishtkhara	Wali Abad	VC	11,418	215.09
175	Peshawar City	Basti Pawaka	NC	13,675	403.73
176	Pishtkhara	Shaheed Abad	VC	8,373	159.53
177	Pishtkhara	Garhi Sikander Khan	VC	15,197	189.81
178	Pishtkhara	Pishtakhara Bala	VC	12,195	1,115.84
179	Pishtkhara	Pishtakhara Payan	VC	12,075	407.07
180	Peshawar City	Nauthia Qadeem-II	NC	11,561	39.76
181	Pishtkhara	Landi Akhoon Ahmad	VC	13,424	1,047.82
182	Peshawar City	Civil Quarter	NC	7,400	64.31
183	Peshawar City	Charkhana	NC	31,720	379.17
184	Peshawar City	Muhalla Kander	NC	15,980	81.95
185	Peshawar City	Gul Berg	NC	26,131	156.61
186	Peshawar City	Nauthia Qadeem-I	NC	12,959	76.87
187	Peshawar City	Kotla Mohsin Khan	NC	18,132	98.61
188	Peshawar City	Dheri Baghbanan	NC	20,520	97.10
189	Peshawar City	Qaid Abad	NC	17,555	83.89
190	Peshawar City	Landi Arbab-II	NC	19,518	446.72
191	Peshawar City	Lala Rukh Colony	NC	20,520	101.12
192	Peshawar City	Rashid Garhi-I	NC	14,894	106.56
193	Peshawar City	Gharib Abad-II	NC	10,784	686.30
194	Peshawar City	Sadozai	NC	28,813	492.37
195	Peshawar City	Achar-I	NC	15,966	252.68
196	Peshawar City	Marozai	VC	12,135	576.57
197	Pishtkhara	Shceme Chowk	VC	12,663	516.00
198	Pishtkhara	Ahmad Khel	VC	10,739	380.79
199	Mathra	Sufaid Sung-II	VC	11,164	66.03
200	Mathra	Lakarai	NC	6,304	454.93
201	Peshawar City	Bahadar Kalay	NC	12,766	233.63
202	Peshawar City	Baqir Shah	NC	9,586	30.17
203	Mathra	Patwar Bala Budha	VC	5,003	1,092.80
204	Pishtkhara	Abu Bakar Saddique	NC	7,493	1,179.19
205	Peshawar City	Akhoon Abad-I	NC	11,518	58.46
206	Peshawar City	Achar-II	NC	11,518	253.19
207	Peshawar City	Nawaz Abad	NC	13,794	54.75
208	Chamkani	Duran Pur	VC	11,621	68.89
	Total Population 2017			**2,868,714**	**92,751.26**

Source: Population Census (2017) and LGE & RDD Peshawar, 2024

Map 2: Administrative Boundaries of Peshawar Study Area



Source: Retrieved by consultant from the data of LGE & RDD Peshawar,

1.2.7. Urban Growth Trends of Peshawar city

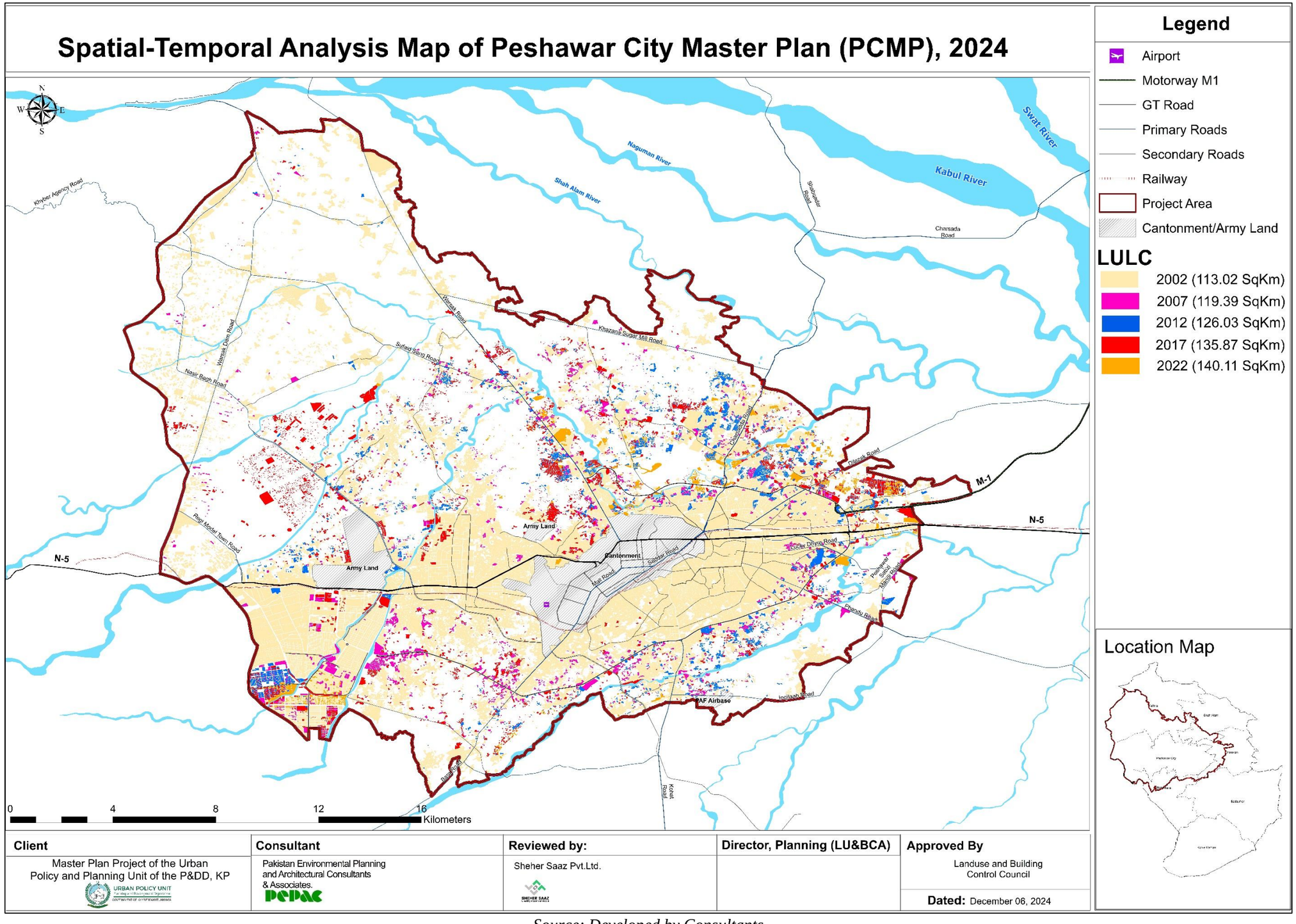
The spatial expansion of Peshawar city has evolved in five distinct phases. The first phase, with an unknown start date, ended with the construction of the city's protective wall. In 1848, the British took control of Peshawar, establishing the Peshawar Cantonment in 1866 to house their administration and military. The second phase concluded with the end of British rule in 1947, after which Peshawar became the capital of NWFP (now Khyber Pakhtunkhwa), triggering rapid urban growth in all directions. The third phase began with the Soviet invasion of Afghanistan in 1979, leading to a massive influx of Afghan refugees, significantly accelerating urban expansion through the 1980s and 2000s. The fourth phase, marked by President Musharraf's devolution plan, saw unprecedented, unregulated sprawl beyond planned urban limits.

Over the past two decades, Peshawar's spatial expansion has been particularly rapid. Between 2007-2012, the city grew at an annual rate of 4.27%, with major developments in the northwest and southwest along GT Road. The 2012-2017 period shows a staggering 37.4% increase, driven by population growth and the return of Afghan migrants and IDPs. Expansion was concentrated in the southern and south-western regions.

From 2017-2022, urban growth slowed slightly to 3%, as government efforts focused on modernizing the city through infrastructure projects like BRT, strengthening the inner core while also driving expansion in the southeast and west.

To achieve the goals of managed urbanization and control urban sprawl and related challenges, the government has initiated preparation of master plans for Twenty (20) cities, including the capital city, Peshawar.

Map 3: Spatial Temporal Analysis of Peshawar Study Area



Source: Developed by Consultants

1.2.8. Population Density Analysis

The population density has been divided into three classes i.e., low, medium, and high based on the criteria given in KP Urban Policy 2024, according to which medium density is defined as 20,000 persons per square kilometre or 200 people per hectare. Therefore, low density refers to the minimum number of people living in per unit area, which is being 100-200 people per hectare, and high refers to the maximum number of people living in per unit area which is being 301-400 people per hectare. This should be noted, however, that the criteria adopted in KP Urban Policy is solely based on distance from transit areas and it does not consider other socio-economic factors.

Table 3: Density Criteria Given in KP Urban Policy 2024-30		
Density Zone	**Distance from Transit**	**Average Population Density**
Mixed Use with High Density Residential (CBD)	< 400 metres	301-400 PPH
Mixed Use with Medium Density Residential	400 – 800 metres	201-300 PPH
Low Density Residential	> 800 metres	100 to 200 PPH

Source: KP Urban Policy, 2024- 30

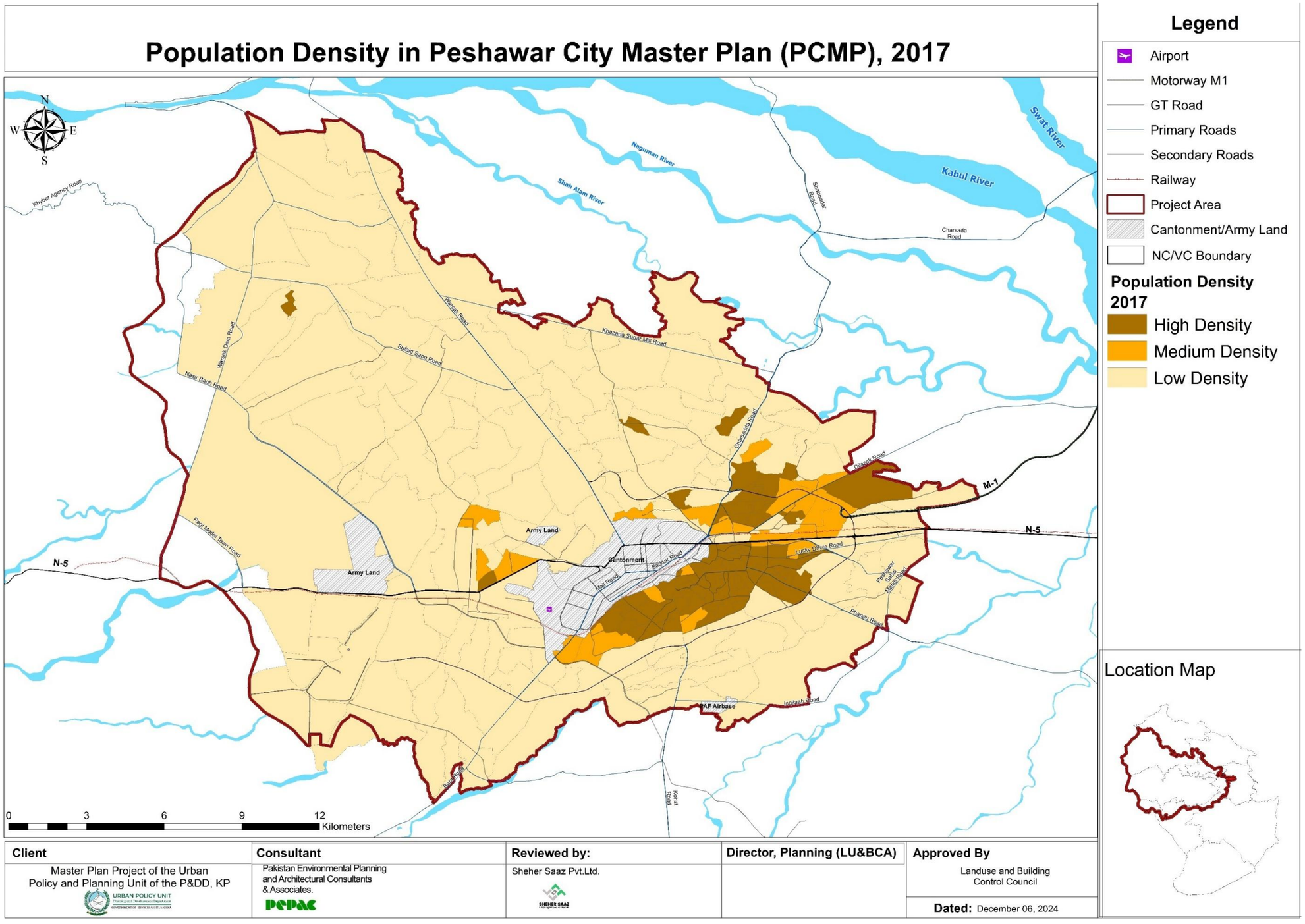
- **Population Density of Peshawar by NC/VC (2017-24)**

The population density in Urban Peshawar's administrative areas has changed between 2017 and 2024 due to urban growth and shifting settlement patterns in Neighbourhood Councils (NCs) and Village Councils (VCs). In 2017, most NCs had low population density, with 45 having fewer than 200 people per hectare (PPH). Only 17 NCs had medium density, while 68 NCs had high density, with more than 300 PPH. By 2024, the number of high-density NCs rose to 78, showing increased urbanization and population concentration in some areas. Meanwhile, medium-density NCs dropped slightly to 5, and low-density NCs fell to 40, indicating a general rise in population density across Urban Peshawar. On a smaller scale a similar pattern population density appeared in the VCs located in the fringe areas of Peshawar city. In 2017, 72 VCs had low density, 2 VCs were falling in the medium–density category while 4 were included in the high-density category. However, by 2024, the number of high-density VCs increased to 6, medium-density VCs grew to 5, and low-density VCs dropped to 66.

Table 4: Density status of each NC/VC in the project area as per the Khyber Pakhtunkhwa Urban Policy 2030.					
Administrative Unit	Density Range				
	Year	High Density (>300 PPH)	Medium Density (201-300 PPH)	Low Density (<200 PPH)	Total
No. of NCs	2017	68	17	45	130
	2024	78	12	40	130
No. of VCs	2017	4	2	71	77
	2024	6	5	66	77

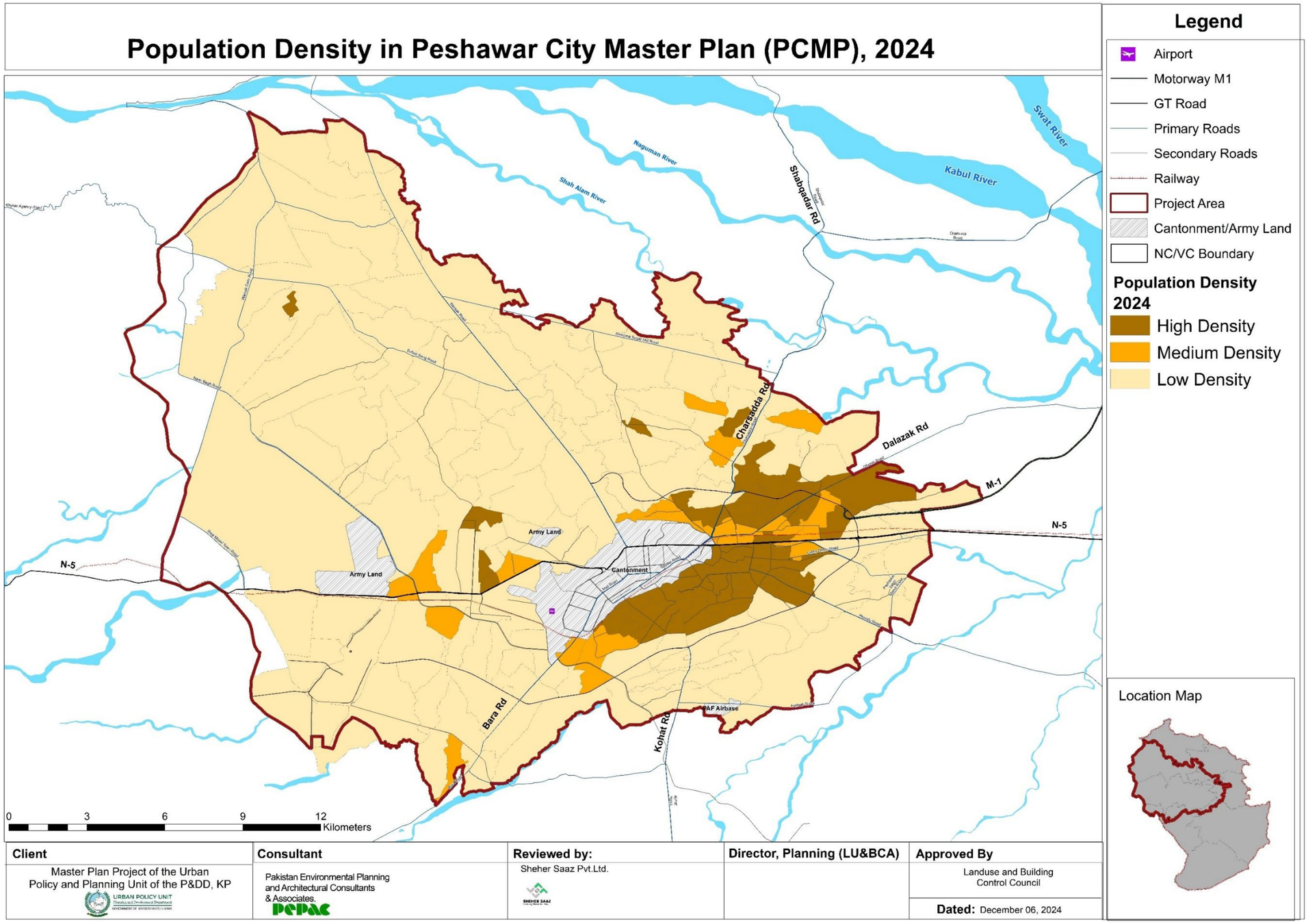
Source: Developed by the Consultant (based on the KP Urban Policy 2030).

Map 4: Population density Map for 2017 – Peshawar Study Area



Source: Developed by Consultant

Map 5: Population density Map for 2024 – Peshawar Study Area

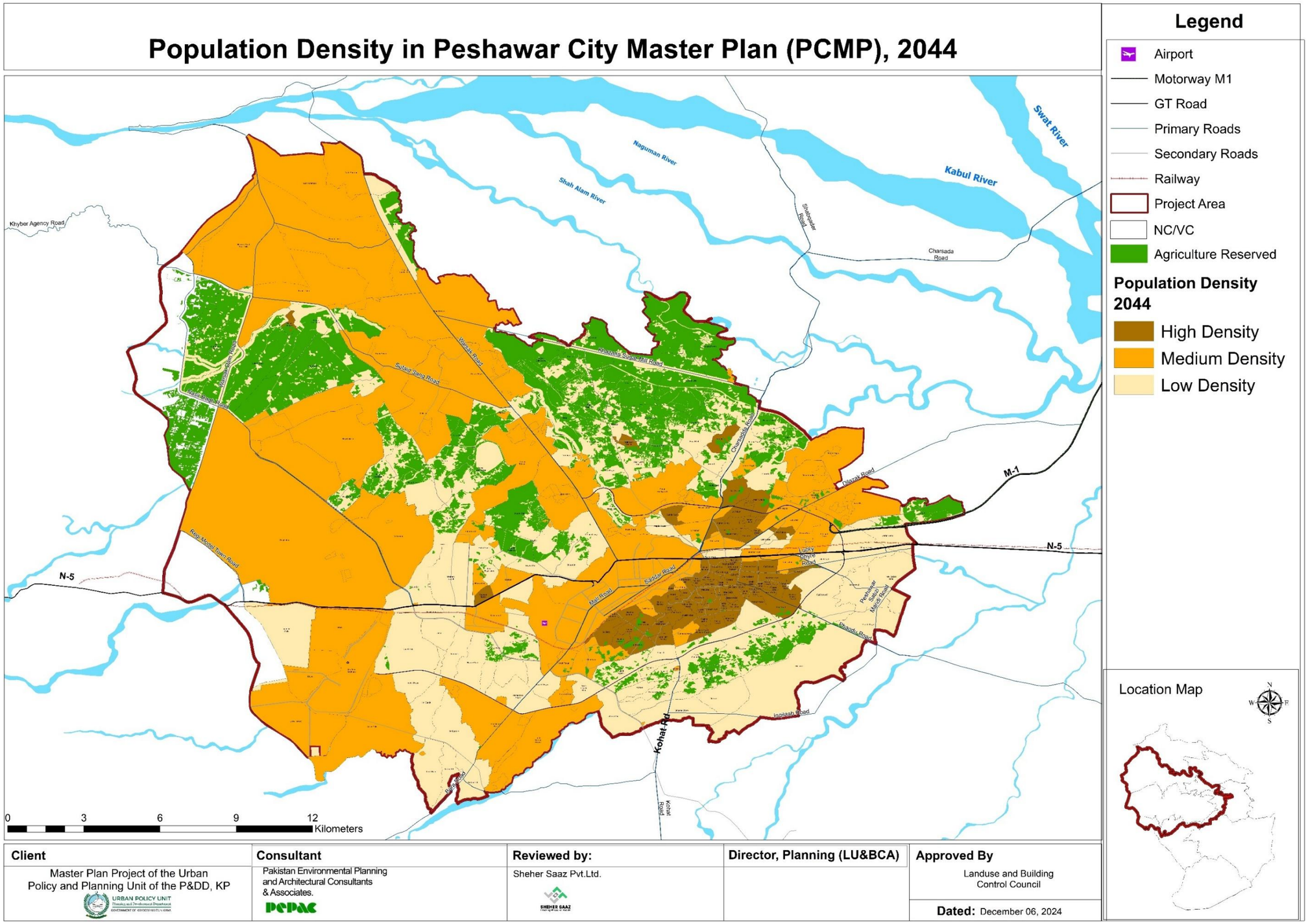


Source: Developed by Consultant

- **Projected Population Density for 2044**

Based on the projected population for each Neighbourhood Council (NC) and Village Council (VC) within the Peshawar City Master Plan Project Area, due to rapid urbanization, new residential developments in the form of housing schemes, and proposed commercial zones in the PCMP, the population density for each NC/VC by 2044 (the plan period) categorized into low, medium, and high, has been shown on Map-06:

Map 6: Population Density Map for 2044 – Peshawar Study Area



Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP URBAN POLICY UNIT	Pakistan Environmental Planning and Architectural Consultants & Associates. PEPAC	Sheher Saaz Pvt.Ltd. SHEHER SAAZ		Landuse and Building Control Council **Dated:** December 06, 2024

Source: Developed by Consultant

1.3. Population Projection

Peshawar's population has seen significant growth a more than doubling since 1998, reaching over 7.9 million in 2017, and Peshawar city specifically surging from 2.0 million to 4.26 million during the same period. The year 2017 was chosen as the base year for this study. The average annual growth rate (AGR) over 19 years is 3.72%, compared to 3.51% from the 1981–1998 Census. Additionally, the average household size has declined from 8.2 in 1998 to 7.97 in 2017.To ensure greater accuracy in this study, three methods, arithmetic, declining growth, and geometric, were used. The average of these methods was calculated to enhance precision.

Table 5: Population Projection Methods for the year 2044

Method	Base Year	Projection				
	2017	2024	2029	2034	2039	2044
Arithmetic Method	2,868,714	3,563,519	4,059,807	4,556,096	5,052,385	5,548,674
Declining Growth Method	2,868,714	3,553,607	3,918,557	4,179,992	4,357,022	4,472,377
Geometric Method	2,868,714	3,704,459	4,446,695	5,337,648	6,407,114	7,690,861
Average	2,868,714	3,607,195	4,141,687	4,691,245	5,272,174	5,903,971

Source: Developed by Consultant

The projected population from year 2024 to 2044 reflects that the population of the city will continue to grow from 3.6 million to 5.9 million; an addition of approximately 2.3 million people over the course of 20 years with average growth rate of 3.12%. The average projected population and growth rates are shown in the below tables:

Table 6: Growth Rate Projection Using Average Projected Population (2024-2044)

Projection Using Different Methods	Base Year	Projection					
	2017	*2024*	*2029*	*2034*	*2039*	*2044*	*Average*
Average Population	2,868,714	3,607,195	4,141,687	4,691,245	5,272,174	5,903,971	N/A
Average Growth Rate increase	3.72	3.52	3.14	2.91	2.76	2.65	***3.12***

Source: Developed by Consultant

Chapter 2: Situational Analysis of the Land Use

2.1. Existing Land Use Patterns

The Peshawar City Master Plan area is comprised of 77 village councils covering 213.91 km², 130 neighbourhood councils covering 150.22 km², and a cantonment area spanning 14.40 km². The major land-use categories were developed based on the classifications provided in the Khyber Pakhtunkhwa Land Use and Building Control Act of 2021. The following table shows the area as well as the percentages of different land uses in the city of Peshawar for the year 2024:

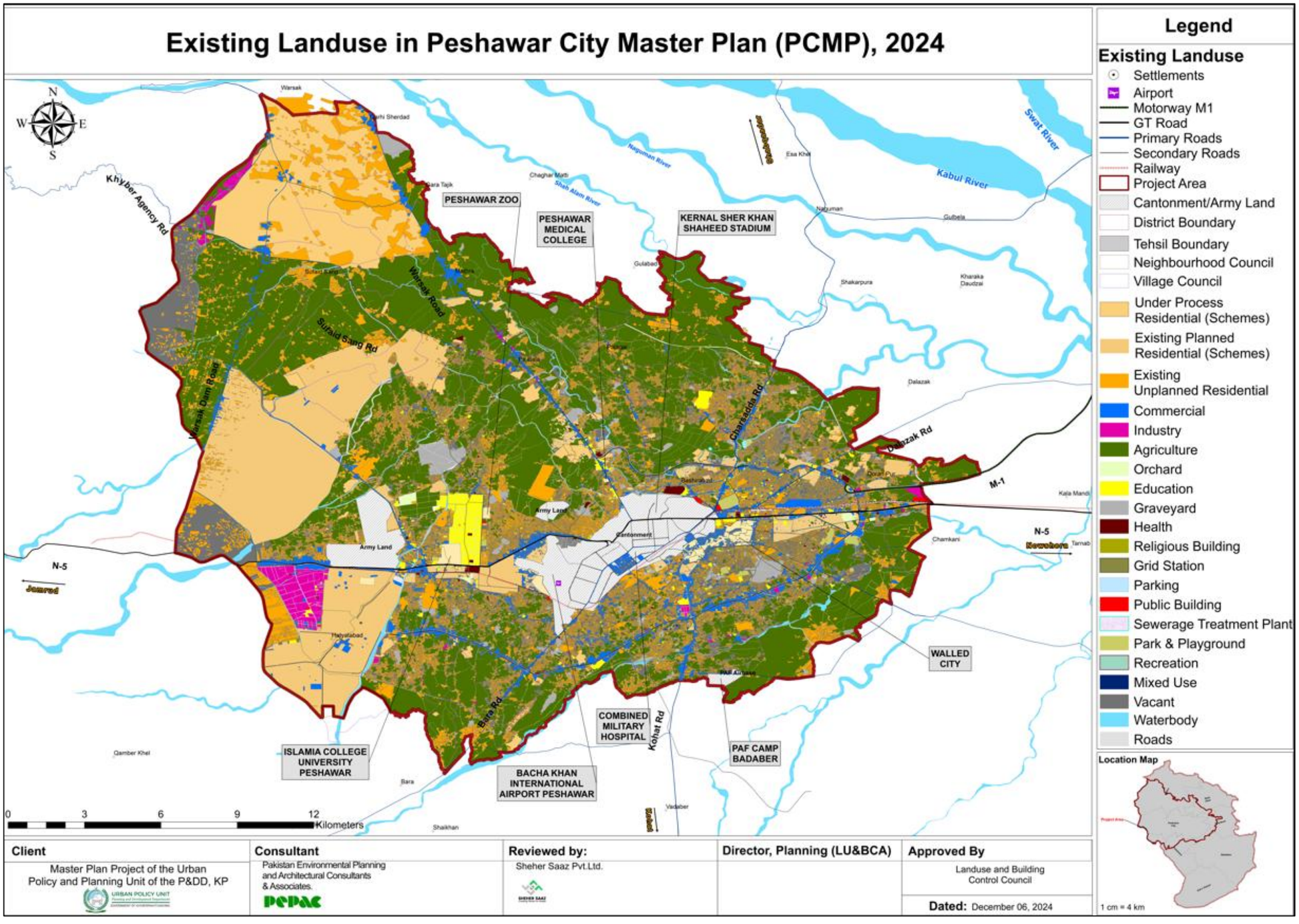
Table 7: Detailed of Existing Land Uses in the Peshawar city Master Plan, (2024-44)

Main Category	Sub-Category	Area (Acre)	Area (sq.km)	Percentage (%)
Residential Area	Planned Residential	17,792.1	72.00	18.14%
	Unplanned Residential	17,231.3	69.73	17.57%
Total Residential Area		35,023.42	141.73	35.72%
Commercial Area	Commercial Area	3,606.7	14.60	3.68%
Industrial Area	Industry	1,097.9	4.44	1.12%
Agriculture Area	Agriculture	34,331.7	138.94	35.01%
	Orchard	103.3	0.42	0.11%
Public Sector Area	Public Building	143.3	0.58	0.15%
	Religious Building	211.6	0.86	0.22%
	Railway Station	13.8	0.06	0.01%
Total Concentrated Public Sector Area		368.7	1.49	0.38%
Recreational Area	Park & Playground	806.8	3.26	0.86%
	Recreational Buildings	31.7	0.13	0.03%
Mixed Land Use	Mixed Use	6.0	0.02	0.01%
Barren and Vacant	Vacant	4,726.4	19.13	4.82%
Water bodies	Water body	1,403.8	5.68	1.43%
Amenities (Any Other Identified During Survey)	Education	1,585.9	6.42	1.62%
	Graveyard	1,656.4	6.70	1.69%
	Grid Station	15.2	0.06	0.02%
	Health	308.8	1.25	0.31%

Table 7: Detailed of Existing Land Uses in the Peshawar city Master Plan, (2024-44)				
Main Category	Sub-Category	Area (Acre)	Area (sq.km)	Percentage (%)
	Road	7,894.2	31.95	8.05%
	Parking	6.8	0.03	0.01%
	Railway Line	167.9	0.68	0.17%
	New Peshawar Bus Terminal	39.4	0.16	0.04%
	BRT Bus Depot	22.5	0.09	0.02%
	Sewerage Treatment Plant	26.9	0.11	0.03%
Peshawar Cantonment	Airport	682.08	2.76	0.70%
	Commercial Area	108.93	0.44	0.11%
	Public Building	77.174	0.31	0.08%
	Park & Playground	251.762	1.02	0.26%
	Recreational Buildings	5.178	0.02	0.01%
	Vacant	13.676	0.06	0.01%
	Water body	1403.8	5.68	1.43%
	Education	182.286	0.74	0.19%
	Graveyard	10.658	0.04	0.01%
	Health	40.803	0.17	0.04%
	Road	410.84	1.66	0.42%
	Railway Line	49.987	0.20	0.05%
	Residential and other	1717.8	6.95	1.75%
Total Area Cantonment		3557.9	14.40	3.63%
	PAF Airbase	116.3	0.47	0.12%
	Army Land	1,153.2	4.67	1.18%
Total		98,058.1	396.83	100.0%

Source: Primary Data Collected from Field Survey

Map 7: Existing Land Use Distribution - Peshawar Study Area



Source: Developed by Consultant

2.2. Existing Land Use Comparison with National Standards (NRM)

To identify the gaps between existing land use and the recommended land allocation under NRM planning standards, a brief comparison was made. As Peshawar falls into the NRM city category for populations exceeding 500,000, and the identified gaps are presented in the table below.

Table 8: Existing Land Use Comparison with NRM Standards

Sr. No.	Land Use	Existing Area (Km^2)	Existing Land Use Percentages	Land Use Distribution at Town/City Level (500,000+ Population) given in District Land Use Plan 2019	Recommended Land Use Allocation Standard (For Population above 500,000)
1	Residential	141.73	35.72%	45-52%	24-32%
2	Commercial	14.60	3.68%	2-3%	1-2%
3	Community Facilities (Health, Education, Mixed Use, Religious, Public etc.)	11.6	2.93%	7.5-10%	3-8%
4	Green/Recreational/ Open Spaces	4.4	1.12%	5-7.5%	2-5%
5	Graveyard	6.75	1.70%	-	0.5-3.5%
6	Vacant and Barren land	19.13	4.82%	-	9-45%
7	Roads	33.61	8.47%	25-30%	13-20%
8	Industry	4.44	1.12%	-	2-15%

Source: Developed by Consultant

The table presents an extensive analysis of future land demand estimation for Peshawar City based on different land use categories described in National Reference Manual and KP Urban Policy, 2030. Since the current population of Peshawar Study Area is ***3,607,195*** individuals the analysis below considers the population range of 500,000 above people and follows the National Reference Manual Standards (NRM) for land use allocation.

Table 9: Land Demand Calculation Analysis – Peshawar City

Land Use Categories	Recommended Land Use Allocation Standard (For Population above 500,000)	Existing area (Sq. Km)	Existing Areas Percentage	2044 Population: 5,903,971 People			
				Minimum Requirement (Sq. Km)	Maximum Requirement (Sq. Km)	Gap Minimum (Sq. Km)	Gap Maximum (Sq. Km)
Residential	**24-32%**	142.86	**37.33%**	91.84	122.45	51.02	20.41
Commercial	**1-2%**	14.12	**3.56%**	3.76	7.52	10.83	7.07
Industrial	**2-15%**	4.77	**1.20%**	7.52	56.39	2.75	51.62
Institutional	**3-8%**	9.19	**2.44%**	11.28	30.08	2.09	20.89
Roads	**13-20%**	32.16	**8.55%**	48.87	75.19	16.72	43.03
Vacant/Barren/Agri/Orchard	**9-45%**	162.29	**42.41%**	34.44	172.20	-127.85	9.91
Recreational Open space	**2-5%**	2.36	**0.62%**	7.65	19.13	5.29	16.77
Graveyard	**0.5-3.5%**	6.70	**1.75%**	1.91	13.39	-4.79	6.69

Source: Developed by Consultants (based on NRM Standards)

Chapter 3: Review of Previous Spatial Development Plans

Preparing spatial development plans, including master plans, structure plans, and land use plans, is a complex technical and political process. Land use planning ensures the rational allocation of land for sustainable urban growth, balancing competing needs like housing, jobs, recreation, and essential services. It relies on development planning, development control, research, and mapping to guide orderly expansion.

In Pakistan, including Peshawar, past master plans failed due to a lack of dedicated institutions, resources, legal frameworks, and public involvement. Most plans were developed in isolation, without stakeholder consultation, reducing their effectiveness. Without proper institutions for plan preparation, review, and implementation, spatial plans remain ineffective. Historically, three spatial development plans were made for Peshawar City, but KP's planning efforts were largely confined to the provincial capital, limiting broader regional benefits.

3.1. Peshawar Master Plan 1965-1985

The first Master Plan for Peshawar city was prepared in 1965 for a period of 20 years in the light of the directive of the 2nd five-year plan. During those days, neither the Municipal Committee nor any other local body in Peshawar was capable of undertaking this assignment. Further, the Directorate of Town Planning in Peshawar was functioning without a qualified Director Planning and the directorate was lacking the capacity to undertake such a technical task.

Therefore, to initiate work on the preparation of the plan, a Master Plan Committee was constituted under the chairmanship of the Commissioner Peshawar Division to supervise the preparation of the Plan and assist the concerned officials in the collection of various data sets required for the preparation of the master plan. As the Directorate of Town Planning lacked the required capacity to formulate a master plan for Peshawar city, therefore, the task of preparation of the master plan was assigned to the Physical Planning Cell of the Directorate of Town Planning Lahore in Punjab province. The various data sets collected for the preparation of the plan were shifted to Lahore, and mostly through desk research, the Peshawar Master Plan was prepared. As the Directorate of Town Planning, Lahore was also in the process of developing the master plan for Lahore City; therefore, the planning standards used for the Lahore Master Plan were also adopted for the Peshawar Master Plan.

The Peshawar master plan was a well-organized report accompanied with maps of various proposals on micro scale. The draft plan was submitted the Divisional Commissioner who passed it on to the Municipal Committee for review, approval and subsequent implementation. However, in the absence of required legal provisions, the Peshawar Municipal Committee was not able to get approval of the plan. As the plan was not approved by any proper forum, therefore it was never disseminated to the line departments involved in the development of the city. In 1975 the first Physical Planning Act, 1975 was promulgated for management of urban centres of the province, however, by that time the Peshawar Master Plan has already passed half of its life and at that time approval of the plan was not a feasible option.

The Planning horizon for the Peshawar Master Plan was 20 years (1965-1985) covering an area of about 23 Km2 (including 32 villages) which was jurisdiction of the then Peshawar Municipal Committee with a total population of around 0.21 million. It is important to mention that the Master Plan was prepared without specified goals and objectives, however,

It reflected a planned approach with all basic principles of modern town planning. Technically the master plan proposed excellent recommendations for the planned growth of Peshawar City and proposals were given to guide and channelize development in the city region. The city was divided into planning units/zones according to the planning principles of hierarchy of self-contained communities. Each zone would have public amenities according to its level in the hierarchy. Due to lack of professional capacity of the concerned institutions and non-availability of funds for the initiation of the plan proposals, therefore, development in hierarchical order in the city was not realized. The provision of infrastructure and other major facilities proposed were not properly implanted and as a result the city faced deficit in housing and other infrastructure.

3.2. Peshawar Structure Plan 1986 – 2001

Under the 1978 Planning Ordinance, the Provincial Urban Development Board (PUDB) was established. One of the functions of the PUDB was to establish local Areas Authorities in the province (Peshawar Development Authority (PDA), Mardan Development Authority (MDA), etc) that were established under PUDB. The PDA, with the technical support of UNDP, took the initiative of the preparation of the Peshawar Structure Plan after the lapse of the Peshawar Master Plan (1965-1986). The Directorate of Town Planning of PDA hired the services of a consortium of foreign and local consultants.

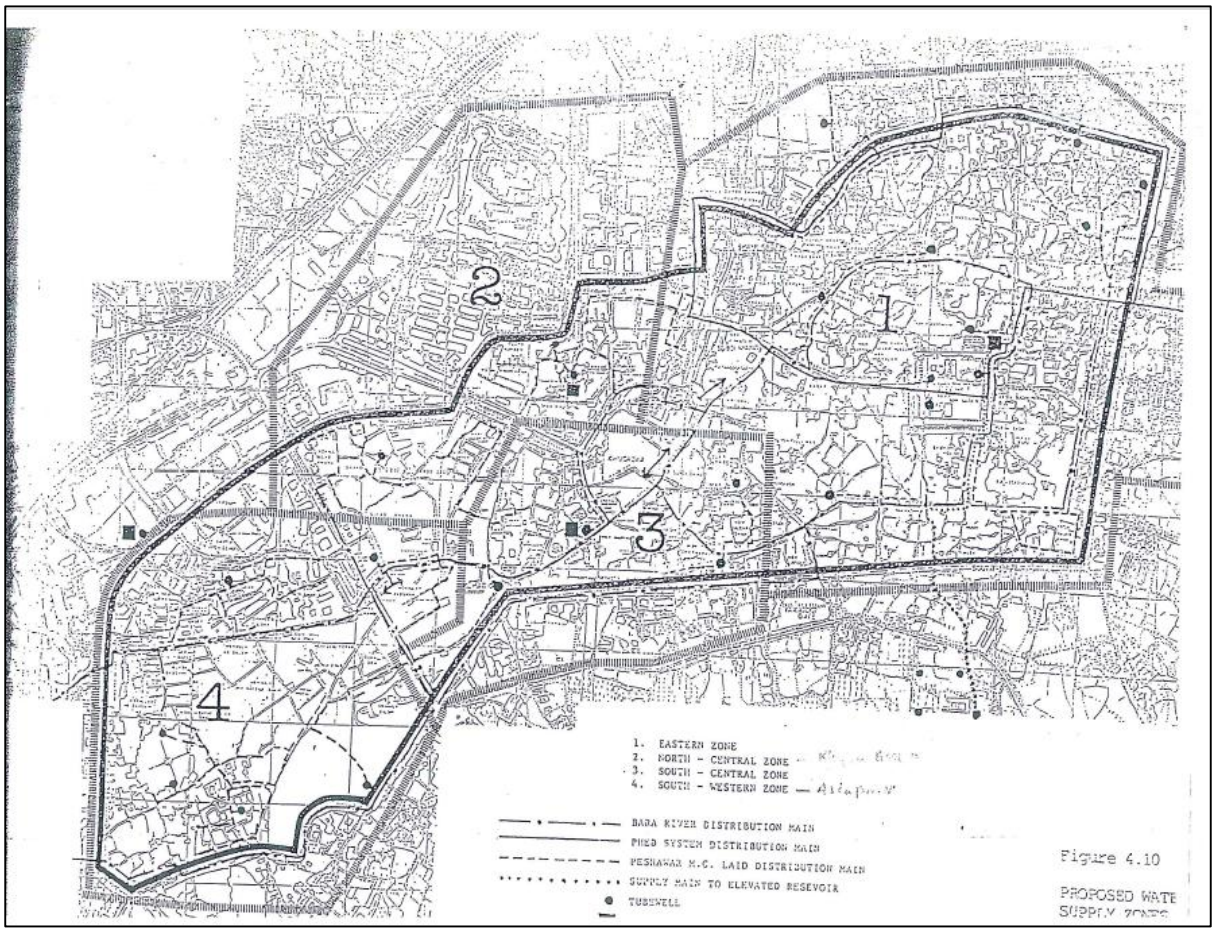
The consultants prepared the Peshawar Structure Plan based mostly on secondary data sets without collecting sufficient primary data from the field. However, primary data was used where required secondary data was not available. The plan properly considered all important aspects of the Structure Plan, including population projections, housing demand, utility infrastructure, transport, economy and employment, and land required for future urban growth. The consultants developed a comprehensive structure plan for both new development as well as redevelopment/ regeneration of the older parts of the city. In order to achieve a balance growth, following objectives were fixed for the plan:

- Identification of a proper framework for guiding the physical growth of the city and facilitating its management.
- Formulating policies and procedure for upgrading the infrastructure and facilitation of management of the old city.
- Development of a framework for improving living conditions of the poorest segments of the urban population by (i)- Preparing detailed action programs in priority areas for future capital investment projects; and (ii)- Strengthening the city capacity to cope with continuing urban development.

The structure plan proposed above two strategies for future expansion and recommended that during first half of the plan period (1986- 1994) development should concentrate around the old city through infilling by private sector through the provision of guided infrastructure by

PDA to ensure that development may not occur in a haphazard manner. Under this strategy in the south of the walled city and the Cantonment with some growth to the north of the GT Road were considered priority areas for urban expansion. This should provide benefits to both the existing residents as well as to the low-income groups requiring houses within short travel distance to their work places. The plan recommends that during the second half development of areas should be considered in south of University Town to form link with Hayatabad and to support the ring road proposals. In the SP, the proposed organizational responsibilities of PDA and PMC have been clearly demarcated to effectively manage city's development consideration.

Most of the prime agriculture land of the district is located in the northern side of the Peshawar city, therefore, to conserve the prime agriculture land, the plan proposed that new development in the southern direction of the city where sufficient vacant land was available. However, the PDA failed to get approve the Peshawar Structure Plan from a competent forum and as a result the plan failed to achieve its objectives.



Source: Peshawar Structure Plan 1986 – 2001

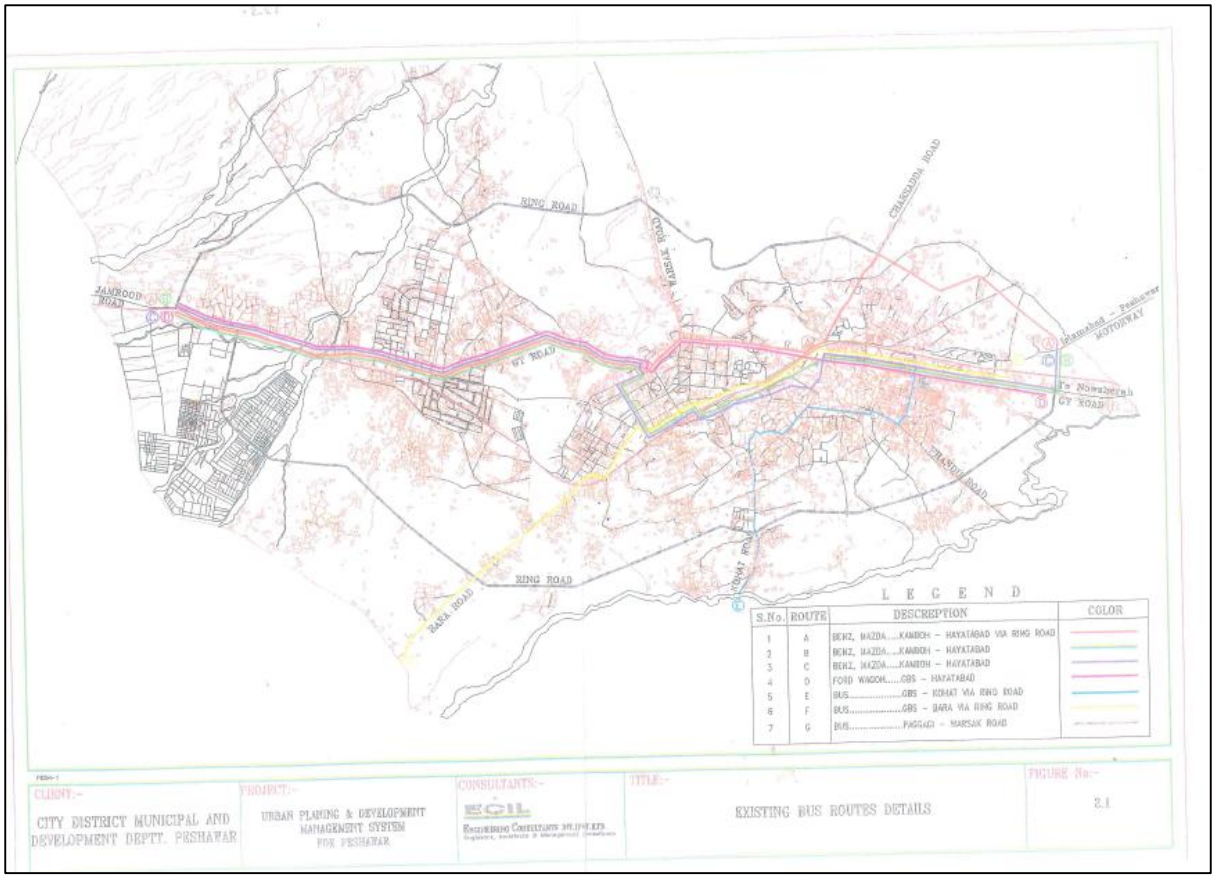
3.3. Urban Planning and Development Management Structure Plan 2001 - 2020

Although the previous two spatial development plans were never approved and properly implemented but the formulation of preparing new spatial development plans continued. After the lapse of the Peshawar Structure Plan in 2001, the Urban Planning and Development

Management System for Peshawar (UPDMSP) was developed in 2002 with a planning horizon of 18 years (2001-2020). The basic purpose of any spatial or non-spatial development plan is to set priorities or objectives that we would like to achieve through the proposed plan. Just like the Peshawar Master Plan (1965-1985) the UPDMSP has also no specific goal and objectives set in the plan for the future development of the city.

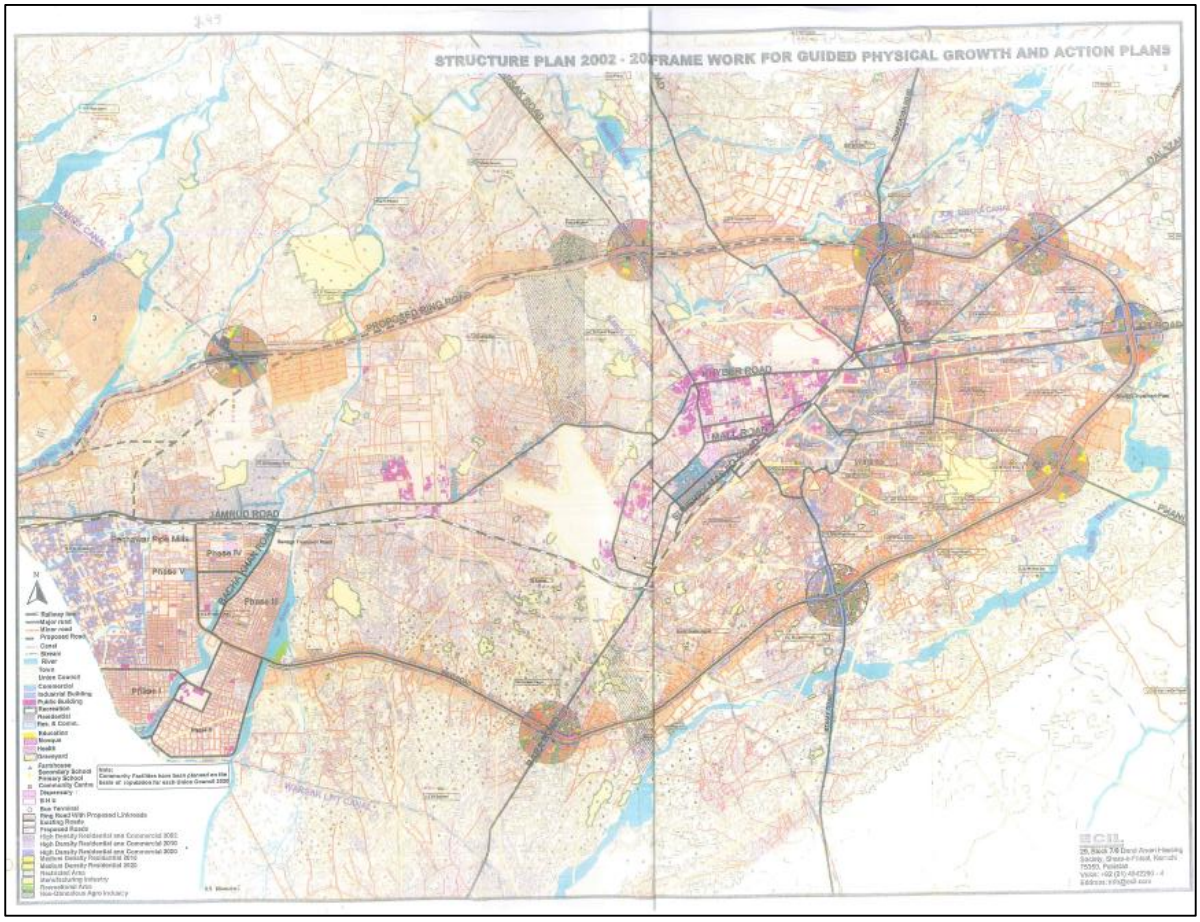
Through the promulgation of LGO 2001 both the PMC and PDA were made defunct, and the district was divided into four towns: Town I, II, III and IV eliminating the concept of urban and rural concept in the province. Therefore, the UPDMS Plan is neither a true spatial development plan (master plan and or structure plan) nor could be considered as a Regional Development Plan. Simultaneously, it opted for the LGO 2001 liability to relinquish rural rural-urban divide and considered the whole district's union councils' population. It also considered social and physical infrastructure in its analysis and focused only on Town-I and Town-III, which were predominantly urban in character for its structure plan proposals, while leaving aside Town-II and Town-IV, which are predominantly of rural character. This deviation in opinion could not help them to turn up an explicit plan for the concerned authority.

The concentration of the Plan was mostly on the provision of infrastructure without taking into account other aspects of the planning process, including environment and social development. The plan proposes civic community centres along Ring Road, regional radial roads intersection and identifies that land use planning and controlled development framework should take place only in these selected areas. However, under the LGO 2001, the executive authority of the City was vested with the City District Government Peshawar (CDGP), TMAs and Union Councils, while the plan custodian was the defunct PDA and after completion, it was submitted to the PDA despite the fact that the plan preparation and implementation was the prerogative of the CDGP. The Peshawar Development Authority PDA had no legal power to influence development in Peshawar except Hayatabad Township, Regi Lalma Model Town, and the frontage of GT Jamrud Road and Ring Road only which are mainly commercial in nature. Housing and infrastructure development for the rest of the city comes under TMAs' function. Section 54(a) of the LGO 2001 empowers TMAs to prepare physical plans (master plans, land use zoning plans) for their respective authority.



Source: Urban Planning and Development Management Structure Plan 2001 - 2020

Further, the UPDMSP plan maintains that land-use planning determines density of use, therefore, the result may be the utilization of land as both the government and private owners or developers do not have enough financial resources to provide infrastructure to the extent required to meet the planning criteria. The plan is of the view that such prescriptive conditions, decrease the supply of land for immediate use, and add to the inefficiencies of urban land. The Plan recommended less control over the urban particularly on land use along major road intersections, while the rest of the development should be left to the market forces with limited control. Due to the lack of legal cover with PDA and lack of capacity of the CDGP and TMAs the plan again not approved for implemented and the city of Peshawar experienced haphazard growth in all areas of the city.



Source: Urban Planning and Development Management Structure Plan 2001 - 2020

3.4. Peshawar District Land Use Plan 2019-2039

Land is a scare and a finite resource, and our existence entirely depends not only on the quantity but also on the quality of this resource. We use land to fulfil our basic needs of food, shelter, energy, and other needs. There are very limited options to increase the quantity of land, like reclamation of land from oceans and seas, but on the other hand, we have great opportunities to maintain and enhance the quality of our available land. The way we manage our land directly influences our environment, development, and economy. It is central to macroeconomic growth. Productive soil, fresh water, forests, clean air, animal life, and other renewable resources underpin the survival and prosperity of people across the planet. As our country moves towards a rapid increase in population of over 190 million, we need to manage the land to meet our increasing needs for food, energy, and water. The demand for agricultural products alone is expected to double in Pakistan in coming decades.

There is immense need to scientifically document our existing land uses and developed a comprehensive land use plan for our future needs and demands. The Government of Khyber Pakhtunkhwa is cognizant of the situation and to discourage the illegal conversion of prime agriculture land to housing societies and other non-agriculture uses initiated a dedicated project under the title of Provincial Land Use Plan (PLUP) within the Urban Policy Unit (UPU), Planning and Development Department, Government of Khyber Pakhtunkhwa. The basic objective of the land use plan is to ensure the judicious uses of land and it resources. The

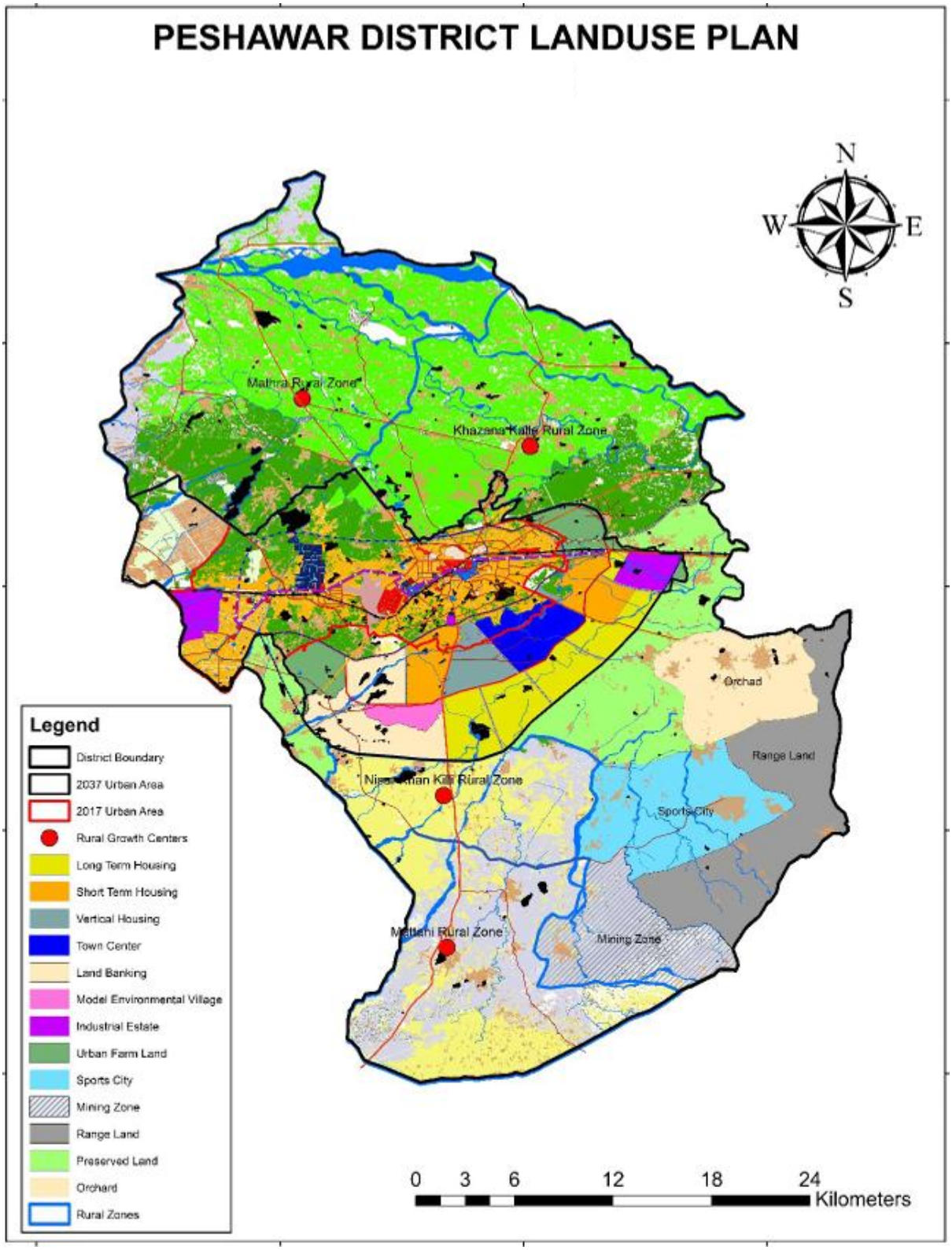
Provincial Land Use Plan shall prepare districts land use plans for all thirty-five districts of KPK. The district land use plans for Peshawar and Mardan divisions (Distract Peshawar, Charsadda, Nowshera, Mardan and Swabi) has been approved by the Provincial Land-Use and Building Control Council in its meeting held September 14, 2022, under the Chairmanship of honourable Chief Minister Khyber Pakhtunkhwa.

3.5. Critical Analysis of the Peshawar Master Plan 1965-85, Structure Plans 1986-2001 & 2001-2020 and Peshawar District Land Use Plan, 2019-39

The analysis of all four spatial development plans revealed that the foremost important aspects of any planning exercise shall be setting up a vision for the future of the city and setting rational objectives reflecting the strength of the proposed plans. Moreover, objectives provide a foundation/guidance for various planning proposals and a firm basis for monitoring and evaluation processes. The review of plans shows that both vision and objectives are missing in the Peshawar Master Plan (1965-1985), and UPDMS Plan (2001-2020). However, a clear-cut vision and explicit objectives are provided in the Peshawar Structure Plan (1986-2001). Besides setting goals and objectives, another important consideration is the prevailing national and regional policies and review of the existing legal framework are other important aspects which should have been taken into account in the plan-making process. Both the Peshawar Master Plan and Peshawar Structure Plan have reviewed the legal aspects and national and regional policy framework whereas UPDMSP has ignored these elements of the planning process.

The involvement of stakeholders at various stages of the plan-making process has been considered a key to the successful development and subsequent implementation of a physical development plan. However, the analysis of the plans revealed that consultation with line departments and the community was not given due regard in the planning process of the Master Plan and UPDMSP. Problem identification and forecast are the main factors which determine the planning approach for the spatial expansion of a city. The review of the Peshawar Land Use Plan documents depicts that the plan has a well-stated objective but without a vision statement. Some of the data sets used in the plan are outdated and cannot be relied upon. Although the plan covers the entire geography of District Peshawar, most of the Planning proposals were limited to Peshawar city which seems an under coverage of the scope of a district land use plan. The management structure provided in the land use plan does not align with both the existing local government structure of the province and Peshawar District.

Figure 5: Peshawar District Land Use Plan 2019 – 2039



Source: Provincial Land Use Plan of District Peshawar (2019-39)

On the basis of the lessons learned from the review of the previous plans, therefore for the proposed Peshawar City master plan (2024 – 2044) the fallowing planning process was adopted:

- Development of Master Plan objectives
- Through a comprehensive consultative process, both the line departments and general public issues and major problems of the city were identified and a Vision statement for the City was developed (deliverable No. 2 Vision Formulation and Community Consultation)
- Formulation of Technical Committee (consisting of 18 sectoral experts of UPU and concerned line departments) for review and approval of each deliverable
- Continuous consultation with the line departments for secondary data collection.

Collection of adequate primary data (1% of the total households of Peshawar city)

- Promulgation of the Land-Use and Building Control Act, 2021 and establishment of the Land-Use Building Control Council and Land-Use Building Control Authority (the authority is responsible for the preparation of the master plans and under the Land Use and Building Control Act the council will accord approval to such plans).

Chapter 4: Housing/Residential Zone

Background:

Pakistan's housing sector faces a significant challenge due to a severe shortage, particularly impacting lower-income groups. However, it also offers opportunities for growth and investment, contributing approximately 2-3% to the country's GDP. In Khyber Pakhtunkhwa (KP), housing demand is particularly high, with an estimated annual need for 1.1 million new units, especially in urban areas, driven by rapid population growth and urbanization.

Despite these challenges, government initiatives prioritize improving housing quality and affordability, especially for low-income residents and government employees. As housing is a fundamental human need, the master plan places it at the forefront of its priorities, aligning with SDG 11: "Sustainable Cities and Communities."

This chapter presents a comprehensive analysis of the existing housing situation, need assessment, future demand projections, and residential proposals for the plan period (2044).

4.1. Land Suitability Analysis (LSA) Criteria for Residential Land Use

LSA is one of the methods for estimating suitable land parcels for a particular land use. For residential land use, different parameters were applied to identify suitable land parcels. The proposals were made on the selected land parcels, considering the planning techniques, standards, local requirements, ground realities, and natural trends. The applied parameters included proximity of land to major roads network, existing planned residential areas, water bodies, and land cover.

4.2. Existing Situation

According to the 2017 census report, Peshawar City had a total population of 1,899,117 people residing in 226,046 housing units, compared to the years 1998 and 1981, where there were 914,076 people in 110,444 housing units and 506,896 people in 72,013 housing units, respectively. The following table presents the details of population, household sizes, and household units of three successive censuses:

Table 10: Demographic Assessment Three Consecutive Censuses – Urban Peshawar

Sr. #	Description	1981	1998	2017
1	Population	506,896	914,076	1,893,344
2	Inter-censual Increase in Population (%)	80.32	107.13	
3	Household Units (HU)	72,013	110,444	226,046
4	Inter-censual Increase in HUs (%)	65.96	46.91	
5	Household Size (HS)	7.2	8.2	8.09
6	Inter-censual Increase in HS (%)	13.88	-0.01	

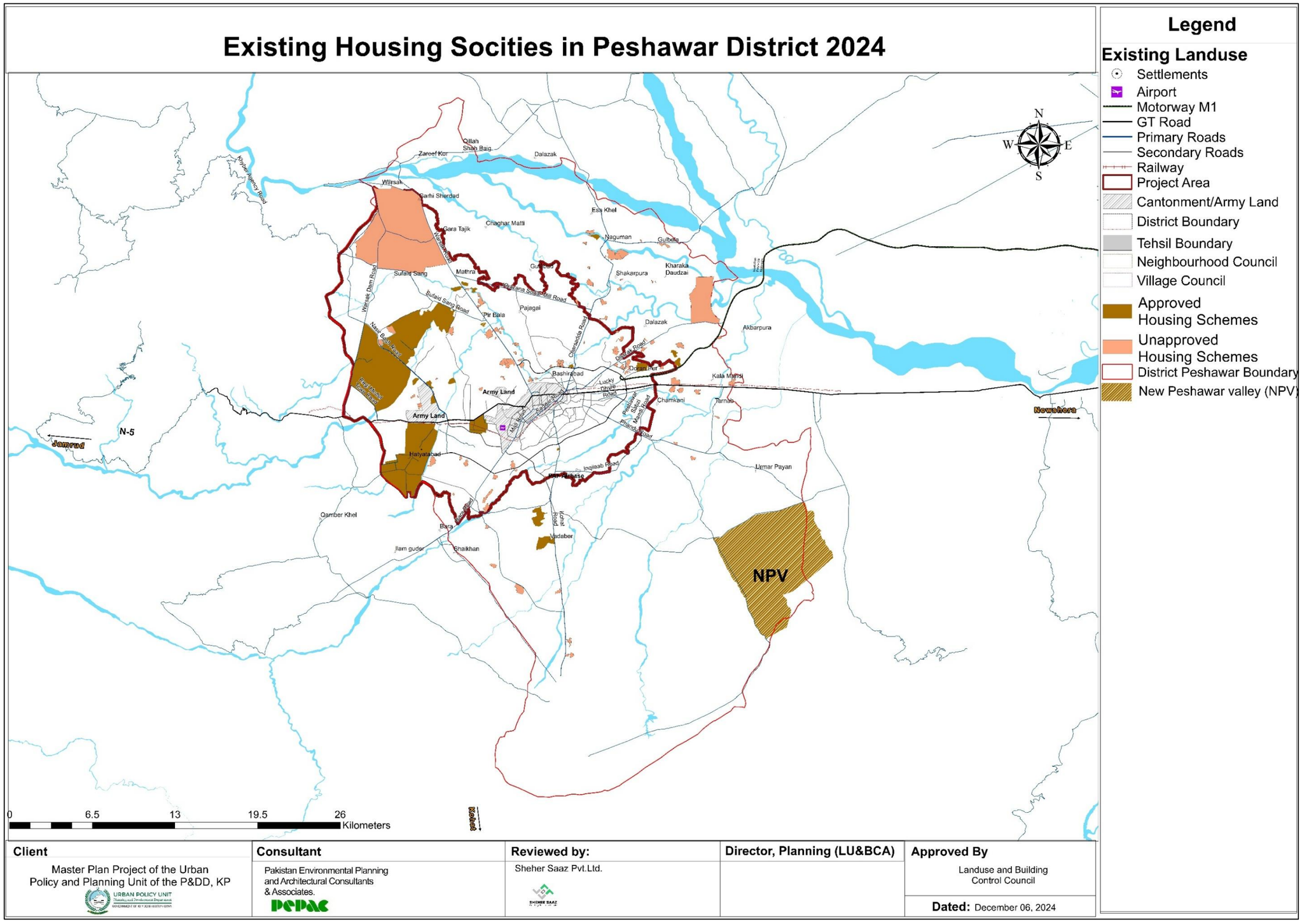
Source: District Census Report of Peshawar for 1981, 1998, and 2017, PBS

4.3. Existing Residential Schemes in District Peshawar

According to data collected from secondary sources, District Peshawar currently has 24 approved housing schemes, of which 17 schemes fall within the Peshawar Master Plan project boundary, covering a total area of 46.44 km². In contrast, the district also faces challenges due to the presence of 110 unapproved housing schemes (with respect to planning permission), 70 of which are located within the project area, occupying approximately 35.34 km². These unapproved schemes needs to be regularized in accordance with prevailing rules and regulations, for meeting the existing housing backlog and future residential demands.

The following map illustrates the distribution and details of both approved and unapproved housing schemes in District Peshawar, based on data received from DC/TMA/LU&BCA records and primary surveys conducted by the consultant.

Map 8: Existing Housing Societies in District Peshawar, 2024



Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP	Pakistan Environmental Planning and Architectural Consultants & Associates.	Sheher Saaz Pvt.Ltd.		Landuse and Building Control Council
				Dated: December 06, 2024

4.4. Existing Residential Schemes/Societies in Peshawar Master Plan Project Area

Considering Peshawar's strategic location along major trade routes, its status as the capital of Khyber Pakhtunkhwa, the eighth largest city in Pakistan, and a preferred second home for many residents, the city faces a substantial demand for housing, particularly within its urban areas. This demand is primarily driven by the city's rapidly growing population.

To effectively respond to these challenges, a comprehensive assessment of the existing housing situation was undertaken as part of the Peshawar City Master Plan. For this purpose, both primary and secondary data was collected. The primary data was obtained through a parcel-level land use survey, while the secondary data regarding housing schemes was acquired from the Deputy Commissioner, Peshawar, who also serves as the Convener of the District Land Use Planning and Management Committee, constituted under the Land Use and Building Control Act, 2021. The collected data was then verified through ground-truthing to ensure accuracy and reliability.

Within the Peshawar City Master Plan Project Area, a total of 87 housing schemes were identified. Of these, 17 have been approved, while the remaining 70 are currently under review by the relevant authorities. Detailed information on the approved and under-process housing schemes is provided in the following sections:

4.4.1. Approved Housing Schemes

At the time of data collection, a total of 17 housing schemes had been approved within the PCMP Project Area. These approved schemes cover an area of 46.44 square kilometres, accounting for approximately 11% of the total Master Plan Project Area. The following table provides detailed information on the approved housing schemes.

Table 11: Detail of Approved Housing Schemes in Peshawar City Master Plan Project Area

S.No	Name	Status	Area (in Sq. Km)	Percentage (%)
1	New University Model Town	Private	0.08	0.02
2	Arbab Cottages	Private	0.05	0.01
3	Shami Road Garden	Private	0.03	0.01
4	OPF Housing Scheme	Private	0.50	0.13
5	Professor Model Town	Private	0.21	0.05
6	Safia Homes	Private	0.11	0.03
7	Shaheen Housing Society	Government	0.20	0.05
8	Shiekh Yaseen Town	Private	0.53	0.13
9	Hasham Babar Town	Private	0.12	0.03
10	Police Colony Nasir Bagh Road	Government	0.20	0.05
11	Regi Lalma	Government	17.94	4.52
12	Mulazai Housing Scheme PHA	Government	0.12	0.03
13	Askari-6	Government	0.17	0.04

14	Hayatabad	Government	13.52	3.41
15	DHA Peshawar	Government	10.91	2.75
16	Professors Colony	Private	0.19	0.05
17	University Town	Government	1.57	0.40
	Total		**46.45**	**11.71**

Source: Secondary Data from concerned TMAs in Peshawar

4.4.2. Under process Housing Schemes in PCMP

Similarly, the data was received for housing schemes currently under process (w.r.t planning permission), which have either applied under the Private Housing Regulation 2021 or through previous regulations with respective TMA/Authorities. Details of the 70 housing schemes, whose approval is currently under process with the respective TMAs, covering a total area of 35.34 square kilometres (8.91% of the PCMP Project Area), are provided in the following Table.

Table 12: Under-process Housing Schemes in the Peshawar City Master Plan Project Area**

Sr.No	Name	Area in (Sq. Km)	Area(%)	Status
1	Sufyan Villas	0.08	0.02	Private
2	Canal View	0.15	0.04	Private
3	Gulshan Rehman Colony	0.03	0.01	Private
4	Green Villas	0.08	0.02	Private
5	Samar Bagh Enclave	0.09	0.02	Private
6	Gulistan Colony	0.10	0.03	Private
7	New Muslim City 3 / Hassan Colony	0.10	0.03	Private
8	Khan Colony	0.02	0.00	Private
9	New Officers Colony	0.09	0.02	Private
10	Tasneem Garden	0.09	0.02	Private
11	Lala Jaan Colony	0.06	0.02	Private
12	Darmangi Villas	0.01	0.00	Private
13	Chitral Valley	0.04	0.01	Private
14	Orchard Views	0.02	0.01	Private
15	Al Moeez II	0.05	0.01	Private
16	Faisal Town	0.02	0.01	Private
17	Car Homes	0.06	0.02	Private
18	Sudais Villas	0.29	0.07	Private
19	Life Style Development	30.17*	7.60	Private
20	Al Madina Colony	0.02	0.00	Private
21	Shah Orchard	0.01	0.00	Private
22	United Buisness Complex & Housing Societies	0.02	0.01	Private
23	Binori Colony	0.04	0.01	Private
24	Asad Regi Enclave	0.06	0.01	Private
25	Al Mashriq Colony	0.01	0.00	Private
26	Khan Villas	0.01	0.00	Private
27	Malik Amir Khalil	0.05	0.01	Private

Table 12: Under-process Housing Schemes in the Peshawar City Master Plan Project Area**				
Sr.No	**Name**	**Area in (Sq. Km)**	**Area(%)**	**Status**
28	Smart Villas	0.06	0.01	Private
29	New Madina Colony	0.02	0.01	Private
30	Pak Garden	0.08	0.02	Private
31	Jamshed Town	0.06	0.01	Private
32	Officer Colony	0.05	0.01	Private
33	Qazi Garden	0.03	0.01	Private
34	Executive Lodges	0.14	0.03	Private
35	Al Moeez Home III	0.03	0.01	Private
36	Malik Jan Abad	0.03	0.01	Private
37	Green Cottages	0.10	0.03	Private
38	Officers Home	0.06	0.01	Private
39	Al Haram Town	0.23	0.06	Private
40	Arbab Yaseen Town	0.03	0.01	Private
41	City Osis	0.15	0.04	Private
42	Galaxy Housing Scheme	0.20	0.05	Private
43	Hafiz Abad	0.01	0.00	Private
44	Hayatabad Enclave	0.03	0.01	Private
45	Khyber Kalay	0.12	0.03	Private
46	Khyber Residencia	0.18	0.05	Private
47	Shams ul Qamar Colony	0.09	0.02	Private
48	Proffessor Housing Scheme	0.14	0.04	Private
49	Officer Housing & University Garden2	0.19	0.05	Private
50	Name-unclear	0.01	0.00	Private
51	Rauf Abad Scheme	0.02	0.01	Private
52	Executive lodges	0.09	0.02	Private
53	Mian Abdul Wali Shah Town II	0.06	0.02	Private
54	Kaka Khel Town	0.06	0.01	Private
55	Arbab Sabz Ali Town	0.30	0.08	Private
56	Al Masa Model Town	0.25	0.06	Private
57	Corniche Enclave	0.04	0.01	Private
58	Labor Colony Peshawar	0.25	0.06	Private
59	Faisal Town	0.02	0.01	Private
60	Shamsul Qammar Town	0.05	0.01	Private
61	Ozair Colony	0.02	0.01	Private
62	Professor Model Town2	0.03	0.01	Private
63	Main Abdul Wali Shah Town	0.04	0.01	Private
64	Basher bagh	0.04	0.01	Private
65	City Oasis	0.01	0.00	Private
66	Mehmood khan Plotting	0.03	0.01	Private
67	Overseas Colony	0.03	0.01	Private

Table 12: Under-process Housing Schemes in the Peshawar City Master Plan Project Area**				
Sr.No	**Name**	**Area in (Sq. Km)**	**Area(%)**	**Status**
68	District One Housing Scheme	0.02	0.01	Private
69	CPEC Colony Housing Scheme	0.03	0.01	Private
70	Green Lodges Housing Scheme	0.09	0.02	Private
	Total	**35.34**	**8.91**	

Source: Secondary Data from Concerned TMAs

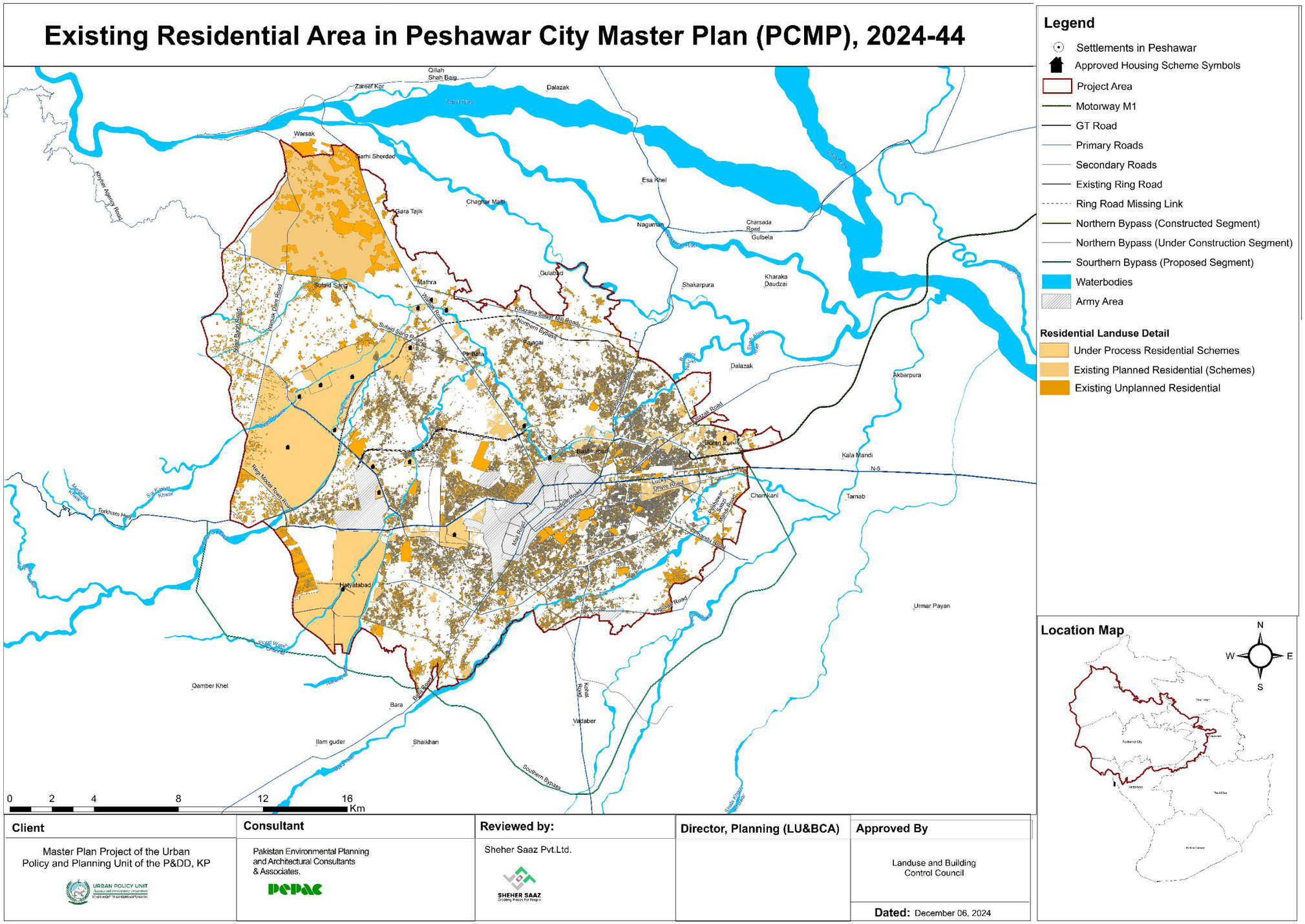
* *The scheme, as per coordinates from DC Office Peshawar, covers 7,748 acres within the PCMP boundary, including 2,220 acres of built-up area and a 1,546-acre Model Environmental Village (DLUP-approved).*

*** The under process housing schemes shall be processed in accordance with the relevant provisions of the Housing Regulation 2024, made under the Land Use and Building Authority Act, 2021..*

5.2.2 Existing Residential area in Peshawar Master Plan Project Area

The total existing residential area in the project boundary is comprised of planned residential areas (approved and under-process housing schemes) and un-planned residential areas. The detail of the aforementioned categories is shown in the following map:

Map 9: Existing Residential Area in Peshawar City Master Plan (PCMP), 2024-2044



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Source: Developed by Consultant

4.5. Housing Shortage & Need Assessment

Considering the current housing supply, backlog, projected population and future requirements, the Peshawar City Master Plan has to accommodate 2,296,776 persons by the plan period. This population shall require 293,755 housing units. The following section presents detail of the housing unit requirements and proposals till the plan period (2044).

According to the 2017 Census, the average household size in Peshawar was 7.97 persons. To determine the required space per household, the following calculation was conducted based on Germany's standard:

- Required space per person (amended for Peshawar) =11 m²
- *Average household size of Peshawar = 7.97 (Census)*
- *Sufficient space required for one household = 11 m² * 7.97 = 87.67 m² = 3.47 Marla*

As per the standard, average housing unit size in Peshawar should be 3.47 Marla approximately.

Calculation of Existing Housing Unit Size

To calculate the average housing unit size, primary data has been analysed;

Table 13: Average Plot Size Calculation from primary data

Range of Plot Size	Min	Max	Median	Sample size (In numbers)	Marla's
< 3 Marla	0	3	1.5	266	399
3-5 Marla	3	5	4	877	3,508
5.1-10 Marla	5.1	10	7.5	604	4,531
10.1-15 Marla	10.1	15	12.5	166	2,075
> 15.1 Marla	15.1	20	20	278	5,554
Missing				34	-
Total				**2,225**	**16,067**

The analysis excluded missing data, resulting in a sample size of 2,191. The average plot size was calculated as follows:

Average Housing Unit size = $\frac{Total\ Marlas}{Sample\ Size}$

=16,067/2,191

=7.33 Marla

Given that the average housing unit size in Peshawar Master Plan Project Area is 7.33 Marla (as per primary data analysis), it exceeds the required minimum of 3.47 Marla, suggesting that there is no housing backlog according to this standard. Furthermore, this housing unit size comfortably accommodates three habitable rooms, thereby aligning with the UN Habitat requirements and confirming there is no significant housing backlog in Peshawar.

4.6. Housing Supply/Provision

To evaluate the existing and potential housing provision for the Peshawar City Master Plan Project Area, two distinct scenarios have been formulated. Each scenario offers a different perspective on the housing landscape within the study area, providing a comprehensive assessment of the current and projected housing availability.

i. **Scenario I:** Housing Stock from Housing Societies within the PCMP Project Area
ii. **Scenario II:** Housing stock from Infill land parcels

4.6.1. Scenario I: Housing Stock from Housing Societies within the PCMP Project Area

The public sector housing schemes in Peshawar, particularly Hayatabad and Regi Model Town, play a significant role in meeting the city's housing demand. Hayatabad spans 3,300 acres and includes approximately 22,500 residential plots. Regi Model Town, covering 12,350 acres, offers around 26,900 plots of various sizes; however, it remains largely uninhabited as per the current assessment[7].

In the private sector, several housing schemes have been identified—some of which are approved, while others are still in the approval process, as detailed in Tables 13 and 14 above. The total area covered by housing schemes (including approved, unapproved, public, and private) within the Peshawar City Master Plan Project Area amounts to 20,215.57 acres (81.81 sq.km). According to the land use survey analysis, 12,521.21 acres (50.67 sq.km) of this area remain currently unoccupied.

In accordance with the Khyber Pakhtunkhwa (KP) Private Housing Scheme Rules 2024, approximately 50% of the vacant land within each housing scheme is designated for residential purposes. Based on this guideline, the total residential land available—comprising both private housing schemes and identified infill parcels—amounts to 7,048.34 acres (28.5 sq.km). The potential number of housing units has been estimated using this residential land area, applying an average plot size of 5 Marla's, as determined from primary data (adjusted for various influencing factors).

The estimated number of housing units is calculated by dividing the total residential land area by the average plot size, providing a tentative figure for the housing capacity within these schemes. To enhance the accuracy of this analysis, the projected average household size for the year 2044 estimated at 7.82 persons per household is applied. This method enables an estimation of the potential population that could be accommodated by these housing schemes. The following table presents a detailed breakdown of the housing stock calculations within the project boundary.

Table 14: Housing Supply from Residential Schemes within the Project Area Boundary

Description	Area in Acres
Total Area under Housing Schemes	20,215.57 Acres
Vacant Area within Housing schemes	12,521.21 Acres

[7] Provincial Land Use Plan of District Peshawar

Allocated Residential Area	7,048.34 Acres
Area in Marla's	1,127,734 Marla's
Housing Units (Supply)	225,546 Units (using Avg. plot of 5marla)
Population to be accommodated	1,763,776 People (using average HH size of 7.82)

Source: Developed by Consultant

Therefore, from the above analysis, the housing supply from housing schemes in Peshawar City Master Plan Project Area underscores a substantial contribution, with a total of 225,546 residential units capable of accommodating a population of 1,763,776 individuals.

4.6.2. Scenario II: Housing Stock from Infill Land Parcels

The second housing supply scenario focuses on infill development within Peshawar, assessing the capacity of vacant land parcels within Neighbourhood Councils (NCs). Infill development refers to the utilization of vacant or underused land in already developed areas, helping to optimize urban land use and reduce urban sprawl.

Vacant Land Parcels within NCs (Above 1 Acre)

The analysis identified 495.77 acres of vacant land within NCs, comprising parcels larger than 1 acre. The total area amounts to 79,323 Marla's, which, using an average plot size of 5 Marla's, can supply an estimated 35,761 housing units. These housing units have the potential to accommodate approximately 279,651 people, based on the projected household size of 7.82 persons per household for the PCMP project area by 2044. The following table presents a detailed picture:

Table 15:: Housing Supply from Infill Land Parcels

Description	Area	*Remarks*
Vacant Land Parcels within NCs	2.01 km^2	*Vacant Land Parcels above 1 Acre*
Housing Units (Supply)	35,761 Units	*G + 3 Mixed Used Residential with Commercial Ground Floor*
Population to be accommodated	279,651 People	*Average Household Size: 7.82*

Source: Developed by Consultant

4.6.3. Cumulative Housing Supply from S1 And S2

Total Supply (Housing Units)	**261,307 Units**
Total Population to be accommodated	**2,043,427 People**

4.7. Future Demand Estimation for Residential Area

Naturally, the demand for housing will increase accordingly with the increased population of Peshawar city. From the year 2024 to 2044, the population of Peshawar is likely to increase by approximately 2.3 million people. This growth will ultimately demand a higher number of housing units in the study area.

Table 16 : Future Demand Estimation for Residential Area		
Total Requirement till 2044	**A**	293,755 Units
Total Population to be accommodation till 2044	**B**	2,296,776 Person
Demand fulfilled by Housing Supply+infill parcels	**C**	261,307 Units
Incremental Population Accommodated in Housing Supply	**D**	2,043,427 Person
Leftover Demand (Housing Units)	**A-C**	32,448 Units
Leftover Population to be Accommodated by 2044	**B-D**	253,349 Person

Source: Developed by Consultant

The analysis reveals that despite the substantial housing stock, there remains a notable **leftover demand of 32,448 units** that must still be addressed to meet the projected requirement by 2044. This shortfall represents a housing deficit that will leave approximately **253,349 people** without proper accommodation if no further developments or interventions are made.

4.7.1. Area Requirement

To accommodate the projected housing demand for 253,349 people (leftover population) by the year 2044, a total of 6.81 km^2 will be required for future residential development. The planning and design of this residential area incorporates both horizontal and vertical development strategies, optimizing land use while ensuring sufficient housing capacity.

Approximately **70%** of the required area will be designated for horizontal development, using a mix of plot sizes. This approach ensures flexibility in catering to diverse housing preferences and income groups, while also addressing the cultural preference for private land ownership and individual housing units.

Table 17: Area Requirement for Horizontal Development (2024-2044) in PCMP							
Single Storey Units	**%age**	**Population**	**Housing Units**	**Area Required (Marla)**	**Area into Acres**	**Area Required for Allied Uses (Acres)**	**Total Area Required (acres)**
4 Marla	**20**	50,670	6,490	25,958	162	73	235
5 Marla	**20**	50,670	6,490	32,448	203	91	294
7 Marla	**8**	20,268	2,596	18,171	114	51	165
10 Marla	**15**	38,002	4,867	48,672	305	137	441
1 Kanal	**7**	17,734	2,271	45,427	284	128	412
Total	**70**	177,344	22,713	170,675	1,067	480	1,547

Source: Developed by Consultant

The above table depicts that, for horizontal development 1,547 acres of land is required to cater leftover incremental population over the next 20 years. Furthermore, to optimize land use and address the growing housing demand in a more space-constrained environment, **30%** of the total residential area will be allocated for **vertical (G+3) development**, which includes multi-storey residential buildings with **Ground + 3 floors**. The calculations of apartments for vertical development have been explained in the following table;

Table 18: : Calculation of Apartments for Vertical Development

Apartment Type	Size of Apartment (sq. ft)	Size of Apartment (Marla)	Units each floor	Area of Each Floor (Sq ft)	Area of Each Floor (Marla)	Additional area for Mandatory spaces (Marla)	Total Area of Each apartment Building (Marla)
1 bedroom Apartment	1,000	3.7	4	4,000	14.7	5.9	20.6
2-bedroom Apartment	1,200	4.4	4	4,800	17.6	7.1	24.7
3 Bedroom Apartment	1,600	5.9	4	6,400	23.5	9.4	32.9

Source: Developed by Consultant

Using the above-mentioned criteria, the area requirement for vertical development has been calculated and mentioned in the table below;

Table 19: Area Requirement for Vertical Development

Apartment Type	%age	Population	Housing Units	Number of Stories	Housing units Accommodated in one apartment building	Area Required (Marla)	Area into Acres	Area Required for Allied Uses	Total Area Required(acre)
1 bedroom Apartment	**10**	25,335	3,245	4	16	4,171	26	12	38
2-bedroom Apartment	**15**	38,002	4,867	4	16	7,509	47	21	68
3 Bedroom Apartment	**5**	12,667	1,622	4	16	3,337	21	9	30
Total	**30**	76,005	9,734			15,017	94	42	136

Source: Developed by Consultant

4.8. Integration of DLUP Peshawar Residential Zones and New Peshawar Valley

Following the detailed housing supply analysis, it was determined that an additional **1,682.8 acres** will be required to accommodate the leftover population by 2044. To address this need, the proposed residential zones of the District Land Use Plan Peshawar, shall be considered ensuring that future development is both sustainable and responsive to the city's growing needs. Furthermore, since Peshawar is the provincial capital city, a business and educational hub, a trade route, and a house to migration from merged districts and surrounding other districts, the

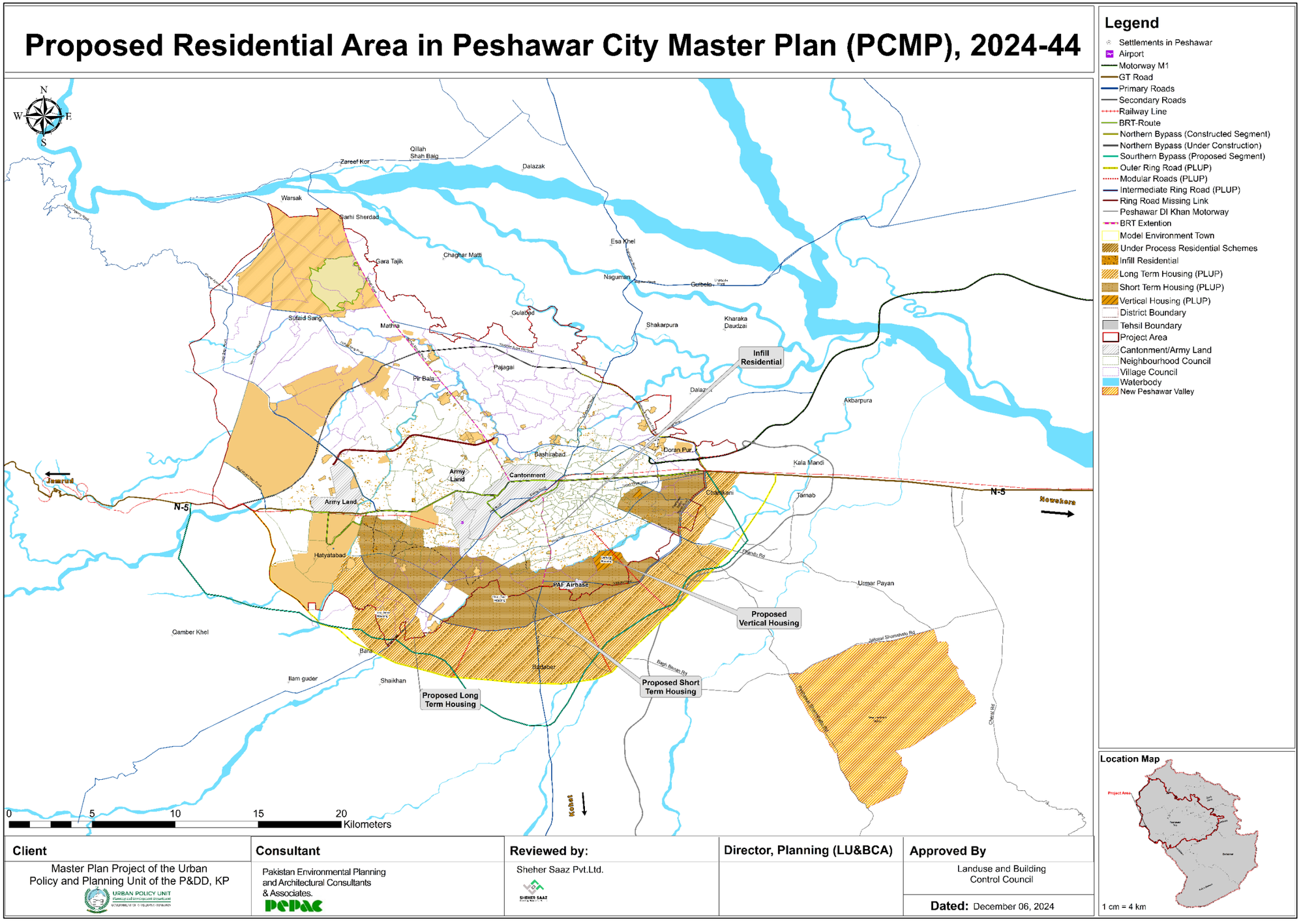
residential area demand may reach beyond the projected need, therefore, the New Peshawar Valley is also considered for residential development and addressing the future demand.

Table 20: Area of Approved DLUP Peshawar Residential Zones		
S.No	**Proposals**	**Area (in acres)**
1	Vertical Housing	336.55 Acres
2	Short Term Housing	8,589.94 Acres
3	Long Term Housing	2,841.94 Acres
Total Area		***11,768.43 Acres***

Source: District Land Use Plan Peshawar

The master plan residential proposals considering the under-process residential schemes, identified infill land parcels, proposed residential zones of DLUP Peshawar and New Peshawar Valley are shown in the following map:

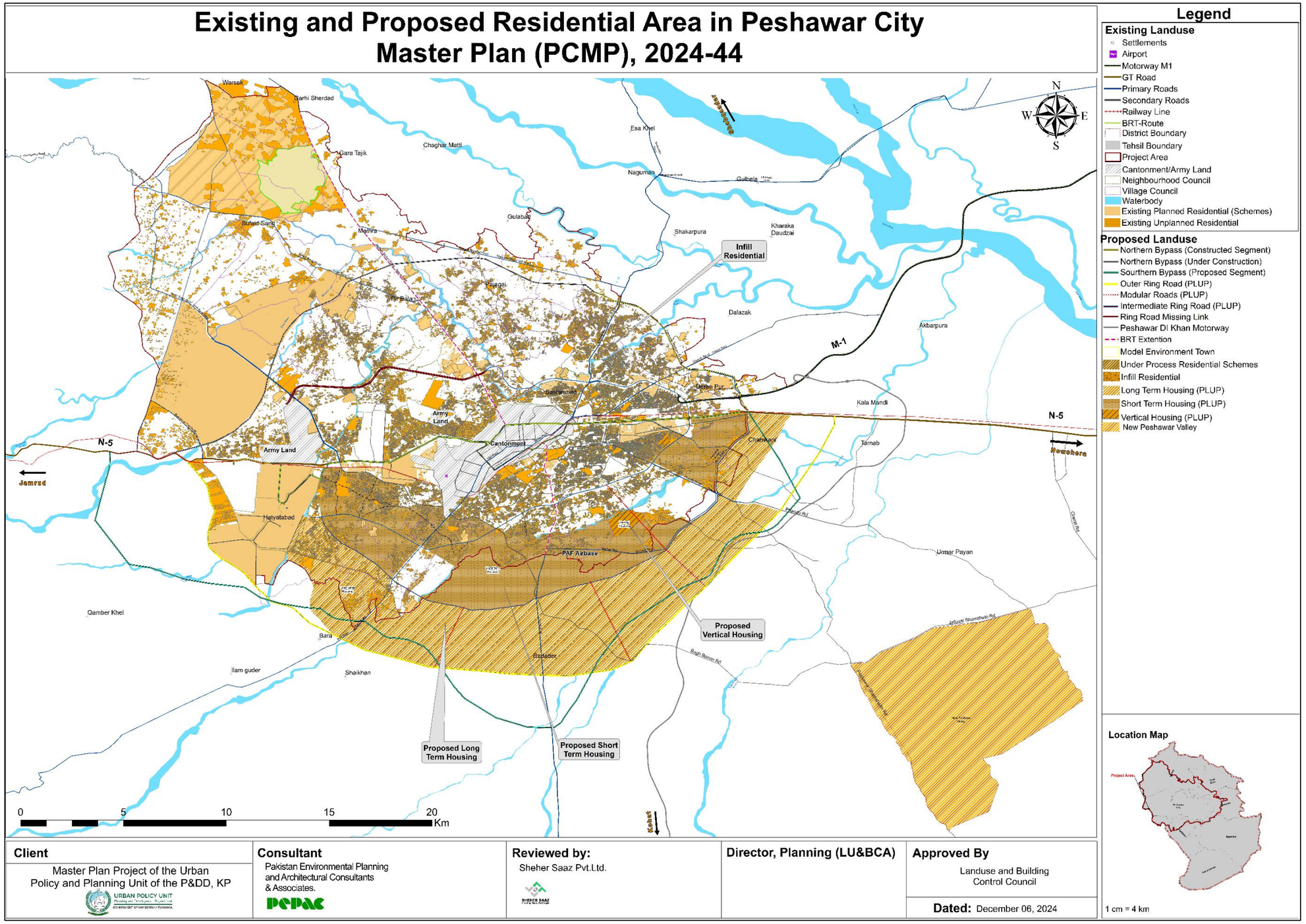
Map 10: Proposed Residential Area in Peshawar City Master Plan (PCMP), 2024-2044



Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP URBAN POLICY UNIT	Pakistan Environmental Planning and Architectural Consultants & Associates. PEPAC	Sheher Saaz Pvt.Ltd. SHEHER SAAZ		Landuse and Building Control Council **Dated:** December 06, 2024

The overall detail of both the existing and proposed residential areas/zone is shown in the following map:

Map 11: Existing and proposed residential area in Peshawar City Master Plan, 2024-44



Source: Developed by Consultant

4.9. Slums in Peshawar City Master Plan Project Area

Peshawar has accommodated migrant population from all over the province as well as the Afghanis. Owing to poor financial conditions, displaced groups frequently establish squatter communities in and around cities (Katchi abadis). Peshawar City has been administratively divided into 6 tehsils and one Capital Metropolitan Government Department. According to the Profiling of Slums and Underserved Areas of Peshawar City of Khyber Pakhtunkhwa, UNICEF, 2020, there are 97 Union Councils (UCs). By UCs, 85 of the UCs are home to slums or underdeveloped areas. These UCs have a total of 550 slums and 22 underdeveloped areas. The distribution of slums by town shows that towns 1 and 2 have the largest concentration while town 4 has the lowest 64. The following table depicts number as well as percentage of slums for each town:

Table 21: Number of Slums and Underserved Areas – Urban Peshawar

Sr. No.	Towns	Slums		Underserved		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage
1	Town 1	210	38	0	0	210	37
2	Town 2	189	34	0	0	189	33
3	Town 3	108	20	22	100	130	23
4	Town 4	43	8	0	0	43	8
5	Total	550	100	22	100	572	100

Source: Profiling of Slums and Underserved Areas of Peshawar City of Khyber Pakhtunkhwa, UNICEF, 2020

Furthermore, the UN-Habitat defines a "slum household" as one lacking one or more of the following:

- Durable housing,
- Sufficient living area,
- Access to improved water,
- Access to improved sanitation, and security of tenure

Therefore, considering the aforementioned factors and ground realities of Peshawar, several areas have been identified, exhibiting the character of slums. The details of identified slums in Peshawar Master Plan Project Area are given in the following table:

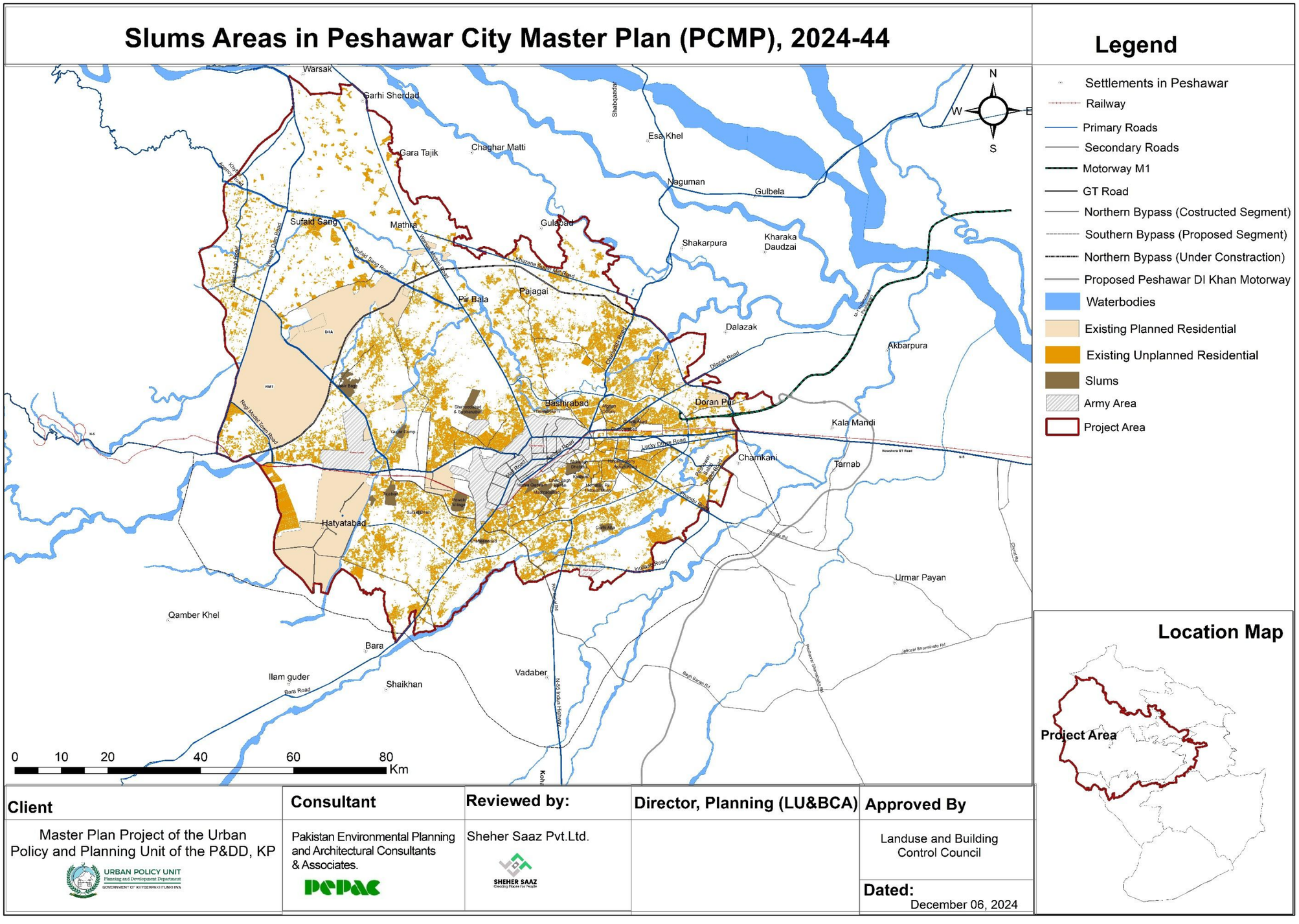
Table 22: Identified Slums in Peshawar City Master Plan Project Area

S.No	Name	Area (Sq.Km)
1	Pawaki Village	0.51
2	Shaheedabad & Subhanabad	0.72
3	Tajabad	0.46
4	Gujjar Camp	0.18
5	Changarabad	0.04
6	Afghan Colony	0.06
7	Gharib Abad	0.08
8	Haider Colony	0.03
9	Hassan Garhi	0.04

S.No	Name	Area (Sq.Km)
10	Kashkal	0.03
11	Mohallah Pir Hidayat Ullah	0.10
12	Tajabad	0.09
13	Sufaid Dheri	0.03
14	Shaheenabad	0.09
15	Garhi Atta	0.17
16	Akhun Abad	0.06
17	Nasir Bagh	0.71
18	Mushtaqabad	0.30
19	Mohallah Dhahdia	0.33
20	Dheri Bagh Banan	0.05
21	Nothia Qadeem	0.32

The aforementioned detail is shown in the following map:

Map 12: Slum Areas in Peshawar City Master Plan (PCMP) Project Area



Source: developed by the consultant

4.10. Zoning Regulations for Housing/Residential

Table 23: Zoning Regulations for Housing /Residential Zones – PCMP

Residential	Permitted Land uses	Permissible Land Uses (Permitted on Appeal)*	Prohibited Landuses**
Residential zone/areas	• Detached/semi-detached dwellings • Mosques • Clinics/Dispensaries Social/Cultural events spots • Parks and Playgrounds and Local Recreational Uses • Non-commercial vegetable gardens and nurseries. • Ancillary uses clearly incidental to residential uses, which must be free from nuisance and hazard. • Hostels, Guest Houses • Apartment Buildings / Multi-family dwellings • Offices of TMAs/other tiers of Local Govt.	• Commercial Offices and Service Shops of Local Character. • Raising of poultry for non-commercial purposes. • Petrol pump, gas filling station. • Taxi/rickshaw stand, • Graveyards. • Primary/High Schools institutions • Local Shopping Areas/Retail Shops • Offices of Professionals with adequate parking facilities • Colleges and Research Institutions	All uses which are not in permitted and permissible uses shall be dealt as prohibited

Source: Developed by Consultant

**The District Land Use Planning and Management Committee shall decide on case to case basis regarding planning permission of the land uses*

***The matter shall be dealt as per section 18 & 19 of the Land Use and Building Control Act, 2021*

Chapter 5: Commerce, Industry, and Urban Economy

5.1 Existing Commercial Land Use

To assess commercial activities in the PCMP, a detailed land use survey was conducted. The analysis indicates that the project area encompasses 14.68 km^2 of land designated for commercial use, serving the study area's population, as illustrated in Map 13 below.

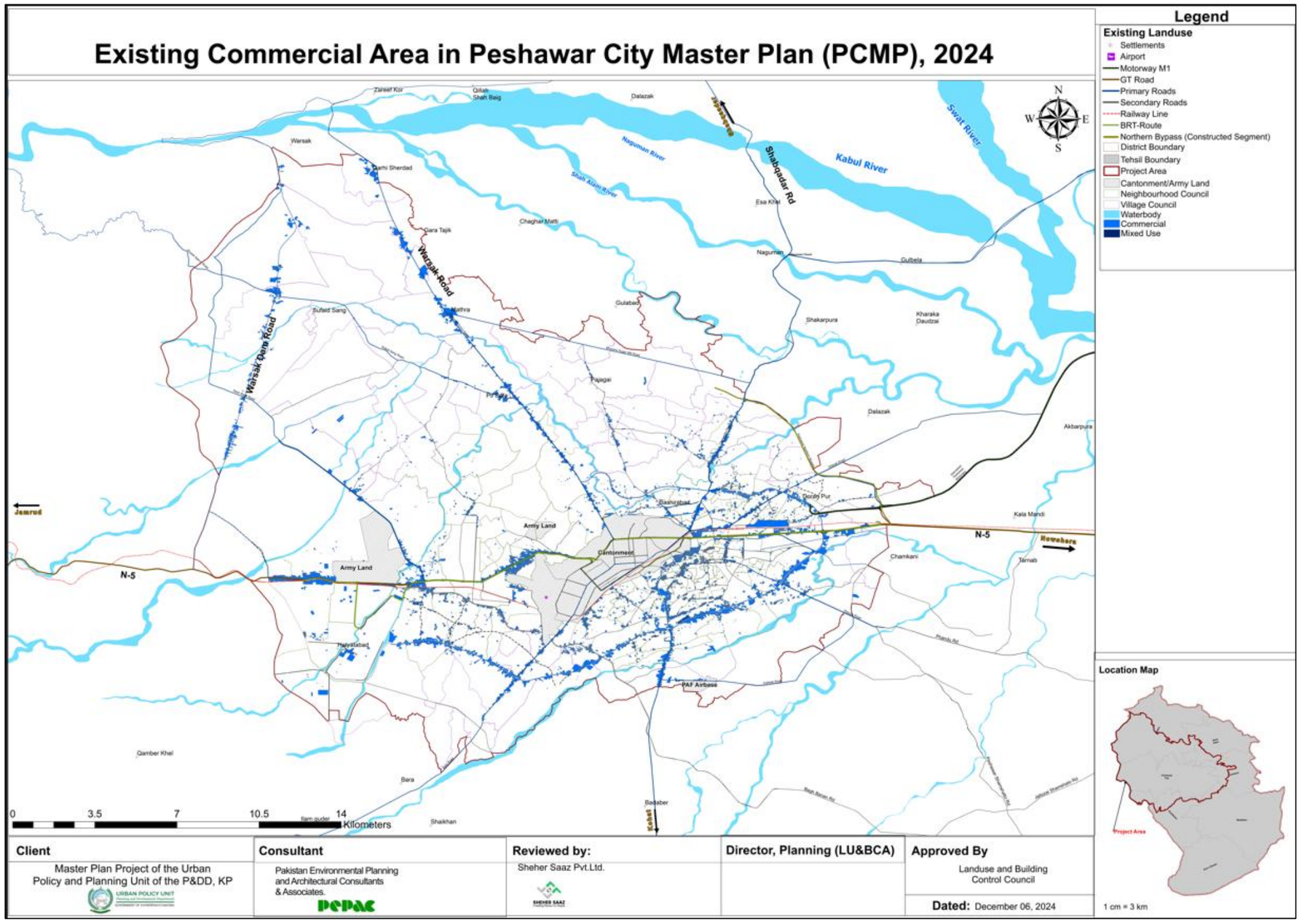
Peshawar's commercial and trade hubs are vital to its metropolitan economy, supporting a diverse range of business activities. Major commercial activities are concentrated along key corridors such as Ring Road, GT Road, Kohat Road, Warsak Road, and several secondary roads. In addition to these arterial commercial zones, the city is home to numerous wholesale markets, shopping plazas, and mixed-use commercial units, collectively providing employment to thousands of people.

Some of the major commercial centres within the city include Saddar Bazaar, Board Bazaar, Khyber Bazaar, Meena Bazaar, and Jewellery Bazaar. These vibrant marketplaces not only drive economic activity but also reflect Peshawar's rich cultural heritage and dynamic commercial landscape.

Saddar Bazaar is one of the busiest commercial areas, offering a vast selection of goods, including clothing, electronics, and local handicrafts, making it a popular destination for both locals and visitors. Board Bazaar is known for its affordability and variety, particularly in textiles, garments, and electronics, attracting budget-conscious shoppers and wholesalers.

Khyber Bazaar, with its deep historical roots, showcases Peshawar’s traditional trade by offering antiques, carpets, and authentic local handicrafts, appealing to those interested in the city's cultural past. These marketplaces, along with other commercial hubs, play a crucial role in sustaining the city’s economic vibrancy and providing a livelihood for thousands of people.

Map 13: Existing Commercial Area in Peshawar City Master Plan (PCMP), 2024



5.2 Land Suitability Analysis (LSA) Criteria for Commercial Land use

For commercial land use, different parameters were applied to identify suitable land parcels. The proposals were made on the selected land parcels, considering the planning techniques, standards, local requirements, ground realities, and natural trend. The applied parameters included primary roads, secondary roads, existing commercial bazar, and land cover. The detailed maps generated as a result of LSA for commercial land uses are attached in Volume II.

5.3 Future Requirement

According to NRM standards, the existing commercial area adequately serves the current city population. However, as a capital metropolitan city, Peshawar hosts major growth drivers, including the Civil Secretariat for the entire province, key health and education institutions, and a major hub for Afghan refugees and internally displaced people. Additionally, its strategic location as a gateway to Afghanistan and Central Asian countries further amplifies the need for expanded commercial space to support future growth. Taking into account the above factors and projected population for the next 20 years, the required commercial area has been estimated to use an alternative NRM standard, which designates 1 acre per 1,000 people. Based on this standard, the future commercial space required for the anticipated population growth is calculated as follows:

Table 24: Commercial Area Requirement as per General Standard – Peshawar Study Area		
Total Incremental Population	2024-2044	2,296,776
Standard	*1 Acre for 1,000 People*	
Area Requirement for Commercial by 2044	(Acres)	2,297
	(km^2)	9.27

Source: Calculated by Consultant

The above table depicts that the area requirement for commercial land use is approximately 9.27 km^2 as per the general standard given in NRM.

5.4 Proposed Commercial Zones

The proposed areas for the master plan are shown in the table below:

Table 25: Proposed Commercial Zones for Master Plan		
Sr. No.	Proposed Zones	Proposed Areas Acres
1.	Proposed Commercial Zones (PLUP)	2,195.9
2.	Mixed Use Commercial Development	1,880.09
3.	High-Density Mixed-Use Zone (Ground Floor Commercial)	1,050.31
Total		**5,126.73**

Source: Developed by Consultant

The proposed Commercial Zones (PLUP) and mixed-use commercial development is shown in the map-15 below. The mixed-use commercial development in Peshawar (part of linear

commercial along the roads) is also categorized into three distinct types of roads (given in the Table below), each with specific regulations governing building setbacks and heights to ensure orderly urban growth and efficient land use while rest of mixed-use commercial areas (commercial-cum residential/institutional/apartments/offices) shall be dealt as per prevailing rules. This table outlines the building setback and height regulations for different types of roads in a city. It categorizes roads into three types (A, B, and C) and specifies the mandatory and optional setback distances along with the corresponding allowable building heights.

Table 26: Commercial Regularizations for major road in Peshawar city master plan

S.No	Types	Name of Road	Setback and Height building	Commercial Buffer	TOD Buffer
1	Type A	Ring road	Setback=50 feet (Mandatory) Height of building = 100 ft OR The setback=60 ft (Optional) Height of building = 160 feet	Approx. 250 Feet	----
2	**Type-B**	Major Arterial Roads (GT road, Kohat road, Warsak road, Nasir Bagh Road)	Setback=25 feet (Mandatory) Height of building=80 feet OR The setback = 30 feet (Optional) Height of building = 120 feet	Approx. 250 Feet	Approx. 650 Feet (except Nasir Bagh Road)
3	**Type-C**	All canals, patrolling, and other roads,	(ROW + Setback) *1.5		

Source: Developed by the consultant

1 Type A Roads (e.g., Ring Road)

- Commercial Development Buffer:250 feet on both sides
- Mandatory Setback: 50 feet
- Maximum Building Height: 100 feet

- Incentive for Increased Setback: If the setback is increased to 60 feet (optional), the building height can be extended to 160 feet.
- Objective: Encourages greater setbacks to promote vertical development while maintaining urban aesthetics and smooth traffic flow.

2 Type B Roads (e.g., GT Road, Kohat Road, Warsak Road, Nasir Bagh Road)

- Commercial Development Buffer: 250 feet on both sides
- Mandatory Setback: 25 feet
- Maximum Building Height: 80 feet
- Incentive for Increased Setback: If the setback is increased to 30 feet (optional), the building height can go up to 120 feet.
- Objective: Ensures a balance between urban density and road functionality by maintaining clear sightlines and preventing congestion along these major corridors.

3 Type C Roads (e.g., Canal Patrolling Roads and Other Roads)

- Building Height Formula: (Right of Way (ROW) + Setback) * 1.5
- Objective: Links permissible building height directly to ROW and setback, ensuring proportional vertical development. This regulation accommodates the unique characteristics of canal-side roads, maintaining a balance between commercial activity, environmental considerations, and spatial planning.

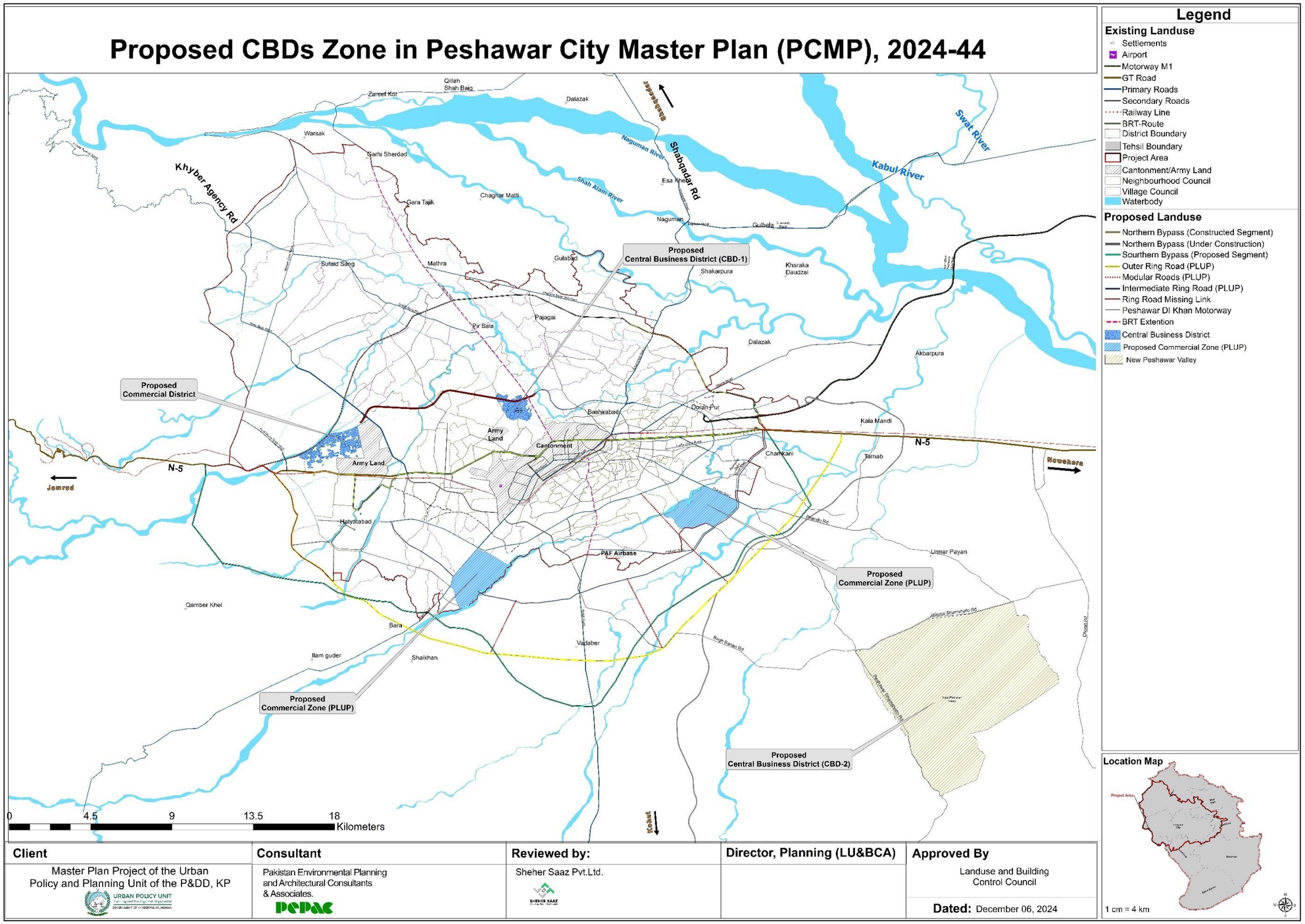
5.5 Central Business Districts

The Peshawar Master Plan 2044 envisions the development of Central Business Districts (CBDs) covering a total of 847 acres, strategically divided into three key zones (Refer to Map-14).

- Zone 1 Commercial District (CD) spans 499 acres in the Kharkhano Market-Jamrud Road area. This district is exclusively designated for warehousing, logistics, and related storage activities. To preserve its intended purpose, retail businesses, office spaces, and other commercial operations will not be allowed within this zone.
- Zone 2, situated next to the Ring Road Missing Link along Warsak Road, encompasses a proposed 348-acre Central Business District (CBD) designed to serve as the city's economic and commercial hub. Strategically positioned with access to major roads and public transportation, the CBD will include high-density commercial, financial, retail, hospitality, and mixed-use developments.
- CBD-3, furthermore, the CBD proposed in the New Peshawar Valley has been considered into the PCMP (Refer to Map 14 below). This area is designated for

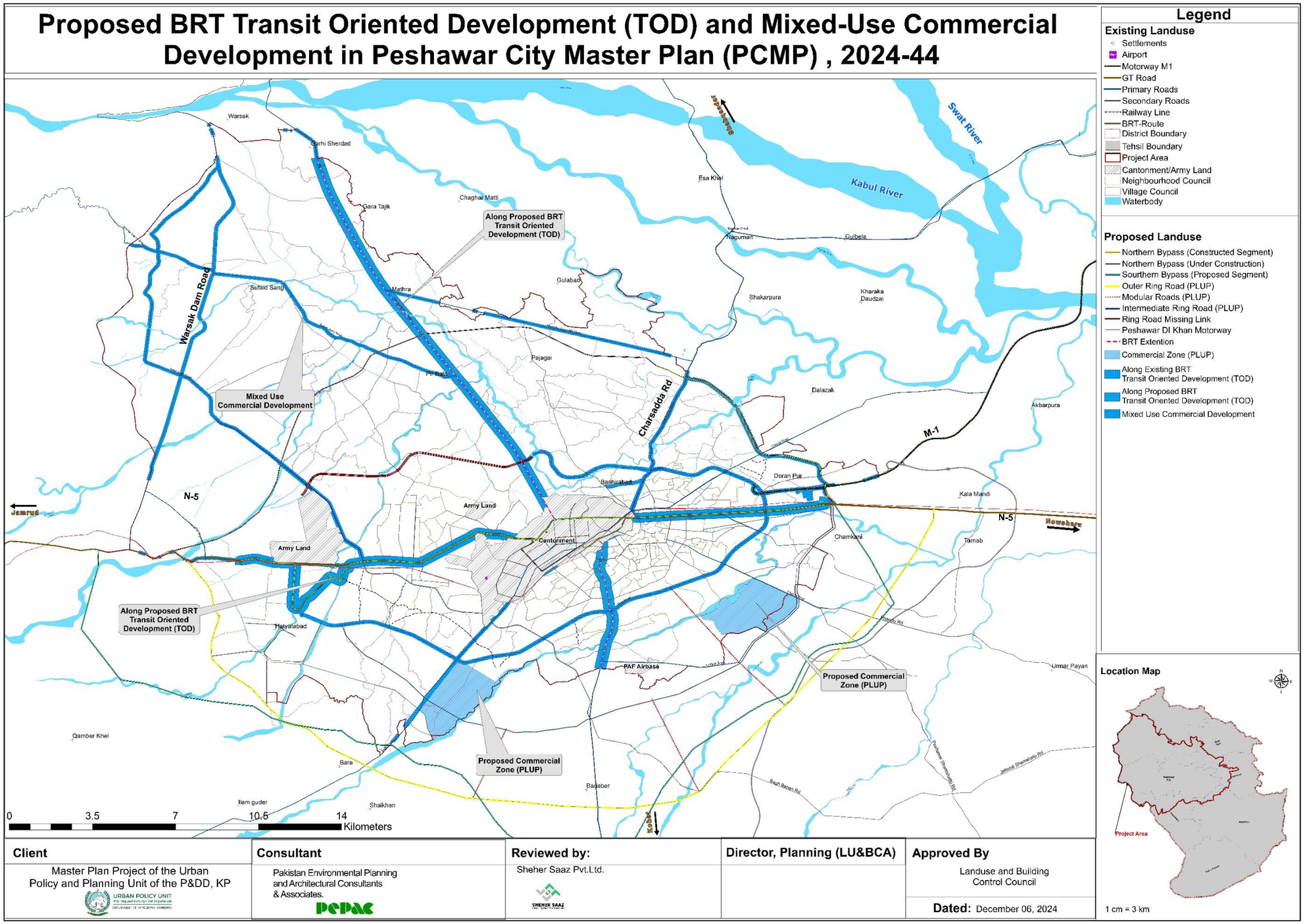
provincial secretariat, civic and institutional facilities, including government and administrative offices, major specialized hospitals, and educational institutions such as IT universities, technical colleges, and research centers. Cultural facilities like museums, galleries, theaters, and large gender-inclusive public parks are also recommended. Additionally, libraries, archives, green spaces, and public plazas are integral to this zone, fostering a vibrant and well-connected urban hub in Peshawar.

Map 14: Proposed CBD in PCMP 2024-2044



Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP URBAN POLICY UNIT	Pakistan Environmental Planning and Architectural Consultants & Associates. PEPAC	Sheher Saaz Pvt.Ltd.		Landuse and Building Control Council **Dated:** December 06, 2024

Map 15: Proposed BRT Transit Oriented Development and Mixed-Use Commercial Development in Peshawar City Master Plan (PCMP), 2024-44



5.5.1. Zoning Regulations for Commercial Zones

Table 27: Zoning Regulations for Commercial landuse - Peshawar

Land use Zone	Permitted Land Uses	Permissible Land Uses (Permitted on Appeal) *	Prohibited Land Uses**
Commercial/Mixed Use commercial Areas	• Shopping plazas, • Shops, guest houses, hotels, hostels, residential cum commercial apartments and commercial centers, • Educational and research institutions (Colleges and Universities) and offices • Recreational places, • Parks and open spaces, • Public and religious buildings • Petrol, CNG filling stations, and LPG filling stations (in mixed use commercial) • Hospitals, Clinic or polyclinic • Courier Service and Logistics offices	• Seasonal Commercial fare site • Vehicles Showrooms • Clubs • Service industries and firefighting arrangements governed by the building and space regulations • Small scale manufacturing units subject to environmental clearance	• All uses which are not in permitted and permissible uses shall be dealt as prohibited

Source: Developed by Consultant

**The District Land Use Planning and Management Committee shall decide on case to case basis regarding planning permission of the land uses*

***The matter shall be dealt as per section 18 & 19 of the Land Use and Building Control Act, 2021*

5.6 Industrial Sector

Pakistan's industrial sector, contributing 28.11% to the GDP in FY21, includes manufacturing (12.52%), mining (2.18%), construction (2.05%), and electricity & gas (1.36%). Textile industries dominate, with textiles contributing $15.4 billion to exports, making up 56% of total exports.

In Khyber Pakhtunkhwa (KPK), the industrial sector, including manufacturing and mining, accounted for 13.6% of the Gross Domestic Product (GDP) in the fiscal year 2023-24. The Development Statistics of Khyber Pakhtunkhwa 2021 highlights a consistent rise in industrial activity within the Peshawar District. In 2019-2020, the district had 977 registered industrial units, with 907 in operation. This marks an increase from previous years, with 773 registered units (965 operational) in 2018-2019 and 751 registered units (679 operational) in 2017-2018.

Despite this expansion, economic disparities remain across the region. According to the Social Development in Pakistan Annual Review Report 2014-2015 by the Social Policy and Development Centre Pakistan, Peshawar's estimated monthly per capita income in 2015 was Rs55,246—significantly lower than major urban centers like Islamabad (Rs117,924) and Karachi (Rs66,359). Urban residents in Khyber Pakhtunkhwa, on average, earn 20% less than the national urban average, contributing to higher levels of urban poverty.

In Peshawar, the industrial sector is categorized into two types: planned zones and sporadic industrial units. The industrial landscape within the study area covers 1,097.9 acres, making up 1.12% of the total land use. The Peshawar Economic Zone, spanning 994.56 acres, plays a crucial role in driving industrial activity. Additionally, the Pak-Afghan Economic Zone, covering 534.69 acres, is designed to strengthen trade relations with Afghanistan and the wider region. Moreover, the Peshawar Land Use Plan (PLUP) designates an Approved Industrial Zone covering 2,169.30 acres. These zones contribute to industrial expansion, job creation, and economic stability in the region.

5.6.1. LSA Criteria for Industry

The Industrial criteria have been made by using factors of planning development. The important factor is the proximal of land to roads, community facilities, and existing industrial block and land cover. The maps generated through Multi-Criteria Decision Analysis (MCDA) are provided in Volume II.

5.6.2. Zoning Regulation for Industrial Land Use

To promote planned industrial development in Peshawar, the existing and proposed industrial zones will be regulated according to the guidelines outlined in Table-26.

Table 28: Zoning Regulations for Industrial Land Use – Peshawar

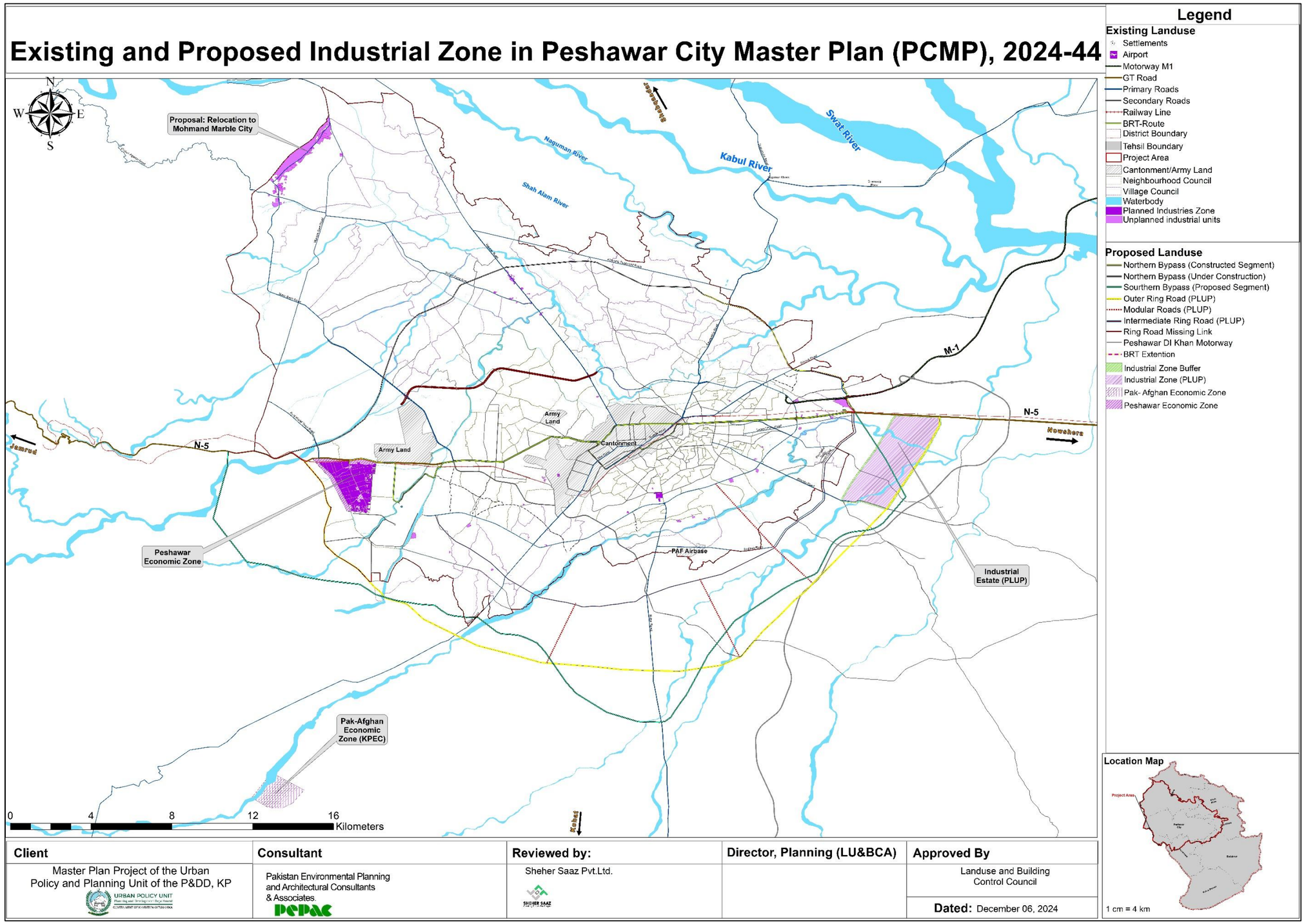
Land use Zone	Permitted Land Uses	Permissible Land Uses (Permitted on Appeal)*	Prohibited Land Uses**
Industrial zone	• Auto-mechanic shops/Yards • Research and Development (R&D) Centers • Small Industrial Units • Warehouses and Storage • Business Incubators and Accelerators • Public Utilities and Buildings Canteens • Agriculture (until the area is required for development) • Approved Parking • Loading and Unloading Provisions • Dwellings for watch and ward staff • All categories permitted in the light-medium industrial zone. • Training and Education Centers • Research and Development (R&D) Centers • Business Incubators and Accelerators • Logistics and Distribution Centers • Warehousing, storage depots and incidental uses. • Approved Parking • Loading and unloading provisions. • Dwellings for labor and watch and ward staff.	• Bus and Truck Terminals • Railway passenger and freight terminals • Petrol and gas filling stations • Taxi stands • Recreational facilities for employees.	• All uses which are not in permitted and permissible uses shall be dealt as prohibited

Source: Developed by Consultant

**The District Land Use Planning and Management Committee shall decide on case to case basis regarding planning permission of the land uses*

***The matter shall be dealt as per section 18 & 19 of the Land Use and Building Control Act, 2021*

Map 16: Proposal Industrial Zone – Peshawar Study Area



Source: Developed by Consultant

Chapter 6: Social Infrastructure

6.1. Health Care Facilities

6.1.1. Existing Background

The health sector in Khyber Pakhtunkhwa (KPK), Pakistan, faces challenges, including poor access to services, underfunded public health systems, and fragmented reform initiatives, despite government efforts to improve healthcare delivery and quality.

Several reforms have taken place in the health sector within the past decade. In 2010, the 18th Constitutional Amendment of Pakistan devolved health administration to the provinces, granting legislative as well executive authorities in the health sector, previously within the purview of the federal government, to the provinces. At the time of devolution, Khyber Pakhtunkhwa already had the HSS 2010–2017 in place, but the process triggered a series of reforms aimed at addressing the unique challenges faced by the province with regard to strengthening the health system at large.

A key aspect of the devolution process has been electing local governments. The local government in Khyber Pakhtunkhwa has three tiers: district, tehsil, and village. The mother and child health centres, rural health centres (RHCs), basic health units (BHUs), social welfare, population welfare, public health engineering, and public health hospitals have been devolved to the districts. Tertiary and teaching hospitals are devolved to the province. The devolution of financial power that allows the local governments to reallocate their assigned budget to areas of their choosing is among the most critical devolutions of powers to the local government and allows the local governments to deal with endemic and emergent issues within their jurisdiction more flexibly and effectively. The provincial government has been on an ambitious mission to reform the health landscape through various legal and programmatic initiatives. Health policy in Khyber Pakhtunkhwa is informed mostly by the Khyber Pakhtunkhwa HSS 2010–2017 and National Health Vision 2016–2025.

The provincial HSS 2010–2017 was extended until June 2018. Efforts are underway to update the strategy and align operational planning, midterm budgetary framework, and district-level health plans with this strategy.

Furthermore, since 2011, more than 23 ordinances/acts and amendments about health care have been passed in Khyber Pakhtunkhwa. Some of these are novel and introduce new dimensions in terms of quality, access, and service delivery, while others, mostly amendments, seek to update the existing laws.

The most critical of these laws include (i) Khyber Pakhtunkhwa Health Care Commission (HCC) Act, 2015, which aims to regulate the health care in the province through sound technical knowledge; (ii) the Khyber Pakhtunkhwa Public Health (Surveillance and Response) Ordinance, 2017, the goal of which is to implement measures that help prevent and control diseases in the province; and (iii) the Khyber Pakhtunkhwa Medical Teaching. Institutions Reforms Act, 2015, which seeks to provide autonomy to the government-owned medical teaching institutions and their affiliated teaching hospitals to improve their performance in and

responsiveness to the provision of quality health care services (see Chapter 2 for a detailed description of these key health sector policies and reforms).

In addition, the Government of Khyber Pakhtunkhwa launched a provincial social health protection initiative (SHPI) called the Sehat Sahulat Program in December 2015. The current reach of the program stands at 51% of the Khyber Pakhtunkhwa population and is being scaled up to 69%. The present benefit package provides 100% coverage for maternity care and cancer in the outpatient department (OPD), as well as all illnesses requiring hospitalization in secondary care hospitals and limited tertiary cover.

The Khyber Pakhtunkhwa Health Roadmap, which was launched in 2016, is an initiative that seeks to carry out targeted interventions in critical domains within the health sector. As new initiatives are being launched, such as the management and operation of health facilities through public–private partnerships (PPPs), a contract management unit has been established to ensure efficient allocation of resources and effective collaboration between public and private entities. A health sector reforms unit was founded in 2014 to ensure that planned reforms are based on sound technical knowledge and to coordinate those reforms that have been undertaken. The health sector reforms unit is responsible for coming up with locally relevant solutions to the challenges faced by the province.

Furthermore, human resources for health (HRH) have been expanded through better incentives for medical staff. Overall, 3,000 new medical officers and other staff have been hired. Multiple health facilities at all levels are being renovated. The district health information system (DHIS) has been strengthened, and its quarterly reports are more regularly utilized to inform evidence-based decision-making as the reports provide disease patterns at health facilities and service utilization trends, among other information.

6.1.2. Health Facilities in District Peshawar

Peshawar District hosts a diverse range of healthcare facilities that cater to the needs of its urban and peri-urban population. The district is served by three Medical Teaching Institutions (MTIs), which function as tertiary care hospitals and also serve as key centers for medical education and specialized treatment. In addition, there is one Category-B hospital and four Category-C hospitals providing secondary healthcare services to the population. Furthermore, the district includes three Rural Health Centres (RHCs) that play a vital role in delivering primary healthcare services to residents of rural and suburban areas. These facilities form the backbone of the public healthcare delivery system in the district, supporting both preventive and curative services. The details are given in the table below:

Table 29: List of Health Facilities in Peshawar District

S.NO	Category A MTIs	Category B	Category C	Category D	RHCs
1	3	1	4	5	3
CATEGORY-A (MTIs)					
S.NO	Name of Health Facilities				
1	Khyber Teaching Hospital				
2	Govt Lady reading Hospital Peshawar				
3	Hayatabad Medical Complex				

CATEGORY-B	
City Hospital Kohat Road Peshawar	
CATEGORY C	
S.No	Name of Health Facilities
1.	Sifat Ghayour Hospital Peshawar
2.	Police and Services Hospital Peshawar
3.	Molvi Je Hospital Peshawar
4.	Emergency Satellite Centre Nahaqi Peshawar
CATEGORY D	
S.NO	Name of Health Facilities
1	Civil Hospital Mathani
2	Govt Maternity Hospital Peshawar
3	Cat-D hospital Badhabher
4	Govt Sarhad Hospital for Psychiatric Diseases
5	Cat-D Hospital Gara Tajik
RHCs	
S.No	Name of Health Facilities
1	RHC Takht Abad
2	RHC Regi
3	RHC Puthwar

Source: Health Department, Government of Khyber Pakhtunkhwa 2017

Within the Peshawar City Master Plan project area, there are 14 Basic Health Units, 14 civil dispensaries, 4 Mother and Child Healthcare centers, 1 Civil Military Hospital, and 6 public hospitals, including the Institute of Radiotherapy and Nuclear Medicine, Lady Reading Hospital, Khyber Teaching Hospital, Peshawar Institute of Cardiology, Hayatabad Medical Complex, and Naseer Ullah Babar Memorial Hospital.

These facilities collectively provide 5,477 beds, serving a population of 2,868,714 as of 2017. The availability of beds in all public hospitals is detailed in the following table.

Table 30: Number of Beds in Public Hospitals – Peshawar Study Area

Sr. No.	Hospital Name	No. of Beds
1	Institute Of Radiotherapy and Nuclear Medicine	75
2	Lady Reading Hospital	1,797
3	Khyber Teaching Hospital	1,800
4	Peshawar Institute of Cardiology	295
5	Hayat Abad Medical Complex	1,280
6	Naseer Ullah Babar Memorial Hospital	230
Total		5,477

Source: Secondary Data Collected from Different Sources

In addition to public sector facilities, Peshawar has a large and growing network of private healthcare providers. These include private hospitals, clinics, diagnostic laboratories, and

specialist centers offering a wide range of medical services. The private health sector plays a crucial complementary role in meeting the increasing healthcare demands of the city's population, particularly in terms of accessibility, specialized treatments, and reducing the burden on public hospitals. The major hospitals in the private sector are:

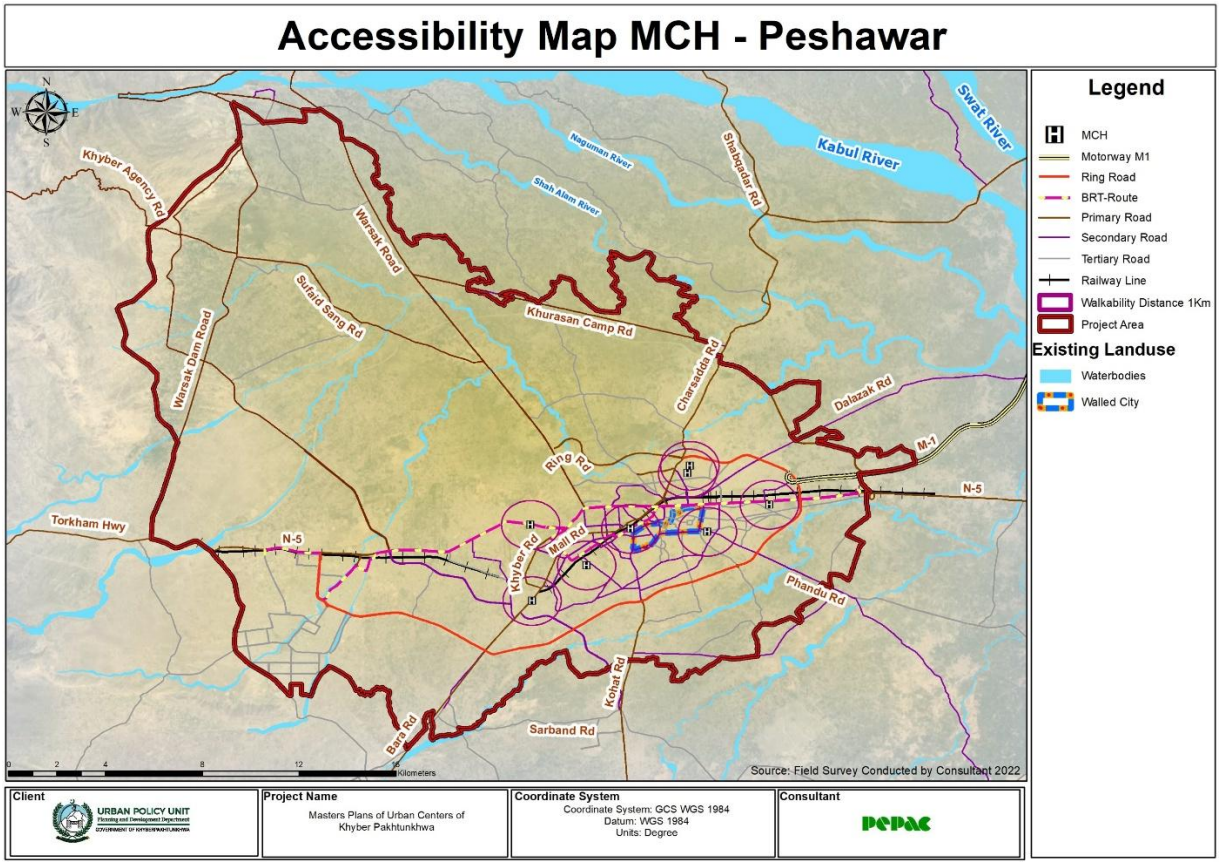
- Rahman Medical Center located in Phase-V, Hayatabad, Peshawar
- North West Medical Institute, located in Hayatabad, Peshawar
- Sarhad Medical University and Hospital
- Prime Institute of Medical Sciences
- Mercy Medical College and Hospital
- Naseer Teaching Hospital

The details of the private health facilities are attached in Annex-A.

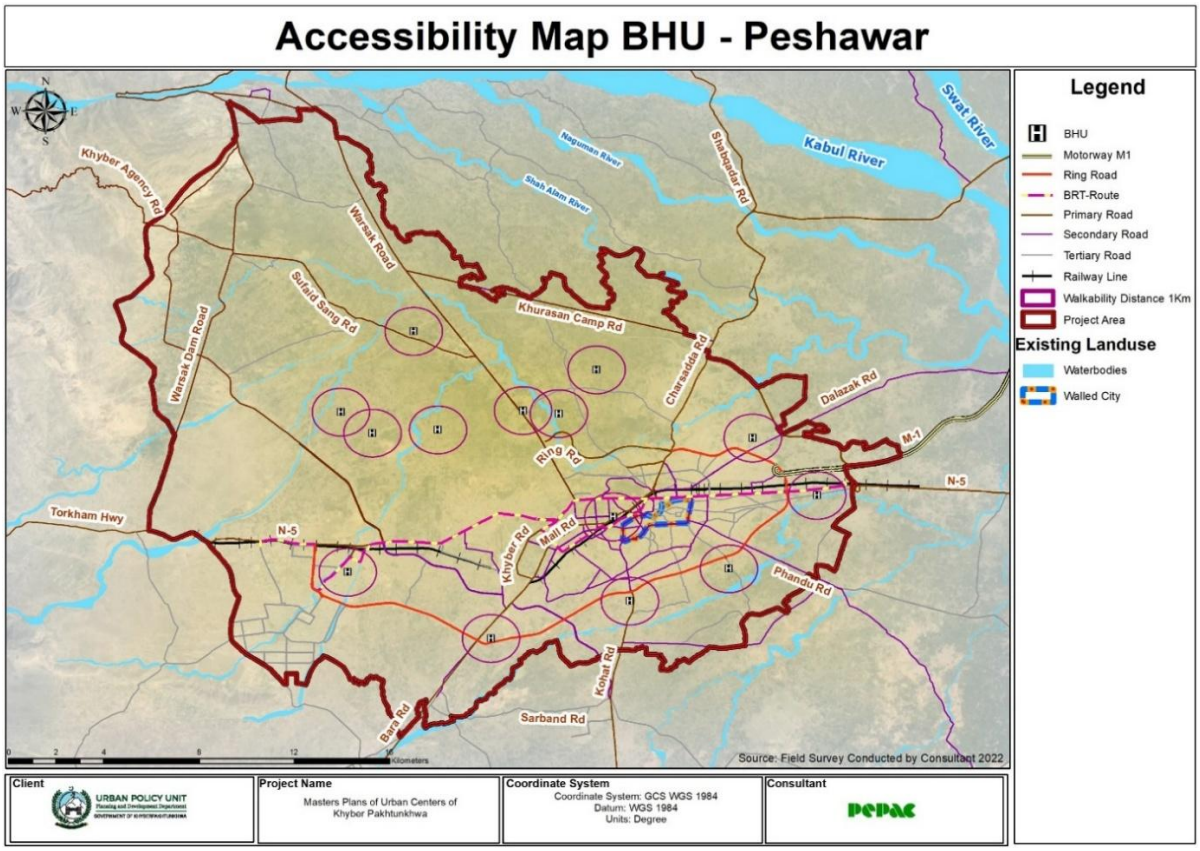
6.1.2.1. Accessibility of Health Facilities

Accessibility to any particular place can be determined in two ways, i.e., walkability distance and driving distance. In terms of walkability distance, the standard is 600m to 1km distance which is assumed that a person can travel without any problem. In regard to driving distance, there is no set standard; however, keeping in consideration the existing traffic situation and assuming that using the driving speed is 40km/h, in 10 minutes, the distance of approximately 6km can be covered. Two buffers have been drawn: one is of 1km for walkability, and the other is on 5km, which is driving distance to understand the proximity and accessibility of the public health facilities. The walkable distance shows that many areas cannot access public health facilities; however, if driving distance is used, almost the entire study area can access the available public health facilities. This does not change the fact that with respect to the population, the number of schools is quite low, and more are required in the next twenty years. The following maps show the accessibility of public health facilities with respect to walkability and driving.

Map 17: Accessibility Map of MCH in Urban Peshawar



Map 18: Accessibility Map of BHU in Urban Peshawar



Source: Primary Data Collected from Field Survey

6.1.3. Required Facilities

As a Basic Health Unit serves up to 25,000 people, the city should have at least 105 of these facilities to accommodate such a population. In Peshawar, there ought to be at least 175 dispensaries to achieve the minimum standards mentioned in NRM. According to WHO regulations, there should be a minimum of 3 hospital beds for every 1000 people.

Table 31: Existing number of health facilities and beds as compared to requirements and standards

Category	Existing	Minimum Requirement	Current Gap	Standard
Basic Health Unit (BHU)	14	105	88	1 BHU for 25000 people
Maternal Children Health Centre (MCH)	4	35	31	1 for 75000 people
CMH	1	N/A	N/A	N/A
Dispensary	14	175	156	1 for 15000 people
Public Hospitals	6	5	No Gap	Criteria of THQ (1 hospital for 0.5 to 1 million)
Private Clinics	345	-	-	-
Beds in all of the health facilities	5,477	7,858	2168	3 per 1000 people

Source: Developed by Consultant

6.1.4. Gap Analysis of Healthcare Facilities in Peshawar

Future healthcare requirements for the city of Peshawar were calculated using population requirement criteria from the National Reference Manual. According to the specifications, there should be a civic dispensary for every 15,000 people and a Basic Health Unit for every 25,000 people. Based on these principles, the table below provides future specifications for healthcare facilities.

Table 32: Gap Analysis for Healthcare Facilities

Year	Population	BHU	RHC	Dispensary	DHQ	THQ	Beds
2017	2,868,714	115	38	13	1	6	8,606
2024	3,607,195	21	7	35	0	1	1,560
2029	4,141,687	22	7	37	0	1	1,675
2034	4,691,245	24	8	40	0	1	1,813
2039	5,272,174	26	9	44	0	1	1,979
2044	5,903,971	29	10	48	0	1	2,178

Source: Devised by the consultant

6.1.5. Area Requirements for Healthcare facilities

Some of the Peshawar BHUs are 0.3 acres, 0.2 acres, 0.4 acres and 0.7 acres in size. The National Reference Manual states that a BHU should be between 0.2 and 0.6 acres in size. Therefore, the sizes of BHUs are according to the standards of NRM. The size of MCHs of

Peshawar is 0.34 acres, 0.64 acres and 1.3 acres. The sizes of MCHs do not adhere to the guidelines of NRM

Table 33: Number of Health care facilities Required with Area (2024-2044)						
Sr. No	Health Institute Type	Standard for Area Required by Each (acre)		Required number of Facilities	Area Requirement by 2044 Acres	
		Minimum	Maximum		Minimum	Maximum
1	**CD**	0.02	0.05	156	3	8
2	**BHU**	0.3	0.6	88	26	53
3	**MCH**	2.47	2.47	30	74	74
4	**DHQ**	12.3	19.74	0	0	0
5	**THQ**	4.94	4.94	0	0	0
Total				**274**	**104**	**135**

Source: Devised by the consultant

6.1.6. Proposed Healthcare Zones

To fulfil the gap in healthcare facilities in Peshawar, a total of 89.74 acres of area has been proposed at the neighbourhood level. The proposed allocation of area for neighbourhood-level healthcare facilities in Peshawar is a strategic response to the gaps identified through an accessibility analysis and population needs assessment. These healthcare facilities are targeted at underserved Neighbourhood Councils (NCs) and Village Councils (VCs), where access to basic health services is limited or absent.

Table 34: Proposed Zone for Health Care Facilities – 2044		
Area of Existing Health-care Facilities 2024 (acres)	Proposed Area for Health Care Facilities (acres)	Total Area (acres)
308.88	89.74	398.62

Source: Developed by Consultant

6.1.7. Zoning Regulation for Health Care Zone

Table 35: Zoning Regulations for Health care Zone - Peshawar			
Land use Zone	Permitted Land Uses	Permissible Land Uses (Permitted on Appeal)*	Prohibited Land Uses**
Health	• Hospitals • Burn Units • Basic Health Units • Teaching Hospital • Medical Research Centres • Staff Residencies • Community facilities • Parking lots • Urban Forest • Religious Place • Veterinary Hospital • Clinical Laboratory • Day care centre or Pre schools • Support facilities (bus stops, parking lots, civil	• Playlands & Amusement Parks • Hostels • Hotels & Restaurants • Banks • Gymnasiums & Clubs • Cinema • Petrol Pumps • Banks	All uses which are not in permitted and permissible uses shall be dealt as prohibited

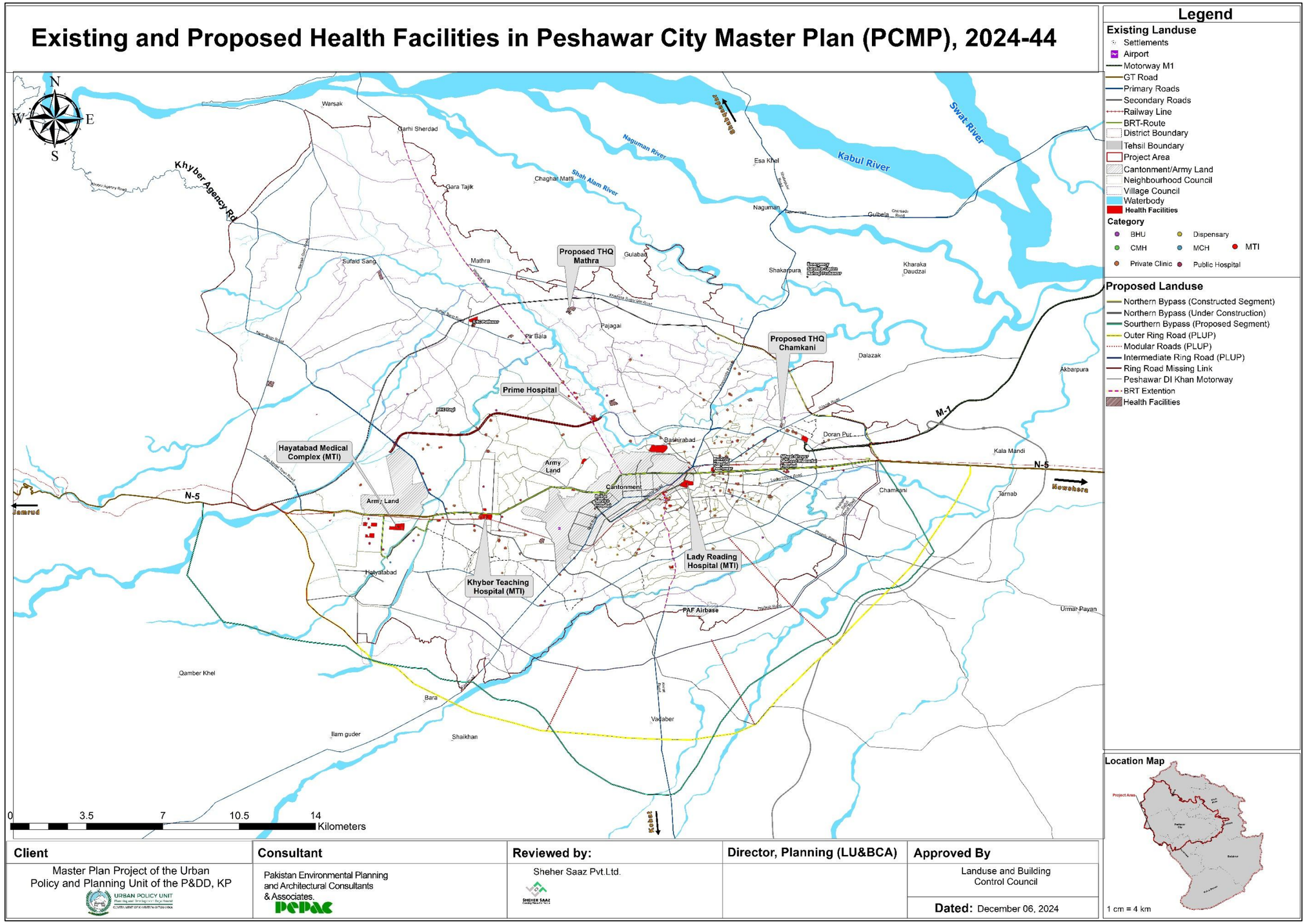
Table 35: Zoning Regulations for Health care Zone - Peshawar			
Land use Zone	**Permitted Land Uses**	**Permissible Land Uses (Permitted on Appeal)***	**Prohibited Land Uses****
	dispensaries and small green open spaces)		

Source: Developed by Consultant

**The District Land Use Planning and Management Committee shall decide on case to case basis regarding planning permission of the land uses*

***The matter shall be dealt as per section 18 & 19 of the Land Use and Building Control Act, 2021*

Map 19: Proposed Healthcare Zones – Peshawar Study Area



Source: Developed by Consultant

6.2. Educational Facilities

6.2.1. Existing Background

Education drives social transformation by providing knowledge and opportunities for a better future. In Pakistan, education awareness is vital for development and prosperity. Quality education depends on facilities and infrastructure, which enhance learning effectiveness.

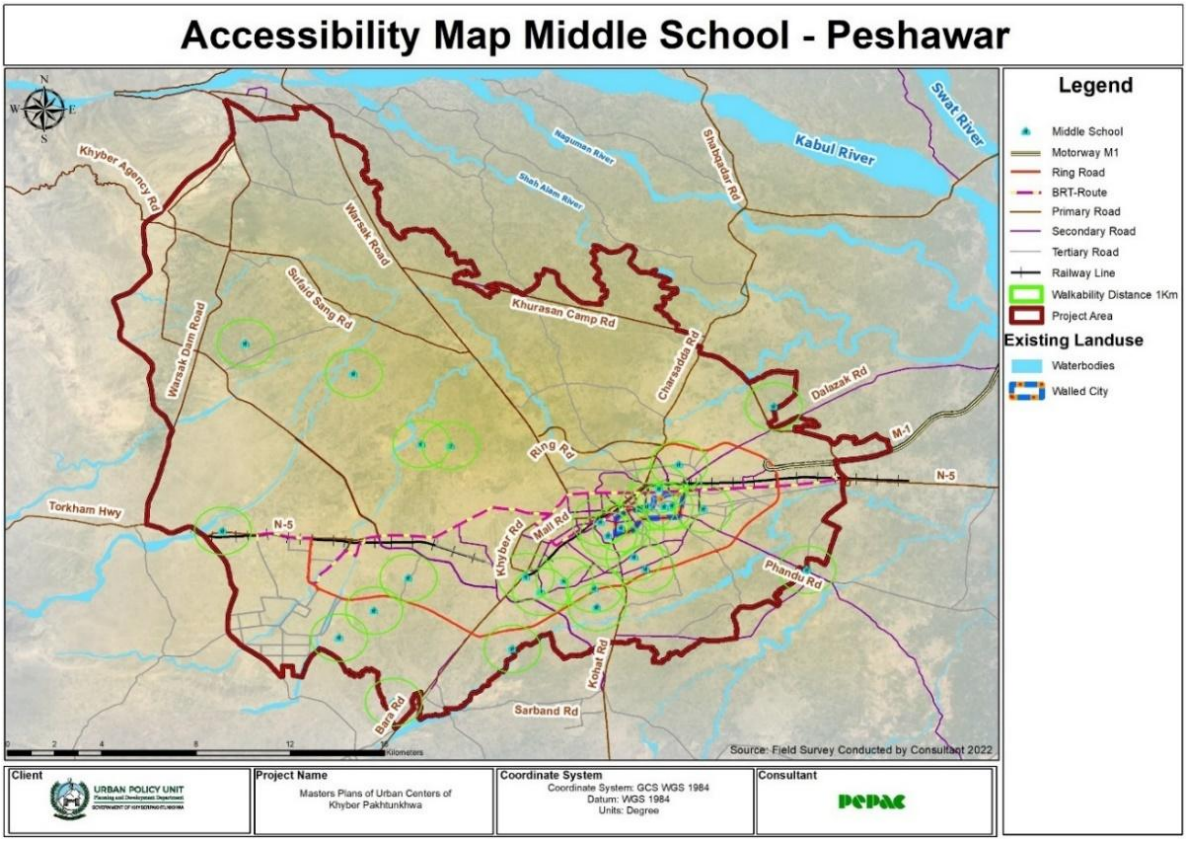
Peshawar, the province's largest urban center, has a vast network of public and private educational institutions. Due to population growth, the government alone cannot provide free education, making private schools essential. Recent reforms, including teacher recruitment, reopening of schools, and improved policies, have increased enrolment. While private schools remain preferred, enhancements in public education are attracting students back to government institutions.

Currently, in the project area, there are a range of educational institutes, both in the public and private sectors. The details of public, private, and elementary and higher education institutes are attached in Annexure-B. The map-22 below shows the existing and proposed education facilities in PCMP.

6.2.2. Accessibility Analysis

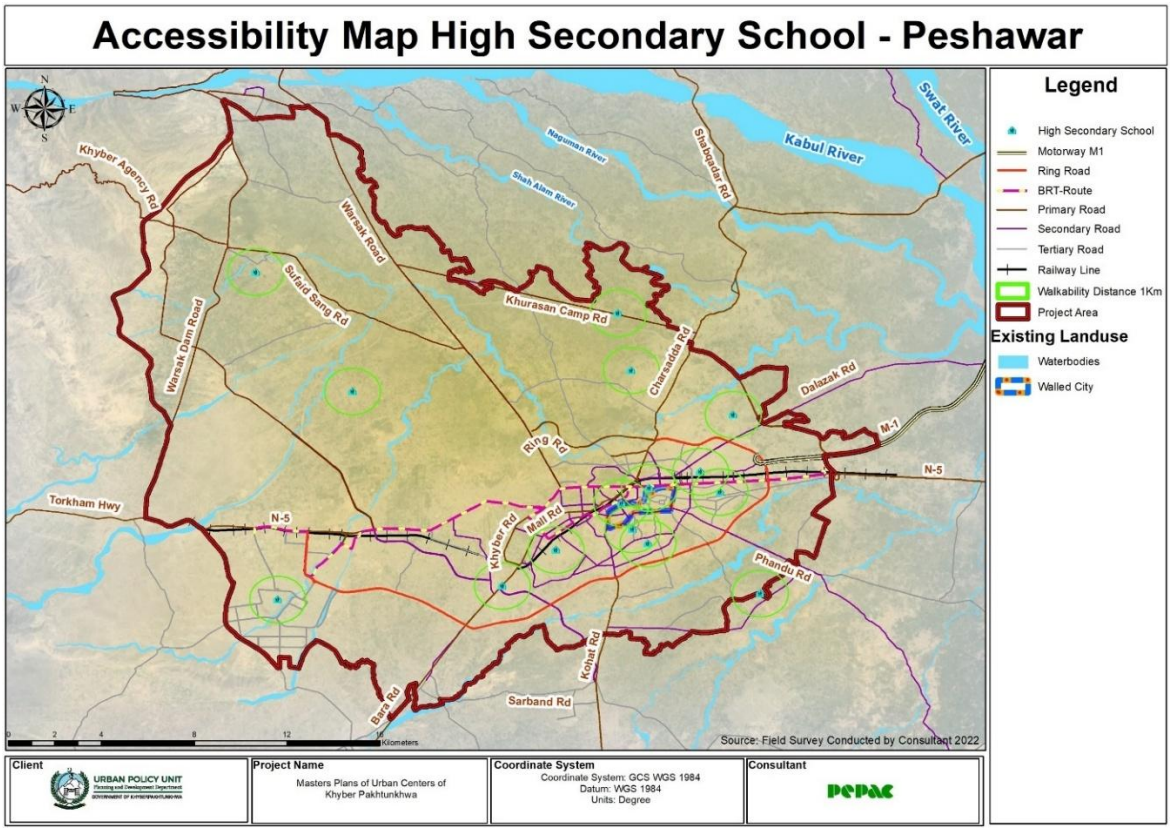
In terms of walkability distance, the standard is 600m to 1km distance which is assumed that a person can travel without any problem. In regard to driving distance, there is no set standard; however, keeping in consideration the existing traffic situation and assuming that using the driving speed is 40km/h, in 10 minutes, the distance of approximately 6km can be covered. Two buffers have been drawn, one is of 1km for walkability distance to understand the proximity and accessibility of the public educational institutes. The following maps show the accessibility of public educational institutions with respect to walkability and driving.

Map 20: Accessibility Map of Middle Schools in Urban Peshawar



Source: Primary Data Collected from Field Survey

Map 21: Accessibility Map of High Schools in Urban Peshawar



Source: Primary Data Collected from Field Survey

6.2.3. Gap Analysis of Education in Peshawar

There are 558 primary schools, 81 middle schools, 74 high schools, 33 higher secondary schools and 23 public colleges in the study area. These are all government institutions. Apart from these, there are a total of 17 public and private universities in Peshawar. According to the NRM standards, a primary school is required for a population of 7500. A middle school is required for a population of 17000 and a high school is required for a population of 74000. For a college, a population of 170,000-400,000 is required. These are the minimum requirements mentioned in the National Reference Manual. However, since Peshawar is a metropolitan city, there are numerous private schools and colleges available at walking and driving distance. Therefore, the standard has been modified, keeping in view the presence of private facilities. For a public primary school, the standard has been modified to the equivalent of four times the population, i.e., 30,000, while the remaining standards have been modified to the equivalent of double population, i.e., 34,000 and 150,000.

Table 36: Gap Analysis of Educational Facilities

Type of Educational Facility	Number of Existing Facilities	Increase in population by 2044	Minimum Requirement 2024-2044	Current Gap	NRM Standard
Primary School	558	2,548,344	340	-218	1 for 7500
Middle School	81	2,548,344	150	69	1 for 17000
High School	74	2,548,344	34	-33	1 for 74000
Higher Secondary School	33	2,548,344	15	-18	1 for 170,000 - 400,000
University (Public/Private)	17	2,548,344		No Gap	

Source: Devised by the consultant

6.2.4. Proposed Educational Zones

A total of 110.68 acres has been designated for future educational facilities, ensuring accessibility at the neighbourhood level. The proposal emphasizes vertical development, reducing ground coverage while increasing building heights to optimize urban space.

In NCs, existing schools will be upgraded into multi-story buildings, maximizing space, improving learning environments, and integrating sustainable design. In VCs, revitalization focuses on upgrading outdated facilities, incorporating technology, and enhancing accessibility.

Table 37: Proposed Area for Educational Zones - 2044

Area of Existing Education Facilities 2024 (Acres)	Proposed Area (acres)	Total Area till 2044 (acres)
1551.82	110.68	1662.5

Source: Developed by Consultant

6.2.5. Zoning Regulation for Educational Zone

Table 38: Zoning Regulations for Educational Zone - Peshawar

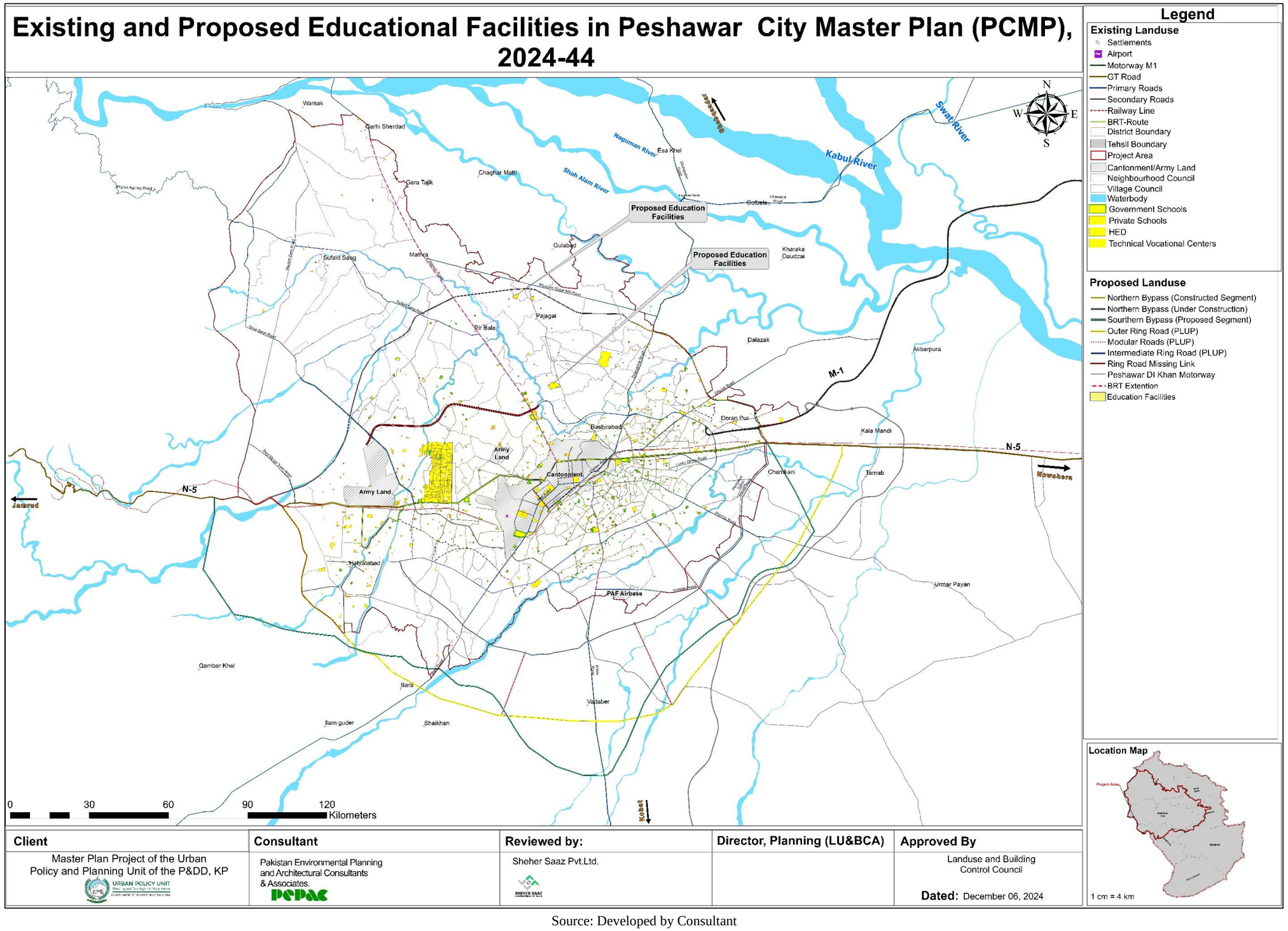
Land use Zone	Permitted Land Uses	Permissible Land Uses (Permitted on Appeal)*	Prohibited Land Uses**
Educational Zone	• Schools, Colleges & Other Educational Institutions • Universities • Research Centers • Incubation Centers • Offices of Social and Cultural Organizations • Religious Institutions • Parks, Memorials and Monuments • Library • Language Centers • Parks • Public Utilities and Buildings • Community Facilities, Arts Councils and Auditoriums • Government Offices • Taxi Stands, Bus Halts • Approved Parking Provisions	• Hotels Offices of Commercial Institutions • Hostels • Restaurants and Clubs • Commercial Recreational uses like theatre halls and cinemas • Petrol and gas filling Station • Limited Retail Shopping	All uses which are not in permitted and permissible uses shall be dealt as prohibited

Source: Developed by Consultant

**The District Land Use Planning and Management Committee shall decide on case to case basis regarding planning permission of the land uses*

***The matter shall be dealt as per section 18 & 19 of the Land Use and Building Control Act, 2021*

Map 22: Proposed Educational Zones – Peshawar Study Area



Source: Developed by Consultant

Chapter 7: Parks and Recreational Facilities

Recreational and open spaces are vital for sustainable development, offering social, economic, and environmental benefits. Sports facilities like Qayyum Sports Complex, Hashim Khan Sports Complex, and Arbab Niaz Cricket Stadium promote community health and host local and international events. The study area of Peshawar consists of few total recreational facilities as well as parks and playgrounds spreading on an area of 839 acres.

Religious diversity is reflected in mosques, churches, temples, and gurdwaras, enhancing cultural tourism. Museums like Peshawar Museum and Sethi House Museum preserve the city's rich heritage, while libraries serve as knowledge hubs.

- Qayyum Sports Complex
- Hashim Khan Sports Complex
- Hayatabad Sports Complex
- Arbab Niaz Cricket Stadium
- Peshawar Club Ground
- Peshawar Golf Course

7.1.Proposed Recreation/Open Spaces

Recognizing the importance of recreational open spaces in enhancing the quality of life and well-being of residents, the proposed plan aims to significantly increase these areas to a total of 111.86 acres by 2044. This includes the establishment of the neighbourhood-level parks, which is envisioned as recreational havens harmonizing nature and adventure. This zone is proposed to offer a serene escape within a wooded environment complemented by thrilling adventure activities.

In addition, the school grounds have been allowed to be open to the public, which has led to challenges in solid waste management. To address this, two policy options are under consideration: either restricting public access to the school premises or implementing policy-level guidelines that require proper maintenance and cleaning of the grounds.

Table 39: Area Proposed for Recreational/Open Spaces Zones - 2044

Existing Recreational/Open Spaces (acres)	Proposed Recreational/ Open Spaces (acres)	Total Recreational/Open Spaces by 2044 (acres)
839.90	111.86	951.76

Source: Devised by the consultant

7.2.Zoning Regulation for Recreational Zone

Table 40:Zoning Regulations for Recreational Zone - Peshawar

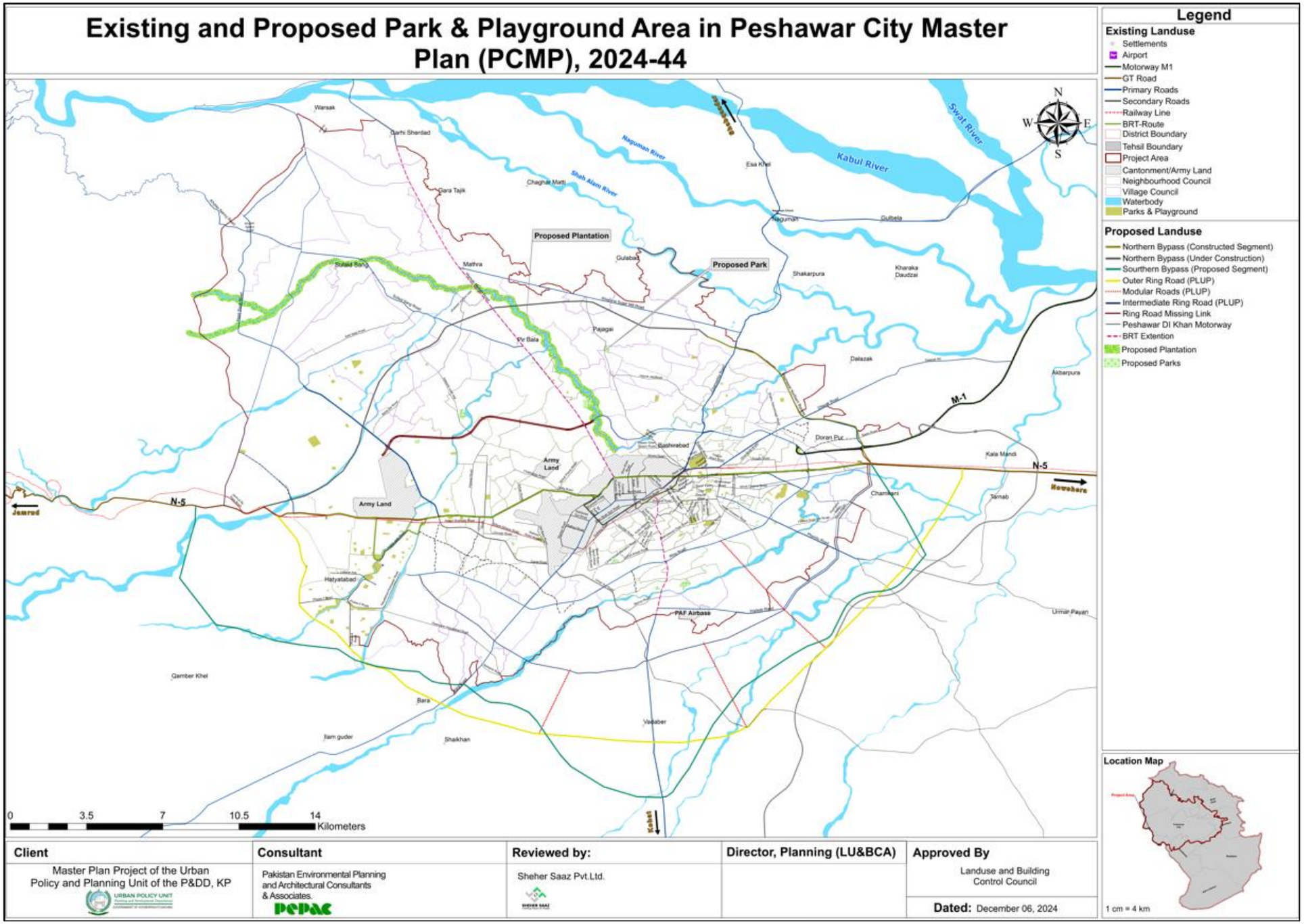
Land use Zone	Permitted Land Uses	Permissible Land Uses (Permitted on Appeal)*	Prohibited Land Uses**
Recreational Areas	• Recreational areas including parks, playgrounds and related uses. • Amusement Parks and Playlands • Youth hostels and clubs • Bus halts and car parking areas. • Dwellings for watch and ward staff. • Urban Forest • Orchard • Plant Nurseries • Botanical Garden • Swimming Pool • Picnic Hut • Shooting Range • Botanical Garden • Public utilities and municipal facilities.	• Restaurants and establishments selling eatables • Incidental recreational uses. • Guest house	All uses which are not in permitted and permissible uses shall be dealt as prohibited

Source: Developed by Consultant

**The District Land Use Planning and Management Committee shall decide on case to case basis regarding planning permission of the land uses*

***The matter shall be dealt as per section 18 & 19 of the Land Use and Building Control Act, 2021*

Map 23: Proposed Recreational Open Spaces - Peshawar Study Area



Source: Developed by Consultant

Chapter 8: Agriculture Proposals

Agriculture is a key driver of Peshawar's economy, contributing to employment, income, and food security. It aligns with Pakistan's broader agricultural significance, making up 24% of GDP and employing nearly half of the workforce. The district produces wheat, maize, sugarcane, barley, fruits, and vegetables, benefiting from fertile soil and favourable climate.

Irrigation is supported by the Kabul and Bara Rivers, along with canals, tube wells, and lift irrigation. Livestock farming, including cattle, goats, poultry, and horses, provides dairy, meat, and labour, complementing crop production.

Challenges such as water management, market access, and food security demand modern irrigation, improved crop varieties, and better market integration. While manufacturing and services contribute to Peshawar's economy, agriculture remains the primary livelihood for rural communities, ensuring its enduring importance.

8.1.Agriculture Proposals

Agriculture is vital to Peshawar's economy and food security, covering 44.65% of the total land (43,787.07 acres). To ensure its sustainability, the Master Plan proposes key initiatives, including a Reserved Agriculture Zone (21,466.5 acres) to protect farmland from urban expansion.

A Proposed Agriculture Research Centre (219.75 acres) will drive innovation, offering farmers advanced techniques and sustainable practices. Additionally, orchard expansion is planned, increasing the current 103.78 acres by 40.23 acres to boost fruit production and farmer incomes. With a total of 21,726.48 acres designated for agriculture, the plan secures Peshawar's farming future through preservation, research, and diversification.

The primary goals for maintaining and enhancing agriculture in Peshawar include improving soil fertility, reducing the use of harmful pesticides and fertilizers, and promoting sustainable farming practices. Key proposals in the Master Plan include:

- Promotion of organic agriculture to reduce environmental impact and improve food quality.
- Encouraging conservation tillage practices and tunnel farming to improve water efficiency and soil health.
- Supporting agroforestry initiatives that integrate trees and shrubs into agricultural landscapes, enhancing biodiversity and providing ecological benefits.
- Investment in research and education through the proposed Agriculture Research Center, which will equip farmers with the knowledge and tools to adopt sustainable practices.
- Provision of incentives and subsidies to farmers, especially in waterlogged and saline areas, to encourage the adoption of water-efficient and drought-resistant crops.
- Community engagement in agriculture, promoting home gardening and community farming to enhance food security at the local level.

Figure 6: Proposed Agricultural Zones

Agriculture

- Existing Area (Acres) = **43,787.07**
- Existing Percentage= **44.65%**
- Reserved Agriculture = **21,466.5 Acres**
- Proposed Agriculture Research Center = **219.75 Acres**

Orchards

- Existing Area (Acres) = **103.78**
- Percentage = **0.11%**
- Proposed Orchards = **40.23** acres

Overall Agriculture

- Total proposed agriculture area (Acres) = **21,726.48 acres**

8.2.Zoning Regulation for Agriculture Land Use

Here are the guidelines developed for agricultural zone development:

Table 41: Zoning Regulations for Agriculture Land Use

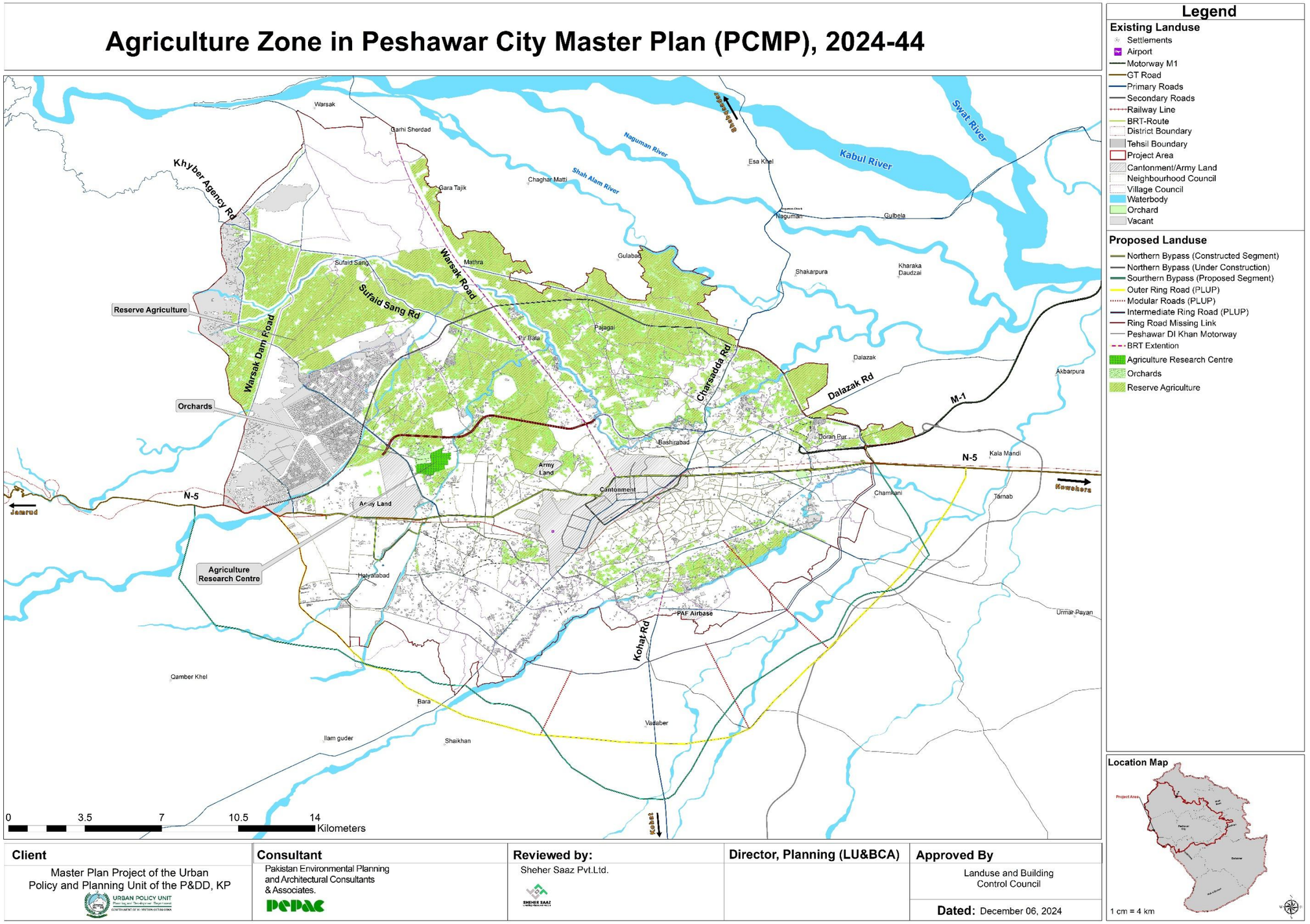
Permitted Uses	Permissible Land Uses (Permitted on Appeal)	Prohibited Land Uses
• Agriculture • Horticulture • Dairy and Poultry Farming • Milk chilling and pasteurization centers • Existing Settlements • Community Facility and public utilities • Servicing/repair of farm equipment and machinery • LPG Stations • livestock	• Storage, processing, and sale of farm products in the zone were produced • Sale of agricultural supplies • Parks and Recreational Uses • Retail Shopping and Service Uses • Graveyards	All uses which are not in permitted and permissible uses shall be dealt as prohibited.

Source: Developed by consultants

**The District Land Use Planning and Management Committee shall decide on case to case basis regarding planning permission of the land uses*

***The matter shall be dealt as per section 18 & 19 of the Land Use and Building Control Act, 2021*

Map 24: Agriculture Zone – Peshawar Study Area



Source: Devised by Consusltant

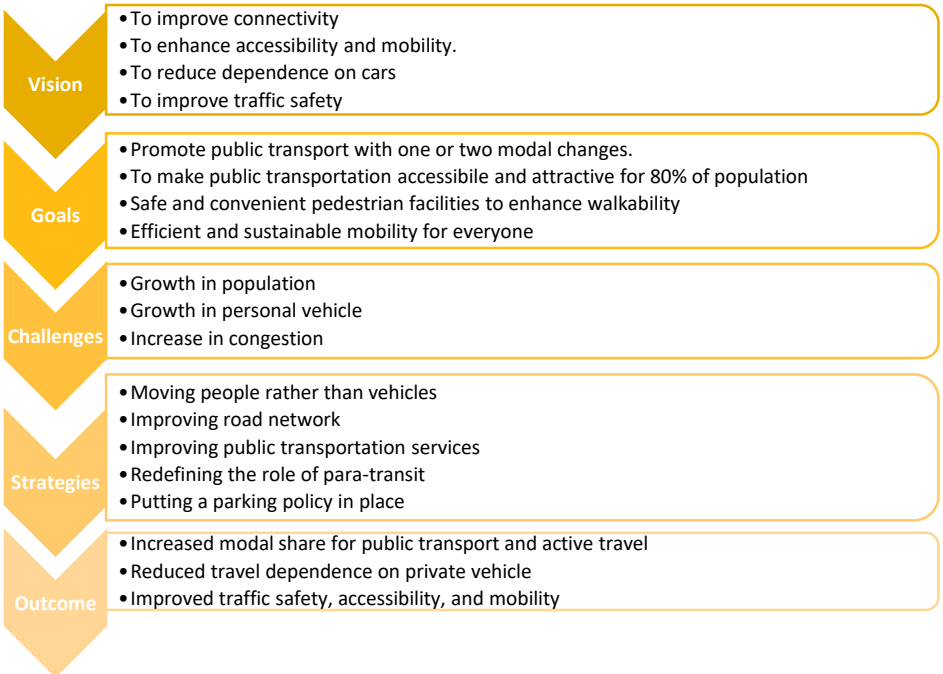
Chapter 9: Transportation and Traffic Mobility - Comprehensive Mobility Plan

9.1.Existing Conditions

Peshawar is currently facing severe traffic congestion, particularly in key areas with high traffic volumes on major corridors such as Nasir Bagh Road, Chamkani Road, Charsadda Road, and Palosi Road. The congestion is at its peak during rush hours at critical junctions, including Jahaz Chowk, Charsadda Road Bus Stop Chowk, Jameel Chowk, FC Chowk, and Chungi Chowk. The vehicle composition in these areas consists of private cars, motorcycles, rickshaws, freight trucks, and limited public transport options, primarily Suzuki vans and wagons. The existing road network lacks essential infrastructure such as footpaths, service lanes, and adequate capacity to accommodate the growing demand. Additionally, the absence of traffic signals, lane markings, pedestrian crossings, and proper enforcement mechanisms further aggravates the congestion. Encroachments by street vendors and illegal parking reduce the effective Right of Way (ROW), creating bottlenecks and obstructing smooth traffic flow. Public transport remains unregulated and inefficient, with limited coverage and no last-mile connectivity, forcing residents to rely on private vehicles. These challenges are compounded by the weak enforcement of traffic regulations and the absence of a structured parking management system.

To address these issues comprehensively, a five-step methodology has been adopted for improving mobility in Peshawar. The approach includes road widening and reclassification based on commercial regulations, intersection improvements, enhancement of public transport services such as Bus Rapid Transit (BRT) feeder routes, pedestrian-friendly infrastructure, and systematic parking management strategies

Figure 7: Comprehensive Mobility Plan Approach



Source: Developed by Consultant

In light of existing traffic and transportation problems, the following interventions are proposed for improvement of mobility and traffic management in Peshawar.

9.2.Proposed Interventions

The Comprehensive Mobility Plan for Peshawar City aims to address these challenges by implementing a People-Centric Urban Transportation System. The proposed interventions are based on detailed studies, including Traffic Volume Counts, Level of Service (LOS) Analysis, Trip Generation Calculations, and Parking Demand Surveys. The details of these studies and calculations are provided in the Detailed Master Plan Report. Below are the specific proposals:

9.3.Road Network Improvements

Existing Roads

The primary roads in Peshawar, including Nasir Bagh Road, Chamkani Road, Charsadda Road, and Palosi Road, serve as vital corridors for both intra-city and intercity connectivity. However, these roads lack essential infrastructure such as service lanes, footpaths, and sufficient capacity to accommodate future traffic growth. Similarly, secondary roads like Warsak Road, Bara Road, Kohat Road, and Dalazak Road require significant improvements to support multimodal transportation and ensure seamless mobility across the city.

Proposed Improvements

Encroachment Removal: All mobile and permanent encroachments along major commercial activity centers, including Saddar, Karkhano Market, and Qissa Khwani Bazaar, will be removed to restore the designed capacity of roads. This includes illegal structures by shop owners, street vendors, and hawkers.

Footpath Provision: Footpaths will be constructed along the building line on both sides of primary and secondary roads to ensure safe pedestrian movement, particularly in high-footfall areas such as University Road, GT Road, and Kohat Road.

Lane Markings: Clearly defined lane markings will be introduced across major roads to minimize weaving conflicts and enhance traffic discipline. The standard lane width will be set at 11 feet for primary roads and 10 feet for secondary roads to optimize space utilization and regulate vehicle speed.

Parking Management: On-street parking will be strictly managed, with paid parking allowed on designated sides of roads to prevent congestion. Multi-story parking plazas will be proposed near commercial hubs such as Saddar, Board Bazaar, and Hayatabad to accommodate parking demand.

Public Transport Enhancement: Expansion of Bus Rapid Transit (BRT) feeder routes and improvement of public transport facilities will be prioritized to encourage modal shift from private vehicles to public transport. Dedicated cycling lanes and pedestrian-friendly infrastructure will also be promoted.

Traffic Law Enforcement: A strict enforcement mechanism will be implemented, including increased police patrolling, smart traffic cameras, and electronic ticketing for traffic violations.

Missing Link Roads: The completion of missing link roads, such as the Southern Bypass and Northern Bypass, will enhance connectivity and alleviate congestion in the central areas of the city.

Utility Relocation: To ensure unobstructed pedestrian and vehicular movement, all overhead utilities (electricity, gas, sewerage, and water supply pipes) will be relocated underground, particularly along key corridors like GT Road and University Road.

Access Control: Select sections of GT Road and Ring Road will be converted into partially access-controlled roads, with designated entry and exit points through secondary link roads. This will help streamline traffic flow and reduce congestion in high-density areas.

Road Widening: Widening on some of the major roads is also proposed to accommodate future traffic needs. The rationale and details are for these widened roads are provided in Detailed Master Plan Report (DMPR).

9.4.Junction Geometry Improvements

Existing Conditions

Major intersections in Peshawar, including Dabgari Garden Chowk, Chungi Chowk, Jahaz Chowk, FC Chowk, and Karkhano Chowk, suffer from severe congestion due to illegal on-street parking, a lack of pedestrian infrastructure, and inefficient traffic management. Other critical junctions, such as Charsadda Bus Stop Chowk, Jameel Chowk, Kababian Chowk, Palosi Chowk, Pishtakhara Chowk, and Shuba Chowk, also experience heavy bottlenecks, particularly during peak hours. These intersections currently operate at Level of Service (LOS) F, causing excessive travel delays, increased fuel consumption, and heightened accident risks. Key contributing factors include the absence of dedicated turning lanes, improper signal timing, unregulated pedestrian crossings, and encroachments by street vendors. Addressing these issues through intersection redesign, improved signal coordination, enforcement of parking restrictions, and pedestrian-friendly measures is essential to restoring efficient traffic flow and enhancing urban mobility.

Proposed Improvements

Signalization: Traffic signals will be installed at key intersections, including Dabgari Garden Chowk, Jahaz Chowk, Chungi Chowk, and Karkhano Chowk, to regulate vehicle and pedestrian movement and improve intersection efficiency.

Lane Markings: Clearly defined lane markings, including turning lanes and directional arrows, will be added across major roads and intersections to guide traffic flow, reduce conflicts, and enhance road discipline.

Pedestrian Crossings: Safe and accessible pedestrian crossings will be provided at all major junctions, including Charsadda Bus Stop Chowk, FC Chowk, and Palosi Chowk, to improve pedestrian safety and ensure smooth vehicular movement.

Signage: Clear, visible, and standardized traffic signage will be installed throughout the city to guide drivers, indicate speed limits, and minimize confusion, particularly in high-traffic areas like Saddar, University Road, and Ring Road.

Additional Lanes: Approach and exit lanes will be added at key intersections to increase capacity and improve throughput. For example, Dabgari Garden Chowk will have an additional lane on Kohat Road and jail Road, while Jahaz Chowk will be expanded with three additional lanes on Charsadda Road.

Slip Lanes: Slip lanes of 60 feet will be introduced at strategic locations to allow for smoother traffic movement and reduce delays. These will be implemented at Jameel Chowk, and Karkhano Chowk, where high turning volumes create congestion.

Grade Separation: An underpass with two lanes will be constructed at Chungi Chowk to facilitate Traffic. Additionally, an interchange at Pistakhara Chowk will be developed to improve traffic flow on Ring Road and prevent congestion at the intersection.

Figure 8: Grade Separation on Chungi Chowk (Model)

Figure 9: Grade Separation on Pishtakhara Chowk (Model)

The feasibility of additional lanes, slip lanes, and grade-separated facilities was analysed using SIDRA software, with detailed assessments available in Detailed Master Plan Report (DMPR).

9.5.Public Transportation Improvements

Existing Conditions

Public transport in Peshawar is primarily served by the Bus Rapid Transit (BRT) system, which operates along major corridors such as GT Road and University Road, providing a structured and efficient mode of transport. However, beyond the BRT network, public transport remains largely dependent on Suzuki vans, Hiace vehicles, and wagons operating along key roads like Ring Road, Kohat Road, and Charsadda Road. These informal services lack fixed routes and designated stops, leading to inefficiencies and contributing to traffic congestion. Additionally, remote areas, including Warsak Road, Palosi, and Regi, have limited or no public transport access, forcing residents to rely on private vehicles.

Proposed Improvements

Fixed Routes: Public transport vehicles, including Suzuki vans, Hiace wagons, and minibuses, will operate on fixed routes along major corridors such as GT Road, University Road, Ring Road, and Kohat Road, with designated stops near commercial and business hubs like Saddar, Karkhano Market, and Board Bazaar.

Feeder Services: To enhance last-mile connectivity, qinqchi rickshaws, electric rickshaws, and shuttle vans will be integrated as feeder services, operating on secondary roads such as Warsak Road, Palosi Road, and Dalazak Road. Feeder route extensions will include:

- Pishtakhara Chowk towards the south along Bara Road to cater to residential zones R5 and R6.
- A new route towards Karkhano Market to serve residential zones R1 and R2.

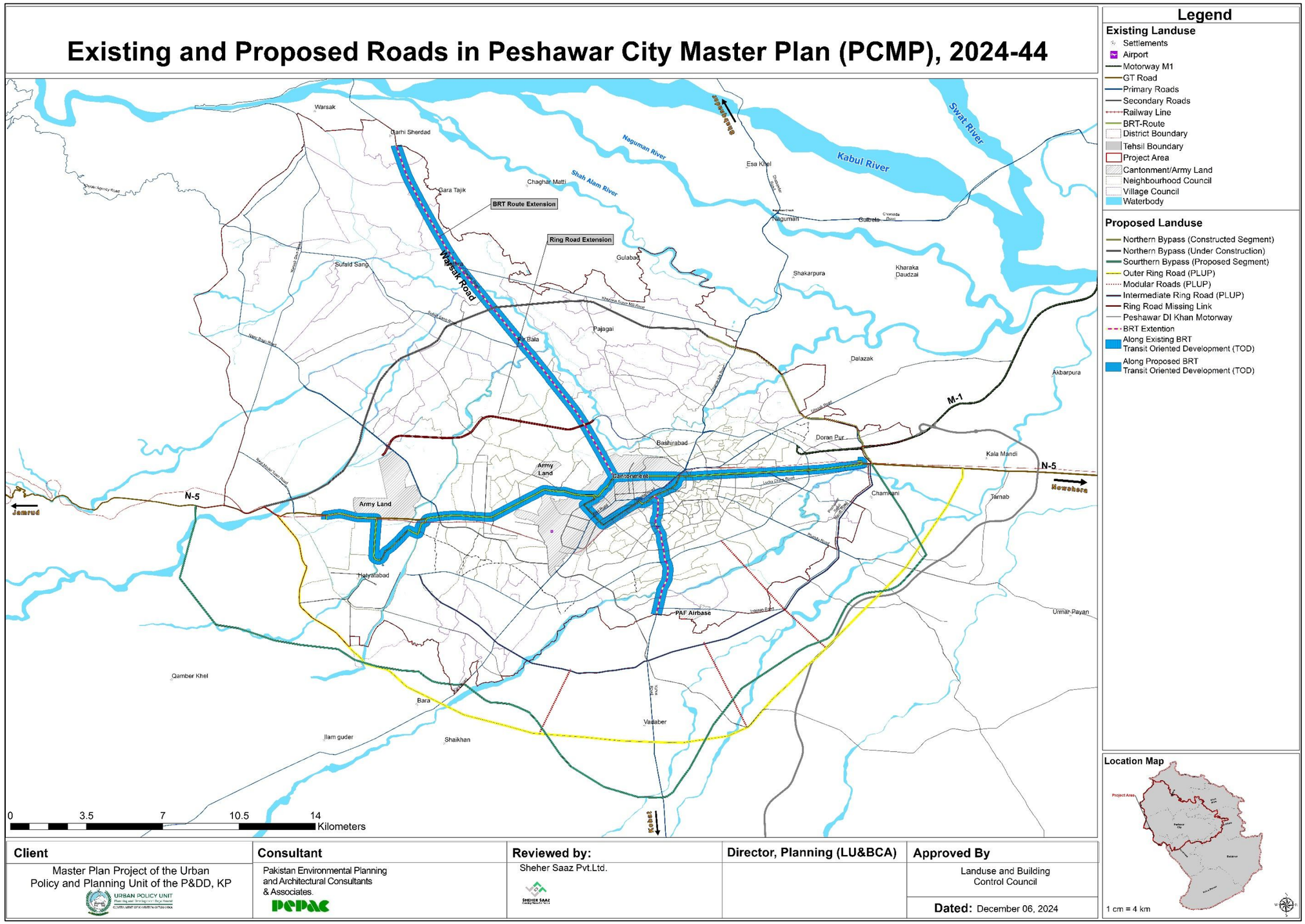
Policy Enforcement: Stricter enforcement of vehicle fitness certification, route permits, and public transport regulations will be implemented. Additionally, high parking fees and congestion charges will be introduced in key areas to discourage excessive private vehicle use.

Bus Services: Public transport bus services will be expanded across all primary roads, operating on dedicated lanes where feasible to minimize congestion delays. New bus terminals will be developed at strategic locations to streamline operations. To accommodate the growing demand for public transport, new bus terminals are proposed at the following locations:

- Bus Terminal 1: 33°58'6.07"N, 71°30'39.01"E
- Bus Terminal 2: 33°57'51.36"N, 71°32'28.53"E
- Bus Terminal 3: 34°0'39.773"N, 71°25'28.064"E

BRT Expansion: The existing Peshawar BRT system will be extended in north and south direction (Warsak and Kohat Road) with additional feeder routes and new express corridors to improve citywide public transport accessibility as shown in map below.

Map 25: Existing and Proposed Roads



Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP	Pakistan Environmental Planning and Architectural Consultants & Associates.	Sheher Saaz Pvt.Ltd.		Landuse and Building Control Council
				Dated: December 06, 2024

9.6.Parking Management

Existing Conditions

The parking situation in Peshawar is increasingly problematic due to a lack of proper management and enforcement. On-street parking is prevalent in high-traffic areas such as Saddar, Karkhano Market, University Road, and Qissa Khwani Bazaar, where vehicles frequently occupy road shoulders and pedestrian pathways, causing significant congestion. Illegal parking is common, with cars, motorcycles, and rickshaws parked haphazardly along major commercial corridors, further restricting traffic flow.

Several off-street parking plazas exist, but they are often operating beyond their intended capacity. Notable parking facilities include:

- Saddar Car Parking (Capacity: 300, Vehicles Parked: 360)
- Malik Shakir Car Parking (Saddar) (Capacity: 200, Vehicles Parked: 364)
- Shafi Market Parking (Saddar) (Capacity: 100, Vehicles Parked: 231)
- Pirano Market Parking (Karkhano City) (Capacity: 200, Vehicles Parked: 161)
- Pak Medi Center Plaza (Dabgari Garden) (Capacity: 200, Vehicles Parked: 266)

Despite the presence of these facilities, demand has drastically exceeded capacity, leading to unauthorized parking in nearby streets and open spaces. The absence of a digital parking management system, inefficient enforcement, and lack of designated parking spaces in key commercial zones have further aggravated the issue. Additionally, encroachments by vendors and unregulated parking attendants contribute to mismanagement, resulting in frequent conflicts between pedestrians and motorists.

Proposed Improvements

Time-Limited Parking: Maximum time limits will be imposed for parking in high-demand areas such as Saddar, University Road, Karkhano Market, and Ring Road to prevent long-term vehicle occupancy and improve turnover rates.

Paid On-Street Parking: To manage demand and discourage excessive on-street parking, paid parking zones will be implemented along major commercial corridors, including GT Road, Charsadda Road, and Kohat Road.

Improved Signage: Clear and standardized parking guidance signage will be installed at key locations to help drivers find designated parking spaces efficiently, reducing unnecessary road-side stops.

Expansion of Existing Parking Plazas: To meet increasing demand, capacity at Shafi Market Parking, Saddar Car Parking, and G.B. Plaza will be increased through multi-level parking structures and basement expansions.

Development of New Parking Plazas: To further alleviate congestion, new off-street parking plazas will be developed in commercial zones. Proposed locations include:

Table 42: Proposed Parking Plazas Locations

Name	Latitude	Longitude
New Dedicated parking Plaza	34°0'18.80"N	71°37'11.26"E

Smart Parking Systems: Advanced parking sensors and license plate recognition cameras will be installed to enable real-time monitoring and enforce parking regulations more effectively.

Integration with Public Transport: To reduce reliance on private vehicles, park-and-ride facilities will be developed near BRT stations and major transit hubs, allowing seamless public transport connectivity.

These measures aim to optimize parking space utilization, reduce illegal parking, and enhance overall traffic flow in Peshawar.

9.7.Traffic Signage and Non-Motorized Transport

Existing Conditions

Peshawar's traffic signage system is poorly maintained, with faded, damaged, or obstructed signs and sparse regulatory signage along major corridors, leading to traffic conflicts. Traffic signals at key intersections often malfunction or lack synchronization, worsening congestion. Non-motorized transport (NMT) infrastructure is severely lacking, with poorly maintained or absent footpaths forcing pedestrians onto vehicle lanes. In high-traffic areas like Saddar, University Road, and Karkhano Market, illegal encroachments obstruct pedestrian movement. Cycling is unsafe due to the absence of dedicated bicycle lanes, making walking and cycling inconvenient despite their potential benefits for mobility.

Proposed Improvements

Traffic Signage: Comprehensive directional, informational, and regulatory signage will be installed at key intersections and along major corridors such as GT Road, University Road, Ring Road, and Kohat Road to improve navigation, enhance road safety, and regulate traffic flow. Following locations are identified:

Table 43: Proposed Signage inventory

	
Directional Sign (U-Turn Sign) needed: At Charsadda Road Coordinates: 34.052512°N, 71.584532°E	Informational Sign (Bridge Sign) needed: At Charsadda Road Coordinates: 34.036706°, 71.578632°E

	
Informational Sign (Market Sign) & Regulatory Sign (Slow Speed Sign) needed: At Dalazak Road Coordinates: 34.043216°N, 71.628812°E	Directional Sign (U-Turn Sign) needed: At Dalazak Road Coordinates: 34.038576°, 71.619608°E
	
Directional Sign (U-Turn Sign) needed: At Dalazak Road Coordinates: 34.038574°N, 71.619608°E	Directional Sign (U-Turn Sign) needed: At Dalazak Road Coordinates: 34.058428°N, 71.512605°E

Source: Developed by Consultant

Footpaths: Well-designed footpaths will be constructed along all primary and secondary roads, particularly in commercial and high-footfall areas like Saddar, Karkhano Market, and Board Bazaar, ensuring safe pedestrian access to markets, retail centers, educational institutions, and healthcare facilities.

Pedestrian Crossings: Clearly marked pedestrian crossings and refuge islands will be introduced at high-traffic intersections to enhance pedestrian safety and promote walkability.

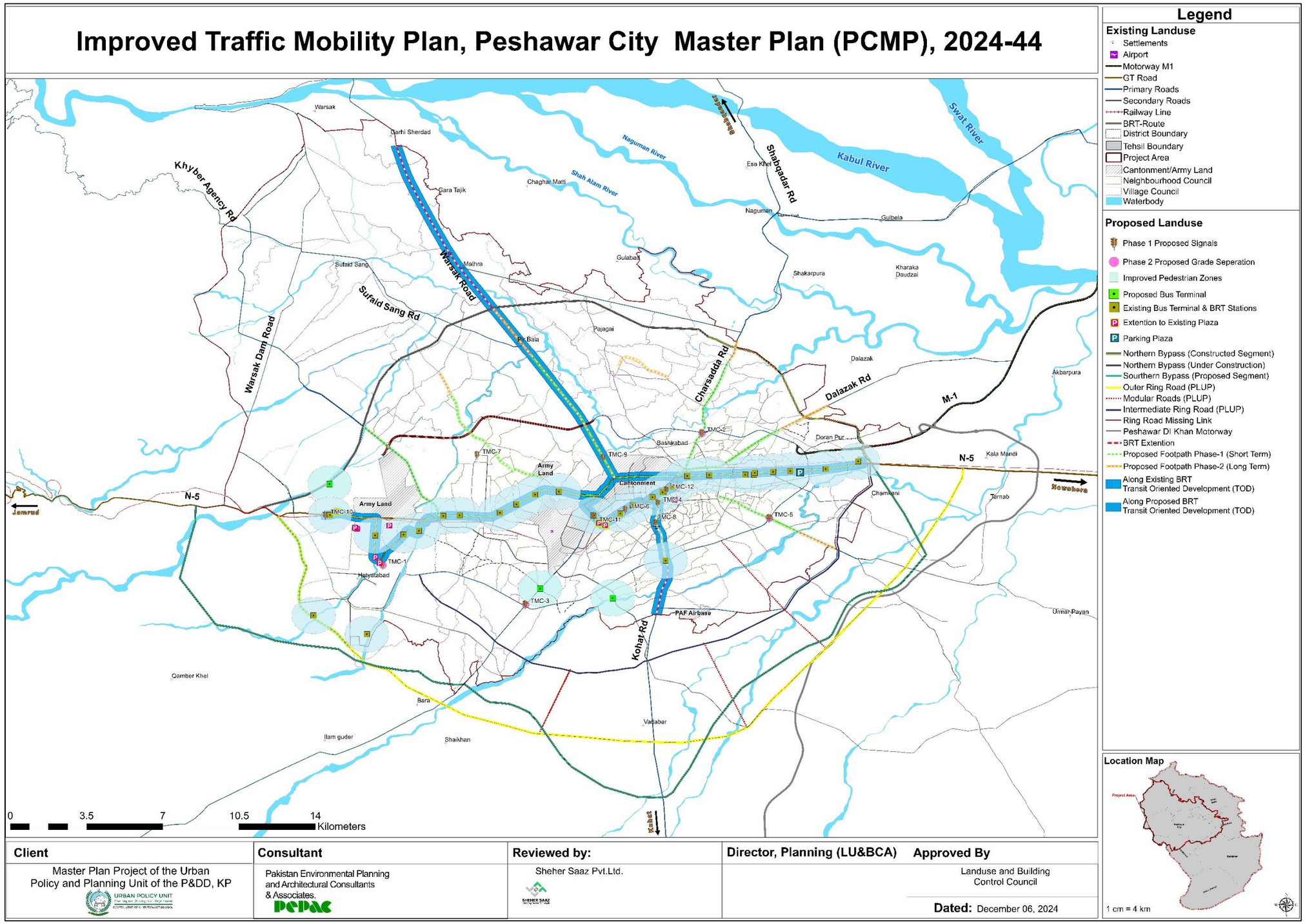
Encroachment Control: Strict removal of encroachments along footpaths and pedestrian zones will be enforced to maintain unobstructed access

9.8.Improved Traffic Mobility

To align the transportation network with urban expansion, a series of traffic and transportation improvements have been proposed. This includes the widening of primary roads, removal of encroachments, and addition of footpaths to facilitate both motorized and non-motorized traffic. The provision of service lanes along commercial corridors such as GT Road, Ring Road, and University Road will improve accessibility to adjacent land uses. Lane markings will be introduced to regulate traffic flow, with dedicated lanes for cyclists, motorcycles, private vehicles, and public transport. This structured approach will help manage vehicle speeds, enhance driver awareness, and reduce road conflicts. Pedestrian connectivity will also be prioritized through a network of footpaths along primary and secondary roads, improving

access to commercial centres, educational institutions, and healthcare facilities. To streamline traffic movement, forced turns at minor intersections and designated U-turns at major junctions will be implemented to regulate traffic flow. Additionally, a hierarchical public transport system will be introduced. Local pickups, qingqi rickshaws, and feeder buses will operate on secondary roads, providing last-mile connectivity to BRT stations and major bus terminals. To manage parking demand, vacant land near major commercial areas will be converted into parking plazas, reducing on-street parking congestion. A paid on-street parking system will also be introduced on high-traffic roads to discourage long-term roadside parking and encourage public transport use. Finally, to enhance road safety and navigation, traffic signage will be installed along primary roads and key intersections, including speed limit signs, distance markers, and parking guidance signs. These measures aim to create a multimodal, well-regulated transportation system, reducing congestion, improving accessibility, and fostering sustainable urban mobility in Peshawar.

Map 26: Proposed Improvements in Traffic Mobility – Comprehensive Mobility Plan



Source: Developed by Consultant

Chapter 10: Water Supply and Sewerage

10.1.Existing Water Supply & Sanitation

Water and Sanitation Services Peshawar (WSSP) manage water supply and waste services in urban areas, while rural areas fall under District/Tehsil Councils. In district Peshawar there are 732 tube wells, 46 functional filtration plants, and 117 overhead reservoirs with limited capacity. Location of these tube wells, filtration plants, and OHRs is given in Map 29. The water supply network spans 1,670 km, yet shortages persist, with a 21% shortfall in Neighbourhood Councils (NCs) and 93% in Village Councils (VCs). Sanitation infrastructure is inadequate, with non-functional wastewater treatment plants (WWTPs) leading to direct discharge into the Kabul River. The city lacks a storm water drainage system, causing frequent flooding. 36 drainage hotspot locations are shown in Map 27. The 495 km sewerage network and three pumping stations are insufficient. Map 30 shows the existing sewerage and drainage system of the project area. Urgent upgrades are needed to meet growing demands.

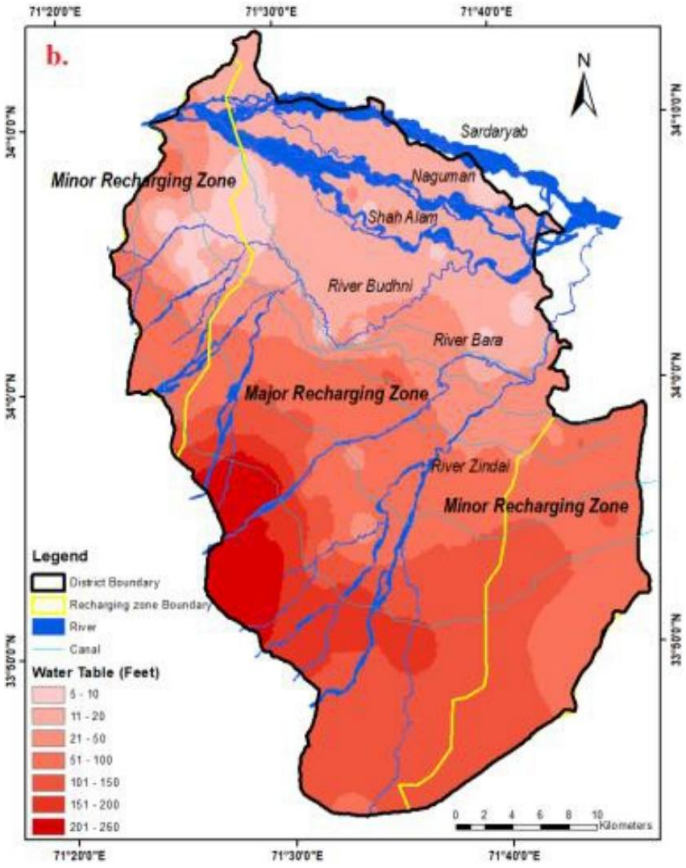
Map 27: Drainage Hotspots Locations

Source: Developed by Consultant

10.2.Existing Groundwater Conditions

Groundwater is the primary water source in Peshawar, but rapid population growth, unplanned development, and excessive extraction are straining resources. The increased pumping costs and untreated wastewater discharge further impact groundwater quality. Two aquifers were identified in 1968: an unconfined upper aquifer (61 m deep) and a semi-confined lower aquifer (120 m deep). The upper aquifer is 10 times more permeable, with hydraulic conductivity

ranging from 1.64 to 4.75 m/day, while the lower aquifer has 0.074 to 0.298 m/day. Only 25-30% of irrigation water and 4% of rainfall contribute to recharge. With extraction exceeding recharge, groundwater depletion is accelerating, posing a risk of severe shortages in the future. The water table depth of district Peshawar and recharging zones are shown in the map below.

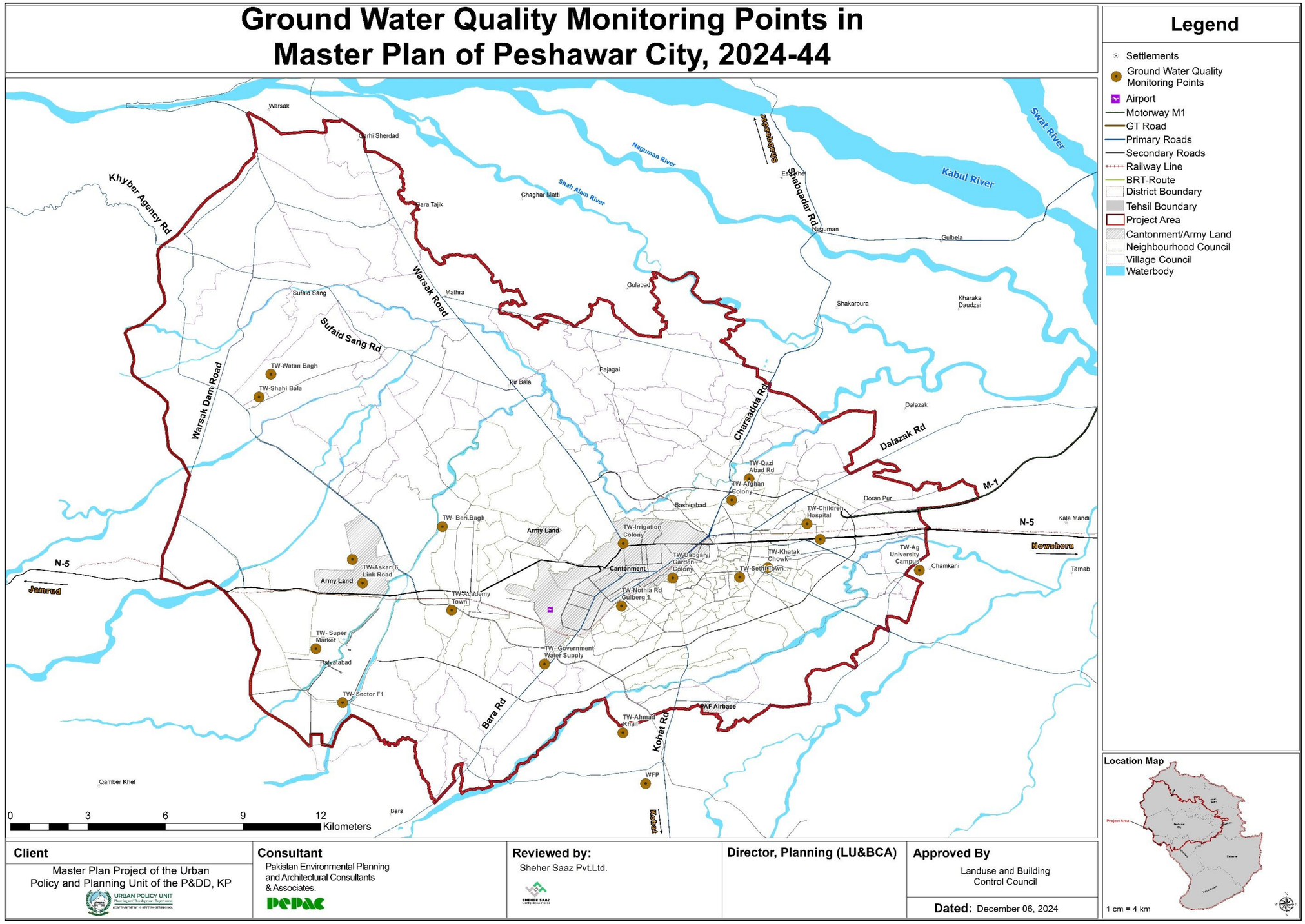


From the above map, it can be observed that the water table depth of Peshawar city is in the range of 50-100 ft. Moreover, the water abstracted from a depth of 50 ft is least suitable for drinking or domestic use.

Moreover, 30% of the aquifer is under high stress, and in summer, due to high temperatures, the demand for water increases further and poses stress on the water table. The annual rainfall recharge is very small and the groundwater infiltration from distributary canals and irrigation is dependent on the influx from the Kabul and Bara Rivers which may fluctuate based on the consumption from the upper catchment areas. It is observed that about 95% of the population is dependent on tube wells for drinking and domestic water use. The estimated value of groundwater recharge from various studies is approximately 229 mm/ year while the groundwater depletion rate is approximately 57 mm/year. Similarly, the total abstraction rate of groundwater through government-owned wells, private hand pumps, dug wells, and commercial wells comes out to be approximately 839,715 m^3/day.

During groundwater sampling from the study area, it was found that the groundwater quality was good. The sampling locations are shown on the Map below.

Map 28: Groundwater Quality Monitoring Points

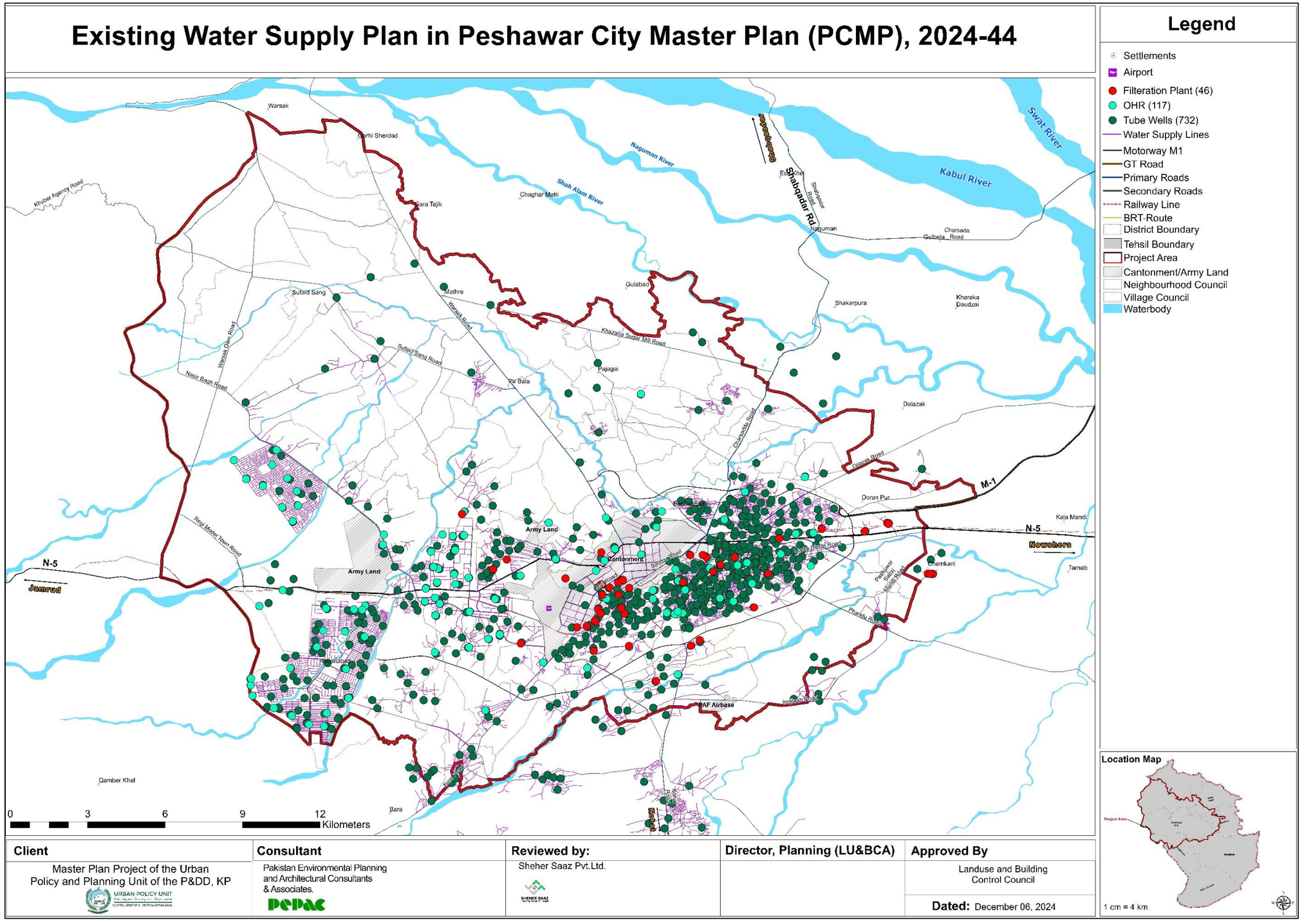


Source: Developed by Consultant

- **Proposal for Groundwater**

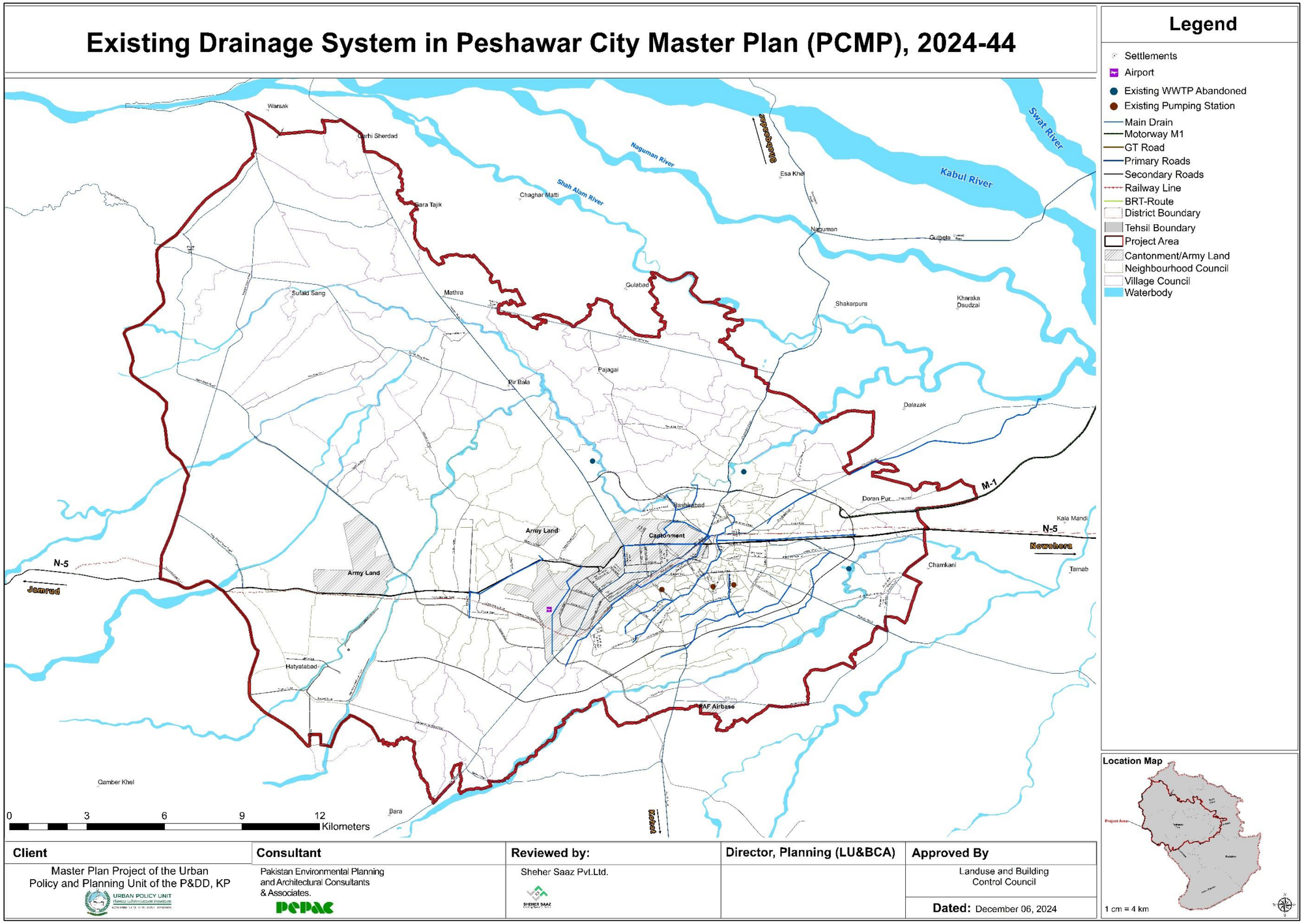
Groundwater recharge is crucial to conserve groundwater and relieve additional stress for current and future abstraction through tube wells. Groundwater recharge could be done by proposing sufficient open spaces throughout the study area. Rainwater harvesting techniques shall be utilized to maximize rainwater usage. Moreover, the provision of recharge wells or recharge pits should also be considered within the urban Peshawar city to further aid groundwater recharge and maximize infiltration. Similarly, temporary wells are proposed to aid future populations till the operation of the Jabba Dam and Mohmand Dam water supplies. Surface water supply and recharge wells will relieve groundwater stress. Furthermore, illegal private bore wells should strictly be prohibited to conserve groundwater.

Map 29: Existing Water Supply Plan in PCMP 2024



Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP URBAN POLICY UNIT	Pakistan Environmental Planning and Architectural Consultants & Associates. PEPAC	Sheher Saaz Pvt.Ltd. SHEHER SAAZ		Landuse and Building Control Council **Dated:** December 06, 2024

Map 30: Existing Drainage System



Source: Developed by Consultant

10.3.Proposed Water Supply

The project area includes urban areas under the jurisdiction of Water and Sanitation Services Peshawar (WSSP), Peshawar Development Authority (PDA), Cantonment Board (CB), Public Health Engineering Department (PHED), and Tehsil Municipal Administrations (TMAs). WSSP has already prepared a comprehensive master plan (2014-2032) and its updation (2019-2048) in areas of Water Supply, Sewerage, Drainage and Solid Waste Management. Considering this the consultant has excluded the WSSP area from this task. The population forecast data is given in Table below.

Table 44: Population Projection

Population Projection Method	Census Year	Base Year	Projection			
	2017	2024	2029	2034	2039	2044
Average	2,868,714	3,607,195	4,141,687	4,691,245	5,272,174	5,903,971

From Table 43, it can be observed that the population gap between the years 2044 and 2024 is around 2,296,776 persons. A total housing supply from infill units (54679) with a total population to be accommodated in infill land parcels is 427589 persons while in proposed pulp zones in the south side of the city, almost 38,736 housing units will accommodate around 302,532 populations. This adds up to 730,121 populations which will reside within WSSP zones leaving behind (200339 housing units) a population of 1566654 in newly approved housing societies on the north side of the city. This populations of 1566654 will be accommodated in different housing societies.

As per the above situation, the consultant has proposed a water supply, sewerage, drainage, and solid waste management system for the remaining population of 1566654 persons. In all the zones of WSSP consultant endorsed the approved plan of WSSP (2019-2048).

10.4.Water Supply Demand Estimation

Table 44 shows the year-wise population, average water demand, maximum day demand, and peak hourly demand of the project area @ 35 GPCD (WASA-Lahore Standard).

*Table 45**: Period-Wise demand estimation***

Water Supply System Requirement						
Parameter Description	**2024-2029**	**2029-2034**	**2034-2039**	**2039-2044**	**Total**	**Unit**
Total Population	391663	391663	391663	391663	1566653	**No.**
Average Water Demand	13.71	13.71	13.71	13.71	55	MGD
Maximum Daily Demand	21	21	21	21	82	MGD
Peak Hourly Demand	31	31	31	31	123	MGD

10.5.Alternative Proposals for Water Supply System

Table 45 shows the period-wise distribution of tube wells, OHRs, Filtration systems, etc., in both the alternatives. Both alternatives are described in the following sections.

Table 45: Summary of water supply system alternative-1&2 proposals

Parameter Description	2024-2029	2029-2034	2034-2039	2039-2044	Total	Unit
Total Population	391663	391663	391663	391663	1566653	No.
Alternative-1						
No. of Tube Wells Needed 1 cusec Capacity & 16 hours/day pumping (Pumping with Storage) & 24/7 Supply.	13	13	13	13	50	No.
OHRs Capacity Requirement (Pumping with Storage Option)	1.37	1.37	1.37	1.37	5	MG
No. of OHRs @ 50000 Gallons	27	27	27	27	110	No.
No. of Tubewells Needed- Direct Pumping (Intermittent Supply) @ 1 cusec & 16 hours/day supply on day of Max Demand	13	13	13	13	50	No.
Filtration Plants(4000 GPD) @ 0.8 GPCD	78	78	78	78	313	No.
No. of tubewell Operators needed @ 2 operators/tubewell	29	29	29	29	117	No.
Alternative-2						
Tube wells Needed	13	13			25	No.
OHRs Capacity	1	1	No OHRs needed further		3	MG
No. of OHRs @ 50000 Gallons	27	27				
Munda Dam Water Treatment Plant (254 MGD Capacity-WSSP)			13.5	13.5	27	MGD

10.6. Alternative-1 Description

This alternative is being proposed for the usage of groundwater till 2044 to meet the water supply demands of the said population to be accommodated in newly approved housing societies. It is being proposed considering failure to adopt alternative 2 which consists of meeting the water needs from 2029 onwards through surface water sources (Mehmad/Munda Dam). In case if surface water treatment plant design, approval, and construction take time then the water supply system will be constructed as proposed in Alternative 1.

Tube wells

No. of tube wells required in each 5-year periods were estimated and are listed in Table-45. This is a huge quantity of tube wells, and it will decrease groundwater table. Therefore, consultant recommends the alternative 2 for long-term sustainability.

Overhead Reservoirs

The required OHRs capacity in million gallons (MGs) is given in Table 45 for each 5-year period. Total OHRs constructed during each period may vary in volume but total capacity should be met. Water service providers may construct OHR of appropriate capacity at the required location as per the detailed design. The construction of 50,000-gallon OHRs at all sites is recommended (During detailed design capacity of single OHR may be decreased or increased but overall capacity may be kept the same.

Drinking water filtration plants

Evaluation of the groundwater quality shows that the groundwater quality is good, but water is being supplied through a distribution network and there is the possibility of contamination of the water till reaching individual homes. As per increased public concern about clean drinking water, 46 water filtration units are already constructed and are in operation. Keeping this in mind, the consultant also proposes installing drinking water filtration plants at appropriate locations within the area. For this purpose, on average (both men and women) 3 LPCD is the drinking water requirement. Based on this considering total drinking water requirements total capacity of the filtration units is estimated considering a single unit of 15000 Litters (Same as already installed in CB). The consultant recommends a detailed feasibility study of the requirement of filtration plants for this purpose.

10.7.Alternative-2 Description

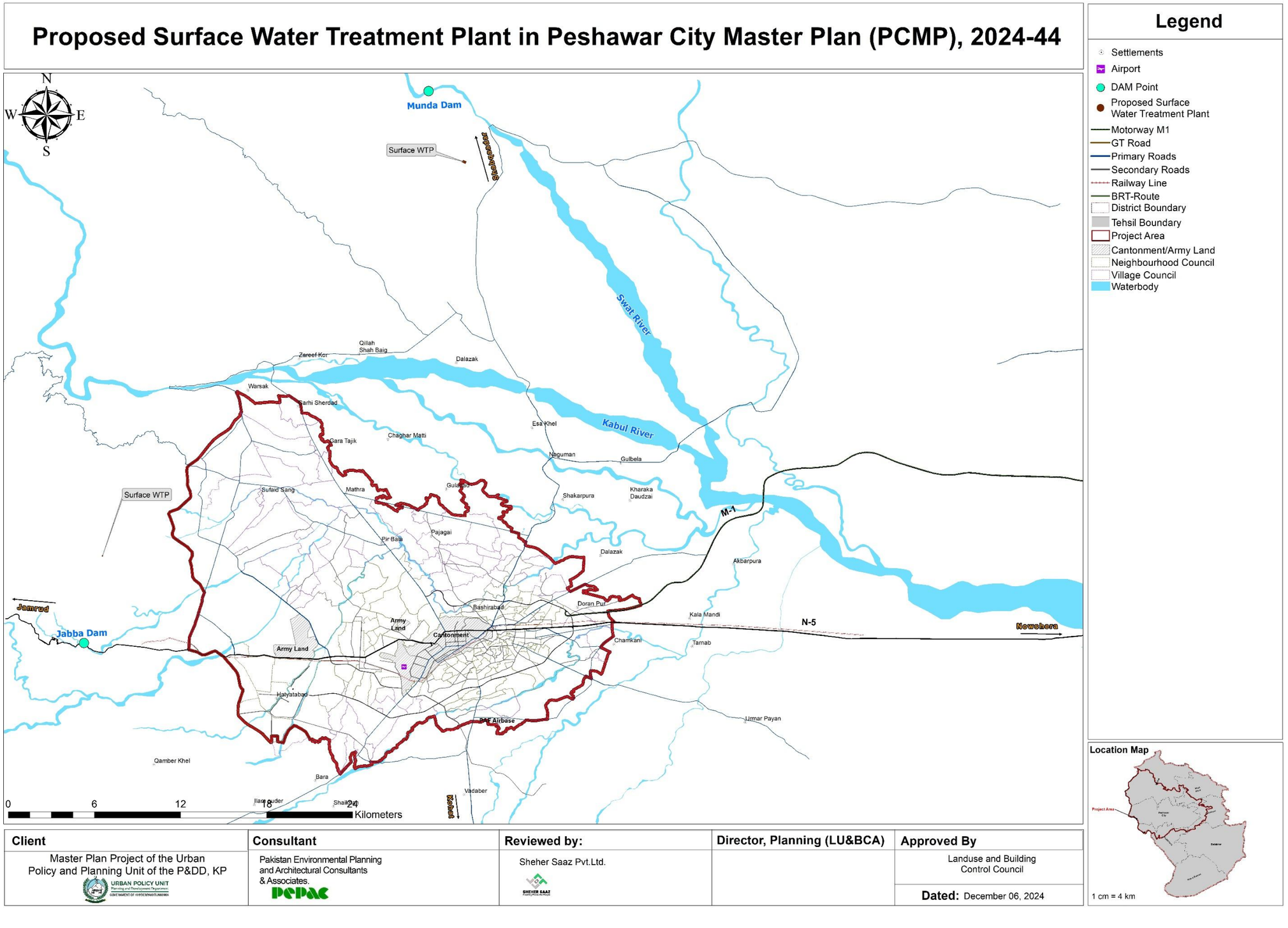
In alternative 2 (Estimations of the OHRs, Tube wells, and required water intake from Munda dam is given in Table 40) water supply needs from 2034 to 2044 will be met through the surface water treatment plant at Munda Dam. WSSP has already evaluated the potential water surface water sources based on two major criteria i.e., the possibility of a gravity-fed surface water supply system and the quality of surface water. The above two criteria were applied to Warsak and Munda Dam water sources. It was found that the quality of the Warsak dam is not good, and it is far more turbid than Munda dam water. The major reason is the availability of two major lakes along the path of Munda Dam and most of the suspended matter gets settled before reaching Munda Dam. While this is not the case for the Warsak Dam water source. Therefore, it was found that the Mehmad/Munda Dam water treatment project will be far better in terms of operations cost as it will require a minimum need of chemicals. On the other hand, Warsak dam project can supply water under gravity to a portion of the city while in the case of the Munda dam water supply project can supply water under gravity to the whole study area reducing the overall operations cost.

The minimum design capacity of 55 MGD for the Munda Dam water treatment plant is recommended for the said population. WSSP has already proposed a 254 MGD capacity water treatment plant at Munda Dam. Therefore, requirements till 2044 can be met from WSSP's proposed water treatment plant. The consultant also proposes a large reservoir of 2.74 MG capacity as a storage tank at the water treatment plant (for the said population) which may fulfil storage requirements from 2034 to 2044 to avoid construction of OHRs from 2034 onwards. Water will directly be supplied from that storage reservoir to the study area. At the same time, 54 OHRs and 26 tube wells may be installed from 2024 to 2034. The consultant also proposes the Jaba Dam Water Treatment Plant.

Short term
(2024-2034)
Water supply to new areas will be provided by extracting ground water with the help of Tubewells

Long term
(2034-Onwards)
Groundwater extraction will be minimized by taking water from Mahmad dam water treatment plant along with the Jabba Dam WTP & Bara River WTP Rehabilitation

Map 31: Proposed Surface Water Treatment Plant Sites (2024-2044)



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Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP URBAN POLICY UNIT	Pakistan Environmental Planning and Architectural Consultants & Associates. PEPAC	Sheher Saaz Pvt.Ltd. SHEHER SAAZ		Landuse and Building Control Council **Dated:** December 06, 2024

10.8.Proposed Drainage & Sewerage System

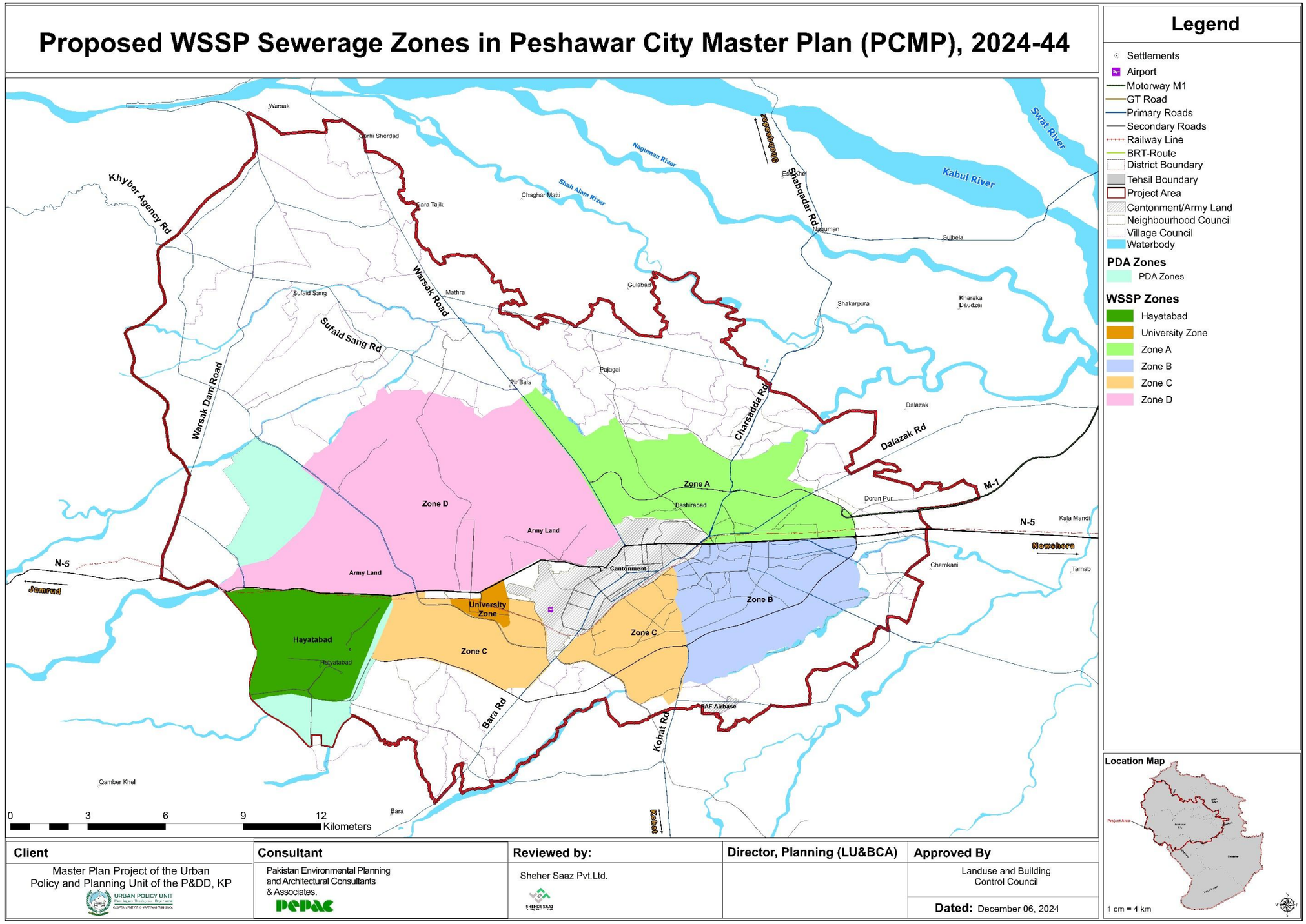
Similar to the water supply system proposals the consultant again endorsed the WSSP master plans for the sewerage system within its Jurisdiction as shown on Map 32. The drainage system proposed within WSSP zones in WSSP master plan is shown on Map 33. The proposed sewerage and drainage system by WSSP in its Master Plan for areas under WSPP jurisdiction is given in Map 34. However as per the newly proposed allocated area for future population adjustment consultant recommends future extensions if needed after evaluation in the already approved wastewater treatment plants near Kohat Road and Sarband Road as these areas will accommodate 730,121 persons. For other populations, the Sufaid Sang Road treatment plant extension is proposed in the future to accommodate the population in DHA and Regi Lalma areas. As per periodic subdivisions of the population, the average and peak sewage flows are measured and provided in Table 46. The proposed wastewater treatment technology is Waste stabilization ponds (WSPs). A new, wastewater treatment plant is proposed on the north side consisting of (44 MGD capacity treatment plants) on 342 acres of land to accommodate the leftover population in societies and nearby villages. Its construction is proposed from the year 2029 onwards. The location of this proposed wastewater treatment plant is given in maps 34, 35, & 36. Maps 35 and 36 show alternative-1&2 respectively (as proposed in the WSSP master plan) but the consultant has proposed the same sewage treatment plant in both alternatives for the leftover population. The main sewer line is also proposed that will collect and transport sewage from all societies, villages, etc. to the treatment plant site as shown in Maps 35 and 36. The consultant also proposes a detailed feasibility study at the detailed design stage. Consultants propose a piped sewerage system for all new developments/settlements.

A partially combined sewerage system along with all possible best management practices (BMPs) is proposed for storm water management. The BMPs include the application of a rainwater harvesting system by each home for usage in lawns, car washing, street washing, floor washing etc. The berm height of the lawns should be at least increased 6” to accommodate the maximum volume of rainfall at home. The green belts along the road should be deep up to 1 foot from the road level with proper embankments to avoid corrosion of roads or destruction of roads. The slope of the roads should be towards these green belts to accommodate maximum rainfall volume.

Table 46: Sewage flow estimations and proposed wastewater treatment plant

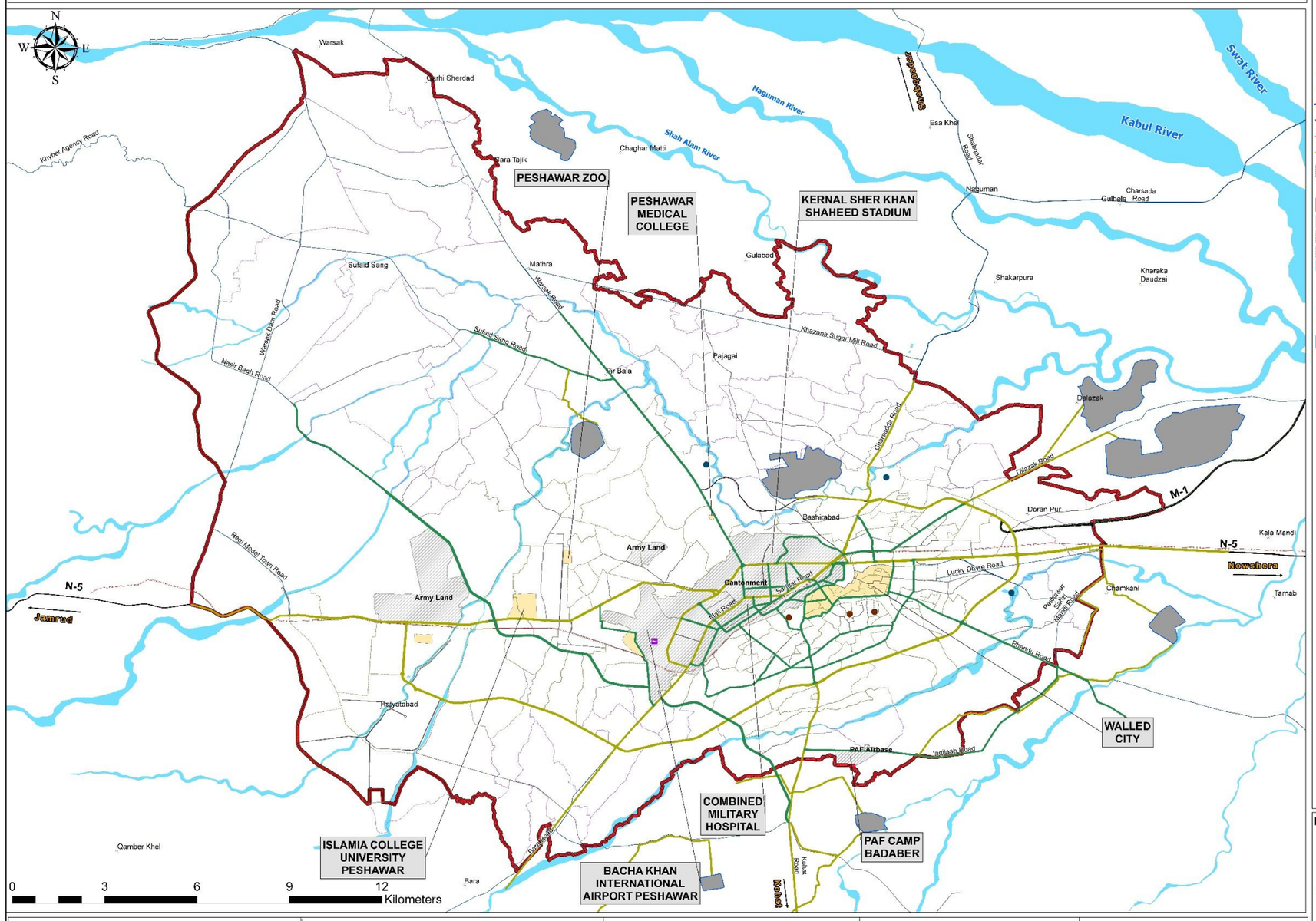
Sewerage System Requirements						
Parameter Description	**2024-2029**	**2029-2034**	**2034-2039**	**2039-2044**	**Total**	**Unit**
Total Population	391663	391663	391663	391663	1566653	No.
Average Sewage Flow	11	11	11	11	44	MGD
Peak Hourly Sewage Flow	17	17	17	17	70	MGD
Wastewater treatment plant (WSP)-North		44			44	MGD
Area Requirement for WSPs		342			342	Acre
Proposed system for sewage collection	Piped Sewerage System					

Map 32: Proposed WSSP Sewerage zones



Map 33: Proposed Sewerage and Drainage System

Proposed Sewerage & Drainage System Peshawar City Master Plan (PCMP), 2024-44

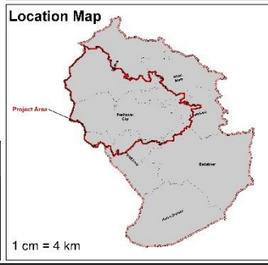


Legend

Existing Landuse
- Settlements
- Airport
- Existing WWTP Abandoned
- Existing Pumping Station
- Main Drain
- Motorway M1
- GT Road
- Primary Roads
- Secondary Roads
- Railway Line
- BRT-Route
- District Boundary
- Tehsil Boundary
- Project Area
- Cantonment/Army Land
- Neighbourhood Council
- Village Council
- Waterbody

Proposed Landuse
- Lateral Sewer
- Conduct Sewer
- WWTP

Location Map



1 cm = 4 km

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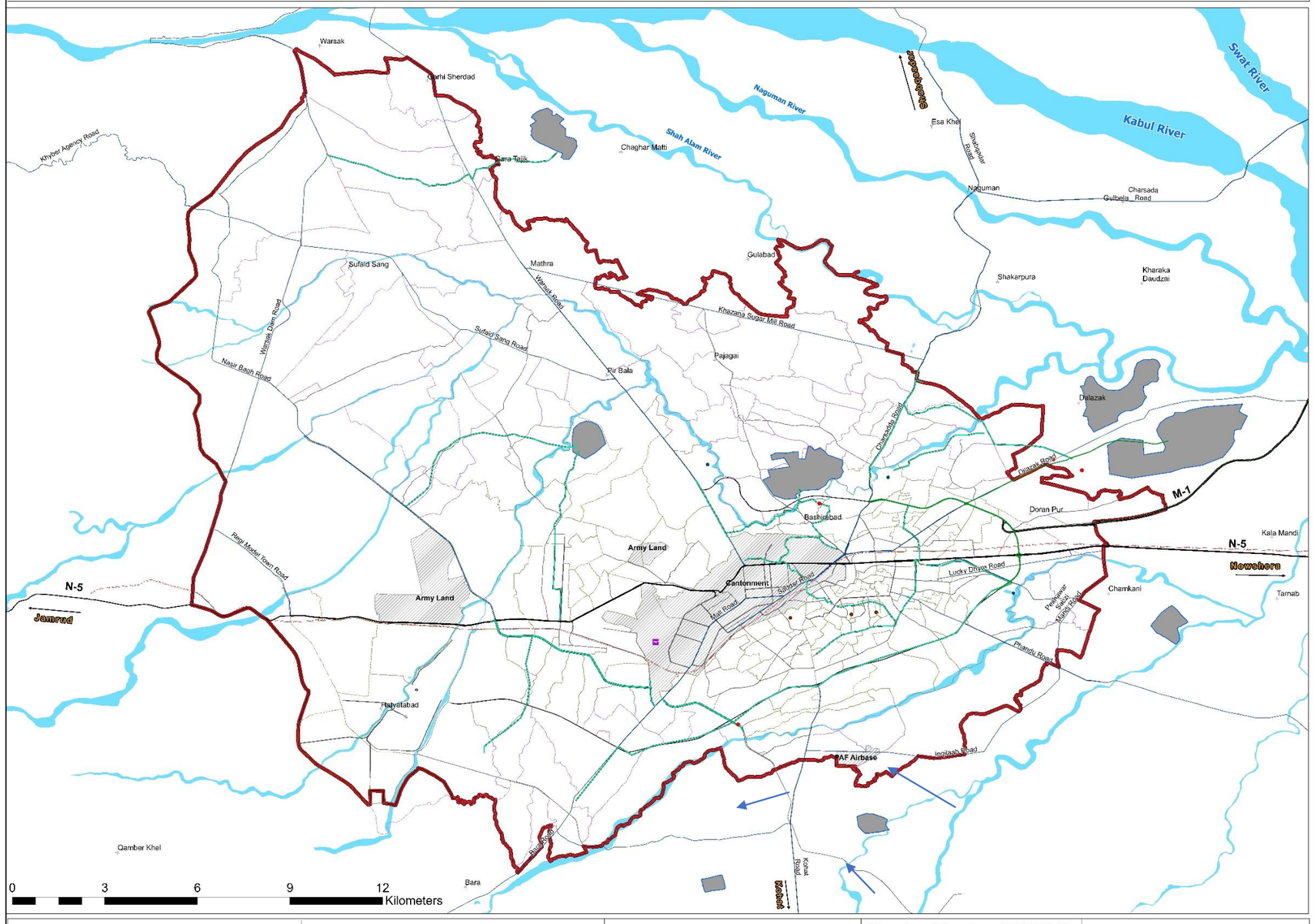
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP	Pakistan Environmental Planning and Architectural Consultants & Associates.	Sheher Saaz Pvt.Ltd.		Landuse and Building Control Council **Dated:** December 06, 2024

Map 34: Proposed Sewerage and Drainage System (Alternative-1)

Proposed Sewerage System in Peshawar City Master Plan (PCMP), 2024-44 (Alternative 1)

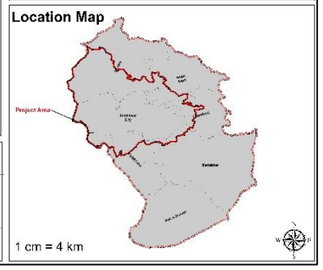


Legend

Existing Landuse
- Settlements
- Airport
- Existing WWTP Abandoned
- Existing Pumping Station
- Motorway M1
- GT Road
- Primary Roads
- Secondary Roads
- Railway Line
- BRT-Route
- District Boundary
- Tehsil Boundary
- Project Area
- Cantonment/Army Land
- Neighbourhood Council
- Village Council
- Waterbody

Proposed Landuse
- Proposed Pumping Station
- Proposed Sewer Conduit
- Proposed Separate Sewer
- WWTP

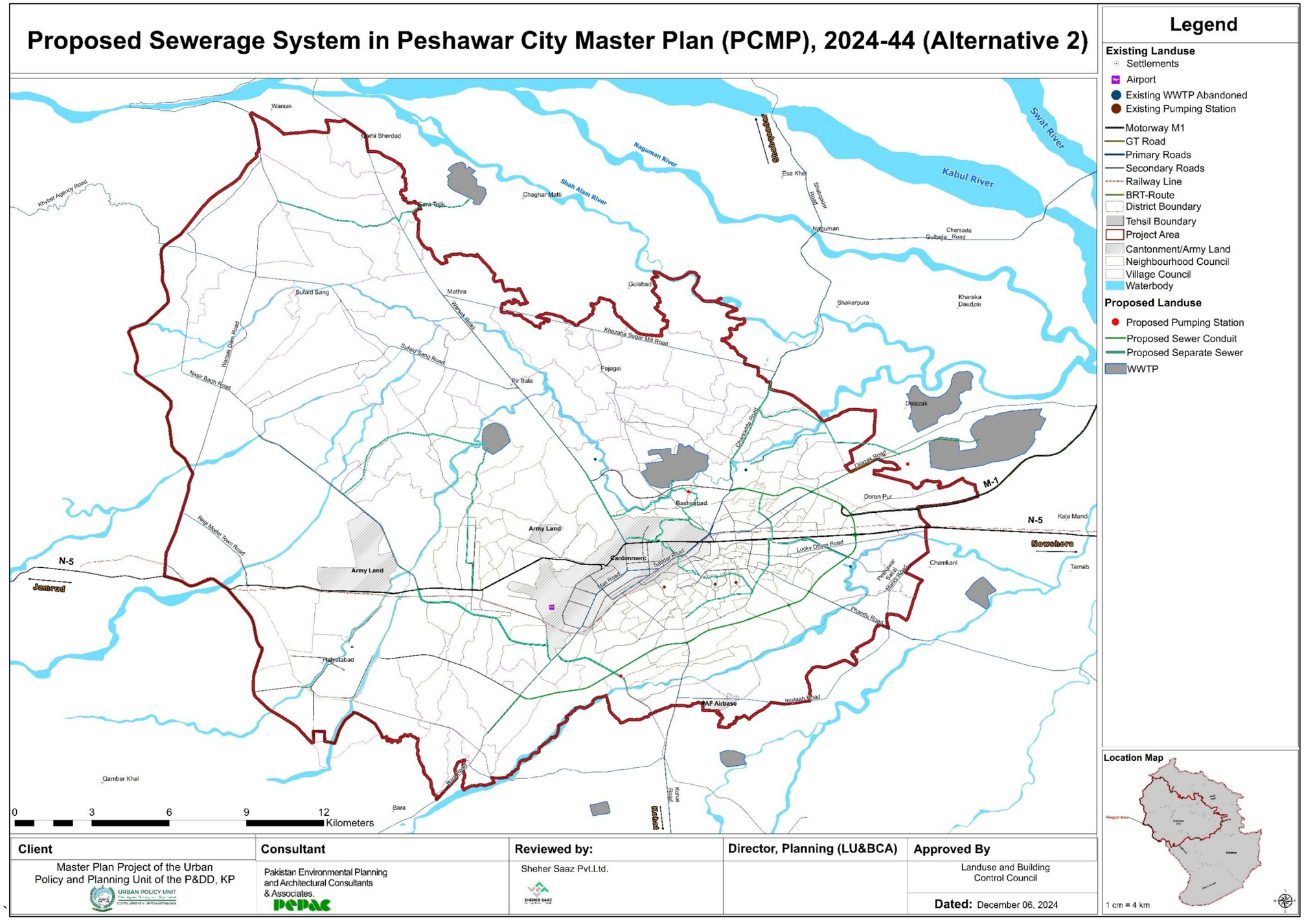
Location Map



1 cm = 4 km

Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP	Pakistan Environmental Planning and Architectural Consultants & Associates.	Sheher Saaz Pvt.Ltd.		Landuse and Building Control Council
				Dated: December 06, 2024

Map 35: Proposed Sewerage and Drainage System (Alternative-2)



Source: Developed by Consultant

Chapter 11: Solid Waste Management

11.1.Existing Situation of the Solid Waste Management Systems in Peshawar

Peshawar faces severe solid waste management challenges, with most waste openly dumped without segregation or recycling. Pakistan generates 49.6 million tons of waste annually, growing at 2.4% per year, while Peshawar lacks a properly engineered disposal site. Uncollected waste litters streets and vacant plots, leading to environmental degradation, health hazards, and economic burdens.

Current unsustainable dumping methods contribute to water, soil, and air pollution, with greenhouse gas emissions from burning waste exacerbating climate risks. Unauthorized landfill sites and inadequate hospital and industrial waste treatment further deteriorate urban ecology. Key issues include lack of urban planning, financial constraints, low public awareness, and absence of recycling policies. Without immediate intervention, Peshawar risks severe environmental and public health crises.

11.2.Existing Waste Generation

With reference to the Waste management study, carried out under the project of KP Cities improvement program funded by ADB. The estimated waste generation for Peshawar city in Khyber Pakhtunkhwa (KP) province of Pakistan is around 2200 tons per day. On the grounds that roughly 60% of the solid waste is collected by the Water and Sanitation Services Company of Peshawar (WSSCP) and by private companies like Blue Skies; a composting company that gives services to a very limited household area for waste collection. While the uncollected waste remained at collection points (public dumping points) or in streets, where it radiates contaminants into the surrounding environment, making it unsuitable for human interaction. A noteworthy part of the waste is dumped in an old furnace misery around the southern side of the city. With reference to data provided by WSSP, the amount of waste generated and collected by the company is 30,000 tons and 20, 000 tons respectively on monthly basis.

11.3.Existing Landfill/ Dumping Site

Peshawar city currently does not have a properly engineered landfill site for solid waste disposal. In addition, there are many gaps in the solid waste collection and transportation infrastructure system including machinery and equipment. There is a single functional sanitary Disposal Site located at Shamshatoo, Garhi Faizullah. Open dumping was also observed in Maryam Zai area by the dwellers of Peshawar and its peripheries. WSSP has divided the city into four zones for proper collection and management of waste. The information regarding available bins and containers was collected from WSSP, Peshawar. The details of containers and bins are shown in the table below depicting the types of containers/bins, their capacity, and the number in each zone.

Table 47: Details of Containers and Bins

Sr. No.	Type of Containers	Capacity	Zone A	Zone B	Zone C	Zone D	Total Containers
1.	Arm Roll Containers	$22m^3$	8	17	8	6	39

2.	Arm Roll Containers	5m^3	21	21	72	43	157
3.	SKIP Containers	7m^3	3	11	0	0	14
4.	Multi Loader Containers	7m^3	6	0	0	0	6
5.	Small Containers	0.8m^3	66	74	60	40	240
6.	Small Bins	0.19 Liters	100	200	100	100	500
	Grand Total						**956**

Source: Secondary Data provided by WSSP, General Manager (PMER)

11.4.Solid Waste Characterization in Peshawar City

An estimate of the current composition of household waste is provided in Table below.

Table 48: Estimated Waste Characterization in Peshawar City

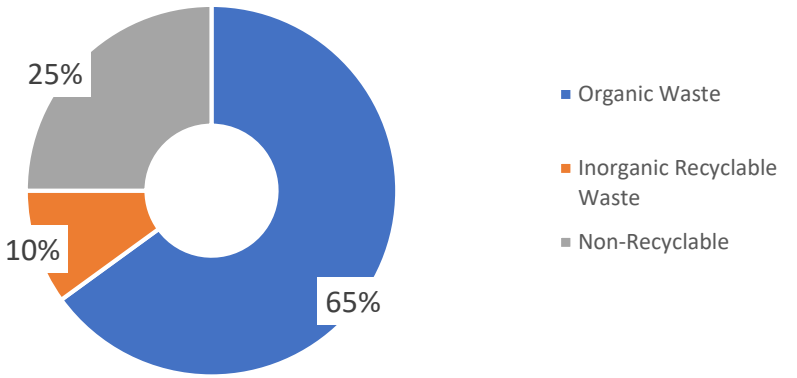
Sr	Waste Fraction	Amount (mm)
1.	Kitchen green waste	53.74
2.	Paper	732
3.	Textile	2.35
4.	Dry Grass and Wood	10.29
5.	Plastic	9.34
6.	Leather and Rubber	0.63
7.	Metal	0.72
8.	Bottle and Grass	2.32
9.	Ceramic, Stone and Soil	12.32
10.	Domestic Hazardous Waste	0.00

Source: waste analysis and characterization studies over the past decade in around 15 cities in Pakistan, ADB (2022)

11.4.1. Solid Waste Production

In terms of composition, almost 65% is organic, while about 10% is inorganic recyclables.

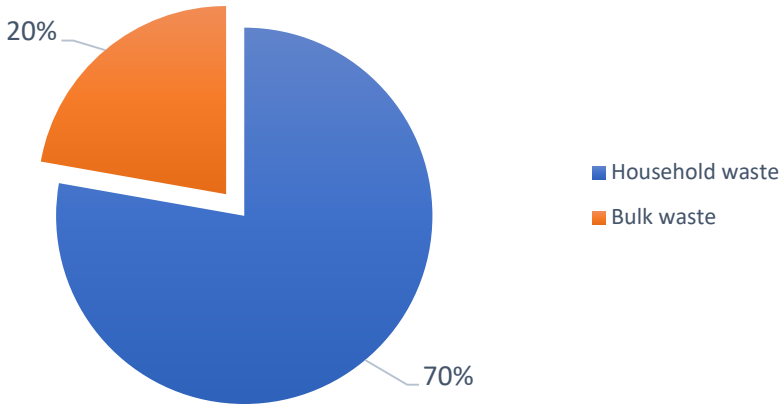
Waste Composition[8]



Source: ADB report on SW Peshawar

[8] https://www.adb.org/projects/documents/pak-51036-002-ecar

Average Waste Categorization[9]



Source: ADB report on SW Peshawar

'At source' storage of waste is yet not practiced in the city as most households, shops, and establishments throw their waste just outside their premises, on streets, in drains, in open spaces, in water bodies, and in other inappropriate places.

11.4.2. Estimated Waste Generation

The municipal solid waste (MSW) generated in the city consist of waste generated by households and waste of similar nature generated by commercial and industrial premises, institutions such as schools, hospitals and other facilities inhabited by people, construction and demolition of buildings, and from public spaces such as streets, markets, slaughterhouses, public toilets, bus stops, parks and gardens. As per the estimates, Peshawar city generates about 1700-1800 tons of waste per day in 2020[10]. If 25% of extra waste is generated from all other sources is factored in, total waste will be approximately in between 2100 – 2200 tons by 2025. Main criteria used for estimating waste generation rate is shown in the table below.

Table 49: Waste generation estimation criteria

Peshawar	Description
SWM Planning Horizon (2020-2042)	20 Years
Population	Projections based on ---- Census
Population growth rate (%)	2.13%
Per Capita Waste Generation	0.53 kg/ca/d
Per capita waste generation annual increment (%)	1.5%
Additional allowance (%)	25%
Loose waste density (kg/m3)	305

Source: ADB report on SW Peshawar

For waste projection in the future, an annual growth rate of 1.5 % is applied to the current waste generation of 0.53 kg/ca/d[11]. Similarly, population projection is also made at the population growth rate as suggested by Pakistan Bureau of Statistics at 2.13% annually. Peshawar has a

[9] ibid
[10] ibid
[11] Asian Development Bank

total waste generation rate of 1,800 tons per day in 2020. For purposes of design for waste treatment, the calculation has been made at 2,140 tpd, considering the growth till 2025.

11.4.3. Waste Transport

For transportation, compactors, arm-roll trucks, skip lifters, tractor trolleys, and dump trucks are used. Tractors, trolleys, Arm-Roll trucks, and front-end loaders assist the secondary collection. Waste from streets is collected by sanitary workers and is brought to collection points using hand carts or wheelbarrows, and rickshaws. From the collection points, waste is transported to final disposal sites, using compactor trucks. WSSP owns 43 compactors, which are largely used for the collection of waste from population centres. This system overall is less efficient since it requires more time and more manpower to function. The innovation of rickshaws and mini dumpers promises to improve reach and efficiency.

Figure 10: Rickshaws for waste collection

Source: Secondary data collected by WSSP site

Currently, the WSSP has a collection fleet with an overall capacity of 900 tons/day (including the 430 tons/day capacity of the primary collection fleet). The fleet includes 28 tractor trollies, carrying the waste in open conditions.

Figure 11: Mini dumpers for waste collection

Source: Secondary data collected by WSSP site

- **Suzuki mini dumper**

The most affordable and widely used in Peshawar is the SUZUKI mini dumper, which collects approximately 800kg of waste from the source. The container has a volume of 2.5 cubic meters.

- **Compactor**

Waste is compacted by the compactor vehicle having the capacity to compact up to 5.6 tons of waste. The total number of compactors at WSSP is 41. The compactor lifts the solid waste bin and empties it into the compactor. The main problem with a compactor is that foul-smelling liquid falls from it as it lifts, compacts, and unloads the collected garbage.

- **Arm roll Trucks**

With the assistance of an arm jack, the arm roll truck transports the containers by itself. It takes one container and returns it to its location after offloading it at the dumpsite in a single round trip. Two arm roll trucks, each with a capacity of 5 cubic meters and 22 cubic meters, are used in the city. The 5 cubic meter arm roll can transport up to 2 tons of MSW per trip. While a 22 cubic meter container can transport up to 9 tons per trip.

- **Mazda truck**

Mazda trucks operate manually, which means it can be loaded by hand using a shawl. The main issue with that is that solid waste falls from it as they travel to the dump sites because it is exposed. total of five trucks are operational in the city which each having a capacity of up to 2 tons.

- **Tractor trolley**

Tractor trolleys are commonly used in Peshawar for transporting solid waste. It can transport up to 4 tons of waste. There are 30 WSSP-equipped tractors and trolleys in total. It emits the same amount of solid waste and liquid as a truck and compactor.

Table 50: Operational Vehicular Capacity

Sr. No.	Type of Vehicle	Capacity	A	B	C	D	E	Total
1.	Ricksha Loader	$1m^3$	2	10	3	4	1	**20**
2.	Bike Loader	$1m^3$	10	12	8	4	9	**43**
3.	Mini Dumper (Suzuki/FAW/Mazada)	$1m^3$/$1.5m^3$	58	49	34	29	19	**189**
4.	Suzuki Bolan		0	1	0	0	0	**1**
5.	Compactor	$7m^3$	7	11	7	1	2	**28**
6.	Compactor	$5m^3$	4	6	2	4	4	**20**
7.	Heavy Arm Roll	$22m^3$	2	3	2	2	1	**10**
8.	Small Arm Roll	$5m^3$	4	3	8	4	2	**21**
9.	China Tractor	$1m^3$	4	1	3	2	2	**12**
10.	Tractor Trolley	300cft/200cft	4	9	3	4	2	**22**
11.	Truck		0	4	4	0	0	**8**
12.	KIP Tractor	$7m^3$	2	3	2	0	1	**8**
13.	Multi Loader	$7m^3$	3	4	5	2	0	**14**
14.	Vacuum Sweeper		2	1	1	1	0	**5**
15.	Mini Excavator		0	0	1	0	0	**1**
16.	Large Excavator		1	1	0	0	1	**3**
17.	Shovel		2	2	2	1	1	**8**
18.	Tractor Mounted Sweeping Machine		1	0	1	0	1	**3**
19.	Blade Tractor		0	0	2	0	1	**3**
20.	Dozer		0	1	0	0	0	**1**
21.	Double Wheel shovel		0	1	0	0	0	**1**
22.	Water Tanker/Water Supply Jeep/Water Bowzer		2	4	3	1	0	**10**
23.	Sucking Machine		1	1	0	0	0	**2**
24.	Jutting Machine		1	1	1	0	0	**3**
25.	Pick Up		2	4	1	1	1	**9**
26.	**Total**		**112**	**132**	**93**	**60**	**48**	**445**

Source: Secondary Data provided by WSSP, General Manager (PMER)

11.4.4. Transfer Station

Currently, most waste collected by collection vehicles is taken to the dumping site at Shamshato directly. Smaller vehicles dump their waste at open collection points and this waste is lifted in bigger dump trucks etc.

In order to improve the overall waste management system and urban environment, waste transfer stations have been proposed. The other prime objective of this intervention is to restrict the commuting of smaller vehicles to the landfill site, thus reducing negative environmental

impact. Depending upon the site, location, and collection vehicles, the following three types of transfer stations are proposed:

- **Mini Transfer Station**

Mini Transfer Station Arm Roll vehicles containers of 15-20 m3 size, placed along a ramp in enclosures.

- **Mobile Transfer Station**

Mobile Transfer Station for vehicle-to-vehicle transfer – where space is constrained, large vehicles, like compactor trucks, could be used for emptying small collection vehicles.

- **Main Transfer Station**

The transfer stations could be coupled with segregation or Material Recovery Facilities (MRFs), reducing load on the actual landfill site.

Three main transfer stations are proposed for Peshawar SWM;

- Transfer station at Sufaid Dheri near Afridi Model School
- Transfer station at Regi Lalma
- Transfer station at Azar Khani near Mall Mandi.

They will serve for transferring the waste from small capacity to large capacity vehicles to haul waste. Waste segregation will be carried out at Material Recovery Facility, located within the landfill site.

11.4.5. Landfill Sites

The Local Government Election and Rural Development Department (LG&RD) acquired land measuring about 819 Kanal (102.4 acres), out of which 32 Kanal (4 acres) is being used for dumping of waste in 2017 for a landfill site near village Ghari Faiz Ullha near Shamshato Refugee camp about 19 kilometres from the Ring Road Peshawar at Union Council Urmar Miana. The land was handed over to the Water Sewerage and Sanitation Company (WSSC) in 2018 and is being used as an open waste dumping site since then.

11.5. Proposed Alternatives for Solid Waste

Similar to other areas i.e., water supply, sewerage and drainage, WSSP has already prepared the detailed master plans for the management of the solid waste generated within the Jurisdiction of WSSP in urban UCs. Therefore, the consultant is again proposing the solid waste management system for the left-over population of 1,566,654 persons. This population was divided in four equal parts in each five-year interval. All the calculations were done based on these population slabs. The generation rate used is 0.45 Kg/Cap-day the same been used by WSSP.

The overall solid waste generation in each five-year interval, the number of communal containers of volume 0.9 m3, the number of hand-carts for DTD collection, the number of compactor trucks (7 m3 volume), number of sanitary workers, number of supervisors, inspectors, assistant managers are given in the table-51 below.

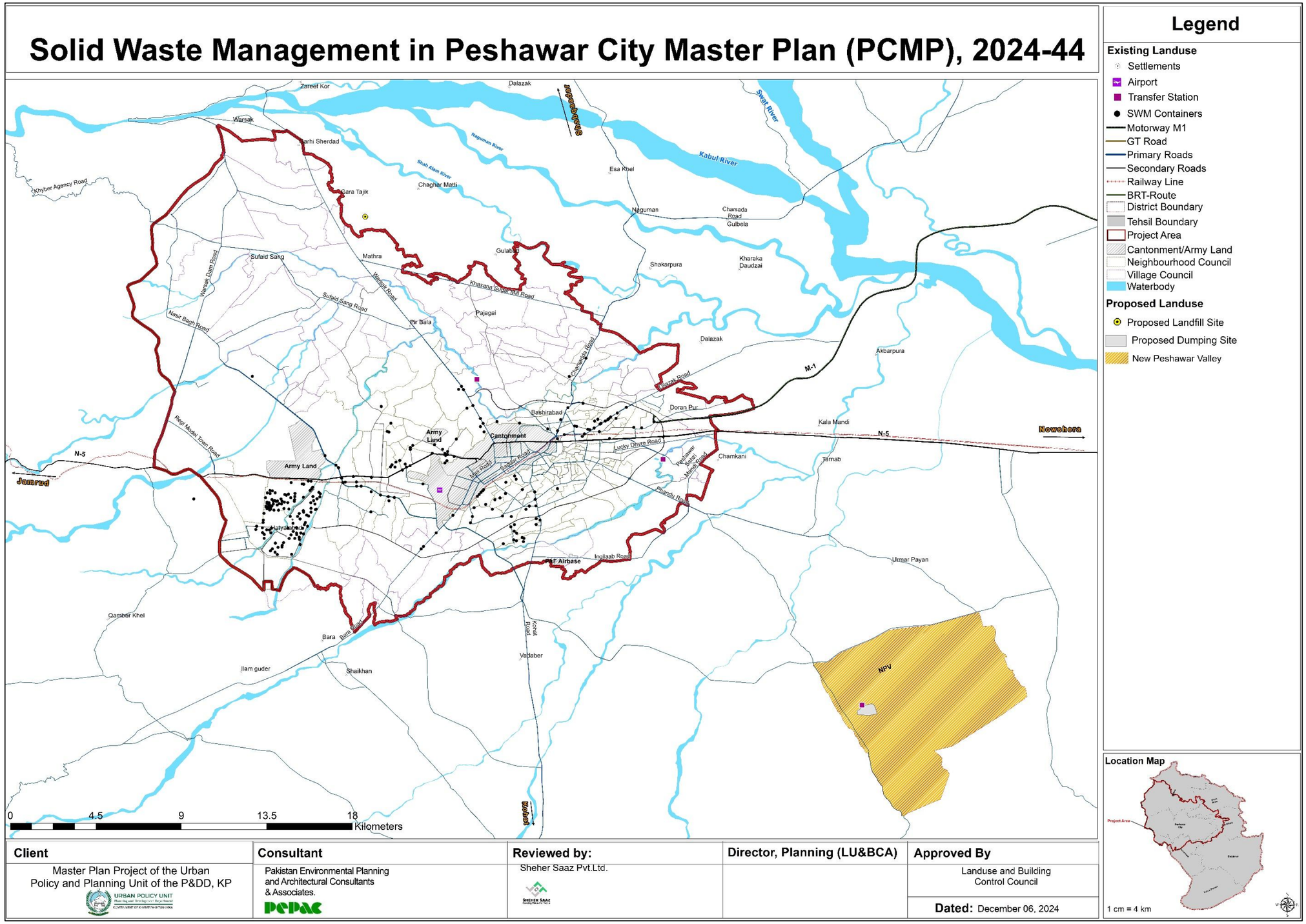
In case if the streets of the societies are wide enough to place communal containers near each home (at an appropriate distance where house owners may themselves throw garbage in communal containers the total number of hand-carts may be reduced. But at present it is assumed that almost 100% DTD collection will be provided.

The waste will be handed over to the WSSP management after collection at proposed landfill sites at north or south at an appropriate tipping fee. WSSP will be responsible for its treatment i.e., composting, material recovery, or waste-to-energy systems as proposed in its master plan by WSSP all such systems are already in consideration. The landfill site at the north is near the proposed housing societies where bulk of the population is being placed therefore, no need for any transfer station for these societies.

Table 51: Proposed No. of Containers till year 2044

Solid Waste Management System Requirement						
Parameter Description	**2024-2029**	**2029-2034**	**2034-2039**	**2039-2044**	**Total**	**Unit**
Total Population	391663	391663	391663	391663	1566653	No.
Solid Waste Generation Rate 0.45 Kg/Cap-day	194	194	194	194	775	ton/day
No. of Communal Containers (1 m3 0.2 ton/m3	1077	1077	1077	1077	4308	No.
No. of 7 m3 Compactor Trucks 0.55 ton/m3 & 2 Trips/day	25	25	25	25	100	No.
No. of 0.2 m3 Handcarts 0.4 ton/day DTD Collection rate Assuming 100% DTD Collection System	485	485	485	485	1940	No.
Sanitary Workers	783	783	783	783	3133	No.
Sanitary Supervisors	31	31	31	31	125	No.
Sanitary Inspector	8	8	8	8	31	No.
Assistant Manager Operations	2	2	2	2	8.0	No.

Map 36: Solid Waste Management - Peshawar



Source: Developed by Consultant

Chapter 12: Environment and Disaster Risk Reduction

12.1 Identification of Environmentally Sensitive Areas

Sensitive receptors include, but are not limited to, hospitals, schools, day-care facilities, elderly housing, and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Extra care must be taken when dealing with contaminants and pollutants in close proximity to areas recognized as sensitive receptors.

The typical descriptors and criteria for the sensitivity of a receptor are listed below.

Table 52: Typical Descriptors and Criteria for Environmental Sensitivity Areas

Typical Descriptors and Criteria for Environmental Sensitivity Areas	
Sensitivity	**Typical Criteria Description**
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale and limited potential for substitution.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.
Low	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale

12.2Proposals

The plans and proposals are explained below on the basis of priority, short term, medium term, and long-term basis.

12.2.1 Agricultural Land Conservation and Development

The growing need for space for residential, commercial, and other non-agricultural uses has threatened the city's agricultural lands. Anecdotally, there have been reports of agricultural lands to have been converted to non-agricultural uses, done either through legal prescription or illegal conversions (i.e., not cleared with government agencies concerned). However, determining the rate of conversion of the city's agricultural lands to non-agricultural uses, to cover a period of time, requires more detailed assessment and review of existing protocols on land classification and land use assessment involving land management agencies, such as the PDA, Directorate General of Farm Management, Research & Development Directorate, Peshawar.

The development of Agricultural Areas is based on the following:

- Intensify crops, livestock and poultry, and fishery production.
- Establish strategically located plant nurseries to supply location-specific crop varieties.
- Upgrade and intensify seedling production at the existing city plant nursery.
- Promote vegetable production through clustering.
- Provide post-harvest facilities and common service facilities (CSFs).
- Rehabilitate and upgrade existing irrigation system.
- Promote value-adding technologies to selected agricultural commodities where applicable.
- Provide alternative Agri-based livelihood projects.

- Improve the entrepreneurial skills of farmers.
- Use of modern techniques for cultivation with quality seeds, pesticides and fertilizers.
- Measures to reduce water logging and salinity and installation of tube wells.
- Rehabilitation / Re-Sectioning / Realigning of canals and drains.

12.2.2 Urban Forestation and Tree Plantation

Urban trees have long been a key element of city planning, offering numerous environmental benefits such as pollution absorption, storm water mitigation, atmospheric cooling, energy reduction, and habitat provision. Research highlights their role in increasing property values, reducing mental fatigue, and promoting well-being. Given the rising impacts of climate change, tree plantation is now recognized as a nature-based solution for mitigating pollution and extreme weather events. Sustainable urban forestry, guided by species composition, soil dynamics, and long-term planning, is crucial for maximizing these benefits.

In cities like Peshawar, urban forests and ecological corridors enhance air quality, water management, biodiversity, and climate resilience. These corridors connect fragmented habitats, creating cool air pathways and improving aesthetic and recreational spaces. To achieve biodiversity conservation, climate mitigation, and ecological connectivity, proposed actions include afforestation campaigns, ecological corridor development, community-based tree planting, and private land reforestation. A 22 km linear green corridor along canals and highways is also planned to improve environmental quality and urban liveability. Strengthening green infrastructure through well-managed urban forests is essential for creating a sustainable and inclusive Peshawar.

- **Goal:**

To enhance urban green spaces and improve the environmental and social health of the city. (Existing Parks Rehabilitation, New Parks, Urban Afforestation, Green Infrastructure).

- **Linkage with SDGs:**

The section is completely aligned with the goals and targets of Sustainable Development Goal – 15, 11 and 13 to improve the local ecology and biodiversity in Peshawar.

SDG 15 – Life on Land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Target **15.5** – *Protect Biodiversity and Natural Habitat* aims to take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

Target **15.8** – *Prevent Invasive Alien Species on Land and in Water Ecosystems* aims to Introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species

Target **15.9** – *Integrate Ecosystem and Biodiversity in Governmental Planning* aims to Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts.

SDG 11 – Sustainable Cities & Communities

Make Cities and Human Settlements inclusive, safe, resilient and sustainable.

Target **11.4** – *Protect the World's Cultural and Natural Heritage aims* the protection and conservation of natural resources located in Hazarganji Chiltan national park and surrounding areas of Quetta city.

Target **11.6** – *Reduce the Environmental Impact of cities* aims the reduction of adverse per capita environmental impact of cities, including by improving the air quality and ecology of the area to promote a sustainable environment.

Target **11.7** – *Provide Access to Safe and Inclusive Green and Public Spaces* aims to increase in provision of safe and ease assess to green spaces and public areas

SDG 13 – Climate Actions

Take urgent action to combat climate change and its impacts.

Target **13.1** – *Strengthening Resilience and Adaptive Capacity to Climate-Related Disasters* which aims to strengthen resilience and adaptive capacity towards climate-related hazards and natural disasters.

Target **13.4** – *Implement the UN Framework Convention on Climate Change* aims at fulfilling the requirements and commitments agreed under the UN Framework Convention on Climate Change.

12.2.3 Linear Plantation for Green Corridor

The networks of linear corridor which are connecting pathway among green belts, green spaces and linear plantation along roads, canals and tracks are designed to improve the environmental qualities of the district. Green corridors are especially beneficial for regional biodiversity as they create cool air pathways that cool cities and improve air quality. Additionally, green

corridors help to improve the aesthetic view of highways and offer locals recreational opportunities. In order to improve the environmental values of division, the networks of linear green corridors are needed of districts to frequently develop along green belts and increase the green infrastructure.

- **Proposed sites**

- Northern and Southern Bypass
- Budhni and Shah Alam Nullah and Hayatabad and Tajjabad Drain
- Railway Track
- Kabul River, Naguman river

- **Proposed Species for Plantation:**

- Mesquite
- Lachi
- Rushes
- Kanwal
- Beri

- **Conceptual Design:**

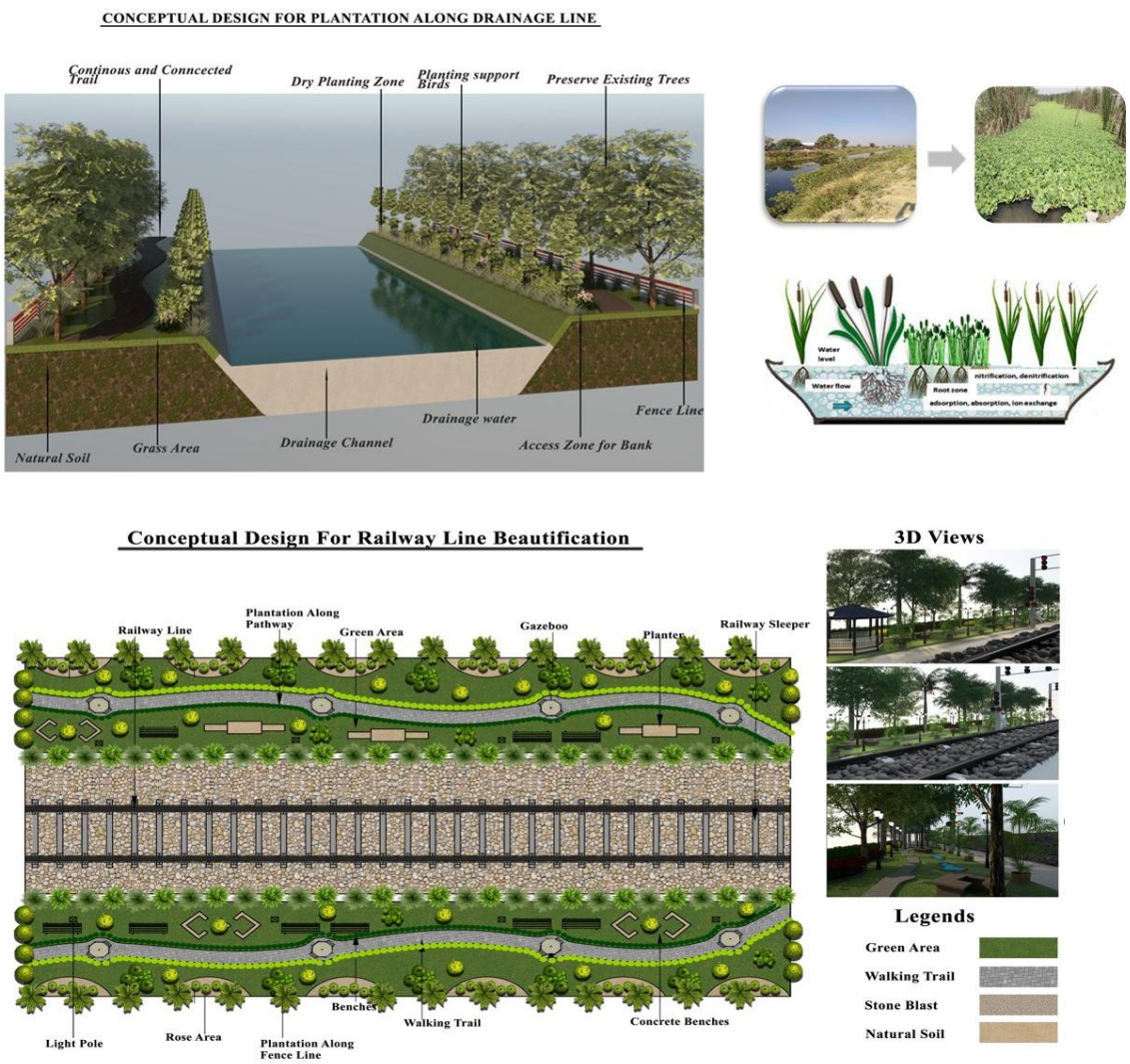
- The green corridor should be a connected network of green cover and green spaces to achieve the basic aim of the project.
- The plantation along water channel should be planned and based on stratification to enhanced the beauty of the region.
- Number of rows based on the availability of spaces along the planting area.
- The placement of vegetation around developments and the maintenance of larger, interconnected green spaces throughout regions should be done to promote air quality improvement.

3D Model of Conceptual Design of Avenue Plantation

Recommended native flora such as mesquite, lachi, rushes, kanwal, behi, etc

Present

Future



12.2.4 Kabul River Habitat Sanctuary

The Kabul River Habitat Sanctuary will be a habitat of ichthyofaunal diversity and species of birds including waterfowls. The sanctuary will also be vital to migratory birds and other wildlife of the region to enhanced the biodiversity richness. This flourishing urban sanctuary ecosystem will be influenced habitat conservation resulting in fresh water diversity that creates a dynamic and sustainably rich environment with high biodiversity. In addition to conservation and protection of this rare natural resource, the Sanctuary's goal also includes promoting environmental values and enhancing Sanctuary habitat.

This river sanctuary will serve as a flood protection site, with terraces of agriculture that protects the nearby Peshawar city from the flood. The sanctuary will also provide a recreation spot for the resident of Peshawar city and the nearby community, with amenities that includes walking tracks, cycling track, picnic spots, natural scenic spots etc.

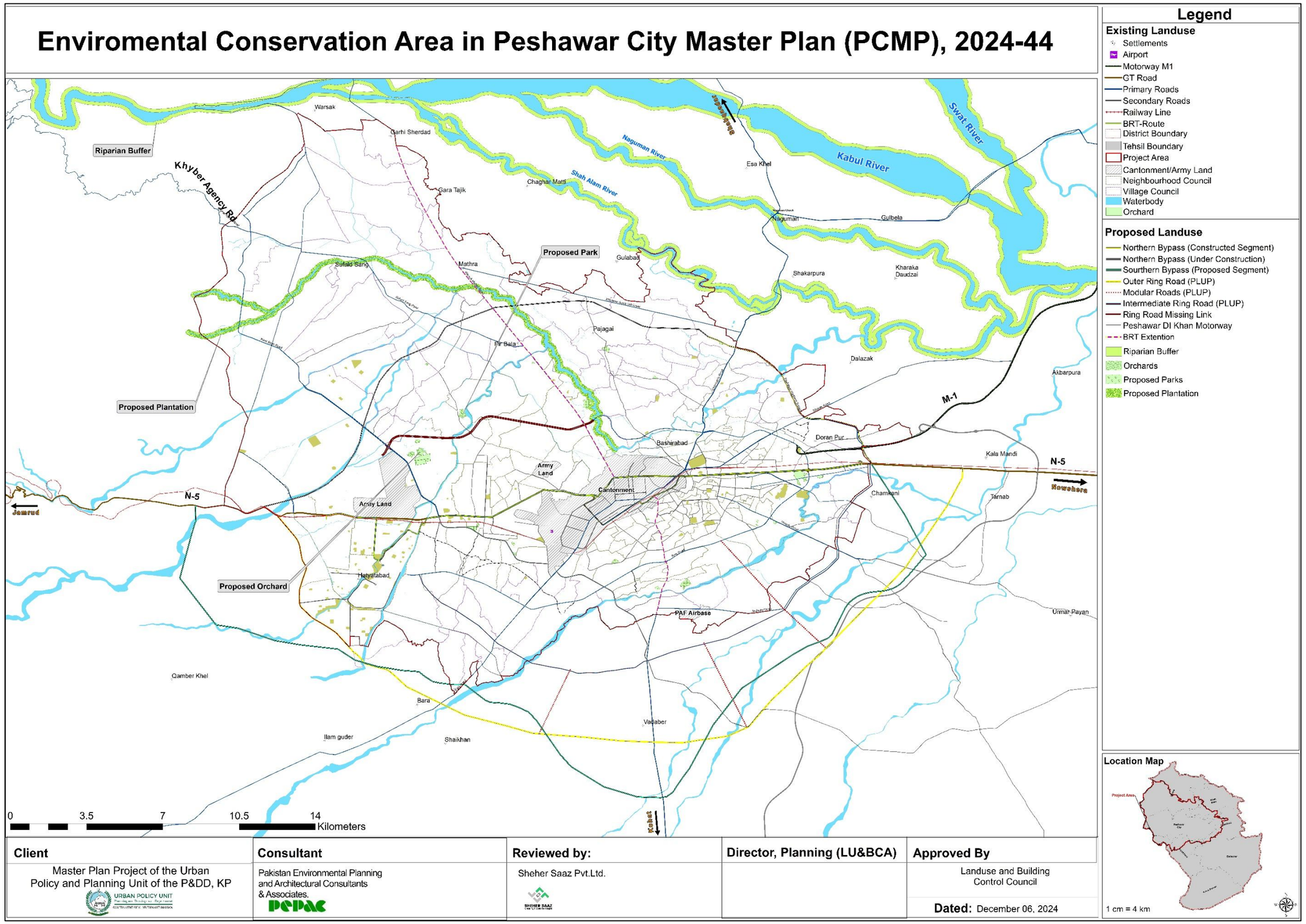
12.2.5 Wildlife and Biodiversity

The following adaptation measures have been proposed to for Fisheries habitat conservation and preservation.

Sr. No	Proposal	Sub - Action	Priority	Responsible Authority
1.	Strengthening of legal and institutional frameworks to materialize efforts towards biodiversity conservation.	Encourage the enhancement of biodiversity conservation efforts; support public and political sensitization activities to make biodiversity conservation as one of the top priority agendas.	Short Term	P&DD, FE&WD, WWF
		Take concrete steps to implement the previously developed Biodiversity Strategy and Action Plan.	Short Term	P&DD, FE&WD, WWF
		Review and update the existing plans regularly based on lessons learned during the practical implementation phases.	Short Term	P&DD, FE&WD, WWF
2.	Improving scientific research and biodiversity conservation implementation	Conduct applied research on biodiversity conservation in KP in the wake of Climate Change.	Medium Term	P&DD, FE&WD, WWF
		Document and incorporate indigenous knowledge into the latest scientific research findings/information for use in conservation planning and activities.	Medium Term	P&DD, FE&WD, WWF
		Extend conservation techniques in collaboration with local communities, utilizing their knowledge from a local perspective.	Medium Term	P&DD, FE&WD, WWF
		Integrate biodiversity conservation strategies into all relevant sectors including forestry, wildlife, aquatic and agriculture.	Medium Term	P&DD, FE&WD, WWF
		Encourage both in-situ and ex-situ conservation of valuable species for research and other uses in biodiversity-rich areas.	Medium Term	P&DD, FE&WD, LGE&RDD, Agriculture Department, Energy & Power, Irrigation Department, WWF

The map below is showing the Environmental Conservation areas of Peshawar city;

Map 37: Environmental Conservation Area Map of Peshawar Study Area



Source: Developed by Consultant

12.2.6 Air Quality Improvement Plan

Clean air is essential for all forms of life. Generally, clean air has no harmful pollutants or emissions in it and is safe to breathe. Human activities such as transportation, loose dust, and emissions from industrial processes are major contributors to contaminate air quality. Air pollution can have significant negative impacts on human health, ecology and on the environment.

Air pollution is considered as one of the global concerns and a major threat to human health, food security, ecology and the environment. It is one of the unavoidable problems during the process of urbanization and industrialization. Every year around 4.5 million people die due to outdoor air pollution reported by Lancet Commission on Pollution and Health. According to WHO concentration of various pollutants shouldn't increase the mentioned standard concentrations the safeguard human health. In Pakistan, these standards are termed National Environment Quality Standards (NEQS).

- **Goal:**

To improve air quality and reduce emission at the urban level, emphasizing the broader objective of enhancing public health, protecting the environment and creating a healthier and more sustainable environment for the residents of Peshawar.

- **Proposed Interventions**

Medium – Term Focus Area: Air
Installation of Ambient Air Quality Monitoring Network • 01 Fixed Monitoring Station for PM2.5 and PM10 • 1 Station Wagon with CO, SO2, NO, NO2, and O3 gas analyzers
Monitoring of Industrial pollution through Stack Emissions Monitoring • Installation of stack emissions monitoring sensors in 50% of industrial units. • Develop mechanism for emissions reduction incentives, carbon taxing and carbon trading
Reduce and Monitor Vehicular Emissions • Vehicles Registration Drive across the city to collect on-road vehicles data and account for unregistered vehicles. • Emissions testing of 70% of on-road vehicles. • Promotion of smoother traffic flow, for all travel modes using Intelligent Transportation Systems (ITS), i.e., improved signal coordination, prioritized public transit and electronic way-finding applications, and mass-transit routes information, all through a central dashboard and mobile application. • Regulate signal timing for smoother traffic flow during construction projects. • Implement congestion pricing mechanism.
Control of Emissions from Stone Crushers • Relocation of all stone-crushing units away from residential areas. • Greening of areas from where the industrial units have been relocated. • Regular Monitoring and Inspection of all Units. Implementation of administrative penalty against the violators.
Development of Low Emission Zone • Designate the boundary of the low-emission zone and place signboards for information to the public. • Development of Pedestrian walkways within the designated zone. • Develop and Implement Strategies to reduce emissions in the low emissions zone.

• Development of community parking spaces inside the zone. • Monitoring of Ambient Air Quality in the zone to test the effectiveness of strategies
Long – Term
Focus Area: Air
Reduce and Monitor Vehicular Emissions • Implementation of Administrative Penalty for Unregistered vehicles and vehicles emitting pollutants in excess of motor vehicle exhaust emissions standards. • Implementation of VICS System and Vehicle Retirement Policy.
Monitoring of Industrial pollution through Stack Emissions Monitoring • Regular Data Sharing on industrial emission through a Centralized Dashboard. • Installation of stack emissions monitoring sensors in rest of the industrial units. • Implementation of Administrative Penalty against Industries in violation of BEQs for Industrial Gaseous Emissions
Reduce and Monitor Vehicular Emissions • Implementation of Administrative Penalty for Unregistered vehicles and vehicles emitting pollutants in excess of motor vehicle exhaust emissions standards. • Development of Vehicle Retirement Policy and Vehicle Inspection and Certification System (VICS) Project for Quetta City.
Development of Low Emission Zone • Development of walkable pathways on the remaining 50% of primary roads within the city. • Increase the radius of the low emission zone to the entire Quetta City. • Monitoring of Ambient Air Quality in the zone to test the effectiveness of strategies

12.2.7 Noise Quality Improvement Plan

Sound is essential to our daily lives, but noise is not. Noise is generally used as unwanted sound or sound which produce unpleasant effects and discomfort on the ears. Noise can create from many sources including household, industries, generators, and transportation etc. In case of Peshawar, Transportation is the major source of noise pollution. As the city is getting urbanized by-passing time, so the increase in traffic volume, traffic jams and congested areas has given rise to increase in noise. The ambient noise levels can be reduced, and the noise quality could be improved by adopting the following measures.

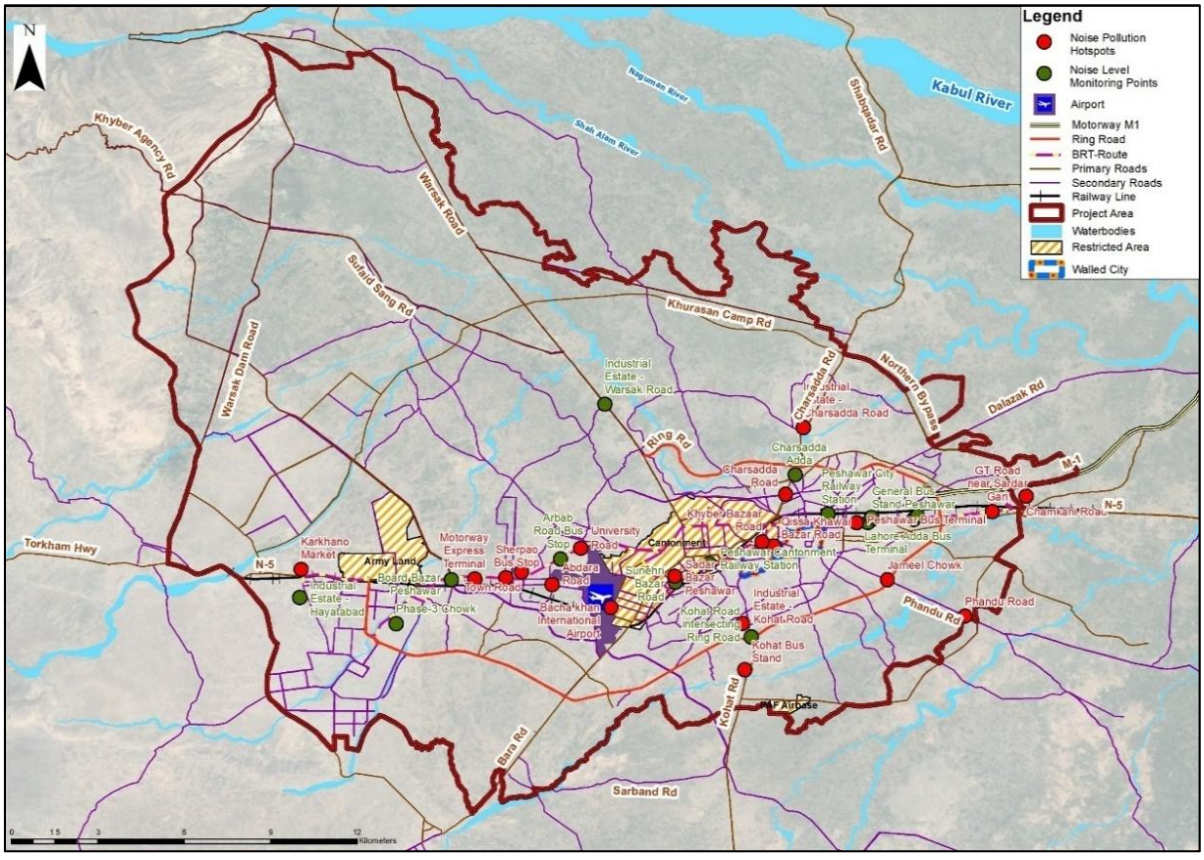
Table 53: Strategic Environmental Enhancement Measures for Noise Quality Improvement

Sr. No	Strategic Environmental Enhancement Measures
Industrial Sector	
1.	Improvement in design and operations of machinery.
2.	Installation of noise barriers.
3.	The development of green belts as a buffer can also help in reducing urban noise levels to great extent.
4.	Reduce wheel-rail contact noise by well-maintained rails, wheels and usage of disc brakes.
5.	Innovations in rail engine and track technology
Residential Sector	
6.	Monitoring and enforcement noise standards in residential areas.
7.	Imposition of restrictions on traffic hours.
8.	Imposing restrictions on operation hours for various urban functional zones.
9.	Establishment of suitable buffer zones around residential areas to insulate from noise emanating areas such as industrial, commercial, road, railway traffic, etc.
10.	Traffic signs are required to place on obvious points, especially, near hospitals, schools, and residential areas.
11.	Vehicle horns and especially pressure horns must be prohibited within city areas.

Sr. No	Strategic Environmental Enhancement Measures
12.	Implement zoning controls and other land-use policies to limit or avoid the proximity of noisy and noise-sensitive uses.
13.	Subsidize acoustical retrofits (e.g., double pane windows, mechanical ventilation) for existing residential buildings near traffic noise sources.
14.	Implement and enforce stringent policies limiting the use of construction equipment at night.
15.	Control of vehicle speed and maintenance of streets can limit general traffic noise.
16.	Adopt building standards to require quiet interiors.
Commercial Sector	
17.	Setting up of road or rail noise barriers.
18.	Municipalities can purchase quieter public service and transit vehicles (e.g., electric and hybrid buses). They can also monitor and regulate private refuse service vehicles.
19.	Ensure machinery and equipment are installed in new buildings as quietly as possible.
20.	Implement and enforce noise standards for loud machinery and equipment and can restrict the use, location, or timing of specific equipment or activities to protect health and sleep.
21.	Permit and monitors entertainment venues requiring building insulation and limiting hours of operation.

Source: Developed by Consultants

Map 38: Noise Pollution Hotspots in Peshawar Study Area for Improvement

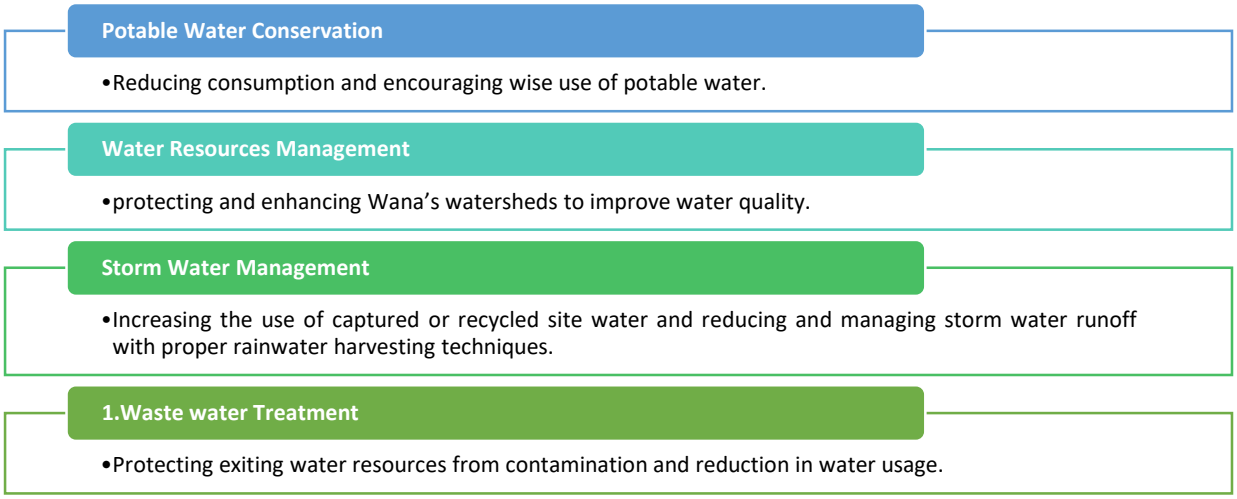


Source: Developed by Consultant

12.2.8 Water Quality Improvement Plan

Access to clean potable water needs to be recognized as a limited resource. New integrated water management approaches that encompass the economic, social, and environmental benefits of water conservation and water quality protection are critical to address this vital

resource. The water quality related objectives and related actions relate to managing water resources through:



A. Potable Water Conservation

Cities largely depend on clean water for drinking, a healthy natural environment, recreation, household and commercial uses, sewage treatment, and many other functions. The water and Sanitation department is responsible for the treatment and distribution of potable water supply, which is drawn from rivers and underground resources. The conservation of drinking water should be ensured by the following measures;

Table 54: Strategic Environmental Enhancement Measures for Potable Water Conservation

Sr. No	Strategic Environmental Enhancement Measures
1.	Develop and implementation of city specific policies to promote sustainable urban development including buildings and facilities that support reduced water consumption. **a.** Develop policies and standards requiring new development applications to submit a water conservation plan, those details proposed water reduction targets, tactics, and water-saving devices. **b.** Develop a plan to install water-conserving technology and/or retrofit low-flow fixtures. **c.** Implement wastewater and greywater demonstration projects (e.g., grey-water recycling, composting toilets).
2.	Work with people, NGOs and Academia to communicate the value of water and its conservation.
3.	Collect and reuse the swimming pool and mosque's ablution area water to irrigate local parkland and sports fields, as appropriate.
4.	Develop and distribute public information on water efficiency.
5.	Support Landscaping Program that encourages the planting of native species to reduce watering requirements for residents, industrial, commercial, and institutional land uses.
6.	Support the WASA to systematically reduce leakage in the water distribution systems. Introduction of water metering system to avoid water wastage.
7.	Monitoring potable water consumption of residential and industrial/commercial/institutional users.
8.	Development of Environmental Monitoring plan to Monitor the surface water quality in the city.

Source: Developed by Consultants

B. Ground Water Quality

The discharge of sewerage, industrial wastewater, agriculture runoff, urban sprawl, livestock sheds, and industry, ultimately deteriorated the water quality as well as quantity. Surface water is the sole source of groundwater aquifer recharge along with rainfall. Consequently, unplanned development scenario keeps on adding threats to the groundwater quality.

Table 55: Strategic Environmental Enhancement Measures for Ground Water Quality

Sr. No	Strategic Environmental Enhancement Measures
1.	**Rainwater harvesting** should be a mandatory part in all the building structures in the new developments. Rainwater harvesting helps increase the water table, improve the quality of groundwater and reduce tube well-pumping costs.
2.	WSSP should take relevant measures to control demand by reducing per capita water availability by educating households to use water more wisely.
3.	The incentive programs should be launched to promote water conservation by giving initiatives to homeowners and businesses to encourage to install of plumbing fixtures and appliances with water-efficient models.
4.	Use high-efficiency irrigation for Urban farms such as drip irrigation instead of flood irrigation.
5.	In order to promote the culture of water conservation, a metering system should be introduced to charge water on a volumetric basis. This will help in reducing water use, in the same way as is being done for electricity, gas, and other utilities.
6.	An integrated water resource management approach should be adopted by involving all stakeholders for the protection of water quality. The linkage between research and development needs to be strengthened.

Source: Developed by Consultants

C. Storm water Management

Table 56: Strategic Environmental Enhancement Measures for Storm water Management

Sr. No	Strategic Environmental Enhancement Measures
1.	Develop a residential storm water management utility fee to help fund storm water management retrofits and maintenance.
2.	Develop and implement a storm water management facility maintenance strategy.
3.	Undertake low-impact development projects and strategies such as rain gardens, porous pavement, etc. as part of road or parking lot reconstruction and development projects.
4.	Usage of parks for temporary excess rainwater storage and low-impact development features to deter basement flooding.
5.	Protect, preserve, and enhance the urban natural areas and wetlands which naturally provide flood control.
6.	Acquire lands to enhance flood protection. Flood protection studies should be carried out to avoid flood damages and to protect the health and safety of the community.
7.	Establish guidelines that will require the City to consider the installation of a green roof for the reconstruction, development and/or replacement of existing roofs at City-owned buildings and facilities.

Source: Developed by Consultants

D. Wastewater Treatment

Table 57: Strategic Environmental Enhancement Measures for Wastewater Treatment

Sr. No	Strategic Environmental Enhancement Measures
1.	Invest in existing sewers, Improvement and rehabilitation of sewer network.
2.	Install decentralized waste treatment plants in designated places to conserve and treat water.

Sr. No	Strategic Environmental Enhancement Measures
3.	Reduce water pollution discharges from City operations. **a.** Buy and use product alternatives with lower toxic levels (for example, natural fertilizers, such as compost or petrol, environmentally friendly cleaning products). **b.** Replace pesticides with herbicidal vinegar in parks and green areas to reduce environmental pollution where practical. **c.** Rehabilitation of existing landfills or waterways. **d.** Development of landfill sites and dumping sites for proper waste disposal. **e.** Implementation of tree plantation adjacent to watercourses to improve the water quality before the storm water runoff.
4.	The industrial sector should be encouraged to provide a complete recycling/reuse system for water conservation, preferably by adopting the Zero Liquid Discharge facility. For this purpose, the government provides subsidies and funding to the industrial sector to introduce green practices in the city.
5.	Identify suitable locations and Sewerage and wastewater treatment plants should be installed for proper treatment of sewerage and wastewater.
6.	Vehicle service should be encouraged with no or little water usage to conserve the water resource.

Source: Developed by Consultants

E. Surface Water Management

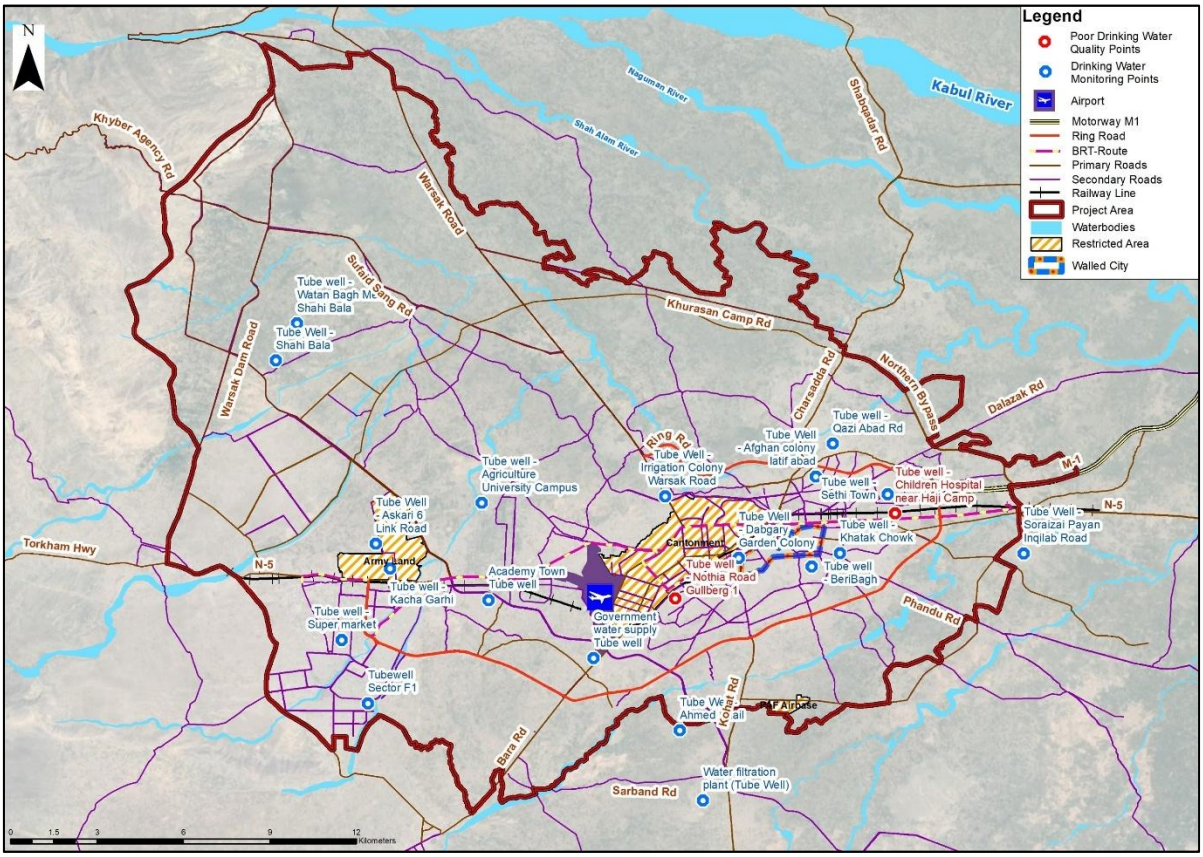
The strategic mitigation measures in order to cater the surface water pollution is here as under.

Table 58: Strategic Environmental Enhancement Measures for Surface Water Management

Sr. No	Strategic Environmental Enhancement Measures
1.	Regular Flushing of surface water bodies is required to flush out the deposited sediments. Natural flushing can happen during the flooding season, but steps must be taken in case natural flushing is not happening. The flushing will have a positive impact on the life of the water body and the downstream ecosystem.
2.	Sedimentation Management Plan is needed as part of the River Basin Management Plan to be developed.
3.	Wastewater treatment plants should be proposed to reduce surface water pollution, and to treat, reuse and recycle water.

Source: Developed by Consultants

Map 39: Water Pollution Hotspots in Peshawar Study Area for Improvement



Source: Developed by Consultant

12.2.9 Climate Change

The current state regarding climate change revealed that Pakistan is rated among the top 10 most vulnerable countries to climate change. Increased risks of Extreme Events (floods, urban heat Iceland, extremely high/low temperatures, etc.); Severe water- and heat-stressed conditions in arid and semi-arid regions leading to reduced agricultural productivity; Increase in Deforestation; Loss of Biodiversity; Health Risks.

Goal:

"To enhance resilience by strengthening the adaptive capacity of the Peshawar city to tackle climate change impacts."

Table 59: Strategic Environmental Enhancement Measures for Climate Change

Sr. No	Strategic Environmental Enhancement Measures
○	The Forest area is planned to be expanded with increased green belts and tree plantations along roadside railways and walking tracks and ecocities. Forests and urban green spaces will deliver substantial economic benefits to the whole city by mitigating a wide range of the expected impacts of climate change and is the safest, most reliable means of realizing several sustainable development goals.
○	A concept of green walls should be introduced in vertical building patterns to mitigate the GHGs and to gain multiple environmental benefits at the same time.
○	Low impact development and green building infrastructure can reduce both urban heating and air pollution.

Sr. No	Strategic Environmental Enhancement Measures
○	In the walled city area, where sufficient green places cannot be developed, a concept of green walls should be introduced in vertical building patterns in the urban area to mitigate the GHGs and gain multiple environmental benefits at the same time.
○	To cope with adverse impacts on agriculture, it is important to introduce climate-resilient varieties of agriculture.
○	It is necessary to plan the cultivation of crops by considering the changing of seasonal patterns.

Source: Developed by Consultants

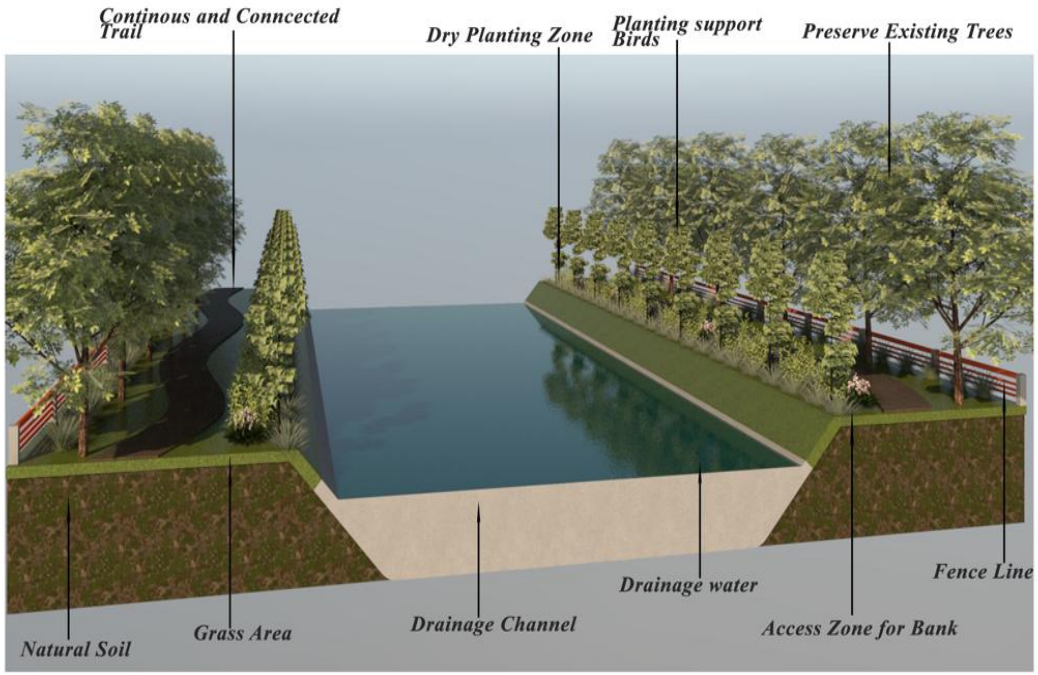
Nature-Based Solution; Treatment & Plantation through Construction of Wetland

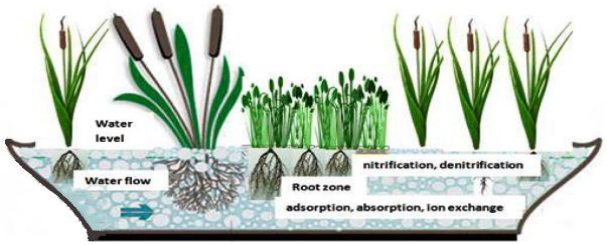
The use of plants to purify water supplies makes it both helpful to surrounding employees and communities and environmentally benign. By using plants, bacteria, or other related microbial organisms to absorb toxins from water, it is feasible to purify water and wastewater. The creation of a low-cost bio-remediation technology was made possible by the natural process of phytoremediation, which takes place in an ecosystem through the involvement of organic or inorganic constituent cycles. This process allows for the remediation to be carried out by retention, removal, or degradation. The constructed wetland is the most commonly used type of phytoremediation for wastewater treatment.

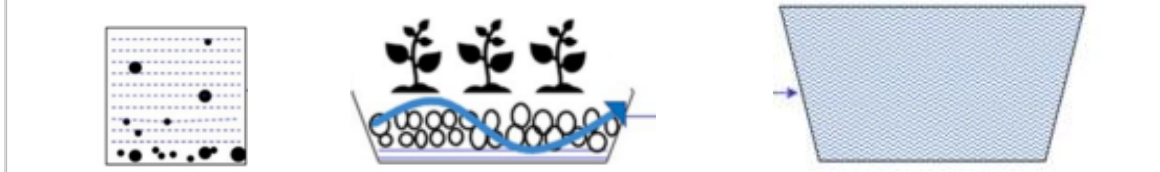
Conceptual Design

- Reed bed and planting bed prepared for water purification
- Introduction of eco-friendly aquatic plant species having the ability of phytoremediation to treat the water.
- The selective proposed plant species for water resource filtration are as follows:
  - Phragmites karka (Common Reed)
  - Typha latifolia (Cattail)
  - Potamogeton perfoliate (Redhead Grass)
  - Pistia stratiotes (Water Lettuce)
  - Nelumbo nucifera (Indian Lotus)
  - Lemna minor (Duckweed

CONCEPTUAL DESIGN FOR PLANTATION ALONG DRAINAGE LINE







12.3 Urban Design Project: Railway Track Plantation

12.3.1 Conceptual Design

- Ornamental Plantation to improve the aesthetic sense of the area.
- Indigenous plantation to improve environmental values and urban biodiversity.
- Grassy lawn to stabilize the nearby soil along railway track.
- Provision of Benches for locals and traveler.
- Provision of Light Poles to enhance the aesthetic values.

Plantation and Beautification along Hayatabad – Tajjabad Drain

PROJECT 3: Installation of Air Quality Equipment

Peshawar is one of the main industrial hubs and the sixth-largest city in Pakistan. The situation of environmental pollution in Peshawar is aggravating, day by day due to industrial expansion, rapidly increasing urbanization, and an increasing number of vehicles are factors responsible for environmental pollution generally in terms of air quality. Air quality monitoring is an important factor in enabling effective monitoring decision-making on-air quality issues. One of the biggest challenges in air quality management is proper access to air quality data. The Pakistani government has started to respond to this air pollution challenge.

Scope of Project

The project aims to record air pollutant concentrations (PM2.5, PM10) in hotspot areas of Peshawar.

Activities

Installation of air quality monitoring equipment (US-EPA Approved BAM 1025) and low-cost sensors and LCD displays in hotspot areas of Peshawar city.

Greening of Industries

According to Development Statistics of Khyber Pakhtunkhwa 2021, there is a total of 977 registered industrial units in the Peshawar District in the year 2019-2020. Out of those 977, 907 are functional. A comprehensive approach is required for pollution prevention management in the industrial sector of Peshawar.

Greening of Industries is a pathway for protecting communities, vital ecosystems, and the global climate from escalating environmental risks and emerging scarcities of natural resources. The greening of industries can be operationalized by mainstreaming and scaling up the practices for pollution reduction by installing effluent treatment plants, and installation of emission reduction technologies. This will help to increase the supply of appropriate, affordable and reliable environmental goods and services.

Chapter 13: Urban Regeneration Proposals

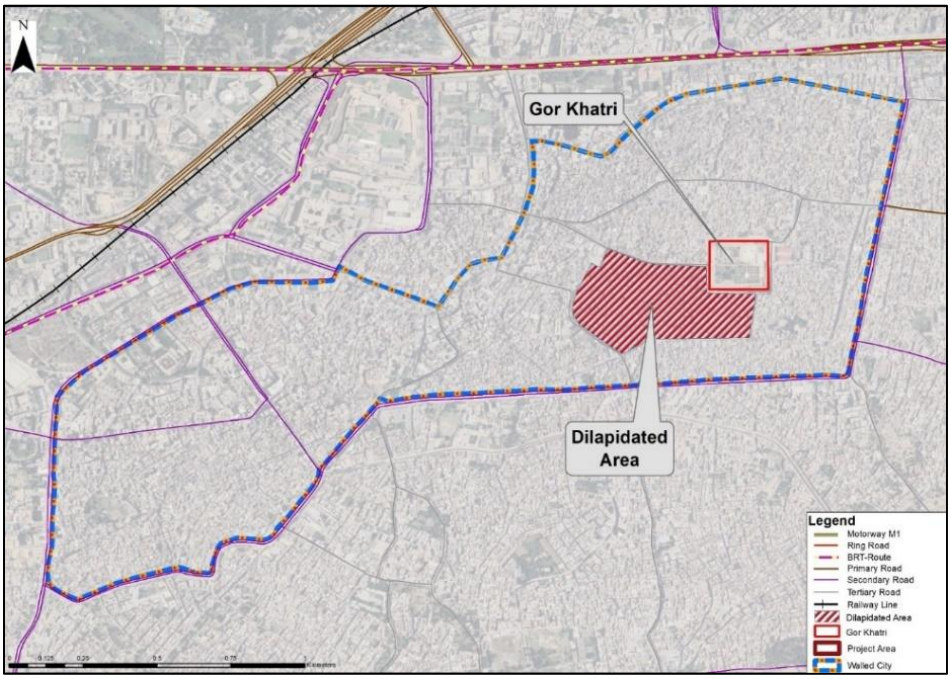
Heritage encompasses buildings, monuments, sites, and landscapes of historical or cultural significance, requiring preservation and enhancement to reflect a city's cultural, social, and architectural legacy. Peshawar, one of South Asia's oldest cities, is rich in heritage, with structures dating back to the Mughal era, ancient Buddhist sites like **Shahji Ki Dheri**, and Indo-Greek artifacts from **Gor Ghatri**. The city also houses Hindu, Sikh, and Muslim sites, many still in use. However, these heritage sites are in a deteriorating state and require urgent restoration and revitalization.

13.1.Regeneration of Walled City Peshawar

The old city of Peshawar has evolved over time, but key landmarks like Qila Bala Hisar, Gor Khatri, Karimpura, and Pipalmandi have remained central. The area features historic lanes, including those from Chowk Yadgar to Gor Khatri and Pipalmandi to Yakatut Gate, with significant sites like Mahabat Khan Mosque and Dhakki Nalbandi. Another key zone lies between Kohati Darwaza and Qissa Khwani, known for traditional crafts and historic markets. The consultant proposes urban regeneration of these areas, including Qissa Khwani Bazaar, a 400-year-old marketplace, to boost tourism and revitalize local businesses.

13.2. Restoration of Gor Khatri Ruins

From archaeological, heritage and historical point, the Gor Khatri Ruins are of immense significance. Over the years, some restoration work had been initiated by the government, and the archaeological site has been preserved to an extent. It has been further suggested to repair the existing ruins in order to protect the history of the area. This will also play a role in strengthening the tourism industry by displaying Peshawar's colourful, multicultural, and multi-faceted past.



Recommendations:

1. Employ traditional building materials like lime plaster, brick masonry, and wooden elements that match the original construction.

2. Repair deteriorated masonry using compatible materials and techniques to preserve the historical authenticity.

3. Apply protective treatments to surfaces to prevent further erosion or damage due to weather conditions.

4. Integrate spaces within Gor Khatri for community and cultural activities to ensure the site remains a living part of Peshawar's urban fabric.

5. Convert parts of the site into a museum that displays its archaeological significance, historical periods, and the broader history of Peshawar.

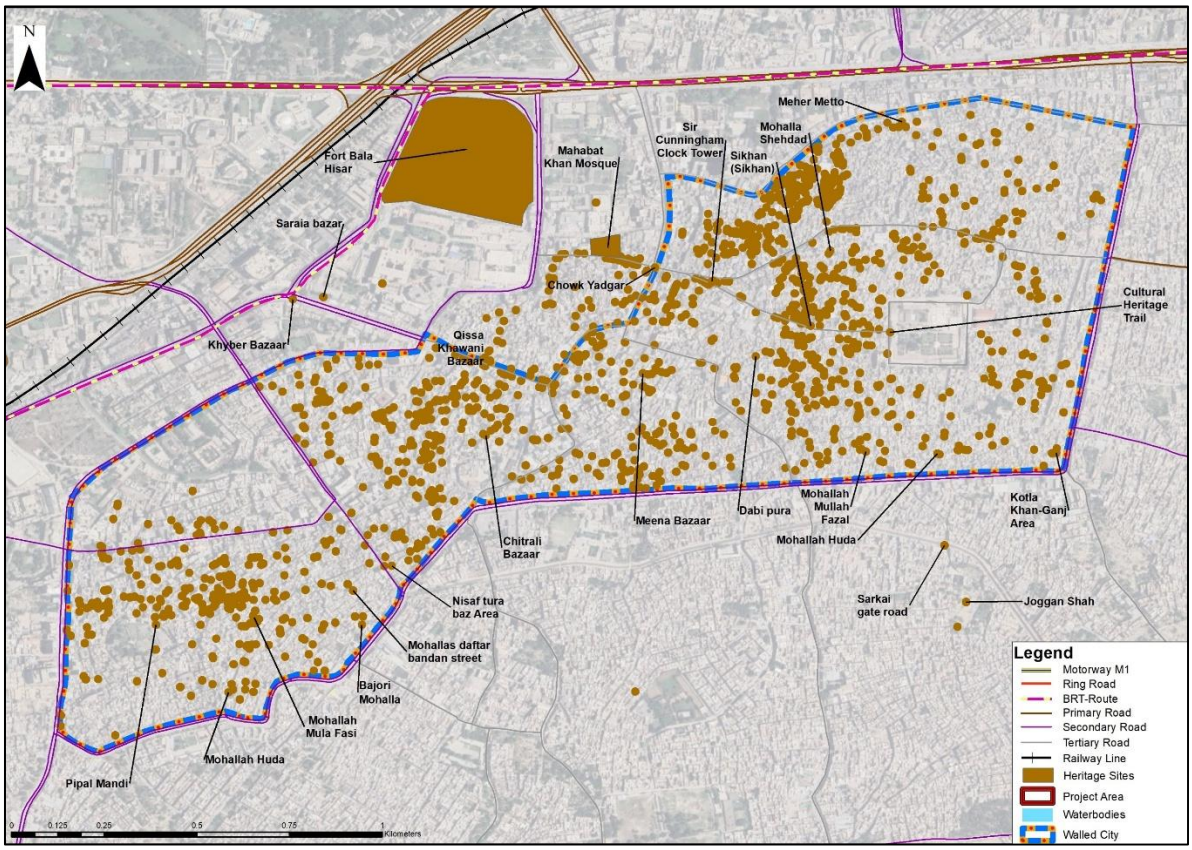
Chapter 14: Culture, History and Heritage

14.1.Background

Peshawar's historic core, starting from Lahori Gate, includes key cultural landmarks such as Mohabbat Khan Mosque, Sir Cunningham Clock Tower, Qissa Khwani Bazaar, and Gor Khatri Museum. The Gor Khatri Heritage Trail Project aims to enhance tourism by leveraging these sites.

- **Heritage Sites Cluster**: Guided walks can be developed to connect sites like Mohalla Shehdad, Kohat Gate, and Wazir Bagh, creating a day-long tourist activity.
- **Transport Accessibility**: BRT routes and primary roads enhance accessibility, enabling both public and private transport options for tourists.
- **Walled City Development**: Restoration of the historic Walled City can transform it into a major cultural attraction.
- **Cultural Hubs**: Qissa Khwani Bazaar, Wazir Bagh, and Sarkai Gate Road can be further developed for cultural events, festivals, and performances, attracting both local and international visitors.

Map 40: Existing Heritage and Cultural Sites - Peshawar



Source: Developed by Consultant

14.2. Culture Heritage of Peshawar

Peshawar, historically influenced by civilizations along the Silk Road and Khyber Pass, is a cultural hub blending Persian, Central Asian, and Indian traditions.

- **Pashtun Traditions**: Rich in Pashto language, music (rubab, tabla), and handicrafts.
- **Qissa Khwani Bazaar**: Historically a gathering place for traders and storytellers, preserving Peshawar's oral tradition.
- **Festivals**: Celebrates Eid-ul-Fitr, Eid-ul-Adha, and Nowruz with cultural performances and feasts.
- **Cuisine**: Famous for Chapli Kebab, Namak Mandi Karahi, and Pulao, best experienced in Saddar Bazaar.

Various empires shaped Peshawar's culture and architecture:

- **Mughal Influence**: Flourished as a trade hub; Mahabat Khan Mosque (1630) stands as a Mughal architectural marvel.
- **Colonial Legacy**: British-era landmarks like Sir Cunningham Clock Tower and Lady Reading Hospital reflect colonial architecture.

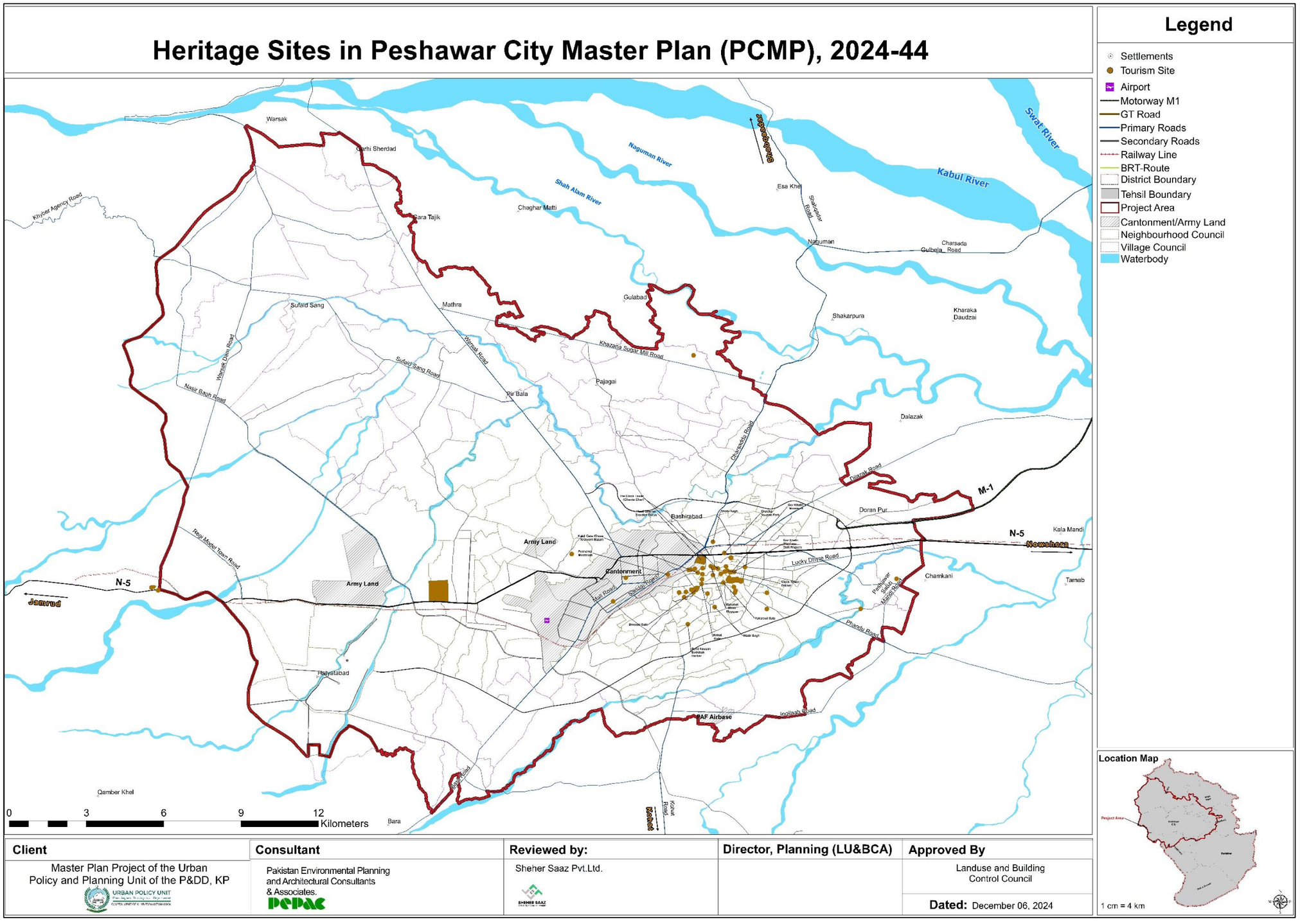
14.3. Importance of historical and cultural heritage

- **Bala Hisar Fort** – A Mughal-Afghan military stronghold offering panoramic city views.
- **Mahabat Khan Mosque** – A 17th-century Mughal-era mosque with intricate tile work.
- **Sir Cunningham Clock Tower** – A British-era Neo-Gothic landmark symbolizing colonial heritage.
- **Cultural Heritage Trail** – A guided route connecting historic sites, mosques, and old bazaars.
- **Traditional Neighborhoods** – Mohallah Shehdad & Mohallah Mullah Fazal showcase classic Peshawari architecture.
- **Chowk Yadgar** – A historic square honoring national martyrs and serving as a cultural gathering point.
- **Meena Bazaar & Chitrali Bazaar** – Vibrant markets offering traditional crafts, textiles, and local foods.
- **Wazir Bagh** – A historic garden providing a green retreat amid the city's hustle.

14.4. Peshawar Historical Heritage:

Peshawar is a city with a very rich history, which can be seen in its architecture, historical sites, and artifacts-mostly spread all over the city and outlined in the map below. This heritage opens deeper insight into how Peshawar was built over centuries.

Map 41: Heritage sites in PCMP



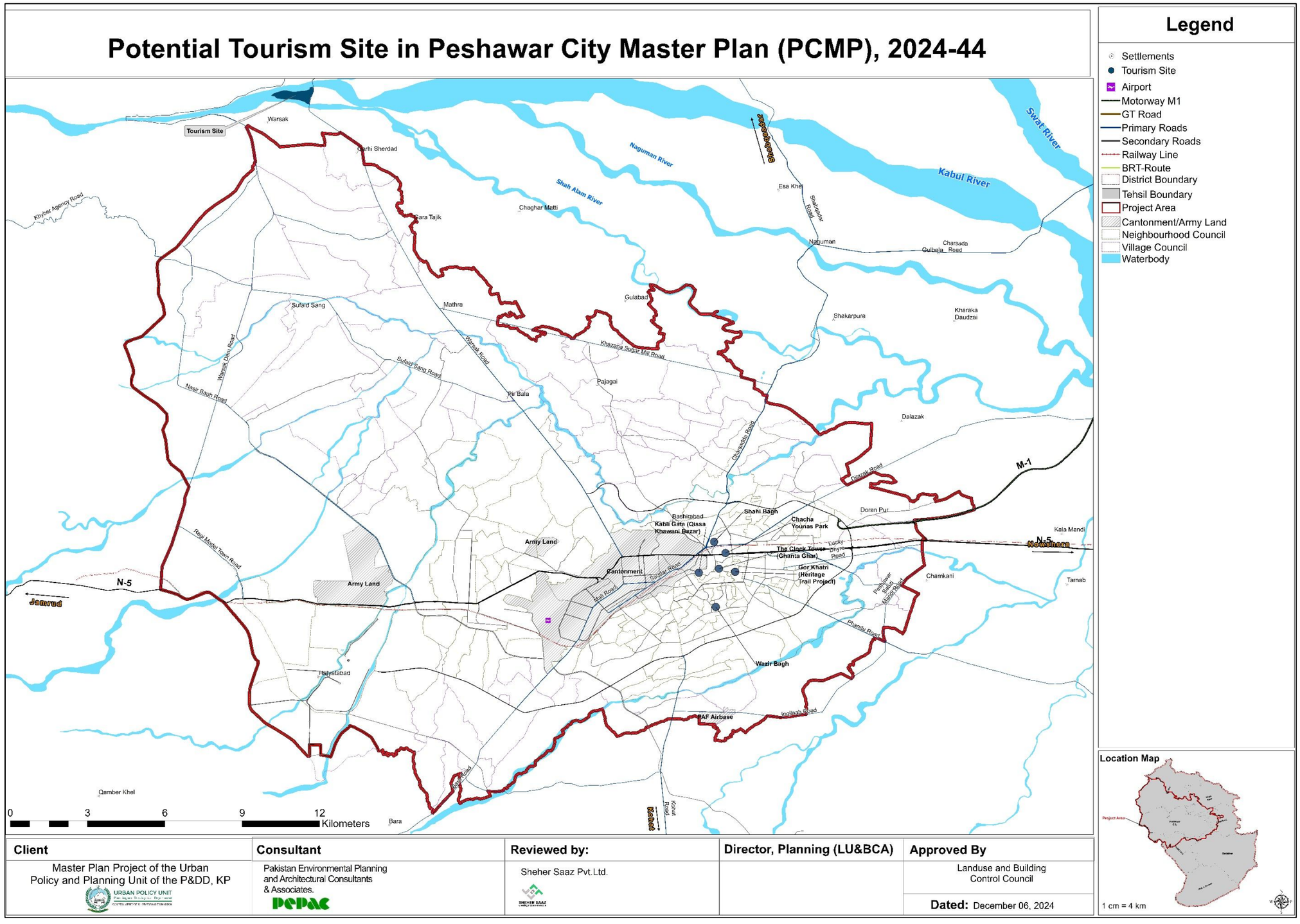
Client	Consultant	Reviewed by:	Director, Planning (LU&BCA)	Approved By
Master Plan Project of the Urban Policy and Planning Unit of the P&DD, KP URBAN POLICY UNIT	Pakistan Environmental Planning and Architectural Consultants & Associates. PEPAC	Sheher Saaz Pvt.Ltd. SHEHER SAAZ		Landuse and Building Control Council **Dated:** December 06, 2024

Source: Developed by Consultant

14.5. Cultural Heritage Potential Tourism Destinations for Peshawar

Peshawar's cultural heritage tourism offers diverse attractions, starting with the Clock Tower (Ghanta Ghar), a colonial-era landmark ideal for interactive historical tours. The Shahi Bagh, a Mughal-era royal garden with scenic fountains, provides a serene heritage experience, while Chacha Younas Park serves as a vibrant venue for cultural events. Gor Khatri, a key archaeological site, highlights Peshawar's Silk Road history, making it perfect for guided heritage tours. Wazir Bagh, another Mughal garden, holds potential for heritage walks, educational programs, and cultural festivals. Lastly, Kabli Gate at Qissa Khwani Bazaar marks the entrance to a bustling cultural hub, where walking tours, food festivals, and live music can offer an immersive experience of Peshawar's rich traditions.

Map 42: Potential Tourism, Culture and Heritage Sites in Peshawar



Source: Developed by Consultant

14.6. Tourism in Peshawar

Tourism in Peshawar revolves around its rich historical sites, vibrant bazaars, and remarkable architectural heritage, attracting both local and international visitors. The Walled City of Peshawar remains one of the most historically significant parts of the city, dating back to the Mughal era. Flanked by ancient gates such as Kabuli Gate, Kohat Gate, Lahori Gate, Yakatoot Gate, and Kotal Gate, this area once served as a secure trading hub while withstanding invasions. Today, these gates stand as a testament to Peshawar's strategic and cultural legacy.

A key initiative in preserving this heritage is the Cultural Heritage Trail Project, which restores historical pathways and connects tourists to significant landmarks, including bazaars, havelis, mosques, and museums. Among these attractions, Qissa Khwani Bazaar remains a bustling marketplace, famous for its traditional crafts, spices, antiques, and its deep-rooted storytelling traditions. Gor Khatri Archaeological Complex, an ancient site that has witnessed multiple civilizations, houses the Gor Khatri Museum, offering valuable insights into Peshawar's archaeological and cultural evolution.

To further enhance Peshawar's tourism potential, the Heritage Trail Project plays a vital role in restoring roads, resurfacing pathways, and rehabilitating old buildings to create a more accessible and immersive historical experience. With its close proximity to the Khyber Pass, archaeological sites, and centuries-old bazaars, Peshawar has immense potential as a major tourist destination. Peshawar’s identity as one of the world’s oldest cities makes it a living testament to South Asia’s history. Through strategic urban interventions, the restoration of Qissa Khwani Bazaar will ensure that its cultural and architectural heritage remains intact while integrating modern infrastructure. This initiative will help maintain the bazaar as a lively, functional, and historically significant part of the Walled City, creating a more liveable and culturally rich environment for both residents and tourists.

14.7. Regeneration Proposals for Target Areas

Revitalization of the Clock Tower Area of the Walled City of Peshawar

Introduction:

The Clock Tower area holds a very important historical part of the walled city of Peshawar. This area reflects decades of cultural and architectural heritage, but the degradation of frontages, lack of greenery, cluttered wiring, and limited infrastructures friendly to pedestrianism have challenged the area.

Figure 12: Clock Tower Area

Recommended Interventions

- **Incorporation of Plantation Along Roadside**

Introducing plants and trees on the roadsides will address several issues: Improved air quality, a much more attractive and cooling ambient environment, and aesthetic value improvement of the streetscape. This green integration is critical in making the city space more sustainable and liveable.

- **Promotion of Green Roof Initiatives**

Adoption of greener roofs in existing buildings and new buildings would be enhanced. The urban setting would be naturally insulated through the roofs while conserving energy costs, reducing urban heat, and furnishing an opportunity for biodiversity inside the urban setup. The initiative will support a much bigger plan for the area to become more eco-friendly and energy-efficient.

- **Signs for Buildings**

This will be coupled with accurate, unambiguously logical visual building identification signs to help the visitor navigate this area while at the same time being sensitive to local cultural sensitivities. It would enrich the experience of the visitor by yet again highlighting the importance of individual buildings and their history.

- **Decorative Screens or Sunshades on Facades**

The planting of ornamented sunshades or screens along building facades will not only enhance the visual coherence of the area but will also provide functional shade, keeping the direct penetration of sunlight. All these elements are going to be designed in concert with the historical architecture to blend tradition and modern utility.

- **Architectural Lighting**

Secondly, there is the installation of aesthetic and energy-efficient architectural lighting on building façades, which transforms the area into a lively evening activity space. Lighting shall be used to highlight the critical architectural features of the buildings, making the cultural landmarks more conspicuous and increasing tourism, thus boosting the local economy.

- **Underground Wiring**

There is still exposed overhead wiring that is not too flattering in the Clock Tower area. All of the above-pavement wiring will not only greatly eliminate visual mess but also make the urban environment clean and harmonious. Besides, it presents to answer the need for keeping up with modern standards in urban infrastructure.

- **Paving of Footpaths**

The paved and well-maintained footpaths will ensure an improvement of pedestrian access as well as safety. There are many local people as well as visitors, and the designed footpath will make for easy movement, thereby making this place more pedestrian-friendly and also lessen the dependence on vehicular movement.

- **Restoration of Fresco Work of the Gate**

The rich artistic traditions of Peshawar are testified by the beautiful frescoes on the gates of this locality. Restoration of these frescoes is extremely important in having any heritage preserved, ensuring its cultural identity, and that this heritage can be enjoyed into the future.

- **Restoration of Building Facades Along Lahori Darwaza Trail**

The Lahori Darwaza path is flanked by buildings that are historically and culturally important. On the other hand, most of them have deteriorated over time. Restoring them will not only preserve their architectural legacy but also help in creating a unified visual identity for the area, reinforcing its historical significance.

Expected Outputs: This project will be well-balanced between modernization and heritage preservation.

PROPOSAL FOR QISSA KHWANI BAZAAR:

Objective:

The aim of the present project is to maintain the character of the historical architecture of Qissa Khwani Bazaar while enhancing functionality and aesthetics. Restoration and revamping would focus on restoring building facades, upgrading pedestrian infrastructure, and putting into practice sustainable design.

Proposed Interventions

- **Restoration of Building Facades Along the Trail**

The buildings along the trail of Qissa Khwani Bazaar form a significant part of the identity of this bazaar and hence are an important element to be included in this project. This proposal suggests bringing the existing facades to their original state through the use of historically accurate materials and techniques, so that they follow the original architecture in the area, thereby addressing the issue of maintaining bazaar character with improvements in visuals.

- **Reviving the Building Facades to a Similar Form**

In each feasible situation, buildings would be restored to their previous form, from drawings to materials and expertise. This is done in consultation with heritage experts to ensure the architectural details preserve Qissa Khwani and its character preserved for future generations. Footpaths paved with Tarmacadam Pedestrians shall be provided with paved pathways. Paving walkways will ensure easier passage and movement of pedestrian cases.

- **Wiring Underground**

All visible electrical and communication wires will move underground thus eliminating visual clutter and making the streetscape cleaner, and more orderly.

- **Installation of Architectural Lighting on Building Facades**

Architectural lighting to be introduced, designed with care, will highlight the restored facade features underlining the rich architectural heritage of the bazaar. This lighting will be a new layer of vibrancy within the area and will help draw more evening visitors and therefore support the local economy.

- **Building Identification Signs**

Installing well-defined and culturally compatible building identification signs will facilitate visitors' navigation in the area while preserving the heritage of the bazaar.

- **Installation of Green Roof Initiatives on Existing and New Buildings**

To instigate sustainability in Qissa Khwani Bazaar, green roof initiatives will be implemented. Green roofs help in temperature regulation, reduce stormwater runoff, and offer aesthetic beauty through natural grace in the urban landscape.

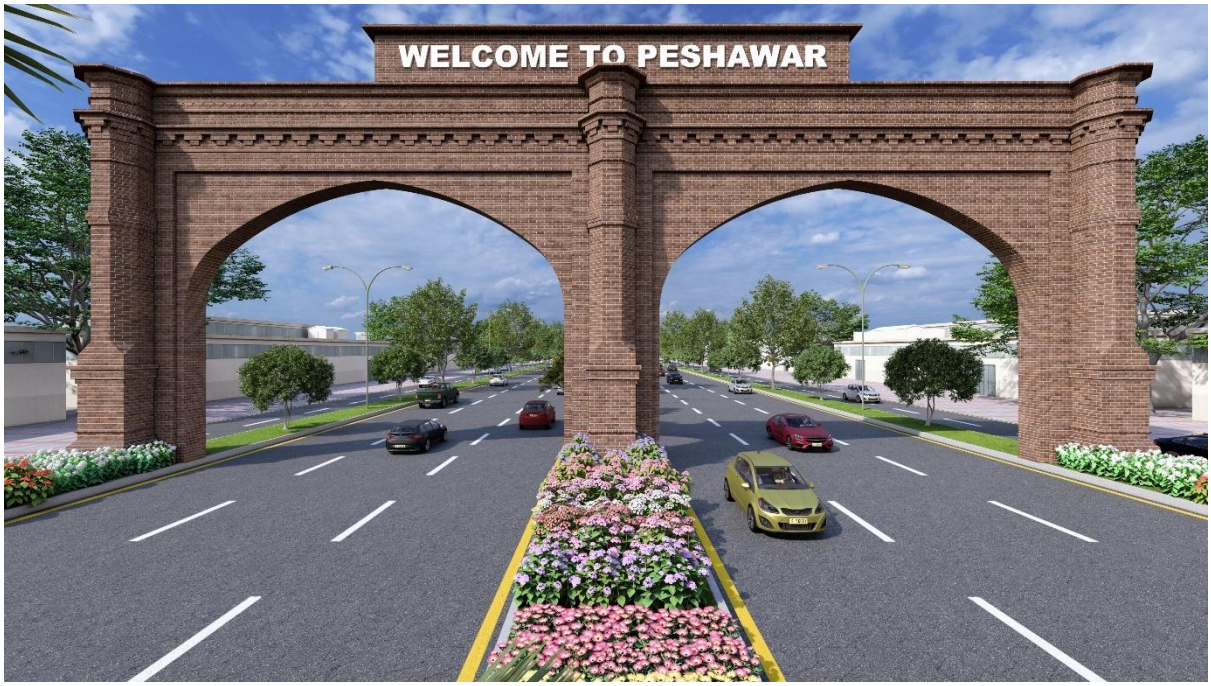
- **Flower Beds in Centre Median**

The introduction of flower beds at the center median of the road will bring color into the bazaar, making the space appear more vibrant and attractive. These flower beds add beauty to the market and enhance the environment by adding to the qualitative constitution of air.

Preservation of Historical Facades

- Improvements to the pedestrian infrastructure should make the area safe and accessible.
- Enhanced visual appeal through greenery along with restored facades and architectural embellishments.
- Cleaner and Better Streets are replete with underground wiring and architectural lights.

14.8. Entry/Exit Gate



Chapter 15: Quality of Life

15.1.Background

The concept of physical living environment constitutes built and natural environment like cleanliness of the indoor and outdoor environment, condition and sufficiency of housing and social and functional aspects and those affecting the quality and circumstances of life. Different population groups have different needs and wishes for their living environment, depending on their age or other situations in life. To improve the overall quality of life of any area, it is essential that needs and requirements of each age group and income group are fulfilled, however, for a developing country like Pakistan which is facing severe economic crisis, catering to the needs of each age group and income group does not take precedence. This coupled with absence of comprehensive data with respect to each age and income group's needs and wishes, it is exceptionally difficult, if not impossible to provide for all.

The primary data collected from land use survey and in-person interviews in Peshawar provided basic data depicting that opinion about overall quality of life was divided in equal parts with half of the people being satisfied with the overall quality of life and half being dissatisfied. The main points raised in assessment related to physical environment, transport, education facilities, health facilities, unemployment, civic and public spaces, security and parks and green spaces. Proposals for each point have been given in their respective section and this section provides policy recommendations and proposals for improving physical health, parks and green spaces, and unemployment.

15.2.Proposals for Improving Quality of Life

Following are some general proposals to improve the quality of life for the citizens of Peshawar City. The detail of these proposals will be discussed in Task D: Action Plan for Quality of life.

- In regard to improving physical health, excluding improvements in health facilities which will be catered for in Task D: Action Plan for Health Facilities, the focus has been encouraging more physical activity among the people which in turn can reduce several health issues like cardiovascular issues, blood pressure, and immunity problems etc. which will have a snowball effect and provide social and economic benefits.
- It is recommended that the civic places should be improved. Proposals for each civic place include the requirement of additional places and maintenance guidelines for the improvement of the existing and proposed facility.
  a. *Establishment of Public Toilets*
  b. *The upgradation of existing and new proposed bus stops (details of those are provided in the section of transportation proposals) should be constructed keeping in view seven elements i.e., safety, thermal comfort, acoustic comfort, wind protection, visual comfort, accessibility, and integration.*
- Provision of green spaces should be ensured within the frontage on an arterial road with views into and out of the site.
  a. *Greenspace perimeters should have trees and a naturalized appearance. It should be located in or proximate to institutional, commercial or industrial areas with buffers provided for lit areas.*

b. The greenspace should be well organized with defined/clustered recreation/athletic facilities. A centrally located building should house public washrooms, concessions, storage, changing rooms, etc. An internal pedestrian network should link all facilities and connect to the city-wide pedestrian system.

- Improvement of sports ground including regular maintenance of the grounds, adequate lighting, presence of proper drainage system, provision of comfortable and safe seating arrangement, adequate parking facilities, easy accessibility, and ensuring a safe and secure environment for females.
- Food Outlets; grocery stores and general stores should be improved by implementing strict hygiene standards in stores, developing and implementing policies and regulations to maintain hygiene and quality standards in stores, and investing in the development of infrastructure such as roads, and electricity in the area.
- Pedestrian-friendly infrastructure: It is suggested to make the city more pedestrian-friendly by creating wider sidewalks, more crosswalks, and reducing speed limits in residential areas.

Chapter 16: Citizen Behavior

The survey aimed at assessing citizen behaviour in Peshawar revealed insightful patterns regarding public attitudes toward solid waste management, vandalism, tourism, and the performance of government departments. A significant portion of respondents expressed a strong belief in reducing waste to protect the environment. However, they identified key challenges contributing to high levels of waste and pollution. Lack of public awareness and education on proper waste disposal was noted as the primary issue, followed closely by 36.3% of respondents pointing out the absence of adequate waste disposal facilities. This highlights a need for targeted awareness campaigns and the development of essential infrastructure to better manage waste across the city.

Tourism, particularly beyond religious tourism, garnered a neutral response, reflecting the limited focus on tourism development in Peshawar. The general attitude towards enhancing tourism was neither positive nor negative, suggesting a lack of interest or awareness of its potential economic benefits. When evaluating government departments, the majority of respondents expressed satisfaction with their functioning but flagged corruption, inefficiency, and bribery as the primary sources of discontent. These issues were consistently highlighted as barriers to good governance, indicating a clear need for reforms to enhance transparency and accountability in public institutions.

16.1General Proposals

- Implement modern waste management infrastructure, including regular collection, recycling, and designated disposal points.
- Launch awareness campaigns on proper waste disposal, recycling, and environmental protection.
- Address vandalism by enforcing stricter laws and penalties, alongside public awareness on protecting public property.
- Install surveillance cameras and improve lighting in vulnerable public spaces to deter vandalism.
- Combat corruption through digitalization of public services, transparency measures, and stronger internal audits.
- Introduce whistleblower protection programs to encourage reporting of corrupt activities.
- Promote civic education on responsibility, ethics, and community welfare through schools and media.
- Improve urban infrastructure, including public spaces and pedestrian-friendly areas, to enhance citizen pride and care.
- Encourage public participation in local decision-making processes to foster community ownership and engagement.

Chapter 17: Graveyard and Allied Facilities

17.1. Existing

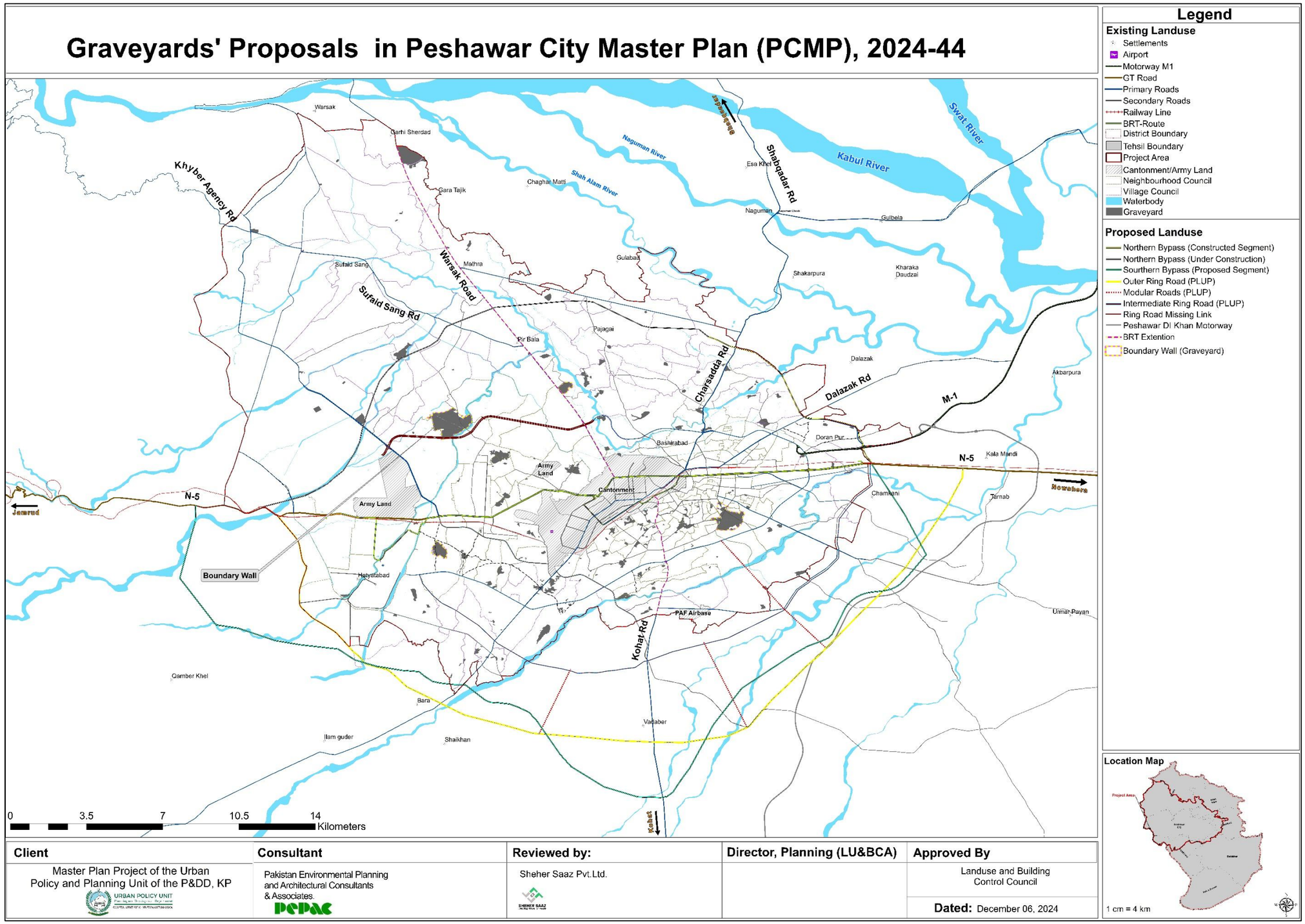
The rapid urban expansion has placed immense pressure on existing burial spaces, with many older graveyards, such as Rehman Baba Graveyard and Sikandar Town Graveyard, now overcrowded or nearing full capacity. The total area covered by graveyards in the study area is approximately 6.70 square kilometers, indicating a substantial portion of the city's open space is dedicated to burial sites. There are over 20 graveyards dispersed across various quadrants of Peshawar, including notable sites such as Hazar Khuwani, Ghareebabad, Darmangi, Regi, Bedazai, and Durrani.

17.2.Proposals

Graveyards in Peshawar require a comprehensive approach to ensure their protection, management, and sustainability. The construction of boundary walls and fencing around existing graveyards is critical to prevent encroachment and enhance security. Many graveyards in the city suffer from land use issues due to the lack of clear boundaries. A standardized design for these walls, along with gateways and signage, will help maintain the sanctity of these spaces. Furthermore, a legal and policy framework is essential to manage graveyards effectively.

In addition, a sustainable graveyard maintenance plan is necessary to address the poor conditions seen in many of Peshawar's burial grounds. Regular cleaning, grave restoration, waste management systems, and greenery maintenance will ensure these sites remain dignified and accessible. The establishment of local management committees will facilitate ongoing upkeep, while public awareness campaigns can engage the community in maintaining cleanliness and participating in tree plantation activities. Security measures, including lighting, should be introduced to protect these spaces from vandalism or misuse.

Map 43: Graveyard Proposals – Peshawar study area



Source: M/S PEPAC Pvt Ltd & Associates

Chapter 18: Integrated Master Plan

18.1. Salient Features of the Proposed Master Plan

The basic purpose of the master plan is to fulfil the specific needs and goals of the area being planned, by typically addressing a wide range of topics related to land use, transportation, environmental protection, economic development, and community engagement. The Master Plan of Peshawar City 2044 will outline the area's current and future land uses, such as residential, commercial, industrial, and institutional etc. It will also identify areas for open space, parks, and other recreational amenities as per the current and future needs of the city. Following is the detail of the proposed master plan for Peshawar City 2044;

18.2. Residential/Housing

The proposed residential zones in the Peshawar Master Plan present a comprehensive and strategic solution to meet the city's housing demands till 2044. By leveraging housing supply from both the public and private real estate sectors, as well as infill development, the plan effectively accommodates the incremental population. For the remaining housing demand, the proposed zones are aligned with the Approved District Land Use Plan of Peshawar and New Peshawar Valley, ensuring that future growth is directed towards areas that support sustainable urban expansion.

The plan emphasizes land efficiency through a blend of compact development and sustainable growth, particularly through the Transit-Oriented Development (TOD) approach. This innovative strategy encourages high-density, mixed-use developments near public transport networks, promoting walkable, pedestrian-friendly communities that reduce the strain on infrastructure. A balanced combination of horizontal and vertical development—including multi-story housing—allows for optimal land use, providing ample housing while maintaining urban green spaces and other essential infrastructure.

18.3. Recreation/Open Spaces

The Proposed Recreation/Open Spaces Zone in Peshawar aims to enhance the quality of life for residents by expanding recreational and green areas significantly. The current recreational spaces span 839.90 acres, and the proposed plan envisions an increase to 951.76 acres by 2044. This includes the development of neighbourhood-level parks designed to harmonize natural beauty with adventure activities, providing spaces for both relaxation and thrill-seeking. The zoning regulations allow for various land uses, such as amusement parks, youth hostels, urban forests, and botanical gardens, ensuring diverse recreational opportunities. With this expansion, Peshawar seeks to foster a healthier, more vibrant urban environment, balancing the city's rapid growth with the need for open, green spaces.

18.4. Commerce and Trade Zone

The proposed commercial zones for Peshawar's Master Plan cover a total of 5,126.73 acres, strategically planned to accommodate the city's future population growth and enhance its commercial infrastructure. These zones are distributed across different types of development,

including Proposed Commercial Zones (PLUP), mixed use Commercial Development, and Central Business Districts (CBDs).

The Proposed Commercial Zones (PLUP), comprising 2,195.9 acres, are focused on creating concentrated commercial hubs along key roads such as Bara Road and Phandu Road. These zones are designed to integrate modern commercial activities with parking facilities to mitigate traffic congestion. The Mixed-use Commercial Development, covering 1,880.09 acres, aims to establish commercial corridors and mixed use development (residential-cum-commercial etc) along primary and secondary roads, ensuring accessibility and a balanced distribution of commercial activities across the city.

Lastly, the High-Density Mixed-Use Zone, spanning 1,050.31 acres, promotes ground-floor commercial spaces with upper residential or office units. This mixed-use development concept is intended to foster economic vibrancy while addressing the city's need for commercial space, housing, and sustainable urban growth. Each commercial area will allocate specified amount of land for parking to ease traffic issues and reduce on-street parking challenges.

18.5. Reserved Agriculture Zone

By keeping in mind, the Goals for Sustainable Agriculture development and promotion in Peshawar City, the following proposals have been considered;

i. Encouraging Conservation Practices and Tunnel Farming
ii. Promoting Integrated Pest Management
iii. Supporting Agroforestry
iv. Promoting Organic Agriculture
v. Supporting Local Food Systems
vi. Investing in Sustainable Agriculture Research and Education
vii. Encouraging Agro ecology

18.6. Industrial Zones

The Industry Comprehensive Proposal for Peshawar highlights the city's evolving industrial landscape, which plays a critical role in its economic growth. Covering an existing industrial area of 843.85 acres, the city also hosts key economic zones like the Peshawar Industrial Estate, Hayatabad Economic Zone, and the Pak-Afghan Economic Zone. These zones are integral to boosting industrial activities, creating jobs, and enhancing regional trade, particularly through the strategic opportunities presented by the China-Pakistan Economic Corridor (CPEC). With a focus on expanding advanced industrial facilities, such as automation plants and heavy industrial setups, Peshawar is positioning itself as a hub for both local and foreign investment, which will contribute to the city's economic stability and growth over the coming decades. The zoning regulations emphasize appropriate land uses for light-medium and medium industrial activities, ensuring safe, sustainable, and efficient industrial development.

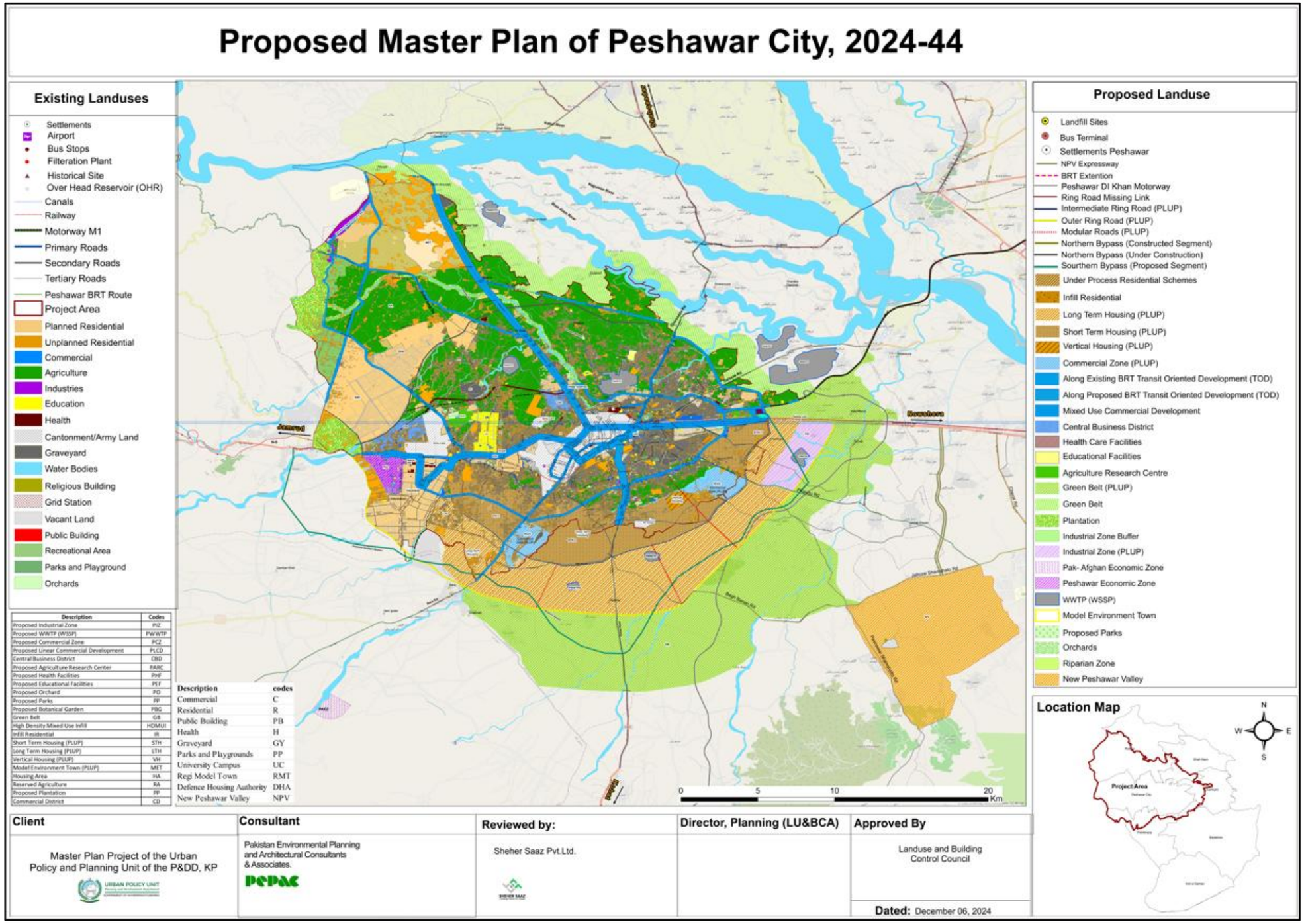
18.7. Social Infrastructure – Health and Education

The Master Plan for Peshawar proposes a comprehensive strategy to address healthcare needs by ensuring equitable access and sustainable infrastructure development. It includes the

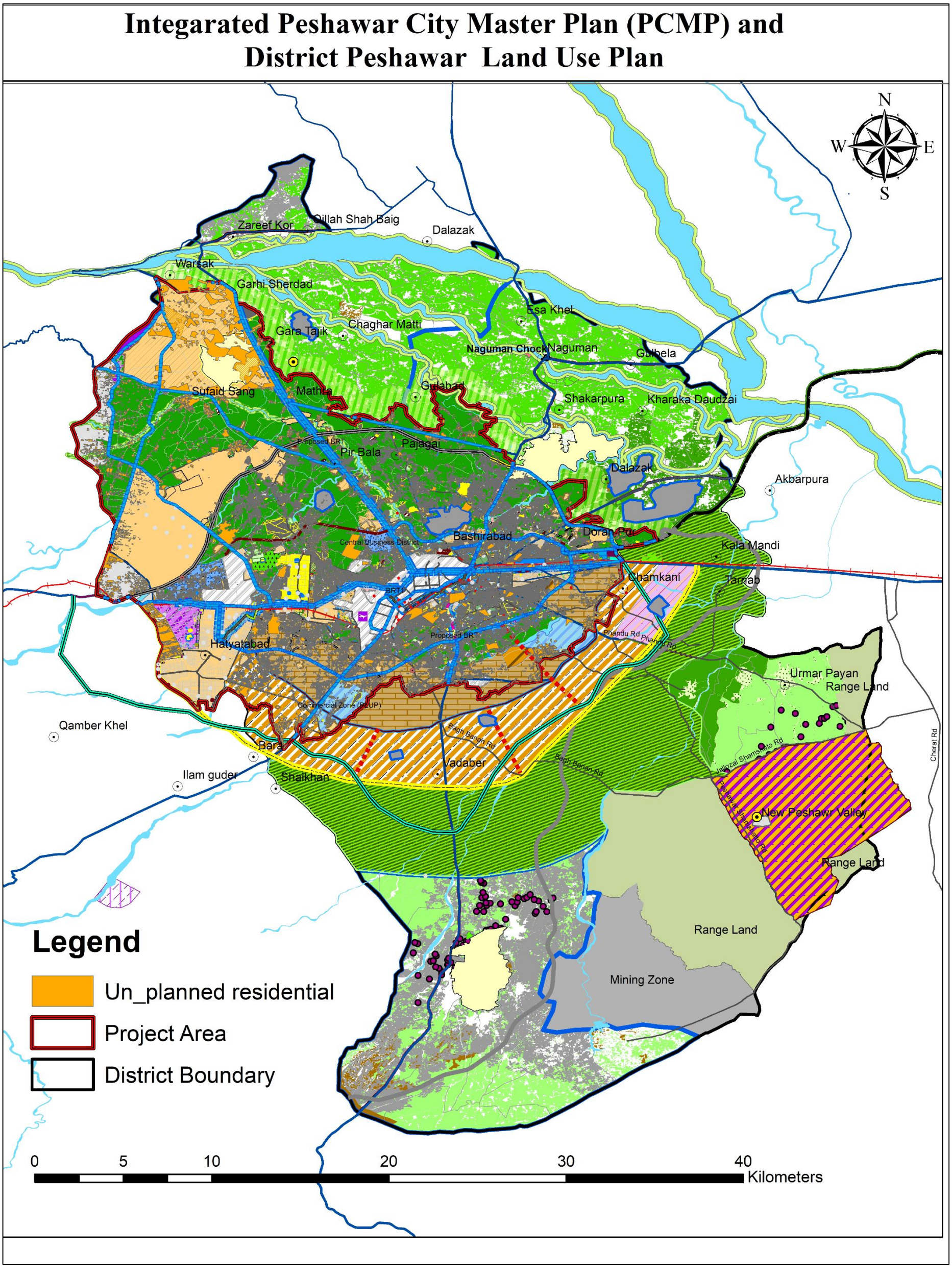
provision of 89.74 acres for neighborhood-level healthcare facilities, targeting underserved areas. The plan emphasizes expanding Basic Health Units (BHUs), dispensaries, and maternal and child healthcare centers, aiming to meet National Reference Manual (NRM) standards and WHO requirements for hospital beds. Zoning regulations are outlined to support health facilities, including hospitals, research centers, and support services, integrated with urban planning for better accessibility and future population growth.

The Master Plan for Peshawar proposes a significant expansion of educational facilities by designating 110.68 acres for new institutions to meet future demand. Emphasizing vertical development to optimize urban space, the plan focuses on creating accessible education zones with modern facilities, including schools, colleges, universities, research centers, and vocational institutions. The proposals aim to integrate education into the urban landscape while promoting land-use efficiency. Zoning regulations support the development of educational infrastructure, ensuring a balanced mix of educational, social, and community facilities to serve the growing population until 2044.

Map 44: Proposed Master Plan of Peshawar City, 2024-44



Map 45: Integrated Peshawar City Master Plan (PCMP) and District Peshawar Land Use Plan



Chapter 19: Annexures

19.1.Annexure 1 List of Health Facilities in PCMP

S.No	Name	Area in Acres	Category
1.	Basic Health Unit Pakha Gulam	0.05	BHU
2.	Basic Health Unit Musazai	0.78	BHU
3.	Basic Health Unit Hazar Khawani	0.14	BHU
4.	Bukari Health Clinic	0.04	BHU
5.	Basic Health Unit Pajagi	0.13	BHU
6.	Basic Health Unit Hassan Gharhi	1.60	BHU
7.	Basic Health Unit Hassan Gharhi	0.32	BHU
8.	Basic Health Unit Cantt Area	0.71	BHU
9.	Basic Health Unit Pushtakhera	0.19	BHU
10.	Basic Health Unit Deh Bahdar	2.60	BHU
11.	Basic Health Unit Hayatabad	0.07	BHU
12.	Basic Health Unit Palosi	0.28	BHU
13.	Basic Health Unit Malakandhir	0.17	BHU
14.	Basic Health Unit Malakandhir	0.97	BHU
15.	Basic Health Unit Mathra	16.87	BHU
16.	Mother Child Health Clinic	0.06	MCH
17.	Maternal & Child Health Centre Jahangir Pura	3.56	MCH
18.	Maternal & Child Health Centre Nauthia Jadid	0.06	MCH
19.	Dispensary Khalisa 2	0.28	Dispensary
20.	Dispensary Gulbahar	0.05	Dispensary
21.	Dispensary Yakatoot	0.04	Dispensary
22.	Dispensary Faqirabad	0.12	Dispensary
23.	Dispensary Tehkal Payan	6.51	Dispensary
24.	Dispensary Nouthia	0.12	Dispensary
25.	Dispensary Nouthia	0.12	Dispensary
26.	Dispensary Nouthia	0.04	Dispensary
27.	Dispensary Landi arbab	0.07	Dispensary
28.	Dispensary LandiArbab	0.11	Dispensary
29.	Dispensary Landi Arbab	0.20	Dispensary
30.	Dispensary Sheheen Town	1.00	Dispensary
31.	Dispensary Hazar Khawani	0.01	Dispensary
32.	Health Clinic	0.07	Private Clinic
33.	Health Clinic	0.06	Private Clinic
34.	Health Clinic	0.06	Private Clinic
35.	Health Clinic	0.03	Private Clinic
36.	Health Clinic	0.02	Private Clinic
37.	Health Clinic	0.03	Private Clinic
38.	Health Clinic	0.03	Private Clinic

S.No	Name	Area in Acres	Category
39.	Health Clinic	0.03	Private Clinic
40.	Health Clinic	0.22	Private Clinic
41.	Health Clinic	0.08	Private Clinic
42.	Health Clinic	0.11	Private Clinic
43.	Health Clinic	0.07	Private Clinic
44.	Health Clinic	0.09	Private Clinic
45.	Health Clinic	0.09	Private Clinic
46.	Health Clinic	0.09	Private Clinic
47.	Health Clinic	0.21	Private Clinic
48.	Health Clinic	0.06	Private Clinic
49.	Health Clinic	0.11	Private Clinic
50.	Health Clinic	0.08	Private Clinic
51.	Health Clinic	0.14	Private Clinic
52.	Health Clinic	0.07	Private Clinic
53.	Health Clinic	0.02	Private Clinic
54.	Health Clinic	0.06	Private Clinic
55.	Health Clinic	1.75	Private Clinic
56.	Health Clinic	0.12	Private Clinic
57.	Health Clinic	0.11	Private Clinic
58.	Health Clinic	12.59	Private Clinic
59.	Health Clinic	0.07	Private Clinic
60.	Health Clinic	0.10	Private Clinic
61.	Health Clinic	0.42	Private Clinic
62.	Health Clinic	0.08	Private Clinic
63.	Health Clinic	0.13	Private Clinic
64.	Health Clinic	0.07	Private Clinic
65.	Health Clinic	0.09	Private Clinic
66.	Health Clinic	0.10	Private Clinic
67.	Health Clinic	0.10	Private Clinic
68.	Health Clinic	0.14	Private Clinic
69.	Health Clinic	0.03	Private Clinic
70.	Health Clinic	0.03	Private Clinic
71.	Health Clinic	0.04	Private Clinic
72.	Health Clinic	0.09	Private Clinic
73.	Health Clinic	0.07	Private Clinic
74.	Health Clinic	0.05	Private Clinic
75.	Health Clinic	0.05	Private Clinic
76.	Health Clinic	0.04	Private Clinic
77.	Health Clinic	0.05	Private Clinic
78.	Health Clinic	0.04	Private Clinic
79.	Health Clinic	0.13	Private Clinic
80.	Health Clinic	0.09	Private Clinic
81.	Health Clinic	0.07	Private Clinic

S.No	Name	Area in Acres	Category
82.	Health Clinic	0.10	Private Clinic
83.	Health Clinic	0.19	Private Clinic
84.	Health Clinic	0.03	Private Clinic
85.	Health Clinic	0.05	Private Clinic
86.	Health Clinic	0.03	Private Clinic
87.	Health Clinic	0.03	Private Clinic
88.	Health Clinic	0.03	Private Clinic
89.	Health Clinic	0.04	Private Clinic
90.	Health Clinic	0.03	Private Clinic
91.	Health Clinic	0.12	Private Clinic
92.	Muqadis Clinic	0.05	Private Clinic
93.	Health Care Clinic	0.16	Private Clinic
94.	Health Clinic	0.07	Private Clinic
95.	Health Clinic	0.05	Private Clinic
96.	Muqadis Clinic	0.05	Private Clinic
97.	Health Clinic	0.02	Private Clinic
98.	Health Clinic	0.04	Private Clinic
99.	Health Clinic	0.07	Private Clinic
100.	Health Clinic	0.04	Private Clinic
101.	Health Clinic	0.10	Private Clinic
102.	Health Clinic	0.07	Private Clinic
103.	Health Clinic	0.04	Private Clinic
104.	Health Clinic	0.07	Private Clinic
105.	Health Clinic	0.06	Private Clinic
106.	Health Clinic	0.05	Private Clinic
107.	Health Clinic	0.04	Private Clinic
108.	Health Clinic	0.02	Private Clinic
109.	Health Clinic	0.03	Private Clinic
110.	Health Clinic	0.03	Private Clinic
111.	Health Clinic	0.02	Private Clinic
112.	Health Clinic	0.02	Private Clinic
113.	Health Clinic	0.06	Private Clinic
114.	Health Clinic	0.02	Private Clinic
115.	Health Clinic	0.02	Private Clinic
116.	Health Clinic	0.02	Private Clinic
117.	Health Clinic	0.03	Private Clinic
118.	Health Clinic	0.06	Private Clinic
119.	Health Clinic	0.04	Private Clinic
120.	Health Clinic	0.03	Private Clinic
121.	Health Clinic	0.06	Private Clinic
122.	Health Clinic	0.03	Private Clinic
123.	Health Clinic	0.03	Private Clinic
124.	Health Clinic	0.03	Private Clinic

S.No	Name	Area in Acres	Category
125.	Health Clinic	0.03	Private Clinic
126.	Health Clinic	0.02	Private Clinic
127.	Nagina Naz Clinic	0.05	Private Clinic
128.	Health Clinic	0.02	Private Clinic
129.	Health Clinic	0.02	Private Clinic
130.	Health Clinic	0.02	Private Clinic
131.	Health Clinic	0.01	Private Clinic
132.	Health Clinic	0.01	Private Clinic
133.	Dr Noor Muhammad Clinic	0.19	Private Clinic
134.	Dr Laila Clinic	0.72	Private Clinic
135.	Health Clinic	0.02	Private Clinic
136.	Health Clinic	0.03	Private Clinic
137.	Health Clinic	0.02	Private Clinic
138.	Health Clinic	0.02	Private Clinic
139.	Health Clinic	0.03	Private Clinic
140.	Health Clinic	0.01	Private Clinic
141.	Health Clinic	0.02	Private Clinic
142.	Health Clinic	0.03	Private Clinic
143.	Health Clinic	0.04	Private Clinic
144.	Health Clinic	0.08	Private Clinic
145.	Health Clinic	0.04	Private Clinic
146.	Health Clinic	0.02	Private Clinic
147.	Health Clinic	0.04	Private Clinic
148.	Health Clinic	0.01	Private Clinic
149.	Health Clinic	0.04	Private Clinic
150.	Health Clinic	0.06	Private Clinic
151.	Health Clinic	0.04	Private Clinic
152.	Health Clinic	0.04	Private Clinic
153.	Health Clinic	0.06	Private Clinic
154.	Health Clinic	0.07	Private Clinic
155.	Health Clinic	0.10	Private Clinic
156.	Health Clinic	0.10	Private Clinic
157.	Health Clinic	0.07	Private Clinic
158.	Health Clinic	0.07	Private Clinic
159.	Health Clinic	0.14	Private Clinic
160.	Health Clinic	0.03	Private Clinic
161.	Health Clinic	0.06	Private Clinic
162.	Health Clinic	0.09	Private Clinic
163.	Health Clinic	0.04	Private Clinic
164.	Health Clinic	0.06	Private Clinic
165.	Health Clinic	0.04	Private Clinic
166.	Health Clinic	0.13	Private Clinic
167.	Health Clinic	0.25	Private Clinic

S.No	Name	Area in Acres	Category
168.	Health Clinic	0.27	Private Clinic
169.	Health Clinic	0.03	Private Clinic
170.	Health Clinic	0.03	Private Clinic
171.	Health Clinic	0.03	Private Clinic
172.	Health Clinic	0.15	Private Clinic
173.	Health Clinic	0.06	Private Clinic
174.	Health Clinic	0.08	Private Clinic
175.	Health Clinic	0.11	Private Clinic
176.	Health Clinic	0.05	Private Clinic
177.	Health Clinic	0.03	Private Clinic
178.	Health Clinic	0.04	Private Clinic
179.	Health Clinic	0.06	Private Clinic
180.	Health Clinic	0.13	Private Clinic
181.	Health Clinic	0.06	Private Clinic
182.	Health Clinic	0.03	Private Clinic
183.	Health Clinic	0.13	Private Clinic
184.	Health Clinic	0.23	Private Clinic
185.	Health Clinic	0.05	Private Clinic
186.	Health Clinic	0.14	Private Clinic
187.	Health Clinic	0.04	Private Clinic
188.	Health Clinic	0.04	Private Clinic
189.	Dr Ali Clinic	0.02	Private Clinic
190.	Health Clinic	0.18	Private Clinic
191.	Health Clinic	0.14	Private Clinic
192.	Health Clinic	0.23	Private Clinic
193.	Health Clinic	1.22	Private Clinic
194.	Imad Clinic	0.34	Private Clinic
195.	Health Clinic	0.10	Private Clinic
196.	Health Clinic	0.06	Private Clinic
197.	Health Clinic	0.12	Private Clinic
198.	Health Clinic	0.11	Private Clinic
199.	Noor Clinic and Maternity Home	0.05	Private Clinic
200.	Naila Shah Clinic	0.09	Private Clinic
201.	Health Clinic	0.15	Private Clinic
202.	Health Clinic	0.12	Private Clinic
203.	Health Clinic	0.04	Private Clinic
204.	Health Clinic	0.22	Private Clinic
205.	Health Clinic	0.44	Private Clinic
206.	Health Clinic	0.35	Private Clinic
207.	Health Clinic	0.28	Private Clinic
208.	Health Clinic	0.13	Private Clinic
209.	Health Clinic	5.13	Private Clinic
210.	Health Clinic	0.82	Private Clinic

S.No	Name	Area in Acres	Category
211.	Health Clinic	0.92	Private Clinic
212.	Health Clinic	0.24	Private Clinic
213.	Dr Aslam Clinic	0.18	Private Clinic
214.	Health Clinic	0.25	Private Clinic
215.	Health Clinic	0.13	Private Clinic
216.	Health Clinic	0.09	Private Clinic
217.	Health Clinic	0.08	Private Clinic
218.	Health Clinic	0.37	Private Clinic
219.	Health Clinic	0.20	Private Clinic
220.	Health Clinic	0.15	Private Clinic
221.	Health Clinic	0.45	Private Clinic
222.	Health Clinic	0.06	Private Clinic
223.	Health Clinic	0.03	Private Clinic
224.	Health Clinic	0.03	Private Clinic
225.	Health Clinic	0.09	Private Clinic
226.	Health Clinic	0.03	Private Clinic
227.	Health Clinic	0.44	Private Clinic
228.	Health Clinic	0.19	Private Clinic
229.	Health Clinic	0.17	Private Clinic
230.	Super Medical Store	0.05	Private Clinic
231.	Shaheen Iftikhar Clinic	0.16	Private Clinic
232.	Health Clinic	0.29	Private Clinic
233.	Health Clinic	0.06	Private Clinic
234.	Health Clinic	0.07	Private Clinic
235.	Health Clinic	0.10	Private Clinic
236.	Health Clinic	0.08	Private Clinic
237.	Health Clinic	0.06	Private Clinic
238.	Health Clinic	0.04	Private Clinic
239.	Health Clinic	0.16	Private Clinic
240.	Health Clinic	0.03	Private Clinic
241.	Health Clinic	0.14	Private Clinic
242.	Health Clinic	0.08	Private Clinic
243.	Health Clinic	0.16	Private Clinic
244.	Health Clinic	0.13	Private Clinic
245.	Health Clinic	0.19	Private Clinic
246.	Health Clinic	0.13	Private Clinic
247.	Health Clinic	0.04	Private Clinic
248.	Health Clinic	0.06	Private Clinic
249.	Health Clinic	0.15	Private Clinic
250.	Health Clinic	0.13	Private Clinic
251.	Health Clinic	0.04	Private Clinic
252.	Health Clinic	0.51	Private Clinic
253.	Health Clinic	0.13	Private Clinic

S.No	Name	Area in Acres	Category
254.	Health Clinic	0.05	Private Clinic
255.	Health Clinic	0.04	Private Clinic
256.	Health Clinic	0.98	Private Clinic
257.	Health Clinic	1.01	Private Clinic
258.	Health Clinic	0.21	Private Clinic
259.	Health Clinic	0.16	Private Clinic
260.	Babar Clinic	1.02	Private Clinic
261.	Health Clinic	0.60	Private Clinic
262.	Health Clinic	0.11	Private Clinic
263.	Health Clinic	0.18	Private Clinic
264.	Health Clinic	0.03	Private Clinic
265.	Health Clinic	0.04	Private Clinic
266.	Health Clinic	1.74	Private Clinic
267.	Health Clinic	0.15	Private Clinic
268.	Health Clinic	0.30	Private Clinic
269.	Health Clinic	0.68	Private Clinic
270.	Health Clinic	0.80	Private Clinic
271.	Health Clinic	0.30	Private Clinic
272.	Health Clinic	0.11	Private Clinic
273.	Health Clinic	0.11	Private Clinic
274.	Health Clinic	0.08	Private Clinic
275.	Health Clinic	0.81	Private Clinic
276.	Health Clinic	0.05	Private Clinic
277.	Health Clinic	0.11	Private Clinic
278.	Mrs Zia Clinic	0.23	Private Clinic
279.	National Health Clinic	0.04	Private Clinic
280.	Health Clinic	0.12	Private Clinic
281.	Health Clinic	0.07	Private Clinic
282.	Health Clinic	0.08	Private Clinic
283.	Health Clinic	0.05	Private Clinic
284.	Health Clinic	0.08	Private Clinic
285.	Health Clinic	0.09	Private Clinic
286.	Health Clinic	0.10	Private Clinic
287.	Health Clinic	0.18	Private Clinic
288.	Health Clinic	0.49	Private Clinic
289.	Health Clinic	1.26	Private Clinic
290.	Health Clinic	0.07	Private Clinic
291.	Health Clinic	0.08	Private Clinic
292.	Health Clinic	0.04	Private Clinic
293.	Health Clinic	0.05	Private Clinic
294.	Health Clinic	0.14	Private Clinic
295.	Health Clinic	0.07	Private Clinic
296.	Health Clinic	0.13	Private Clinic

S.No	Name	Area in Acres	Category
297.	Health Clinic	0.16	Private Clinic
298.	Health Clinic	0.44	Private Clinic
299.	Health Clinic	0.12	Private Clinic
300.	Health Clinic	0.04	Private Clinic
301.	Health Clinic	0.12	Private Clinic
302.	Health Clinic	0.13	Private Clinic
303.	Health Clinic	0.07	Private Clinic
304.	Health Clinic	0.09	Private Clinic
305.	Health Clinic	0.07	Private Clinic
306.	Health Clinic	0.05	Private Clinic
307.	Health Clinic	0.16	Private Clinic
308.	Health Clinic	0.03	Private Clinic
309.	Health Clinic	0.14	Private Clinic
310.	Health Clinic	0.19	Private Clinic
311.	Health Clinic	0.14	Private Clinic
312.	Health Clinic	0.15	Private Clinic
313.	Health Clinic	1.34	Private Clinic
314.	Health Clinic	0.08	Private Clinic
315.	Health Clinic	0.11	Private Clinic
316.	Health Clinic	0.09	Private Clinic
317.	Health Clinic	0.08	Private Clinic
318.	Health Clinic	0.07	Private Clinic
319.	Health Clinic	0.31	Private Clinic
320.	Health Clinic	0.20	Private Clinic
321.	Al-Khair Health Clinic	0.05	Private Clinic
322.	Health Clinic	0.33	Private Clinic
323.	Health Clinic	0.28	Private Clinic
324.	Health Clinic	0.51	Private Clinic
325.	Health Clinic	0.17	Private Clinic
326.	Health Clinic	0.22	Private Clinic
327.	Health Clinic	0.15	Private Clinic
328.	Health Clinic	0.13	Private Clinic
329.	Health Clinic	0.10	Private Clinic
330.	Health Clinic	0.09	Private Clinic
331.	Health Clinic	0.36	Private Clinic
332.	Health Clinic	0.99	Private Clinic
333.	Health Clinic	0.10	Private Clinic
334.	Health Clinic	0.11	Private Clinic
335.	Health Clinic	0.14	Private Clinic
336.	Health Clinic	0.17	Private Clinic
337.	Health Clinic	0.13	Private Clinic
338.	Health Clinic	0.43	Private Clinic
339.	Health Clinic	0.23	Private Clinic

S.No	Name	Area in Acres	Category
340.	Health Clinic	0.28	Private Clinic
341.	Health Clinic	0.01	Private Clinic
342.	Health Clinic	0.37	Private Clinic
343.	Health Clinic	0.20	Private Clinic
344.	Health Clinic	0.12	Private Clinic
345.	Health Clinic	0.06	Private Clinic
346.	Health Clinic	0.07	Private Clinic
347.	Health Clinic	0.21	Private Clinic
348.	Health Clinic	0.05	Private Clinic
349.	Health Clinic	0.05	Private Clinic
350.	Health Clinic	0.16	Private Clinic
351.	Health Clinic	0.06	Private Clinic
352.	Health Clinic	0.04	Private Clinic
353.	Health Clinic	0.05	Private Clinic
354.	Health Clinic	0.03	Private Clinic
355.	Dr Alif Khan Hashimzada Clinic and Phramacy	0.06	Private Clinic
356.	Health Clinic	2.25	Private Clinic
357.	Health Clinic	0.75	Private Clinic
358.	Health Clinic	0.33	Private Clinic
359.	Health Clinic	0.21	Private Clinic
360.	Health Clinic	1.02	Private Clinic
361.	Health Clinic	0.14	Private Clinic
362.	Health Clinic	0.19	Private Clinic
363.	Health Clinic	0.26	Private Clinic
364.	Health Clinic	0.07	Private Clinic
365.	Health Clinic	0.05	Private Clinic
366.	Health Clinic	0.07	Private Clinic
367.	Health Clinic	0.20	Private Clinic
368.	Health Clinic	0.21	Private Clinic
369.	Health Clinic	0.56	Private Clinic
370.	Health Clinic	0.05	Private Clinic
371.	Health Clinic	0.08	Private Clinic
372.	Health Clinic	0.12	Private Clinic
373.	Health Clinic	0.10	Private Clinic
374.	Health Clinic	0.07	Private Clinic
375.	Health Clinic	0.09	Private Clinic
376.	Health Clinic	0.11	Private Clinic
377.	Health Clinic	0.08	Private Clinic
378.	CMH		CMH
379.	Sajida Gul Afridi Clinic	0.04	Private Hospital
380.	Nasir Hospital	0.08	Private Hospital
381.	Shifa Health Clinic and Maternity Home	0.33	Private Hospital

S.No	Name	Area in Acres	Category
382.	Shabunm Clinic	0.51	Private Hospital
383.	Agha Khan Health Center	0.47	Private Hospital
384.	Shifa Gynae and Maternity Center	0.09	Private Hospital
385.	NaseerulAllah Khan Hospital	0.17	Private Hospital
386.	Khattak Medical Center	2.89	Private Hospital
387.	Jinnah Hospital	0.14	Private Hospital
388.	Ibrahim Medical Hospital	0.88	Private Hospital
389.	Peshawer Kidney Center	0.45	Private Hospital
390.	Yasmin Aslam Sethi Clinic	0.06	Private Hospital
391.	City Central Hospital	0.21	Private Hospital
392.	Infectious Diseases Hospital	0.09	Private Hospital
393.	Lady Doctor Marzia Hayat	0.07	Private Hospital
394.	Sheeren Gul Medical Center	0.51	Private Hospital
395.	Govt Hasht Nagri Maternity Home	0.19	Private Hospital
396.	Al Shifa Zacha Bacha Center	0.10	Private Hospital
397.	Shah Gul Clinic	0.09	Private Hospital
398.	Wapda Hospital	48.02	Private Hospital
399.	Karim Medical Center	0.17	Private Hospital
400.	Sandal Medical Clinic	0.04	Private Hospital
401.	Prime Hospital	2.10	Private Hospital
402.	Prime Hospital Complex	4.09	Private Hospital
403.	Kuwait Teaching Hospital	0.73	Private Hospital
404.	Mission Hospital	0.35	Private Hospital
405.	Habib Medical Complex	0.42	Private Hospital
406.	Khyber Medical Center and Hospital	1.28	Private Hospital
407.	Veterinary Research Institute and Hospital	1.04	Private Hospital
408.	People's Primary Healthcare Inn	0.24	Private Hospital
409.	Fuji Foundation Hospital	1.32	Private Hospital
410.	Aman Hospital	0.50	Private Hospital
411.	North West General Hospital	2.49	Private Hospital
412.	Pain Lees Medical Complex	0.68	Private Hospital
413.	Shaukat Khanam Cancer Hospital	8.85	Private Hospital
414.	Peshawar Institute of Medical Sciences	1.85	Private Hospital
415.	Pakistan Heart Foundation	0.66	Private Hospital
416.	College of Physicians and Surgeons	6.27	Private Hospital
417.	Shifa Medical Hospital	0.57	Private Hospital
418.	Minhas Hospital	0.63	Private Hospital
419.	Naseer Teaching Hospital	2.02	Private Hospital
420.	Khyber Medical Hospital	3.43	Private Hospital
421.	Islamia College Hospital Peshawar	0.75	Private Hospital

S.No	Name	Area in Acres	Category
422.	Doctors Hospital	0.31	Private Hospital
423.	Kidney Transplant Center	7.93	Private Hospital
424.	Rehman Medical Hospital	2.94	Private Hospital
425.	Mother Child Health Clinic	0.06	MCH
426.	Mercy Teaching Hospital	1.73	MCH
427.	Maternal & Child Health Centre Jahangir Pura	3.56	MCH
428.	Maternal & Child Health Centre Nauthia Jadid	0.06	MCH
429.	Dispensary Khalisa 2	0.28	Dispensary
430.	Dispensary Gulbahar	0.05	Dispensary
431.	Dispensary Yakatoot	0.04	Dispensary
432.	Dispensary Faqirabad	0.12	Dispensary
433.	Dispensary Tehkal Payan	6.51	Dispensary
434.	Dispensary Nouthia	0.12	Dispensary
435.	Dispensary Nouthia	0.12	Dispensary
436.	Dispensary Nouthia	0.04	Dispensary
437.	Dispensary Landi arbab	0.07	Dispensary
438.	Dispensary LandiArbab	0.11	Dispensary
439.	Dispensary Landi Arbab	0.20	Dispensary
440.	Dispensary Sheheen Town	1.00	Dispensary
441.	Dispensary Hazar Khawani	0.01	Dispensary

19.2.Annexure 2 List of Government Schools in PCMP

Sr.No	Name	Area_Acres	Category	Level
1	Govt. Primary School for Boys	0.17	Government School	Primary
2	PESHAWAR MODEL SCHOOL (BOYS-IV)	1.72	Government School	Higher Secondary
3	Govt. High School for Boys	0.10	Government School	Higher Secondary
4	Govt. Primary School for Boys	0.05	Government School	Primary
5	Govt. Middle School for Boys	0.05	Government School	Middle
6	Govt Middle School Samar Bagh for boys	1.43	Government School	Middle
7	Govt. Primary School for Girls	0.70	Government School	Primary
8	Government Primary School (GPS No.1)	0.53	Government School	Primary
9	GHSS Pakha Ghulam	1.17	Government School	Higher Secondary
10	Govt. Primary School for Girls	0.05	Government School	Primary
11	Government primary School Latifabad	0.16	Government School	Primary
12	Public School	0.04	Government School	Primary
13	G.P.School	0.04	Government School	Primary
14	Hidayat public high school peshawar	0.27	Government School	Higher Secondary
15	Govt. Girls Middle School	0.13	Government School	Middle
16	Government primary school chugal pura	0.25	Government School	Primary
17	Govt. Girls Middle School	0.16	Government School	Middle
18	Govt. Primary School for Boys	0.20	Government School	Primary
19	Government girls primary school	0.46	Government School	Primary
20	Government primary school Garhi	0.26	Government School	Primary
21	Govt Primary School1	0.37	Government School	Primary
22	Govt Girls Primary School14	0.20	Government School	Primary
23	Al Muslim Public High School(AMPHS)	0.18	Government School	Higher Secondary
24	Govt Primary School12	0.13	Government School	Primary
25	Govt Girls Primary School9	0.06	Government School	Primary

Sr.No	Name	Area_Acres	Category	Level
26	Govt Primary School13	0.05	Government School	Primary
27	Govt Girls Primary School	0.07	Government School	Primary
28	Govt Girls Primary School7	0.31	Government School	Primary
29	Govt Primary School8	0.06	Government School	Primary
30	Islamia Public School	0.08	Government School	Higher Secondary
31	Govt Girls Primary School13	0.15	Government School	Primary
32	Govt Girls Primary School8	0.13	Government School	Primary
33	GPS NO 1 Garhi Qamar Din	0.13	Government School	Primary
34	Govt Girls Primary School11	0.15	Government School	Primary
35	Govt High School4	1.15	Government School	Higher Secondary
36	Peshawar Model School (Girls III)	1.73	Government School	Higher Secondary
37	Govt. Higher Sec School for Boys	0.14	Government School	Higher Secondary
38	Govt Girls Primary School Hazar Khawani	0.26	Government School	Primary
39	Govt Primary School9	0.49	Government School	Primary
40	Girls School	0.05	Government School	Primary
41	Govt. Middle School5	0.34	Government School	Middle
42	Fuji Public School	0.08	Government School	Higher Secondary
43	Govt girls primary school shiekhabad	0.08	Government School	Primary
44	Govt.Girls High School	0.05	Government School	Higher Secondary
45	Govt girls High school shiekhabad	0.01	Government School	Higher Secondary
46	Pak Model School	0.07	Government School	Higher Secondary
47	Govt Girls Primary School4	0.12	Government School	Primary
48	Govt. Primary School for Girls	0.04	Government School	Primary
49	Ghandara School	0.12	Government School	Higher Secondary
50	Govt Girls Primary School10	0.09	Government School	Primary
51	Muslim Public School	0.07	Government School	Higher Secondary

Sr.No	Name	Area_Acres	Category	Level
52	Govt Girls High School2	0.49	Government School	Higher Secondary
53	Govt High School3	0.18	Government School	Higher Secondary
54	G.P.School Garhi Hidayatullah	0.05	Government School	Primary
55	Govt Girls Primary School1	0.06	Government School	Primary
56	Govt Primary School19	0.07	Government School	Primary
57	Govt High School Akhoonabad	0.03	Government School	Higher Secondary
58	Govt Primary School14	0.02	Government School	Primary
59	Govt Girls Primary School5	0.03	Government School	Primary
60	Govt Girls High School Khan Mast Colony	0.21	Government School	Higher Secondary
61	Govt Girls Middle School8	0.23	Government School	Middle
62	Govt Girls High School	0.37	Government School	Higher Secondary
63	Govt. Primary School2	0.12	Government School	Primary
64	GHSS Ahmad Ali Shaheed Wazir Bagh	1.26	Government School	Higher Secondary
65	City Public School	0.04	Government School	Higher Secondary
66	Govt Primery School	0.03	Government School	Primary
67	Pakistan Model School	0.07	Government School	Higher Secondary
68	Government High SchoolRasheed Ghari	0.79	Government School	Higher Secondary
69	Govt Primary School no 2	0.15	Government School	Primary
70	Govt School Number 4	1.87	Government School	Higher Secondary
71	Govt Girls Middle School7	0.29	Government School	Middle
72	Govt Girls Primary School3	0.14	Government School	Primary
73	Peshawar Public School	3.91	Government School	Higher Secondary
74	Govt High School Akhoon Abad1	0.31	Government School	Higher Secondary
75	Pasban Model school	0.02	Government School	Higher Secondary
76	Govt Primary School2	0.05	Government School	Primary
77	Girls Public High School	0.05	Government School	Higher Secondary

Sr.No	Name	Area_Acres	Category	Level
78	Govt Girls Middle School6	0.07	Government School	Middle
79	Government Primary School for Girls	0.06	Government School	Primary
80	Govt Primary School17	0.09	Government School	Primary
81	Govt. Middal School1	0.22	Government School	Higher Secondary
82	Govt.Primary School	0.18	Government School	Primary
83	Govt.High School	0.06	Government School	Higher Secondary
84	Govt.Primary School	0.10	Government School	Primary
85	Government Girls Model High School	1.72	Government School	Higher Secondary
86	P.M.H.S School	0.02	Government School	Higher Secondary
87	Govt. Middle School4	0.08	Government School	Middle
88	Govt. Primary School3	0.11	Government School	Primary
89	Govt. Primary School Boys	0.10	Government School	Primary
90	Govt. Middle School2	0.15	Government School	Middle
91	Govt Girls High School3	0.79	Government School	Higher Secondary
92	Govt Girls Middle School5	0.33	Government School	Middle
93	Girls Primary School	0.12	Government School	Primary
94	Girls Primary School2	0.16	Government School	Primary
95	Govt. Middle School3	0.16	Government School	Middle
96	Papolzai Public School	0.04	Government School	Higher Secondary
97	Government Girls High School For Deaf	0.34	Government School	Higher Secondary
98	Govt Primary School11	0.11	Government School	Primary
99	Govt High School Khudad	0.35	Government School	Higher Secondary
100	Govt.Middle School	0.02	Government School	Middle
101	Govt Girls High School4	0.23	Government School	Higher Secondary
102	Public School	0.05	Government School	Higher Secondary
103	G.G.H.S Joghi Wara	0.22	Government School	Higher Secondary

Sr.No	Name	Area_Acres	Category	Level
104	Government Girls Primary School Kambo	0.12	Government School	Primary
105	Government Shaheed Haris High School	0.69	Government School	Higher Secondary
106	Govt Middle School3	0.07	Government School	Middle
107	Girls High School	0.17	Government School	Higher Secondary
108	Govt Boys and Girls School	0.18	Government School	Higher Secondary
109	Govt Primary School for Boys	0.13	Government School	Primary
110	Govt Shaheed Haris Nawaz School	0.12	Government School	Higher Secondary
111	Govt High School for Boys	0.13	Government School	Higher Secondary
112	Govt Girls Primary School (Ittihad Colony)	0.43	Government School	Primary
113	Govt High School Yousaf abad for Boys	0.44	Government School	Higher Secondary
114	New Islamia Public High School	0.90	Government School	Higher Secondary
115	Peshawer Grammar School	0.36	Government School	Higher Secondary
116	Govt High School No.1 2	10.69	Government School	Higher Secondary
117	Govt High SchoolNo.02	2.44	Government School	Higher Secondary
118	Govt Girls Model School9	0.04	Government School	Higher Secondary
119	Govt Institute for Blind	1.29	Government School	Higher Secondary
120	Public Health School	0.84	Government School	Higher Secondary
121	Govt.High School	0.24	Government School	Higher Secondary
122	Govt. Girls High School	0.36	Government School	Higher Secondary
123	Govt. Primary School1	0.27	Government School	Primary
124	Govt Primary Girls School	0.21	Government School	Primary
125	Forward Model School	0.43	Government School	Higher Secondary
126	Govt Middle School	0.18	Government School	Middle
127	Forward Model School	0.58	Government School	Higher Secondary
128	Golden Public School	0.58	Government School	Higher Secondary
129	Govt School	0.21	Government School	Primary

Sr.No	Name	Area_Acres	Category	Level
130	Public School	0.10	Government School	Higher Secondary
131	Govt High School Larhama	0.44	Government School	Higher Secondary
132	Govt. Primary School for Girls	0.08	Government School	Primary
133	Govt. Primary School for Boys	0.08	Government School	Primary
134	Govt. Primary School for Boys	0.37	Government School	Primary
135	Govt Girls primary school	0.26	Government School	Primary
136	Govt. Primary School for Boys	0.03	Government School	Primary
137	Govt. Primary School for Girls	0.15	Government School	Primary
138	Govt. Primary School for Boys	0.04	Government School	Primary
139	Govt. Girls Middle School	0.17	Government School	Middle
140	Govt. Primary School for Boys	0.13	Government School	Primary
141	Govt. Primary School for Girls	0.21	Government School	Primary
142	Govt. Primary School for Girls	0.16	Government School	Primary
143	Peshawer Model School	0.29	Government School	Higher Secondary
144	G.P.S TERAI PAYAN	0.15	Government School	Primary
145	PESHAWAR MODEL GIRLS HIGH SCHOOL	1.48	Government School	Higher Secondary
146	Peshawer Model School Girls Branch	0.58	Government School	Higher Secondary
147	PEF Model School	0.28	Government School	Higher Secondary
148	Govt Primary School18	0.03	Government School	Primary
149	Peshawar Model School	0.15	Government School	Higher Secondary
150	Govt Girls Primery School15	0.07	Government School	Primary
151	Govt Middle School1	0.17	Government School	Middle
152	Govt Primary School No1	0.12	Government School	Primary
153	Govt Primary School No.2 2	0.08	Government School	Primary
154	Govt. Middle School for Boys	0.41	Government School	Middle
155	G.H.School	0.61	Government School	Higher Secondary

Sr.No	Name	Area_Acres	Category	Level
156	Govt Primary School20	0.06	Government School	Primary
157	Govt Primary School	0.21	Government School	Primary
158	Govt Girls Middle School1	0.14	Government School	Middle
159	Palosi Model School	0.08	Government School	Higher Secondary
160	Govt Primery School	0.29	Government School	Primary
161	Golden Gate School	0.35	Government School	Higher Secondary
162	Peshawar Public Shcool	9.05	Government School	Higher Secondary
163	Peshawar Model School	1.19	Government School	Higher Secondary
164	Fuji Foundation School	3.50	Government School	Higher Secondary
165	Government Boys School	0.92	Government School	Higher Secondary
166	Govt. High School for Girls	0.86	Government School	Higher Secondary
167	Govt School	0.43	Government School	Primary
168	Govt High School for Boys No 3	1.38	Government School	Higher Secondary
169	Government Centinnail Model High School	0.64	Government School	Higher Secondary
170	Para Shoot public School	4.37	Government School	Higher Secondary
171	Govt High School Cantt	0.95	Government School	Higher Secondary
172	Govt High School No 1	1.53	Government School	Higher Secondary
173	Girls School	1.16	Government School	Primary
174	Govt. High School for Girls	30.72	Government School	Higher Secondary
175	Govt Shaheed Mahir Rizwan High School	0.91	Government School	Higher Secondary
176	Govt. Girls Primray	0.30	Government School	Primary
177	Govt.Girls High School1	0.60	Government School	Higher Secondary
178	Govt. High School	0.44	Government School	Higher Secondary
179	Govt.Girls Primray	0.22	Government School	Primary
180	Govt primary school Bhana Mari	0.18	Government School	Primary
181	Govt Middle School	0.07	Government School	Middle

Sr.No	Name	Area_Acres	Category	Level
182	Pak School of Education	0.14	Government School	Higher Secondary
183	Govt.G.primray School	0.05	Government School	Primary
184	Govt Shaheed Sahiban High School	0.10	Government School	Higher Secondary
185	Govt Centennial Model High School For Girls Nothia	0.32	Government School	Higher Secondary
186	Govt.Primray School	0.05	Government School	Primary
187	Govt.Girls primray School	0.62	Government School	Primary
188	Govt.Middle School	0.05	Government School	Middle
189	Govt.Middle School	0.07	Government School	Middle
190	G.G.P.School	0.28	Government School	Primary
191	G.P.School	1.70	Government School	Primary
192	Government Girls High School	0.19	Government School	Higher Secondary
193	GCT Peshawar	4.17	Government School	Higher Secondary
194	Govt. High School for Girls	0.09	Government School	Higher Secondary
195	G.H.School Nauden Payan	0.63	Government School	Higher Secondary
196	Govt Girls Primary School Swati Gate	0.17	Government School	Primary
197	G.P.S No.3	0.32	Government School	Primary
198	Govt Girls High School	0.15	Government School	Higher Secondary
199	G.G.P.School	0.26	Government School	Primary
200	G.H.School	0.27	Government School	Higher Secondary
201	G.G.H.S.School	0.32	Government School	Higher Secondary
202	G.P.S	0.05	Government School	Primary
203	Govt Boys and Girls Secondary School	2.30	Government School	Higher Secondary
204	Govt Middle School5	0.20	Government School	Middle
205	Govt Primary School15	0.18	Government School	Primary
206	Govt Middle School Garhi Durrani	0.45	Government School	Middle
207	Govt Middle School7	0.09	Government School	Middle

Sr.No	Name	Area_Acres	Category	Level
208	Govt Girls Primary School6	0.31	Government School	Primary
209	Govt Primary School16	0.13	Government School	Primary
210	Govt High School5	0.16	Government School	Higher Secondary
211	Govt Shaheed Saad ur E Rehman High School	0.24	Government School	Higher Secondary
212	Govt Primary School6	0.15	Government School	Primary
213	Govt Primary School7	0.26	Government School	Primary
214	Govt Primary School Mehboobabad	0.06	Government School	Primary
215	Govt Primery School Mehboobabad	0.05	Government School	Primary
216	Govt Primary school5	0.12	Government School	Primary
217	Govt Primary School4	0.08	Government School	Primary
218	Govt Primary School3	0.07	Government School	Primary
219	Govt High School6	0.37	Government School	Higher Secondary
220	Govt Girls Middle School4	0.23	Government School	Middle
221	Govt Primary School22	0.31	Government School	Primary
222	Govt High School Deh Bahadar	0.19	Government School	Higher Secondary
223	Govt Girls Middle School2	0.08	Government School	Middle
224	Govt. Girls Middle School	0.08	Government School	Middle
225	Govt Girls Primary School	0.04	Government School	Primary
226	GPS No 2	0.48	Government School	Primary
227	Peshawer Grammer School Senior	0.05	Government School	Higher Secondary
228	G.P.S	0.05	Government School	Primary
229	Government Primary School No 1	0.31	Government School	Primary
230	GMS Sufaid Dheri	0.05	Government School	Higher Secondary
231	Govt High School Hayatabad	1.63	Government School	Higher Secondary
232	Forward Public School	1.01	Government School	Higher Secondary
233	Govt. Primary School for Boys	1.16	Government School	Primary

Sr.No	Name	Area_Acres	Category	Level
234	Forward Public School	0.87	Government School	Higher Secondary
235	Govt Girls High School	0.26	Government School	Higher Secondary
236	Govt. Primary School for Girls	0.41	Government School	Primary
237	Govt. Primary School for Girls	0.13	Government School	Primary
238	Govt. Middle School for Boys	0.12	Government School	Middle
239	Govt Girls Middle School3	1.02	Government School	Middle
240	Govt Primary School Hamayun Khan	0.13	Government School	Primary
241	Govt. School	9.99	Government School	Primary
242	Peshawer Grammer School	0.45	Government School	Higher Secondary
243	Peshawer Grammer School Junior	0.17	Government School	Higher Secondary
244	Govt. Primary School for Boys	0.07	Government School	Primary
245	GPS	0.20	Government School	Primary
246	Govt. Middle School for Boys	0.23	Government School	Middle
247	GPS	0.68	Government School	Primary
248	Govt. Primary School for Boys	0.21	Government School	Primary
249	Govt Middle School No 2 Mohallah Trakanan	2.75	Government School	Middle
250	PALOSI PUBLIC SCHOOL	0.08	Government School	Higher Secondary
251	Govt. High School for Boys	0.06	Government School	Higher Secondary
252	Govt Middle School2	0.19	Government School	Middle
253	Govt Primary School21	0.24	Government School	Primary
254	Govt Girls Middle School	0.17	Government School	Middle
255	Govt Primary School Malkandher	0.81	Government School	Primary
256	Govt High Secondary school Regi	0.84	Government School	Higher Secondary
257	Govt. High School for Boys	0.13	Government School	Higher Secondary
258	Govt Girls High School	0.15	Government School	Higher Secondary
259	BISE Peshawar	4.42	Government School	Higher Secondary

Sr.No	Name	Area_Acres	Category	Level
260	G.G.P.School	0.99	Government School	Primary
261	G.P.School	0.59	Government School	Primary
262	Govt. Primary School	0.47	Government School	Primary
263	Govt Girls Primary School12	1.56	Government School	Primary
264	Govt.School	0.32	Government School	Higher Secondary
265	Govt. Primary School for Boys	0.06	Government School	Primary
266	Govt School Putwar Payan	0.38	Government School	Higher Secondary
267	Govt. Primary School for Girls	0.39	Government School	Primary
268	Govt Primary School	0.21	Government School	Primary
269	GPS GARHI SHERDAD 2	0.04	Government School	Primary
270	GPS Ali Ahmad Banda	0.40	Government School	Primary
271	Govt Girls Primary school panam dehri Bala	0.45	Government School	Primary
272	Govt Primary School SUFAID Sung	0.20	Government School	Primary
273	Govt Girls School	0.25	Government School	Primary

19.3.Annexure 3 List of Private Schools in PCMP

Sr. No.	Name	Category
1.	AAMIR EDUCATION ACADEMY	Private School
2.	AAMIR EDUCATION ACADEMY	Private School
3.	Abseen Model Hogh School	Private School
4.	Abu Talib Model School	Private School
5.	ACADEMY OF MODERN STUDIES (BOYS) PALOSI PESHAWAR	Private School
6.	AHMAD ENGLISH MODEL SCHOOL	Private School
7.	Ahmad English Model School	Private School
8.	Ahmad Islamia Academy, Tajabaad	Private School
9.	Ahmad Islamic Education System (AIES)	Private School
10.	AIGLONS INTERNATIONAL SCHOOL	Private School
11.	AIOU Regional Campus	Private School
12.	Air Force School	Private School
13.	Air Foundation School System	Private School
14.	AJAB KHAN AFRIDI PUBLIC SCHOOL	Private School
15.	Al Abad Public School	Private School
16.	AL BADAR ENGLISH MODEL SCHOOL	Private School
17.	AL FALAH MODEL SCHOOL SARBAND	Private School
18.	Al Falah Public High School	Private School
19.	al falah public school	Private School
20.	Al Furqan Children Academy	Private School
21.	al furqan islamic model school	Private School
22.	Al Furqan Public school	Private School
23.	Al Haj Muhammad Gul Khan School	Private School
24.	Al Hamd Public School	Private School
25.	Al Hasnain Public School (APS)	Private School

Sr. No.	Name	Category
26.	Al Ilm Academia school	Private School
27.	Al Imran Memorial School	Private School
28.	Al Kabir Public School	Private School
29.	AL KHAIR PUBLIC SCHOOL	Private School
30.	Al Khair Public School	Private School
31.	Al Khuda Public School	Private School
32.	Al Madina Institute	Private School
33.	AL MAHMOOD MODEL SCHOOL	Private School
34.	AL MUSLIM IQRA ACADEMY	Private School
35.	Al Nasar Education System School	Private School
36.	AL NIMRAH MODEL SCHOOL SHAHGI THANA	Private School
37.	Al Noor Public High School	Private School
38.	al noor public school	Private School
39.	Al Qalam education system	Private School
40.	Al Qalam Education System	Private School
41.	AL QALAM MODEL SCHOOL	Private School
42.	Al Quran Kareen Online Acadmey	Private School
43.	Al Sayed Hajwari public high school	Private School
44.	AL SAYED MODEL HIGH SCHOOL PUSHTAKHARA PAYAN	Private School
45.	al suffa public school	Private School
46.	Al Syed School System	Private School
47.	Al-Faisal Model School	Private School
48.	Alfazal Public School	Private School
49.	Al-Hamra Public School Shahi Payan, Peshawar	Private School
50.	Al-Huda Public school	Private School
51.	ali children academy	Private School

Sr. No.	Name	Category
52.	Ali Garh School	Private School
53.	Ali Model School	Private School
54.	Allama Iqbal Public School	Private School
55.	Allied School Abasyn Campus	Private School
56.	Allied School city campus kohat	Private School
57.	ALLIED SCHOOL FRONTIER CAMPUS	Private School
58.	ALLIED SCHOOL HAYATABAD CAMPUS	Private School
59.	Allied School Univesity Town Campus	Private School
60.	alma meter school system	Private School
61.	Al-Madina Model School, Kano Dheri Warsak Road	Private School
62.	Almayeda Model School	Private School
63.	Almuslim Public School	Private School
64.	Altaqwa Laisa	Private School
65.	APEX Institute of Peshawar	Private School
66.	Army Public Toddlers Academy	Private School
67.	Asia Model School	Private School
68.	asian model school	Private School
69.	Aspire Grammar School (Peshawar)	Private School
70.	ATI Peshawarr	Private School
71.	Ayman Public School	Private School
72.	BAANGEDARA SCHOOL SYSTEM	Private School
73.	Beacon public School	Private School
74.	Beaconhouse School Kindergarten Camous	Private School
75.	BEACONHOUSE SCHOOL SYSTEM KHYBER CAMPUS	Private School
76.	Becon House School System Sadd	Private School
77.	Bekan Camreg School	Private School

Sr. No.	Name	Category
78.	Benchmark school powered by taleemabad	Private School
79.	Benevent Public School	Private School
80.	Bibi Aisha Siddiqa Girls School	Private School
81.	Bibi Ayesha Kaka Kheil School	Private School
82.	Bin Haleem High School	Private School
83.	Bismillah School	Private School
84.	Bloomfield Hall	Private School
85.	Bloomfield Hall Senior Campus	Private School
86.	Blue Bird Grammar School	Private School
87.	Bridges Autism Center Peshawar	Private School
88.	BRIGHT BEGINNINGS SCHOOL SYSTEM	Private School
89.	BRIGHT ROOTS EDUCATION SYSTEM	Private School
90.	Bukhari Public School	Private School
91.	Buraq Education System (Peshawar Campus)	Private School
92.	Cambridge Public School	Private School
93.	Cantonment Board Public High School	Private School
94.	Cathedral School	Private School
95.	Children Foundation School	Private School
96.	Choice Model School	Private School
97.	Circle School Pawaka (ASDEO) Town 3	Private School
98.	CITY PUBLIC SCHOOL	Private School
99.	City School	Private School
100.	Comprehensive School Dabgari	Private School
101.	Course Amercian Center	Private School
102.	DAR-E-IQRA MODEL SCHOOL	Private School
103.	Dawn Public School	Private School

Sr. No.	Name	Category
104.	DEH BAHADAR MODEL SCHOOL	Private School
105.	Deh Bahadar Model School	Private School
106.	Dharmik School	Private School
107.	Discovery School System	Private School
108.	Dr. A.Q. Khan School System Phase 1 Hayatabad	Private School
109.	Dua Model School	Private School
110.	Dynamic International School	Private School
111.	Dynamic International School	Private School
112.	Education	Private School
113.	Edward High School	Private School
114.	Edward High School	Private School
115.	EEF Model School	Private School
116.	EM School	Private School
117.	Erontior Public School	Private School
118.	Erudition School	Private School
119.	Etchers Schooling System	Private School
120.	Ever Green School	Private School
121.	Excellence School	Private School
122.	Exploreville Schools	Private School
123.	F.B.S School	Private School
124.	F.G School	Private School
125.	Falcon Model School	Private School
126.	Faran Education System	Private School
127.	Farkhanda Insititute of Nursing and public health	Private School
128.	fatima qayyum trust school	Private School
129.	Fatimatuz Zuhra Primary School	Private School

Sr. No.	Name	Category
130.	Fawad Model	Private School
131.	FC Public School	Private School
132.	FG Boys Public School	Private School
133.	FG Junior School	Private School
134.	FGS Education System	Private School
135.	Fixit Skill Centre	Private School
136.	Forntior Model School	Private School
137.	Forward Public School Warsak Road Peshawar	Private School
138.	Frontier Children Academy	Private School
139.	Frontier Children High School	Private School
140.	frontier grammar school	Private School
141.	Frontier model school for Boys	Private School
142.	FRONTIER PUBLIC HIGH SCHOOL DORA ROAD	Private School
143.	Frontier Science Academy	Private School
144.	Frontier Star Model School	Private School
145.	Frontier Youth Academy	Private School
146.	Furkan school	Private School
147.	Ghari Qamar din Mohallah Waris khan	Private School
148.	Ghazali Public High School	Private School
149.	GHS Lakarai Kaneeza	Private School
150.	Global Wisdom International School Peshawar	Private School
151.	Govt Girls Primary School	Private School
152.	Govt Primary School of Ilham	Private School
153.	Green Hill School	Private School
154.	haqqania public high school	Private School
155.	Haryana Public School	Private School

Sr. No.	Name	Category
156.	Hashmatullah Meyakhel Town	Private School
157.	HAYAT MODEL SCHOOL	Private School
158.	HAYATABAD MODEL SCHOOL	Private School
159.	High School for Girls	Private School
160.	Hina Model School	Private School
161.	Hira Grammar School	Private School
162.	Hira High School	Private School
163.	HIRA MODEL SCHOOL	Private School
164.	Hira Standard School	Private School
165.	HIRA STUDENTS ACADEMY	Private School
166.	Horision School	Private School
167.	Horizon School	Private School
168.	House of Knowledge Peshawar	Private School
169.	HUDAIBIA MODEL SCHOOL	Private School
170.	ICMS SCHOOL SYSTEM FOR GIRLS	Private School
171.	Idial Public School	Private School
172.	IILM School	Private School
173.	ILM School	Private School
174.	Imad Public School	Private School
175.	Imran Public School	Private School
176.	INQILAB MODEL SCHOOL, PHANDU	Private School
177.	Institute of Health Science Peshawar	Private School
178.	INTERNATIONAL SCH OOL OF CORDOBA, HAYATABAD CAMPUS	Private School
179.	IPS School system for boys and girls	Private School
180.	Iqbal Public High School Sango Landi Bala	Private School
181.	Iqra Children Academy	Private School

Sr. No.	Name	Category
182.	IQRA DAR UL ATFAL ACADEMY	Private School
183.	IQRA EDUCATION SYSTEM SCHOOL	Private School
184.	Iqra Hira School	Private School
185.	Iqra Huffaz Secondary School	Private School
186.	Iqra Huffaz Secondary School Warsak Road	Private School
187.	Iqra Huniors Garden (Girls Campus)	Private School
188.	Iqra International Moddel School IIMS	Private School
189.	IQRA ISLAMIC INTERNATIONAL SCHOOL SYSTEM	Private School
190.	IQRA ISLAMIC MODEL SCHOOL(HIGH), Tehkal Bala	Private School
191.	IQRA ISLAMIC MODEL SCHOOL(HIGH), Tehkal Bala	Private School
192.	Iqra Islamic School shahedabad	Private School
193.	Iqra Juniors Garden (Boys Campus)	Private School
194.	iqra kids academy	Private School
195.	IQRA MADINA-TUL-ATFAL SCHOOL (IMAS)	Private School
196.	Iqra Mahad Ul Atfal school	Private School
197.	IQRA MODEL HIGH SCHOOL HAZAR KHOWANI	Private School
198.	Iqra Model School	Private School
199.	Iqra Noor e Hira Academy	Private School
200.	IQRA NOOR UL ILAM PESHAWAR	Private School
201.	Iqra Public High School, Shero Jengai	Private School
202.	Iqra Public School	Private School
203.	Iqra Public School	Private School
204.	Iqra Public School	Private School
205.	Iqra Public School	Private School
206.	Iqra Public School	Private School
207.	iqra public school	Private School

Sr. No.	Name	Category
208.	IQRA RAUZA TUL ATFAL FOUNDATION SCHOOL	Private School
209.	iqra rauzatul atfal academy	Private School
210.	IQRA RAUZATUL ATFAL SAYYEDINA ANUS BIN MALEK	Private School
211.	IQRA RAUZATUL ATFAL SCHOOL SYSTEM	Private School
212.	Iqra Rauzatul Uloom School	Private School
213.	Iqra Rauzul Atfal	Private School
214.	IQRA ROUZAT UL ATFAL & SCHOOL	Private School
215.	Iqra Rozatul Atfal Trust	Private School
216.	Iqra Rozatul itfal School Danishabad	Private School
217.	Iqra School	Private School
218.	Iqra School	Private School
219.	Iqra School	Private School
220.	Iqra School System Madeena Town	Private School
221.	Iqra Smart Education	Private School
222.	Iqra Stenography Institute	Private School
223.	Iqra Tahfeez-ul-Furqan Children Academy	Private School
224.	Iqra Tajweed ul quran Academy	Private School
225.	IQRA TUHFA TUL ATFAL SHCOOL	Private School
226.	Iqra Zia Ul Quran School	Private School
227.	Islamabad Public School	Private School
228.	Islamia Education System	Private School
229.	Islamia Model school	Private School
230.	Islamic Children Acadmey	Private School
231.	Islamic Children Acadmey	Private School
232.	Islamic Institute of Modreb Studies Peshawar	Private School
233.	Islamic International High School	Private School

Sr. No.	Name	Category
234.	ISLAMIC TARBIYAH SCHOOL	Private School
235.	ittehad model school	Private School
236.	Ittehad Public High School	Private School
237.	Jamal Interational Public High School	Private School
238.	Jamia Masjid Abu Bakar Siddique	Private School
239.	Jamiatul Muhsanat For Girls	Private School
240.	Jamil Sunshain School	Private School
241.	Jan Accadmy School	Private School
242.	Jinah Model School	Private School
243.	jinnah education foundation	Private School
244.	Johar Public School	Private School
245.	Junior Model School	Private School
246.	Junnah Model School	Private School
247.	Khalid Mehmood Public school	Private School
248.	Khalil Model School Regi Peshawar	Private School
249.	KHALIL MOHMAND CAMBRIDGE SCHOOL PAF CAMP BADABER	Private School
250.	Khansa School for Girls	Private School
251.	Khursheed Public School	Private School
252.	Khusal Bagh School	Private School
253.	Khushal Bagh Inclusive School	Private School
254.	Khyber Grammer School	Private School
255.	Khyber Institute of Technology	Private School
256.	KHYBER PUBLIC SCHOOL	Private School
257.	Khyber School	Private School
258.	khyber youth academy high school	Private School
259.	Kid campus School	Private School

Sr. No.	Name	Category
260.	KIDDIE KINGDOM	Private School
261.	Kids Paradise School	Private School
262.	King Hall Public School	Private School
263.	Knowledge City School System	Private School
264.	Knowledge Core Education System	Private School
265.	Koshish Education Campus	Private School
266.	Lady Grifth School	Private School
267.	Lahore Grammer School	Private School
268.	Lamar Medical Institute	Private School
269.	Leeds School System	Private School
270.	Liaqat Public School	Private School
271.	Live Stock Research and Breeding Farm	Private School
272.	madina public school	Private School
273.	Madina School	Private School
274.	Madrasa Saleh Muhammad	Private School
275.	Mahjoba High School	Private School
276.	Mahmood Ghaznavi Islamic Public School	Private School
277.	Maredian School	Private School
278.	Mashriq Public School	Private School
279.	Mayaa	Private School
280.	MCA Education System	Private School
281.	Mehria Public School	Private School
282.	Memorial School	Private School
283.	Middle School	Private School
284.	Milat school	Private School
285.	Military Public School	Private School

Sr. No.	Name	Category
286.	Model School	Private School
287.	Mohammad Medical Complex	Private School
288.	Mohmad Community for Education	Private School
289.	Moon Light Public School	Private School
290.	Moon Light School	Private School
291.	Morning Model School	Private School
292.	Mosque Ittefaq	Private School
293.	Mrs. Shahuddin school	Private School
294.	Muhammad Ali School	Private School
295.	Muhammad International Billinguil School	Private School
296.	Munawar Public School	Private School
297.	Muslim Cambridge Public School	Private School
298.	Muslim Post Graduate	Private School
299.	Muslim School	Private School
300.	Nanak Pura G.H.S	Private School
301.	Naseem Official	Private School
302.	Nation Rise Model School	Private School
303.	National Education Public School	Private School
304.	National model school	Private School
305.	NCE _ Physical Chemistry	Private School
306.	NCE in GEOLOGY	Private School
307.	NCS School System	Private School
308.	NCS School System	Private School
309.	NCS School System Jinnah Campus	Private School
310.	New Diamond Model School and Children Academy	Private School
311.	New Frontier Model School	Private School

Sr. No.	Name	Category
312.	NEW MUSLIM CHILDREN ACADEMY	Private School
313.	New Qali School	Private School
314.	New Scholer School	Private School
315.	Nirma Public School	Private School
316.	Nishtar Model School	Private School
317.	North Hills International School For Education	Private School
318.	NUSRAT CAMBRIDGE HIGH SCHOOL	Private School
319.	Nusrat cambridge Public	Private School
320.	Old Govt High School	Private School
321.	Old Salwan School	Private School
322.	Online Quran Teaching academy	Private School
323.	Oures Public School	Private School
324.	Oxford Grammer School	Private School
325.	Oxford public School	Private School
326.	Pak Academy	Private School
327.	PAK CHILDREN ACADEMY	Private School
328.	Pak Iqra High School	Private School
329.	Pak Linka School	Private School
330.	pak model school	Private School
331.	Pak Shaheen Model High School Phandu Peshawar	Private School
332.	Pakhtunkhwa Group of Schools (Branch 2)	Private School
333.	Pakistan Embassy Public School	Private School
334.	Pakistan Forest Institute	Private School
335.	Pakistan Hear Foundation (PHF, MH, IMRC)	Private School
336.	PAKISTAN SCHOOL OF EDUCATION	Private School
337.	Pakistan Standard Model School	Private School

Sr. No.	Name	Category
338.	Pakturk School	Private School
339.	PALOSI PUBLIC SCHOOL	Private School
340.	Park Radient public School	Private School
341.	Pasto Academy	Private School
342.	Peace Model School	Private School
343.	Peace School System	Private School
344.	Peshawar Academy	Private School
345.	Peshawar Children Academy Hayatabad Peshawar	Private School
346.	Peshawar Core School System	Private School
347.	Peshawar Education System	Private School
348.	PESHAWAR EDUCATIONAL COMPLEX	Private School
349.	PESHAWAR ENGLISH AZEEMI SCHOOL & IQRA ACADEMY	Private School
350.	Peshawar Excellence School	Private School
351.	Peshawar Institute of english language	Private School
352.	peshawar international public school	Private School
353.	Peshawar Model School (Boys -VI)	Private School
354.	PESHAWAR MODEL SCHOOL HAYATABAD CAMPUS	Private School
355.	Peshawar Scince Academy	Private School
356.	Peshawer Institute of Technology (PIT)	Private School
357.	PIPS SCHOOL SYSTEM PESHAWAR CAMPUS	Private School
358.	Precise Technology IT Learning Centre	Private School
359.	Preston school system	Private School
360.	Primary School	Private School
361.	PRIME SCHOOL SYSTEM	Private School
362.	Private School	Private School
363.	Private School	Private School

Sr. No.	Name	Category
364.	Private School	Private School
365.	Private School	Private School
366.	Private School	Private School
367.	Private School	Private School
368.	Private School	Private School
369.	Private School	Private School
370.	Private School	Private School
371.	Private School	Private School
372.	Private School	Private School
373.	Private School	Private School
374.	Private School	Private School
375.	Private School	Private School
376.	Private School	Private School
377.	Private School	Private School
378.	Private School	Private School
379.	Private School	Private School
380.	Private School	Private School
381.	Private School	Private School
382.	Private School	Private School
383.	Private School	Private School
384.	Private School	Private School
385.	Private School	Private School
386.	Private School	Private School
387.	Private School	Private School
388.	Professors model school peshawar	Private School
389.	Public Health school Nistarabad	Private School

Sr. No.	Name	Category
390.	Qaid Azam School	Private School
391.	Qaid Gramer School	Private School
392.	Qaid Public School	Private School
393.	Quaid e Azam School	Private School
394.	Quaid Girls High School	Private School
395.	Quartaba School	Private School
396.	Quarters & Quide Grammer Public School	Private School
397.	Racines school System Faqieabad campus	Private School
398.	Rehman Medical Institute	Private School
399.	Rehmania Institute of Modren Studies Peshawar	Private School
400.	RISING STAR EDUCARE SYSTEM	Private School
401.	Rising Star Public School	Private School
402.	Roots Millenium Schools Paddington Campus	Private School
403.	ROOTS MILLENNIUM SCHOOLS KHYBER CAMPUS	Private School
404.	Roots Millennium Schools, Hayatabad Campus	Private School
405.	roshni islamic model school	Private School
406.	Royal Public School	Private School
407.	S T Jan School	Private School
408.	S.Merry High School	Private School
409.	SADAAT MODEL SCHOOL CHAWAGUJAR	Private School
410.	Safi Govt School	Private School
411.	Sahibzada Public School	Private School
412.	Sameer Model School	Private School
413.	Sameer Model School	Private School
414.	Sana Model School	Private School
415.	SAPNA MODEL SCHOOL	Private School

Sr. No.	Name	Category
416.	Sarhad Children Academy	Private School
417.	Sarhad Islamia school	Private School
418.	Sarhad Model High School	Private School
419.	School	Private School
420.	School	Private School
421.	School	Private School
422.	School	Private School
423.	School	Private School
424.	School	Private School
425.	Science Coaching Academy	Private School
426.	Shah Public School	Private School
427.	Shahab Public School	Private School
428.	Shaheed Haroon Acadmey	Private School
429.	Shaheed Mir Fateh Muhammad	Private School
430.	Shaheed Munshi Sahar Gul Momand	Private School
431.	Shaheen Muslim School	Private School
432.	Shaheen Public School	Private School
433.	Shaheen School	Private School
434.	Shaheen Students Academy	Private School
435.	Shahzad Public School	Private School
436.	Shahzad Tuition Acadmey	Private School
437.	Shakir Academy Boys and Girls School	Private School
438.	Sheikh Zaid Islamic Center	Private School
439.	Shinning Stars High School	Private School
440.	Shinwari Town Sir Syed Public School	Private School
441.	Shiraz Public School	Private School

Sr. No.	Name	Category
442.	Sir Sahibzada School	Private School
443.	Sir Syed English Model School	Private School
444.	Sir syed School	Private School
445.	Skyline Middle School	Private School
446.	SPARKLE PUBLIC SCHOOL	Private School
447.	Special Public School	Private School
448.	SPRING ROSE SCHOOL SYSTEM	Private School
449.	ST Francis High School	Private School
450.	ST Francis High School	Private School
451.	St Mathews High School, Tehkal Payan	Private School
452.	St,John School	Private School
453.	Standared Model School	Private School
454.	Stanford School System Montessori Branch	Private School
455.	Sun Light Model School	Private School
456.	Sun Rise School	Private School
457.	Sun Rise School	Private School
458.	Sun Shain Public School	Private School
459.	Sun Shain School	Private School
460.	Sun Shin Public School	Private School
461.	SUNRISE MONTESSORI SCHOOL	Private School
462.	Superior Model School	Private School
463.	Superior Muslim School	Private School
464.	Taj Public School	Private School
465.	Talha Islamia Public School	Private School
466.	Tasawar Public School	Private School
467.	Tech Girls School	Private School

Sr. No.	Name	Category
468.	Tech Vocational Center	Private School
469.	Technical Higher Secondary School	Private School
470.	Technical School	Private School
471.	THE AL-BADAR ISLAMIC GRAMMAR SCHOOL	Private School
472.	The Angels Nursery and school	Private School
473.	The Bright School System	Private School
474.	The City Educator School	Private School
475.	the city model school	Private School
476.	The City School Hayatabad Junior Peshawar	Private School
477.	The Dominators School	Private School
478.	The Eagle's Nest School	Private School
479.	The Edex School	Private School
480.	The Educators	Private School
481.	The Educators Ring Road Campus (Girls)	Private School
482.	The Educators Ring Road Campus (Pre-School)	Private School
483.	The Educators Ring Road Campus (Pre-School)	Private School
484.	The Educators School	Private School
485.	The Educators School Rahatabad	Private School
486.	the elite public school	Private School
487.	The Elite School System	Private School
488.	The Elite School System	Private School
489.	The Ennoble School System	Private School
490.	THE EVERGREEN EDUCATIONAL COMPLEX	Private School
491.	The Frontier Education Academy	Private School
492.	the future educators, Musazai	Private School
493.	The Global Grammer High School Regi	Private School

Sr. No.	Name	Category
494.	The Grace School System	Private School
495.	The Home School System	Private School
496.	The Hope English Language and Computer	Private School
497.	THE ISLAMIC SCHOOL OF SCIENCES	Private School
498.	The Knowledge inn School	Private School
499.	The Knowledge School	Private School
500.	The Knowledge School Gulnerg	Private School
501.	THE LAMPS SCHOOL SYSTEM	Private School
502.	THE LEARNERS HIGH SCHOOL	Private School
503.	the learning tree model school	Private School
504.	The Morning Star School	Private School
505.	THE MOTHER 'S LAP SCHOOL MATHRA PESHAWAR	Private School
506.	The Muslim Collegiate School Peshawar	Private School
507.	The Muslim School Regi	Private School
508.	The Muslim Vision Public School	Private School
509.	The National Grammer School System	Private School
510.	The New United english language School	Private School
511.	The Pakistan Public School	Private School
512.	The Pearl Public School	Private School
513.	THE PEGASUS SCHOOL SYSTEM	Private School
514.	THE PEGASUS SCHOOL SYSTEM	Private School
515.	THE PERFECT EDUCATOR SCHOOL	Private School
516.	The Peshawar School	Private School
517.	The Royal School of Learning	Private School
518.	THE SMART SCHOOL TAJ CAMPUS	Private School
519.	THE SUN LIGHT MODEL SCHOOL	Private School

Sr. No.	Name	Category
520.	The Sun Light Model School	Private School
521.	The Sun Light Model Umeed Abad 2	Private School
522.	The Thinking School	Private School
523.	Ummul Qura Model School	Private School
524.	Unique Model School	Private School
525.	UNIQUE VISION SCHOOL SYSTEM	Private School
526.	UNIVERSAL MODEL SCHOOL REGI LALMA	Private School
527.	UNIVERSAL MODEL SCHOOL REGI LALMA	Private School
528.	Universal Public School	Private School
529.	Universal Public School	Private School
530.	university grammar school	Private School
531.	University Model School	Private School
532.	University Public School	Private School
533.	UNIVERSITY STANDARD SCHOOL	Private School
534.	Unsere Kinder our Children Pre-School	Private School
535.	Wapda High School	Private School
536.	warsak grammar school	Private School
537.	WARSAK PUBLIC SCHOOL & COLLGE	Private School
538.	WARSAK STAR PUBLIC SCHOOL	Private School
539.	Westford Systematic School Peshawar	Private School
540.	Wisdom House Model School	Private School
541.	WISDOM MODEL SCHOOL	Private School
542.	WMSC Girls Branch	Private School
543.	Working Folks Gramar School and College	Private School
544.	Worksak Model School	Private School
545.	ZAhir Shah Home and School	Private School

Sr. No.	Name	Category
546.	Zahreen Public High School Naudeh Payan	Private School

19.4.Annexure 4 List of HEDs in PCMP

Sr. No	Name	Area_Acres	Category	Level
1	Al Mansoor High School and College	0.07	College	HED
2	Shah Nursing College and Medical Sciences	0.38	College	HED
3	NPSW08 Virtual University	0.23	University	HED
4	Abasyn University Peshawar New Building	0.09	University	HED
5	FRONTIER GRAMMAR SCHOOL & COLLEGE, CAMPUS-II	0.53	College	HED
6	City University Peshawar	4.78	University	HED
7	Peshawar Model Degree College Boys	1.00	College	HED
8	New Islamia School and College	0.08	College	HED
9	City Girls College	2.25	College	HED
10	CITY MODEL COLLEGE AND (CMC) ELEMENTARY SCHOOL	0.15	College	HED
11	Elementry College	0.14	College	HED
12	Superier science college	6.64	College	HED
13	Municipal Inter College	1.42	College	HED
14	Municipal Inter College for Boys	0.23	College	HED
15	The Wist School and College	0.27	College	HED
16	Pakistan Public School and College	0.03	College	HED
17	Shaheen Commerce College	0.09	College	HED
18	Shaheed Alamzeb Girls Commerce College	0.60	College	HED
19	Govt girls degree college zaryab colony peshawar	0.15	College	HED
20	The Muslim Schoil and College city campus	0.21	College	HED
21	Muslim College of Commerce Campus II	0.47	College	HED
22	Peshawer Model School and College	1.65	College	HED
23	The Little Saqes High School and College	0.05	College	HED
24	Abasyn University	1.43	University	HED
25	New Peace School and College	1.09	College	HED
26	ICMS School and College For Girls	0.44	College	HED
27	North Hills School & College	0.79	College	HED
28	Jinnah Islamia College for Boys	3.24	College	HED
29	North Hills School and College peshawar	0.07	College	HED
30	College	0.32	College	HED
31	Muslim College	0.22	College	HED
32	Muslim college of commerce & management Peshawar	0.43	College	HED
33	Hira Degree Collage	0.27	College	HED
34	HIMS Degree College Peshawar	0.34	College	HED
35	Islamia Women College	0.27	College	HED
36	THE CITY COLLEGE OF ARTS, SCIENCES & COMMERCE	0.92	College	HED
37	City College	0.60	College	HED
38	IBS college	0.50	College	HED
39	Jinnah College for Girls	0.11	College	HED

40	Quaid-e-Azam Degree college Peshawar	0.26	College	HED
41	Govt Girls Degree College	0.27	College	HED
42	City College for Girls	3.19	College	HED
43	Peshawar Degree College of Commerce and Science	0.10	College	HED
44	Govt Commerce College Peshawer	0.15	College	HED
45	Govt Commerce College	0.75	College	HED
46	New Iqra School and College	0.31	College	HED
47	City University	0.22	University	HED
48	Frontier Law College Pajaggi Road	0.13	College	HED
49	PESHAWAR FOUNDATION PUBLIC SCHOOL & COLLEGE	0.21	College	HED
50	Greenwich Grammar School and College	0.13	College	HED
51	Frontier Women University Larma Campus	72.36	University	HED
52	Jannah College for woman	0.54	College	HED
53	Degree College For I.T	0.18	College	HED
54	PEF College	0.44	College	HED
55	GENERATION MODEL SCHOOL & COLLEGE	0.13	College	HED
56	Peshawer Medical College	4.11	College	HED
57	Peshawar Public School and College	0.27	College	HED
58	Edward College	14.79	College	HED
59	Jinnah Girl College	1.34	College	HED
60	Frontier College For Women	6.38	College	HED
62	Frontier Women University	0.65	University	HED
63	FG Degree Girls College	19.24	College	HED
64	Rehana Jalal College	6.99	College	HED
65	FG Degree College for Boys	3.68	College	HED
66	F G Women Degree College	7.71	College	HED
67	NWFP Compuet College	0.08	College	HED
68	College Of Education	25.19	College	HED
69	Govt Degree College Achini Payan Peshawar	2.51	College	HED
70	Govt College Of Management	2.19	College	HED
71	Bacha Khan College	2.09	College	HED
72	Girls College Nodiayah Payan	0.30	College	HED
73	G.F.E.P.C Girls College	1.04	College	HED
74	Govt.Technical College	9.32	College	HED
75	Govt College for Boys	3.59	College	HED
76	F.E.F College	1.42	College	HED
77	MIH National University of Modern Science	15.97	University	HED
78	Sarhad University of Science and Information	5.78	University	HED
79	afridi model school and college	0.87	College	HED
80	Govt Degree College for women	0.27	College	HED
81	Women Degree College	0.16	College	HED
82	Khyber Tibbia College New Campus	0.11	College	HED
83	AL FAROOQ ISLAMIA PUBLIC SCHOOL & COLLEGE	0.13	College	HED

84	Superior Group Of Colleges	1.09	College	HED
85	Superior Group Of Colleges	0.31	College	HED
86	National University of Computer and Emerging Tech	3.82	University	HED
87	Fast University Peshawer Campus	5.76	University	HED
88	Hadaf College DHA Girls Campus	0.61	College	HED
89	Cecos University Peshawar	2.08	University	HED
90	The Lyceum school and college	1.22	College	HED
91	Quaid-e-Azam Group of School & Colleges	1.34	College	HED
92	Govt. Degree College Hayatabad	4.54	College	HED
93	Forward Girls College	0.48	College	HED
94	Govt High School and College for Girls	2.08	College	HED
95	Qurtuba Model School and college	1.01	College	HED
96	Rehman Medical College	0.39	College	HED
97	Institute of Mechatonics Engineering	5.03	University	HED
98	FEF Girls College	2.46	College	HED
99	AW College	1.18	College	HED
100	IIUI SCHOOL & COLLEGE KHYBER CAMPUS HAYATABAD	1.92	College	HED
101	Hayatabad Science College	0.93	College	HED
102	qurtuba school and college for girls	0.13	College	HED
103	Peshawar Model Degree College (Boys) Phase IV	0.68	College	HED
104	Govt Girls Degree College	2.78	College	HED
105	Iqra National University	2.92	University	HED
106	Iqra University	0.44	University	HED
107	Qadims Lumiere School and Girls College	0.47	College	HED
108	CONCORDIA COLLEGE PESHAWAR	0.41	College	HED
109	National University of Modern Languages, (NUML)	1.03	University	HED
110	Professional College of Medical Science	0.12	College	HED
111	Al Awan College	0.06	College	HED
112	Global Degre College	0.73	College	HED
114	Govt Girls Degree College Palosi	0.15	College	HED
115	University of Agriculture Research Farm	4.05	University	HED
116	Reflex College of Health Sciences Peshawar	0.21	College	HED
117	NEW SHAHZAD MODEL SCHOOL & COLLEGE REGI PESHAWAR	0.21	College	HED
118	Meritorious Central College & Hostel	0.03	College	HED
130	Peshawar Model Degree College	0.29	College	HED
131	Brains Post Graduate College	0.71	College	HED
132	Iqra University1	0.72	University	HED
133	Hayatabad Insititute of Medical Sciences	0.25	College	HED
134	Brains Degree College	0.91	College	HED
135	Peshawar Science College	0.34	College	HED
136	Post Graduate Medical Institute	6.90	College	HED
137	Peshawar Light Engineering Centre	0.86	College	HED
138	Roots International School & Colleges	4.40	College	HED

139	ITTEFAQ MODEL SCHOOL GIRLS CAMPUS	2.02	College	HED
140	University Campus Peshawar	677.50	University of Peshawar	HED

19.5.Annexure 5 Proposed Land Parcels for Education Facilities

Sr.No	Name	Area_Acres
1	Proposed Land Parcel for Educational Facilities	10.24
2	Proposed Land Parcel for Educational Facilities	0.03
3	Proposed Land Parcel for Educational Facilities	0.07
4	Proposed Land Parcel for Educational Facilities	5.66
5	Proposed Land Parcel for Educational Facilities	1.78
6	Proposed Land Parcel for Educational Facilities	9.15
7	Proposed Land Parcel for Educational Facilities	30.61
8	Proposed Land Parcel for Educational Facilities	0.78
9	Proposed Land Parcel for Educational Facilities	1.99
10	Proposed Land Parcel for Educational Facilities	1.34
11	Proposed Land Parcel for Educational Facilities	0.05
12	Proposed Land Parcel for Educational Facilities	0.03
13	Proposed Land Parcel for Educational Facilities	0.02
14	Proposed Land Parcel for Educational Facilities	2.71
15	Proposed Land Parcel for Educational Facilities	0.06
16	Proposed Land Parcel for Educational Facilities	0.04
17	Proposed Land Parcel for Educational Facilities	0.12
18	Proposed Land Parcel for Educational Facilities	0.25
19	Proposed Land Parcel for Educational Facilities	0.15
20	Proposed Land Parcel for Educational Facilities	0.03
21	Proposed Land Parcel for Educational Facilities	0.03
22	Proposed Land Parcel for Educational Facilities	0.03
23	Proposed Land Parcel for Educational Facilities	0.02
24	Proposed Land Parcel for Educational Facilities	0.11
25	Proposed Land Parcel for Educational Facilities	1.20
26	Proposed Land Parcel for Educational Facilities	0.74
27	Proposed Land Parcel for Educational Facilities	0.69
28	Proposed Land Parcel for Educational Facilities	0.80
29	Proposed Land Parcel for Educational Facilities	0.51
30	Proposed Land Parcel for Educational Facilities	1.34
31	Proposed Land Parcel for Educational Facilities	0.10
32	Proposed Land Parcel for Educational Facilities	0.45
33	Proposed Land Parcel for Educational Facilities	0.23
34	Proposed Land Parcel for Educational Facilities	2.81
35	Proposed Land Parcel for Educational Facilities	2.42
36	Proposed Land Parcel for Educational Facilities	0.56
37	Proposed Land Parcel for Educational Facilities	1.80
38	Proposed Land Parcel for Educational Facilities	1.07
39	Proposed Land Parcel for Educational Facilities	0.17
40	Proposed Land Parcel for Educational Facilities	3.10
41	Proposed Land Parcel for Educational Facilities	3.42
42	Proposed Land Parcel for Educational Facilities	5.83
43	Proposed Land Parcel for Educational Facilities	5.16