

MASTER PLAN OF HARIPUR CITY 2024-2042

VOLUME I



Master Plan Project (MPP) Urban Policy & Planning Unit

DECEMBER, 2024



URBAN POLICY UNIT
Planning and Development Department
GOVERNMENT OF KHYBERPAKHTUNKHWA



MESSAGE FROM THE CHIEF MINISTER KHYBER PAKHTUNKHWA

Khyber Pakhtunkhwa, the third most populated province of Pakistan, is experiencing rapid urbanization due to various factors. Lack of proper planning has resulted in overcrowding of urban centers coupled with traffic congestion, environmental pollution and ribbon development along main roads.



Insufficient investment, lack of trained human resource 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 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 potentials of a city 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, master plans and district land use plans for districts and urban centers across the province have been developed. These plans are designed to address core urban issues such as traffic congestion, non-affordable housing, transportation problems, unemployment, lack of education 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 would’nt have been possible without the dedicated and untiring efforts of the Urban Policy and Planning Unit of the Planning and Development Department, 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.

Ali Amin Khan Gandapur
Chief Minister,
Khyber Pakhtunkhwa

MESSAGE FROM THE ADDITIONAL CHIEF SECRETARY, PLANNING AND DEVELOPMENT DEPARTMENT 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 economic 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 centers.

The formulation of master plans for the towns and cities is a crucial step toward 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, livable 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 a 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 DEPARTMENT GOVERNMENT OF
KHYBER PAKHTUNKHWA**



The Haripur City Master Plan of 2042 represents a significant milestone in our efforts to foster sustainable urban development and shape the future of the city. As Haripur City 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 of all citizen to essential services and resources.

At the Local Government Election & 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 shall 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 a long-term resilient growth.

The Haripur City Master Plan of 2042 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 Haripur City. Moreover, it underscores the importance of collaboration among public institutions, stakeholders and residents in shaping an inclusive, sustainable and prosperous urban center.

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 Haripur City 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 Local Government
Government of Khyber Pakhtunkhwa

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



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 toward creating plans that will not only tackle present challenges but also lay the foundation for a sustainable urban future.

Mr. Arshad Ayub Khan
Minister Local Government
Khyber Pakhtunkhwa

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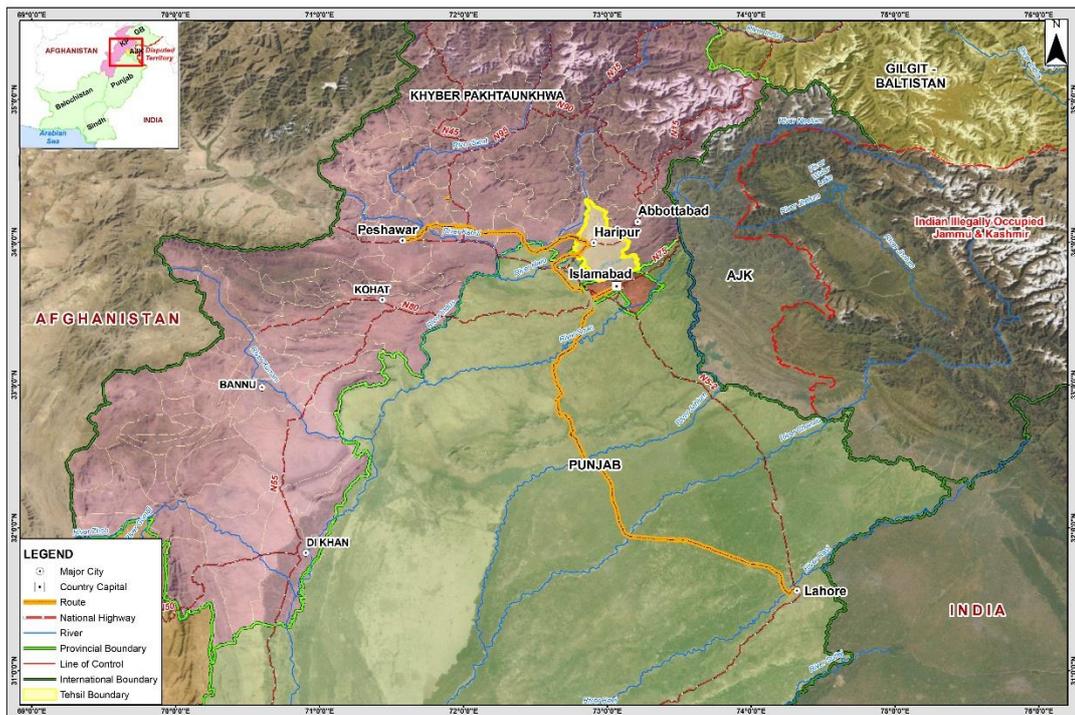
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MASTER PLAN REPORT

1. EXISTING SPATIAL CONFIGURATION AND URBAN FORM OF HARIPUR

Haripur District is in the Hazara Division of Khyber Pakhtunkhwa. Before becoming a district in 1991, Haripur had the status of a tehsil in Abbottabad District. Geographically, the district borders Abbottabad District to the northeast. The Federal Capital of Islamabad is adjacent to the district in the south as it can be observed in the **Map-1** Location of Haripur District.



Map 1 Location of District Haripur

The total population of Haripur district was 692,228 as enumerated in 1998 with an intercensal percentage increase of 44.5 since 1981 when it was 479,031 persons. The average annual growth rate was 2.2 per cent during this period. The total area of district is 1725 km² with a population size of 1,003,031 in 2017 which comprises of 49% (approx.) male and 51% female population which gives population density of 401 persons per square kilometer.

Table 1-1 Administrative Set-up District Haripur

Description	Number
Tehsils	03
Neighborhood Councils	25
Village Councils	155
Mauzas	361
Police station	11
Municipal Committees	02

1.1 Delineation of Project Boundary

The proposed project area for Haripur is carefully delineated to stay within the Tehsil boundary, taking into account the city's historical growth patterns and spatial trends which have influenced its current layout. Haripur's existing physical footprint and its administrative boundaries, including the limits of Neighborhood Councils (NCs) and Village Councils (VCs), are central to this planning effort. To ensure comprehensive urban management, all Neighborhood Councils are included in the project area.

Additionally, the project extends to adjoining Village Councils where urban development has seamlessly continued into these areas, reflecting the city's expanding boundaries. The administrative limits of these Village Councils are particularly important in the urban periphery, where the transition between rural and urban zones is becoming more pronounced. Key features of Haripur's urban development, along with both expected and committed projects, are critical in understanding and planning for the city's future growth. Considerations of population and development densities in the urban-rural fringe play a significant role in shaping this project. The plan addresses expected infill areas and outlines strategies for planned expansions, ensuring sustainable growth. The proposed project area covers approximately 130 square kilometers, incorporating 20 Neighborhood Councils and 33 Village Councils, aimed at managing the city's growth effectively and cohesively. The project area along with boundary is shown in the Map 2.

The project area population is 297,362 person population data for Neighborhood Councils (NCs) is derived from the urban population of Tehsil Haripur and additionally, the proportionate population of adjacent Village Councils (VCs) is also considered.

Table 1-2 Current Population of the Project Area

Category	GR Used for Projection	Population
NC	2.73	132,851
VC	2.08	164,510
Total Population (2020)		297,361

Table 1-3 Population Projection 2020-2042

Sr. No.	Year	Population Projected
1.	2020-2023	311,633
2.	2023-2027	348,285
3.	2027-2032	390,232
4.	2032-2037	438,711
5.	2037-2042	494,784

In the above table, the yearly population projections are presented, using three distinct methods: the Mathematical Method, the Arithmetic Method, and the Geometric Increase/Progression Method. These methods analyze historical data and growth patterns to estimate future population trends. The final projection is an average derived from the results of these three methods. Additionally, the below figure illustrates the curve of population increase.

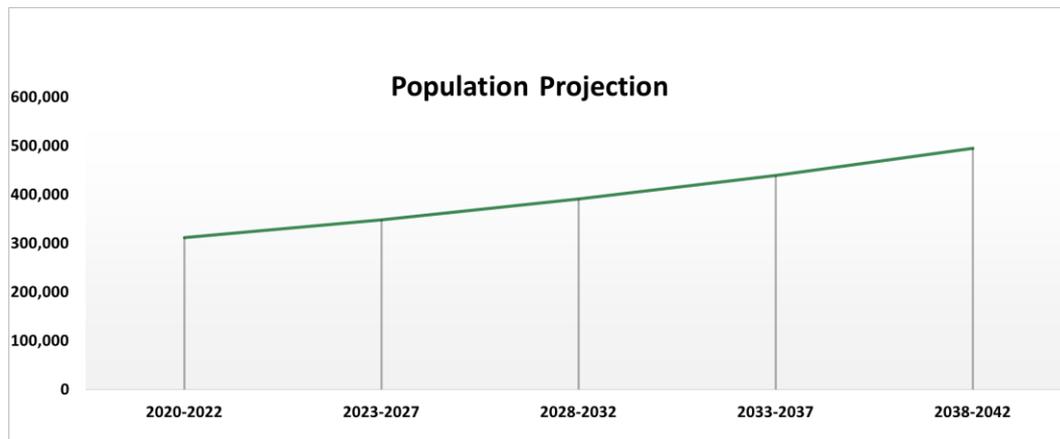
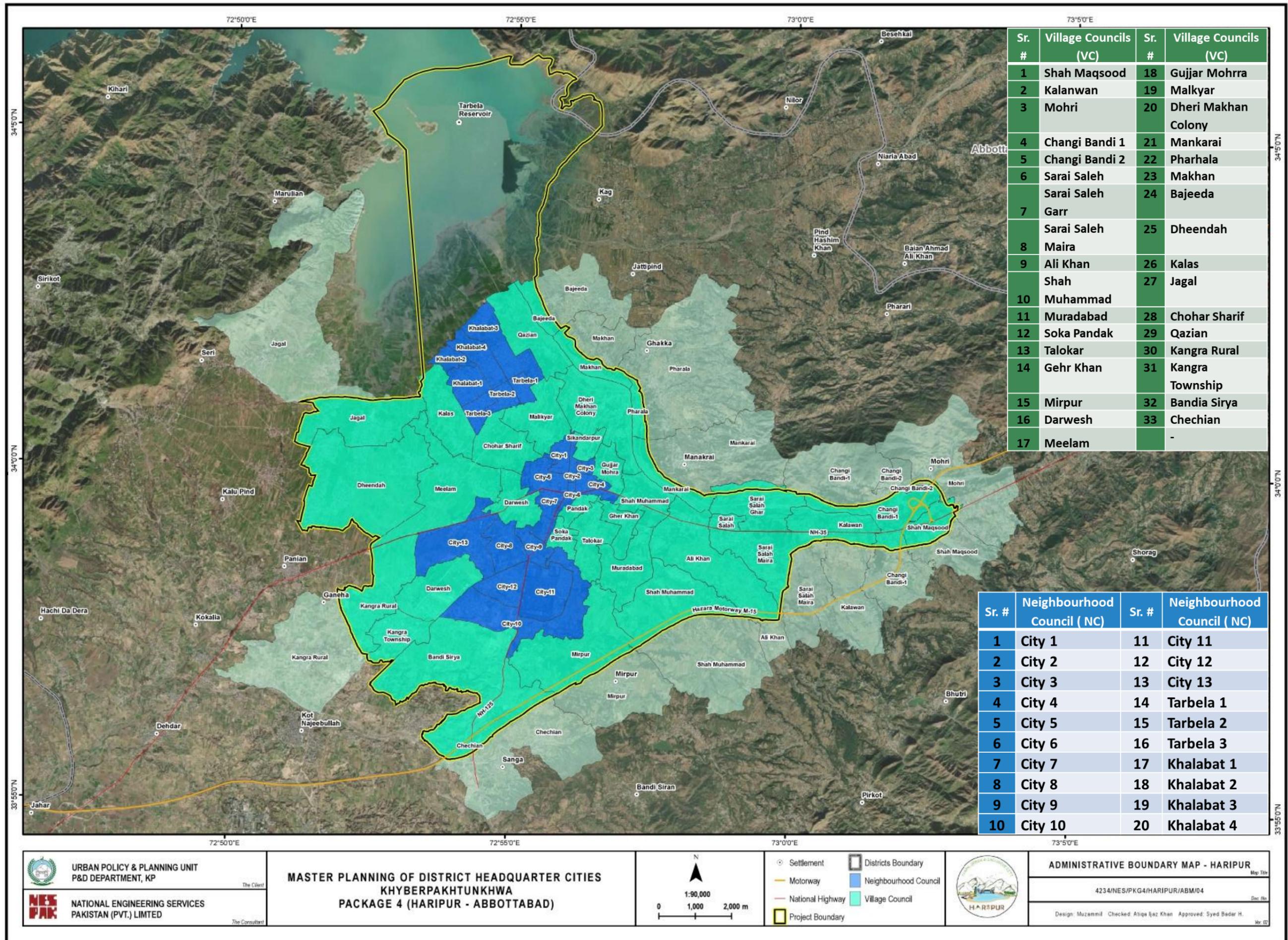


Figure 1-1 Population increase Curve



Map 2 Administrative Boundary of Project Area

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In 2005, the Urban area of Haripur was 20.65 sq km. development was in Khalabat Township, in Darwesh area along N35 and few developed area along N125 refer Figure 1-2.

In 2010, the Urban area of Haripur was 21.34 sq km. The Haripur area was densified in 2010 at Township Khalabat, T&T Society, and Sikanderpur refer Figure 1-3.

In 2017, the urban area was 22.44 sqkm, which was developed along Haripur interchange. The development growth trend is in Kangra colony, Model Town, Township Khalabat and Sikanderpur. The area developed along Dor River near the outskirts of Haripur refer Figure 1-4.

In 2021, urban area is 38.92 sqkm, growth trend occurs along Dheenda road, Meelum, Sikanderpur and along N-35 refer Figure 1-5.

Growth ratio of Haripur is 1.07 sq km per year from 2005 to 2021, the urban area of Haripur expand from 20.65 sq km to 38.92 sqkm. Over these years Haripur city became more densified mainly developed over time are in North West direction and this urban growth is expand and grew over time.

Quantifications of Urban sprawl changes occur from 2005 to 2021 is shown in the Map 3 and table 1-4:

Table 1-4 Estimated Urban Area for Year 2005, 2010, 2017, & 2021

Sr. No.	Years	Area In Sq.KM	Area in Acres	%
1.	Urban Area (2005)	20.65	5103.05	-
2.	Urban Area (2010)	21.34	5273.28	3
3.	Urban Area (2017)	22.44	5545.77	9
4.	Urban Area (2021)	38.92	9618.36	88

From 2005 the urban area of Haripur City expands by 3% in 2010, 9% in 2017 and in 2021 its area expands up to 88%.





Figure 1-2 Spatial growth Trend in 2005



Figure 1-3 Spatial growth Trend in 2010

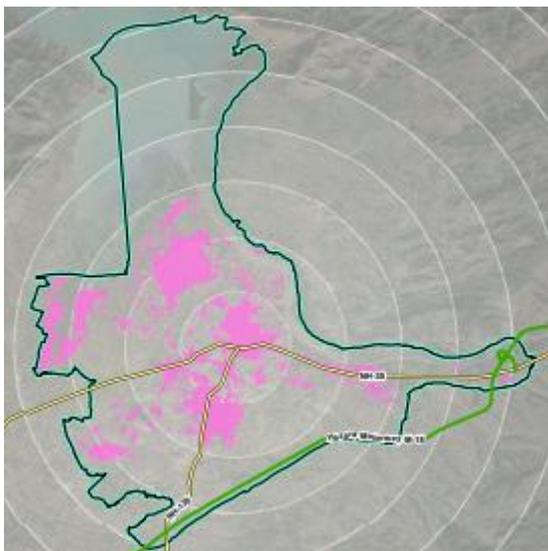


Figure 1-4 Spatial growth Trend in 2017

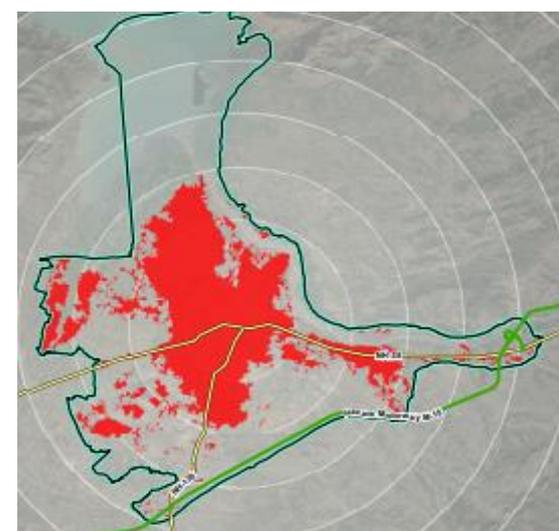
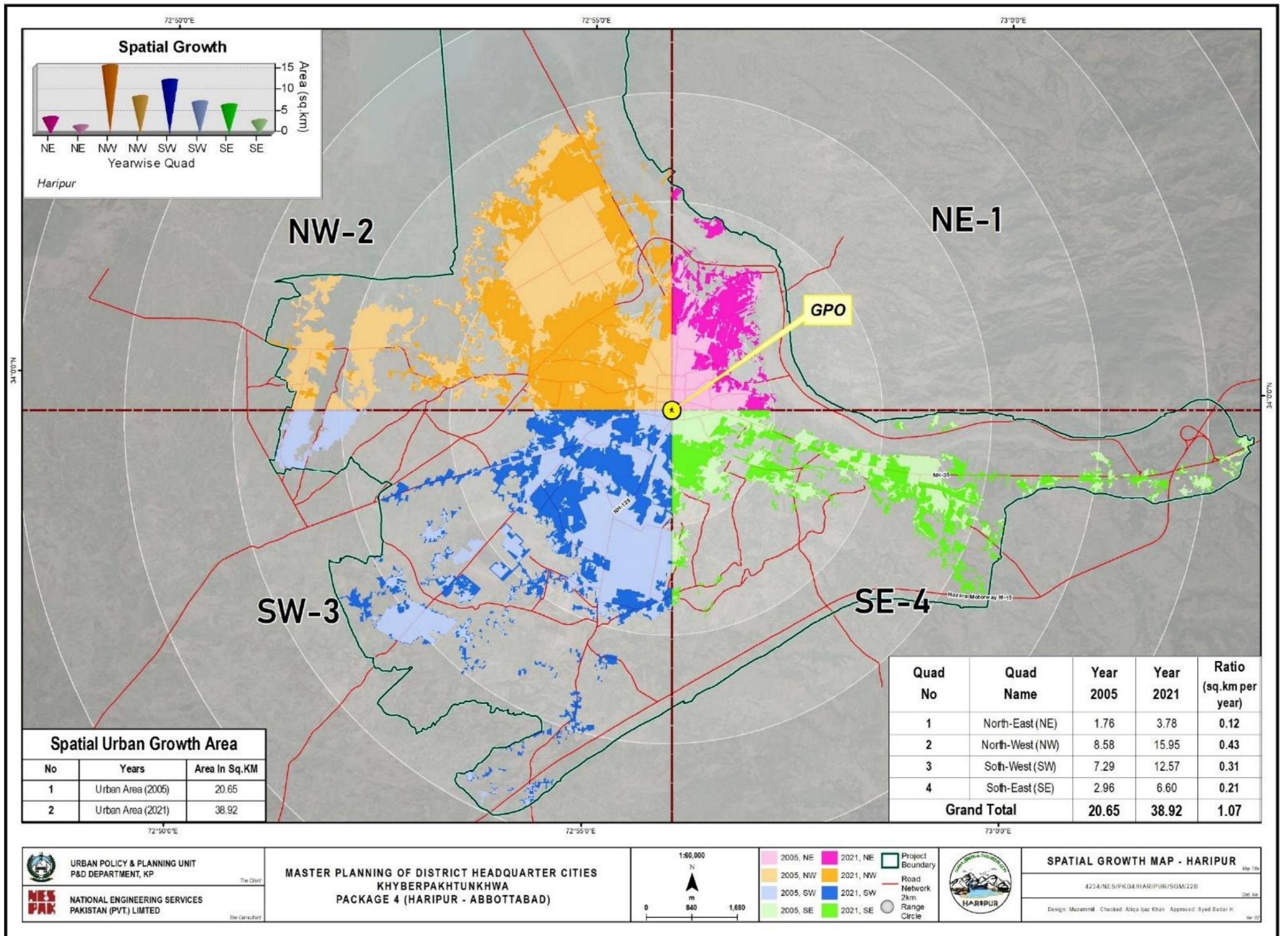


Figure 1-5 Spatial growth Trend in 2021



Map 3 Spatial Growth Map of Haripur

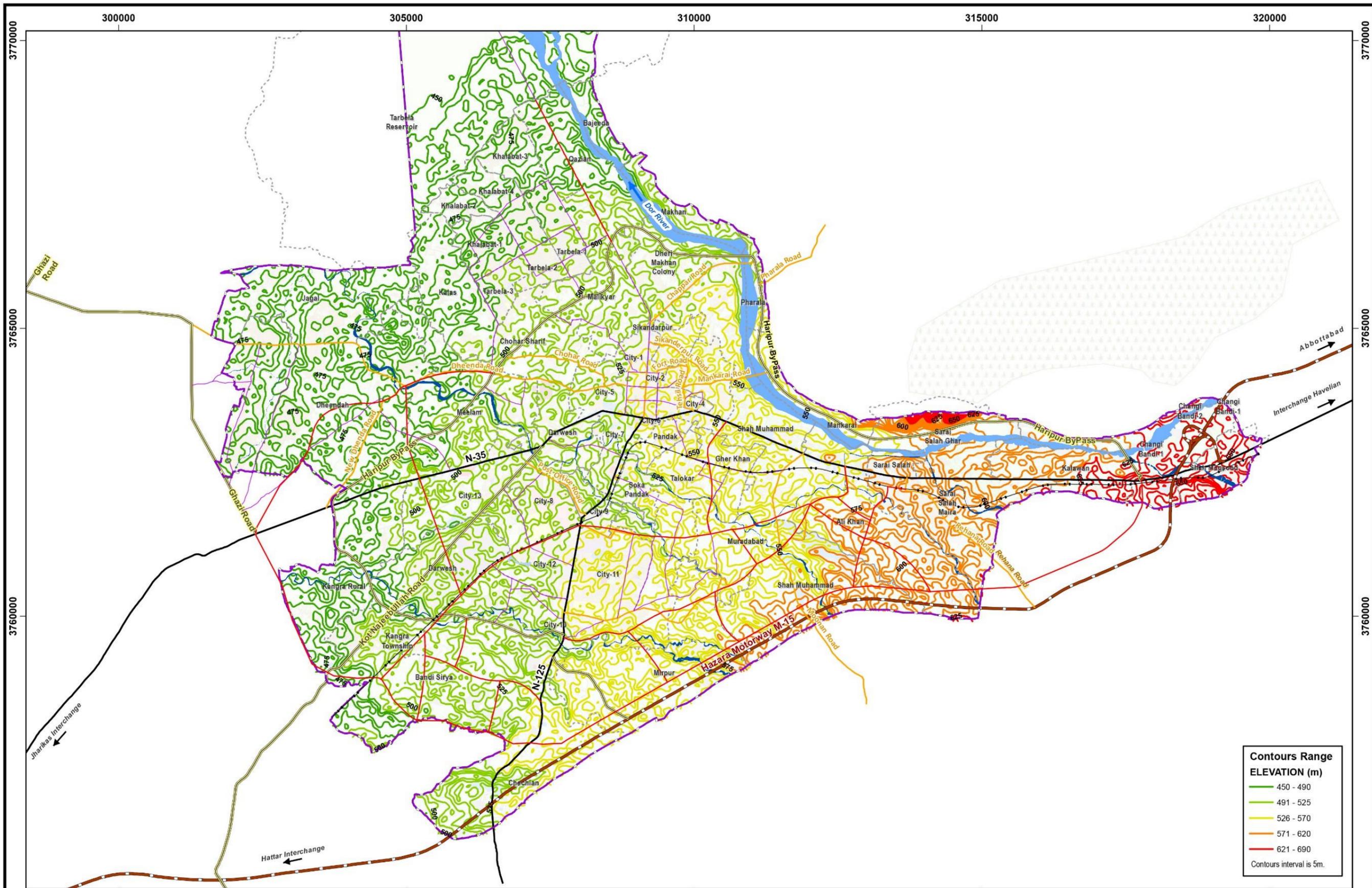
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The existing City has been growing in unplanned manner instead of following any physical development plan or any planning policy resulting in haphazard and uncoordinated development in different sectors.

In future plan Multiple Nuclei Growth Model is highly appropriate and feasible for Haripur city. The linear as well as urban expansion in patches along small and medium industries shows that the city has the strength to be developed in a sustainable manner along with the fringes and civic communities. Moreover, the proposal of low-class residential zones along industrial zone, fault lines and water bodies would develop a new direction of city's growth towards South and West. The provision of New CBD in West depicts that the city would not have only one centre to grow rather it would grow in multiple points and through multiple commercial avenues. The proposed new outer ring road along with residential zone parallel to Hazara Motor way will serve the purpose of residential suburb and the outer Ring Road will help to accommodate heavy traffic flows and enable faster movement of goods and services, as well as people. This road would be designed as major urban Arterial serving as a reliable transport corridor for emergency services to newly developed zones. The proposed road would also have a significant impact on the local economy by improving accessibility to business districts and industrial zones. This could potentially attract new investments and create employment opportunities, boosting economic growth in the region.

Contour map with contour interval of 5 meters is shown in the Map 4 below which provide detailed information about the terrain, environmental features, and accessibility etc.

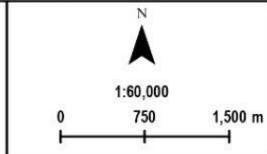





URBAN POLICY & PLANNING UNIT
 P&D DEPARTMENT, KP
The Client


NATIONAL ENGINEERING SERVICES
 PAKISTAN (PVT.) LIMITED
The Consultant

MASTER PLANNING OF DISTRICT HEADQUARTER CITIES
KHYBERPAKHTUNKHWA
PACKAGE 4 (HARIPUR - ABBOTTABAD)



- Legend**
-  Express Highway
 -  National Highway
 -  Primary Road
 -  Secondary Road
 -  Collector Road
 -  Railway Line
 -  Proposed Road
 -  VC/NC Boundary
 -  Project Boundary



CONTOUR MAP-HARIPUR

4234/NES/PKG4/HARIPUR/PLUP/13

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Map 4 Contour Map Haripur

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The existing Land use classification of Haripur City in terms of percentages has been studied in the light of National Reference Manual (NRM). The total area is around 32,164 Acres, out of which 76.43% is non-built-up area, while 23.57% is built up. The non-built-up area mainly includes agriculture fields, Tarbila Reservoir, Orchards, Dor River and Canal/ Nullah, which are considered as protected/ reserved in NRM and brown fields/ vacant land. The comparison of existing land use as per NRM¹ Standards is shown in the table below:

Table 1-5 Haripur Land Use Classification²

Sr.No.	Existing Land Uses	Areas (acres)	Percentages %	NRM Standards	
1.	Residential	4,675	14.53%	Residential	40-45%
2.	Commercial	568	1.77%	Commercial	2-3%
3.	Industrial	195	0.61%	Industrial	2-10%
4.	Mixed Land use	26	0.08%		
5.	Cantonment	-	-	-	-
6.	Public Buildings	192	0.60%	Institutional	3-5%
7.	Health Facilities	53	0.16%		
8.	Educational Facilities	300	0.93%		
9.	Religious	49	0.15%	Religious	-
10.	Parks and Playgrounds	86	0.27%	Recreational	4-6%
11.	Graveyard	209	0.65%	Graveyard	2-3%
12.	Roads Network	1,170	3.64%	Arterial Circulation and Terminals	5-20%
13.	Railway Land	44	0.14%		
14.	Transportation	15	0.05%		
Sub-Total: Built Up Area		7,582	23.57%		
15.	Agricultural Land	17,728	55.12%	Protected Reserved	15-25%
16.	Orchards	934	2.90%		
17.	Water Bodies	5	0.02%		

¹ Standard Land Use Classification for Urban Jurisdictions in Pakistan Appendix 10.1, page no. 398, National Reference Manual on Planning and Infrastructure Standards

² These areas are calculated from Existing Landuse Map of Haripur City



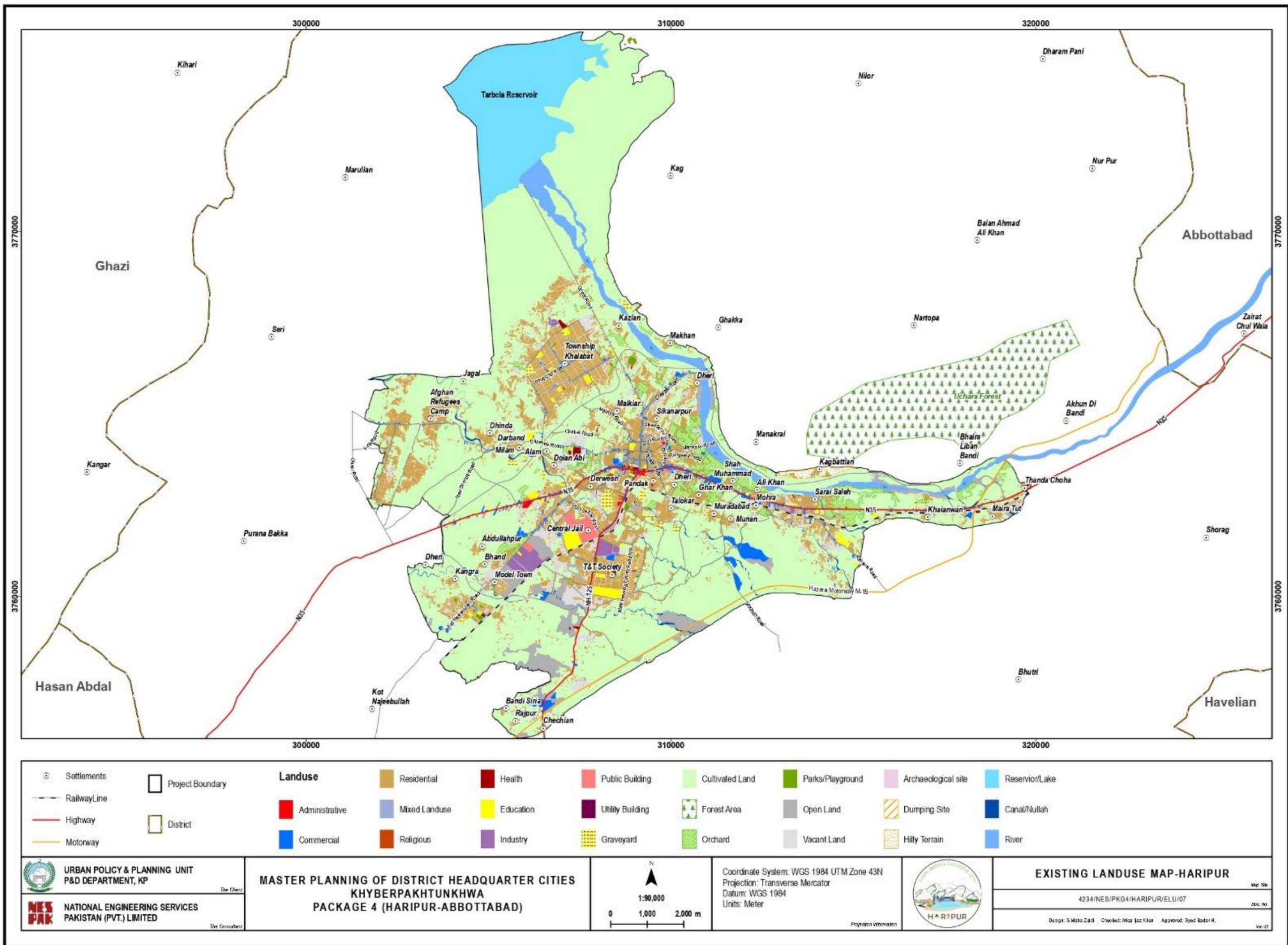
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Sr.No.	Existing Land Uses	Areas (acres)	Percentages %	NRM Standards	
18.	Canal/ Nullah	252	0.78%		
19.	Reservoir	2569	7.99%		
20.	River	960	2.98%		
21.	Brown Fields / Vacant Land	1127	3.50%		
22.	Hilly Terrain	76	0.24%		
23.	Open Land	931	2.89%		
Sub-Total: Non - Built Up Area		24,582	76.43%		
Total Area		32,164	100%		

It is observed that the percentages of all built up land uses like; residential, commercial, industrial, institutional, recreational, graveyard and circulation are low, while protected / reserved is high, in comparison to the NRM Standards. Therefore for future land use proposal, the area deficiency in each land use classification, is balanced from the excess area of protected /reserved and vacant land.

Existing Land use/ Base Map of Haripur is shown in the Map 5 below:





Map 5 Base Map of Haripur

2. MULTI CRITERIA ANALYSIS FOR SUITABLE LAND PARCELS

Suitability of Land use based on multi-criteria analysis, which categorized into qualitative and quantitative analysis.

2.1 Qualitative Multi-Criteria Analysis

Qualitative multi-criteria Analysis which includes;

1. Proximity to administrative zones
2. Use of Protected Lands
3. Capability of Land for Agriculture
4. Location and accessibility,
5. Land availability and valuation,
6. Correlation among land uses and provision of basic utilities and amenities

Table 2-1 Landuse Criteria Categories with Description (Qualitative)

Land use Categories	Multi Criteria Analysis
Residential Land Use	
Low Income	<ul style="list-style-type: none"> Affordable land prices Near to employment opportunities Safe and Secure neighbourhoods Access to public transport Provision of affordable basic utilities and services Availability of affordable public sector social amenities Densely Populated Area Adjacent to industrial Zone Provision of Open Spaces/Parks
Middle Income	<ul style="list-style-type: none"> Provision of basic utilities and services Affordable land prices Low/ Medium density housing with Neighbourhood scale characteristics Safe and secure neighbourhoods Access to public transport and quality roads Access to social amenities Less environmental issues Provision of Opens spaces/Parks
High Income	<ul style="list-style-type: none"> High land prices Connectivity to existing high income areas Low Density Safe and secure neighbourhoods Green and clean environment Good quality road infrastructure Uninterrupted supply of basic utilities and services Access to quality social amenities
Commercial Land use	
New (Proposed) CBD	<ul style="list-style-type: none"> Adjacent to new development zones Access from major roads High Land Prices Availability of large land parcels Adjacent to open and green spaces
Mix Use Development	<ul style="list-style-type: none"> Approachable from multiple roads Existing trend of mix use Availability of land parcels

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Land use Categories	Multi Criteria Analysis
	<ul style="list-style-type: none"> • Provision of parking spaces • Accessible from public transport
Neighborhood Centers	<ul style="list-style-type: none"> • Centralized with respect to residential development • Pedestrian friendly • Provision to primary level services of daily use • Ample parking space
Industrial and Economic Land Use	
Industrial Area	<ul style="list-style-type: none"> • Nearby existing industries • Favourable wind direction • Accessible from major roads • Away from city centre • Nearby transport terminals • Close to low-income housing • Provision of green areas
Economic Area	<ul style="list-style-type: none"> • Access from major roads • Adjacent to transport terminals • Nearby existing economic activities • Away from city centre
Civic Services	
Civic Centers	<ul style="list-style-type: none"> • To be located in city centre near CBD • Accessible from major roads • Adjacent to existing civic services
Health Services	
Clinics	<ul style="list-style-type: none"> • In centre of residential neighbourhood • Preferably within 0.25 km radius to facilitate pedestrian • Adjacent to open / green spaces
Health Centers	<ul style="list-style-type: none"> • Accessible from secondary roads • Nearby mix use development • Adjacent to green/ open spaces • Ample provision of parking space
Hospitals	<ul style="list-style-type: none"> • Accessible from major roads • Nearby existing health facilities • Accessible through public transport • Availability of large land parcel • Adjacent to green/ open spaces • Ample provision of parking space
Education Facilities	
Schools	<ul style="list-style-type: none"> • In centre of residential neighbourhood • Preferably within 0.25 km radius to facilitate pedestrian • Adjacent to open / green spaces • Away from noisy or busy areas • Away from major roads i.e. (intercity & primary)
Colleges	<ul style="list-style-type: none"> • Accessible from secondary roads • Nearby mix use development • Adjacent to green/ open spaces • Adjacent to playgrounds • Ample provision of parking space
University	<ul style="list-style-type: none"> • Accessible from major roads i.e. (intercity & primary) • Accessible through public transport • Availability of large land parcel • Preferably at outskirts of city
Recreational and Sports Facilities	
Neighborhood Park and Playground	<ul style="list-style-type: none"> • In centre of residential zones / neighbourhood • Preferably within 0.25 km radius to facilitate pedestrian • Accessible for the all income group



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Land use Categories	Multi Criteria Analysis
Large /City Level Facilities	<ul style="list-style-type: none"> Accessible from major roads Availability of large land parcel Preferable at outskirts of city or could be near to the city center Ample parking space Nearby existing water resource
Graveyard	
Graveyard	<ul style="list-style-type: none"> At outskirts of city Access from major roads Low land prices
Transport Facilities	
Transport Terminals	<ul style="list-style-type: none"> On outskirts of town Near industries/ economic zones Adjacent to provincial roads
Intersections	<ul style="list-style-type: none"> At crossings of major roads To avoid traffic congestion Nearby significant land marks
Major Roads	<ul style="list-style-type: none"> Main connectivity Occurrence of prime activities Presence of important land uses
Utilities and Services	
Water Reservoir	<ul style="list-style-type: none"> Near to water source At entry point of water course At outskirts of city Accessible from major roads Not close to prime development
Sewerage Treatment Plant	<ul style="list-style-type: none"> At exit point of waste water discharge Low elevation level At outskirts of city Accessible from major roads Not close to prime development
Landfill Site	<ul style="list-style-type: none"> At outskirts/ outside of city Favourable wind direction Away from water bodies Low elevation level Accessible from major roads Not close to prime development
Agricultural & Livestock	
Agricultural	<ul style="list-style-type: none"> Land with agriculture potential Presence to water/ irrigation network Accessible from roads Away from city centre Local market for supplies and trade Facilities for forming
Livestock	<ul style="list-style-type: none"> Near existing livestock/ dairy farms Adjacent of agriculture land Veterinary centre availability Away from city centre Local market for supplies and trade

2.2 Quantitative Multi-Criteria Analysis

The quantitative multi-criteria analysis involves various parameters related to land uses. Quantitative analysis generates a suitability map using Geographic Information Systems (GIS), which helps identify suitable locations and allocate different zones.



Land suitability contributes towards the identification of compatible patch of land for potential development in regard to better land management; mitigation of land degradation; and designing land use pattern that prevents environmental problems through segregation of competing land uses.

The assessment factors for land-use suitability for urban development are as follows.

1. The topographic features including Terrain elevation
2. Land-use type
3. Multi-hazed Zones (Urban flooding, earthquake, etc.)
4. Exposure to geological hazards
5. Proximity to the roads network
6. Proximity to built-up urban areas
7. Land Availability
8. The ecological factors

The land suitability analysis for Haripur City has been developed using Geographic Information System (GIS) based approach for land use suitability assessment. The criteria and weights for each activity required for each land use has been arranged on a priority basis in order to assist future development by identifying the areas with physical limitations for various land use alternatives are shown in detail in table below. The factors if not suitable for development lies under 0-5 weight and if suitable for development lies under 6-10 weight: These weightage criteria help in identifying the suitability of land uses within each zone. By weightage criteria, identify and prioritize the areas that determine the highest suitability for each specific land-use category.

Table 2-2 Multi-Criteria Analysis (Quantitative)

SR.	PARAMETER	OPPORTUNITIES	CONSTRAINTS	WEIGHTING CRITERIA
RESIDENTIAL ZONES				
1	Highly Hazardous Zone (HHZ)		Constraints	0
2	High Multi-hazard Zone (HMZ)		Constraints	02
3	Medium Multi-hazard Zone (MMZ)	Opportunities		06
4	Low Multi-hazard Zone (LMZ)	Opportunities		08
5	Land parcels suitable for agriculture use including cultivation, orchards & forests.		Constraints	0-2
6	Land parcels near landfill/dumping sites & STP (200m)		Constraints	0
7	Land parcels near protected areas including high tension (HT) Lines, firing range etc.		Constraints	0-2

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SR.	PARAMETER	OPPORTUNITIES	CONSTRAINTS	WEIGHTING CRITERIA
8	Land available near obnoxious industries		Constraints	0
9	Vacant land parcels within Built-up Areas	Opportunities		07
10	Large land parcels (open/barren land) other than Built-up Areas	Opportunities		10
11	Land parcels accessible to transportation network	Opportunities		08
12	Land availability proximal to community facilities	Opportunities		07
13	Land availability proximal to employment opportunities	Opportunities		08
14	Availability of land parcels over Slope less than 20%	Opportunities		10
15	Availability of land parcels over Slope from 20-30%		Constraints	05
16	Availability of land parcels over Slope above 30%		Constraints	0
COMMERCIAL ZONES				
1	Highly Hazardous Zone (HHZ)		Constraints	0
2	High Multi-hazard Zone (HMZ)		Constraints	02
3	Medium Multi-hazard Zone (MMZ)	Opportunities		06
4	Low Multi-hazard Zone (LMZ)	Opportunities		08
5	Land parcels suitable for agriculture use including cultivation, orchards & forests.		Constraints	0
6	Land parcels near landfill/dumping sites & STP (200m)		Constraints	0
7	Land parcels near protected areas including high tension (HT) Lines		Constraints	0-2



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SR.	PARAMETER	OPPORTUNITIES	CONSTRAINTS	WEIGHTING CRITERIA
8	Land available near obnoxious industries		Constraints	0-2
9	Vacant land parcels within Built-up Areas	Opportunities		08
10	Large land parcels other than Built-up Areas	Opportunities		08
11	Land parcels accessible to transport corridors/network	Opportunities		10
12	Lands proximal to existing physical infrastructure services	Opportunities		08
13	Existing trend of mixed Landuse along primary roads of city	Opportunities		10
14	Availability of suitable land parcel on central location with reference to new development	Opportunities		09
15	Availability of land parcels over Slope less than 20%	Opportunities		08
16	Availability of land parcels over Slope from 20-30%		Constraints	04
17	Availability of land parcels over Slope above 30%		Constraints	0
INDUSTRIAL ZONES				
1	Highly Hazardous Zone (HHZ)		Constraints	0
2	High Multi-hazard Zone (HMZ)		Constraints	02
3	Medium Multi-hazard Zone (MMZ)	Opportunities		06
4	Low Multi-hazard Zone (LMZ)	Opportunities		08
5	Land parcels suitable for agriculture use including cultivation, orchards & forests.		Constraints	0
6	Land parcels near landfill/dumping sites & STP		Constraints	0-2



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SR.	PARAMETER	OPPORTUNITIES	CONSTRAINTS	WEIGHTING CRITERIA
7	Land parcels near protected areas including high tension (HT) Lines		Constraints	0-2
8	Land parcels along major highways	Opportunities		10
9	Lands proximal to existing main trunk utility lines	Opportunities		07
10	Land parcel availability proximal to exiting industries	Opportunities		06
11	Availability of large land parcels	Opportunities		08
12	Availability of land parcels over Slope less than 20%	Opportunities		08
13	Availability of land parcels over Slope from 20-30%		Constraints	04
14	Availability of land parcels over Slope above 30%		Constraints	0
CIVIC ZONES (ADMINISTRATION/PUBLIC BUILDING/COMMUNITY FACILITIES) <i>(Administration, Education, Health & Religious)</i>				
1	Highly Hazardous Zone (HHZ)		Constraints	0
2	High Multi-hazard Zone (HMZ)		Constraints	02
3	Medium Multi-hazard Zone (MMZ)	Opportunities		06
4	Low Multi-hazard Zone (LMZ)	Opportunities		08
5	Land parcels suitable for agriculture use including cultivation, orchards & forests.		Constraints	0
6	Land parcels near landfill/dumping sites & STP		Constraints	0
7	Land parcels near protected areas including high tension (HT) Lines		Constraints	0-2
8	Land available near obnoxious industries		Constraints	0-2
9	Vacant land parcels within Built-up Areas	Opportunities		08



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SR.	PARAMETER	OPPORTUNITIES	CONSTRAINTS	WEIGHTING CRITERIA
10	Large land parcels other than Built-up Areas	Opportunities		08
11	Land parcels accessible to public transport corridors	Opportunities		10
12	Lands proximal to existing physical infrastructure services	Opportunities		08
13	Availability of suitable land parcel on central location with reference to new development	Opportunities		09
14	Availability of land parcels over Slope less than 20%	Opportunities		08
15	Availability of land parcels over Slope from 20-30%		Constraints	04
16	Availability of land parcels over Slope above 30%		Constraints	0
SPORTS & RECREATIONAL ZONE				
1	Highly Hazardous Zone (HHZ)		Constraints	02
2	High Multi-hazard Zone (HMZ)		Constraints	04
3	Medium Multi-hazard Zone (MMZ)	Opportunities		08
4	Low Multi-hazard Zone (LMZ)	Opportunities		10
5	Land parcels suitable for agriculture use including cultivation, orchards & forests.		Constraints	03-04
6	Land parcels near landfill/dumping sites & STP		Constraints	0
7	Land parcels near protected areas including high tension (HT) Lines		Constraints	04
8	Land available near obnoxious industries		Constraints	0
9	Vacant land parcels within Built-up Areas	Opportunities		09



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SR.	PARAMETER	OPPORTUNITIES	CONSTRAINTS	WEIGHTING CRITERIA
10	Large land parcels other than Built-up Areas	Opportunities		08
11	Lands proximal to existing water bodies (lakes, canals & water channels)	Opportunities		10
12	Availability of suitable land parcel on central location with reference to new development	Opportunities		07
13	Availability of land parcels over Slope less than 20%	Opportunities		05-08
14	Availability of land parcels over Slope from 20-30%	Opportunities		05-08
15	Availability of land parcels over Slope above 30%	Opportunities		05-08
AGRICULTURE ZONES <i>(Cultivation, Orchards, Urban Farms, Forest)</i>				
1	Land parcels suitable for cultivation outside Established Built-up Area	Opportunities		08
2	Land parcels along/near water irrigation system	Opportunities		08
3	Land proximal to transport services	Opportunities		07
4	Lands proximal to farm markets	Opportunities		07
5	Lands proximal to existing agricultural activities	Opportunities		08
6	Availability of land parcels over Slope less than 20%	Opportunities		07-10
7	Availability of land parcels over Slope from 20-30%	Opportunities		07-10
8	Availability of land parcels over Slope above 30%	Opportunities		07-10
9	Land available near obnoxious industries		Constraints	0-2



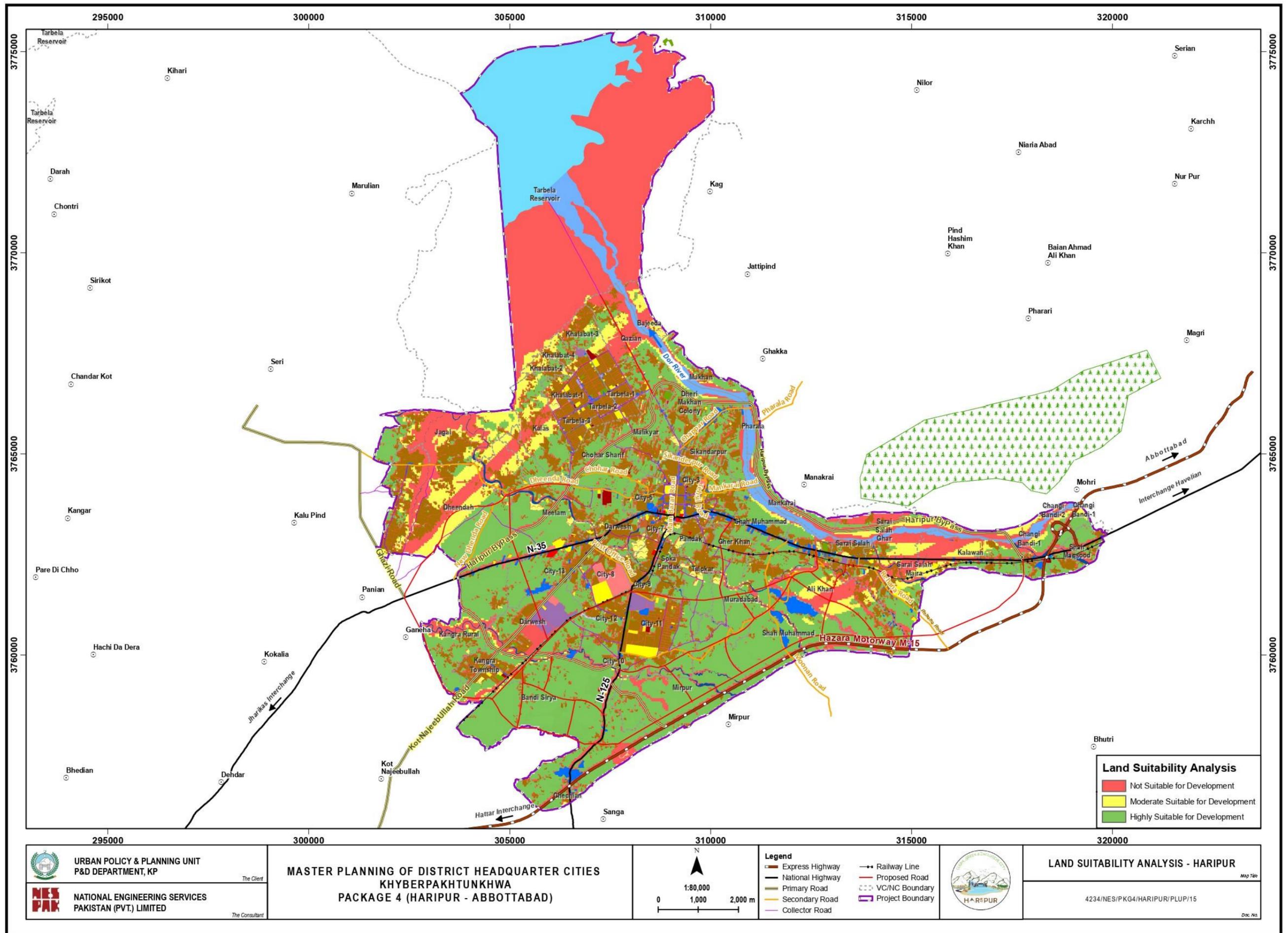
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SR.	PARAMETER	OPPORTUNITIES	CONSTRAINTS	WEIGHTING CRITERIA
10	Land available near landfill/dumping sites & STP		Constraints	0-2

Based on the above stated Multi Criteria Analysis for Suitable Land Parcels Land Suitability Analysis Map is prepared to guide the future development of Haripur City and highlights the concentrates. Available land parcels have been divided into three (3) categories as shown in Map 6 below.

- i) Land parcels in green are suitable for development based on following Criteria:
 - Low Multi-hazard Zone
 - Seismic ground shaking envisaged during a strong earthquake with very low risk of earthquake induced indirect and localized geo-hazards.
 - Not prone to rock falls, slope failure, bud/debris flows and flood hazard
 - Land Parcels with slope less than 20%
- ii) Land parcels in yellow are moderate suitable for development based on following Criteria:
 - Medium Multi-hazard zone (MMZ)
 - High seismic ground shaking and other indirect earthquake induced localized geo hazard.
 - Prone to minor rock falls, slope failure, mud debris flow, low flood hazards and Bad Lands associated moderate erosion.
 - Land Parcels with Slope upto 20%
- iii) Land parcels in red are constraints and not suitable for development based on following Criteria:
 - Highly Hazardous Zone (HHZ)
 - Extremely high seismic ground shaking envisaged that may be associated with ground rupturing and other indirect earthquake induced localized geo-hazards during earthquake.
 - Prone to massive rockfalls, liquefaction, mud Debris flows differential erosion, bank collapse and high flood hazard.
 - High Multi-hazard Zone
 - Very high seismic ground shaking and other indirect earthquake induced localized geo-hazrds
 - Prone to massive rockfalls, slope failure, mud/ debris flows and moderate flood hazard.
 - Land Parcels with Slope above 20%





Map 6 Land Suitability Analysis Haripur

3. LAND USE PATTERN FUTURE OPTIONS

Land use pattern to be adopted for Haripur City Master Plan 2042 two options are considered. In order to arrive at a best option potentials and constraints of both the options are drawn.

3.1 Option 1

The option 1 brings together housing, commercial, transport, and the choice of location in a tractable way.

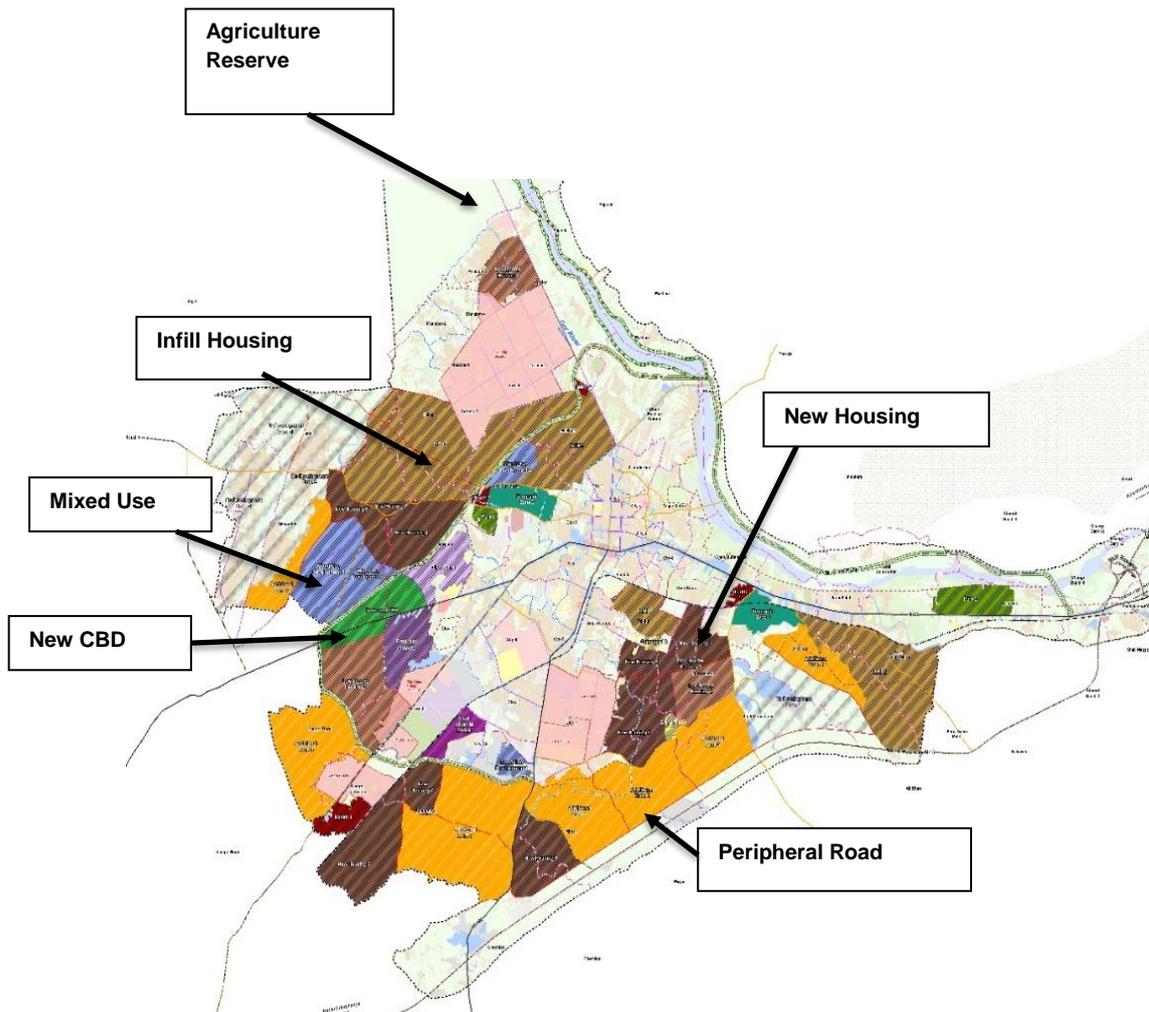


Figure 3-1 Option-1

Main features of Option-1 are given below:

- Peripheral road is proposed parallel to Hazara Motorway
- New CBD is on the periphery of project boundary along the Haripur Bypass Road
- Infill residential development is along proposed peripheral road and new housing is on both east and west sides close to existing residential development
- Mixed use development close to proposed CBD
- Agriculture reserved in North direction

3.2 Option 2

Option 2 follows existing growth pattern, in order to utilize present development through creating multiple growth centers.

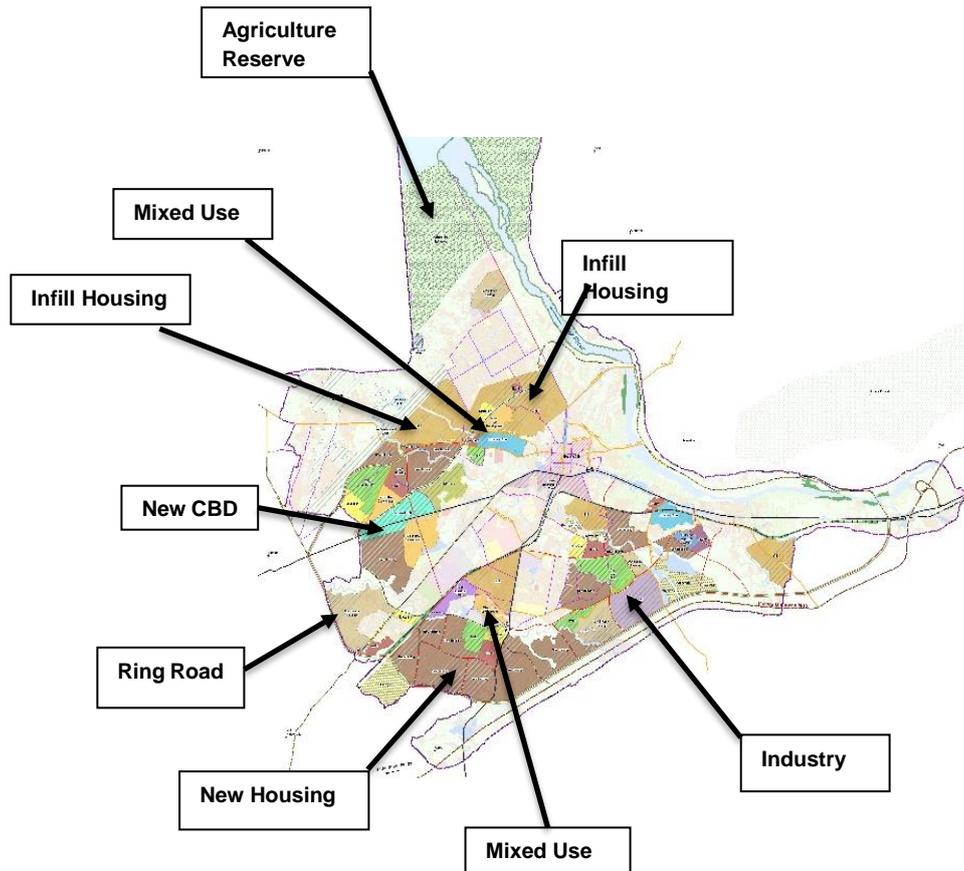


Figure 3-2 Option-2

The key features of Option-2 are given below:

- Proposed Ring Road providing access to all parts of project area connecting new proposed zones as well as existing development Haripur Bypass Road, N-35 and N-125.
- Proposed CBD at central location of proposed zones
- Infill residential development is near Khalabat Township complimenting existing residential development and new housing is proposed near Hazara Motorway.
- Mixed use development areas are distributed at appropriate locations in the project area complimenting Civic Zone, Low-income housing, Economic Zone and Proposed CBD.
- Agricultural reserves are proposed on north near Tarbila Reservoir.

Above explained options of Land use pattern have pros and cons however option -2 is preferred option as Proposed Ring Road provide alternate access around the project area connecting all the existing roads and developments as well as connecting all the proposed zones in the project area. Proposed zones for different land uses including Residential, Commercial, Mix use, Industrial are evenly distributed in considerations of existing development of the city therefore option-2 is suggested for Haripur City Master Plan 2042.

4. LAND USE MIX POTENTIAL RANGE OF USES

Land use mix potential range refers to the degree to which that different types of land uses (e.g., residential, work, leisure, services etc.) are physically and functionally integrated.

Land use Mix Potential Range of uses (residential, work, leisure, services etc.) shall provide a base for transit-oriented development. It would promote walking, biking and use of transit within neighborhoods. Travel distances would be reduced, enable “linked trips” where one trip provides for many activities, and allow drivers to park once and then get around easily on foot. It shall provide a mix of public spaces to cater to a range of users (children through to older adults) and encourage social interaction as people fulfil more of their needs in their local area and enhance an area’s unique identity and development potential. Mix Land Use potential range shall provide the 3Ds—population density, land use diversity, and pedestrian friendly design.

In master plan of Haripur City, the areas designated for Mixed Land use development are distributed at appropriate locations in the project area refer figure 4-1 below:

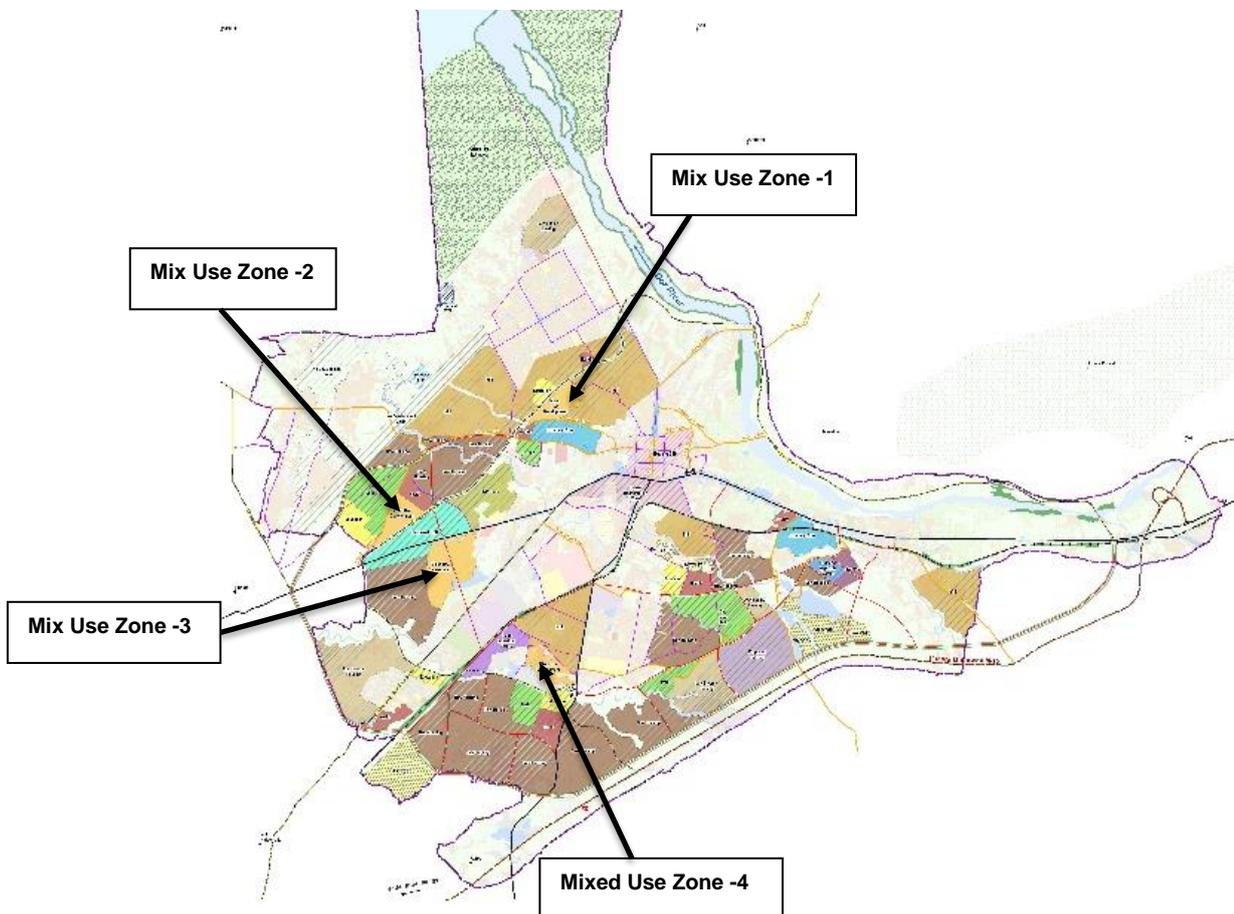


Figure 4-1 Mix Land Use Potential Range of Uses

Mix Use Zone-1 is proposed near Economic Zone and Infill Housing. Mix-Use Zone-2 is proposed surrounded by CBD, Health, Education Zones and City Level Park. Mix Use Zone-3 is sited near CBD and New Housing. Mix Use Zone-4 is sited along N-125 Road.

5. PROPOSED PHASE WISE DEVELOPMENT

The Proposed Master Plan for Haripur has been prepared with the consideration of four phases of scenario development generated through GIS.

It is recommended to focus on Phase-1 for up gradation and restoration in existing town, for infill development in Phase-2, new and future development in Phase-3 and Phase-4 plan respectively.

Table 5-1 Phase Wise Development

Sr. No.	Phase Name	Year / Duration	Development	Plan
1.	Phase -1	5 years (2022-2027)	Up gradation / Restoration	Action Plans
2.	Phase-2	10 years (2022-2032)	Infill Development / Intensification	Priority Projects
3.	Phase-3	15 years (2022-2037)	New Development	Strategic Development Plan
4.	Phase-4	20 years (2022-2042)	Future Development	Strategic Development Plan

In light of Task-B findings and Land Use Base Map of Haripur City, NCs and VCs are suggested to be developed according to phase wise scenario development of Haripur City. The mentioned names of NCs and VCs are not exactly in line of proposed scenarios development, as existing development is not following any specific pattern and results in leapfrog development.

5.1 Phase-1 Up gradation and Restoration

This phase would emphasize on up gradation and restoration of existing NCs and VCs which are old and almost have no space for new development. It will be preferred if any land parcel still available would be utilized as open space and the existing development will be taken care of through restoration and preservation. In addition, more focus would be towards beautification of old town, managing traffic congestions, repairing of utilities, widening of roads and upgradation of public spaces.

The NCs (Khalabat-1, Khalabat-2, Khalabat-3, Khalabat-4, Tarbela-1, Tarbela-2, Tarbela-3, City-1, City-2, City-3, City-4, City-5, City-6, City-7, City-8, City-9, and VC's (Darwesh, Qazian, Gher Khan, Pandak, Dheri Makhan Colony, Gujjar Mohra, Sikandarpur, Shah Muhammad) where no new development is feasible, instead rehabilitation/ Up gradation / Restoration work is required.

5.2 Phase-2 Infilling Intensification and Redevelopment

Infill development is the process of developing vacant or under-utilized land parcels within existing urban areas that are already developed. This will be considered as a means of sustainable land development close to existing inner-city area. Thus, in infill development new buildings can be constructed on vacant or underused property or in between existing buildings. The infill development is somewhat possible in NCs (City-10, City-11, City-12) and VC's (Darwesh, Soka Pandak, Muradabad, Kangra Rural, Meelam, Chohar Sharif, Malikyar, Kalas, Darwesh, Kangra Township).

5.3 Phase-3 New Development

This will include state of the art new development, giant infrastructure, iconic buildings, well planned schemes and large landscapes in NCs (City-13) and VCs (Soka Pandak, Talokar, Kangra Rural, Meelam, Dheendah, Gher Khan, Pandak, Muradabad, Shah Muhammad, Ali Khan) have potential for new development in near.

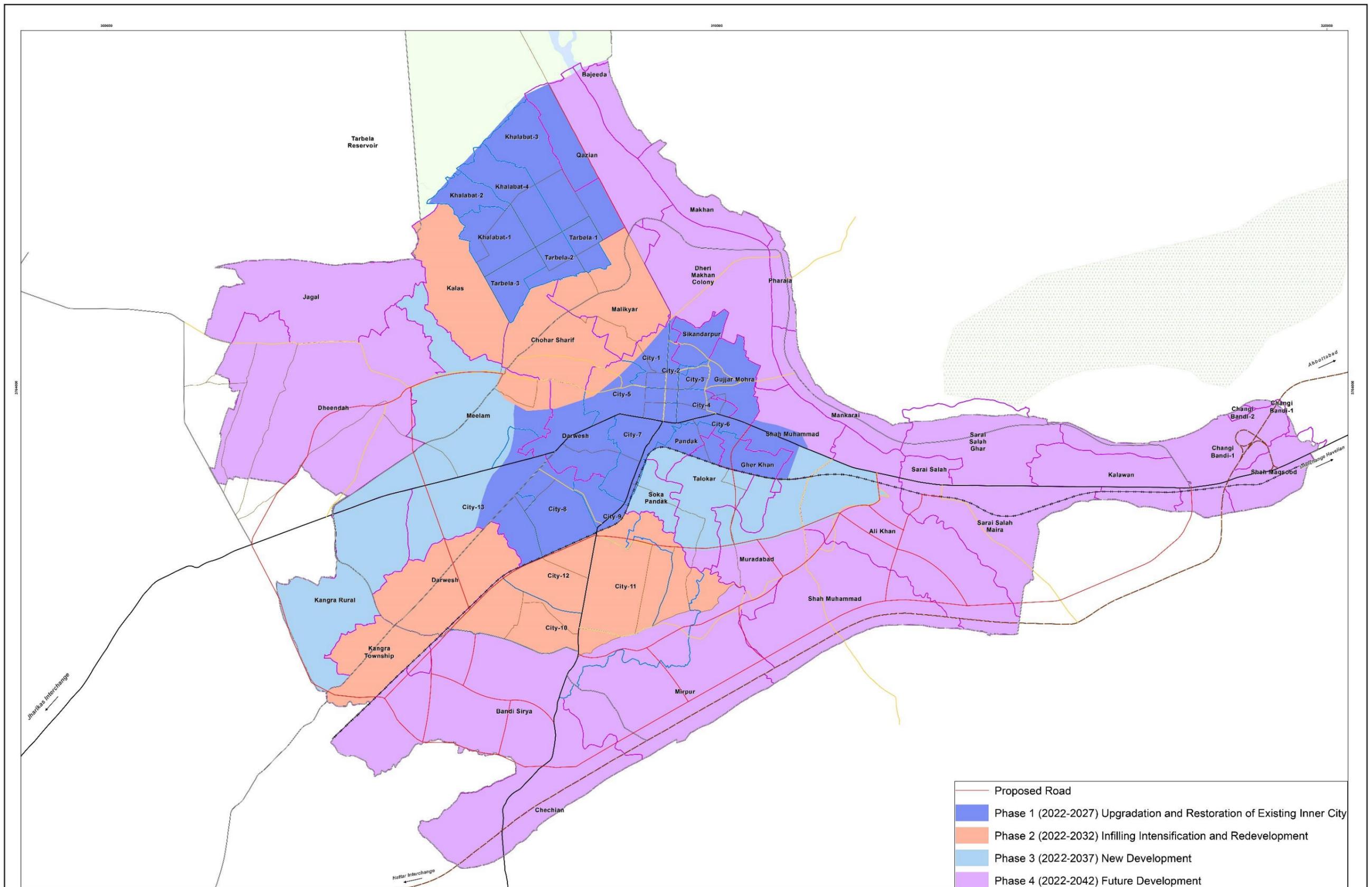
5.4 Phase-4 Future Development

This would include future development for long term activities in VCs (Jagal, Dheendah, Qazian, Bajeeda, Makhan, Dheri Makhan Colony, Pharala, Mankarai, Sarai Salah Ghar, Shah Muhammad, Ali Khan, Sarai Salah Maira, Sarai Salah, Shah Maqsood, Changi Bandi-1, Kalawan, Mirpur, Bandi Sirya, Shah Muhammad, Muradabad, Kangra Township, Malikyar) have potential for new development in far future

Proposed Phase Wise Development is attached as Map 7:

In the Master Plan of Haripur City 2042, it is suggested that by the year 2042 the Village Councils fall in the Project Area shall be given status of Neighbourhood Councils.





	Proposed Road
	Phase 1 (2022-2027) Upgradation and Restoration of Existing Inner City
	Phase 2 (2022-2032) Infilling Intensification and Redevelopment
	Phase 3 (2022-2037) New Development
	Phase 4 (2022-2042) Future Development

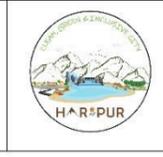
	URBAN POLICY & PLANNING UNIT P&D DEPARTMENT, KP <i>The Client</i>
	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED <i>The Consultant</i>

**MASTER PLANNING OF DISTRICT HEADQUARTER CITIES
KHYBERPAKHTUNKHWA
PACKAGE 4 (HARIPUR - ABBOTTABAD)**

N
1:20,000
0 750 1,500 m

Legend

	Express Highway		Railway Line
	National Highway		Proposed Road
	Primary Road		Neighbourhood Council
	Secondary Road		Village Council
	Collector Road		Project Boundary



**PROPOSED PHASE WISE SCENARIO
DEVELOPMENT-HARIPUR**

Map Title

4234/INES/PKG4/HARIPUR/PLUP/07

Doc. No.

Map 7 Proposed Phase Wise Development

6. PROPOSED MASTER PLAN OF HARIPUR CITY

After observing trend of development on major transport corridors i.e. Haripur Bypass, N-35 and N-125, the areas beyond Haripur Bypass and M-15 are highly recommended to be reserved for very long-term future development or protected for agricultural production. The total extent of the proposed area is 32,164 acres approx. for a population of 494,784 by 2042. In this way, Haripur in next twenty years is expected to have population density of 15.4 persons per acre and an average household size of 6.1.

At present residential and commercial buildings have densities of up to three stories and five stories respectively. For proposed master plan of Haripur City, it is recommended to follow Khyber Pakhtunkhwa Model Building Bye-laws 2017. As per this document residential density of houses would be suggested to two stories (ground plus first floor), for walkable apartments four stories (ground plus three floors) and commercial buildings maximum height would be restricted to seven stories (ground plus six floors) maximum.

As the future expansion of Haripur is expected to be large, thus the Proposed Haripur Master Plan provides all the necessities of a full-fledged metropolis of the future. Thus, the plan will afford balanced development containing all required land uses.

Despite taking different aspects in to consideration, it is suggested that the Master Planning should be reviewed every five years to estimate the land use and area requirement according to the growth rate and economic investment.

The proposed Master Plan of Haripur city is based on the multi-growth pattern of the city refer Map 8 Haripur Proposed Master Plan.

6.1 Salient Planning Features (Haripur Master Plan)

- Areas for Mixed-Use Development are identified in North, South and West directions. Each mixed-use zone is bounded by two major roads to reduce the burden over the main CBD
- The Industrial Zone especially for small scale and cottage industries is proposed near the existing Pak China Phosphate industry that is located on the South West of the city along existing railway line and proposed road. For heavy manufacturing the location is proposed in South East direction along the Hazara Motorway M-15 and the proposed Outer Ring Road (250' R.O.W) considering existing trend of industries in this area
- The Economic Zones are located towards west side, along Haripur Bypass Road and east along N-35 Road; with respect to existing connectivity and to serve other towns and tehsils as well.
- The Transport Terminals are also provided on South and east direction along the proposed Outer Ring Road (250' R.O.W) parallel to the Hazara Motorway M-15.
- The main Health and Educational Zones are identified in all the directions of the city i.e. North, South, East and West so that it will accessible to everyone equally.
- The major Recreational Zone i.e. City Level parks are placed in South Eastern and Western side, including amusement park, zoological and botanical gardens. In addition, recreational areas are also placed in different directions along Dheenda Road in west direction and also along Haripur Bypass Road in south direction in order to balance distribution.



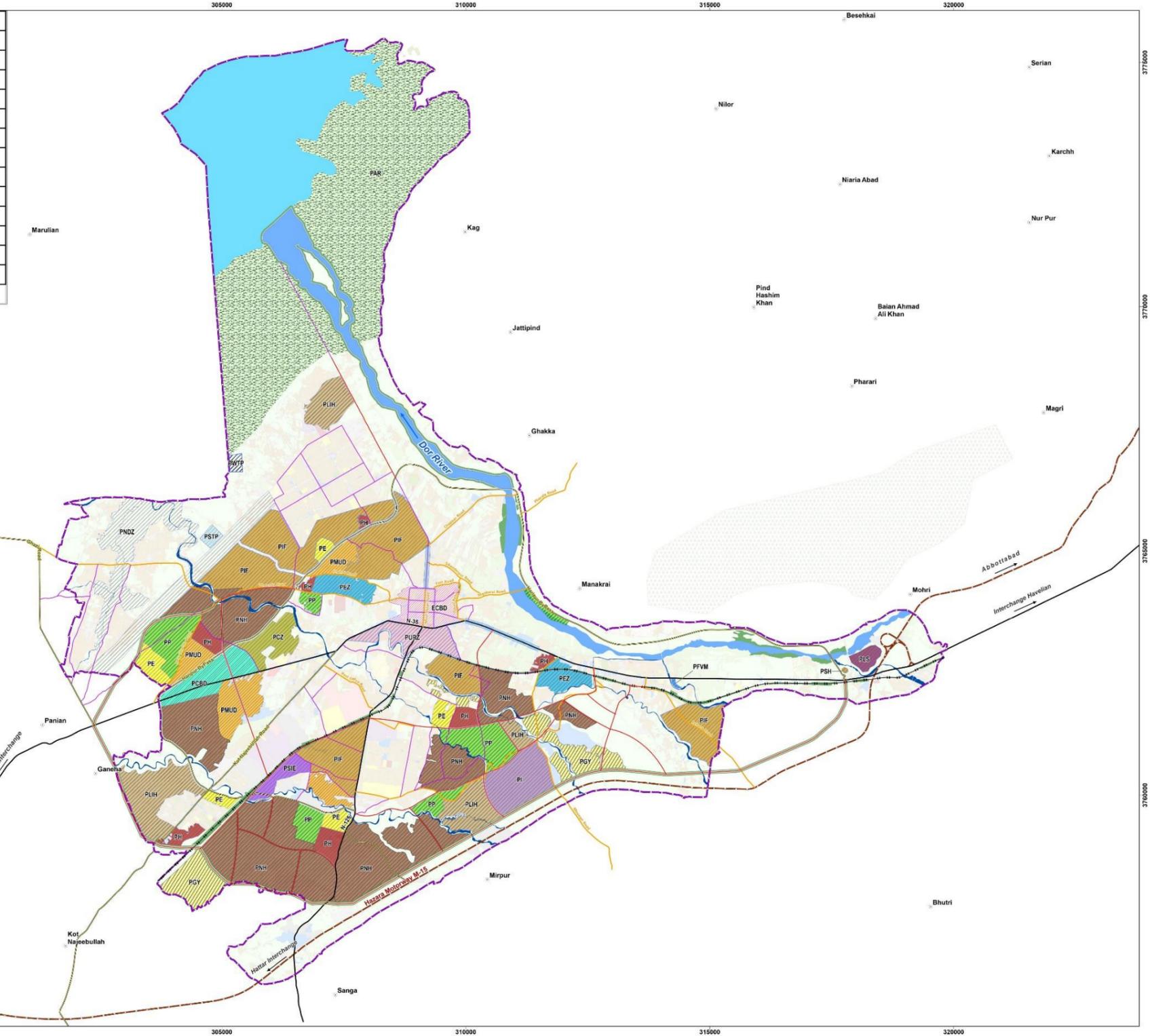
- The areas for **Graveyards** have also been reserved at the extreme ends of the proposed town in South East and South west direction.
- The extension of Central Jail is proposed within the existing premises of jail.
- The Infill Housing Development is proposed with Neighbourhood Centres, to avoid leapfrog housing development, while for Future Housing areas are also designated next to Mixed-Use Development. Majorly New housing is proposed in South West direction along the Haripur Bypass and the proposed Outer Ring Road (250' R.O.W) parallel to the Hazara Motorway M-15
- The **Livestock Zone and Slaughter House** is proposed near Bypass/Shah Maqsood in the east.
- The Agricultural Zones are identified as Garden Towns with Agri-Centers in northern side near Tarbela Lake.
- The Water Reservoir with Water Treatment Plant is suggested in the west side of Dor River to reserve better quality water before entering in the city to mix with drains.
- Sewerage Treatment Plant is proposed in downstream area towards north considering natural slope of the project area.
- Landfill Site is also suggested in southern side.
- The Reserved Areas for agriculture graveyards, recreational, infrastructure and utilities will be helpful in restricting housing development and preserving the agricultural farms from the onslaught of the housing projects by private sectors.

PROPOSED MASTER PLAN OF HARIPUR CITY (2024-42)

Existing Landuse Uses	Codes	Existing Landuse Uses	Codes
Existing Administrative	EA	Existing Railway Line	ERL
Existing Commercial	EC	Existing Orchard	EO
Existing Dumping Site	EDS	Existing Public Building	EPB
Existing Cultivated Land	ECL	Existing Parks/Playground	EPP
Existing Education	EE	Existing Religious	ER
Existing Forest Area	EFA	Existing Residential	ER
Existing Graveyard	EGY	Existing Utility Building	EUB
Existing Archaeological Site	EAS	Existing Hilly Terrain	EHT
Existing Health	EH	Existing Reservoir	ER
Existing Industry	EI	Existing Canal/Nullah	ECN
Existing Mixed Use	EMU	Existing River	ER
Existing Open Land	EOL	Existing Pond	EP
Existing Road	ER	Existing Vacant Land	EVL
Existing CBD	ECBD		

Existing Land Uses	Areas (Acres)	Percentages	Proposed Land Uses	Areas (acres)	Percentages
Residential	4,675	14.53%	Residential	8,540	26.55%
Commercial	568	1.77%	Commercial	1,312	4.08%
Industrial	195	0.61%	Industrial	747	2.32%
Mixed Land use	26	0.08%	Public Buildings	350	1.09%
Public Buildings	192	0.60%	Health Facilities	304	0.95%
Health Facilities	53	0.16%	Educational Facilities	530	1.65%
Educational Facilities	300	0.93%	Parks / Playgrounds	1,324	4.12%
Religious	49	0.15%	Graveyard	598	1.86%
Parks and Playgrounds	86	0.27%	Religious	49	0.15%
Graveyard	209	0.65%	Roads Network	2,768	8.62%
Roads Network	1,170	3.64%	Railway Land	44	0.14%
Railway Land	44	0.14%	Transportation	35	0.11%
Transportation	15	0.05%	Sub-Total: Built Up Area	16,601	51.61%
Sub-Total: Built Up Area	7,582	23.57%	Agricultural Land	9,179	28.54%
Agricultural Land	17,728	55.12%	Orchards	934	2.90%
Orchards	934	2.90%	Water Bodies	5	0.02%
Water Bodies	5	0.02%	Canal/ Nullah	252	0.78%
Canal/ Nullah	252	0.78%	Reservoir	2,569	7.99%
Reservoir	2,569	7.99%	River	960	2.98%
River	960	2.98%	Brown Fields / Vacant Land	1,127	3.50%
Brown Fields / Vacant Land	1,127	3.50%	Hilly Terrain	76	0.24%
Hilly Terrain	76	0.24%	Open Land	931	2.89%
Open Land	931	2.89%	Sub-Total: Non - Built Up Area	24,582	76.43%
Sub-Total: Non - Built Up Area	24,582	76.43%	Total Area	32,164	100%
Total Area	32,164	100%	Total Area	32,164	100.00%

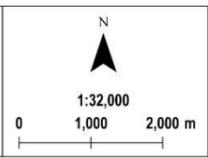
Proposed Landuse Uses	Codes	Proposed Landuse Uses	Codes
Proposed Road	PR	Proposed Fruits and Vegetable Market	PFVM
Proposed Commercial Corridor	PCC	Proposed Graveyard	PGY
Proposed STP	PSTP	Proposed Health	PH
Proposed WTP	PWTP	Proposed Infill	PIF
Proposed Food Street	PFS	Proposed Low Income Housing	PLIH
Proposed Slaughter House	PSH	Proposed Mixed Use Development	PMUD
Proposed Agriculture Reserves	PAR	Proposed New Housing	PNH
Proposed Livestock	PLS	Proposed No Development Zone	PNDZ
Proposed Park	PP	Proposed CBD	PCBD
Proposed Civic Zone	PCZ	Proposed Industry	PI
Proposed Economic Zone	PEZ	Proposed Small Industrial Estate	PSIE
Proposed Education	PE	Proposed Urban Regeneration Zone	PURZ
Proposed Urban Forest	PUF		



URBAN POLICY & PLANNING UNIT
P&D DEPARTMENT, KP

NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LIMITED

MASTER PLANNING OF DISTRICT HEADQUARTER CITIES
KHYBERPAKHTUNKHWA
PACKAGE 4 (HARIPUR - ABBOTTABAD)



- Legend**
- Express Highway
 - National Highway
 - Primary Road
 - Secondary Road
 - Collector Road
 - Railway Line
 - Project Boundary



Name and Signature of the Team Leader	Director, Planning (LU&BCA)	Approved By:
		Land Use & Building Control Council
		Dated: Council Meeting December 06, 2024

Map 8 Proposed Master Plan of Haripur

7. INTEGRATED DEVELOPMENT PROPOSALS FOR KEY SECTORS

7.1 Major Transportation

7.1.1 Proposed Outer Ring Road (250' R.O.W)

Construction of a major urban arterial in the form of outer semi-circular ring road is proposed for later stages of the Master Planning. This 250' ROW road is proposed to start from the junction of KKH and Haripur Bypass and will run towards Southern side of Haripur parallel to E-35 then it will cross existing N-125 and running towards North Western side of Haripur crossing Kot Najibullah Road and will terminate in West of the city and merge with other existing or new proposed roads of 100' ROW. There will be no need to extend this route further towards northern side in the flood prone area as no development is proposed in the Master Plan further northwards. This alignment will complete a semicircle between existing Haripur Bypass and E-35. This route shall facilitate connectivity between adjacent zones and link them to the other parts of the city as well as to national network. This would serve as an alternate route to the existing Haripur Bypass. Since the E-35 has only one interchange for Haripur, so this outer ring road shall serve as shorter and more convenient route for newly developed residential and industrial zones to access national road network. This would also reduce traffic congestion and improve transportation efficiency of existing road network in future years including KKH. The proposed Outer Ring Road (250' R.O.W) is shown on Figure 7-1 below:

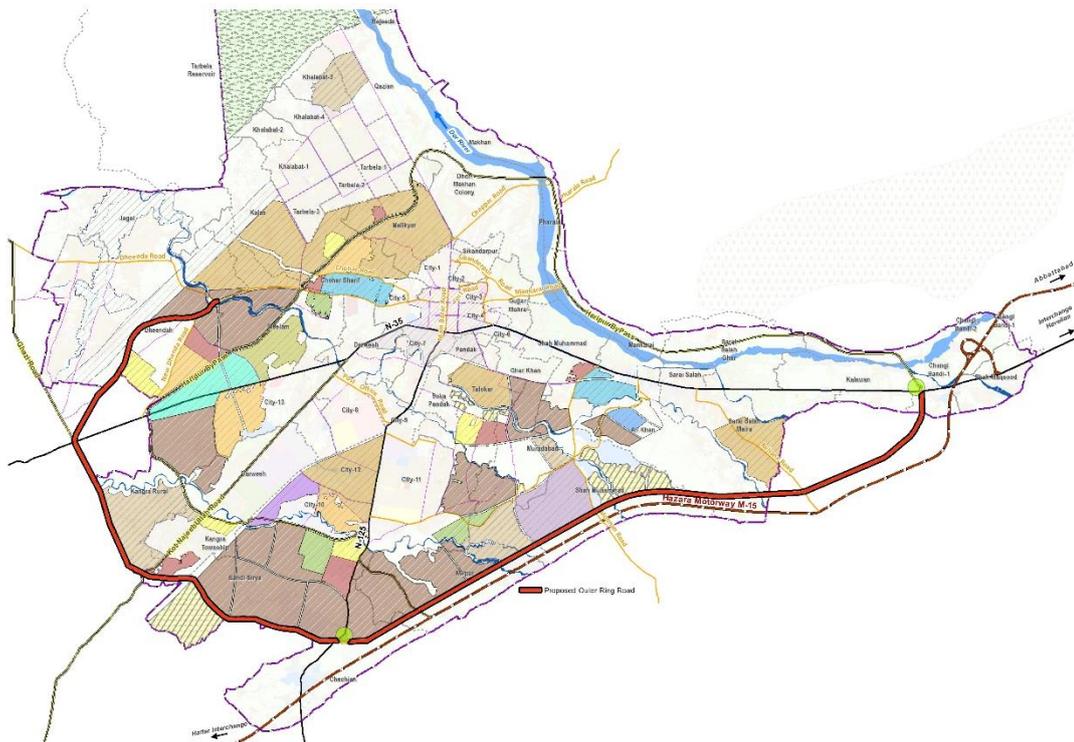


Figure 7-1 Proposed Outer Ring Road

The outer Ring Road would be designed to accommodate heavy traffic flows and enable faster movement of goods and services, as well as people. This road would be designed as major urban Arterial serving as a reliable transport corridor for emergency services to newly developed zones. The proposed road would also have a significant impact on the local

economy by improving accessibility to business districts and industrial zones. This could potentially attract new investments and create employment opportunities, boosting economic growth in the region.

Furthermore, the outer ring road has to be designed as ITS enabled modern urban arterial to incorporate traffic management systems and safety features to ensure the safety of motorists, pedestrians, and cyclists and to serve as a reliable transport corridor for emergency services to future development. Dedicated Bicycle / Motorcycle lanes, emergency vehicles lanes, Metro Bus Corridors as well as service roads can be added to this corridor as per the need. Therefore, provision of 250' ROW has been dedicated for this corridor and afforestation on both sides of the road within the ROW is also recommended. Tentative length of the proposed corridor will be 21 Kms.

7.1.2 Proposed Inter-Zonal Arterial Roads (100' R.O.W)

For this purpose, ROW of all new proposed roads within the zones is set as 100 feet. This ROW will cater future demand of traffic that will generate due to growth of existing as well as new development. It is recommended to phase-wise develop these roads as and when development of adjacent zones takes place. The portion of Haripur Bypass from Chungji No 11 to Village Ali Khan which has not been constructed yet has also been utilized with these newly proposed roads as this portion of Haripur bypass will serve as important link between new zones. The proposed Inter Zonal Arterial Roads (100' R.O.W) in Haripur City are shown on Figure 7-2 below:

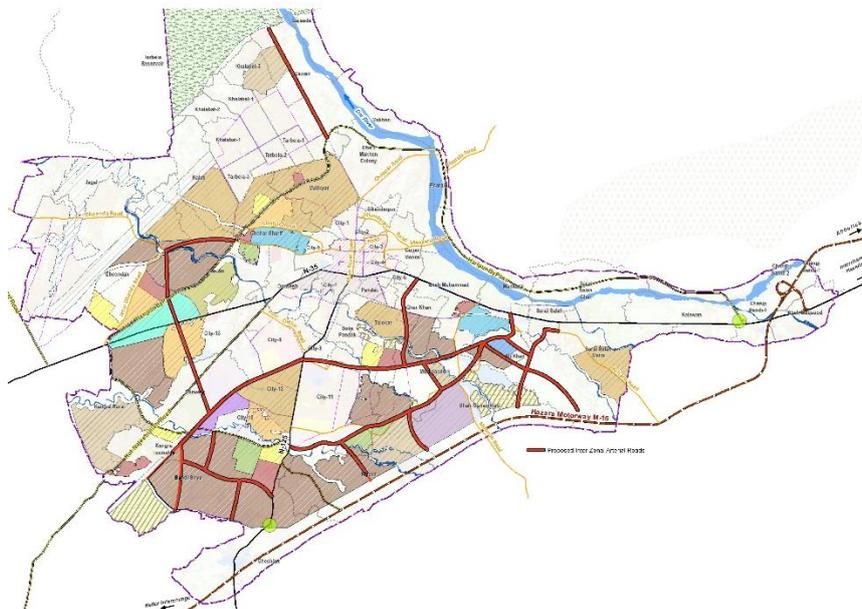


Figure 7-2 Proposed Inter Zonal Arterial Road

Most of these roads are identified by linking existing isolated minor roads / tracks in such a way as to provide not just the connectivity to new zones but also to act as new arteries to add up in the existing road network of the city. This will also help to ease traffic congestion in existing areas by diverting traffic to alternative routes. Final alignment of these proposed roads will depend on the engineering studies for these roads in future. Total length of these newly proposed 100' ROW roads is 42 Kms.

7.1.3 Improvement of Existing Road Network

- Improvement of KKH (within Haripur)

The N-35 (KKH) is the major arterial road in Haripur, with some intercity traffic still passing through it despite construction of Bypass Road and Hazara Expressway (E-35). There are various educational and medical institutions, as well as commercial areas situated alongside the KKH. This leads to an influx of people from different parts of the city and other cities. Unfortunately, there are no parking facilities available along the road. Traffic from intercity roads like N-125 also merge onto the KKH, leading to congestion near the DC Chowk and other intersections. The KKH experiences congestion at different points due to its attraction for trips and intercity traffic. Moreover, there are some bus terminals including Pindi adda and Abbottabad Adda situated along KKH without proper entry and exit points aggravating congestion along KKH.

Capacity enhancement and geometric improvement of KKH is required immediately especially in 7.5 km stretch from Missile chowk upto Sarai Saleh Bazaar. Provision of pedestrian sidewalks throughout this stretch is necessary along with proper Bus bays to accommodate proper local bus service. All intercity bus / wagon terminals located along KKH should be shifted outside the main CBD area to appropriate location. In addition, provision of an efficient public transport service is mandatory in order to handle the increased demand of traffic volume and ensure sustainability of the city.

- Improvement/ Traffic Management on Other Important Roads

Similarly, N-125 from DC Chowk to Haripur Bypass interchange (near PTCL Staff College) needs to be improved and rehabilitated. Circular road is one of the most congested arteries due to its location within main CBD of Haripur. Its improvement is also needed very much. Since widening is not feasible, some alternate solutions can be taken up for following roads in CBD area:

- Circular road
- Shakar Shah road
- Main Bazaar Road
- Sabzi Mandi road
- Dheendha road

To reduce traffic congestion on these urban roads during peak hours, access restrictions can be imposed on certain areas. This measure can limit the entry of specific types of vehicles, such as delivery trucks and heavy vehicles, during certain times of the day. To improve traffic management in market areas, parking plazas should be provided and vehicle entry into market streets should be restricted with barricades and warning signs. Park and ride services could be introduced to further mitigate car entry and to facilitate customers. Commercial and delivery vehicles should also face entry constraints; such as only being allowed at certain time period for product deliveries. Allowing traffic movement in one-way direction where ROW is less can sometimes be an effective way to avoid conflicts and reduce traffic congestion if a proper traffic circulation is possible.

More congested areas near Sabzi Mandi and Circular Road should be converted into car free areas with only pedestrians allowed. This can be achieved systematically after

provision of proper car parking areas at strategic locations. The proposed Improvements on Existing Roads in Haripur City are shown on Figure 7-3 below:

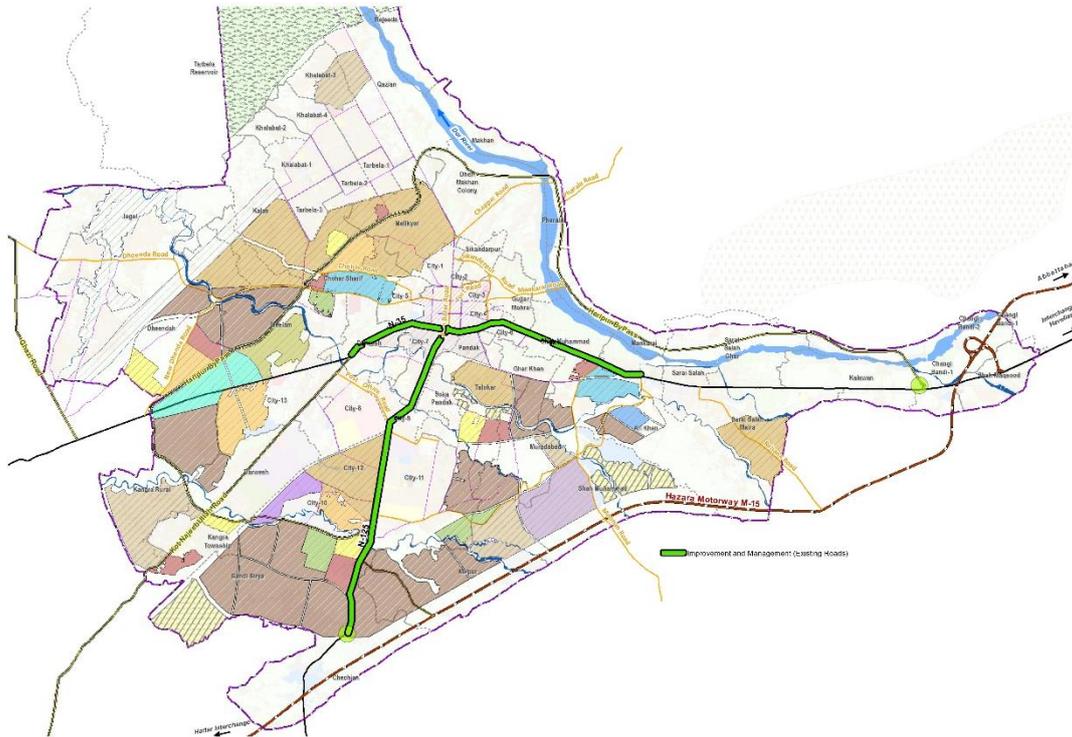


Figure 7-3 Improvements and Management on Existing Road

7.2 Agriculture Areas

Agriculture areas to be developed by adoption of advance agriculture technology and use of modern techniques for cultivation, selection of best seeds, fertilizers and pesticides. Improving irrigation system by utilization of modern techniques. Enhancing crop productivity through adoption of new technologies.

Warehouse facilities to be established for storage of agriculture products and construction of farm to market roads. Area proposed for agriculture reserved is shown in figure 7-4 below:

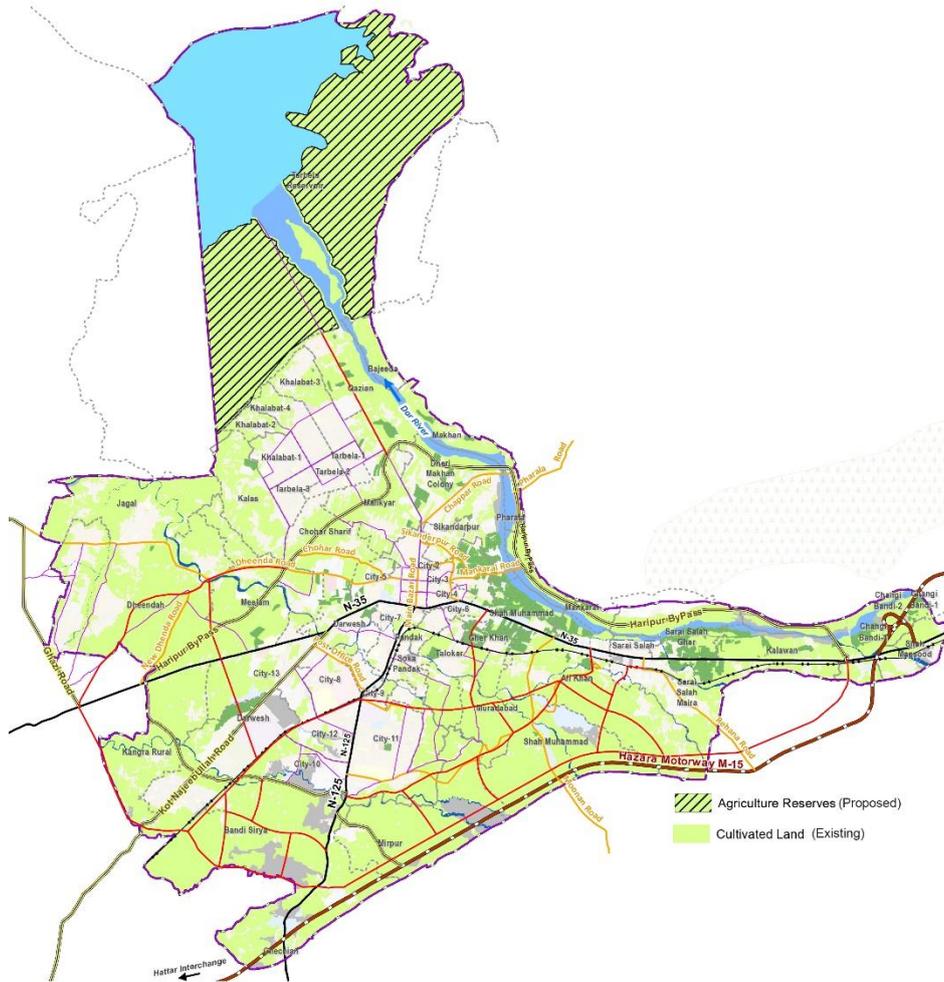


Figure 7-4 Agriculture Reserved

7.3 Urban Forestation (Tree Plantation)

Tree plantation in the master plan is proposed along proposed Outer Ring Road, along Dor River, along existing Railway Line and other water channels/ streams subject to availability of land and also inside city area where appropriate land is available for tree plantations as shown in Figure 7-5 Tree Plantation.



Figure 7-5 Tree Plantation

Native trees of Haripur City to be preferred to add beauty in the urban area and better environment.

7.4 Environmental Conservation Areas

The environment conservation is proposed along Dor River, Tarbela Reservoir and Nullahs/Streams to protect adjoining area prone to urban flooding to overcome environmental challenges such as land degradation, water sheds, deforestation, waste management, pollution control and climate change refer figure 7-6 below.

Plantation of trees is proposed to reduce the impact of emissions to make viable local climate to achieve safe and healthy environment. Environment sustainability is ensured by restricting to discharge waste and pollutants in water bodies without treatment. Environment awareness shall be created to preserve ecological cycles and to reduce risks of urban flooding, pressure on land along water bodies and conserve biodiversity.

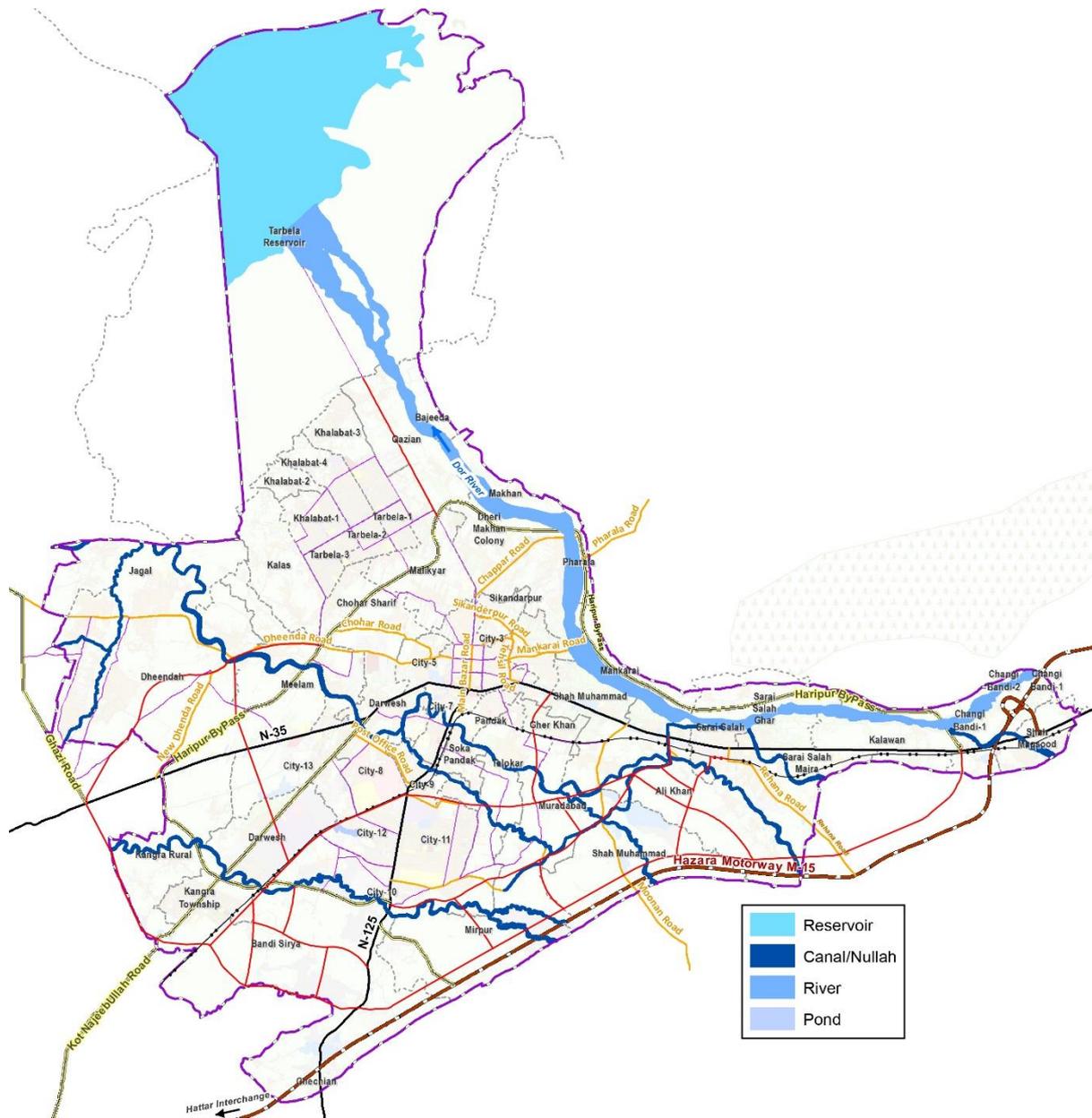


Figure 7-6 Environment Conservation

8. PROPOSED LAND USE ZONING

The proposed land use zoning is broadly based on NRM Guidelines. The NRM has not been revised since decades, thus Consultant have added new land uses in the prescribed categories, as per the contextual requirement of the indigenous environment of Haripur as DHQ city, and in consideration of the NRM Standards. The proposed land use zoning is shown in the table 8-1:

Table 8-1 Proposed Landuses Haripur

S. No.	Proposed Land Uses	Existing Areas (Acres)	New Proposed Areas (acres)	Total Proposed Areas (acres)	Percent ages %	NRM Standards	
1.	Residential	4,675	3,865	8,540	26.55%	Residential	40-45%
2.	Commercial	568	744	1,312	4.08%	Commercial	2-3%
3.	Industrial	195	552	747	2.32%	Industrial	2-10%
4.	Cantonment	-	-	-	-	Institutional	3-5%
5.	Public Buildings	192	158	350	1.09%		
6.	Health Facilities	53	251	304	0.95%		
7.	Educational Facilities	300	230	530	1.65%		
8.	Parks Playgrounds /	86	1238	1,324	4.12%	Recreational	4-6%
9.	Graveyard	209	389	598	1.86%	Graveyard	2-3%
10.	Religious	49	-	49	0.15%	Religious	-
11.	Roads Network	1,170	1,598	2,768	8.62%	Arterial Circulation and Terminals	5-20%
12.	Railway Land	44	-	44	0.14%		
13.	Transportation	15	20	35	0.11%		
Sub-Total: Built Up Area				16,601	51.61%		
14.	Agricultural Land	17,728	-8,549	9,179	28.54%	Protected Reserved	15-25%
15.	Orchards	934	-	934	2.90%		
16.	Water Bodies	5	-	5	0.02%		
17.	Canal/ Nullah	252	-	252	0.78%		
18.	Reservoir	2569	-	2,569	7.99%		
19.	River	960	-	960	2.98%		
20.	Urban Forest	-	-	820	2.55%		
21.	Hilly Terrain	76	-	76	0.24%		
22.	No Development Zone	-	-	768	2.39%		
Sub-Total: Non - Built Up Area				15,563	48.39%		
Total Area				32,164	100.00 %		

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The total area requirement for full fledged metropolis will be around 32,164 acres. As shown in the table of proposed land use classification, the percentage of residential use is low and institutional is high, in comparison to the NRM standards. Subsequently, the institutional area will also contain residences for health, education, religious and public administration employees / staff. In this way, institutional area is accommodating the residential load as well. On the other hand, commercial area percentage share is exceeding which also catering mixed use development like public buildings, health, educational, green open spaces etc.

8.1 Residential Zone

Keeping in view the current population the total housing demand is calculated for the additional population that will be 196,594 by 2042 income class wise area required along with total demand for housing is shown in the able below:

Table 8-2 Total Housing Demand & Area Required for Additional Population in Haripur City

Land Requirement in Residential Sector	Low Income Housing (45%)	Middle Income Housing (45%)	High Income Housing (10%)	Total
Projected Population (2022-2042)	494,784			
Population Distribution as Per Income Class	222,653	222,653	49,478	494,784
Additional Population	82,418	82,418	18,315	183,151
HH Size (Source: Census-2017)	6.1			
Housing Requirement (Units)	13,511	13,511	3,002	30,025
Existing Housing Stock of Haripur City	21,314			
Replacement Demand @15% of existing Stock (Source PBS)	1,439	1,439	320	3,197
Housing Stock of Haripur City by 2042	18,117			
Additional Replacement Demand @15% of existing Stock	1,223	1,223	272	2,718
Existing Backlog as per PBS	231	231	51	531
Total Replacement Demand of Housing Stock by 2042	16,403	16,403	3,645	36,452
Land Required (Kanals)	5 Marla & Apptt	10 M	1 Kanal	
	3,392	6,784	3,015	1,3192
Addition of Amenities 120% In Kanals (for allied amenities i.e. Roads, parks, public buildings etc.)	4,071	8,141	3,618	1,5830
Land Requirement Total (Kanals)	7,463	14,926	6,634	29,023
Land Requirement Total (Acres)	933	1,866	829	3,628



In reference to Task-B following is summary of the residential sector:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	4,675
2.	Existing area (in %)	14.55
3.	Existing household size	6.1
4.	Existing number of houses	21,314
5.	NRM Standards	40-45%
6.	Proposed area (in acres) (existing and proposed residential)	8,540
7.	Proposed area (in %)	26.55
8.	Proposed household size	6.1
9.	Required Housing (Units) by (2042) for additional Population	30,025

One of the important features of the proposed master plan is accommodation of all income groups with specific options for housing particularly suitable for respective income groups. Therefore, in total approximately 8,540 acres of residential land use is proposed, which will mean having 10 housing units per acre on average. Thus, it is expected that by around 2042 the total housing stock in the town would be about 30,025 units to accommodate the additional population. Refer attached Map 9 Proposed Residential Zone.

The central part of Haripur occupies most of the residential use with other mix uses. With growing population there is shift from centre to outskirts in the south direction of the city to avoid congestion and pollution thus new residential schemes have emerged. There are existing vacant land parcels in overall town for housing development. It is suggested to utilize available land within inner city in short term plan for infill development. To fulfill housing need of population for next decade till 2030, Infill Housing Development within adjoining VCs is proposed with Neighborhood Centres, to avoid leapfrog housing development.

Moving ahead, for medium to long term phase, areas are also being proposed for new residential development as per future requirement, which might also include apartment buildings. To fulfill housing need of population till 2042, areas are also designated for New Housing Development. For Low Income Housing area towards south is found more feasible for medium to high density development; while for middle- and high-income groups, mixed density (low, medium and high) residential areas are suggested to be proposed in new housing development. Following land use division is for New Residential Schemes according to KP Local Government Private Housing Schemes Management and Regulations, Rules 2020:

Table 8-3 Planning Standards for Private Housing Schemes

Sr. No.	Land Use	Category-D (upto 50 kanal)	Category -C (50-100 kanal)	Category-B (100-200 kanal)	Category-A (200-500 kanal)	Mega Housing Scheme (above 500 kanal)
1.	Open Spaces	-	Min 05%	Min 07%	Min 07%	07% or above
2.	Graveyard	-	-	Min 02%	Min 02%	Min 02%
3.	Commercial	-	Max 01%	Max 05%	Max 05%	Max 10%
4.	Public Buildings	-	Min 02%	02% to 10%	03% to 10%	04% to 10%
5.	Size of Residential Plot	Max 01 kanal	Max 02 kanal	Max 02 kanal	Max 02 kanal	Max 02 kanal
6.	Internal Roads	Min 25 ft	Min 25 ft	Min 30 ft	Min 30 ft	Min 30 ft
7.	Site for Solid Waste	-	Min 05 marla	Min 10 marla	Min 01 kanal for 200 kanal and 10 marla for each additional 100 kanal upto 500 kanal	Min 04 kanal for 500 kanal and 02 kanal for each additional 500 kanal
8.	Grid Station Exclusive of Public Buildings	-	-	As per Requirements of concerned deptt. / Agency	As per requirements of concerned deptt. / Agency	As per requirements of concerned deptt. / Agency
9.	Major Roads	Min 40 ft	Min 40 ft	Min 60 ft	Min 100 ft	Min 150 ft
10.	Service Area / Scheme Office		Min 05 Marla	Min 10 Marla	Min 10 Marla	Min 01 Kanal

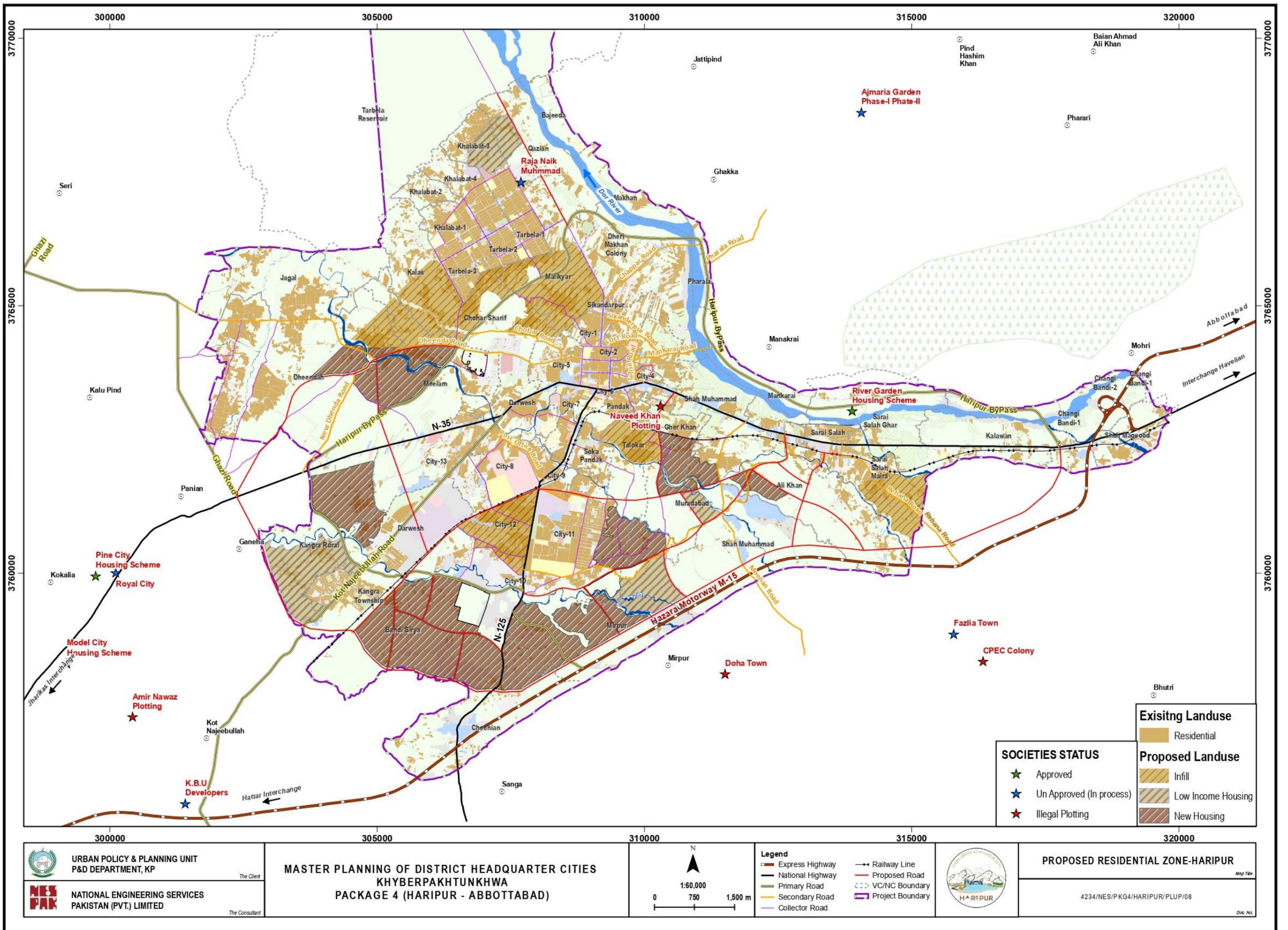
The Category D is suggested to be removed and the minimum size of housing schemes should not be less than 50 Kanal, since small chunks of housing schemes are not sustainable solutions. In Category C and Category B, it is recommended to limit the size of residential plot to one Kanal, in order to increase number of plots to serve more population. The internal roads should not be less than 30 feet in any category, for better accessibility and parking provision.

The Guidelines for Residential Zone Development

The Residential Zone will encompass houses and apartments, emphasizing low to medium-density housing development in alignment with cultural preferences. It is recommended to adhere to standards and allocate ample space for neighborhood facilities. According to the Khyber Pakhtunkhwa (KP) Land Use and Building Control Act, 2021, there is a crucial need to define the terms 'permitted' and 'permissible' land use. While the act acknowledges this necessity, the detailed development guidelines remain unspecified. To address this gap, the consultant has reviewed the Punjab Land Use (Classification, Reclassification, and Redevelopment) Rules 2009 (Amended, 2020), specifically relevant to the study area. It is essential to note that these development guidelines will be amended to make it compliant if the Building Control Authority of KP introduces Land Use Classification Rules.

The guidelines for Residential Zone development are as follows:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
(i) detached house; (ii) semi- detached house; (iii) town house; (iv) residential apartment; (v) neighborhood level park and playground; (vi) place of worship or prayer; (vii) place of burial or cremation; and (viii) horticultural nursery:	(i) daycare centre or preschool; (ii) primary school; (iii) secondary school; (iv) dispensary with no bed and laboratory facilities; (v) library; (vi) guest house having not more than ten rooms; (vii) small size corner shop at the ground floor; and (viii) office of a professional not exceeding twenty five percent of the floor area, as office associated with resident professional; this facility shall be available to a resident holding both a professional degree, diploma or certificate and a registration with a statutory body established under a law for the time being in force:	The District Land-Use Planning and Management Committee/KP Land-Use and Building Control Authority/TMA shall not allow a person to use a property in a residential area for a purpose which is neither permitted nor permissible.



Map 9 Proposed Residential Zone

8.2 Commercial Zone

In reference to Task-B following is summary of the commercial sector:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	568
2.	Existing area (in %)	1.77
3.	NRM Standards	2-3%
4.	Proposed area (in acres)	1,312.06
5.	Proposed area (in %)	4.08

This zone is primarily mixed-use commercial with state-of-the-art buildings. Smart development will be favored, ranging from medium to high density with a minimal footprint, aiming to efficiently utilize the land while providing ample open and green spaces. Refer the attached Map 10 Proposed Commercial Land Use. The commercial land use will include the following:

8.2.1 New CBD (Central Business District)

The placement criteria of New CBD are based on existing commercial areas, prevailing growth trends and inter and intra-regional connectivity. It is proposed in west side efficiently accessible through Haripur Bypass and N-35. Secondly tertiary level new developments are also happening in southern side, which compliment development of New CBD.

Thus, New CBD has been located along Haripur Bypass. The main land uses of the CBD will be regional corporate headquarters, financial centres, media houses, IT / software, specialized production service and retail shopping outlets with dedicated parking and large open spaces. This will integrate a great deal of financial, business, culture, service institutions and lots of supporting facilities; such as business office buildings, large shopping malls, hotels, convention, exhibition, expo centre, and apartments, etc. These will be developed with perfect and convenient traffic, communications and other infrastructures, favorable economic development, environment friendly places; which are convenient for commercial activities.

8.2.2 Mixed-Use Development³

Mixed-use development involves urban planning that combines various functions, such as residential, commercial, cultural, institutional, or entertainment, within a single space. These functions are integrated to some extent both physically and functionally, with pedestrian connections provided. This approach can be applied to a single building, a block or neighborhood, or even an entire city or administrative unit. Mixed-use developments may include new construction, the reuse of existing buildings, or the redevelopment of brownfield sites.

A common characteristic of mixed-use developments is the provision of a range of services and amenities within walking distance, promoting a pedestrian-friendly environment. This approach is often seen as a way to enhance the overall quality of life, encourage sustainability, and contribute to the economic viability of an area.

³ <https://www.planetizen.com/definition/mixed-use-development>



In continuation to the main CBD, it is recommended to place sub commercial areas at other major intersection to share the burden of retail commercial activities and will also benefit the inhabitants with nearby commercial facilities. Thus, a mixed-use development is suggested in between major roads i.e.

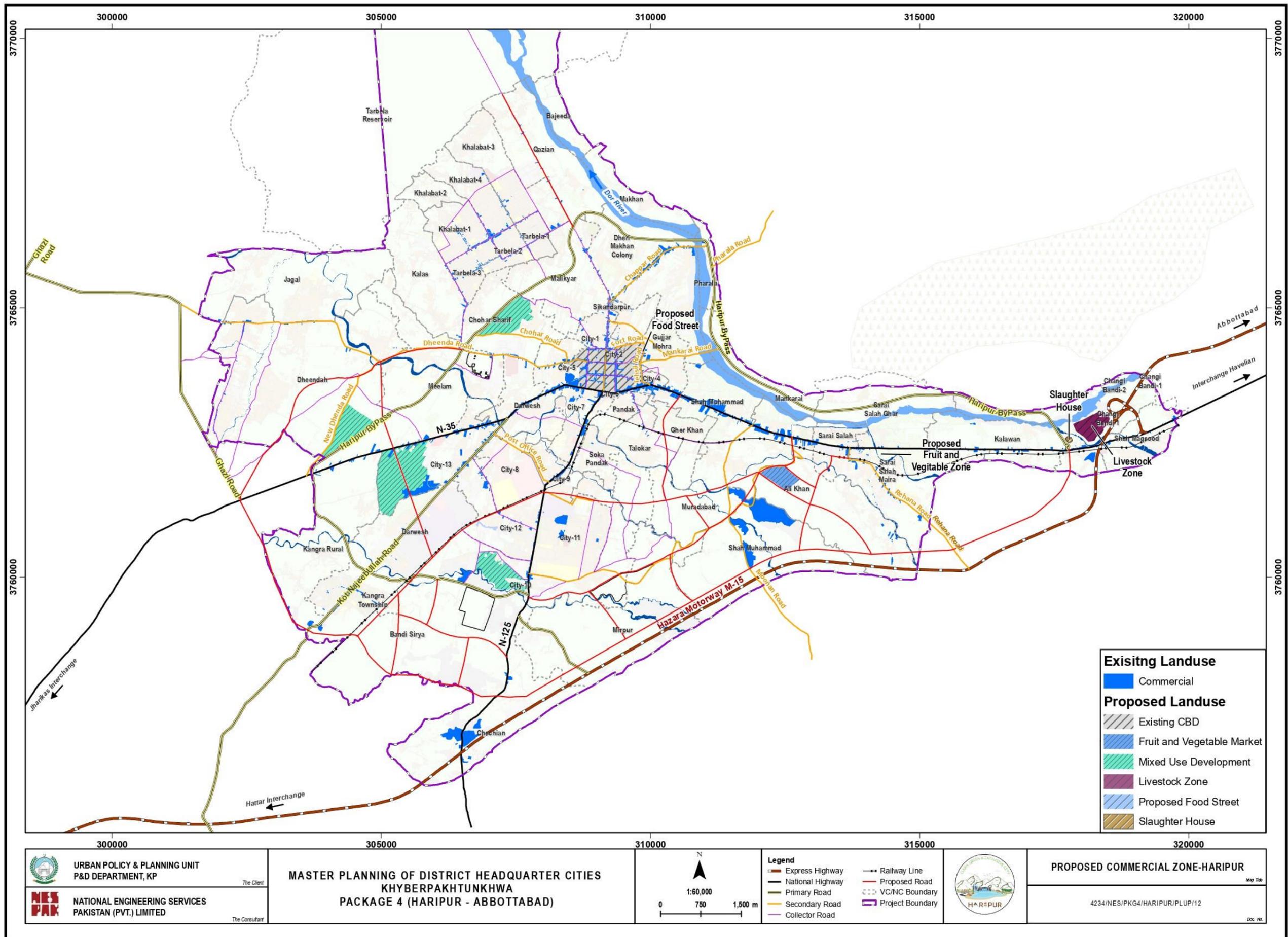
- Mixed-Use Development West – Haripur Bypass Road
- Mixed-Use Development South – N-125 Road
- Mixed-Use Development North - Haripur Bypass Road

8.2.3 Neighbourhood Centres

In order to facilitate residents at micro level there are Neighborhood Centers in partially developed areas aim to cater to residents' needs, offering daily-use commercial markets, primary schools, small mosques, play areas, clinics, and common parking. Permitted uses within the commercial zone include residential apartments, multi-storey buildings, commercial plazas, markets, business facilities, offices, financial institutions, cultural institutions, hotels, showrooms, shops, boutiques, restaurants, social welfare institutions, parking plazas, taxi stands, bus halts, and places of worship or prayer.

The following guidelines are for commercial zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
(i) residential apartment; - (ii) multi storey building; (iii) condominium complex; (iv) commercial plaza; (v) market, shopping mall, departmental store; (vi) business facility; (vii) private office; (viii) government or semi-government office; (ix) court or tribunal; (x) financial institution; (xi) cultural institution such as park, memorial and monument; (xii) hotel up to three star; (xiii) motel having not more than twenty rooms; (xiv) showroom and shop; (xv) boutique; (xvi) restaurant; (xvii) social welfare institution such as community centre, art gallery & museum; (xviii) parking plaza; (xix) taxi stand and bus halt; (xx) police station, post office, fire station; and (xxi) place of worship or prayer:	(i) educational institution; (ii) research institution (iii) marriage or banquet hall with a minimum plot size of four Kanal; (iv) cinema; (v) theater, auditorium, concert hall or exhibition hall with a minimum plot size of four Kanal; (vi) seasonal commercial fare site; (vii) stadium or play land; (viii) Shops dealing in hazardous or dangerous substances (ix) petrol pump or gas or LPG or LNG station; (x) bus or truck terminal; (xi) loading and unloading requirements of all uses; (xii) weighbridge; (xiii) private hospital; (xiv) hotel four star or above; (xv) television or other studio; (xvi) auto workshop; (xvii) whole sale storage place; (xviii) printing press; (xix) Coal, wood or timber yard; (xx) athletic club, gymnasium, fitness centre or indoor sport facility; and (xxi) base trans receiver station or communication tower: (xxii) renewable energy installations or projects.	The District Land-Use Planning and Management Committee/KP Land-Use and Building Control Authority/TMA shall not allow a person to use a property in a commercial area for a purpose which is neither permitted nor permissible.



Map 10 Proposed Commercial Zone

8.3 Industrial and Economic Zone

In reference to Task-B following is summary of the industrial and economic sector:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	195
2.	Existing area (in %)	0.61
3.	NRM Standards	2-10%
4.	Proposed area (in acres)	747.29
5.	Proposed area (in %)	2.32

In order to increase employment opportunities and production activities; industrial and economic areas need to be developed. It will create more jobs, investment options, open new markets and at the end of the day will boost the economy of the town. Refer attached Map 11 below Proposed Industrial and Economic Land Use.

8.3.1 Industrial Zone

The Industrial Zone is currently characterized by small-scale industries primarily located along N-125. To further enhance industrial development, a new small industrial estate is proposed in the southwest, adjacent to existing industries, accessible from N-125 Road. The focus in this area will be on promoting cottage and small-scale industries, encompassing activities such as flour mills, ice factories, packaging of fruits and vegetables, feeder crops, as well as handicrafts and souvenir cottage industries. Large-scale industrial setups are planned outside the city, particularly in the Hattar Economic Zone (SEZ) as part of the China-Pakistan Economic Corridor (CPEC). Thus, heavy industries are discouraged within the city, and efforts are recommended to expedite the colonization of the already developed Hattar Industrial Estate Phase-2.

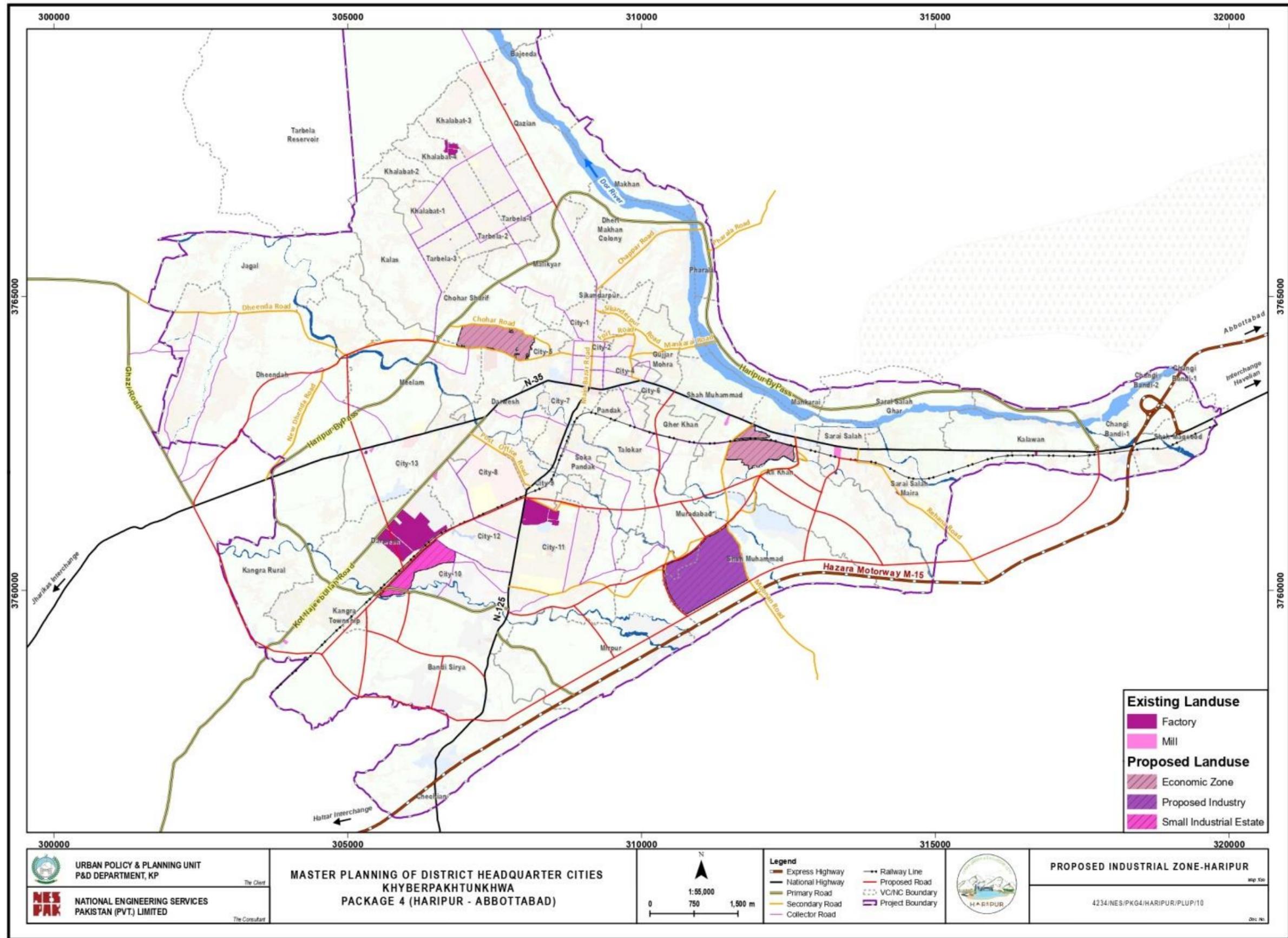
8.3.2 Economic Zone

In addition to the Industrial Zone, emphasis is given to various economic activities in the Economic Zone, considering indigenous economic potentials and technical services. Positioned along N-35 and Haripur Bypass Road, adjacent to proposed transport areas, these economic zones facilitate regional trading activities, connecting towns and tehsils. The Economic Zone includes markets for grains, fruits, and vegetables, wholesale markets, a slaughterhouse, and storage areas. Technical services such as mechanical workshops, spare parts (automobile repairing), building construction materials, home depots, furniture markets, housewares, and food and beverages are also integrated. Warehouses, ranging from large to small scale, encompassing general, bulk, liquid, dry, and cold storage, will be equipped with advanced technology for goods storage and management, including CCTV surveillance and in-and-out data entry.

The following guidelines⁴ are for industrial development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
(i) cottage or light industry; (ii) Vertical green industry (iii) construction equipment; (iv) warehouse, storage or distribution centre; (v) building material store; (vi) fire station; (vii) restaurant (viii) loading and unloading place; (ix) weighbridge (x) industrial units except for which special permission is required under any law, rules or policy (xi) industrial products display center, fair price shop and showroom; and (xii) renewable energy installation or projects; (xiii) ancillary office or place for industry (xiv) auto workshop, service garage and service station; (xv) essential residential, commercial or educational facility for laborers or employees; (xvi) police station, post office or fire station; (xvii) base trans-receiver station or communication tower; (xviii) construction equipments; (xix) parking lot; (xx) water purification plant; (xxi) green or forest area; (xxii) warehouse, storage or distribution center; (xxiii) vocational and technical training institute; (xxiv) building material store; and (xxv) medium or heavy industry including manufacturing, production, processing	(i) storing, packing, pursing, cleaning, preparing, and manufacturing of blasting powder, ammunition, fireworks, gun powder, sulphur, mercury, gases, phosphorous, dynamite; nitro-compounds, (ii) storing explosives, petrol, oil, lubricants, and other inflammable materials including coal, chemicals, liquids or otherwise cleaning dying, preparing and manufacturing of cloth or yarn in indigo or other colour; (iii) storing, processing, cleaning, crushing, melting, preparing or manufacturing and dealing in bombs, tallow, offal, fat blood, soap, raw or dry hide or skin, washing or dyeing wool or hair; (iv) casting of heavy metals, electro plating, welding, marble cutting and polishing, manufacturing of cement or pipes, burning or grinding of lime stone, metal or use of any other obnoxious or hazardous material; (v) petrol pump or gas station or LPG or LNG storage and filling station; (vi) grid station; (vii) power plant; (viii) hospital; (ix) effluent treatment or recycling plant; (x) industrial units for which special permission is required under any law, rules or policy; (xi) oil depot; (xii) incineration plant; (xiii) essential residential, commercial, health and educational facility for workers or employees; and (xiv) place of worship.	The District Land-Use Planning and Management Committee/KP Land-Use and Building Control Authority/TMA shall not allow a person to use a property in an Industrial area for a purpose which is neither permitted nor permissible.

⁴ https://lgcd.punjab.gov.pk/system/files/The_PLG_LAND_USE_PLAN_RULES_2020_0.pdf



Map 11 Proposed Industrial & Economic Zone

8.4 Civic Services Zone

The summary of the civic services sector is given in the Table below:

Sr. No.	Categories Names	Values
1.	Proposed area (in acres)	158.94
2.	Proposed area (in %)	0.50

As Haripur is the district of Hazara division, therefore in future with the rising activities more space for different public offices and institutions will be required. With this assumption a new Civic Services Zone is proposed along existing Haripur Bypass Road next to New CBD. This will include Town Committee Offices, District Secretariat Offices Development Authority, Line Departments, Local Government Offices, Town Planning Department, Circuit House, Judiciary Complex etc.

The area for public employee housing is also suggested in this zone to cater the need of housing for public employees. This will include houses and walkable apartments for all employees, according to their grade levels and status. Refer attached Map 12 Proposed Civic Services Land Use.

The following guidelines are for civic services zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> • District Secretariat, • Development Authority • Town Committee Complex • Line Departments • Local Government Offices • Town Planning Department • Judiciary Complex • Circuit House • Government offices and administrative buildings. • Public service centers. • Municipal facilities and town halls. • Police stations and law enforcement offices. • Fire stations and emergency response facilities. • Public transportation hubs. • Educational institutions focused on civic education. • Community centers for public gatherings and events. 	<ul style="list-style-type: none"> • Employees Residences (for all grades) • Auditoriums, seminar halls, workshop spaces • Community facilities (parks, playgrounds, clinics, schools, neighborhood commercial) • Support facilities (gym, health club, bus stops, taxi Stand, banks, fuel stations) • Commercial establishments providing essential services. • Public libraries and cultural institutions. • Public parks and recreational areas. • Non-profit organizations promoting civic engagement. • Educational institutions not directly related to civic education. • Small-scale commercial ventures supporting civic functions. 	<ul style="list-style-type: none"> • Heavy industrial activities. • Residential developments not in line with civic purposes. • Commercial activities unrelated to civic services. • Activities with potential environmental hazards. • Any uses incompatible with the public service nature of the zone.

8.4.1 Health Zone

In reference to Task-B following is summary of the health sector:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	53
2.	Existing area (in %)	0.16
3.	Proposed area (in acres)	304
4.	Proposed area (in %)	0.95

This zone is specifically for health and welfare related large scale activities. It will be a specialized area with high tech health facilities, social welfare and supporting services; with advance infrastructure.

Health Zone is located along Haripur Bypass Road. In this area it is suggested to have extension of DHQ Hospital with medical and nursing colleges as well. Since it will become tertiary level centre for health facilities, thus staff residence, hostels, community and allied facilities will also be accommodated here. It could also include; Rehabilitation Centres, Special children, Welfare Homes (orphanage / old age / women) etc. It is widely possible that this area will be utilized for distinct health and welfare facilities in long term phase; like specialized hospitals, research and welfare centres etc. It will comprise the specialized units like oncology, urology, infertility centres, organ transplantation, and specialized treatment centres, research and development centres.

In plan other sub zones of health are also proposed, which are accessible from N-35, N125, and other important roads. The purpose of health areas is to make these accessible for other towns as well as attract private investment in health and welfare sector. The aim will be to provide all specialized health solutions within the town, and to serve the population beyond city borders, like nearby urban and rural localities.

The following guidelines are for health and welfare zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> • Hospitals and healthcare facilities. • Medical clinics and diagnostic centers. • Rehabilitation centers and nursing homes. • Educational institutions related to health sciences. • Community welfare centers. • Recreational facilities promoting well-being. • Green spaces for relaxation and exercise. • Social service agencies and counseling centers. 	<ul style="list-style-type: none"> • Educational institutions not directly related to health sciences. • Non-profit organizations focused on community development. • Research institutions with a health and welfare focus. • Supportive housing for vulnerable populations. • Ancillary services such as pharmacies and health-related retail. 	<ul style="list-style-type: none"> • Heavy industrial activities. • Commercial activities unrelated to health and welfare. • Residential developments not specifically designed for health-related purposes. • Activities with environmental hazards detrimental to health. • Any uses incompatible with the well-being and safety of the community.

8.4.2 Educational Zone

In reference to Task-B following is summary of the educational sector:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	300
2.	Existing area (in %)	0.93
3.	Proposed area (in acres)	529.79
4.	Proposed area (in %)	1.65

The large-scale educational land uses will be developed in this zone, focusing towards the global trend of education especially for future generations. The aim is to create a base of knowledge hub, to provide quality education in all diversified fields, in order to upgrade the livelihood of the indigenous as well as the regional population. The Educational Zone is mainly proposed for new universities and campuses of well-known national educational institutes, which is lacking in the town. As the society is moving towards global dynamics, diversified fields of education will be a prerequisite. It could include upcoming need of the job market like; engineering, business, management, finance, media, IT and software, artificial intelligence, robotics etc.

In addition to academic buildings; allied facilities like administration, sports grounds, and health clubs will also be accommodated here. The purpose of educational areas is to serve other towns as well as to attract private investment in educational sector due to good connectivity. It will include government and private degree colleges to accommodate all the required facilities and services. It will also include; poly technical college for boys and girls, women development center (working women hostels, day care centers), certified computer and IT training centers, research centers etc.

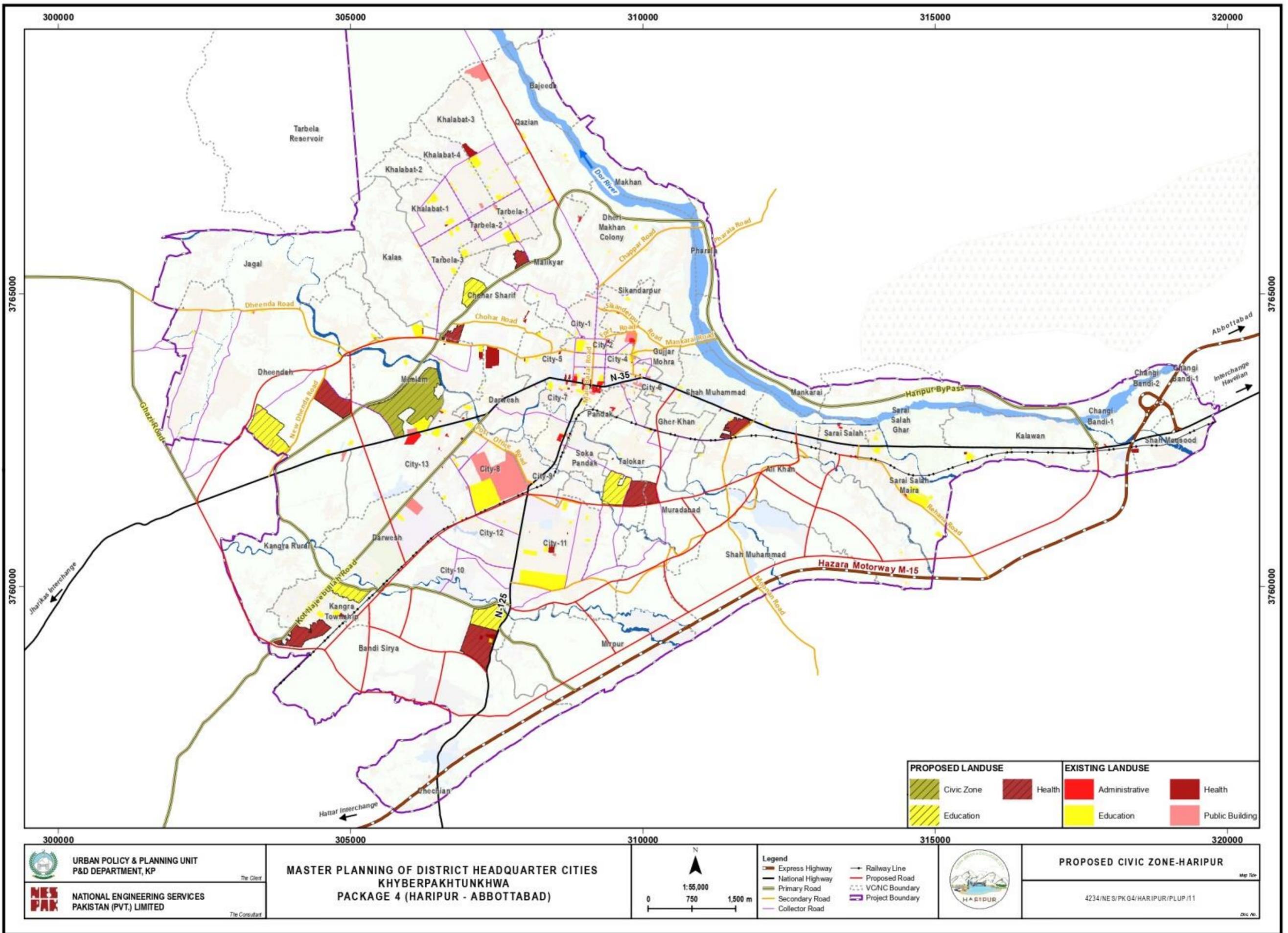
The vocational training center is also suggested to be placed in this zone to cater need of under privileged youth for better skills and technical knowledge. This will provide space for skill development centers, technical education for the indigenous and surrounding population to accommodate in the current job market. The library, data and information centers and scientific research institutes are also recommended in this zone to provide all kind of facilities for research and development in different fields.

The following guidelines are for educational zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> •Schools and educational institutions at all levels. •Colleges and universities. •Research and development institutions. •Libraries and educational resource centers. •Student housing and dormitories. •Auditoriums and lecture halls. •Sports facilities and recreational areas for educational purposes. •Administrative offices for educational institutions. 	<ul style="list-style-type: none"> •Educational support services such as tutoring centers. •Bookstores and educational supply stores. •Cafeterias and dining facilities for students. •Non-profit organizations focused on education and research. 	<ul style="list-style-type: none"> •Heavy industrial activities. •Residential developments not associated with educational purposes. •Commercial activities unrelated to education. •Activities with potential environmental hazards. •Any uses incompatible with the educational nature of the zone

The proposed Health, Education and Civic Zones are shown in the Map-12 below:





Map 12 Proposed Civic Zone

8.5 Recreational Zone

In reference to Task-B following is summary of the recreational sector:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	86
2.	Existing area (in %)	0.27
3.	NRM Standards	4-6%
4.	Proposed area (in acres)	1323.72
5.	Proposed area (in %)	4.12

In the existing towns, disappearance of open spaces and non-provision of planned open spaces are seen. Thus, in the proposed master plan, recreational land use has been given a vital importance in order to create a healthy environment. Several types of regional level recreational activities are recommended like sports and cultural complex, amusement and theme parks, festival grounds, zoological and botanical gardens etc.

In the heart of city, a Central Park and Sports and Cultural Complex are proposed. A central park would contain area for swings, sitting, walking, jogging with allied facilities of washrooms, tuck shops, parking etc. It would also have sub portions reserved for families (ladies and children). And sports and cultural complex would include cricket, football, hockey and other grounds, cultural centre and gymnasium.

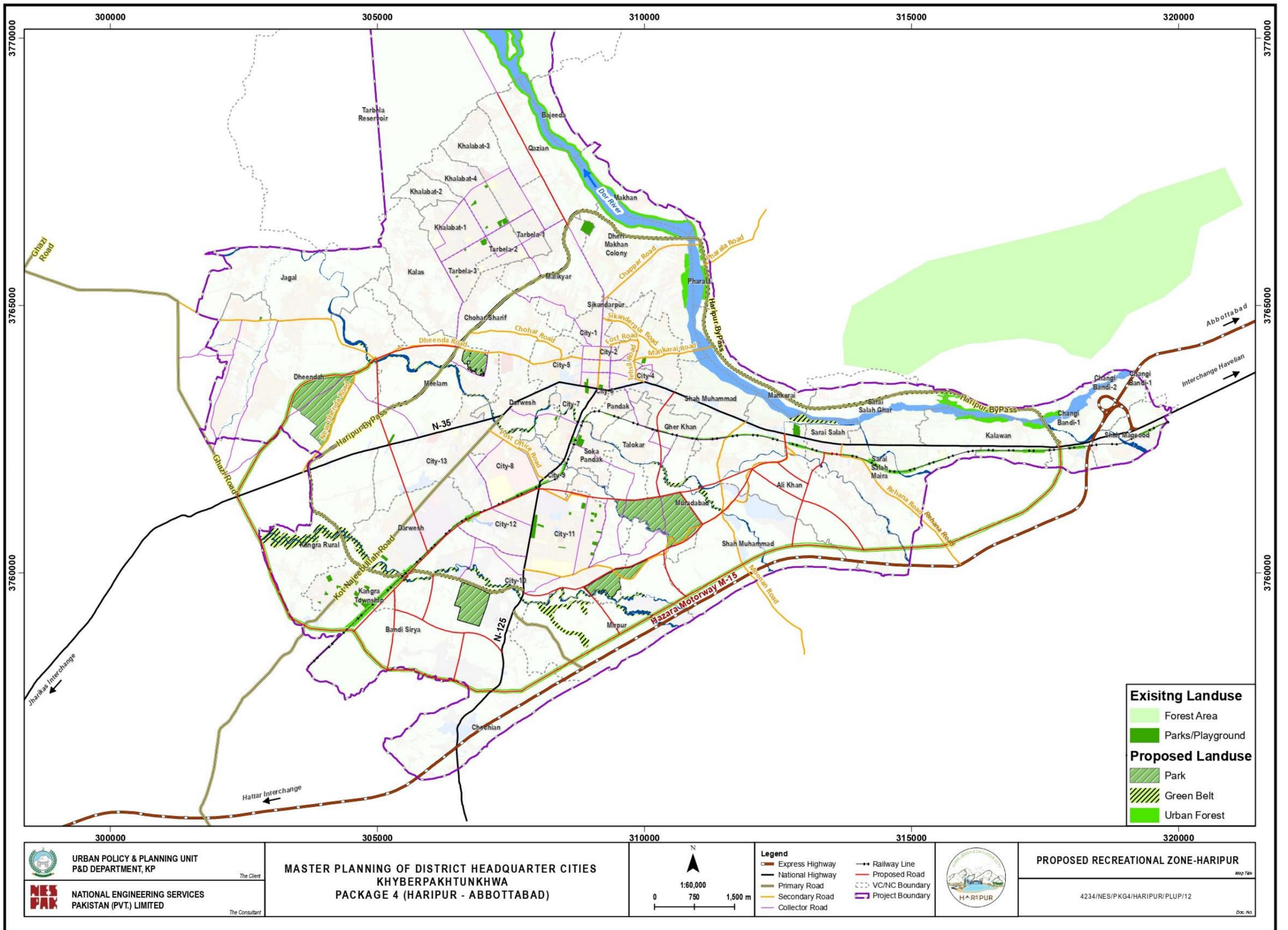
The recreational area specifically for Amusement and Theme Parks is designated in south west side accessible from Haripur Bypass and proposed outer ring road (250' ROW) road. In this area large scale amusement facilities like thrilling rides in a safe and pleasant manner will be provided. Moreover, theme parks like Art Park, floral garden, glow garden etc. could also be introduced as per the demand of the region.

In addition, Haripur is a regional centre, there is also a need of Botanical and Zoological Gardens. These gardens will serve not only a metropolis of future but urban and rural areas of Haripur region as well. It is recommended to develop these gardens towards south. Considering indigenous tradition and types of festivals, spaces are proposed for such events. These recreational spaces will be used for large population events like carnivals, Eid festivals, etc.

The following guidelines are for recreational zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> • City scale parks • Large public squares • Sports facilities • Cultural activities • Amusement area • Special theme parks • Regional level gardens like botanical, zoological 	<ul style="list-style-type: none"> • Ancillary structures for caretakers / workers • Related commercial activities • Fuelling stations • Parking • Public washrooms 	<ul style="list-style-type: none"> • Other than permitted and permissible

The proposed Recreational Facilities for the citizens of Haripur City are shown in the Map-13 below.



Map 13 Proposed Recreational Zone

8.6 Graveyards

In Reference to the Task B the Proposed summary of the graveyard sector is given in the table below:

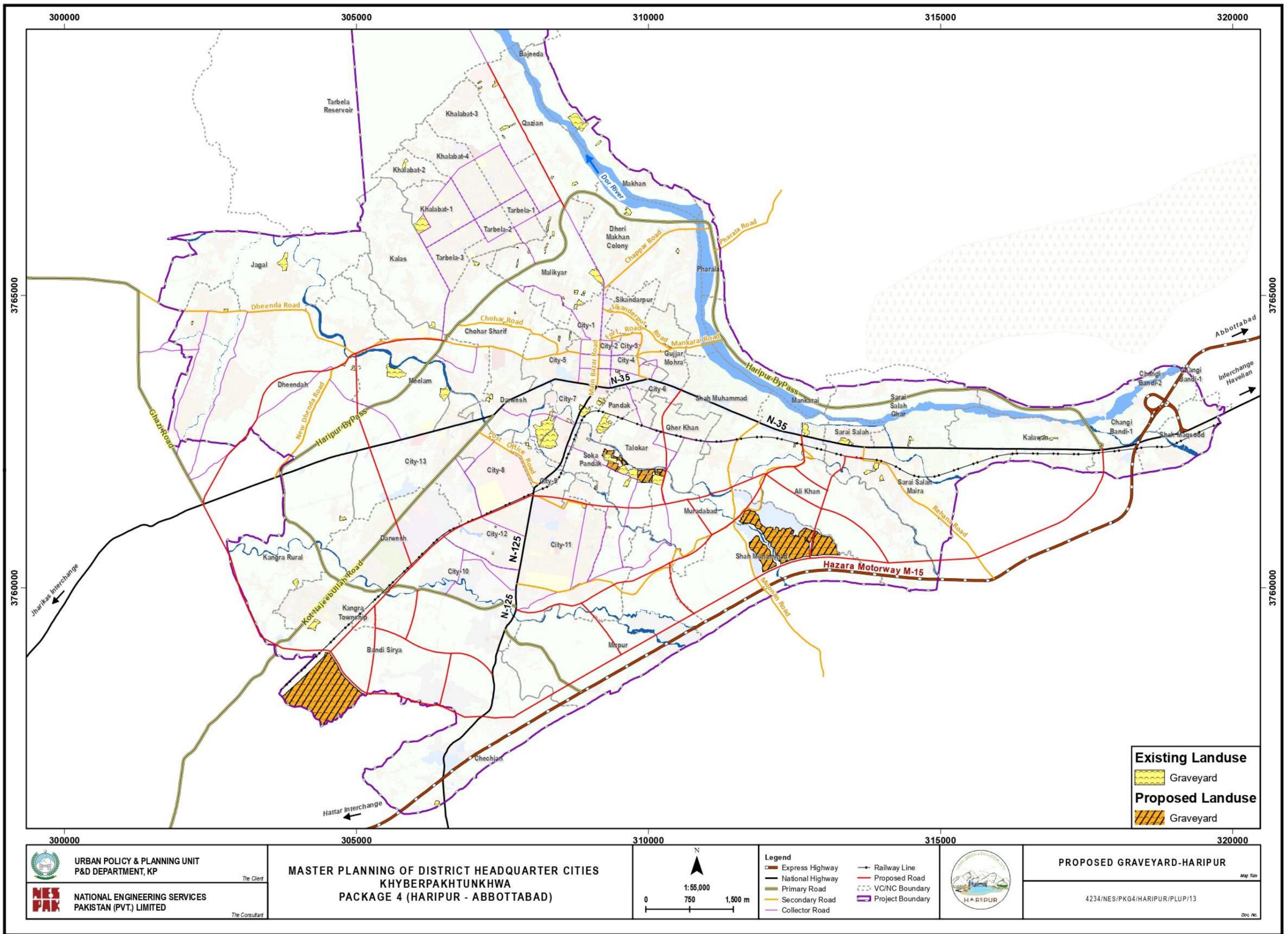
Sr. No.	Categories Names	Values
1.	Existing area (in acres)	209
2.	Existing area (in %)	0.65
3.	NRM Standards	2-3%
4.	Proposed area (in acres)	598.13
5.	Proposed area (in %)	1.86%

Considering accessibility four areas for graveyards are designated at appropriate locations. Thus, these sites will be accessible whenever required and will also remain in the periphery of the town. These graveyards can be further divided according to the requirement of practiced religions in the town.

The following guidelines are for graveyard zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> Graveyard area 	<ul style="list-style-type: none"> Related activities Accommodation for caretaker 	<ul style="list-style-type: none"> Other than permitted and permissible

The proposed Graveyard in Haripur City are shown in the Map-14.



Map 14 Proposed Graveyards

8.7 Transportation Zone

In reference to Task-B following is summary of the transportation sector:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	1,229
2.	Existing area (in %)	3.8%
3.	NRM Standards	5-20%
4.	Proposed area (in acres)	2,847
5.	Proposed area (in %)	8.87

Road network is considered as a vehicle for economic development and social change. Efficient road network not only develops a quick and efficient transportation system but also opens up new areas that have previously remained closed. It brings about social integration among rural and urban sectors and greatly assists in providing access to basic amenities such as education, health facilities, etc. It brings rural areas in constant touch with urban segment of a society and creates better understanding necessary for social change and economic activities.

Haripur is situated along Karakoram Highway N-35 (KKH) which is the main urban arterial road crossing within the city. Similarly, N-125 also enters the city from South and intersects N-35 at DC Office intersection. E-35 also called Hazara Expressway is a newly constructed Expressway which provides high speed bypass route to intercity traffic moving from Islamabad, Hassanabdal, and Taxila side towards Abbottabad, Mansehra and other Northern areas. So, this expressway has relieved Haripur of some intercity traffic that previously used to enter Haripur City to move towards northern areas. However, intercity traffic that does not want to travel on Motorways / Expressway still use N-35 and N-125.

Similarly, a Haripur Bypass is constructed on Northern to South Western sides of the city. It is a Two-lane undivided highway with grade separations on all road crossings along. Therefore, it can be said that Haripur has relatively better road network approaching the city area but main problem is that roads are narrow and congested within the busy city areas and near commercial centres. The stretch of Main roads like N-35 and N-125 crossing within the city area have become congested due to encroachments, On-street parking, unregulated stoppage of public transport on roads, lack of bus bays and pedestrian crossing along the main roads. These main roads have not been widened for a long time whereas the city and its population kept growing hence there is a mismatch of demand and capacity along main roads. Haripur has a proper railway station and railways is serving as important means of intercity communication. However, railways have some problems like train operation issues, i.e. late running problems, lack of service, obsolete maintenance equipment, and so on. Therefore, railways have only a limited role in short- to medium-distance urban travel. Normal urban railway passengers such as workers and students do not frequently use railway for commuting.

The intersections in Haripur are without any proper traffic control devices or signals which results traffic flow congestion and accidents. It is required to regulate the traffic movements at intersections by deploying geometric improvements and proper traffic signaling system with proper phasing and timing at critical intersections. Geometric improvements at U-turns and segregation of traffic directions at intersections are also required. Below is the list of key solutions to congestion problems at intersections.

- Geometric remodelling of critical intersections along with provision of dedicated left turn lanes.
- Removal of Illegal parking of public transport and private vehicles near intersections.

- Installation of proper advanced traffic signals at the intersections.
- Provision of proper pedestrian facilities for crossing of pedestrian at signalized and unsignalized intersections
- Provision of proper traffic signage, safety devices, lane marking and road furniture

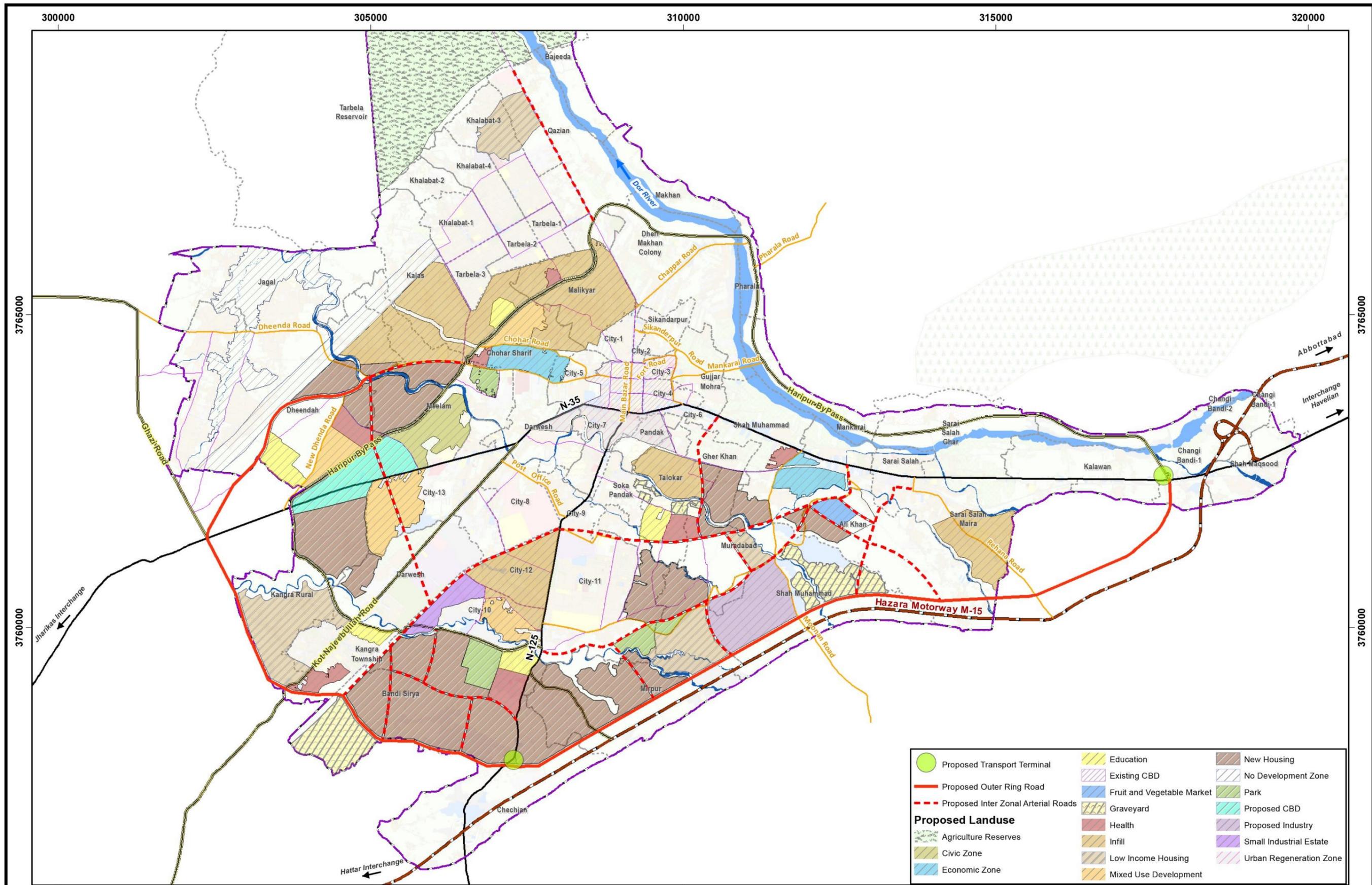
Moreover, Adaptive traffic signals should be installed on selective intersections where traffic congestion and high delay is observed in peak hours. Adaptive traffic signals can automatically adjust signal timings in real-time based on traffic flow throughout the day. They can also respond to changes in traffic patterns or emergencies more quickly than fixed time signals or manual traffic control. Adaptive traffic signals offer more flexibility and responsiveness than fixed time signals or manual traffic control, resulting in improved traffic flow, reduced congestion, and enhanced safety.

Additionally, establishment of integrated security surveillance and traffic monitoring system similar to those in place in Lahore and Islamabad is recommended for Haripur city. This system can smartly handle intelligent traffic management on the basis of real-time data by controlling traffic signals. These systems are also very effective for emergency response.

The development of new zones in Haripur city requires careful planning and consideration of the city's future transportation needs. As a result, the master plan for Haripur proposes the construction of new arterial roads to support these new zones. These roads will provide essential transportation links between different parts of the city and enable easier access to the new areas. Overall, the inclusion of new arterial roads in the master plan for Haripur demonstrates a commitment to sustainable urban development and a focus on providing efficient and effective transportation infrastructure to support the city's growth. These roads alignment pertains to planning phase, which may vary on account of detail design. The proposed Outer Ring Road and proposed Inter-zonal Arterial Roads are originating from the existing roads and these become major connecting corridors for Haripur City through widening and beautification. These would have dual carriageways with green medians in the center, footpaths, parking and urban forestations on both sides. However, it is very important to control upfront development along the major roads, thus upto 100 feet plantation of indigenous trees is suggested on both sides of major roads. Refer Map 15 Haripur Proposed Transportation Land Use.

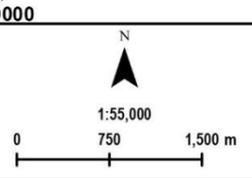
The following guidelines are for Transport zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> • Parking Areas • Right of Ways of Designated Roads • Green Belts • Walkways • Traffic Management Devices 	<ul style="list-style-type: none"> • Street Furniture • Accommodation for drivers and staff • Service Area, Support Offices, washrooms shops etc. 	<ul style="list-style-type: none"> • Other than permitted and permissible

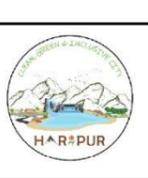


URBAN POLICY & PLANNING UNIT
 P&D DEPARTMENT, KP
 The Client
NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LIMITED
 The Consultant

MASTER PLANNING OF DISTRICT HEADQUARTER CITIES
KHYBERPAKHTUNKHWA
PACKAGE 4 (HARIPUR - ABBOTTABAD)



Legend
 Express Highway
 National Highway
 Primary Road
 Secondary Road
 Collector Road
 Railway Line
 VC/NC Boundary
 Project Boundary



PROPOSED TRANSPORTATION LANDUSE
 Map Title
 4234/NES/PG4/HARIPUR/PLUP/31
 Doc. No.

Map 15 Proposed Transportation Land use

8.8 Utilities and Services Zone

8.8.1 Water Supply System

Urbanization has significantly altered both the quantity and quality of water resources. The concentration of people in urban areas has modified the natural landscape, bringing about water problems that strongly affect their daily lives. Large cities require huge amounts of water to satisfy both domestic and industrial needs.

At present, groundwater is being used as water supply source in Haripur. The water is pumped directly from tube wells (T.W) into supply pipes. As per groundwater study report, depth of water table in Haripur city is 160 to 210 feet below ground level. The average depletion rate of aquifer is 7 feet per year and specifically in urban area, depletion rate is 11 feet per year. The aquifers underlying the project area is under stress and no further groundwater pumping scheme is recommended.

The excessive demand of Haripur in future may be fulfilled through surface water sources i.e., Tarbela Reservoir which is 5 Kilometers from the city. For Haripur city, 20 acres of land is designated for water reservoir and treatment plant near Tarbela reservoir. Location of water reservoir and treatment plant is shown in the Map 16 below.

8.8.2 Sewerage System

Partially Combined wastewater collection system exists in Haripur city which is served through mainly combination of open drains and covered drains. In this system a single/combined collection network (i.e., conduits) is used to convey both the wastewater and stormwater generated in a developed area. There is no functional wastewater treatment plant in the city. All of the wastewater generated is discharged untreated into the receiving water bodies without giving any consideration to the environment.

Sewage treatment is a type of wastewater treatment which aims to remove contaminants from sewage to produce an effluent that is suitable to discharge to the surrounding environment or an intended reuse application, thereby preventing water pollution from raw sewage discharges.

For Haripur city, 25 acres of land is designated for sewerage treatment plant (STP). This site is low in elevation level, which will be helpful to relay mainly on gravity flow. Location of wastewater treatment plant is shown in the Map below.

8.8.3 Solid waste Management system

Solid waste is being produced since the inception of human history. But with the passage of time; population grew, human activities expanded, resource utilization increased, so the waste production increased too. Solid waste management is a real challenge for developing countries due to shortage of resources and inadequate institutional setup.

Haripur city did not own a permanent dumping/ sanitary landfill site. Municipal solid waste of city is being dumped at temporary dumping site at Doyan Khuski. At present another site is proposed by TMA for landfill near Kot Najeeb ullah, which is outside the city area. Total land

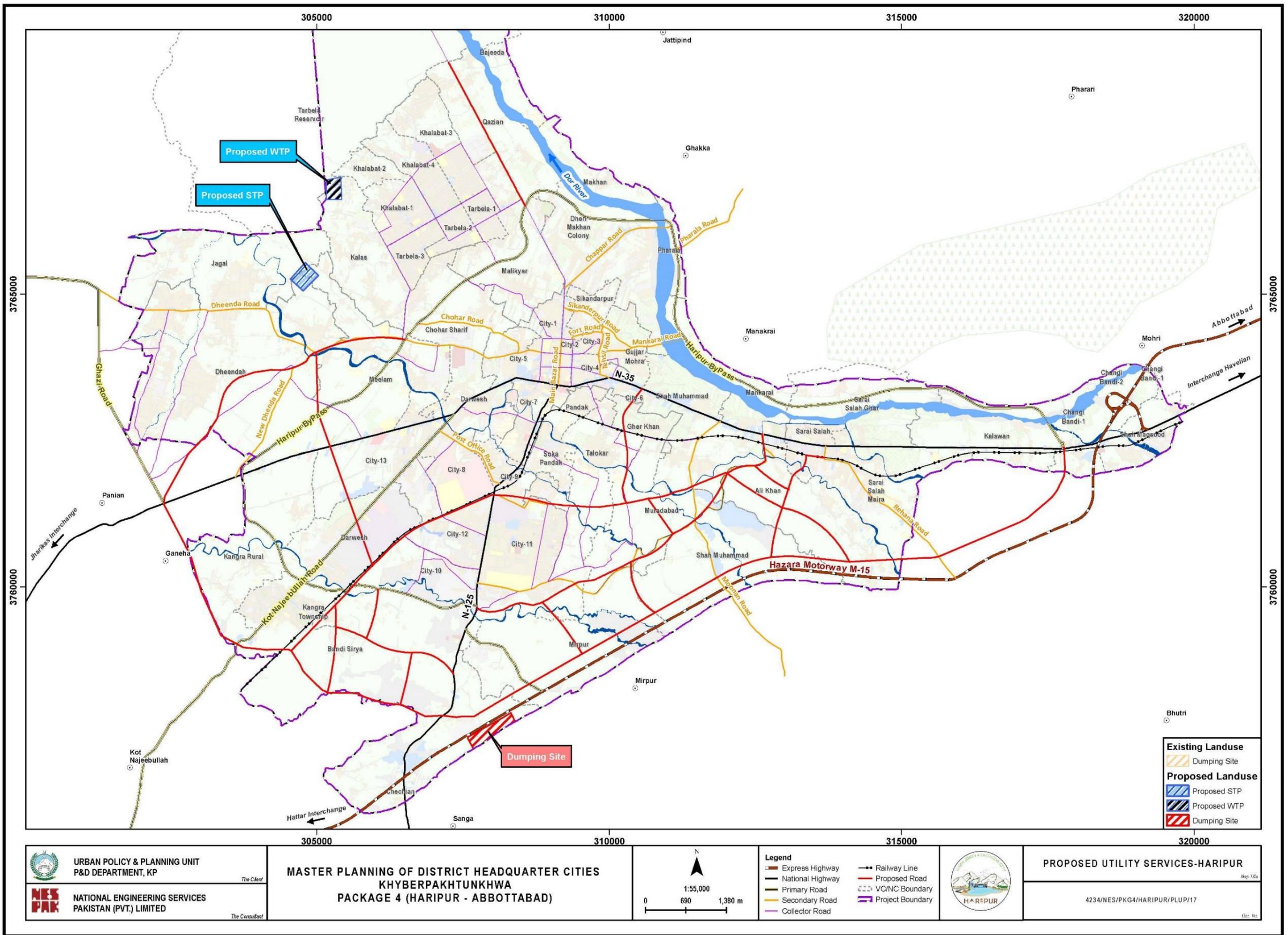


requirement for sanitary landfill site is about 40 acres. Location of existing sanitary landfill site is shown in the Map below.

The following guidelines are for utilities and services zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> • Land use for Utilities and Services like Water Supply, Filtration, Oxidation Ponds, Sewage Treatment, Landfill Sites, Grid Station etc. 	<ul style="list-style-type: none"> • Related land development and building activities • Accommodation for staff, operators and labors • Specific parking area 	<ul style="list-style-type: none"> • Other than permitted and permissible

The proposed Utility Services in Haripur City are shown in the Map-16 below.



Map 16 Proposed Utility Services

8.9 Agricultural Zone

In Reference to the Task B summary of the agricultural sector is given in the Table below:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	17,728
2.	Existing area (in %)	55.12%
3.	Proposed area (in acres)	9,179
4.	Proposed area (in %)	28.54

In order to limit the town development prevailing trend of agricultural production is endorsed at outskirts of city area. Considering inter and intra-regional connectivity among farm roads and rich agricultural potential areas as per existing base map, Agricultural Reserved are proposed with Agri-Centers. These will emphasize on agro production of indigenous crops and all facilities and services will be provided in Agri-Centers to boost agricultural production within city limits. In this way, not only spatial growth of the city will be confined but also essence of agriculture activities will remain close to the city. It will also create a healthy environment and result in containing the spread of infrastructure network. The existing villages or settlements in the periphery of the town will also be benefited and not removed from their place of livelihood.

The following guidelines⁵ are for agriculture zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
(i) crop; (ii) orchard; (iii) pasture land; (iv) livestock rearing such as dairy, poultry or fish farm; (v) forest; (vi) nursery or a green house; (vii) tube well; (viii) agricultural godown; (ix) residential dera or farm hut or farm house or house; (x) place of worship or prayer; (xi) place of burial or cremation; (xii) corner shop; (xiii) agro-based industry; (xiv) cottage industry; (xv) public slaughter house; (xvi) gawala colony; and (xvii) bus or truck terminal and ancillary activities	(i) agricultural machinery workshop; (ii) brick kiln; (iii) basic health unit; (iv) clinic or hospital; (v) veterinary dispensary or hospital; (vi) recreational club or resort or country club; (vii) shooting range; (viii) swimming pool; (ix) library; (x) cold storage; (xi) agricultural or livestock research institute; (xii) park, monument, playground, gymnasium or sports complex; (xiii) vegetable, fruit and grain market; (xiv) cattle market of a local government; (xv) public toilets; (xvi) public or private recreational or theme park;	• Other than permitted and permissible

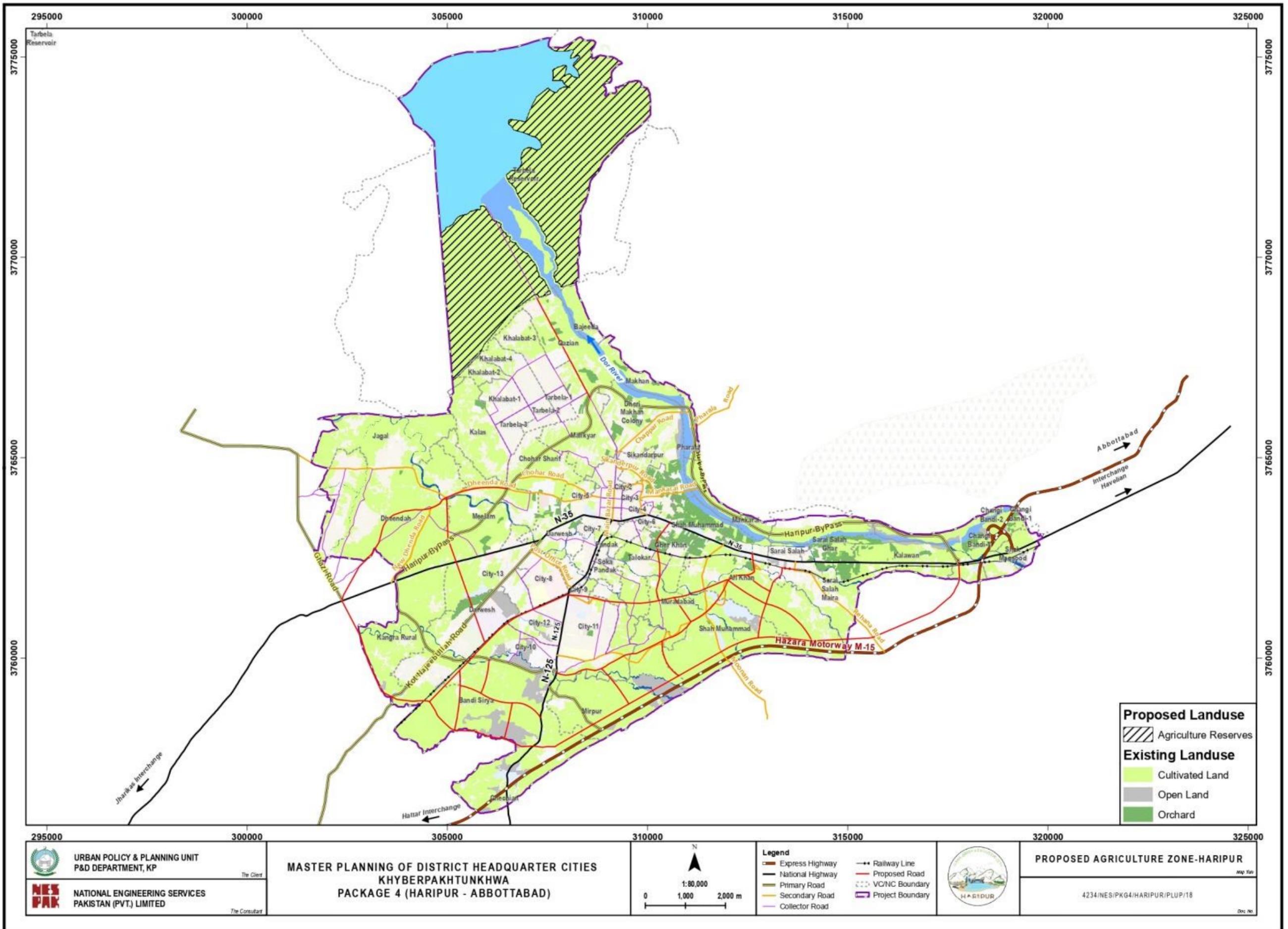
⁵ https://lgcd.punjab.gov.pk/system/files/The_PLG_LAND_USE_PLAN_RULES_2020_0.pdf

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Permitted Uses	Allied Permissible Uses	Prohibited Uses
	<p>(xvii) oil depot; (xviii) power plant; (xix) water filtration plant; (xx) waste water treatment plant; (xxi) landfill site or dumping site or waste segregation site or plant; (xxii) Incineration plant; (xxiii) birds/ wildlife sanctuary; (xxiv) botanical or zoological garden; (xxv) factory outlet or products marketing center; (xxvi) zoo; (xxvii) base trans-receiver communication tower; and station or (xxviii) petrol pump or gas station or LPG or LNG storage and filling station.</p>	

The proposed Agricultural Zone is shown in the Map-17 below:





Map 17 Proposed Agriculture Zone

8.10 Livestock Zone

The Proposed summary of the Livestock Zone is given in the Table below:

Sr. No.	Categories Names	Values
1.	Proposed area (in acres)	48.6
2.	Proposed area (in %)	0.15

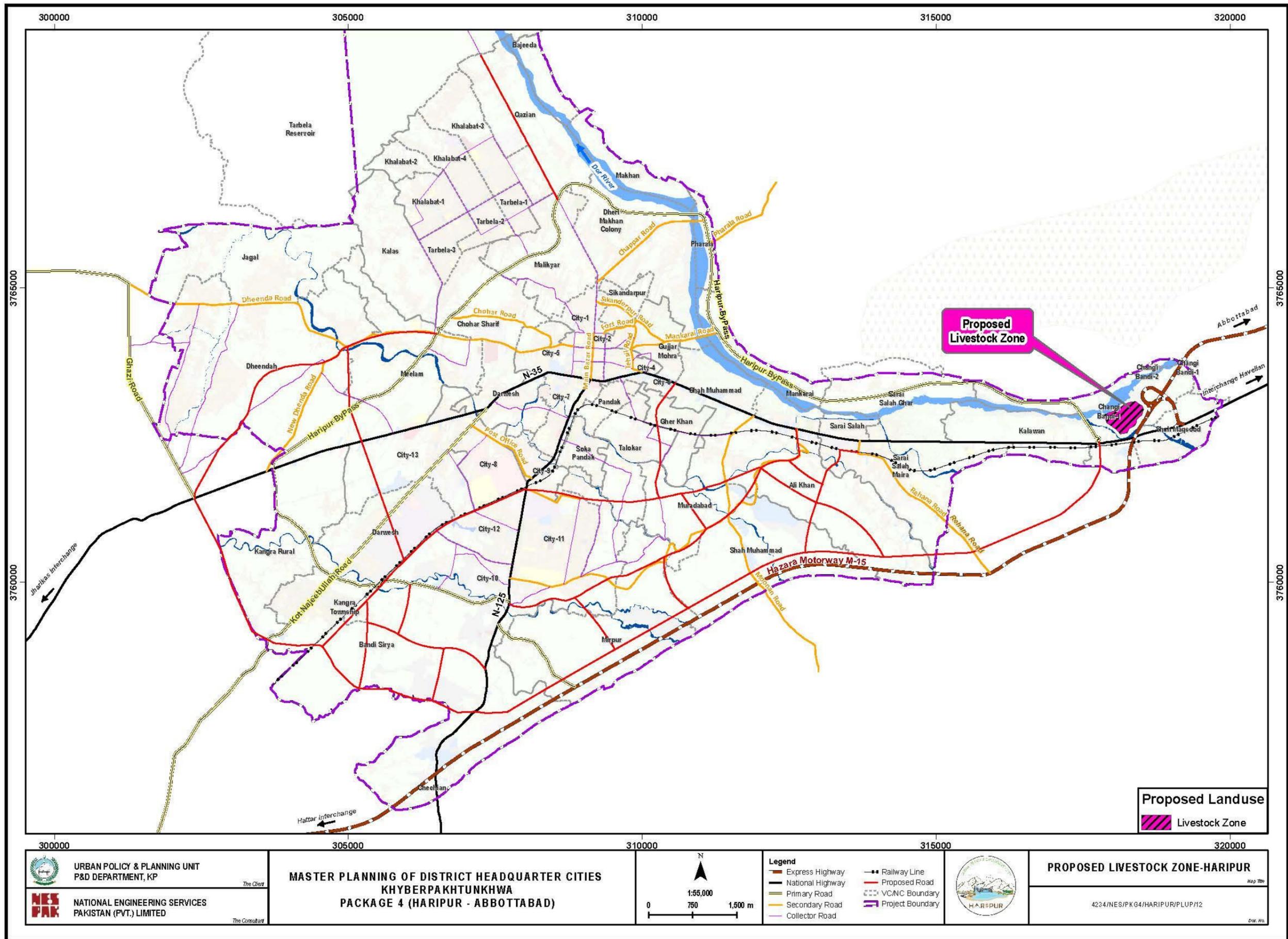
Livestock Zone is placed in south direction near Haripur Bypass Road, to promote livestock production. Main emphasis is to be given to cattle production and their required facilities and services. In addition, poultry is another requirement to fulfil through the livestock zone. Thus, the cattle area will contain mainly cattle farms that could accommodate cattle, buffaloes, sheep, goats, poultry, etc. with pasture and grazing lands around the farms. Refer attached Map 18 below Proposed Livestock Land Use.

This zone can also accommodate a new full-fledged veterinary hospital can also be proposed to cater to livestock health requirements. Dairy area will be facilitated with mandi / cattle market, artificial insemination centre, slaughter house, milk collection unit, chiller storage unit, fodder storage and purchase, bio gas plant etc.

The following guidelines are for livestock zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> • Cattle Farm • Poultry Farms • Pasture and grazing lands • Slaughter Houses • Dairy production • Veterinary services • Veterinary education and training 	<ul style="list-style-type: none"> • Low rise ancillary structures • Residences of caretakers • Related commercial activities • Fueling stations • Godowns and cold storage • Cattle Market 	<ul style="list-style-type: none"> • Other than permitted and permissible

The proposed Live Stock Zone is shown in the Map-18 below.



Map 18 Proposed Livestock Zone

8.11 Water Bodies

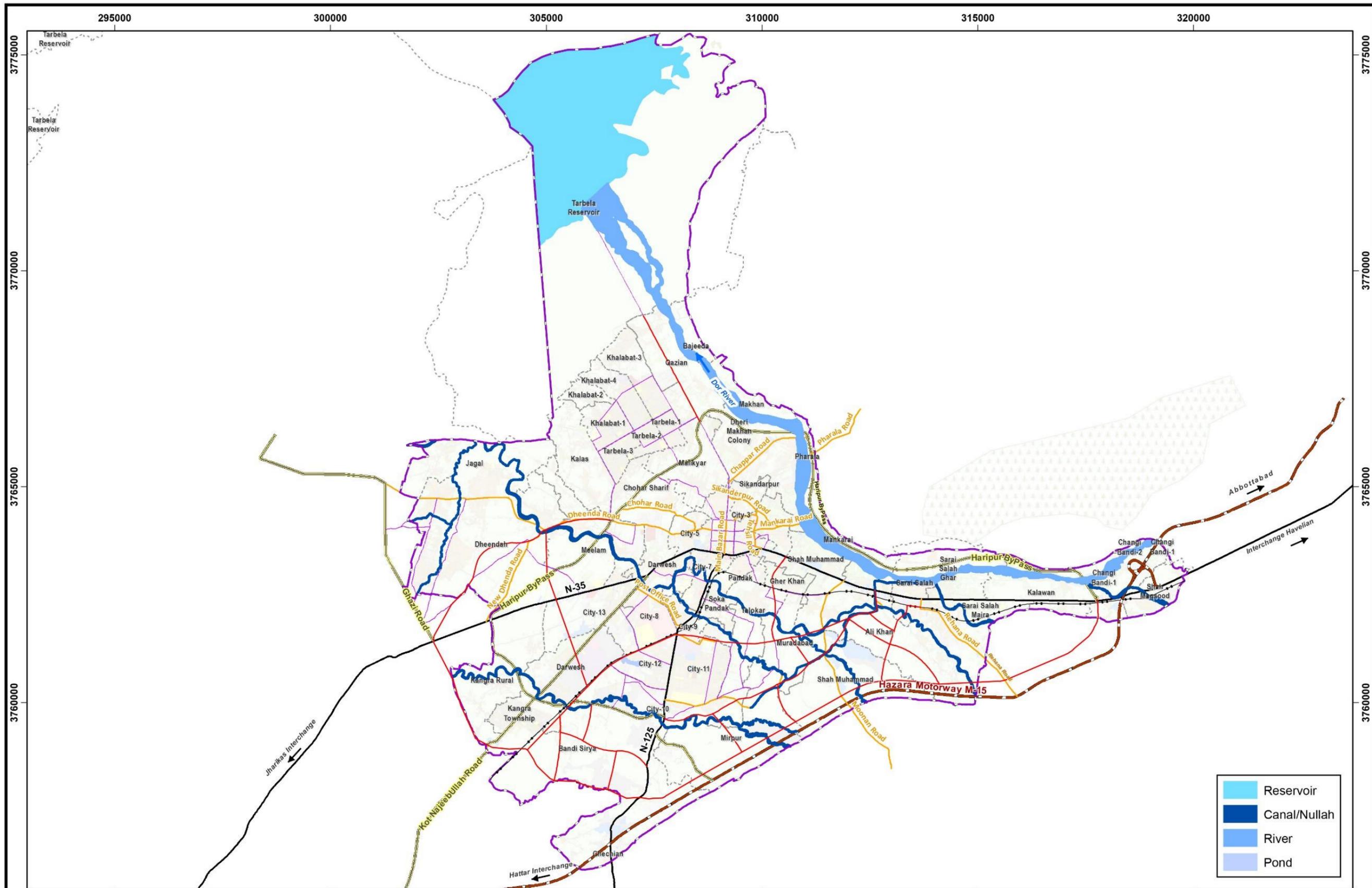
In reference to Task-B following is a summary of the water bodies:

Sr. No.	Categories Names	Values
1.	Existing area (in acres)	3786
2.	Existing area (in %)	11.8
3.	Proposed area (in acres)	3786
4.	Proposed area (in %)	11.8

The Dor River, Canals and other water courses are passing from north to south direction inside Haripur City and on north is Tarbila Lake. It is suggested to protect all Water Bodies in and around the town area and following measures are recommended:

1. Protection of right of ways of water bodies and removal of encroachments
2. Control on incompatible development in surrounding
3. Restriction on disposal of waste water
4. Restriction on dumping of solid waste
5. Native plantation on both sides of river

Refer attached Map-19 below Haripur Water Bodies.



	Reservoir
	Canal/Nullah
	River
	Pond

<p>URBAN POLICY & PLANNING UNIT P&D DEPARTMENT, KP</p> <p>NES PAK NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED</p>	<p>MASTER PLANNING OF DISTRICT HEADQUARTER CITIES KHYBERPAKHTUNKHWA PACKAGE 4 (HARIPUR - ABBOTTABAD)</p>	<p>N</p> <p>1:80,000</p> <p>0 1,000 2,000 m</p>	<p>Legend</p> <ul style="list-style-type: none"> Express Highway National Highway Primary Road Secondary Road Collector Road Railway Line Proposed Road VC/NC Boundary Project Boundary 		<p>WATER BODIES-HARIPUR</p> <p>4234/NES/PKG4/HARIPUR/PLUP/14</p>
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Map 19 Water Bodies

8.12 Urban Forestation/ Tree Plantation Zone

In reference to Task-B following is a summary of the Urban Forestation/Tree Plantation:

Sr. No.	Categories Names	Values
1.	Proposed area (in acres)	820
2.	Proposed area (in %)	2.55%

Urban forestation up to 200 feet on both sides along Haripur bypass Road is proposed to avoid rapidly increasing disorganized private development. It is advised to restrict development in this area and implement the rules and regulations to keep the town green.

In addition to the urban forestation up to 100 feet on both side of River Dor and Major Radial Roads are also proposed where land is available, to avoid direct / upfront development along roads. All major roads crossings will have initially green roundabouts with enough space for grade separated junctions in the future.

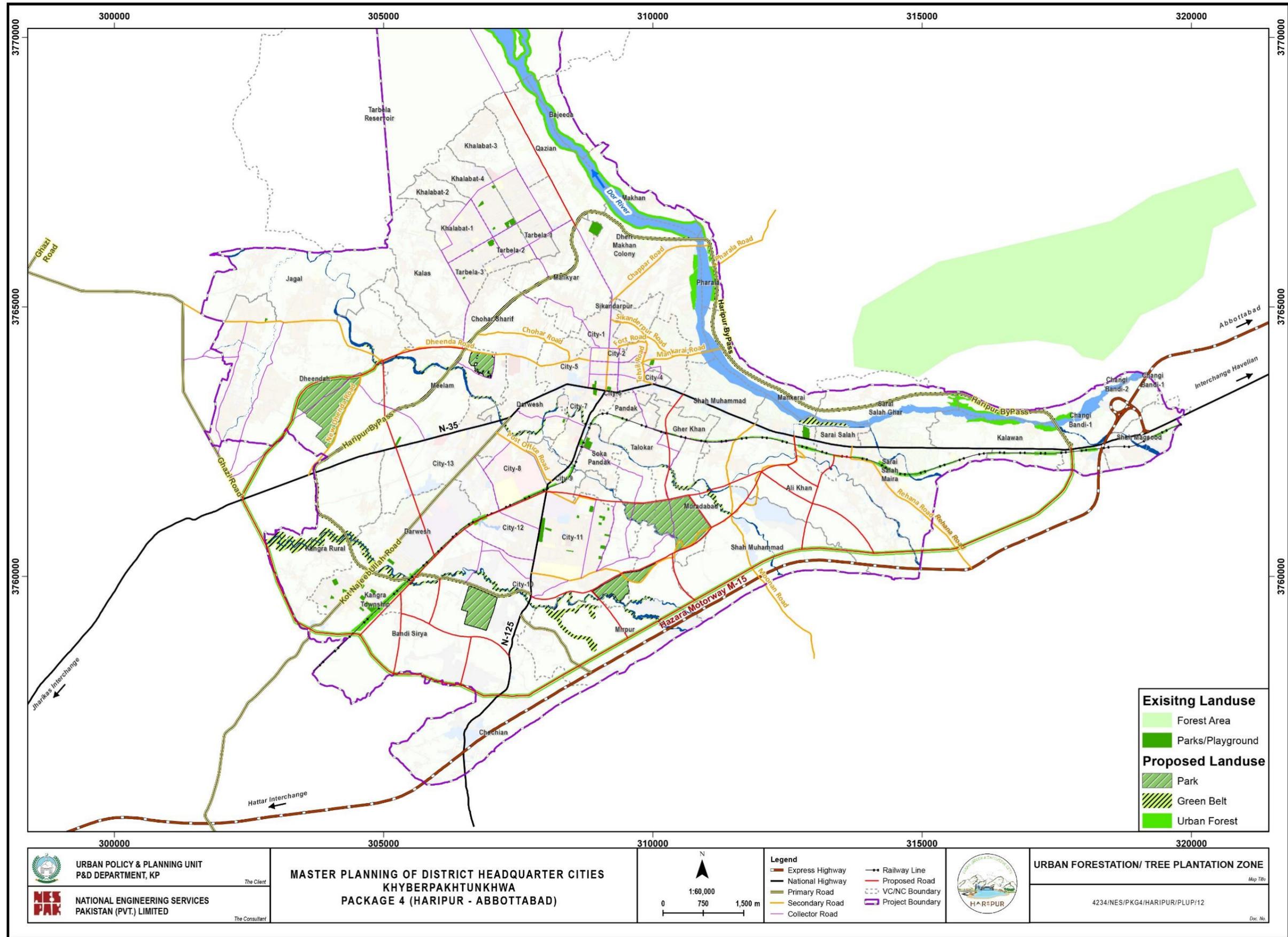
Other than linear form of urban forestation, it is also recommended to encourage plantation of indigenous trees at suitable vacant land parcels within existing city. And these suggestions to promote urban forestation are subject to land availability and process of land acquisition.

The following guidelines are for urban forestation zone development:

Permitted Uses	Allied Permissible Uses	Prohibited Uses
<ul style="list-style-type: none"> • Sustainable forestry practices for the cultivation of native trees and plants. • Nature trails and walking paths for recreational use. • Educational facilities for environmental awareness and conservation. • Bird watching areas and wildlife observation zones. • Conservation and research centers for flora and fauna. • Eco-friendly structures for environmental education. • Picnic areas with minimal impact on the natural surroundings. • Passive recreation spaces such as meditation or yoga areas. 	<ul style="list-style-type: none"> • Outdoor classrooms and workshops focused on environmental education. • Sustainable agriculture practices that complement the urban forest. • Small-scale nature-inspired art installations. • Eco-friendly cafes or refreshment stands with sustainable practices. • Visitor centers providing information on local biodiversity. 	<ul style="list-style-type: none"> • Heavy industrial activities. • Residential developments not aligned with conservation goals. • Commercial activities unrelated to environmental preservation. • Activities with potential harm to the ecosystem. • Any uses incompatible with the urban forestation nature of the zone.

The proposed Urban Forestation/ Tree Plantation is shown in the Map-20 below:





Map 20 Urban Forestation / Tree Plantation Zone

9. TOURISM POTENTIAL IN HARIPUR

Haripur, cradled in the picturesque foothills of the Himalayas, offers a hidden gem of natural beauty, historical depth, and vibrant culture. Although it may not be as famous as its neighboring tourist spots, Haripur has immense potential to attract visitors looking for adventure, cultural experiences, and a peaceful retreat.

9.1 Current Tourism Landscape

9.1.1 Strengths

Natural Beauty: Haripur is a visual treat with its stunning valleys, majestic mountains, the tranquil Harnoi River, and the serene Khanpur Lake, and Tabela Dam which are perfect for boating and fishing.

Historical Significance: This district is rich in history, featuring archaeological sites and historical landmarks like forts and tombs. There's always a chance of discovering even more historical treasures.

Cultural Heritage: Haripur's diverse population brings a colourful tapestry of local crafts, lively festivals, and delicious cuisines that are just waiting to be explored.

Adventure Activities: The area's rugged terrain is ideal for outdoor enthusiasts, offering trekking and hiking trails like the famous Pipeline Track. There's also potential for developing activities like paragliding and mountain biking.

Proximity to Popular Destinations: Located close to Abbottabad, Thandiani, and Nathiagali, Haripur is perfectly positioned as a convenient base for exploring the wider region.

9.1.2 Weaknesses

Limited Infrastructure: Haripur needs more tourist-friendly facilities, including better-maintained roads, clear signage, and diverse accommodation options, especially eco-friendly ones.

Promotional Efforts: There's a significant need for better marketing to showcase what makes Haripur special and attract more tourists.

Limited Awareness: Many travelers simply don't know about Haripur's potential as a tourist destination.

9.2 Strategies for Development

Infrastructure Development: Focus on upgrading current tourist spots, developing well-maintained hiking trails, and investing in a variety of eco-friendly lodging options.

Cultural and Heritage Tourism: Preserve and promote Haripur's historical sites and buildings, support local crafts and festivals, and consider organizing cultural tours to enhance the visitor experience.

Adventure Tourism: Explore the feasibility of introducing paragliding, mountain biking, and other adventure sports, while ensuring safety standards are met.



Marketing and Promotion: Create a dedicated website and social media channels to highlight Haripur's natural and cultural attractions. Work with travel agencies to promote the district, and include Haripur in regional tourism campaigns.

Map 21 offers a detailed overview of Haripur's existing tourism sites, showcasing key attractions such as natural landmarks, historical sites, and recreational areas. This map is a crucial tool for understanding the spatial distribution of these assets and their integration into Haripur's landscape. It aids in identifying areas with potential for tourism development and planning, supporting efforts to enhance Haripur's appeal as a travel destination.





Map 21 Existing Tourism Sites in Haripur

10. CULTURAL HERITAGE AND ARCHAEOLOGICAL SITES

Haripur's rich cultural heritage and array of archaeological sites provide invaluable insights into the past. From ancient mounds and historical structures to remnants of forts and temples, these sites offer a glimpse into the lives and times of previous civilizations. The following table provides a comprehensive list of these significant locations, detailing their names, access points, probable dates, and brief descriptions. This inventory underscores the importance of preserving these treasures for future generations and enhancing our understanding of the region's historical and cultural legacy.

Table 10-1 Comprehensive List of Heritage and Archeological Sites in Haripur

Sr. No.	Name of Explored Site	Access/Location	Probable Date	Brief Description
1	Pinda Mohalla	Tarin Abad, Haripur, Hasanabdal road	Kushan Period	The site can be accessed from the GT road through Mohalla Tarin Abad, about 3 km south of the main road in Pinda village and close to Motian village. It is an agricultural field with potsherds scattered on the surface.
2	Garh Site	East of Gas village near Pir Mankarai	Kushan Period	This large site is situated on a small hill and can be accessed by crossing a stream. Only potsherds are visible on the surface.
3	Chui Site	West of Rich Dani village	5th – 7th century A.D.	Located on a small hill, this site is accessible from Sarai Saleh at a distance of 16km. Ruined ancient walls and scattered potsherds are present.
4	Rich Dani Site	Center of Rich Dani village	3rd – 6th century A.D.	Now converted into agricultural fields, this site has no visible structures but potsherds are scattered on the surface.
5	Bagra Site 1	Bagra village	3rd – 7th century A.D.	Located 3km south of Shah Maqsood, this site is now agricultural fields with only potsherds visible.
6	Bagra Site II	South of Shorag road	3rd – 7th century A.D.	A well-preserved 12m high mound site with scattered stones and potsherds.
7	Paharo Site	Haripur-HasanAbdal road	Sikh Period	Located on the main road near Paharo village, this site is an archaeological mound now occupied by modern graves. Only potsherds are visible on the surface.
8	Magri Site I	Southwest of Magri village	Kushan Period	A small site with potsherds, likely abandoned due to erosion.
9	Magri Site II	Center of Magri village	Kushan Period	A large site on a high hill, now agricultural fields with a central modern house. Thick textured potsherds of the Kushan period were found here.
10	Shah Maqsood I	Right side of Haripur-Abbottabad road	3rd – 7th century A.D.	A large mound divided by the railway line, with modern houses and agricultural fields. It has yielded potsherds from the 3rd to 7th century A.D.
11	Shah Maqsood Site II	South of Shah Maqsood Site I	3rd – 7th century A.D.	An artificial mound with a modern house and agricultural fields. Thick textured

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				potsherds dated from the 3rd to 7th century A.D. have been found here.
12	Bhera Mound	1 km east of Shah Maqsood site	3rd – 7th century A.D.	A large tapering mound divided by the railway line, with large river stones and potsherds from the 3rd to 7th century A.D.
13	Bal Dher Site I	1km east of Bal Dher railway station	3rd – 5th century A.D.	A large mound with scattered large blackish stones and potsherds dated from the 3rd to 7th century A.D.
14	Bal Dher Site II	West of Bal Dher Site I	3rd – 5th century A.D.	Located on a natural mound, this site has visible foundation structures and potsherds. It may date from the 3rd to 5th century A.D.
15	Didan Bridge	South of Panian bazaar	British Period	Built on the GT road, this bridge consists of dressed stones and a terraced parapet.
16	Railway Station (Haripur)	Southwest of Haripur bazar	British Period	Made of bricks, this station has waiting rooms, offices, and an open porch.
17	Kholian Railway Bridge	Below railway line at Kholian	British Period	A long brick bridge with semicircular arched walls.
18	Shah Maqsood Railway Bridge	Eastern side of Shah Maqsood village	British Period	Constructed with bricks and stones, this bridge has steel beams supporting the railway line. An inscription indicates construction in 1911.
19	Bal Dher Railway Station	Right side of Haripur to Abbottabad road	British Period	A brick building with two rooms and an open porch. It features semicircular arches and a flat brick ceiling.
20	Bal Dher Railway Bridge	West of Bal Dher railway station	British Period	A brick bridge with two walls and a central space. Steel girders support wooden beams.
21	Hindu Temple A	Rehmania road	British Period	Built in 1939, this square temple features a pillared veranda and a high dome.
22	Hindu Temple B (Siva Temple)	South of Hindu Temple A	British Period	An octagonal shaped temple made of black stone blocks. It has a partially fallen Shikara and a socket hole for a lingam.
23	Pir Manki Fortress	East of Mankhrai village	Kushan Period	One of the largest settlement forts, it consists of two parts: the Fortress and the Lower City.
24	Sheran Wali Gate Temple	Sheran Wali gate	Sikh Period	This octagonal building with a ribbed dome is now a shop. Seated lion figures adorn the corners.
25	Lakhmi Chand High School (New High School)	Main Haripur bazaar	British Period	Built in 1913, this double-story brick building features multiple arches, a pillared veranda, and a wagon vault ceiling.
26	Banda Sher Khan Graveyard	1km east of Rehana village		
27	Basti Sher Khan Tombs	Haripur-Abbottabad Road, 1 km west of Bal Dher	18th century A.D.	Basti Sher Khan is a village with "jackal type" tombstones adorned with Persian inscriptions. Made of blackish sandstone and carved with floral and geometrical designs, each tombstone is 73cm high and 9cm long.

	Bhamala Stupa	Haripur	2nd century CE	Bhamala Stupa is a ruined Buddhist stupa and National Heritage Site near Haripur. Located on the banks of the Haro River, a tributary of the Khanpur Dam, it is a tourist destination. The Bhamala Buddhist Complex includes this stupa, known for its 1,700-year-old statue depicting the Buddha attaining enlightenment, considered the oldest such statue in the world.
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10.1 Recommendations for Cultural Heritage and Archaeological Sites in Haripur

To preserve Haripur's rich cultural and archaeological heritage, we recommend the following:

Conservation and Restoration:

Documentation: Ensure thorough documentation of all heritage sites, including detailed records of structures, artifacts, and historical significance.

Conservation Plans: Develop and implement comprehensive conservation plans tailored to each site's specific needs, focusing on preserving architectural integrity and preventing further deterioration.

Restoration Projects: Undertake careful restoration efforts using authentic materials and techniques to maintain historical authenticity while ensuring structural stability.

Site Management:

Visitor Management: Establish visitor guidelines and regulations to minimize impact on fragile sites while allowing sustainable tourism.

Monitoring and Maintenance: Regularly monitor sites for any signs of deterioration or damage, and promptly undertake necessary maintenance activities.

Security Measures: Implement security measures to protect sites from vandalism, theft, and unauthorized access.

Promotion and Awareness:

Educational Programs: Develop educational programs targeting locals, tourists, and school children to raise awareness about the cultural and historical significance of the sites.

Publications and Exhibitions: Publish books, brochures, and create exhibitions showcasing the heritage of Haripur to attract interest and educate the public.

Digital Platforms: Utilize digital platforms such as websites and mobile apps to provide virtual tours and interactive experiences of the sites.

Community Involvement:



Local Community Engagement: Involve local communities in the preservation efforts by promoting cultural pride and offering economic incentives through tourism.

Capacity Building: Provide training and resources to local communities for sustainable tourism practices and site management skills.

Partnerships: Foster partnerships with local businesses, NGOs, and governmental agencies to support ongoing preservation and promotion initiatives.

Legal and Regulatory Framework:

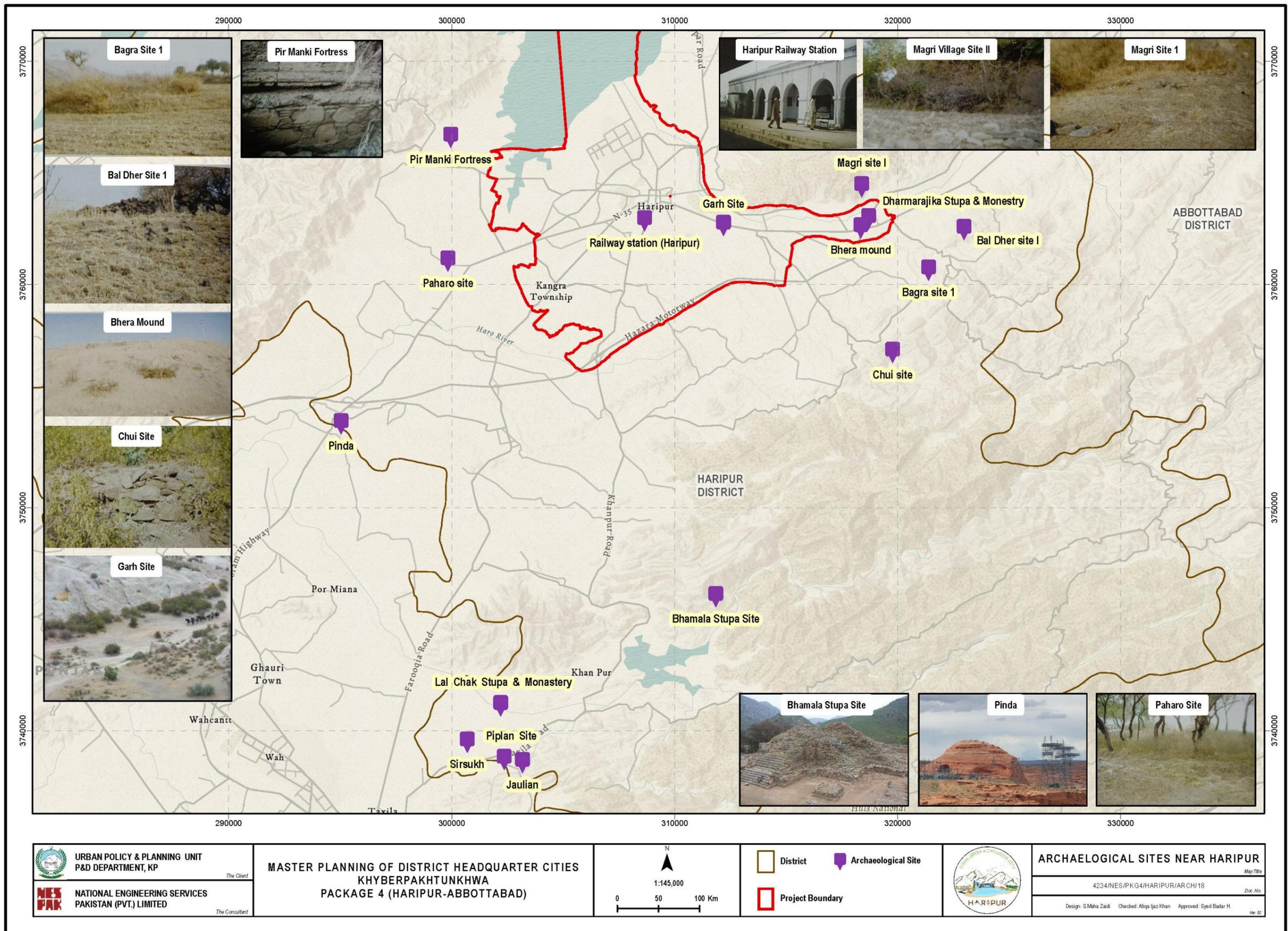
Heritage Legislation: Advocate for and enforce heritage protection laws and regulations to safeguard sites from encroachment and unauthorized development.

Zoning and Planning: Integrate heritage considerations into urban planning and zoning regulations to prevent incompatible development near sensitive sites.

Research and Documentation:

Archaeological Research: Encourage ongoing archaeological research to uncover more about the history and significance of Haripur's heritage sites.

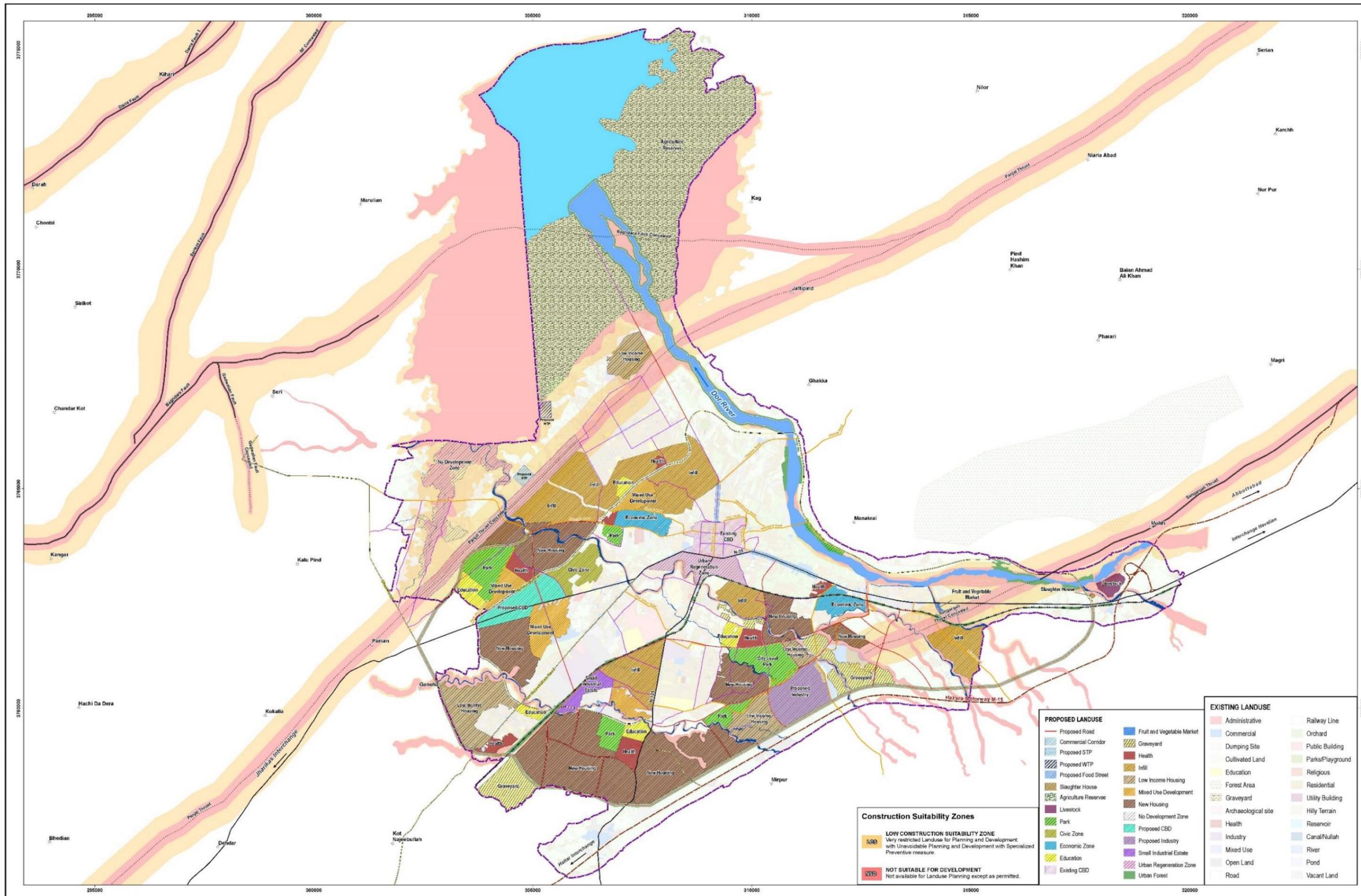
Archival Documentation: Establish archives for storing and preserving historical documents, photographs, and artifacts related to the sites.



Map 22 Archaeological Sites, Haripur

11. GUIDELINES FOR SAFER LAND USE PLANNING AND SUSTAINABLE DEVELOPMENT OF HARIPUR CITY

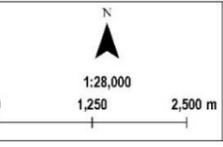
- Haripur City is located in Seismic Zone-2B, as per Building Code of Pakistan, Seismic Provision-2007. The major threat to the urban population living in the Haripur City is from earthquakes that may create a havoc. For practical purpose, Highly Hazardous Zone (HHZ-Comprising of a geologic fault with 100-300 meters buffer zone) should not be used for any new development involving buildings with human occupancy and critical infrastructure in compliance to Sub-clause 3.2, BCP-SP-2007.
- Site specific Geotechnical investigation should be considered mandatory for any new important construction.
- In general, energy efficient, environment friendly and innovative construction technologies should be promoted owing to good seismic competence, cost effectiveness and easy erectibility, for all types of construction and in all areas of High, Medium and Low Seismic Hazard Zones.
- However, more importantly, innovative construction technologies need to be promoted in High Seismic Hazard Zones (HSZ)
- Modified Traditional Construction Technologies need to be accorded due consideration in perspective of their good seismic performance and valued advantages of cost effectiveness, energy conservation procurement of construction material and local availability of skilled workforce.
- Construction of multi-storey (Ground story + one or more) buildings / communication towers and any other high rising structures should be strictly avoided in localities identified under Highly Hazardous Seismic Zone (HHZ) for geologic faults with 100/150m buffer or 200/300 m corridor with the geologic faults at the centre of the corridor. Any buildings meant for emergency response services and all types of community buildings involving large number of human occupancies should not be constructed in these localities.
- Conventional / prevailing non-engineered construction practices using stone and / or concrete blocks / brick masonry with cement / sand or mud mortars with or without RCC slab roofs should be abandoned and replaced with Masonry Infilled Concrete Framed-MICF structure designed by a competent structural engineer, in compliance to the BCP recommended Seismic Design Parameters.
- Other potential natural phenomenon that may create a state of emergency is hill torrent/flash floods accompanied by flood hazard. Important localities include low lying areas along the banks of Dor River and the area under influence of Tarbela reservoir and the areas on the Eastern side of the city, therefore any buildings meant for public services and all types of residential, commercial and community buildings should not be constructed in these localities



URBAN POLICY & PLANNING UNIT
P&D DEPARTMENT, KP
The Client

NES
PAK NATIONAL ENGINEERING SERVICES
PAKISTAN (PVT.) LIMITED
The Consultant

MASTER PLANNING OF DISTRICT HEADQUARTER CITIES
KHYBERPAKHTUNKHWA
PACKAGE 4 (HARIPUR - ABBOTTABAD)



Legend

- Express Highway
- National Highway
- Primary Road
- Secondary Road
- Collector Road
- Railway Line
- Project Boundary



PROPOSED MASTER PLAN - HARIPUR
Map Title

4234/NES/PKG4/HARIPUR/PLUP/06
Doc. No.

Map 23 Proposed Master Plan of Haripur with Construction Suitability Zones

**COMPLIANCE TO TECHNICAL COMMITTEE COMMENTS ON HARIPUR CITY
DRAFT MASTER PLAN**

S. No	Points	COMMENTS	COMPLIANCE
1	Report format and sectoral maps	The report must include detailed information on the district, tehsil, project area, and NC/VC, along with comprehensive demographic data. Additionally, the report will feature essential maps that support the proposal, such as existing and proposed residential, commercial, industrial, and economic areas, slum and informal settlement, planned and unplanned area, public sector facilities, security services, health and educational institutions, recreational areas, tourism and archeological sites, parks and playground, graveyards, urban forests, water bodies, livestock and agriculture areas, utilities and services, and civic services. Moreover, the sectoral maps for each land use shall be prepared and included in reports which shall become part of action plans later.	The revised report includes detailed information on the district, tehsil, project area, and NC/VC, along with comprehensive demographic data, such as the projected population refer to Section 1, Tables 1-1, 1-2, 1-3 Map 1 and Map 2 For essential maps regarding stated zones, refer Map 9, Map 10, Map 11, Map 12, Map 13 and Map 14.
2	Environment Section	Representative of EPA shared that further detail of the proposed industrial zone shall be required so as to identify that which type of industrial activity shall be allowed and which should be restricted/prohibited. The consultant responded that the detail of the industrial activities within the proposed industrial zone along with its regulations shall be provided in its separate action plan. Moreover, the findings of the environment surveys (noise, air, and water), along with remedial measures/ strategies for catering the issues (if any) shall be included in reports.	Refer to Section 7.4 of revised report and Figure 7-6.



**COMPLIANCE TO TECHNICAL COMMITTEE COMMENTS ON HARIPUR CITY
DRAFT MASTER PLAN**

3	Other Ongoing and Proposed Projects	Representative of Abbottabad district administration shared that there is a JICA proposal in WATSAN which may also be considered in the master plan exercise. The consultant agreed and requested for the detail of the said project. The chair added that all the current and on-going projects shall be incorporated in the master plan, for which the concerned line departments shall be consulted accordingly.	This comment is related to Abbottabad Master Plan
4	District Land Use Plan Abbottabad and Master Plan of Abbottabad City.	One of the participants suggested that the proposals of the master plan and land use plan Abbottabad shall not be in conflict with each other. Therefore, comparative analysis shall be done to avoid conflict in proposals of the both plans. The consultant replied that the District Land Use Plan Abbottabad is thoroughly reviewed and comparatively analysis is done. The proposals are in line with the land use plan. Furthermore, the proposals of the master plan are more rational as they are finalized considering the seismic studies and fault lines particularly in Abbottabad. Similarly, the proposals are based on a latest authentic data particularly, the housing data (public and private housing schemes) where the concerned deputy commissioners and local TMAs were requested to share the updated data. The data so received was readily incorporated in the master plans. Moreover, the proposed satellite towns in DLUP Abbottabad are also considered in the master plan.	Not applicable to Haripur Master Plan



**COMPLIANCE TO TECHNICAL COMMITTEE COMMENTS ON HARIPUR CITY
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5	The WATSAN and Solid Waste Management Section	<p>The WATSAN and solid waste management section shall be revisited and the detail of existing/current waste collection/disposal/ management practices, availability/ adequacy of landfill/dumping sites, categorization of different types of wastes including domestic, hospital and industrial waste, WWTP sites (existing and proposed), issues in existing system and proposals for catering the current need and requirements till the plan period shall be included. Similarly, detail about drinking water sources, per capita water demand, available resources, backlog, and the new proposals considering the current need and requirements of the plan period shall also be the part of reports. The serviceability maps (maps showing the served, poorly served and un-served areas in terms of these facilities and amenities) shall also be prepared and included in reports. The consultant agreed with the recommendation and ensured that the section shall be updated accordingly.</p>	<p>Refer to Section 8.8 titled "Utilities and Services Zone" for detailed information on the following sub-sections:</p> <p>8.8.1 Water Supply System 8.8.2 Water Demand 8.8.3 Solid Waste Management System</p> <p>Additionally, refer Map 16 for the Proposed Utility Services Land use.</p>
6	Tourism Section	<p>One of the participants shared that special emphasis must be given to tourism section as both of the cities are rich in tourism attraction and potential sites for recreation. In this regard, all the existing tourism spots, archaeological and historical sites/monuments, detailed inventory of hotels/ motels/ restaurants/ guest houses etc. shall be explored and documented. The consultant may identify new potential tourism spots and incorporate in the master plans considering the transportation system enhancement and ensuring for accessibility and mobility.</p>	<p>Refer Section 9 and Map 21 for <i>Tourism Sites in Haripur</i> and section 10 and Map 22 for <i>Archaeological Sites of Haripur</i>..</p>



**COMPLIANCE TO TECHNICAL COMMITTEE COMMENTS ON HARIPUR CITY
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7	Transportation Section	<p>A representative from the TMA emphasized that the consultant must maintain close coordination with the district administration and consider all completed, ongoing, and proposed transportation projects in their plan. Additionally, a detailed road inventory with verified Right of Ways (ROWs) from relevant departments (NHA, PKHA, C&W, Transport and Mass Transit Department, etc.), issues in the existing transportation system, rationalized road widening proposals, new road proposals considering existing and proposed land uses, and measures to promote public transportation modes should be included in the reports. The consultant shall also make inventory and classify all the roads, determine their existing ROWs, identify congested intersections, map all on/off-road and dedicated parking areas, pinpoint hotspots during peak hours, and document various encroached points in the city. Furthermore, land use should be integrated with the designed/planned road network to reduce encroachments on road capacity and prevent the deterioration of the transportation system. He also mentioned that all current and future transportation proposals from each department should be analyzed and incorporated into the master plan. Current parking practices and issues in cities, particularly in CBDs, along with feasible parking proposals, should also be part of the reports.</p>	<p>Refer to the following sections and figures for detailed information on major transportation and existing road improvements:</p> <p>Section 7.1: Major Transportation Figure 7-Figure 7-2, Figure 7-3,</p> <p>Additionally, refer to Map 15: Proposed Transportation Land Use for an overview of the existing & proposed transportation land use.</p>
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**COMPLIANCE TO TECHNICAL COMMITTEE COMMENTS ON HARIPUR CITY
DRAFT MASTER PLAN**

8	Education and health sector	As for the education and health sector, the consultant has to map all existing health and education and proposed facilities both public and private. the proposals must be based on prevailing standards and health and education policies of the government. The standards for locating the educational institutes must be followed. Considering the current and projected need the upgradation of existing institutes or proposals of new institutes shall be given accordingly. In this regard, the serviceability maps (maps showing the served, poorly served and un-served areas in terms of these facilities and amenities) shall also be prepared.	Refer Map 12: <i>Existing and Proposed Civic Zone</i> , which includes health and educational institutes.
9	Balanced distribution of recreational sites facilities	The consultant shall ensure that all the neighborhoods are equipped with the parks and recreational sites in addition to city level facilities. In this regard, parks (though smaller in size) shall be provided per NCVC level with special consideration for female and kids.	Refer Map 13: <i>Existing and Proposed Recreational Zone</i> , which outlines the current recreational facilities. Additionally, recreational facilities at the NC/VC level, including parks and other amenities, will be provided as part of infill development and new housing.
10	Infill Land Parcel	The consultant must define and rationalize the size of infill land parcels and shall be made in line with the new housing regulations of KP. Appropriate use of the infill land parcels must be identified.	Refer to the section 5.2 and map-7 for detailed information on the infill land parcels
11	Compliance of Land Use and Building Control Act, 2021	All the land use categories must be made in line with the Land Use and Building Control Act, 2021. The regulations for every land use/zone must be drafted in detail. The draft master plans reports must contain maps of both existing and newly proposed situation scenario along with statistical details.	Refer Table 1-5 for the " Haripur Land Use Classification" which details the categories and designated purposes of land within the city and refer Table 8-1 describes proposed land uses categories.
12	land suitability analysis	In MCA or land suitability analysis, the constraint map must be prepared first, in which all the constraints (for	Refer to the following sections, tables, and map for detailed information on the



**COMPLIANCE TO TECHNICAL COMMITTEE COMMENTS ON HARIPUR CITY
 DRAFT MASTER PLAN**

		<p>instance, water bodies, agriculture land, high slopy terrain, build up area etc.) get eliminated. The area left for development shall be utilized in different proposals. Similarly land suitability maps (showing highly, moderately and least suitable land parcels) for each land use (like residential, commercial, industrial etc.) shall be prepared separately. The proposals shall be adjusted in highly suitable land parcels first, followed by moderately suitable land on need basis. The rationalized selection of a particular land parcel out of all the suitable land parcels gives the different scenarios.</p>	<p>multi-criteria analysis used to identify suitable land parcels in Haripur:</p> <p>2.1 Qualitative Multi-Criteria Analysis</p> <p>Table 2-1: Land Use Criteria Categories with Description (Qualitative) This table outlines the qualitative criteria used to evaluate and categorize land parcels, providing descriptions for each category to assess their suitability for different types of land use.</p> <p>2.2 Quantitative Multi-Criteria Analysis</p> <p>Table 2-2: Multi-Criteria Analysis (Quantitative) This table presents the quantitative criteria and their respective weights used in the multi-criteria analysis, offering a numerical assessment of land parcels based on various factors influencing land use suitability.</p> <p>Map 6: Land Suitability Analysis</p> <p>This map visually represents the results of the land suitability analysis, showing (highly, moderately and least suitable land parcels) for various types of development based on the multi-criteria evaluation.</p>
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**COMPLIANCE TO COMMENTS ON GROUND TRUTHING EXERCISE FOR HARIPUR CITY
DRAFT MASTER PLAN (2042).**

S. No	Points	COMMENTS	COMPLIANCE
1	Proposed Park	It was emphasized that the previously proposed park along the Dor River should be incorporated into the master plan. The coordinates are: 34°0'2.16" N, 72°57'24.00"E and 33°59'43.93"N, 72° 57' 52.86" E.	Incorporated in Map 13 of the revised report.
2	Livestock, Slaughter house and fruits and vegetable market sites	location for the proposed livestock Zone, fruit and vegetable market and slaughterhouse was identified and marked in the kmz file. The coordinates of the suggested slaughter house location are: 33°59'16.04"N, 73° 1'37.60" E and livestock zone: 33°59'22.02"N, 73° 1'54.42"E. while coordinates of the recommended fruits and vegetable market site are: 33°59'3.77"N, 72°59'22.29"E.	For Livestock, fruit and vegetable market and slaughter house the designated zones has been marked, for reference please see map 18 of the revised report.
3	Commercial Corridor	The participants suggested alignment of commercial corridor from Lora Chowk to Sherwan (Haripur Bypass). The team agreed and shared the length of commercial corridor as mentioned shall be considered as per the requirements of the city till the plan period (2042)	Agreed and incorporated the suggestion.
4	Parks and Food Street	Locations already proposed by TMA were reviewed and marked in KMZ file. The coordinates of the already proposed food street are: 34° 0'3.78"N, 72°56'28.40"E and proposed park: 34° 0'6.67"N, 72° 56' "E. The team assured that the proposals shall be incorporated in the master plan.	The park and food street proposed by TMA has been incorporated in the proposed master plan, please refer map 8 and map 13.
5	Mapping Request	The participants requested a composite map with all NCs (Neighborhood Councils) and VCs (Village Councils) onto the masterplan proposals facilitate accurate visualization. The consultant assured that the requested map would be included in the revised report and will be shared accordingly with all relevant stakeholders.	Included in Map 2; details visible in proposal maps.
6	Private Housing Schemes	The district architect noted that most of the Private Housing schemes identified earlier, are located outside the master plan boundary with few exceptions. The District	Verified accuracy; most schemes outside boundary, per district architect's agreement.



**COMPLIANCE TO COMMENTS ON GROUND TRUTHING EXERCISE FOR HARIPUR CITY
DRAFT MASTER PLAN (2042).**

		Architect was agreed with the accuracy of the shared data.	
7	Industrial Zone Location	It was also suggested to relocate the proposed industrial zone at a safe distance to low-income housing. The consultant clarified that the proposed site is intended for small scale industries. The Hattar Industrial Estate located in close proximity is designated for large scale industries. However, no suitable alternative site was identified by ground truthing team.	As mentioned in the comments, no suitable alternative site for the industry was identified by the ground-truthing team. Therefore, the currently proposed zone for the industry will remain unchanged.
8	Meeting with PHE Department (XEN)	The master plan proposals were discussed with representative of PHED. The PHED agreed with the MP Proposals and also shared the required data for preparation of detailed action plans	PHED agreed; data provided for action plans.
9	Agriculture Department	The NESPAK team presented the proposed agricultural zone to the Director Agriculture Ext. It was suggested to make classes of agriculture land, like class-01, 02, and 03. The consultant team was of the opinion that the city's requirement till the plan period was fulfilled from the available vacant land. The rest of land is declared as Agriculture Preserve land, however, the classification of agriculture land is beyond the scope of Master Plan.	Classification deemed beyond scope; city needs met with remaining land declared as Agriculture Preserve land.
10	Irrigation Department	The team met with XEN & SE, Irrigation department and discussed the MP Proposals. The officers confirmed that no proposed zone fall within major flood-prone areas. However, as per River Protection Act, 2014, the required buffer may be provided along the Dor River.	Confirmed no zones in flood-prone areas; buffer provision ensured.
11	Highways/C&W Department (XEN)	The Team discussed the proposed Road Network and other transport related proposals of the MP with XEN, C&W. It was highlighted to include the newly proposed road in the master plan. The detail of the new and existing roads falling in jurisdiction of C&W shall be shared via email in few days.	In the meeting, it was noted that the proposed road is located away from the project boundary.

