



The Urban Unit

Urban Sector Planning & Management Services Unit (Pvt.) Ltd.



Regional Development Plan of Rawalpindi Division

Urban Planning, Design & Policy Development



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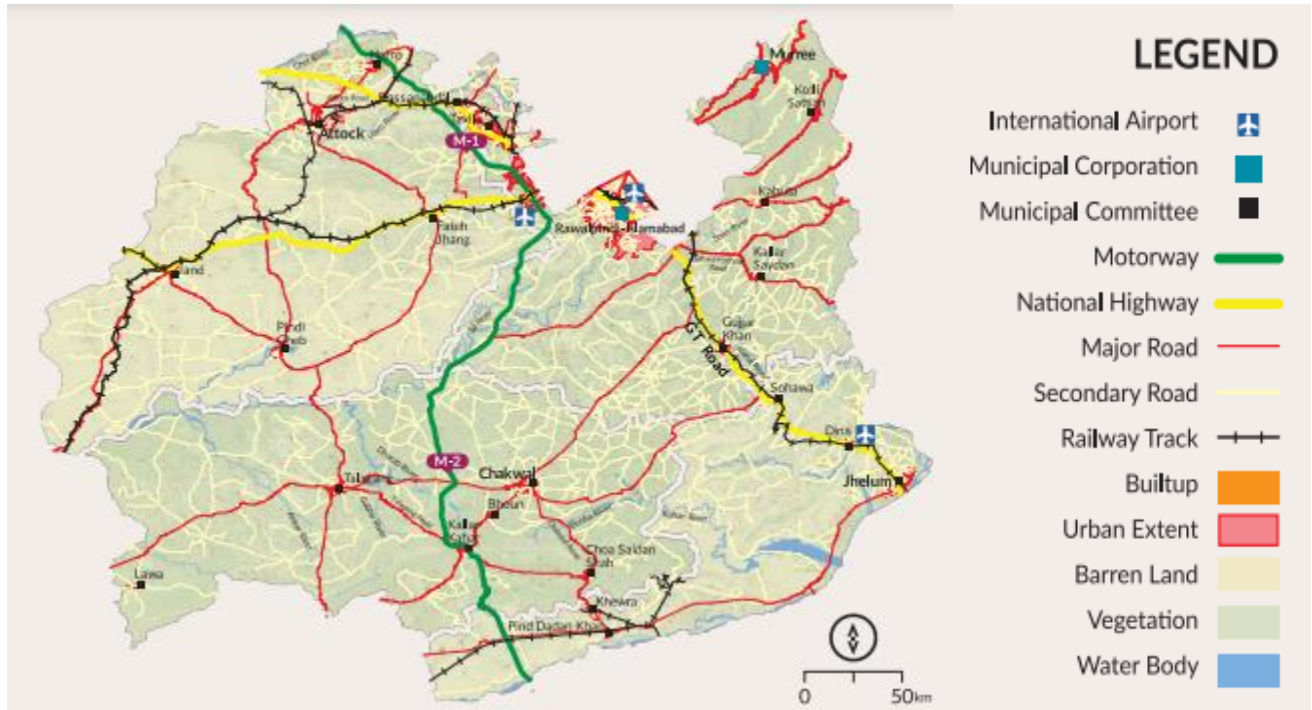
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SECTION 1: OVERVIEW

1.1. Study Area

The Rawalpindi Division is located in Punjab province. The division is also called ‘Pothohar’ and ‘North Punjab Region’. There are four districts in the division: Rawalpindi, Jhelum, Attock, and Chakwal District.



Map 1. Rawalpindi Division.

1.1.1. History and Culture

Historically, the Rawalpindi Division was created during the British colonial era. It has a rich history and cultural heritage.

History:

Rawalpindi served as a prominent trading and military outpost during the medieval period due to its strategic location. Later, in the 19th century, Rawalpindi came under the rule of the Sikh Empire, followed by the British East India Company. The British developed Rawalpindi as a garrison town due to its proximity to the North-West Frontier, an area of strategic importance. After partition of

the subcontinent, Rawalpindi became part of Pakistan. It is currently among the major urban regions in Pakistan and holds key significance in terms tourism and strategic location.

Culture:

Rawalpindi is home to a diverse population, representing various ethnicities, and cultures. It has roots of the Gandhara civilization from the past. Taxila in the Rawalpindi region is regarded as the birthplace of this civilization. Later, the region was ruled by different dynasties, which include Ghaznavids and Ghurids. These dynasties caused an impact on the rich culture of Rawalpindi. There is diversity in the culture as we travel from Murree and Kahuta in the north to Chakwal, Jhelum, and Rawalpindi city in the center and southern area of Rawalpindi division. The north i.e., Murree and Kotli Sattian have tourism significance due to their scenic beauty. Kotli Sattian and Attock have cultural impact of the Khyber Pakhtunkhwa as they are located at the border of KP Province. On the other hand, the Rawalpindi city area is regarded as a mixture of different cultures because people originating from different cities are residing there.

1.1.2. Geography

The Geography of Rawalpindi division raises its highlights in the entire country. Rawalpindi district is adjacent to the Capital of Pakistan, Islamabad. Likewise, it has military headquarter which raises its strategic significance. Furthermore, it is a gateway to the northern areas that have tourism significance.

The geography of the Rawalpindi division makes it a prominent region in the entire Southern area of Punjab. It is located at the South of Faisalabad Division and at the North of Bahawalpur. Notably, the Sutlej River separates it from the Bahawalpur District in the South-East. The Rawalpindi Division also meets Muzaffargarh in the West. The total area of Rawalpindi division is 14,223 square kilometers. Chakwal and Attock districts have the largest land area i.e., 4,373 and 4,349 square kilometers, while Rawalpindi District has an area of 3,721 square kilometers. However, demographically, Rawalpindi District has the largest population as compared to the other three districts in the entire Division.

1.1.3. Tehsils

The names of tehsils in each district are provided below:

Table 1. Total Number of Tehsils in Rawalpindi Division.

Sr. No.	District	No. of Tehsils	Names of Tehsils
1.	Rawalpindi	07	Rawalpindi, Gujar Khan, Kahuta, Kallar Syedan, Kotli Sattian, Murree, and Taxila.
2.	Attock	06	Attock, Fateh Jang, Hassan Abdal, Hazro, Jand, and Pind Gheb.
3.	Jhelum	04	Jhelum, Sohawa, Pind Dadan Khan, and Dina.
4.	Chakwal	05	Chakwal, Choa Saidan Shah, Kallar Kahar, Lawa, and Talagang.
	Rawalpindi Division	22	

1.2. Scope

The main scope of this report is related to providing proposals for sustainable urban planning and development in the Rawalpindi Region. The Urban Planning team of the Urban Unit is creating this report.

1.3. Objectives

The main objectives of the Urban Planning component of Rawalpindi Regional Plan are described below.

- To formulate plans for bringing sustainability in urban growth.
- To take care of the problems with haphazard expansion, illegal home development, insufficient open spaces, and the need for infrastructure to support varied future urban demands
- To upgrade the commercial spaces by providing proposals aimed at creating convenience for buyers and sellers.
- To improve the condition of residential areas, especially slums by addressing relevant issues.
- Develop targeted interventions to improve quality of life, urban form, liveability of urban centers

SECTION 2: APPROACH AND METHODOLOGY

This section of the report includes an explanation of the approach and methodology for preparing the Regional Development Plan of Rawalpindi Division for the Urban Planning sector. The approach involved carrying out both, primary and secondary research. The primary research comprised of surveys and data collection. This data was analysed via spatial analysis using Geographical Information System (GIS) software and other techniques. The detailed methodology as part of the Urban Planning Sectoral Research for the Rawalpindi Regional Development Plan is elaborated below.

2.1. Inception Meeting

On 18th July 2023, the inception meeting was held at the Commissioner Office Rawalpindi. The Commissioner Rawalpindi presided over the meeting. The Deputy Commissioner Rawalpindi and the directors/deputy directors of all line departments also attended the meeting. The attendees of the meeting were briefed about the Rawalpindi Regional Plan by the Urban Unit team. The Commissioner ensured full support for the plan and viewed as an important milestone for the development of Rawalpindi Division.



Figure 1. Inception Meeting with Chief Commissioner Rawalpindi.

In addition, the inception meetings in Chakwal, Jhelum, and Attock were also held which were presided over by the Deputy Commissioners of relevant districts, respectively. The representatives of all line departments also attended these inception meetings, respectively in each district of the

Rawalpindi region. These inception meetings helped the Urban Unit team to develop an understanding of ground realities and concerns of the local community.



Figure 2. Inception Meeting at DC Office Jhelum



Figure 3. Inception Meeting at DC Office Attock



Figure 4. Inception Meeting at DC Office Chakwal

2.2. Baseline Study

A baseline study was also conducted to determine the socio-economic and developmental aspects of the Rawalpindi region. This study was carried out right after the Inception Meetings. It also identified the development related requirements in the urban areas of the Rawalpindi region.

2.3. Stakeholders Consultative Sessions and Site Visits

The Urban Planning and Architecture team also had consultative sessions with stakeholders. The sessions included meetings with all relevant line departments in all four districts of the Rawalpindi region. The main purpose of such sessions was to acquire information about the Urban Planning related measures that have been adopted so far in each district. Furthermore, the input of stakeholders was also necessary to be acquired for the regional development plan.

In addition to the Consultative Session, the team also visited all important sites and areas in all four districts of the region to conduct reconnaissance surveys and collect data from the field. These sites particularly included commercial and residential areas as per the scope of the Urban Planning sector.

2.3.1. Rawalpindi District

2.3.1.1. Consultative Session at Rawalpindi Development Authority (RDA)

A consultative session at the Rawalpindi Development Authority was held on 9th August 2023. The Deputy Director Planning, Mr. Samiullah Niazi presided over the session and shared the required information with the Urban Planning team of the Urban Unit. He shared that the RDA jurisdiction area is around 292 square kilometres. He further said that Urban renewal is needed all over Rawalpindi, especially in highly dense populated areas. He also explained some major issues in the city. For instance, he mentioned that ‘parking’ is the most important issue in the city. Although, several places for new parking plazas were identified in the city in the past, but the plans to construct them were never realized. He mentioned that a parking plaza (G+2) currently exists near the Raja Bazar, but it needs improvement too. He also stated that the Raja Bazar also requires urban renewal.



Figure 5. Meeting at Rawalpindi Development Authority's Office.

He also mentioned that existing green spaces are not enough to cater the needs of current and future population. Therefore, more green spaces are needed. When enquired about land use, he stated that the land speculation is more common in the city. There exist no rules and regulations for that. Speculated plots are not in the list of RDA and land record system. He further mentioned that unplanned areas are located along the Circular Road. Commercial activities have been rapidly spreading alongside such areas. Furthermore, city is expanding along Chakri road and Murree Road. The RDA also shared a list of legal housing schemes which is given in Annexure-B.

2.3.1.2. Meeting at the Municipal Corporation Rawalpindi Office

A meeting was held at the MC Rawalpindi office with the Deputy Director Planning, Mr. Mumtaz. The Building Inspector Rawalpindi also attended the meeting. Mr Mumtaz and the Building Inspector Mr. Saddique shared urban planning related data with the UPA team. Moreover, they also provided information related to the existing and past urban planning measures in the Rawalpindi District. Pertinently, they also shared information about the issues related to commercial and residential areas. For instance, they shared that the presence of encroachments is the biggest issue in commercial areas of Rawalpindi. According to them, this issue ignites from the insufficiency of parking spaces in and around commercial areas. Moreover, the city needs parking plazas to resolve this issue.

Shortage of staff at the MC Office is also another challenge which the MC faces. In particular, there is a shortage of technical staff and building inspectors. This issue also hinders it from enforcing building regulations in the city and especially, in the commercial areas.

The Rawalpindi Development Authority has made Building and Zoning Regulation 2023 to be followed in the Rawalpindi District. The building height has been suggested according to the plot size. RDA has declared some roads for future commercialization. The list is attached as Annexure-A.



Figure 6. Meeting at MC Office Rawalpindi

2.3.1.3. Consultative Session at the Deputy Director Development Office, Rawalpindi

A meeting at the Deputy Director Development Rawalpindi office was held on 9th August 2023. However, due to absence of the Deputy Director, the Assistant Director attended the meeting. He mentioned that horizontal (mushroom) growth is taking place in Rawalpindi. However, due to the rising population of the city, vertical growth is recommended. He further mentioned that the groundwater table is declining severely in the city. He suggested that commercial areas should be revitalized and upgraded. In particular, he suggested that the restoration of Raja Bazar should take place similar to Walled City architecture.



Figure 7. Meeting at DD Development Office Rawalpindi

2.3.1.4. Consultative Session at PHATA Office

The UPA team also had a consultative session at PHATA office on 7th August 2023. The Deputy Director PHATA Syed Sajjad Hussain Shah, Assistant Director Research, and Head Draftsman were also present in the meeting. In addition, the team also had a separate consultative session with the Director PHATA at the same venue.

PHATA has developed 142 schemes in overall Punjab. PHATA is a development agency, and it is focused at developing housing schemes. It identifies state or other lands for development of Low-

Income Housing. According to PHATA, people with income less than 60,000 PKR fall under the criteria of low income. For allocating plots, it carries out the procedure of balloting. After initiating the scheme, PHATA gives their control to TMA for operation and maintenance.

In district Rawalpindi, PHATA has developed 11 housing schemes in Rawalpindi tehsil. In district Chakwal, PHATA has developed 2 housings schemes in tehsil Chakwal, and both are under process. In district Attock, 3 housings schemes are located in tehsil Attock and only one is approved. 4 schemes are in Fateh Jhang and 3 are approved. One of these three schemes (NOVA CITY) is also aligned with CPEC route. Only one approved housing scheme exist in tehsil Hassan Abdal. 2 housing schemes are in tehsil Hazro , of which one is approved and other one is under process.

In district Jhelum, the ADS I and ADS IV schemes are present and both are also lying in NPHP scheme. ADS I is 100-acre land and 90% is occupied and is in good condition. One plot is designated for high rise building in ADS I. ADS IV is 80% completed. Due to some issues and concerns of locals, 20% is not completed yet. High rise development is not preferred in ADS IV but 3 and 5 marls residential plots only. A list of PHATA housing schemes is given in Annexure-C, as provided by the PHATA office Rawalpindi.

The Director and Deputy Director PHATA highlighted institutional weaknesses such as shortage of HR and especially, technical staff. According to them, there is no town planner in the entire PHATA office in Rawalpindi.



Figure 8. Meeting at PHATA Office Rawalpindi

2.3.1.5. Meeting at Chamber of Commerce Office

A meeting at Chamber of Commerce Office was also held in Rawalpindi. The Senior Vice President Mr. Hamza Sarosh shared his opinions with the UPA team. He stated that a Ring Road

is constructed and inaugurated in Rawalpindi in August 2023. They want to divert wholesale and retail markets along the Ring Road instead of in the city centre, in order to reduce burden and overcome congestion and road encroachments. He further stated that Rawalpindi is a trading hub and they want cottage and micro industries along Ring Road through proper zoning and land use allocation.

2.3.1.6. Meeting with Deputy Director (Technical) Murree

A meeting with Deputy Director (Technical) Murree was held on 7th August 2023. The DD technical stated that Murree is controlled by two authorities: one is TMA and other is MIT (Murree Improvement Trust). Illegal and unplanned high-rise construction is flourishing everywhere in Murree particularly in Patriata. For the betterment of the area, she suggested that there must be a development agency in Murree, similar to LDA or RDA.



Figure 9. Meeting with Deputy Director Technical (Murree)

She further stated that there are issues related to encroachment in Murree. Furthermore, the building rules are often violated especially, in the commercial areas in Murree.

2.3.1.7. Meeting at MC Office Kahuta

The meeting at MC Office Kahuta was headed by the Chief Officer MC Kahuta. Other MC officers such as Building Inspector also attended the meeting. The Chief Officer Mr. Kamran highlighted prominent issues of the MC Kahuta. He said that no street addresses are located in Kahuta, which is a major problem faced by the residents. Water supply is another significant issue in the city. The water of a nearby water reservoir is supplied to the people for drinking, which has insufficient capacity to cater for the needs of the locals. He suggested that sedimentation in the reservoir should be removed to enhance water capacity. Likewise, the quality of water is also not good. A mixed

form of land use is dominant in the city. In addition, prevalence of sanitation issue was also highlighted by the Chief Officer.



Figure 10. Meeting with Chief Officer MC Kahuta.

2.3.1.8. Meeting at MC Office Kotli Sattian

A meeting with Chief Officer MC Kotli Sattian was held on 10th August 2023. In the meeting, the Chief Officer Mr. Ahmed highlighted some major issues which are present in Kotli Sattian. For instance, water supply issues, deficiency of human resource in MC and other public offices, lack of facilitation and management of tourism sites, and insufficient commercial and livelihood opportunities are some prominent issues present in Kotli Sattian.

He further mentioned that there is no municipal officer planning in MC Office Kotli Sattian. Posts are vacant but are never filled. Moreover, there is no water supply and gas facility in Kotli Sattian. For water, the locals rely on rainwater preservation or on nearby streams.

Mr. Ahmed also highlighted that the Kotli Sattian has several places which can attract tourists, for instance, Chewra Hill Top, Panjpeer Rocks, Fire Watch Tower, Burj (a track that goes to Patriata), and Danoy Rest House. If tourism grows at these sites, it will also generate income for the area in terms of expanding the commercial spaces in Kotli Sattian. That is, the incoming tourists will do shopping and contribute to the income of the local residents.



Figure 11. Meeting with Chief Officer MC Kotli Sattian

2.3.1.9. Meeting with MOP, MC Murree

The meeting with MOP Murree was held at District Council Office Rawalpindi. He mentioned that ODP (1985-2013) is still being followed in Murree, but the ground realities are much different as compared to the ODP map. This is because new roads have been added especially the Murree Expressway. He further added that the city is expanding along the GT road, Nathiagali road, Surasi road and Expressway. Moreover, housing schemes are along the expressway road such as Bharia golf city, OGDC, Judicial Town. The main issues are parking, congestion, road blockage, encroachments, unplanned expansion along Patriata road and surface road. There is high level of commercial activity in the city but there is no commercialization policy for the city. He further said that an alternate commercial route is needed in addition to Mall Road Murree. This route can be built on expressway. Furthermore, more development is needed along the Patriata chairlift. Likewise, a Master plan is needed for Murree. He also mentioned that there is low HR capacity especially, building inspectors are required to be hired in Murree.

2.3.1.10. Meeting with Chief Officer MC Taxila ad DOP MC Taxila

A meeting with Chief Officer MC Taxila was held at the Municipal Office Taxila on 16 August 2023. The Chief Officer stated that setbacks are not left for houses as well commercial uses. Encroachment is very common in the city. Other major problem includes sewerage and drainage issue. The sewerage pipe lines are old thus cause leakage.



Figure 12. Meeting with Chief Officer MC Taxila

The Chief Officer further mentioned that the city growth is taking place towards Wah Cantt side (i.e., alongside Peshawar Road). The CPEC route is at HMC roads that connects HMC road to Haripur district. Public transport is only Qingqi rikshaw. On street parking is common, thus CO proposed to utilize their building surrounding area for parking plaza. Solid waste collection is common but there is no dumping site in Taxila. The concerned department workers have to travel a long distance to Rawalpindi to dump solid waste. Moreover, the number of sanitary workers is very low and it is drastically reducing with the passage of time. There is also a lack of parks and public spaces in MC area.

In addition, a meeting with MO(P) Taxila Mr. Sohail was also held on 16th August 2023. Mr. Sohail mentioned that the MC area is very limited that is bounded by Wah Cantt on one side and Hassan Abdal from other. He further stated that there is high rise growth in newly built housing societies such as, Faisal Hill and New Citi Housing Society. However, the high rise is not common in the rest of the MC area.



Figure 13. Meeting with MO(P) MC Taxila.

2.3.1.11. Site Visits in Rawalpindi District

The UPA team conducted a reconnaissance survey in the Rawalpindi District. The team thoroughly inspected both residential and commercial areas, as well as all major roads in the region. It is pertinent to mention here that the Rawalpindi MC area, Kahuta MC, Kotli Sattian, and Taxila MC areas were particularly surveyed considering their urban significance in the Rawalpindi district. Additionally, the team also explored key public spaces during their visits. The primary objective of these surveys was to pinpoint and analyze urban planning challenges and deficiencies within the Rawalpindi district.

2.3.1.11.1. Sites Surveyed in Rawalpindi City and Connected Area

Some of the prominent residential areas that were surveyed included the following:

- Sadiqabad
- Nala Lai & connected residential area
- Residential area around Kartar pura
- Gulzar-e-Quaid
- Pir wadhai
- Ghareebabad
- Moti Bazar
- Raja Bazar
- 5th road
- 6th road
- Murree road
- Shamsabad
- Gulshan Abad
- Faizabad
- Satellite Town
- Rehmanabad
- Ganj Bazar
- Commercial Market
- Expressway
- Adyala road
- Rawal road

2.3.1.11.2. Sites Surveyed in MC Kahuta

The team also conducted survey in MC Kahuta. All residential and commercial areas were visited. The prominent among these are mentioned below.

- Nayi Abadi
- Ling Bridge and Ling Nala
- Pindi Road
- Kallar bypass and Kallar Road
- Tehsil Chowk/ Tehsil Toad
- Zahoor Bagh

- Kidney center chowk
- Channi Mohallah
- Arra Mohallah
- Water Tank (water supply source is Tangi Dam)
- Channi Road
- Bohr bazar
- Moti bazar
- Mator Road bazar
- Panjaar Road and Panjaar Chowk
- Kotli Link Road
- Bus Adda
- Dupri
- Mohallah Bahria

2.3.1.11.3. Sites Surveyed in MC Kotli Sattian

After covering MC Kahuta, the UPA team then visited Kotli Sattian and carried out a reconnaissance survey of the area. Some prominent areas that were surveyed include the following.

- Main bazar
- Kachery Chowk
- Chewra Hill Top
- Danoy guest house
- Area around MC office and all connected roads
- All commercial spaces

In this regard, the houses in different areas of Kotli Sattian were also visited. The water storage tanks were observed in the houses. The locals were cooperative enough in allowing visits to the houses.

2.3.1.11.4. Sites Surveyed in MC Taxila

The team also visited MC Taxila. In particular, the team surveyed all residential and commercial areas in the MC jurisdiction. All of the important roads also got covered in the meanwhile. The prominent areas which were surveyed included the following.

- Faisal Shaheed Road
- Railway Road Bazar
- Bari Phatak
- Choti Phatak
- Purana Bazar
- Mohallah Phalaian
- Mohallah Eidgah
- Shahrah e Umar Farooq

- Mujawar Chowk
- Mohallah Mujawar
- Inayat Shaeen Mohallah
- Jandial Chowk
- Nehr Road / Canal Link Road
- Nehr Stop
- Model Town
- HMC Road
- Mohallah Makkar
- Nizam Town
- Mughal Market
- Madinah Market
- Taxila Chowk aka Khatm-e-Nabuwat Chowk
- Jameelabad
- Thatha Khalil Road
- Bilal Market
- Taxila Road
- Faisal Hills Housing Society
- MPCHS

2.3.2. Chakwal District

2.3.2.1. The Consultative Session at MC Office Chakwal

A consultative session at the MC Office Chakwal was held on 08 August 2023. The Municipal Officer Planning Chakwal, the Building Inspector, the city’s tax officer, and the Chief Officer MC Kalar Kahar also joined the session.

The MOP Officer said that the Chakwal city is in triangular form and is considered as district's CBD. The city area is growing rapidly as, for instance, the surrounding 8 villages have been included in the Chakwal city urban area. Previous plan was ODP (1983-1998) and now this is revised as ODP (2014-2039). The newly added 8 villages are included in this plan. The city has 15 chowks and 4 major primary roads. These are Pindi Road, Talagang Road, Jhelum Road, and Bhoun Road. City is growing towards all these main roads especially, alongside the Pindi Road and Talaganag Road. Main commercial areas are chappar bazaar, moti bazaar, itwar bazaar, model bazaar. There is a need for parking plaza and old AC office (8 kanal) can be used as a parking plaza and this is near to Chapar bazaar. This can solve the parking issues of commercial areas.



Figure 14. Combined Consultative Session with MO(P) Chakwal and Chief Officer Kallar Kahar.

He further stated that the State land in the city is 1900 kanal. More land is available for new proposals on state land. Alongside and opposite to model bazar, state land is available for new land uses. Naya Pakistan Housing Schemes has allocated space for low-income housing near model bazaar.

On the other hand, the Chief Officer Kalar Kahar stated that Kalar Kahar has high potential and reputation for tourism growth. However, there is a lack of commercialization in the area due to a ruling from the Supreme Court, which prevents new investment in tourism and commercial areas. He stated that the entire area around the lake is environmentally sensitive and wildlife is present in the area. Therefore, the court has banned any development to be carried out in the area. Consequently, NOCs are not issued by the MC office for new development around the lake in Kalar Kahar.

2.3.2.2. Meeting with Deputy Director Development, Chakwal District

A meeting with the Deputy Director Development Chakwal was held on 8th August 2023. In the meeting, the Deputy Director, Mr. Fazal, highlighted some prominent issues of Chakwal. He stated that the main issues are related to the provision of healthcare and water supply in the city. Furthermore, haphazard expansion all around the city area is also a major problem. In particular, the unplanned expansion is prominent along the Talagang Road. The city is also facing the sewerage issue. In Chakwal, rural culture is dominant and people are value for it. Traditional cultural festivals are popular in the area, which include Buffaloes mela, Neza bazi, and horse-riding.



Figure 15. Meeting with Deputy Director Development Chakwal

2.3.2.3. Site Visits in Chakwal District

The UPA team also surveyed the Chakwal District. In particular, the entire city area was surveyed. Therein, the team particularly inspected the existing situation of all commercial and residential areas. All public spaces and major roads were also covered. The team also identified several problems during the survey which will be discussed in the fifth section of this report.

2.3.2.3.1. Sites Surveyed in MC Chakwal

The prominent sites which were surveyed in MC Chakwal are mentioned below.

- Chapar Bazar
- Anarkali Bazar
- Hospital Road
- Old Sabzi Mandi
- Mohallah Khawajagan
- Mohallah Masjid Pir Shah
- Circular Road
- Mohallah Bhattian
- Islamia College and adjacent MC owned public park's site
- 15 Road
- 15 Chowk
- Girls College Road
- Sabzi Mandi
- Fruit Mandi
- Talagang Road
- General Bus Stand
- Shuhada Road
- E-Khidmat Markaz
- Saddar Thana and Highway rest house
- Allied Park
- Pindi Bypass Road
- Ghala Mandi
- Iqbal Library
- Old AC House (abandoned now)

2.3.2.3.2. *Sites Surveyed in MC Kallar Kahar*

The UPA team also carried out a reconnaissance survey in the commercial and residential areas of Kallar Kahar. The main areas covered are mentioned below.

- Talagang Road
- Main Chowk connecting Talagang Road and Choa Saidan Shah Road
- Ghousia Mohallah
- Usmani Mohallah
- Nurul Nabi Mohallah
- Road connected to the MC Office
- Choa Saidan Shah Road
- Main Trauma Center
- Water Tank (newly built)
- Katchi Abadi
- Commercial area at Kalar Kahar lake

2.3.3. Jhelum District

2.3.3.1. Consultative Sessions at the MC Office Jhelum

In Jhelum, the consultative sessions started with a meeting with Municipal Officer Planning. Mr. Hafiz Shoaib, at the MC Office Jhelum. The meeting was held on 15 August 2023. The UPA team availed information related to planned and unplanned areas in Jhelum. The building inspector also joined the meeting. When asked about the issues in Jhelum city, the MOP Officer said that the city is growing in an unplanned manner. He mentioned that traffic congestion often takes place in busy areas especially, at Shandar Chowk.



Figure 16. Meeting with MO(P) Jhelum

He suggested that a parking plaza should be built in the city due to the current insufficiency of available parking spaces. The infrastructure is weak, for instance, open drains are present on the river side. He further mentioned that there is a shortage of staff especially, at the MC Office.

2.3.3.2. Consultative Sessions with the Deputy Director Development Jhelum District

A meeting with Deputy Director Development was also held in Jhelum on 15 August 2023. The UPA team acquired data related to ADPs from the office of DD Development. The Deputy Director shared that Jhelum city is facing issues related to urban flooding, sewerage, and drainage. Furthermore, he mentioned that there is no disposal station available. Moreover, the city has parking issues. There are no sufficient parking spaces for commercial areas. Similarly, there are no street lights in the city except on civil lines road. Furthermore, he mentioned that there is also a shortage of parks and public spaces in the city.



Figure 17. Consultative Session with Deputy Director Development Jhelum

He also provided suggestions for development in the city. He suggested that a ring road should be built to cover the city. Furthermore, he suggested that there should be a connecting point of motorway with GT road. He also suggested that a flyover or bypass should be built on Shandar Chowk. The Shandar Chowk is an area where traffic jam often happens as it is connected to main bazars of the city. He also suggested that a public transportation system should be made available in the city.

2.3.3.3. Site Visits in Jhelum District

The UPA team also carried out a reconnaissance survey in the Jhelum District and especially, in the MC Jhelum area. During the survey, the team noted several issues that were present in the city area. These issues are summarized in the fifth section of this report. The prominent sites that were visited include the following.

- Shandar Chowk
- Dulhan Bazar
- Bilal Town
- Mohallah Suleman Paras
- Abdul Sattar Eidhi Road
- Civil Lines

- Naya Bazar
- Railway Road
- Shamla Mohallah
- Tehsil Road
- Machine Mohallah Number 1 and connected commercial area
- Machine Mohallah Number 2 and connected commercial area
- Commercial area along GT Road
- Kala Gujran
- Model Bazar
- Jada Road

2.3.4. Attock District

2.3.4.1. Consultative Session at the MC Office Attock

A consultative session at the MC office Attock was held on 17th August 2023. The MO(P) Officer could not join in the meeting; therefore, the building inspector Mr. Bilal provided the required information and briefed the UPA team in the meeting. Some of the major issues which he highlighted were parking issues and lack of availability of parks and public spaces in the city. Currently, the city growth is mostly towards north, because south has Harro river and east and west side is surrounded by Cantt area. He further indicated that Mauza Baryal state land is vacant around 3000 kanal which can be used for housing in future. The ODP in PHATA was from 1981-1996 which was developed by PHATA. Since then, no ODP or SDZ or Land Use Plan has been created for the Attock city. However, a new plan is under completion and it is going to be prepared for 2023-2042.



Figure 18. Consultative Session at MC Office Attock

2.3.4.2. Consultative Session at the DO(P) Attock and Hasan Abdal

A meeting with Director Officer Planning Mr. Ijaz was held at the District Council Office Attock. Mr Ijaz also has an additional charge of overseeing MC Hasan Abdal. He stated that no Outline

Development Plan is currently existing for Hasan Abdal and Attock. However, a newer plan for Attock is about to be completed by NESPAK in 2023. He mentioned that growth in the Attock city as well as in Hasan Abdal MC mostly remains unchecked, which leads to haphazard development. Moreover, List A and List B are not technically allocated or notified. Therefore, a mixed growth of residential and commercial areas is taking place. Moreover, there is also a shortage of human resources in MC offices.



Figure 19. Meeting with DO(P) Attock and Hasan Abdal

2.3.4.3. Consultative Session with the Deputy Director Development Attock

A meeting with Deputy Director Development was held on 17th August 2023. The Deputy Director stated that the implementation of ADB projects faces significant financial and operational issues in Attock. For example, he mentioned that there are 20-25 projects proposed for transport sector, but none has been implemented so far. He further mentioned that the south of the city is an unplanned area which is quite neglected for development. Low capacity of institutions is also a problem which hinders implementation of projects. Some other issues he highlighted included a lack of parking space in the city area, draining issues, and absence of any technical teaching institute. He also stated that Committee Chowk and Fawara Chowk are two potential areas for building parking plaza.



Figure 20. Meeting with Deputy Director Development Attock

He also mentioned that the city has vast economic potential. For instance, Attock has many minerals. Limestone is the most prominent among the minerals found abundant in Attock. Furthermore, he mentioned that that district Attock also has religious and cultural significance.

2.3.4.4. Site Visits in Attock District

The UPA team also conducted a survey in the Attock District and especially, in MC Attock jurisdictions. In addition, Hasan Abdal MC area was also surveyed. Prominent issues related to urban planning in the commercial and residential areas of Attock and Hasan Abdal were noted. These issues will be discussed in a later section of this report.

2.3.4.4.1. Sites Surveyed in MC Attock

In MC Attock, the following sites were particularly surveyed.

- Committee Chowk
- Fawara Chowk
- Main Bazar
- Madni Chowk
- Fateh Jang Road
- A, B, C, E, & R Blocks
- Agri-reform department land
- 3000 kanals state land
- Landfill site
- Dhoke Fateh
- Ziarat Park
- Two Potential parking plaza sites (owned by MC)
- Attock Kamra Road
- Darussalam Colony
- Officers Colony
- Peoples Colony
- Mehria Town

2.3.4.4.2. Sites Surveyed in MC Hasan Abdal

After covering MC Attock, the team visited Hasan Abdal and carried out reconnaissance survey of all commercial and residential areas. All important roads were also surveyed. The prominent areas surveyed included the following.

- MC Office and connected road
- Islam Shaheed Road
- Panja Road
- Panja Bazar
- Mohallah Takia
- Sakhi Nagar Chowk
- Jinnah Colony
- Mohallah Khawaja Nagar
- Station Road
- Shahrah-e-Resham – Hazara Road
- Mohallah Mehmood Abad
- Mohallah Roshan pura
- Mohallah Reham pura
- Main Bazar
- Mohallah Punjabian
- Shah Jhoolan Bazar
- Adda Larian

The purpose of surveys was to identify all problems and challenges related urban planning in the areas mentioned above. In particular, it was essential to identify development challenges in the residential and commercial areas. Apt familiarization with problems is essential to propose development related suggestions in the residential and commercial areas of Rawalpindi division.

2.4. Data Analysis

Data Analysis was carried out using statistical methods and software such as, Geographical Information System (GIS). The Spatial Analysis and Statistical Analysis gave key insights about the data that was gathered from primary and secondary research. Based on this data analysis, proposals for urban areas of Rawalpindi Division were formulated.

2.5. Proposed Interventions

After a meticulous analysis of data and a thorough evaluation of the study area's requirements, a series of urban planning initiatives has been suggested. These proposed urban planning

interventions are elaborated in a subsequent section of this report. Pertinently, these interventions have a primary goal to stimulate economic growth and support sustainable development in the Rawalpindi Division. It is worth underscoring that these recommendations are firmly rooted in the realm of practical urban planning. Therefore, the feasibility of these interventions has been particularly ensured. Moreover, they have been developed after taking insights from stakeholders from all four districts in the Rawalpindi Division. Hence, the requirements of urban areas of each district have been particularly assessed for suggesting the relevant intervention. The last section of this report includes the details of these suggested urban planning measures.

SECTION 3: POPULATION

3.1. Projected Population Growth

The population of all districts included in the Rawalpindi Division has been estimated as per the population growth rate of each district. The growth rates of districts as well as tehsils were taken from the population census of 2017 and 2023. The population projections of each district are given in the below tables.

Table 2. Population Projections Based on 2017 Population Census

District	Population 2017	Projected Population 2023	Projected Population 2048	Growth Rate (1998-2017)
Rawalpindi Division	10,006,624	11,394,106	19,692,351	2.17
Rawalpindi District	5,402,380	6,274,164	11,702,192	2.52
Attock District	1,886,378	2,134,801	3,574,594	2.08
Jhelum District	1,222,403	1,329,494	1,886,484	1.41
Chakwal District	1,495,463	1,655,545	2,529,081	1.71

As per the 2017 census, the total population of Rawalpindi Division is around 10 million. However, due to the population growth rate of 2.17, the population of the division is now projected to have reached 11.39 million. This population is expected to reach 19.69 million by 2048. Within Rawalpindi Division, the highest urban population is in Rawalpindi District.

In Rawalpindi District, the total population is 5.4 million, as per the 2017 census. This population has been estimated to reach 6.3 million in 2023 at a growth rate of 2.52. At this rate, the population is expected to reach 11.7 million by 2048.

On the other hand, according to the 2017 census, the total population of Attock District is 1.86 million. The growth rate of population has been estimated at 2.08 for the district. As per the growth rate, the population in Attock District may have reached 2.13 million in 2023. The future projections at this growth rate illustrate that the population of the district will be 3.57 million in 2048.

In Jhelum, the total population of the entire district is 1.22 million, according to the census report of 2017. This population is growing at the rate of 1.41. At this rate, the population projections have led to the estimate that the current population of Jhelum District in 2023 is 1.33 million. Likewise, at the existing growth rate of population, the total population of the Jhelum District will reach 1.9 million by 2048.

As per the 2017 census, the total population of Chakwal district is 1.49 million. The population growth rate of 1.71 gives the projections that the population in the district in 2023 is 1.66 million, whereas it is forecasted to reach 2.5 million in 2048.

The above information has also been illustrated graphically below.

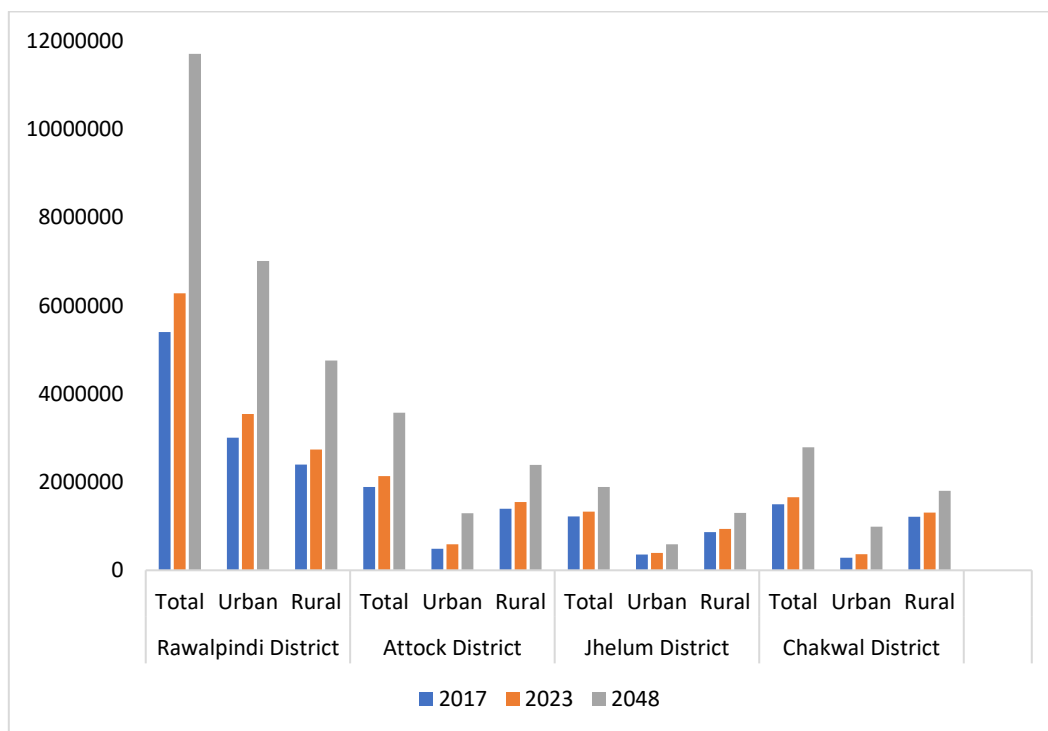


Figure 21. Population Projections in Rawalpindi Division based on 2017 Census

On the other hand, if we consider the results of the census of 2023, then the stats vary slightly as illustrated in below chart.

Table 3. Population Projections Based on 2023 Population Census

District	Population 2017	Population 2023	Projected Population 2048	Growth Rate (2017-2023)
Rawalpindi Division	10,006,624	11,406,496	19,702,765	2.21
Rawalpindi District	5,402,380	6,118,911	10,281,228	2.10
Attock District	1,886,378	2,170,423	3,893,674	2.37
Jhelum District	1,222,403	1,382,308	2,307,092	2.07
Chakwal District	1,495,463	1,734,854	3,220,771	2.51

For instance, as per the census 2023 the population of Rawalpindi District is 6.1 million as compared to the projected population based on 2017 census of 6.2 million. Likewise, as per census 2023 the population of Attock, Jhelum, and Chakwal districts are 2.17 million, 1.38 million, and 1.73 million as compared to the projections based on the 2017 2.13 million, 1.33 million, and 1.65 million, respectively. Based on the population growth rates of 2023 census, the projected population in 2048 in Rawalpindi, Attock, Jhelum, and Chakwal districts will reach 10.28 million, 3.9 million, 2.31 million, and 3.22 million respectively. These statistics are also illustrated in the below chart.

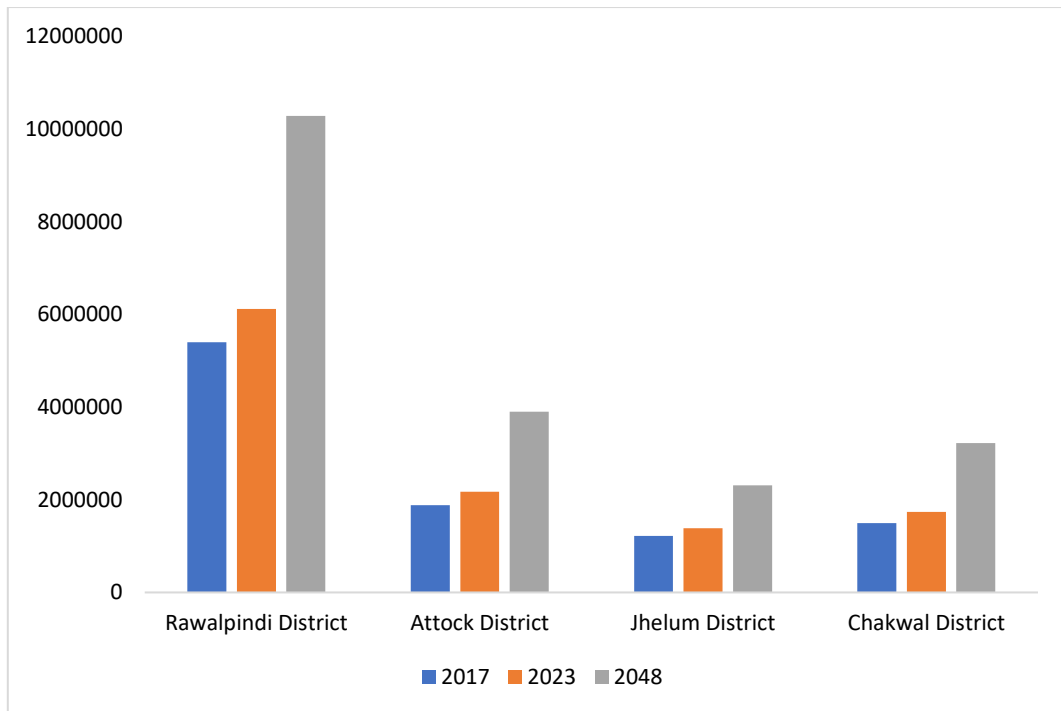


Figure 22. Population projections based on 2023 Census

3.2. Population of Tehsils in Rawalpindi Division

In addition to estimating population of districts in Rawalpindi division, the projections for population in tehsils have also been estimated. The Growth Rates have been calculated by the consultant which are approximately equal to the growth rates mentioned in Census 2017. These projections are summarized in the below table.

Table 4. Urban and Rural Population Growth of Tehsils in Rawalpindi¹

District	Tehsil	Population 2017	Projected Population 2048	Growth Rate	Urban Population 2017	Projected Urban Population 2048	Growth Rate (Urban)	Rural Population 2017	Projected Rural Population 2048	Growth Rate (Rural)
Rawalpindi	Rawalpindi Tehsil	3,256,641	7,665,782	2.80	2,097,824	4,007,611	2.11	1,158,817	4,312,214	4.33
	Taxila Tehsil	677,558	1,809,781	3.22	501,547	1,372,213	3.30	176,011	440,042	3.00
	Kahuta Tehsil	220,746	398,047	1.92	60,610	394,645	6.23	160,136	212,708	0.92
	Kallar Sayaddan Tehsil	217,061	363,817	1.68	54,239	56,819	0.15	162,822	170,566	0.15
	Kotli Sattian Tehsil	119,295	217,083	1.95	22,401	29,033	0.84	96,894	125,578	0.84
	Murree Tehsil	233,017	366,315	1.47	157,043	4,069,289	11.07	75,974	23,685	-3.69
	Gujar Khan Tehsil	678,062	1,136,504	1.68	112,044	258,229	2.73	566,018	898,003	1.50
Attock	Attock Tehsil	435,203	996,980	2.71	212,493	555,765	3.15	222,710	453,436	2.32

¹ The projections of population in tehsils are based on the census of 2017

	Fateh Jhang Tehsil	326,433	648,694	2.24	66,500	308,079	5.07	259,933	439,678	1.71
	Hassan Abdal Tehsil	217,109	466,786	2.50	63,218	145,260	2.72	153,891	321,978	2.41
	Hazro Tehsil	340,189	606,007	1.88	55,308	86,154	1.44	284,881	521,565	1.97
	Jand Tehsil	295,513	450,577	1.37	48,194	257,157	5.55	247,319	320,535	0.84
	Pindi Gheb Tehsil	271,931	465,614	1.75	45,195	88,999	2.21	226,736	377,723	1.66
Jhelum	Jhelum Tehsil	445,232	712,873	1.53	190,471	289,530	1.36	254,761	424,411	1.66
	Dina Tehsil	238,465	365,825	1.39	73,243	125,410	1.75	165,222	242,094	1.24
	Pind Dadad Khan Tehsil	336,841	502,710	1.30	64,398	108,930	1.71	272,443	394,341	1.20
	Sohawa Tehsil	201,865	305,913	1.35	26,185	84,966	3.87	175,680	243,602	1.06
Chakwal	Chakwal Tehsil	656,527	1,110,519	1.71	138,214	333,282	2.88	518,313	807,381	1.44
	Choa Saidan Shah Tehsil	141,942	230,763	1.58	22,574	52,658	2.77	119,368	183,120	1.39
	Kallar Kahar Tehsil	169,238	286,267	1.71	43,142	43,142	0.00	126,096	132,093	0.15
	Lawa Tehsil	125,770	196,513	1.45	15,595	15,595	0.00	110,175	138,893	0.75
	Tala Gang Tehsil	401,986	705,276	1.83	64,083	151,757	2.82	337,903	562,918	1.66

3.2.1. Projected Population of Tehsils in Rawalpindi District:

The population projections in Rawalpindi District illustrate that the population in all tehsils is rising. Nonetheless, the highest growth rate has been noted in Taxila Tehsil which is 3.22 while the growth rate of Rawalpindi Tehsil is 2.80. If we compare the urban population growth rate, then it is the highest in the Murree Tehsil which is 11.07, while Kahuta Tehsil is at the second highest with a growth rate of 6.23. Taxila Tehsil has an urban growth rate of 3.30. These growth rates will consequently increase the urban population in Murree, Kahuta, and Taxila Tehsils significantly by 2048 as compared to the current statistics. For instance, at this rate, the projected urban population in Murree Tehsil will cross above 4 million, equaling the population of Rawalpindi Tehsil in 2048. Such population growth requires immediate implementation of suitable urban planning measures in tehsils of Rawalpindi district.

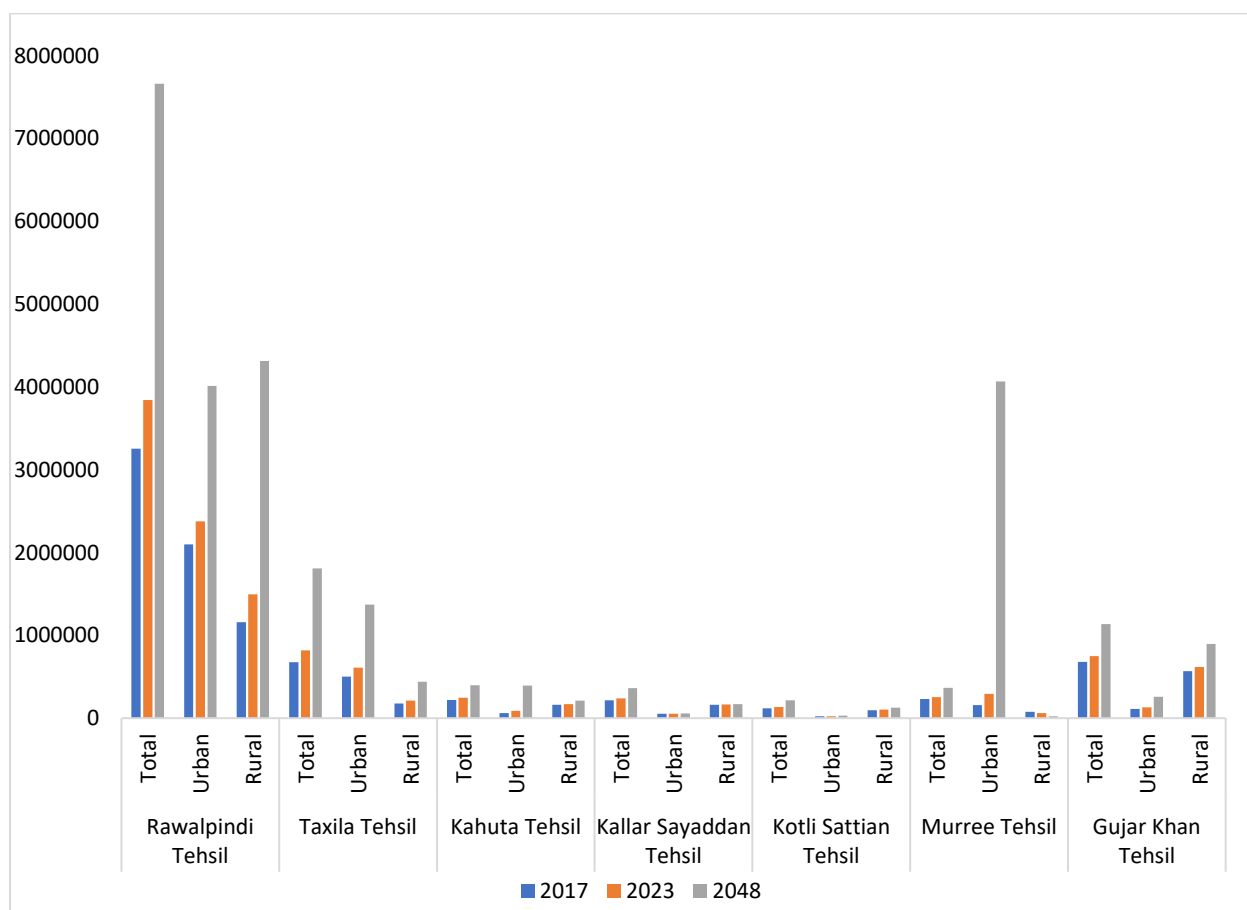


Figure 23. Population Growth in Tehsils of Rawalpindi District

3.2.2. Projected population of tehsils in Chakwal District

In Chakwal district, the Chakwal tehsil has the highest population (656,527) as compared to the other tehsils. Its population is expected to cross 1.1 million by 2048. The highest urban population is also in Chakwal Tehsil (138,214), which will reach 333,282 by 2048. Pertinently, the urban population growth rates of Talagang tehsil and Chakwal tehsil are 2.82 and 2.88 respectively. This indicates that urban growth is taking place at a good pace in these two tehsils. Therefore, it is necessary to provide better urban conditions in the Talagang Tehsil and Chakwal Tehsil considering the growing urban population in these two areas. The following graph further illustrates the population growth in tehsils of Chakwal District.

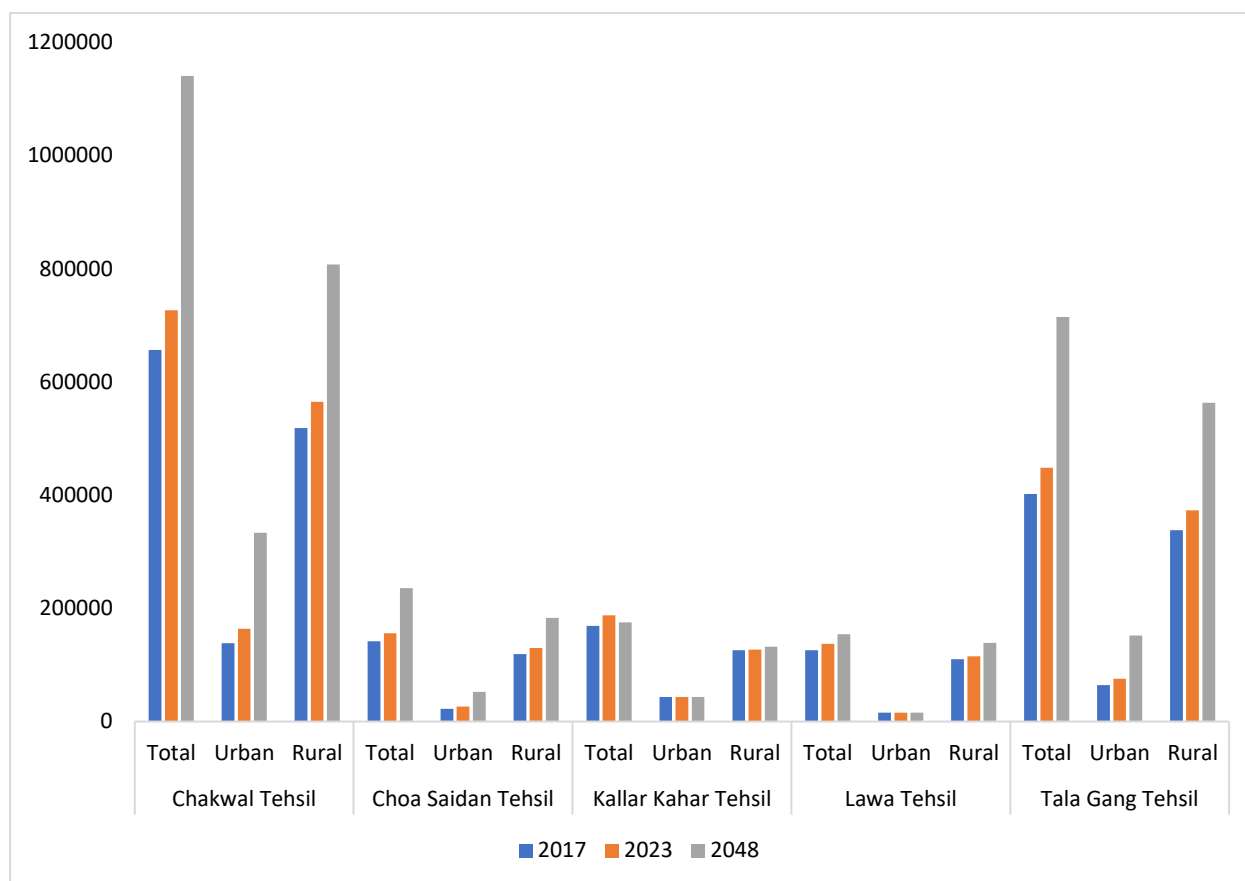


Figure 24. Population Growth in Tehsils of Chakwal

3.2.3. Projected Population of Tehsils in Jhelum District

In Jhelum District, the Jhelum tehsil has the highest urban and overall population as compared to other tehsils. Currently, as per the 2017 population census, the total population in Jhelum tehsil is 445,232 and it will reach to 0.7 million by 2048. Of these, the current urban population is 190,471, which will reach almost 0.3 million by 2048. The rate of population growth in

Jhelum tehsil is 1.53, while the rate of population growth is 1.36. The lower growth rate for urban population as compared to the overall growth rate of rural population (1.66) indicates that the city lacks suitable conditions for urban growth. Migration to other cities, including Rawalpindi, is also one of the reasons for lower urban population growth as compared to rural population growth. It is necessary that suitable urban living conditions and infrastructure should be provided in Jhelum city to reduce the burden of urban migration to other cities from Jhelum city.

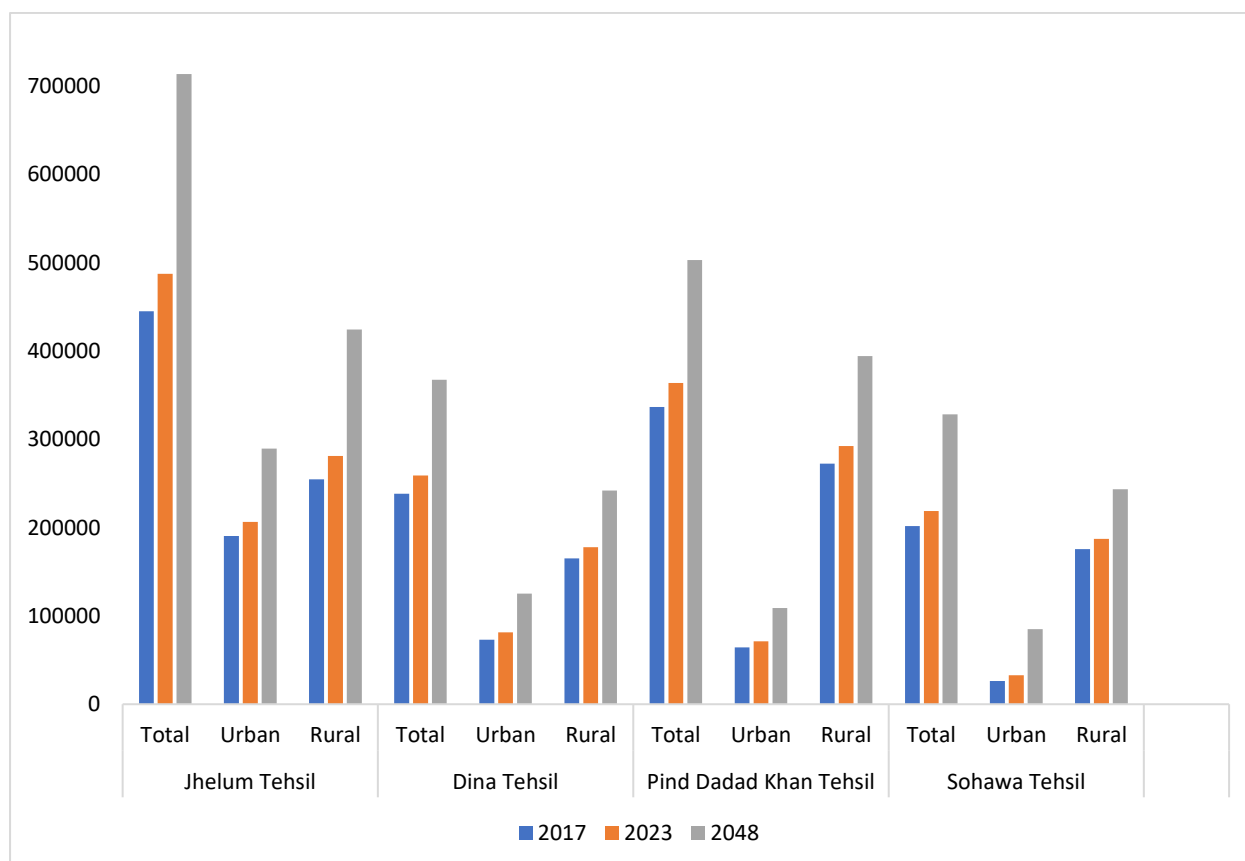


Figure 25. Population Growth in Tehsils of Jhelum District

3.2.4. Projected Population of Tehsils in Attock District

In Attock District, the Attock tehsil has the highest urban population and total urban population as compared to other tehsils. As per the 2017 census, it has a total population of 435,203 which will reach almost 1 million by 2048. The population growth rate of Attock tehsil is 2.71, while the urban population growth rate is 3.15. Currently, the urban population (as per 2017 census) is 212,493, which will reach the level of 555,755. This indicates that the urban population is growing at a rapid pace in Attock tehsil. Therefore, it is essential that urban living conditions should be improved in the tehsil to cater for the needs of the growing population. The graph below further illustrates the projected population growth in tehsils of Attock district.

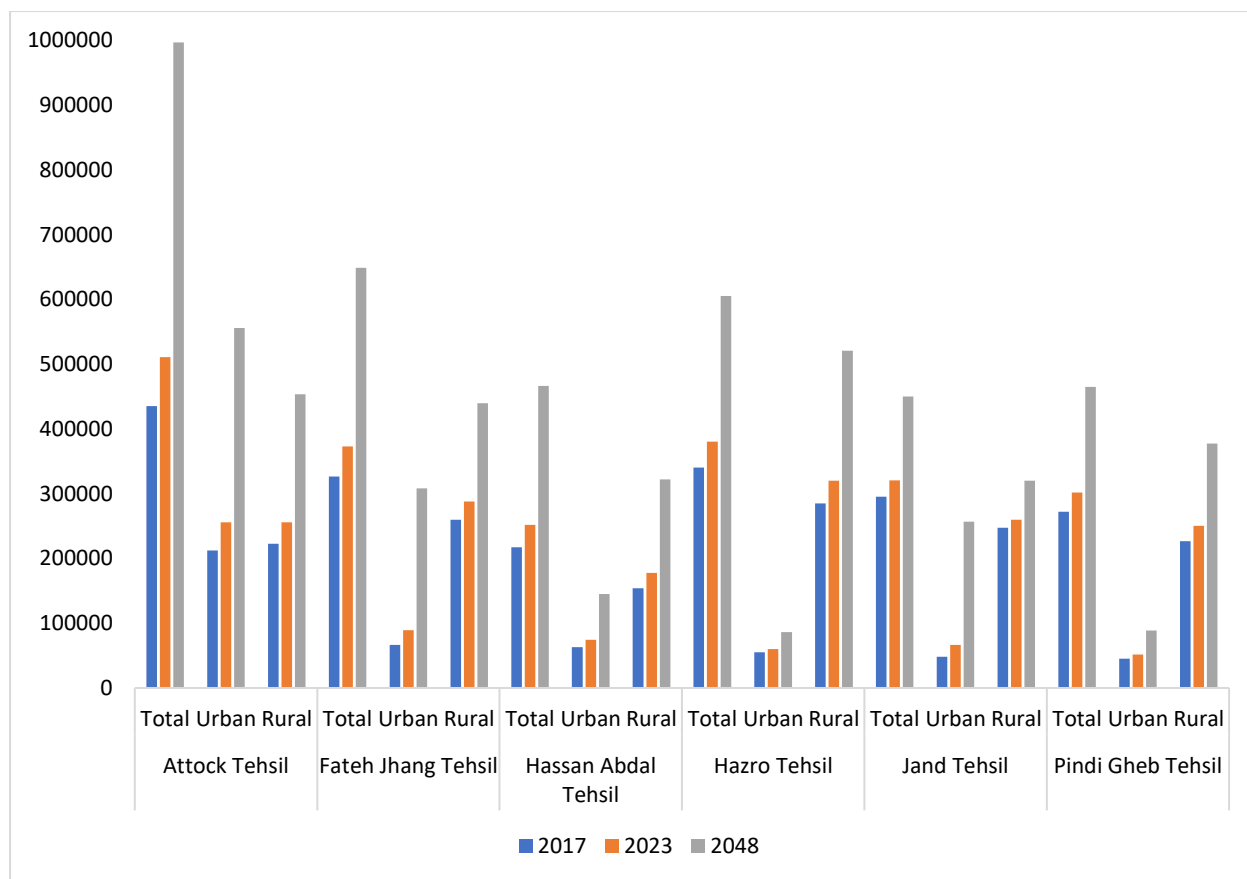


Figure 26. Population Growth in Tehsils of Attock District

3.2. Classification of Cities Based on Population

In order to identify the cities as small, intermediate or large, we can categorize them as per their population. For instance, a city with population of over 1 million individuals can be regarded as a large city, whereas a city with a population between 250,000 and 1 million can be considered an intermediate city. Similarly, a city with population between 100,000 and 250,000 can be called a small city. The table below summarizes this.

Table 5. Categorization of cities based on population.

Large Cities	> 1,000,000
Intermediate Cities	250,001 - 1,000,000
Small Cities	100,000 - 250,000
Towns	< 100,000

3.2.1. Classification of Urban Areas in Rawalpindi District

Based on the above classification, the tehsils in the Rawalpindi District are categorized as illustrated in the below table.

Table 6. Classification of Cities/Urban Areas in Rawalpindi District

Urban Area	Projected Population 2023	City Classification (2023)	Projected Population 2033	City Classification (2033)	Projected Population 2048	City Classification (2048)
Rawalpindi City	1,287,549	Large City	1,571,054	Large City	2,117,543	Large City
Rawalpindi Cantonment	772,859	Intermediate City	990,291	Intermediate City	1,436,336	Large City
Wah Cantonment	465,194	Intermediate City	653,038	Intermediate City	1,086,166	Large City
Chaklala Cantonment	318,790	Intermediate City	375,104	Intermediate City	478,764	Intermediate City
Murree MC	312,221	Intermediate City	1,079,716	Large City	6,943,547	Large City
Gujar Khan MC	104,118	Small City	132,372	Small City	189,759	Small City
Taxila MC	74,359	Town	87,926	Town	113,056	Small City
Kahuta MC	87,053	Town	159,164	Small City	393,495	Intermediate City
Taxila Cantonment	72,020	Town	113,678	Small City	225,428	Small City
Kallar Syedan MC	59,941	Town	70,808	Town	90,910	Town
Kotli Sattian MC	25,138	Town	30,464	Town	40,640	Town
Daultala MC	27,993	Town	42,159	Town	77,922	Town
Murree Hills Cantonment	9211	Town	10,054	Town	11,466	Town

The above table indicates that while Rawalpindi will maintain its current status of large city in 2048, other cities such as, Wah Cantt, Rawalpindi Cantonment, and Murree MC will also

become large cities from their current status of intermediate city as their population will cross 1 million threshold. The population of Murree MC is growing at such a high pace that it will avail this status of large city by 2033 while the other two MCs will be intermediate cities by 2033. Similarly, the Kahuta MC will become an intermediate city in 2048, while its status will change to small city by 2033 from its current status of town due to population growth.

These projections indicate that the cities in Rawalpindi district will be needing adequate urban living conditions and upgraded facilities to cater the needs of growing population. Appropriate and sustainable urban plans are required to be implemented on an immediate basis to meet the needs of the growing population.

3.2.2. Classification of Urban Areas in Chakwal District

The following data indicates the population growth and consequent status of urban areas in Chakwal District.

Table 7. Classification of Cities/Urban Areas in Chakwal District

Urban Area	Projected Population 2023	City Classification (2023)	Projected Population 2033	City Classification (2033)	Projected Population 2048	City Classification (2048)
Chakwal MC	163,884	Small City	217,694	Small City	333,282	Intermediate City
Tala Gang MC	75,720	Town	99,996	Town	151,757	Small City
Kallar Kahar MC	26,883	Town	31,851	Town	41,075	Town
Choa Saidan Shah MC	26,595	Town	34,952	Town	52,658	Town
Bhuan MC	20,879	Town	24,736	Town	31,900	Town
Lawa MC	17,002	Town	19,634	Town	24,367	Town

According to the population projections, Chakwal MC will become an intermediate city by 2048. The status of all other tehsils will remain the same. Therefore, it is essential to pay attention on the Chakwal MC area. Adequate measures should be adopted to improve the urban living conditions in this tehsil to meet the demands of its population.

3.2.3. Classification of Urban Areas in Jhelum District

The following data indicates the classification of tehsils in Jhelum district based on their population.

Table 8. Classification of Cities/Urban Areas in Jhelum District

Urban Area	Projected Population 2023	City Classification (2023)	Projected Population 2033	City Classification (2023)	Projected Population 2048	City Classification (2048)
Jhelum MC	191,263	Small City	223,504	Small City	282,337	Intermediate City
Dina MC	64,285	Town	78,671	Town	106,505	Small City
Khewra MC	36,867	Town	41,251	Town	48,824	Town
Pind Dadan Khan MC	34,675	Town	44,300	Town	63,972	Town
Sohawa MC	32,885	Town	48,072	Town	84,966	Town
Mangla Cantonment	17,153	Town	18,687	Town	21,248	Town
Jhelum Cantonment	15,783	Town	14,997	Town	13,889	Town

From the above estimates, it becomes evident that only Jhelum MC has the status of a small city while other tehsils have the status of town in the Jhelum district, based on the city classification criteria. All tehsils in Jhelum will maintain their status in 2033 too. However, the Jhelum MC will become an intermediate city by 2048 while Dina MC will avail the status of small city by 2048. This indicates higher urban population growth in these tehsils as compared to the population growth levels in other tehsils of Jhelum district.

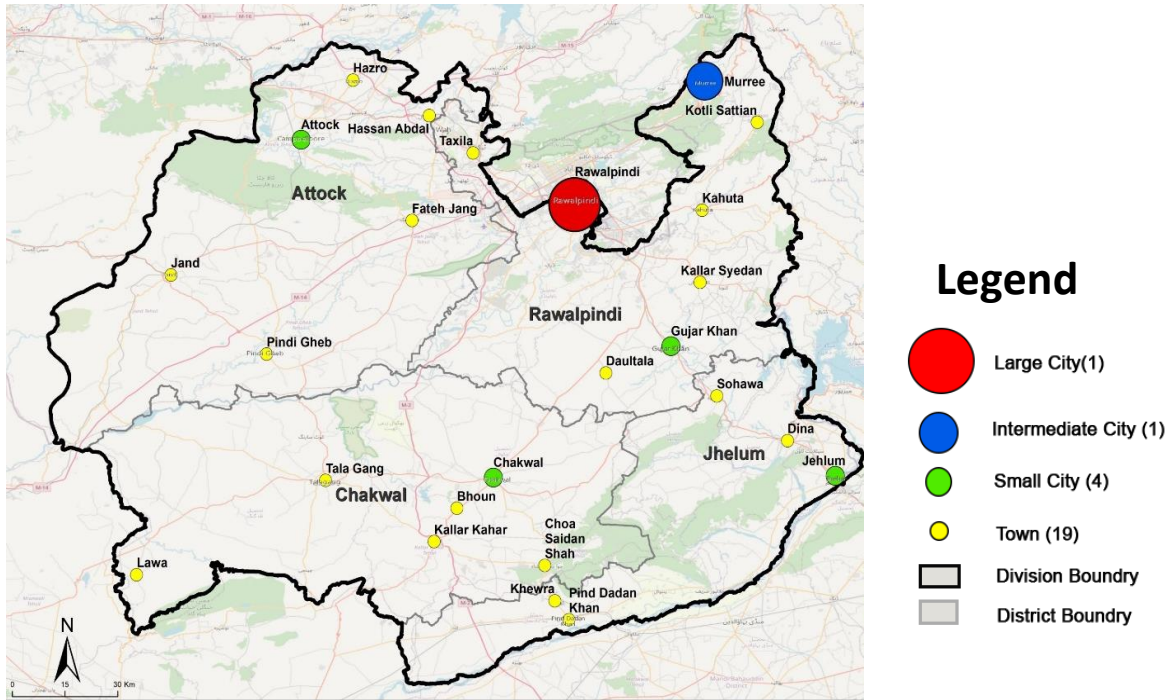
3.2.4. Classification of Urban Areas in Attock District

The below data provides information about classification of urban areas in Attock district.

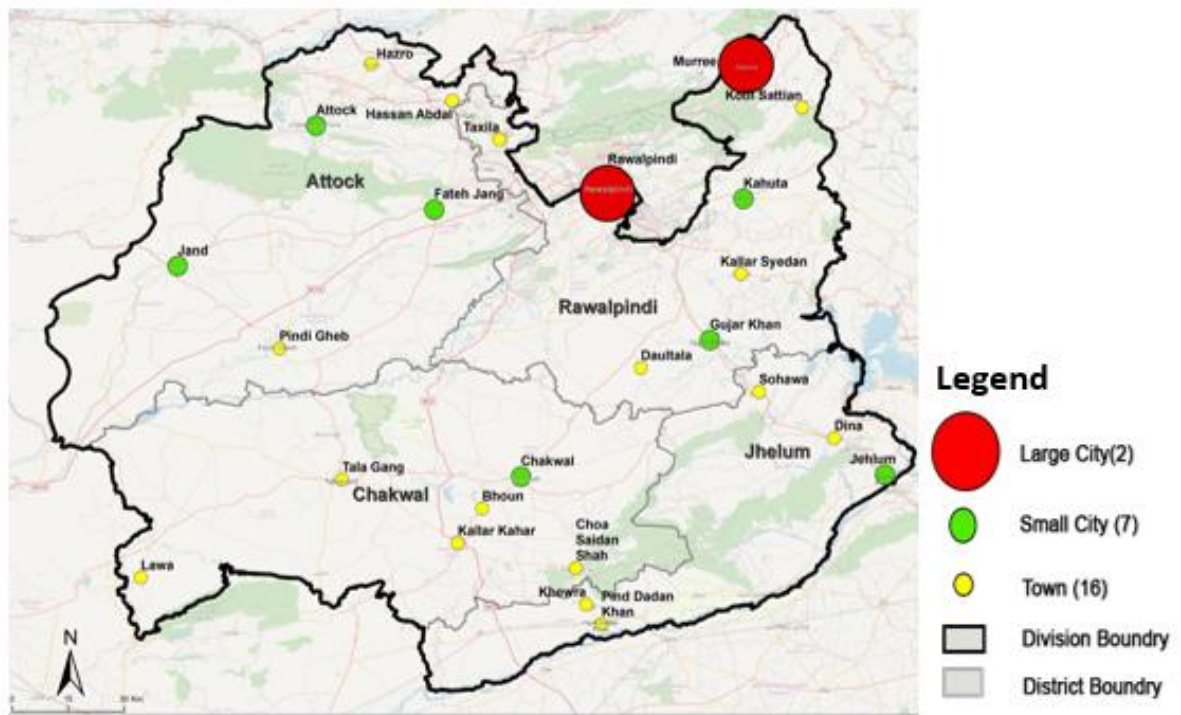
Table 9. Classification of Cities/Urban Areas in Attock District

Urban Area	Projected Population 2023	City Classification (2023)	Projected Population 2033	City Classification (2023)	Projected Population 2048	City Classification (2048)
Attock MC	157,825	Small City	245,567	Small City	476,607	Intermediate City
Fateh Jang MC	89,422	Town	146,494	Small City	307,172	Intermediate City
Hasan Abdal MC	74,219	Town	96,972	Town	144,822	Small City
Kamra Cantonment	61,080	Town	73,080	Town	95,644	Town
Jand MC	66,565	Town	114,027	Small City	255,651	Intermediate City
Pindi Gheb MC	51,499	Town	64,018	Town	88,730	Town
Hazro MC	44,389	Town	53,793	Town	71,762	Town
Attock Cantonment	29,009	Town	35,431	Town	47,826	Town
Ghur Ghushti MC	16,086	Town	16,658	Town	17,554	Town
Sanjwal Cantonment	11,483	Town	12,597	Town	14,474	Town

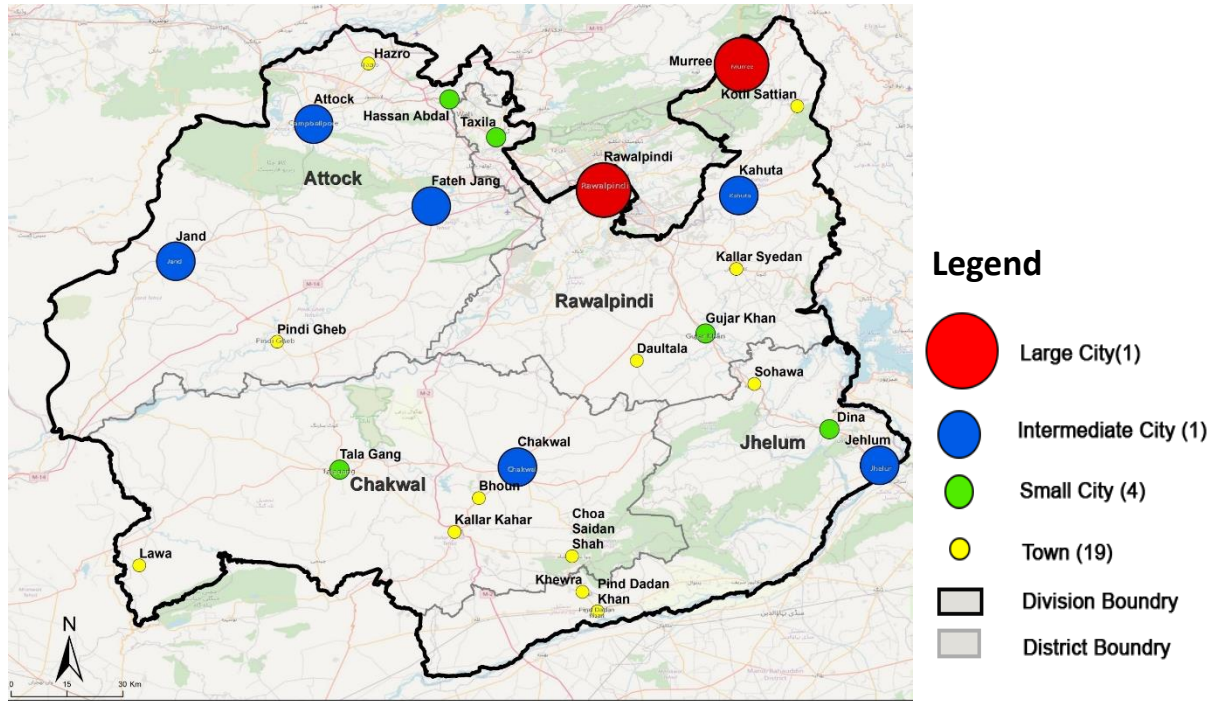
In Attock District, the Attock MC, Fateh Jang MC, and Jand MC will become intermediate cities by 2048. Among them, the Fateh Jang MC and Jand MC will also avail the status of small cities by 2033 as compared to their current status of ‘town’. Pertinently, all other cities will retain the status of ‘town’ by 2048. Therefore, a priority focus should be given on Attock MC, Fateh Jang MC, and Jand MC for carrying out urban development. The above discussion is also illustrated in the below Maps.



Map 2. Classification of Cities/Urban Areas of Rawalpindi Division based on 2023 Projected Population



Map 3. Classification of Cities/Urban Areas of Rawalpindi Division based on 2033 Projected Population



Map 4. Classification of Cities/Urban Areas of Rawalpindi Division based on 2048 Projected Population

SECTION 4: SPATIAL ANALYSIS

This section of the report includes a spatial analysis of the Rawalpindi Division.

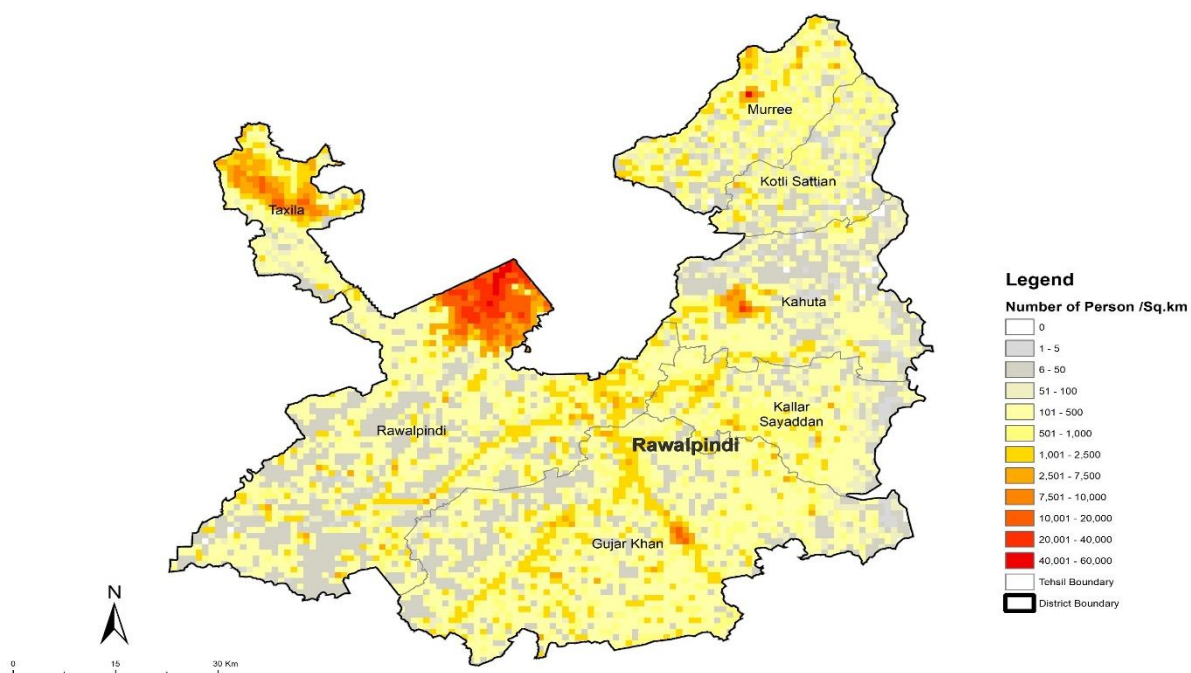
4.1. Population Density in Rawalpindi Division:

In Rawalpindi Division, the Rawalpindi District has the highest population density of 1022 per square kilometers. Jhelum, Chakwal, and Attock districts have population densities of 340.8, 229, and 275 square per kilometers, respectively. The high population density in Rawalpindi District is attributed to the high population in the district. On the other hand, the other three districts have relatively lower population as compared to the Rawalpindi district. The below data indicates this.

Name of the District	Area	Avg. Population Density per Sq. Km (2017)
Rawalpindi	5,286	1,022
Jhelum	3,586	340.8
Chakwal	6,530	229
Attock	6857	275

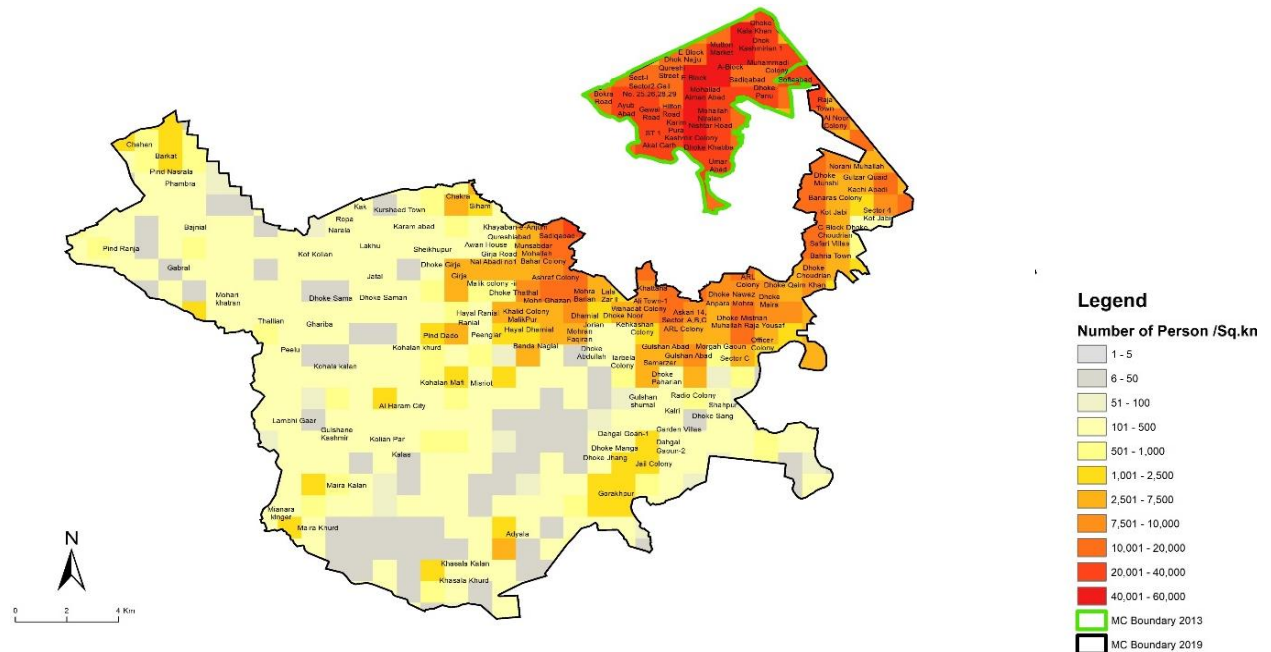
Source: Census 2017

4.1.1. Rawalpindi District



Map 5. Population Density Map of Rawalpindi District

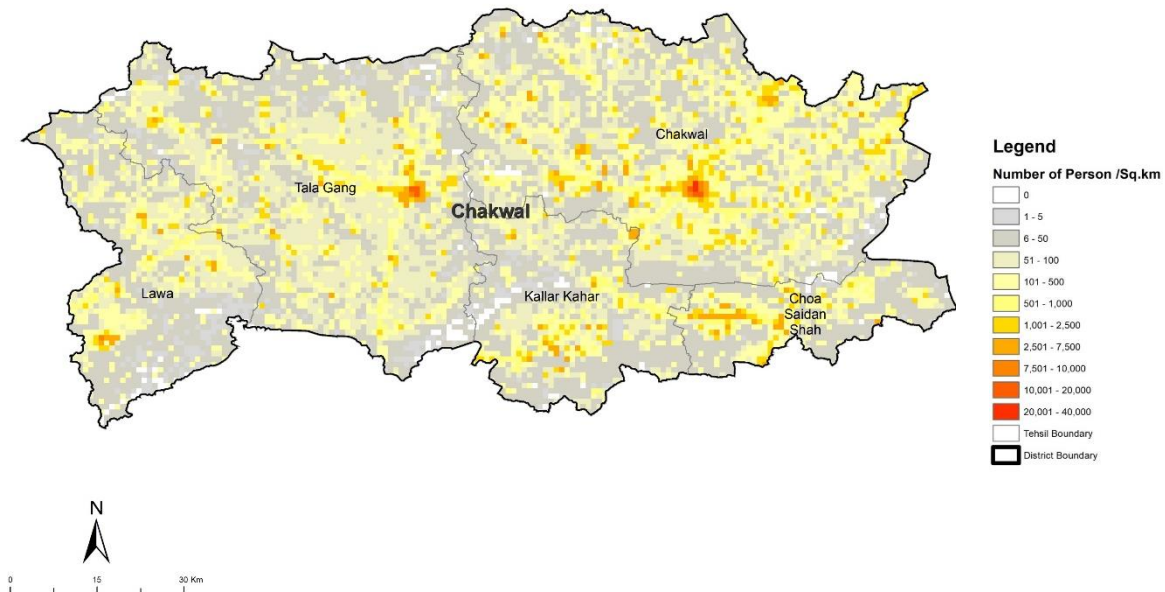
In Rawalpindi district, the population is widely dispersed in all tehsils, however, the MC centers have higher densities as they are highlighted in the map with red color. The highest population density lies in the Rawalpindi MC and then, in Taxila MC. The below map of the Rawalpindi city further illustrates this:



Map 6. Population Density Map of Rawalpindi City

Within Rawalpindi city, the highest population density is on the northeastern side of the city. This area borders the federal capital and has higher urban facilities, especially in terms of roads and connectivity.

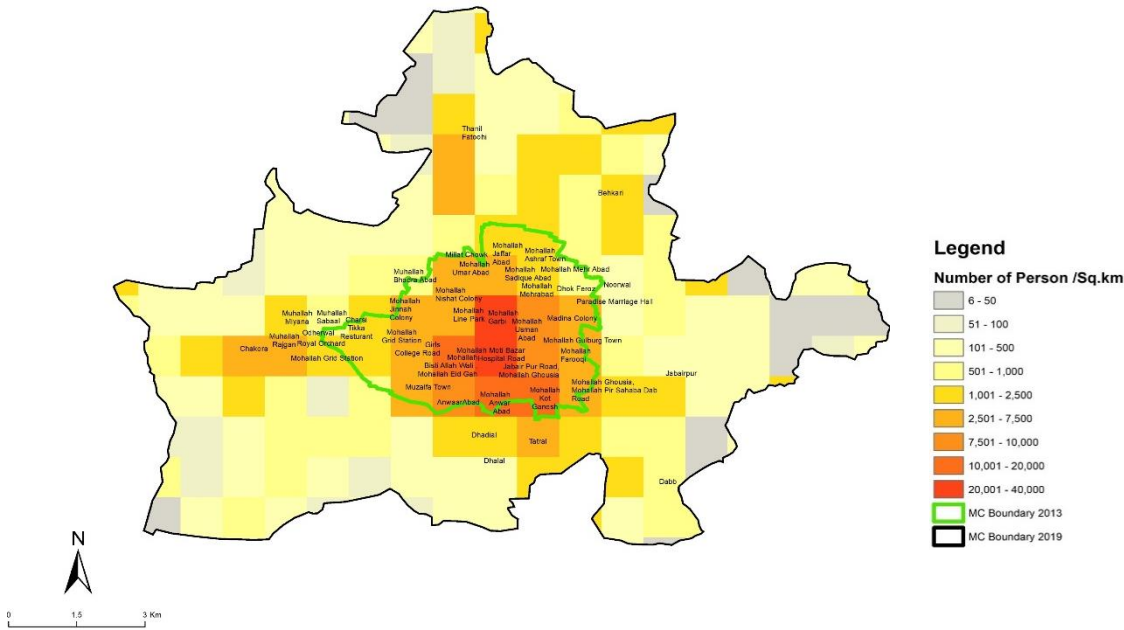
4.1.2. Chakwal District



Map 7. Population Density in Chakwal District

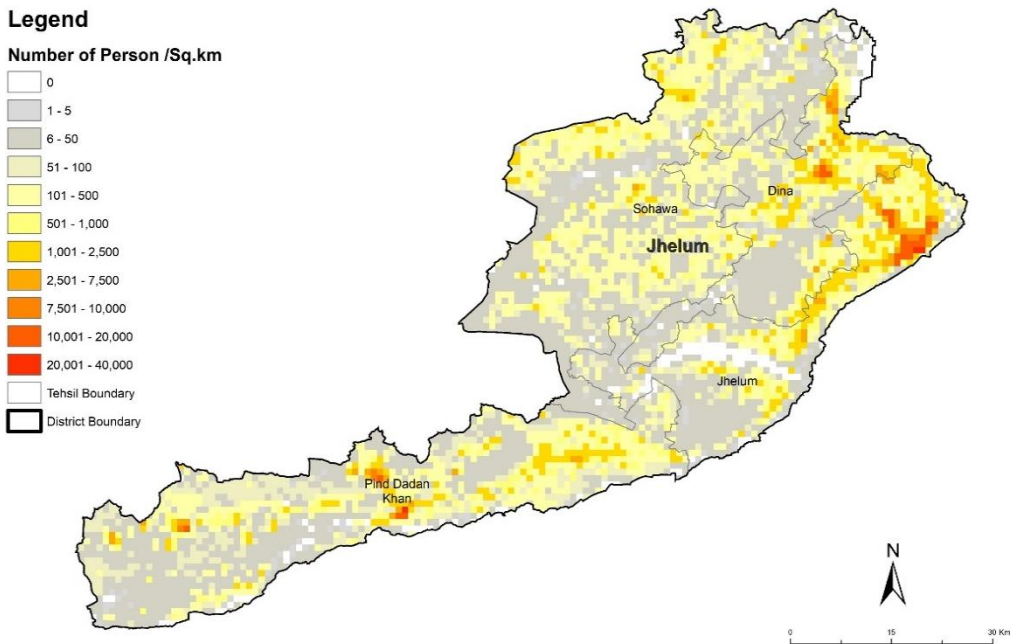
In Chakwal District, the average population density is lower than the Rawalpindi district, with fewer dense concentrations and a greater uninhabited area. However, the population becomes denser in MC centers as compared to the peripheral areas. As evident from the above map, the Chakwal MC appears to have more red-colored areas indicating a relatively higher population density.

The below map of Chakwal MC further clarifies that the population is dense in the center of the city and thus, Chakwal MC can be said to have a concentric model of development.



Map 8. Population Density in Chakwal City

4.1.3. Jhelum District

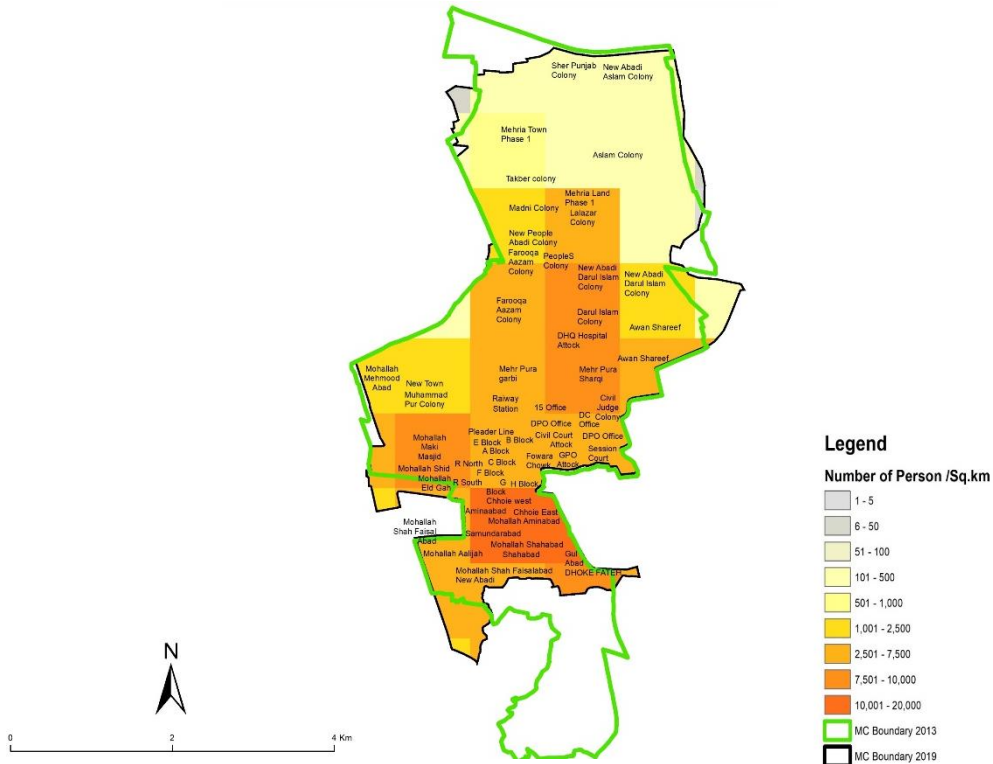


Map 9. Population Density in Jhelum District

In Jhelum district, the population is denser on the eastern side of the district, where the major urban center is located.

Similar to other districts in Rawalpindi division, the Jhelum MC has higher population density as compared to population density of the Jhelum district. The highest density is observed in the

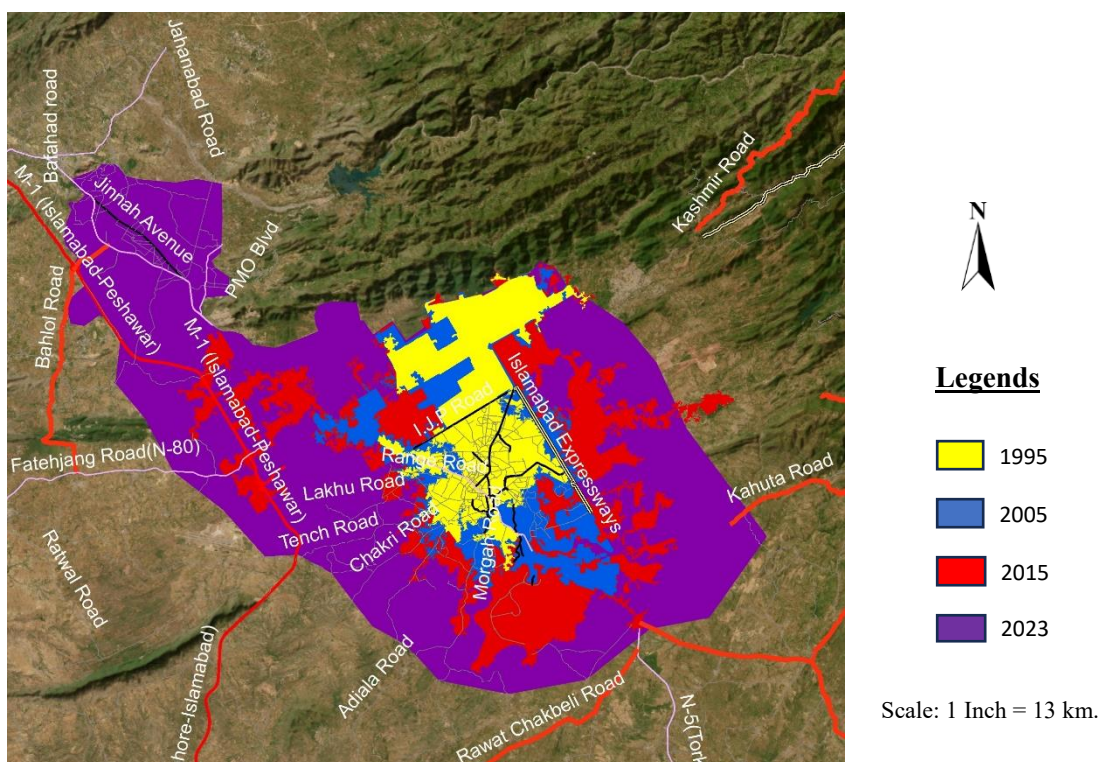
The Attock district has a relatively lower population density as compared to the Rawalpindi district. Its population is denser in MC centers as evident from the above map. Within the Attock MC, the population is largely denser at the center of MC area. Therefore, more development is at the center of the MC.



Map 12. Population Density in Attock City

4.2. Built-up Area Expansion

4.2.1. Rawalpindi City



Map 13. Built-Up Area Expansion in Rawalpindi City

In Rawalpindi city, the built-up area expansion until 2015 primarily took place at and around the center of the city. In this time period, urban expansion is observed in the form of infill development of the oldest urban core (represented in yellow) and gradual expansion of the urban center on all sides (except north, where the MC Boundary is located). From 2015 to 2023, urban expansion has continued at a high much higher pace, and although the trend of development around all sides of the urban center has continued, there is also significant urban expansion in the northwestern direction along the Islamabad Peshawar motorway. Overall, urban expansion has occurred alongside Chakri road, Islamabad-Peshawar motorway, and along the periphery of Islamabad Expressway. New housing societies are emerging on this side of the city, which is creating the growth trend and expansion of the city at this side.

The data below illustrates that most of the expansion in built-up area has taken place after 2015. That is, the built-up area has grown from 494 sq.km to 1212 sq.km. This indicates a rapid urban expansion in Rawalpindi city in recent years. The built-up area has grown more than two times (716 sq.km) in the past eight years as compared to an increase of 248 sq.km in twenty years (1995-2015).

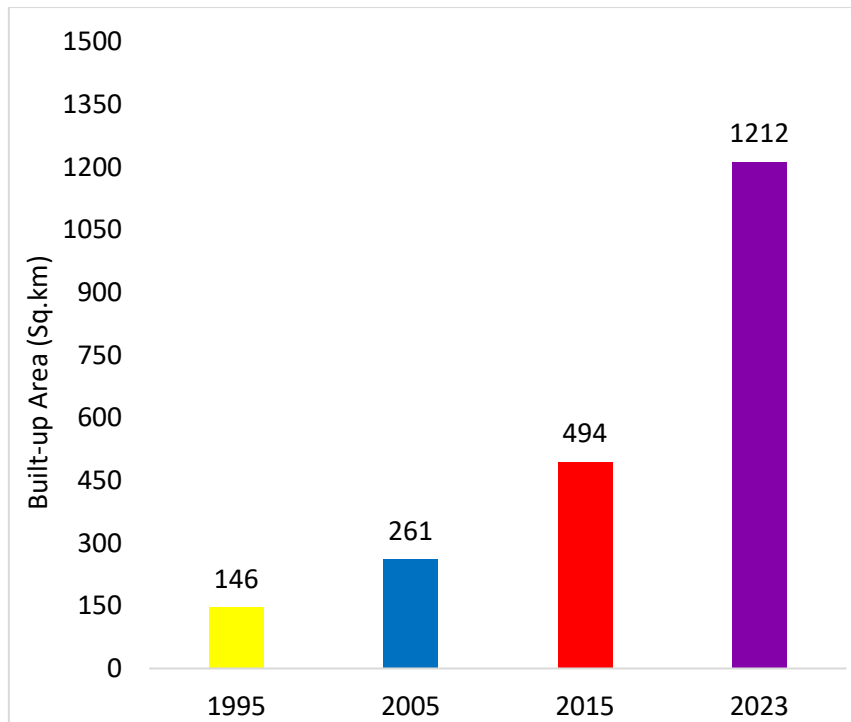


Figure 27. Built-up Expansion in Rawalpindi City (in square kilometers)

The percentage of increase in built-up expansion is further shown in the graph below. The 145% increase indicates that the built-up area expanded more than the existing total built-up area.

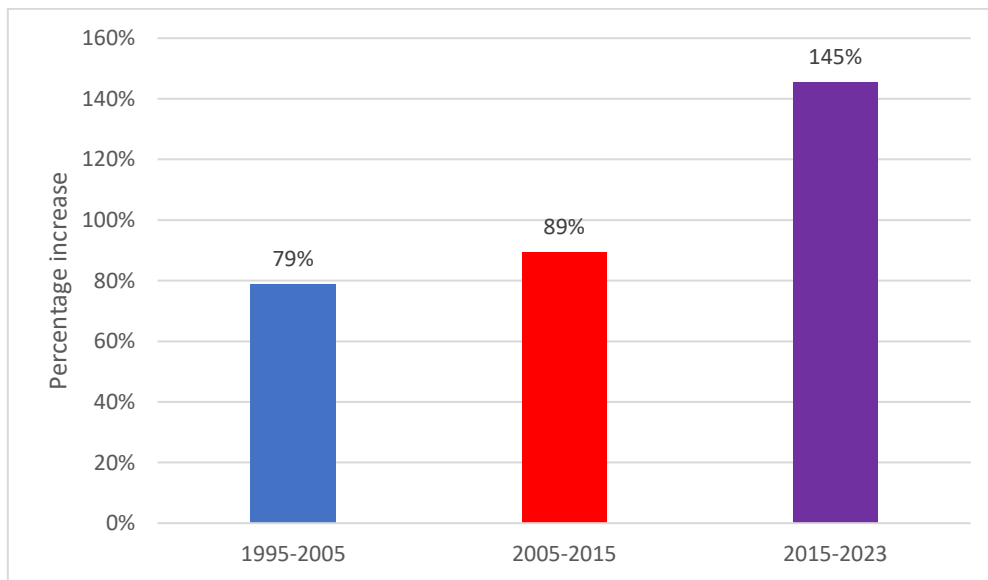
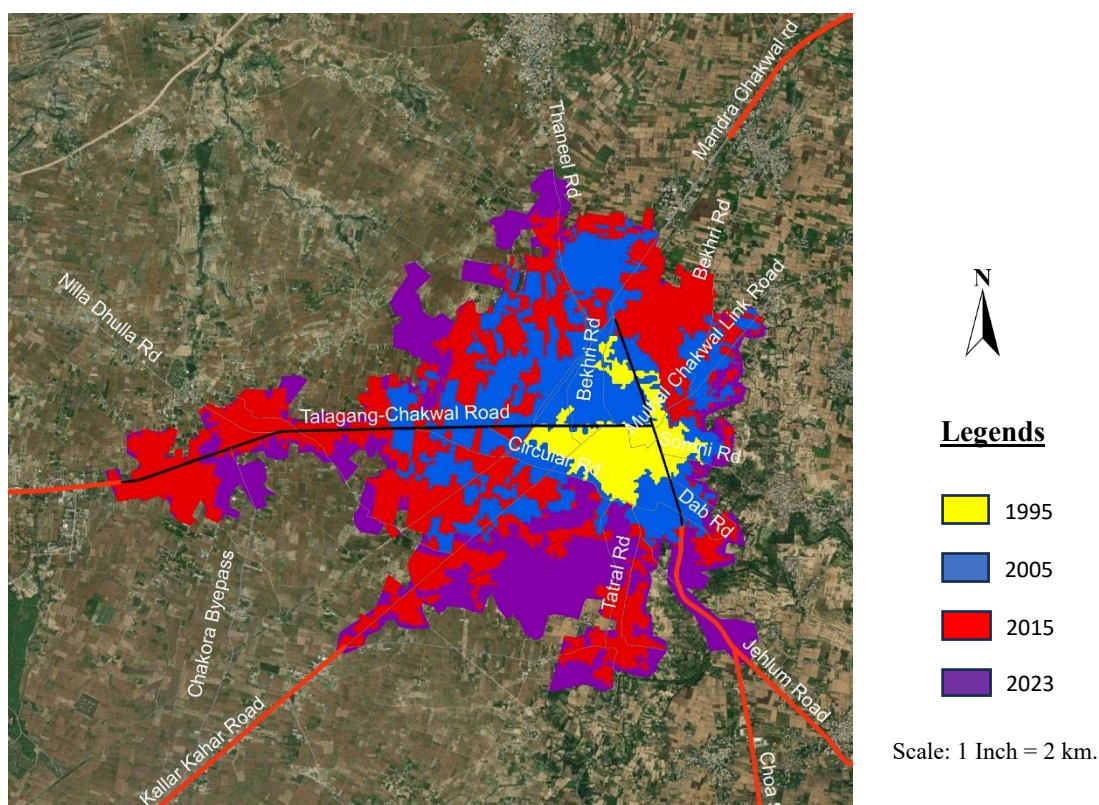


Figure 28. Percentage increase in built-up area expansion in Rawalpindi city

4.2.2. Chakwal City



Map 14. Built-Up Area Expansion in Chakwal City

In Chakwal city, the built-up area expanded at the center of the city till 2005. However, after that, the much of of built-up expansion took place direction alongside Talagang-Chakwal Road and Bekhri Road until 2015. After 2015, majority of the built-up expansion has taken place at the Southern side of the city and some along the Jhelum Road and Talagang-Chakwal Road too. The reason for expansion is that the Talagang-Chakwal road is the major highway connecting Chakwal city. Therefore, the residential and commercial growth is taking place on its periphery, which is consequently creating growth trend towards this side of the city.

The data below shows that the built-up area expanded more than 5 times from 1995 to 2005 (i.e., increased from 1.2 sq.km to 6.2 sq.km). The built up area again more than doubled until 2015 i.e., from 6.2 sq.km to 13.6 sq.km indicating urban growth in Chakwal city. After that, the built-up expansion has now reached 18 sq.km until 2023.

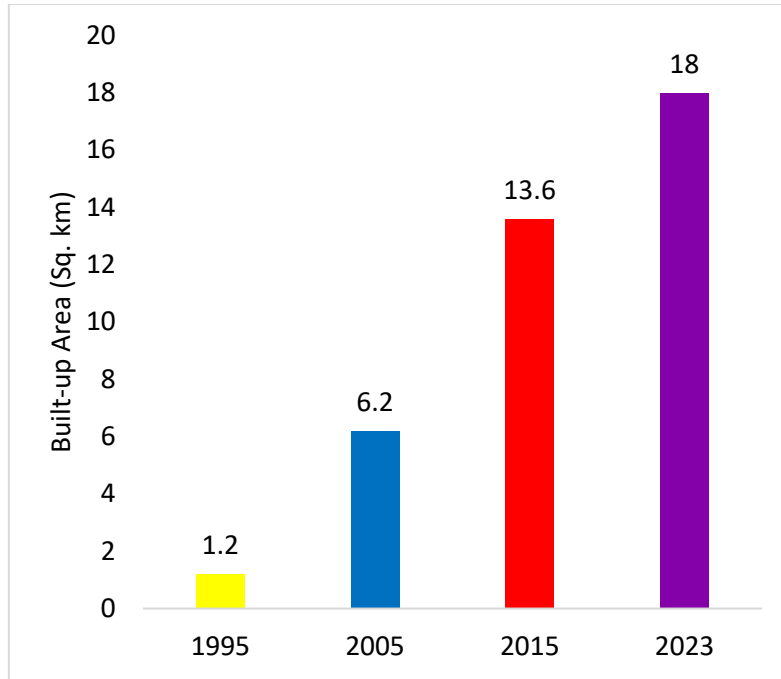


Figure 29. Built-up Expansion in Chakwal City (in square kilometers)

The above shown status of built-up area expansion has also been shown in percentages below.

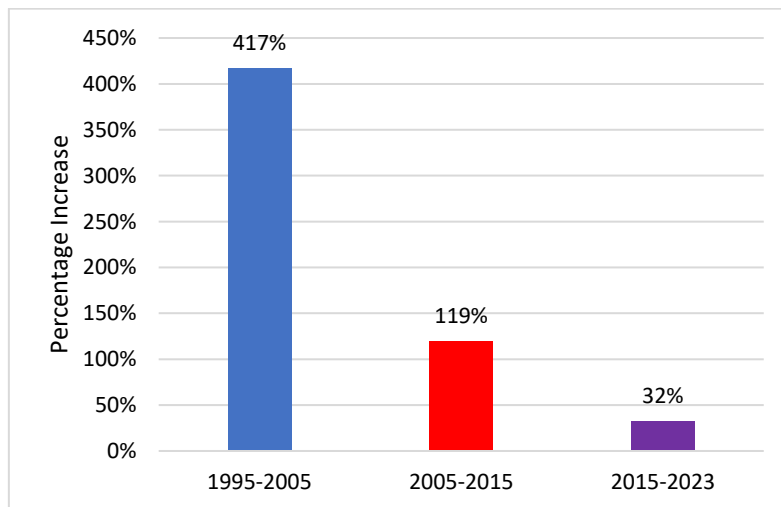
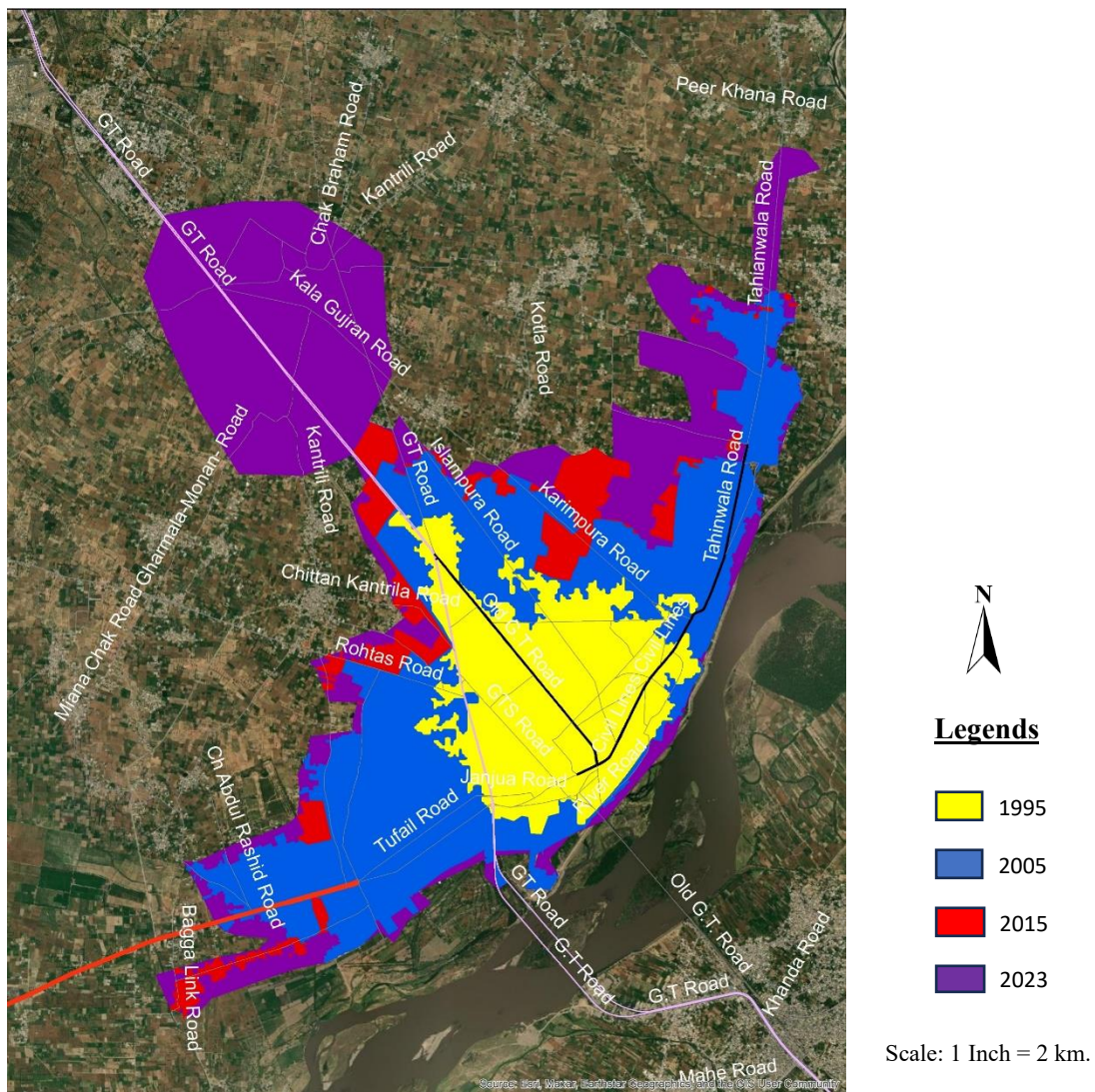


Figure 30. Percentage increase in built-up area expansion in Chakwal city

4.2.3. Jhelum City



Map 15. Built-Up Area Expansion in Jhelum City

In Jhelum city, the built-up expansion has taken place mostly adjacent to the Jhelum river until 1995 and subsequently, expansion occurred evenly around the center of the city, along Jhelum river till 2005. From 2005 to 2015, small expansion in built-up took place in the city and that was along Karimpura Road, Rohtas Road, and GT Road at the northern side of the city. Nonetheless, after 2015, significant expansion in built-up area has taken place at the northern side of the city around GT Road and Kala Gujran Road. In this period, built-up area has also grown alongside Tahianwala Road at the north-east side of the city. The reason for expansion in built-up area here is the presence of the GT road that serves the connectivity needs of the people and invites commercial and residential expansion along both sides of the road.

The below data further confirms the above explained expansion of built-up in the city. The built-up area increased almost three times from 5.4 sq.km in 1995 to 15.7 sq.km by 2005. After

that, the built-up area expanded only 2 sq.km to 17.7 by 2015 and to 20 sq.km by 2023. The slowing up of pace of built-up area expansion signifies a lack of development in the urban area in Jhelum city.

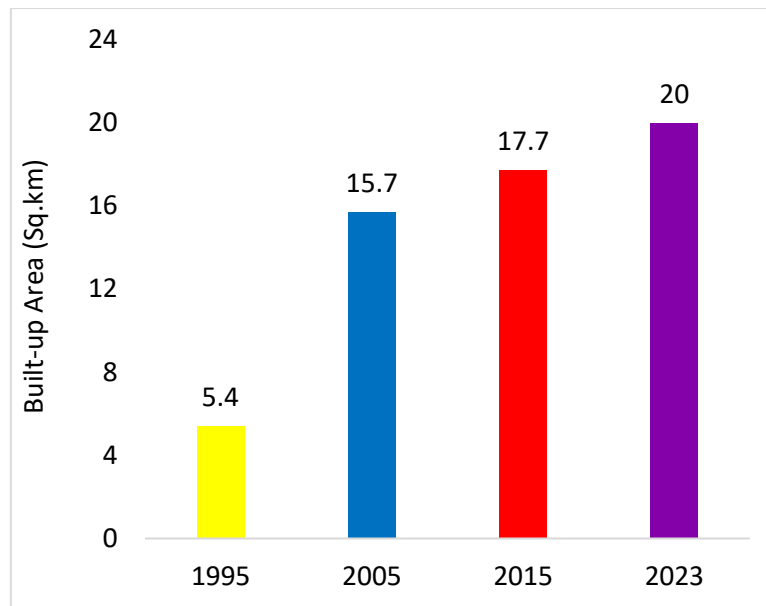


Figure 31. Built-up Expansion in Jhelum City

The above illustrated increase in built-up area expansion has also been shown in percentages below.

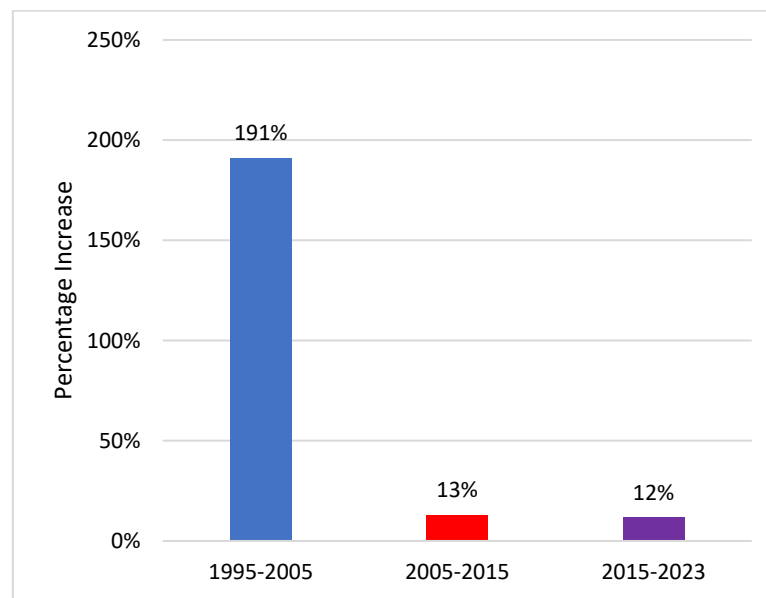
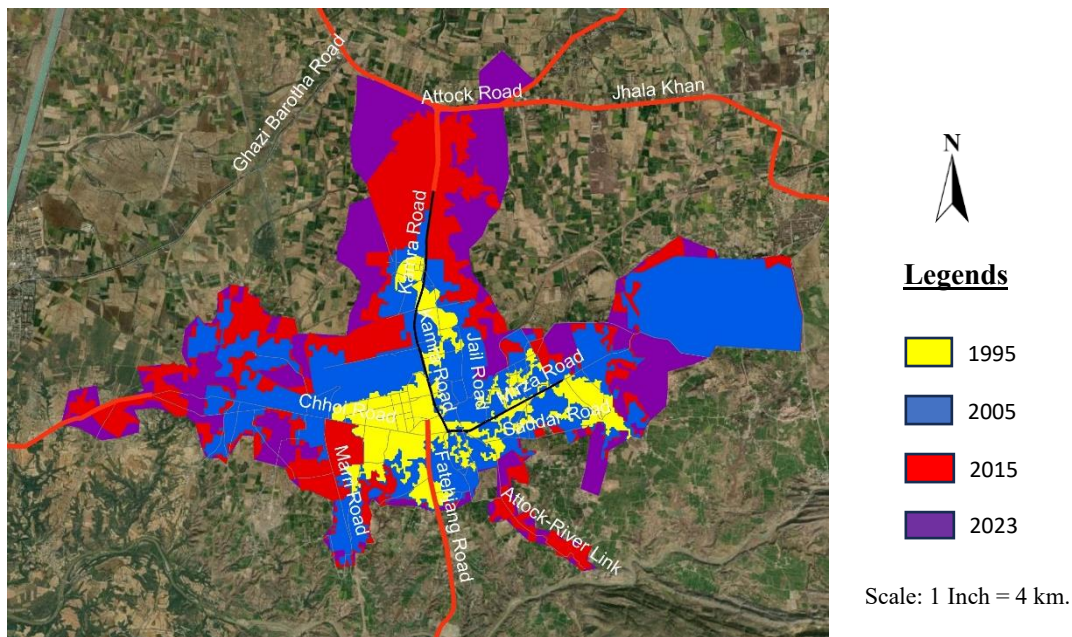


Figure 32. Percentage increase in built-up area expansion in Jhelum city

4.2.4. Attock City



Map 16. Built-Up Area Expansion in Attock City

In Attock city, the built-up area expanded at the center of the city and alongside it especially, at the eastern side of the city until 2005. After that, the majority of expansion took place at the northern side of the city and at the western side. Some developments also took place across the Attock River link. Since 2015, the majority of expansion has taken place alongside Attock Road at the north side of the city. The reason for expansion along these roads is due to the presence of the river at the southern side of the city, which facilitates growth only at the northeastern, eastern and western side of the city. Pertinently, since new residential colonies are emerging at the northern side, therefore, the expansion is rapid in that area.

The below data signifies that the built-up area expanded more than four times i.e., from 4.2 sq.km to 18 sq.km from 1995 to 2005. After that, the area expanded from 18 sq. km to 27.8 sq. km. from 2005 to 2015. Since 2015, the area expanded to 35 sq.km indicating an increase of 7.2 sq.km.

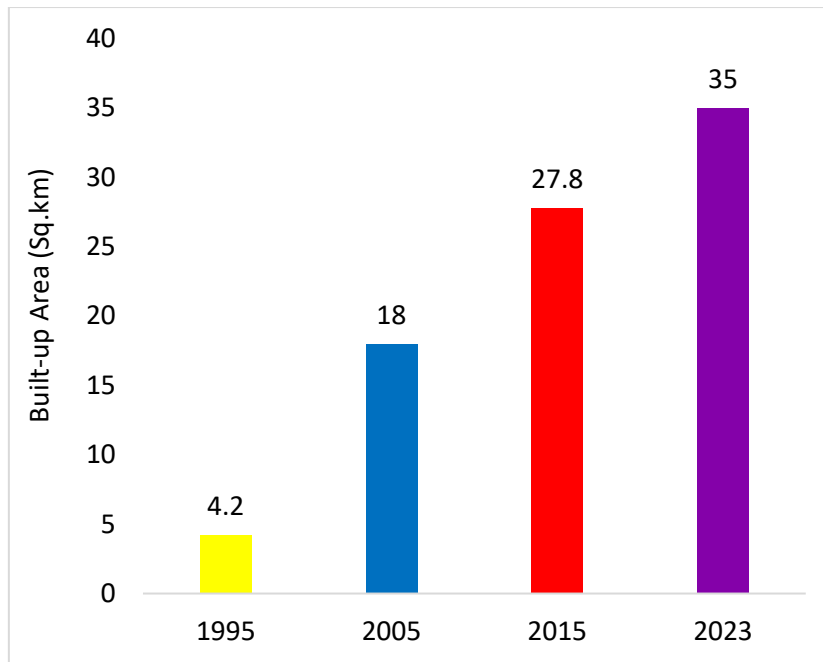


Figure 33. Built-up Expansion in Attock City

The above shown increase in built-up area expansion has also been illustrated in percentages in the below chart.

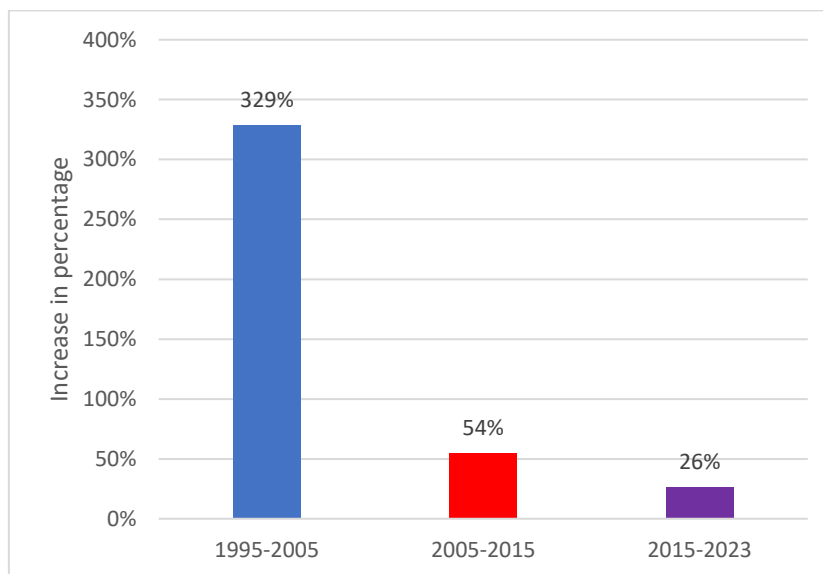


Figure 34. Percentage increase in built-up area expansion in Attock city

In short, the built-up area expansion has taken place in all four cities. The expansion in built-up area is indicating towards urban development as well as towards rise in urban population.

SECTION 5: ISSUES AND CHALLENGES

This section of the report summarizes the key issues and challenges that exist in the urban areas of the Rawalpindi division. As per the scope of this report, the issues and challenges related to the urban planning sector were particularly noted. All commercial and residential areas of MCs were especially surveyed to identify the main issues there.

5.1. Rawalpindi District

5.1.1. MC Rawalpindi

5.1.1.1. Parking Issues

A major issue in Rawalpindi city is related to parking. There is a significant shortage of parking spaces in Rawalpindi city, which creates problems of encroachment and traffic congestion at often. In particular, the bazars such as, Raja Bazar and its connected bazars face this issue of shortage of parking plaza to a greater extent.



Figure 35. Haphazard Parking in Raja Bazar and Connected Area

Although there is a parking plaza outside Raja Bazar, but this plaza lacks the capacity to meet parking demands of the vehicles which flow through Raja bazar and its connected areas on daily basis. Therefore, illegal parking of motorbikes and other vehicles is present outside this plaza too.



Figure 36. Illegal parking alongside the wall of plaza (outside plaza)



Figure 37. Illegal Parking in the Bazar area.

5.1.1.2. Haphazard Growth

Haphazard growth is taking place in Rawalpindi city, which is causing the emergence of unsustainable development patterns in the city. This growth is usually the consequence of rapidly growing population of the city, migration from other areas to the city, and the consequent growing housing demand in the city.

5.1.1.3. Open Drains and Manholes

In several residential areas (e.g., in Sadiqabad, Pir Wadhaj, and other areas) and bazars (e.g., Kartar pura) of Rawalpindi city, the manholes and drains are uncovered.



Figure 38. Open drains in residential area near Nala Lai



Figure 39. Open manholes in different residential areas.

5.1.1.4. Poor Condition of Streets

In some residential areas, for example, in Sadiqabad, Ghareebabad, etc., the condition of streets is poor. The streets are broken and have solid waste and sanitation issues.



Figure 40. Condition of streets in Ghareebabad



Figure 41. Unpaved streets in Gulshanabad

5.1.1.5. Encroachments

Encroachments are present in several areas in Rawalpindi. Especially, the main roads and commercial areas are more prone to it. The Raja bazar and its connected areas, Faizabad, and the commercial area at Adyala Road have significant encroachment issues.



Figure 42. Encroachments by motorbikes and shopkeepers in Raja Bazar Area

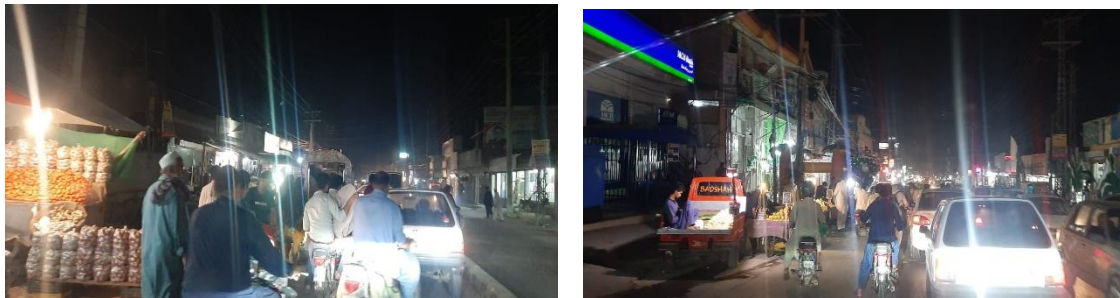


Figure 43. Encroachments at the side causing congestion for traffic at Adyala Road

5.1.1.6. Sanitation Issues

Sanitation issues are also present in several areas of Rawalpindi, especially in the residential areas e.g., in Sadiqabad, Nala Lai, Pir Wadhai, and other areas.



Figure 45. Sanitation Issue in area near Shamsabad



Figure 46. Sanitation Issue near Sadiqabad



Figure 44. Sanitation issue near Pir Wadhai

5.1.1.7. Solid Waste Management Issues

Unfortunately, massive dumping issues exist in several areas of Rawalpindi city. Solid waste issues and unclean open drains are present in every street in some areas such as, in Pir Wadhai, Nala Lai, Sadiqabad, and Kartar pura.



Figure 47. Cleanliness Issues in Residential Areas

5.1.2. MC Kahuta

5.1.2.1. Unpaved Roads

Many roads in MC Kahuta are not in good condition. In particular, there are broken patches on many roads.



Figure 48. Poor condition of roads (especially after rainfall)

5.1.2.2. Poor Condition of Streets

In majority of the residential areas in MC Kahuta, the condition of streets is poor. The streets are broken and have cleanliness issues too.



Figure 49. Streets are damaged in Mohallas

5.1.2.3. Solid Waste Issues

Solid waste issues are also found in some residential areas of MC Kahuta.



Figure 50. Solid Waste in Kahuta

5.1.2.4. Traffic Jams due to Absence of Traffic Management

In MC Kahuta, there is no traffic management observed in Kahuta MC. The traffic on many of the roads in MC Kahuta flows haphazardly which often creates the issue of traffic jams. For instance, the vehicles go opposite to the direction of the traffic at often times to create shortcut to their destination instead of following the right way of traffic.

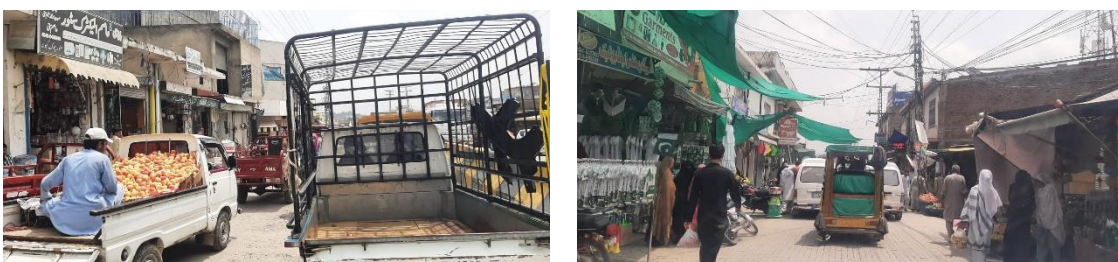


Figure 51. Traffic Jams at a main road (left) and in a bazar (right).

5.1.2.5. Absence of Urban Planning

MC Kahuta lacks proper urban plans measures. Even, the addresses of houses are not marked. The MC requires immediate ODP or land use plans.

5.1.2.6. Issues of Water Supply

Unfortunately, the water supplied for drinking has poor quality. It is supplied from a nearby water reservoir, which is brackish as shown in the image below.



Figure 52. This water is used by several households for drinking.
(Source of information: MC Office)

5.1.3. MC Kotli Sattian

5.1.3.1. Recurrent Traffic Jams in Main Bazar



Figure 53. Traffic Congestions in Main Bazar.

In the main bazar of Kotli Sattian, the traffic often takes place due to the congestion. The road in the main bazar has narrow width. Therefore, the traffic coming from both sides slows down on chowks, which creates long traffic jams.

5.1.3.2. High Loadshedding of Electricity and absence of Gas Facility

The electricity is usually not available for long hours in Kotli Sattian. Similarly, there is no gas facility in Kotli Sattian. The locals are required to cut trees and use wood for burning fire. This situation is also harmful for forests and natural habitats in Kotli Sattian.

5.1.3.3. Lack of Livelihood Earning Opportunities

There are very few or almost negligible opportunities to earn livelihood. Therefore, majority of the locals migrate to other cities such as, Rawalpindi to find livelihood opportunities.

5.1.3.4. Absence of Urban Planning

Kotli Sattian is often neglected when it comes to urban planning. Therefore, it urgently requires an up-to-date OD Plan or Land Use Plan.

5.1.3.5. Ignoring Potential Tourism Sites

There are some beautiful tourism sites in Kotli Sattian which can be promoted to attract tourists. However, they are neglected as of yet.

For instance, there is a forest rest house which is in poor condition now. In the past, it used to be one of the major destinations of tourists and notable personalities who used to visit and stay this.



Figure 55. Forest Rest House Kotli Sattian.



Figure 54. Poor Condition of the Rooms.

5.1.4. MC Taxila

5.1.4.1. Open Drains and Broken Streets especially in Bazars

In MC Taxila, open drains exist in bazars.



Figure 56. Open Drains and Broken Streets in Old Bazar.

5.1.4.2. Encroachments

Encroachment by vehicles especially, by rickshaws exist in commercial areas and on main chowks of almost all main roads.



Figure 57. Encroachment by Shopkeepers in Old Bazar



Figure 58. Encroachments by Vehicles at Sideways of Commercial Road.

5.2. Chakwal District

5.2.1. MC Chakwal

5.2.1.1. Encroachments and Lack of Parking Spaces

Encroachment issues are present in Chakwal. In particular, the commercial areas and main roads suffer from this issue. Mainly, the lack of proper parking spaces in the city generates the impulses for the locals to park their vehicles at the sideways of main roads and streets.

Likewise, the rickshaws are also parked at the sideways of main roads and especially, on main chowks. This further drives the problem of congestion on main roads.



Figure 59. Random Parking of Bikes, Rickshaw, and Cars at the Sideways of Road

5.2.1.2. Poor Condition of Streets in Some Residential Areas

In some residential areas, the streets are broken and unpaved. They are also unclean and have either solid waste or open drains. In particular, the streets in Mohallah Bhattian are unpaved and some are broken.



Figure 60. Unpaved and broken streets in Mohallah Bhattian



Figure 61. Open drains at sideways of a broken street

5.2.1.3. Lack of Public Spaces

There is a lack of availability of public spaces in Chakwal city. In particular, there is a significant shortage of parks and playgrounds in the city.

5.2.1.4. Open Dumping of Solid Waste

In Chakwal, the open dumping of solid waste has been observed at several locations. This issue is particularly common in residential areas where the solid waste is thrown either in vacant plots or at the sideways of streets.



Figure 63. Solid Waste Thrown at the Sides of Streets in Residential Areas



Figure 64. Open Dumping of Solid Waste in Vacant Plots in Residential Areas



Figure 62. Solid Waste Thrown at Chowks on Main Roads i.e., 15 Chowk, etc.

5.2.1.5. Open Drains

There are open drains at the sideways of streets in residential and commercial areas, which depicts uncleanliness.



Figure 65. Solid Waste in Open Drains at Sideways of Streets

5.2.1.5. Low HR Capacity

The MC office in Chakwal city lacks human resource capacity. The number of cleaning workers and other staff is declining every year. New posts are not filled, while the already serving employees are retiring. This is causing issues for the MC in running its operations smoothly.

5.2.2. MC Kallar Kahar

5.2.2.1. Unpaved Roads

Some of the main roads especially at the Talagang Road in Kallar Kahar MC's jurisdiction have broken patches. These roads are never repaired.



Figure 66. Broken patches of Main Road

5.2.2.2. Lack of Proper Urban Infrastructure

Kallar Kahar lacks proper urban infrastructure. The condition of houses and streets depicts this, as illustrated from below images. More particularly, the streets are unpaved in many areas.



Figure 67. The condition of houses on a road to Mohallas



Figure 68. Water supply pipe and drainage situation outside houses

5.3. Jhelum District

5.3.1. MC Jhelum

5.3.1.1. Poor Condition of Streets

In several residential areas, the condition of streets is extremely poor, as they are broken and have sanitation issues in them.



Figure 69. Poor condition of streets in several residential areas in Jhelum city

5.3.1.2. Open Drains

There are open drains in almost every residential area in Jhelum MC. These drains get flooded when rainfalls occur due to which the residents face problems.



Figure 70. Open Drains in Residential and Commercial Areas



Figure 71. A large open drain outside residential colonies

5.3.1.3. Sanitation Issues

There are sanitation issues in almost all residential areas in MC Jhelum. The sanitation issue becomes appalling in the aftermath of rainfall. The rainwater remains clogged in streets and roads. Often, the rainwater enters houses thus creating issues for the locals.



Figure 72. Sanitation Issues in Residential Areas.

5.3.1.4. Encroachments

Jhelum city also faces the issue of encroachment. More significantly, this issue occurs due to lack of availability of parking spaces in the city. Therefore, the cars, bikes, and rickshaws are parked at the sideways of main roads or in the streets, which ultimately create issues such as, road congestion for the ongoing traffic. This issue becomes more problematic in commercial areas, especially around Shandar Chowk.

5.3.1.5. Absence of Proper Public Transport

There is no proper public transport system in Jhelum MC. Only Chingchi rickshaws operate as public transport.

5.3.1.6. Cleanliness Issues and Open Dumping of Solid Waste

Solid waste issues are also present especially, in residential areas and more specifically, in small mohallas. Several residential areas lack cleanliness while there are also heaps of solid waste in some areas.



Figure 73. Open Dumping of Solid Waste



Figure 74. Solid Waste thrown in Streets and Drains in Residential Areas

5.3.1.7. Low Institutional Capacity

The government offices, especially the MC office, has a shortage of staff to control its operations in the city. For instance, there is a shortage of staff to collect solid waste from residential areas. The vacancies are not filled every year, which worsens the situation further.

5.4. Attock District

5.4.1. MC Attock

5.4.1.1. Lack of Urban Planning Measures

There is a lack of urban planning related measures implemented in Attock District and MC Attock so far. The last plan that was implemented in the MC was in 1996. Since then, no ODP or Land Use Plan has been formulated or implemented in Attock so far. Currently, a private

organization has been assigned to create the Land Use Plan of Attock, which is under process at the moment.

5.4.1.2. Open Drains

In Attock, a common issue was related to open drains. In almost every street of Attock city, there are open drains at the side of every street. Unfortunately, no attention has been given in covering them.



Figure 75. Open Drains in Some Residential and Commercial Areas in Attock

5.4.1.3. Lack of Public Spaces

Another issue in Attock city is that there is a lack of availability of open public spaces i.e., parks and playgrounds.

5.4.1.4. Open Dumping and Cleanliness Issues

In several residential areas of Attock, the issue of open dumping of solid waste is present.



Figure 76. Open Dumping of Solid Waste in Residential Areas.

5.4.2. MC Hasan Abdal

5.4.2.1. Absence of Urban Planning Measures

Similar to Attock MC, the Hasan Abdal MC also has no updated Land Use or Master Plan formulated so far. The last ODP was created in the 1990s and it has become outdated now. There is a need to create and implement updated land use plan or master plan in Hasan Abdal MC.

5.4.2.2. Broken Streets

A major issue in Hasan Abdal is that the streets are broken in residential and commercial areas.



Figure 77. Broken Streets in residential and commercial areas in Hasan Abdal.

5.4.2.3. Lack of Cleanliness

Furthermore, the streets also depict an ugly picture of cleanliness. This problem is common in Mohallas and in bazars.



Figure 78. Lack of Cleanliness in Streets in Residential Areas

5.4.2.4. Open Drains

Almost in every street in residential areas in Hasan Abdal MC, there are open drains, which require immediate overhaul.



Figure 79. Open drains in residential areas



Figure 80. Open Manhole in Main Bazar

5.4.2.5. Broken Roads

Several roads in Hasan Abdal MC area are broken. In majority of the roads, patches exist where rainwater remains clogged.



Figure 81. Broken Roads



Figure 82. Rainwater remains clogged in broken patches of road

5.4.2.6. Sanitation Issues

Hasan Abdal also has sanitation issues which are particularly present in bazars including the main bazar and Shah Jhoolan Bazar.



Figure 83. Condition of streets after rain

In sum, the Rawalpindi Division has issues related to lack of implementation of urban planning measures, open drains, poor condition of streets, encroachments, haphazard growth, and encroachment. These issues need to be resolved at the earliest. Especially, appropriate urban planning measures should be devised to upgrade the living conditions in the Rawalpindi Division.

SECTION 6: HOUSING SHORTAGE

The regional plan seeks to make sure that future growth is planned throughout the entire region in a way that benefits our communities, the economy, and the environment. Housing is one of the key sectors for such a plan. Calculating the housing needs for a region is important, because as the population grows, so does the demand for homes.

Identifying housing demand and shortages within an urban area is crucial for assessing unsustainable growth trends. Consequently, by relying on future population projections, an assessment was conducted to estimate housing demand and supply for every district within the Rawalpindi Division. This assessment was carried out using the 2017 census.

The total housing deficit is calculated from three components: i. the gap between housing demand i.e., the number of housing units needed to house the number of households in the area, and the housing supply; ii. the number of new housing units needed to allow overcrowded households to move into new housing units - that is, the housing deficit expressed in terms of overcrowded living conditions; and iii. the number of new housing units needed to replace dilapidated housing units - that is, the housing deficit expressed in terms of dilapidated living conditions.

Overcrowding is defined as a house where there are more than 3 persons living in a room, as per the 2007 guidelines of the United Nations on population and housing. The data on the number of overcrowded housing units, that is, housing shortage due to overcrowding is taken from the Census 2017.

Projected housing demand is calculated using the projected population and project average households' size:

$$\text{Housing Demand Year } X = \text{Projected Population Year } X / \text{Projected Average Household Size Year } X$$

Furthermore, the following formula is used to calculate the projected population:

$$N_t = P_e * (1 + r/100)^t$$

Where, N_t = Population of Future year

P_e = Present Population i.e. Population 2017 (Census 2017)

$r =$ Population growth rate i.e. Population Growth Rate 1998 – 2017

$t =$ Time Period in-between

And the following formula is used to calculate the projected average household size:

$$A_t = H_e * (1+r)^t$$

Where, $A_t =$ Average household size of Future year

$H_e =$ Present i.e. Average household size 2017 (Census 2017)

$r =$ Household size rate of change i.e. Household Size Rate of Change 1998 – 2017

$t =$ Time Period in-between

Furthermore, the projected housing supply has also been calculated, in order to assess the housing demand-supply gap:

$$S_t = P_e * (1+r/100)^t$$

Where, $S_t =$ Housing Supply of Future year

$P_e =$ Present Housing Supply I.e. Housing Units 2017 (Census 2017)

$r =$ Intercensal Housing Growth Rate 1998 – 2017

$t =$ Time Period in-between

Furthermore, the housing shortage due to overcrowding and housing shortage due to dilapidated housing replacement has also been calculated:

*Project Shortage due to overcrowding Year X = Projected Housing Supply Year X * Percentage of Overcrowded units 2017*

*Projected Shortage due to dilapidated housing replacement Year X = Projected Housing Supply * Percentage Dilapidated housing replacement 2017*

The estimated housing demand and housing deficit has been calculated for the years 2023, 2033, and 2048. The population was projected based on the population of 2017 census and average annual growth rate taken from the Pakistan Bureau of Statistics. Using this data, the housing deficit for 2023, 2033, and 2048 was estimated using the methodology described above. It is pertinent to mention here that only district-wise population is available in 2023 census, therefore the consultant has used the 2017 census data for estimating cities population and housing demand.

The analysis revealed a prevalent housing deficit throughout the entirety of the Rawalpindi region, as depicted below:

Table 10. Total Housing Shortage in Districts of Rawalpindi Division

Name of Districts	2017	2023	2033	2048
Rawalpindi District	504,083	593,997	780,488	1,174,061
Attock District	247,397	278,440	338,077	448,627
Chakwal District	230,394	259,521	313,815	405,993
Jhelum District	159,708	189,513	240,404	324,027

In Rawalpindi District, the total housing shortage in 2017 was 504,083 units which has reached to 593,997 housing units in 2023. This shortage is expected to rise to 780,488 housing units by 2033 and 1,174,061 units by 2048.

On the other hand, the housing shortage in Attock district in 2017 was 247,397. This shortage has reached to 278,440 in 2023. For future, it is projected that the housing shortage in 2033 and in 2048 in Attock district will be 338,077 and 448,627 units.

In Chakwal district, the housing shortage was 230,394 in 2017. In 2023, the housing shortage in Chakwal is now at the level of 259,521. For future, this shortage will reach to 313,815 by 2033 and 405,993 by 2048, respectively.

Similarly, in Jhelum district, the housing shortage was 159,708 in 2017. This shortage is now at the level of 189,513 in 2023. Furthermore, it will become 240,404 by 2033 and 324,027 by 2048, respectively.

In short, the housing shortage in each district is rising, and it will continue to increase in the future as well. The shortage is mostly qualitative in nature, that is, people are living in overcrowded and dilapidated housing conditions due to a lack of affordable and viable housing

options in the market. The above numbers include the housing shortage in the urban as well as rural areas in the four districts of Rawalpindi. Now, the details of housing shortages in urban areas of these districts are provided below.

6.1. Housing Shortage in Urban Areas of Rawalpindi:

The following data indicates the housing shortage in the urban areas of Rawalpindi district.

Table 11. Total Housing Shortage in Urban Areas of Rawalpindi District²

Name of Urban Area	2017	2023	2033	2048
Rawalpindi Municipal Corporation	37,683	44,100	57,291.43	84,754
Rawalpindi Cantonment	22,710	38,891	73,310.81	148,232
Wah Cantonment	13,037	16,660	25,056.23	46,166
Chaklala Cantonment	11,000	14,157	20,939.92	35,909
Murree Municipal Corporation	6,490	13,048	41,382.27	226,995
Gujjar Khan MC	2,999	3,596	4,859.181	7,615
Taxila MC	2,066	2,334	2,857.13	3,869
Kahuta MC	1,979	2,884	5,403.586	13,853
Taxila Cantonment	3,008	3,994	6,403.073	12,997
Daultala MC	750	1,030	1,735.19	3,754
Murree Hills Cantonment	801	808	808.45	772

In the urban areas of Rawalpindi, in 2017, the highest housing shortage was in Rawalpindi MC and Rawalpindi Cantonment i.e., 37,683 and 22,710, respectively. In 2023, this shortage has reached to 44,100 and 38,891, respectively. Since the population in urban areas of Rawalpindi is growing rapidly, thus, the demand for housing will also continue to rise. Unfortunately, the concurrent housing supply projections will not be able to meet this demand, which will lead to housing shortage in the future as well. For example, the housing shortage in Rawalpindi MC will rise to 57,291 by 2033 and 84,754 by 2048.

Among all of the urban areas, the housing shortage will most dramatically rise in the Murree MC. As per 2017 estimates, the housing shortage in Murree MC was 6,490, which has reached to 13,048 in 2023. Hence, it has almost twice the shortage in 2017. In 2033, this housing shortage will reach 41,382 whereas, it will significantly rise to 226,995 by 2048. The following graph further illustrates the housing shortage estimations by 2048.

² The data of Kallar Syedan and Kotli Sattian is not available. Therefore, their housing shortages are not mentioned.

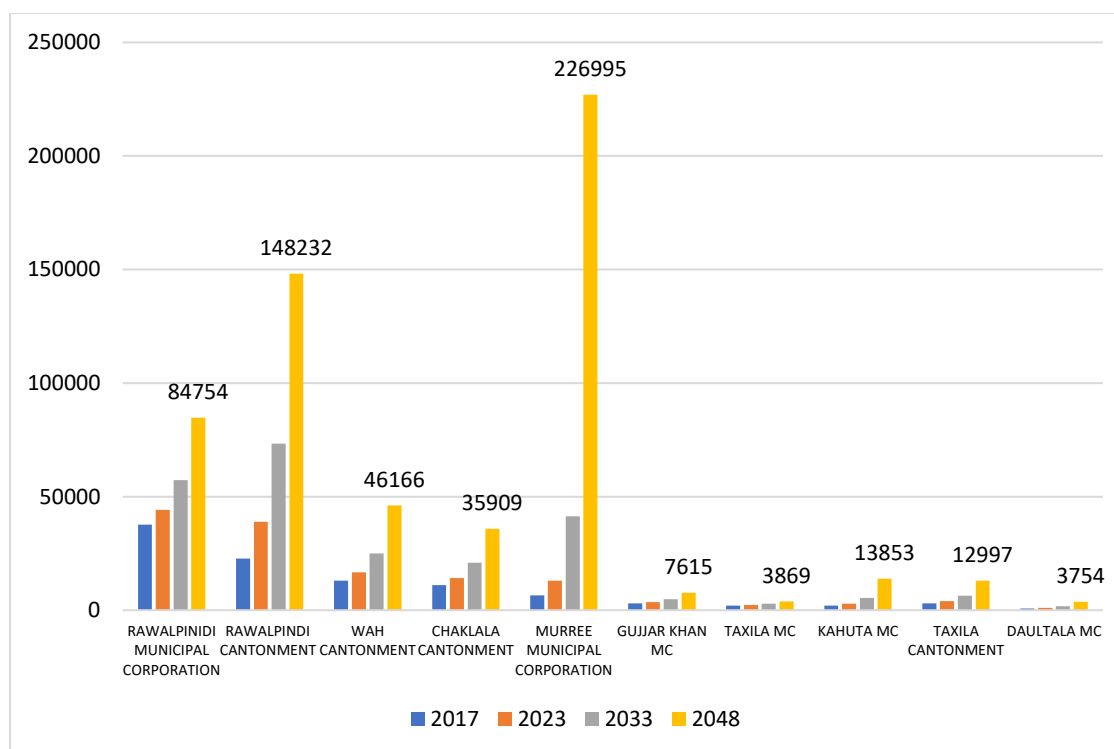


Figure 84. Housing Shortage in Rawalpindi District

6.2. Housing shortage in Urban Areas of Chakwal District:

The following data shows the housing shortage in the urban areas of Chakwal district.

Table 12. Total Housing Shortage in Urban Areas of Chakwal District

Name of Urban Area	2017	2023	2033	2048
Chakwal MC	4,559	5,552	7,710	12,617
Talagang MC	2,223	2,732	3,850	6,437
Kallar Kahar MC	1,300	2,879	5,334	9,283
Choa Saidan Shah MC	897	1,047	1,357	2,000
Bhaun MC	681	1,016	1,819	3,904
Lawa MC	725	1,567	3,318	7,164

In Chakwal district, as per 2017 estimates, the housing shortage in Chakwal MC, Talagang MC, and Kallar Kahar MC was 4559, 2223, and 1300, respectively. In 2023, this housing shortage has reached to 5552, 2732, and 2879, respectively. In 2033, the housing shortage in these tehsils will reach 7710, 3850, and 5334, respectively. However, due to the population growth in these areas and consequent increase in housing demand, the shortage will continue to rise and will reach to 12617, 6437, and 9283 in Chakwal MC, Talagang MC, and Kallar Kahar MC by 2048 respectively.

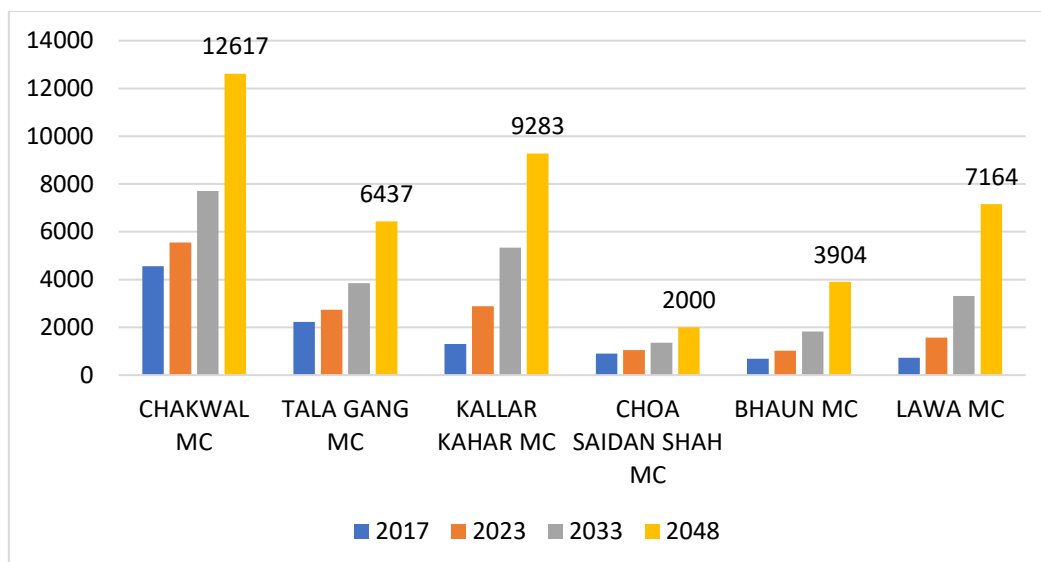


Figure 85. Housing Shortage in Chakwal District

6.3. Housing Shortage in Urban Areas of Jhelum District:

The total housing shortage in urban areas of Jhelum district is illustrated below.

Table 13. Total Housing Shortage in Urban Areas of Jhelum District

Name of Urban Area	2017	2023	2033	2048
Jhelum MC	6072	7040	9000	12,976
Dina MC	1729	2047	2710	4126
Khewra MC	1103	1218	1436	1834
Pind Dadan Khan MC	1047	1227	1598	2373
Sohawa MC	752	960	1444	2661
Jhelum Cantonment ³	1473	1348	1140	828

In 2017, the housing shortage in Jhelum MC was 6,072 which has reach to 7,040 in 2023. This housing shortage will rise to 9,000 by 2033 and 12,976 by 2048. Dina MC and Pind Dadan Khan MC will also face housing shortages of 4,126 and 2373 by 2048. The housing shortages estimations in these MCs of Jhelum are lower as compared to the estimations in MCs of other districts due to relatively lower pace of population increase in these MCs of Jhelum district.

³ The data of Mangla Cantonment is not available. Therefore, it has not been added into it.

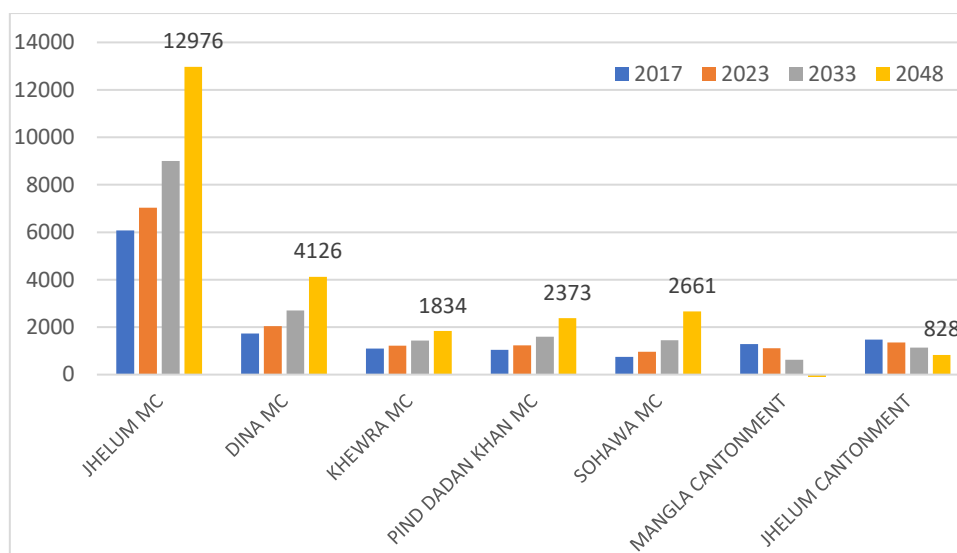


Figure 86. Housing Shortage in Jhelum District

6.4. Housing Shortage in Urban Areas of Attock District:

The housing shortage in the urban areas of Attock district is provided below.

Table 14. Total Housing Shortage in Urban Areas of Attock District.

Name of Urban Area	2017	2023	2033	2048
Attock MC	4043	5349	8529	17172
Fateh Jang MC	2245	3028	4980	10481
Hasan Abdal MC	2036	2307	2835	3839
Kamra Cantonment	2499	2844	3525	4850
Jand MC	1775	2471	4289	9804
Pindi Gheb MC	1542	1773	2237	3170
Hazro MC	1237	1447	1876	2760
Attock Cantonment	1638	2106	3126.144	5424
Ghur Ghushti MC	524	554	608.5827	699
Sanjwal Cantonment	354	364	379.3454	398

In Attock district, the highest increase in housing shortage is projected to occur in the Attock MC, Fateh Jang MC, and Jand MC. The housing shortage in these MCs in 2017 was 4043, 2245, and 1775, respectively, which have reached 5349, 3028, and 2471 in 2023, respectively. By 2033, the deficit will reach 8529, 4980, and 4289, respectively. However, by 2048, the housing deficit numbers will rise to 17172, 10481, and 9804 in these MCs, respectively. The greater rise in housing deficits in these three MCs is due to the higher demand for housing in

these areas resulted by the higher population growth rate there. The below chart further illustrates these housing shortages in the urban areas of Attock district.

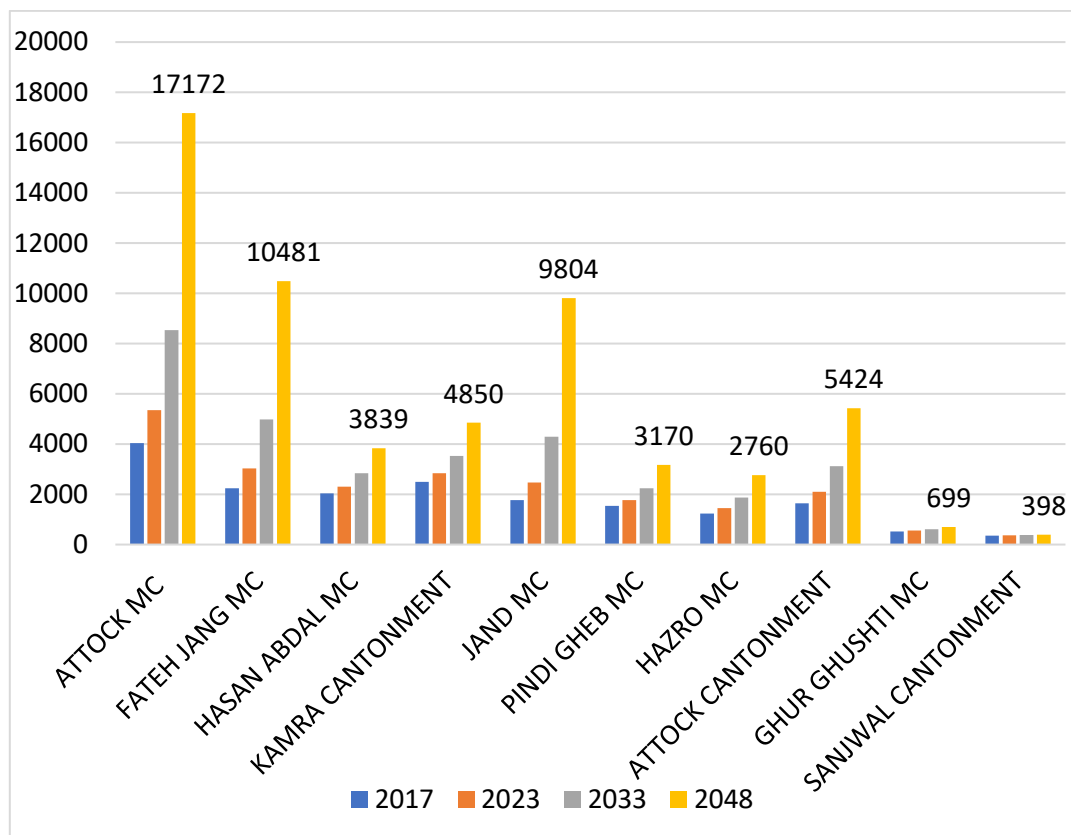


Figure 87. Housing Shortage in Attock District.

In a nutshell, the housing shortage in the urban areas of districts of Rawalpindi division highlights the deficit in housing supply as compared to the rising housing demands. As the population in the urban areas is growing continuously, these areas require sustainable housing supply to meet the housing demands of the growing population. It is suggested that medium to high density residential development can fulfill the housing demands of the growing population.

SECTION 7: SWOT ANALYSIS

This section of the report includes a SWOT analysis of the Rawalpindi division. The strengths, weaknesses, opportunities, and threats have been identified in relation to the scope of the regional plan and in particular, related to the urban planning sector.

7.1. Strengths

Rawalpindi division boasts a diverse range of landscapes, including mountains, plains, and rivers. This diversity provides a solid foundation for various industries such as agriculture, tourism, and natural resource management. The division is steeped in history and culture, with numerous historical sites including Pharwala Fort, Rawat Fort, GPO Murree, Lajpat Rai Library, Shiva Temple, Rohtas Fort, Gurudwara Sri Panja Sahib, Old Temple Attock, Pandavas Caves, Hari Singh Nalwa Fort, Katas Raj Temples Complex, Kusak Fort, museums including Taxila Museum, Rohtas Museum, , and tourists sites like Sikki Lake, Neela Wahan Waterfall, Kallar Kahar Lake, Wah Gardens, Maqbara Attock, Shakardara Dam Picnic Point, Patriata Hilltop and Chairlift, Kashmir Point Murree, Jhelum River Forest, etc. Additionally, its natural assets, including forests and wildlife, make it an attractive destination for eco-tourism. It has the ability to draw visitors from far-off locations, and this may allow the area to generate revenue by properly maintaining and managing these sites. Given their historical significance, the sites need to be adequately managed and protected to improve their state and increase tourists from around the country.

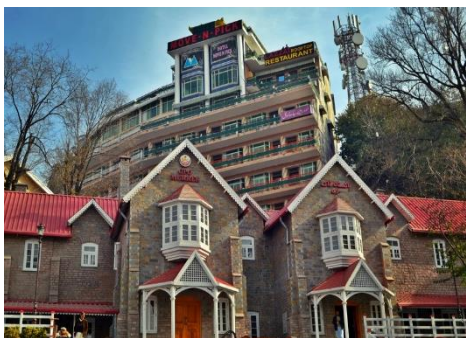
Following are some of the images of the historical sites of Rawalpindi division. The following images depict the museums, cultural, and tourist sites of Rawalpindi Division.



Pharwala Fort, Rawalpindi



Shiva Temple, Jhelum



GPO, Murree



Katas Raj Temple Complex,
Chakwal



Patriata Chairlift, Murree



Neela Wahan Waterfall, Chakwal

The division benefits from a well-developed transport network, including roadways, railways, and an international airport. This connectivity facilitates trade, tourism, and easy access to and from the federal capital, Islamabad, and its close proximity to the federal capital, grants the Rawalpindi Division a strategic advantage. This makes it an ideal location for businesses, government offices, and various institutions, enhancing economic opportunities.

The region boasts popular tourist destinations, such as Murree, Kotli Sattian, and Kahuta tehsils. These areas attract both domestic and international tourists, contributing significantly to the local economy. The division's natural beauty and tourist attractions have led to a burgeoning tourism industry. This sector not only generates revenue but also provides employment opportunities for the local population.

The presence of a growing urban population signifies economic development and increased market potential for businesses in various sectors, including retail, real estate, and services. Rawalpindi Division is home to a robust education sector, including reputable universities, colleges, and schools. This educational strength attracts students and scholars from across the country and abroad, fostering intellectual growth and innovation. The division's focus on

education, healthcare, and infrastructure has contributed to a high Human Development Index (HDI). This indicates a higher quality of life, better living standards, and a skilled workforce.

Incorporating these strengths into a SWOT analysis allows Rawalpindi Division to leverage these advantages for future growth and development strategically. These strengths can be harnessed to overcome weaknesses, seize opportunities, and mitigate threats in the region's evolving landscape.

7.2. Weaknesses

Rawalpindi Division exhibits several critical weaknesses that significantly challenge its development and prosperity. Firstly, Rawalpindi Division suffers from a lack of coherent and forward-looking planning, there is a conspicuous lack of consciousness in planning, leading to a disjointed and reactive approach to development. This deficiency in foresight undermines efficient resource allocation and makes it challenging to address emerging issues effectively. Additionally, despite its rich cultural and historical heritage, there is no focused intervention to promote heritage tourism, missing out on a valuable economic opportunity.

Economic disparities within the region exacerbate social unrest and hinder equitable access to opportunities. The region also struggles with underinvestment in social infrastructure, including healthcare and education, further compromising residents' quality of life. Inadequate transportation services, limited recreational activities, and low tourism awareness further impede economic growth. Land scarcity for urban development, insufficient infrastructure, water shortages, and land development constraints create bottlenecks that inhibit sustainable progress.

Addressing these weaknesses demands a concerted effort involving comprehensive planning, targeted interventions, and the active involvement of government bodies, private stakeholders, and local communities. Strategic planning, resource allocation, and community involvement will be essential to overcome these challenges and unlock the division's full potential for sustainable development.

7.3. Opportunities

Rawalpindi Division presents several promising opportunities. The government's policy guidelines for planned development provide an opportunity to steer the division towards

sustainable growth. These policies can help in regulating urbanization, infrastructure development, and resource management, ensuring a more organized and efficient future. By focusing on social development, Rawalpindi Division has the opportunity to stabilize and strengthen its social structure. This can reduce economic and social disparities within the region, promoting a more equitable distribution of resources and opportunities.

The presence of government policies and investments can create an opportunity to boost the local and regional economy. This can include support for small and medium-sized enterprises (SMEs), job creation, and economic diversification. Policies aimed at conservation and protection of the region's natural assets, including forests and wildlife, present an opportunity to preserve its unique environment for future generations. These policies can also support eco-tourism initiatives. Technical support from the government can empower local businesses and industries to adopt modern practices, improve efficiency, and enhance competitiveness, leading to economic growth and job creation.

The China-Pakistan Economic Corridor (CPEC) transport routes passing through the region offer a significant opportunity for increased economic activity and trade. Rawalpindi Division can leverage its strategic location to become a key logistics and trading hub, attracting investments and enhancing its regional economic influence. Leveraging these opportunities will require effective collaboration between government agencies, local communities, private sector stakeholders, and development organizations. By capitalizing on these prospects, Rawalpindi Division can chart a path towards sustainable and inclusive growth.



Map 17. Road Network Map of Rawalpindi Division

7.4. Threats

The division faces a significant threat due to the incapability and lack of capacity to effectively implement government policies. This can lead to a disconnect between policy intent and on-ground outcomes, hindering progress and development. Without adequate capacity, and resources for monitoring and evaluating processes, there's a risk of inefficiency and mismanagement, potentially leading to suboptimal results and wasted resources.

While tourism can be an opportunity, the growing pressure from tourism in popular areas within the division may strain local infrastructure, natural resources, and cultural heritage, potentially causing environmental degradation and conflicts. Unplanned land use changes can threaten the division's environmental sustainability and urban development. These changes might lead to land misuse, congestion, and inadequate infrastructure. The failure of various agencies to provide an enabling environment for businesses and residents can stifle economic growth and development in the region, creating an unfavorable business climate. Insufficient coordination and integration among government departments can result in inefficiencies,

duplication of efforts, and delays in project implementation, negatively impacting development initiatives.

Political instability or abrupt policy changes can disrupt ongoing development projects and discourage investments, potentially leading to economic setbacks and uncertainty. The increasing impact of climate change, such as water scarcity, floods, and landslides, poses a significant threat to the region's infrastructure, agriculture, and overall well-being. These events can disrupt daily life and development efforts.

To mitigate these threats, Rawalpindi Division must focus on capacity building, effective inter-departmental collaboration, long-term planning, and climate resilience measures. Additionally, stability in policies and proactive measures to manage tourism-related pressures are crucial to address these threats and foster sustainable development in the division.

SECTION 8. EXISTING AND PREVIOUS URBAN PLANNING INTERVENTIONS

This section of the report includes a description of the existing and previous urban planning-related interventions that are being adopted in the Rawalpindi region. These interventions may include the existing projects and other urban planning and development-related initiatives.

8.1. History of Urban Planning Initiatives in Rawalpindi District

There are two outline development plans for District Rawalpindi: the Gujar Khan ODP (1985-2010) and the Taxila ODP (1989-2014). While a "Rawalpindi Master Plan (1996-2016)" was developed to address several areas of the city's future development. For the tehsils in the Rawalpindi District, Peri-Urban Structure Plans/SDZs (2023-2043) have been prepared. These are explained in detail in below sections.

8.1.1. Gujar Khan - Outline Development Plan (1985-2010)

The Outline Development Plan of Gujar Khan has been prepared for a period of 25 years i.e., from 1985 to 2010, covering the ways and means of the future systematic growth of the city. The outline development plan was out-of-date and therefore is no longer applicable. The present unexpected expansion issue highlights the necessity to create a new plan considering the current demographic variable. Local planning organisations are facing a significant problem as a result of unchecked urbanisation and growth.

It is necessary to protect the area's agricultural land as the built-up area grows over time, but the previous plan did not address any agricultural strategies or proposals in the outline development plan of Gujar Khan town.

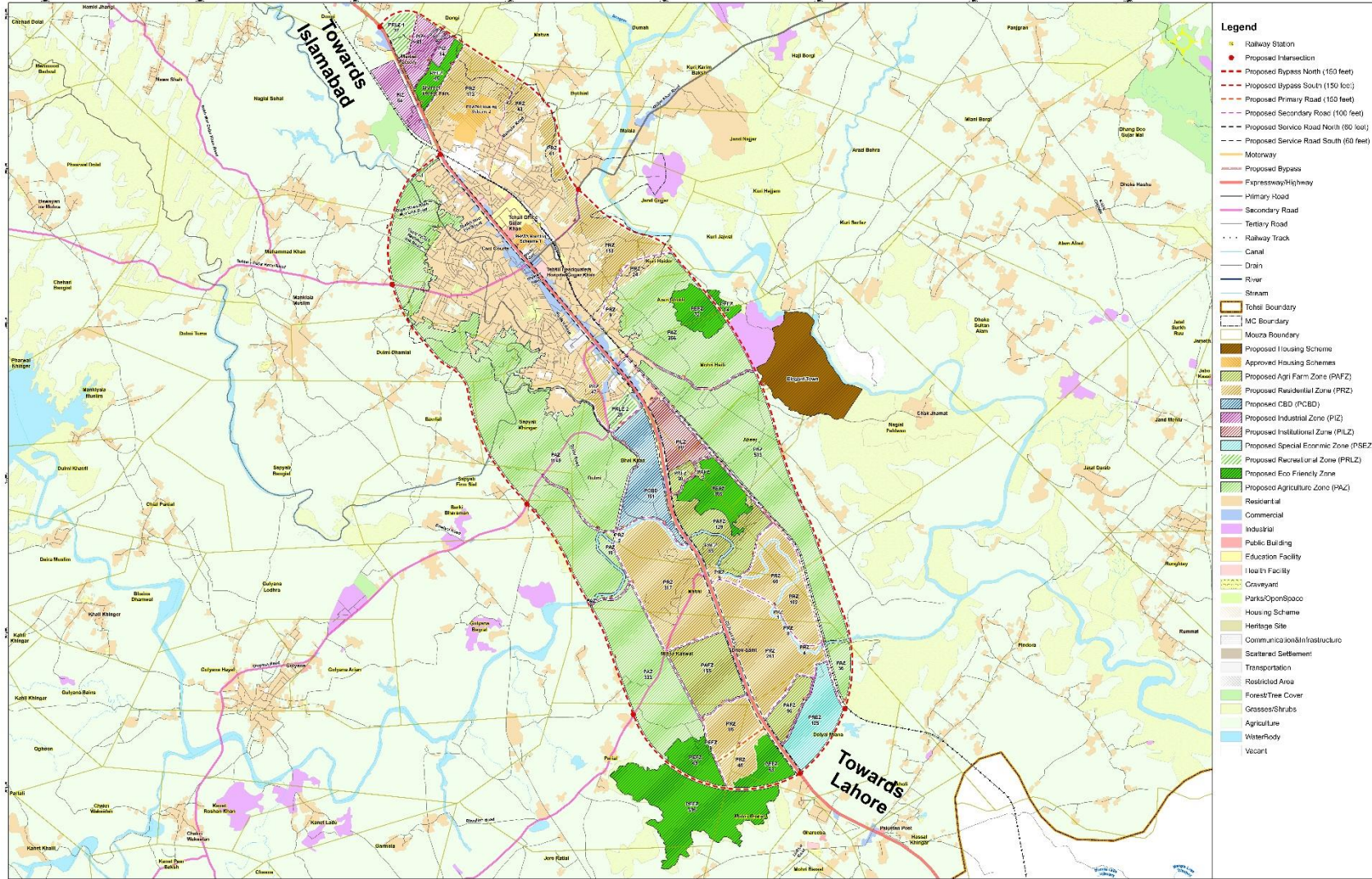
The Gujar Khan Outline Development Plan has several suggestions that are not implemented. The main goal of this proposal, for example, was to divert the heavy vehicular traffic and relieve the central parts of the town from needless traffic. A new bypass road around the town was proposed with a right of way of 250 feet in the Outline Development Plan (1985-2010). But because this proposal hasn't been developed until now, the congestion issue remains.

It has been recognised that the suggestions that were made to be executed were not carried out adequately based on the evaluation of ODP and current circumstances. The provision of bypass roads enhanced open spaces or recreational places, and access to improved utility services

were some of the plans that were essential to improving the situation in the region but were still not being implemented for a variety of reasons.

8.1.2. Peri-Urban Structure Plans/SDZ of Gujjar Khan (2023-2045)

The plan has been developed to address the rising concerns about urbanization and uncontrolled urban expansion as well as to save agricultural land to preserve the food basket. Different zones, including residential, industrial, institutional, special economic, recreational, eco-friendly, and agricultural zones, have been recommended in this plan while considering the current trend of the city and future projections. Along the major route (N-5) that runs through the city, a central business area (CBD) has been proposed. It provides commuters with convenient access and will aid in the growth of business operations along this road. To make the region green and environmentally sustainable in the long term, four eco-friendly zones have been proposed at different locations. To preserve the land for farming, the territory outside of the city's built-up area has been designated as a protected agricultural zone. On the upper boundary of the city and along the major N-5 heading towards Islamabad, an industrial zone is proposed. The comprehensive recommendations made in this plan are shown on the following map.



Map 18: Peri Urban Structure Plan/SDZ or Gujjar Khan (2023-2045)

8.1.3. Taxila - Outline Development Plan (1989-2014)

The Outline Development Plan of Taxila was prepared for Taxila Town (present MC) for a period of 25 years i.e., from 1989 to 2014, covering the ways and means of the future systematic growth of the town. The outline development plan was outdated before the 2017 census and is not valid now. The present unexpected expansion issue highlights the necessity to create a new plan considering current demographic variable. Local planning organisations are facing a significant problem as a result of unchecked urbanisation and growth.

The development plan (ODP) for Taxila was prepared only for Taxila town and the area within the MC limit was 10.88 sq. km (2690 acres) was proposed to cater for the future projections and planning demand of the citizens.

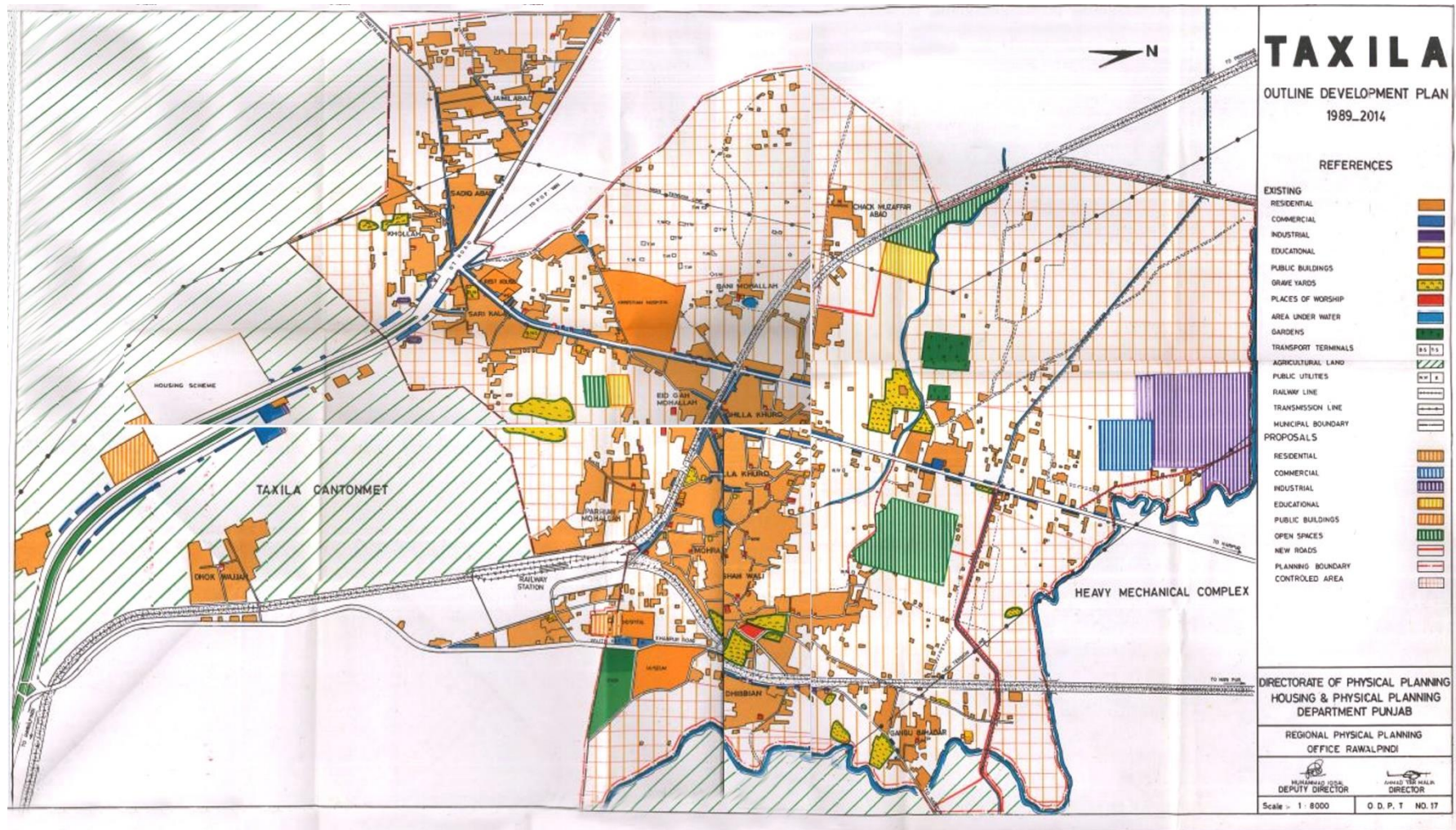
In 1989, the gross density of the town was 42.40 persons per acre, which was very low, but with the development of the industrial sector, the density proposed in the plan is not sufficient to accommodate the future population for sustainable and compact development. For compact city development to meet the housing demand and stock of the future population there is a need to encourage the increase in density periodically in a revised plan.

Some of the proposals of the Outline Development Plan of Taxila are not taken up. For instance, it is proposed that the condition of central shopping areas should be improved by properly managing the encroachment as well and the grain market is also proposed to be shifted outside of the central areas in the town towards the North direction had been proposed having an area of 10 acres in the Outline Development Plan (1989-2014) to relieve the central parts of the town from unnecessary traffic. Further, a bypass road was proposed to divert the heavy traffic. But these proposals have not been properly implemented as the traffic congestion problem still exists. Traffic congestion and parking are prioritized as the 2nd issue in Taxila City.

It is a prerequisite to protect the agricultural land of the area with the increase in a built-up area with time, but the previous plan had not addressed any agricultural strategy or proposal in the outline development plan of Taxila. For this reason, uncontrolled sprawl resulted in the depletion of agricultural land within the town and in tehsil. Therefore, a new plan, with the agriculture zone will be marked and proposed for future agriculture activities at a designated fertile land to meet the local agricultural needs of the Taxila.

Based on the review of ODP and current circumstances, it has been recognized that the plans that were formulated to be executed were not carried out appropriately. The provision of bye-

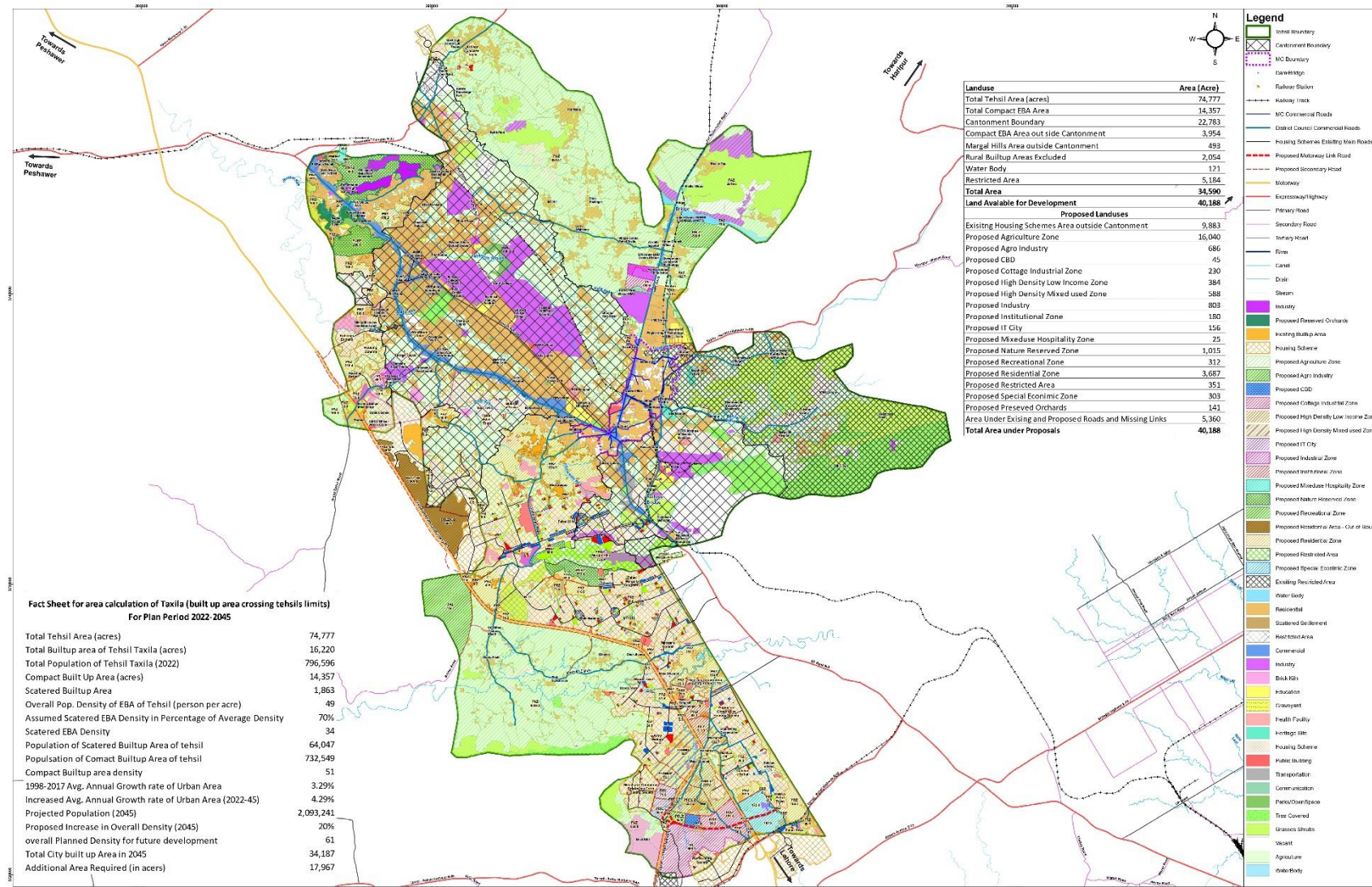
pass roads, enhanced open spaces or recreational places, relocating business markets, and access to improved utility services were some of the recommendations that were essential to improving the situation in the area but were still not being implemented for a variety of reasons.



Map 19: Outline Development Plan, Taxila (1989-2014)

8.1.4. Peri Urban Structure Plans/SDZ of Taxila Tehsil (2023-2045)

The plan was designed in response to rising concerns about urbanisation and unchecked urban growth as well as to conserve agricultural land for the food basket. Different zones, including residential, reserved orchards, agriculture, agro-industry, cottage industry, high-density low-income, high-density mixed-use. IT city, industrial, institutional, mixed-use hospitality, natural reserved zone, recreational, special economic and residential zones have been proposed in this plan. Along the major GT route (N-5) that runs through the city, a central business area (CBD) has been proposed. It provides commuters with convenient access and will aid in the growth of business operations along this road. To make the region green and biodiversity sustainable for the long term, natural reserved zones have been proposed. To preserve the land for farming, the territory outside of the city's built-up area has been designated as a protected agricultural zone. To solve the growing concerns of housing backlog, high-density, medium-density and low-density residential zones have been proposed throughout the city. The comprehensive recommendations made in this plan are shown on the following map.



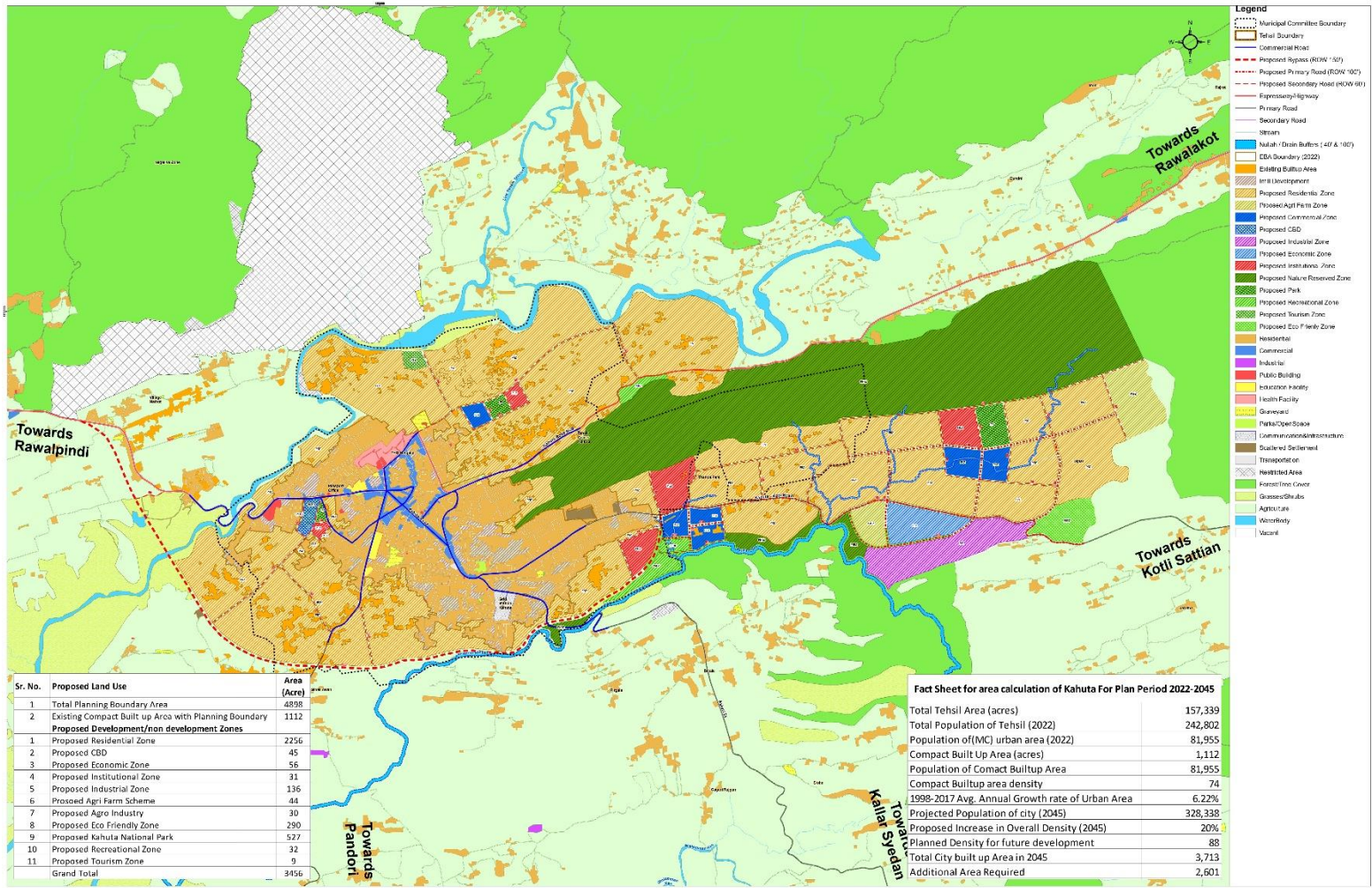
Map 20: Peri Urban Structure Plan/SDZ or Taxila Tehsil (2023-2045)

8.1.5. Peri-Urban Structure Plans/SDZ of Kahuta (2023-2045)

In comparison to other cities, Kahuta is a small city with a very low population. Several tourist attractions in this city might draw travellers. This region has long been stigmatised as being outdated. There are no existing programmes or initiatives to examine the situation. To provide this region with adequate planning and to highlight its beneficial characteristics, this plan has now been developed.

To support the sustainability of the region, this plan includes proposals for residential, commercial, agri-farm, economic, industrial, institutional, parks, natural reserve areas, tourist, and eco-friendly zones. Along the major road (Tourism Highway) that runs through the city, a central business area (CBD) has been proposed. It provides commuters with convenient access and will aid in the growth of business operations along this road.

To make the region green and biodiversity sustainable for the long term, natural reserved zones have been proposed. To preserve the land for farming, the territory outside of the city's built-up area has been designated as a protected agricultural zone. The comprehensive recommendations made in this plan are shown on the following map.



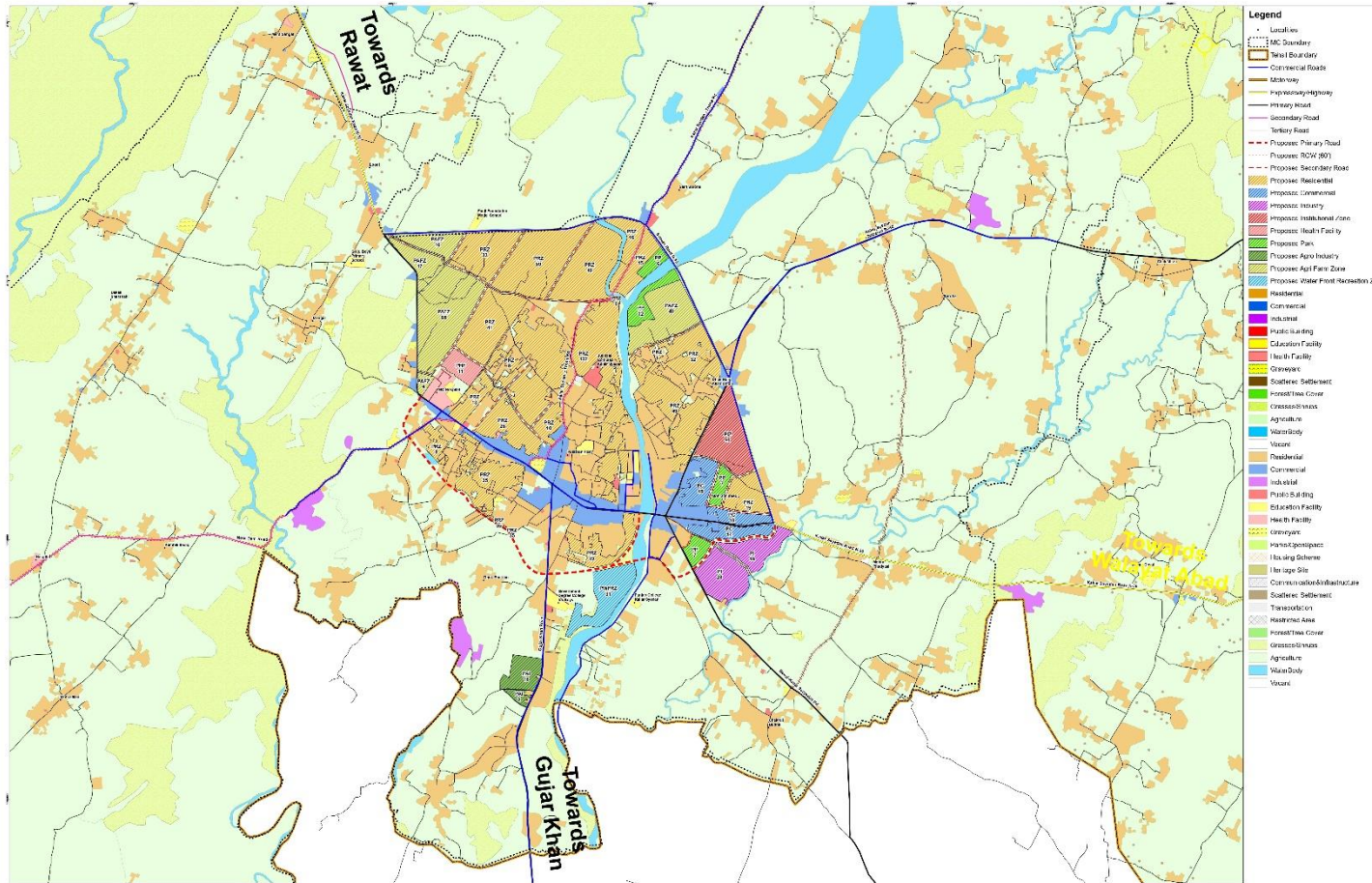
Map 21: Peri-Urban Structure Plan/SDZ or Kahuta (2023-2045)

8.1.6. Peri-Urban Structure Plans/SDZ of Kallar Syedan Tehsil (2023-2045)

Kallar Syedan is a tiny city with a relatively small population when compared to other cities. This city has many tourist attractions that can interest visitors. This area has long been associated with being out of date. There are no projects or efforts in place to analyse the circumstances. This plan has now been created to adequately prepare for this area and to emphasise its positive traits.

This plan includes recommendations for zones for residential, commercial, economic, industrial, institutional, parks, natural reserve areas, tourism, and eco-friendly activities in order to promote the sustainability of the area. A central commercial zone has been suggested to be located beside the main road that passes through the city. It makes commuting easier and will support the expansion of commercial activity along this road. Recreational zones on the waterfront have been suggested for the water body.

To make the region green and biodiversity sustainable for the long term, natural reserved zones have been proposed. To preserve the land for farming, the territory outside of the city's built-up area has been designated as a protected agricultural zone. The comprehensive recommendations made in this plan are shown on the following map.



Map 22: Peri-Urban Structure Plan/SDZ or Kallar Syedan Tehsil (2023-2045)

8.1.7. Rawalpindi Master Plan (1996-2016)

The Master Plan for Rawalpindi was prepared for Rawalpindi city for a planning period of 20 years i.e., from 1996 to 2016. The plan was prepared to cover the ways and means of the future systematic growth of the town. The population recorded in the 1981 census is 7,94,843 persons and the projected population in 1996 was recorded as 38,26,356.

The master plan was prepared for the horizon year 2016. It was outdated before the 2017 census and is not valid now. The existing situation of unplanned growth stresses the need to develop a new plan considering recent administrative boundaries and current demographic conditions. The average household size in Rawalpindi's metropolitan regions was 8.62, but this number was projected to fluctuate in the future, so 6 has been suggested as household size. It was suggested that 1330 acres of area be sufficient to meet future housing demand, with 75% of those units being reserved for low-income groups. A compact urban growth pattern should be adopted for the development, with 10 planning zones and simultaneous sub-divisions into "mohallah" and "Mohallah centers".

As per the review of the plan, the health sector needs special attention to meet demand, including new technology/machinery and extension, three new teaching hospitals, 20 government dispensaries and clinics, and 10 maternity centers. Whereas, the analysis of the existing situation shows that the proposals were not implemented properly. A concept of a metropolitan area of opportunity was introduced in the plan to cater the higher-order facilities. In this zone, higher-order public facilities i.e., health, education, other public buildings, and transport terminals will be accommodated. The concept is also not implemented during the plan period.

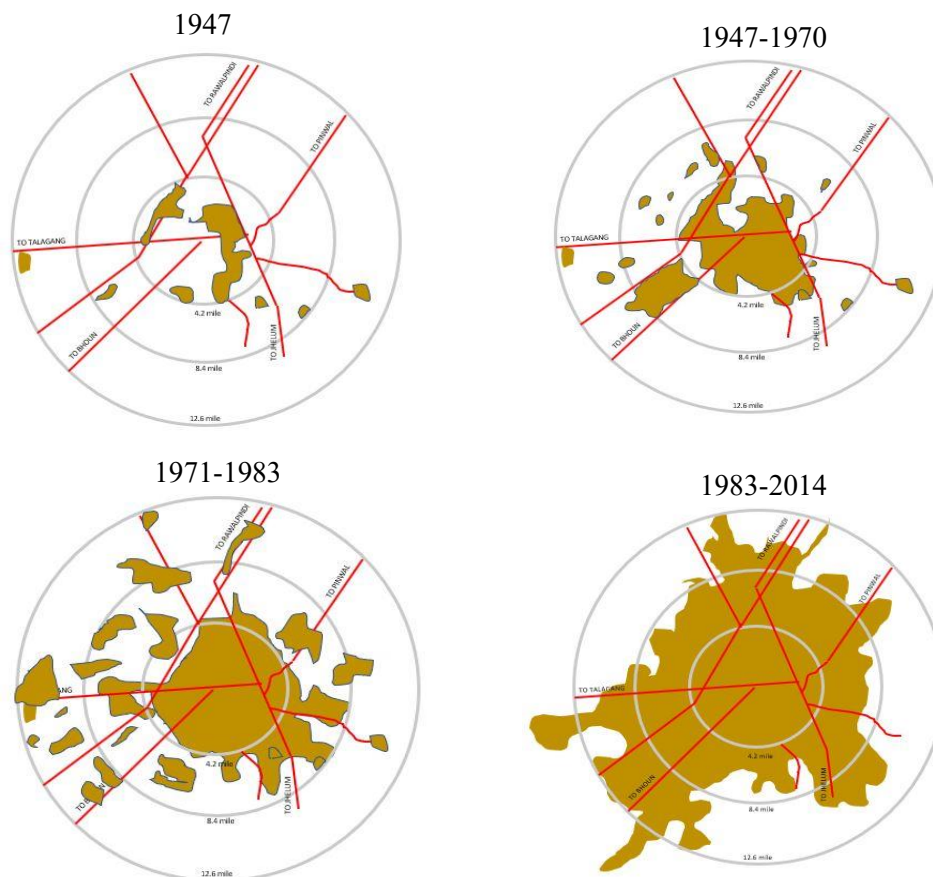
For proper collection and disposal of wastewater, a plan for proper check and balance and treatment of wastewater was proposed to be carried out before disposal. Trunk sewers to collect wastewater were proposed to be initiated. As for the Lei nullah, a 100-foot buffer was recommended to be built. Whereas the introduction of buffers is not being implemented and encroachment along the Nullah is observed. Some of the proposals of the Master Plan of Rawalpindi are not taken up to their full extent. For instance, it is proposed that the condition of central shopping areas should be improved by properly managing the encroachment as well as through shifting 1.44% of higher-order commercial facilities in the proposed zone. The industrial sector was proposed to be expanded and provisioned in zonal centers to support the city's economic

base. However, these proposals had not been properly implemented in the planned manner as it was proposed in the plan.

In sum, according to the review of the Master Plan and prevailing situations, it has been comprehended that the proposals prepared to be implemented were not carried out appropriately. Some of the proposals that were crucial to improving the situation of the area were still not being executed such as the provision of improved open spaces or recreational areas, and access to improved utility services due to various factors.

8.2. History of Urban Planning Initiatives in Chakwal District

There are two development plans for city Chakwal: the Chakwal ODP (1983-1998) and the Updation/revision of the outline development plan (2014-2039). The development trend from 1947 to 2014 is shown below which depicts that development is spreading in all directions. However, the predominant trend has been noticed towards north, north-western and southern directions along Talangang Road, Pindi Road and Bhoun Road. Accordingly, future residential extensions have been proposed in these directions.



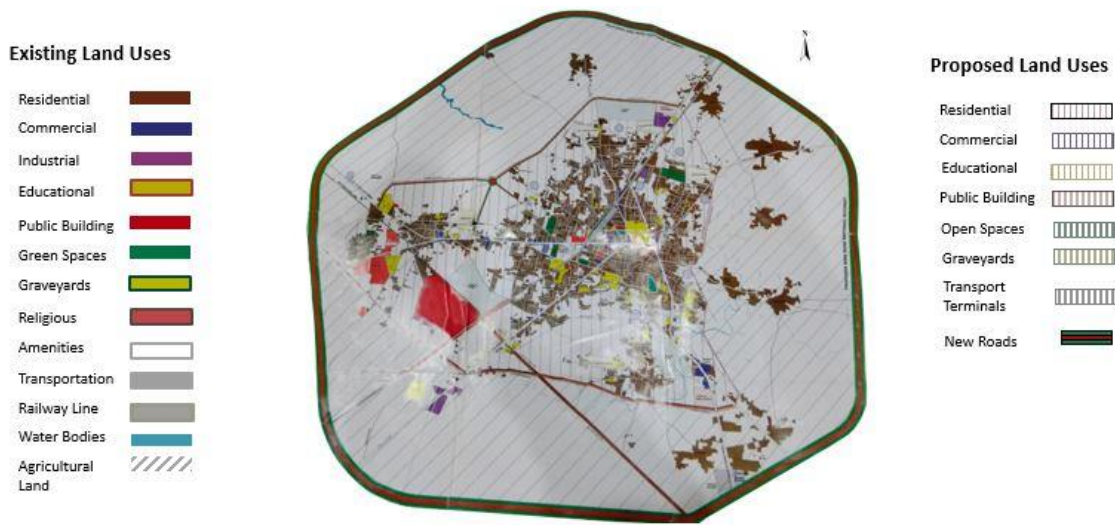
Map 23. Development Trend from 1947 - 2014

8.2.1. Updation/Revision of Outline Development Plan (2014-2039)

The primary goal of the Chakwal outline development plan is to forecast potential future growth patterns based on current and previous development trends. The purpose of predicting future trends is to provide the public and civic authorities with the opportunity to plan for new developments that will come along with population and economic expansion and to take measures to guarantee that they will be carried out in a normal manner.

The Outline Development Plan, Chakwal (2014-2039) has been divided into five phases comprising five years each.

FIRST PHASE (2014-2019)	SECOND PHASE (2019-2024)
Acquisition/reservation of a right of way of proposed roads. Improvement of existing roads, and junctions. Improvement of solid waste management system. Acquisition of land for proposed two educational blocks. Acquisition of land for proposed two proposed parks. Acquisition of land for proposed two proposed graveyards. Reservation of sites for all utilities/services recommended in the development plan Provision of portable drinking water for the town.	To review the progress and implementation of the first phase proposal. Construction of proposed link roads and improvement/widening of proposed roads. Completion of first two educational blocks. Acquisition of land for wagon stand and bus stand. Acquisition of land for public building blocks. Acquisition of land for fruit market. Acquisition of land for two educational blocks. Acquisition of land for two parks. To take measures for the beautification and environmental aspects of the town. Acquisition of land for extension of two other graveyards and commercial blocks.
THIRD PHASE (2024-2029)	FOURTH PHASE (2029-2034)
To review the progress and implementation of the second phase proposal. Extension of infrastructure and services in the new town. Provision of sewerage system for the entire town. Completion of wagon stand and bus stand. Completion of public building blocks. Completion of fruit market, and educational blocks. Development of 3rd park and health block. Construction and completion of first four commercial blocks. Acquisition of land for the next four commercial blocks.	To review the progress and implementation of the third phase proposal. Extension of infrastructure and services in a new town. Completion of parks and graveyards. Construction and completion of commercial blocks and off-site parking sites.
FIFTH PHASE (2034-2039)	
Feedback and review of previous phases of its implementation. Complete implementation by the end of the planning period.	



Map 24: Outline Development Plan, Chakwal (2014-2039)

8.3. History of Urban Planning Initiatives in Jhelum

In general, Jhelum's land usage is haphazard and undefined. Most the town's business activity is centred in linear strips along its southernmost roadways, which are generally rather broad but are further complicated by encroachments and traffic congestion. The Shandar Chowk is where most commerce takes place. The old GT road and Civil Lines Road converge at this chowk, which is one of the town's important intersections. This region is quite crowded. Further congestion is caused by the interior roads' erratic and disorganised layout. Even worsening the problem is the combination of rapid and slow-moving traffic. In the far south, there is a vegetable market. The site development zone and structure plan has been made for Jhelum and explained in detail in the next section.

8.3.1. Site Development Zone and Structure Plan 2022 – MC Jhelum

The future expansion of Jhelum is taking place to the northwest of the town. The town's expansion is restricted to the northern side as to the southeast lies the River Jhelum and to the southwest is the Army Cantonment area. Therefore, the town is mainly expanding beyond Bilal town, along Talian Wala Road, in the north-east direction. The other direction for the expansion of the town is

taking place in the area between the road to Kala Gujran and Islam Pura Road. This area is called Islam Pura. This area is sporadically developed. There are several vacant plots in this belt which are mainly used for agricultural purposes, but due to rapid urbanization, use is being converted into residential. Some more expansion is taking place to the north of Jada town, along GT road and road to Kala Gujran. In this plan, two site development zones have been proposed on the northwest side of the city for future development.



Map 25. Site Development Zone and Structure Plan of MC Jhelum, 2022

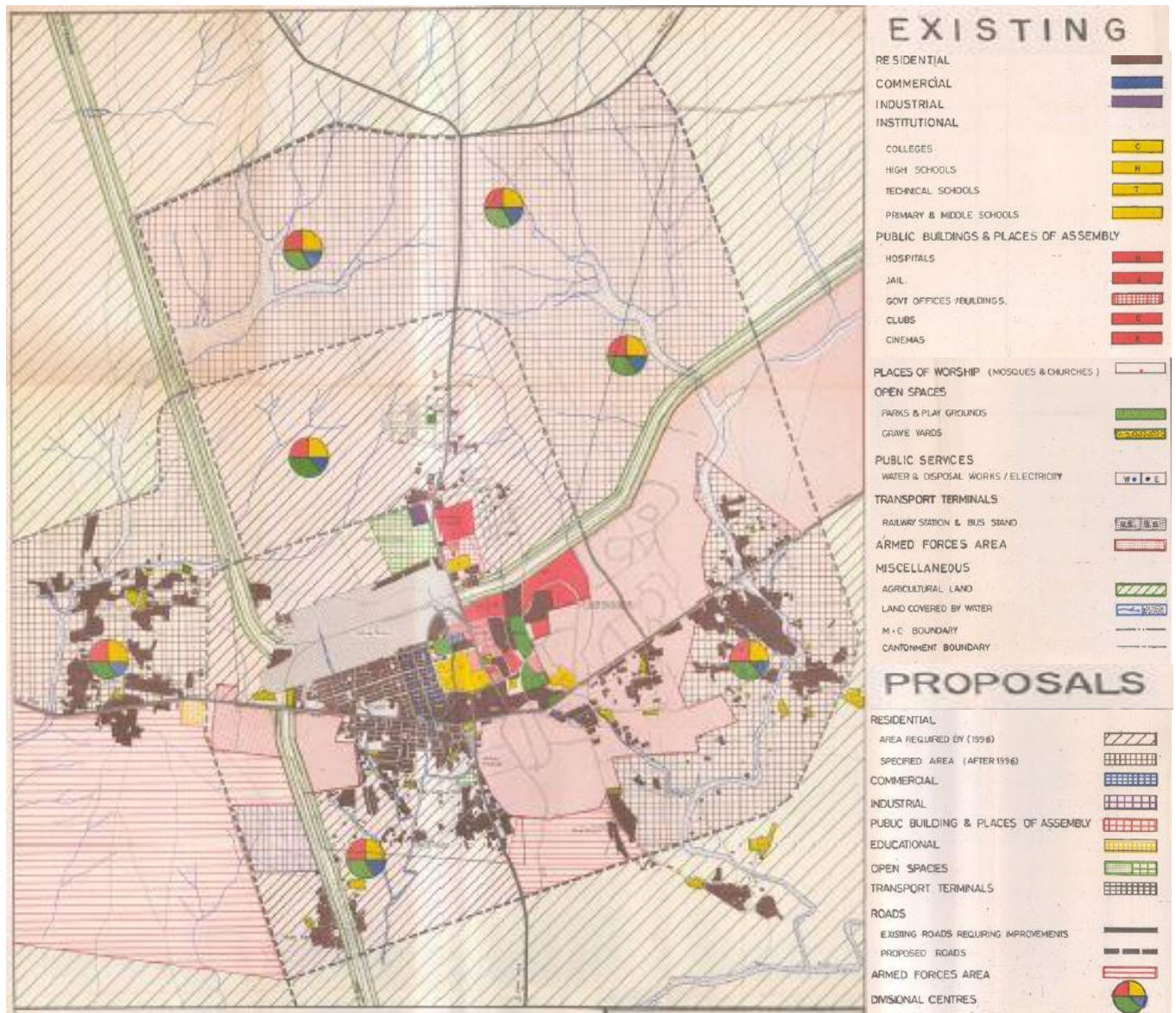
8.4. History of Urban Planning Initiatives in Attock

Attock is an old-planned colonial town. Attock comprises three UC's. UC-2 is the oldest one created in 1905 and is a planned one. There is space allocated at centre of each block for commercial and recreational purposes. The roads are mostly wide in this block. UC-3 is partially planned. UC-1 is the most recently developed and is separated from the other two UCs by a railway line that passes east-west of the town. UC-I has two planned colonies namely Peoples Colony and Dar-ul-Salam.

The northern part is purely residential with irregular street patterns and old houses. The central part is the amalgamation of commercial, residential and institutional uses. The main commercial activity is situated along the Madni Chowk, TMA Chowk, Fawara Chowk and Katchehry Chowk. The main bazaars in this area are Sarafa Bazaar and Civil Bazaar. The road that leads to Kamra

runs north-south and is situated to the east of this town. All of the major institutional buildings like the TMA office, educational institutions, banks, GPO, and District courts exist in this part of the town. There are three open spaces in the central part i.e., the railway ground, the Army stadium and a ground near the TMA office. The southern part is again an unplanned part with irregular street patterns. A graveyard is present near Iqbal Chowk. There is congestion due to traffic and encroachment at certain places. The outline development plan of Attock has been made for 1981-1996. Now the master plan of Attock is in process.

8.4.1. Attock-Outline Development Plan (1981-1996)



Map 26. Outline Development Plan Attock 1981-1996

As per the Outline Development Plan, the Attock city is growing in three distinct directions. The one is in the northwestern direction, the eastern direction and in the north. In the north along the Kamrah road is the three-mile Chowk. Some private development is taking place beyond Choi Road. The people are constructing houses on their private land. The third direction is the north-west direction. The cause of the growth of the town is the same i.e., the private development in this direction.

SECTION 9. PROPOSED INTERVENTIONS

The suggested solutions are based on issues and possible areas for improvement identified in the division via the study conducted in the districts and information obtained from key stakeholders. It is made sure that these recommendations do not conflict with the current development strategies for greater acceptance and easier implementation. The district administration and division stakeholders' development-based decision-making and planning will be supported by these proposals, which will have positive effects. The proposals will collectively serve as a springboard for appropriate policy frameworks aimed at the comprehensive uplift of the region. They are broad and all-encompassing in scope, place a strong emphasis on sustainability, and aim to improve the area's social, economic, and environmental conditions in order to make it more livable.



Figure 88. Overview of Key Recommendations

9.1. Rehabilitation of Parking Plaza, Raja Bazar

9.1.1. Parking Situation in Raja Bazar, Rawalpindi

Raja Bazar is the oldest and most busiest market in Rawalpindi city. It is the main business hub for shopping specially for whole sale shopping. It is a historic market, lies in the heart of Rawalpindi as an urban center accommodating a great section of mercantile as well as residences. Mixed-use activity, density, street food, colonial and pre-colonial architecture and religious architecture followed by congestion, visual clutter, low livability and lost heritage are the key attributes of the area.

Currently, the area is fraught with problems. High density, unplanned land use, traffic congestion, visual clutter, inefficient services infrastructure and degraded housing has depreciated the livability of the area. The shared street, which serves as the major public space, is now dominated by vehicular traffic for mobility. This has reduced the social and economic potential of the street. The residents are exasperated with the intensified vehicular traffic and incompatible commercial activity in some locations. Customers and tourist when they go there at all confront a public space that lacks the most basic urban amenities such as a walking path, drainage, benches, trees and lighting.

The illegal stands of public transport around Fawara Chowk near Raja Bazar, the city's major commercial hub, are disrupting the traffic flow due to which long queues of vehicles leading to Raja Bazaar, Ganj Mandi and District Headquarters Hospital have become commonplace.



Figure 89: Illegal Parking in Raja Bazar, Rawalpindi

Along with ordinary vehicles, ambulances are also stuck in rush all day due to which the patients and their families are facing serious problems. The illegal pickup, rickshaw, taxi and wagon stands

have been set up on both sides of the main thoroughfare, causing frequent gridlocks on the nearby streets.

9.1.2. Parking Plaza in Raja Bazar, Rawalpindi



Map 27: Location Map of Parking Plaza



Exterior Condition



Outside Parking



Interior Condition

Figure 90: Parking Plaza in Raja Bazar, Rawalpindi

Stressing on the issue of traffic, over 60,000 vehicles commute to Raja Bazar daily and therefore, more parking plazas are needed to accommodate them in Rawalpindi's commercial areas.

One parking plaza had been constructed in Raja Bazaar in 2010. The RDA constructed three floors at the cost of Rs1.5 billion. Originally, the plaza was designed for six storeys but it stopped the work after three floors due to shortage of funds. The parking plaza had been made earthquake proof and it spreads over an area of four kanals.

According to RDA study, more than 60,000 vehicles ply on roads around Fawara Chowk and require parking arrangements for 1,200 vehicles. However, the roadside place accommodates only 200 vehicles. Location map of the parking plaza is shown below.

The public transport parking stands were previously established in the parking plaza at Fawara Chowk but with the increased number of vehicles in the city, there is not enough space left in the parking plaza to park the public transport.

9.1.3. Proposed Interventions

The parking plaza's interior and external conditions should be improved. These will support restoration by enhancing accessibility and connection, which will promote local economic growth.

The influence and value of parking in planning for livable communities is often underestimated and not well understood. Parking deserves more attention than it typically receives, due to its influence on the character, form, function, and flow of our communities. More particularly, parking undoubtedly serves an essential service for every brick and mortar business. With the right parking control systems, it can be a significant revenue generator, too. Having ample, accessible parking can attract prospective customers and instill loyalty in existing ones. Meanwhile, a lack of readily available parking has been proven to deter potential customers. Parking has many benefits such as:

Improved traffic flow: By properly managing parking spaces, you can help reduce congestion and improve traffic flow.

Increased safety: Effective parking management can help prevent accidents and promote safety by reducing the number of vehicles on the road and reducing the likelihood of collisions.

Rawalpindi is one of the major cities in Pakistan. People are continually moving to this metropolis in search of better opportunities and a better way of life. This causes distorted planning that results in uncontrolled sprawl and infrastructure decay. As parking is acknowledged as a significant problem in Rawalpindi, it occurs mostly in the city's major commercial centres, where there is a high volume of daily wage traffic and this illegal parking disrupts traffic flow in business areas

In particular, the components for rehabilitating the Raja Bazar Parking Plaza are explained below:

9.1.3.1. Facade Improvement

The revitalization of a neglected commercial or residential neighborhood often begins with improvements to a single building. The facade works as the building's second skin, encasing it in a covering. This results in a building's outside that resembles a wall and may be decorated with plain colours, images, or textured 3D art. The enhanced aesthetics will please neighbours and make your place stand out to customers. This will contribute to giving the parking plaza life by incorporating appropriate architectural and aesthetic elements into an existing structure.

9.1.3.2. Ticketing System

It's never been simpler to sell tickets, but it does need effort and a live facilitator. To prevent traffic and save travel times, smart parking systems like E-ticketing must be used. Introducing e-ticketing will help to generate more revenue by limiting the hustle and bustle of the visitors. It has multiple benefits such as:

Flexibility: E-tickets are usually more flexible than physical tickets, allowing an easy change or cancel ticket reservation.

Environmental Friendliness: E-tickets eliminate the need for paper tickets, which can help reduce paper waste and contribute to a more sustainable environment.



Figure 91. E-Ticketing System

9.1.3.3. Signages

Signage is a multi-purpose marketing tool which can be used for many reasons, such as: to draw attention to promotions, convey important information and directions, and also to build brand awareness.

Signage in the parking plaza inform people about important aspects such as speed limits, traffic direction or travel, and where to park. It also gives car park owners a legal footing to stand on should accidents occur. With these, one can easily park one’s vehicle in a correct and efficient way. It also helps to reduce the travel time and improve efficiency overall



Figure 92. Example of Signages in a parking plaza

9.1.3.4. Security and Safety

Vehicle theft and vandalism are common threats. Criminals may target unlocked cars or those that contain visible valuables such as money or electronics. They may also choose vehicles that they know they can part out for a profit. The threat of violent attack is also pressing in parking areas. Muggings and car jackings can be easy crimes to perpetrate if there is no security presence on the premises.

One of the most effective ways to improve the security of your parking area is to ensure that there is proper lighting throughout. Good lighting eliminates dark corners that create potential hiding spots for thieves or attackers and brightens walkways and stairwells. Lighting should be bright enough to illuminate the area and space so that it does not create shadows.



Figure 93. Proper lighting in parking plaza

An unmonitored parking lot is an open invitation for misconduct. Controlling who enters and when they enter can prevent a significant amount of crime while giving your parking lot users peace of mind. Security booths, gates and security arms can be effective for both entrances and exits.

Install emergency beacons, security cameras, phones, and panic buttons throughout the premises. Not only do they act as a visual deterrent for would-be criminals, but they can also be a lifesaver for someone in need.



Figure 94. CCTV Cameras for Security and Monitoring

In addition, security guards can monitor for suspicious activity, quickly respond to security events and act as personal escorts to customers leaving the property after hours.

For safety concerns, such as fire, etc., the fire alarms should be set in the plaza. This is essential to minimize damage in the events of catastrophic fire eruption in the plaza.



Figure 95. Fire alarms should be set in the plaza.

9.1.3.4. Adding more storeys to the building

It is possible to eliminate the illegal parking spaces on Liaquat Road, Iqbal Road, Jinnah Road, Ganj Mandi, Kashmiri Bazar, and Raja Bazar roads by adding more floors to this plaza. At present, it is the only parking plaza in the commercial area around Raja Bazar. Its basement shelter home has been removed and the ground, first, and basement floors have been restored for parking space.

The original design of the plaza also entails six floors but due to the shortage of funds, only three floors were constructed. Therefore, we propose that three additional floor must be added on to the building of plaza. This will provide space for approximately 2500 vehicles.



Figure 96. Conceptual image of plaza if new Storeys will be Added

9.2. Transit Oriented Development

Compact, mixed-use, pedestrian-friendly development that is centred around transportation hubs is given emphasis in transit-oriented development (TOD). The main objective of TOD is to create thriving communities that encourage the use of public transit and lessen dependency on private vehicles. TOD efficiently reduces traffic congestion, promotes sustainable growth, and improves the quality of life for people by thoughtfully locating a mix of residential, business, and retail areas around transit stops.

By promoting the use of public transport and reducing the need for private automobiles, TOD helps to reduce traffic congestion and air pollution. Additionally, TOD promotes economic growth and raises property values by developing enticing, walkable neighbourhoods that draw both visitors and locals.

By offering alternatives for inexpensive housing and easing access to key services including employment, education, and services of daily living, TOD contributes to social fairness. Additionally, TOD improves public health by promoting physical activity and lowering sedentary behaviour. Overall, transit-oriented development is a just, sustainable, and financially sound method of urban development that helps locals as well as the larger neighbourhood.

The strategic aim statement of Punjab's spatial strategy 2047 includes initiatives including transit-oriented development. There is support for the concept of TOD, which coordinates land use with mass transit in cities with mass transit. According to the Punjab Spatial Strategy (World Bank), the minimum TOD project should be completed by 2027 in each of the five big cities, including Rawalpindi as of right now.

9.2.1. Principles for Transit Oriented Development Rawalpindi

A set of principles is followed in transit-oriented development. Depending on the place-baseness, these principles may alter in terms of importance and focus. We suggest that the following principles should be adopted for TOD.

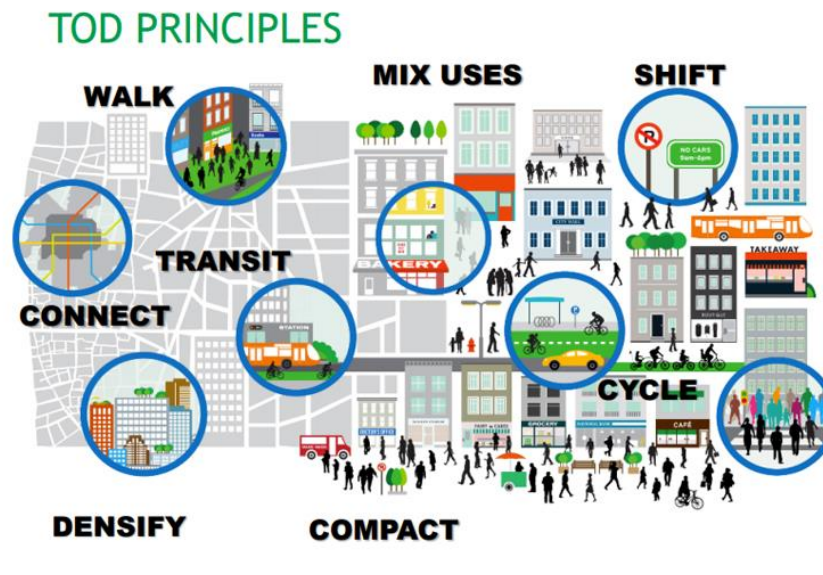


Figure 97. TOD Principles for Development Considerations

In order to follow these principles, the following are the implicative steps that need to be materialized into development.

- Increase Land Use Mix (LUM)
- Increase diversity in development
- Increased FAR
- Urban design and place-making principles
- Social inclusion and human scaliness
- Accessible green areas and Public Spaced
- Bike lanes and sidewalks with ergonomic design

9.2.2. Hospital/Chandni Chowk Station for TOD Rawalpindi

The consultant suggests starting the TOD implementation in Rawalpindi at the Hospital/Chandni Chowk Station because of the station's relevance in terms of its location, the type of commercial development, and the nature of economic activity. Below map shows the location map of Chandni Chowk.



Map 28. Location Map of Chandni Chowk

(Source: The Urban Unit)

On its northern side, Sadiqabad, a developed urban district, and on its southern, Kartarpura and Raja Bazaar Market, older, historically significant parts of the city. Development is noticeably more diversified around Chandni/Hospital Chowk station. From Rehmanabad Station, one may go in the higher direction to a satellite town with a commercial market.



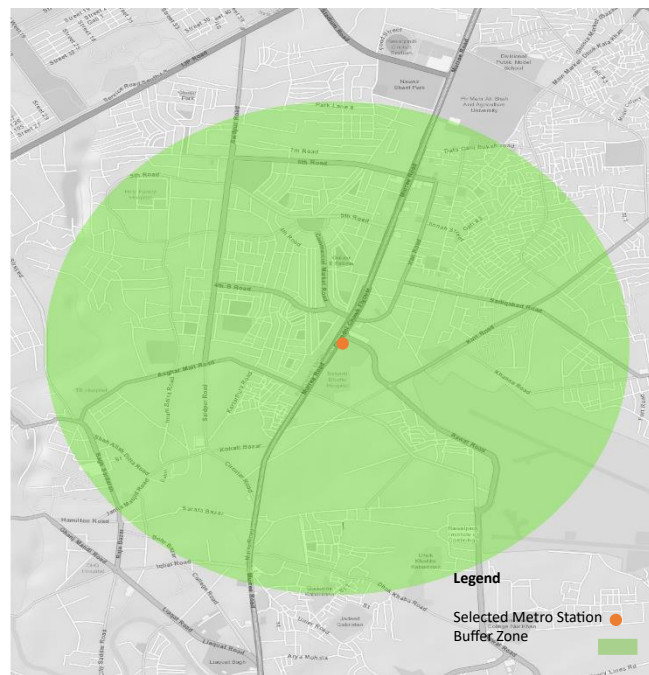
Figure 98. Commercial Market Satellite Town

Kartarpura and Raja Bazaar, two of Rawalpindi's most significant shopping districts, are situated on the city's lower side, next to the Waris Khan station and a transit line.



Figure 99. Area near Raja Bazar

Within the vicinity of the Hospital/Chandni Chowk station, there are a number of other business roadways. Moreover, there are many different types of development here, including residential, commercial, historical, and tourism-related enterprises. A buffer zone is created for the transit oriented development of 2 km because it is considered as a minimum walking distance. The buffer zone location of the Hospital/Chandni may be seen on the map below.



Map 29. Location Plan of the TOD Metro Zone

The center that is Hospital/Chandni Chowk Station will act as the node for the TOD. The area within a certain diameter is proposed to be treated. The considerations for TOD metro zone will be discussed for fixing the diameter.

9.2.3. Considerations for Buffer Zone

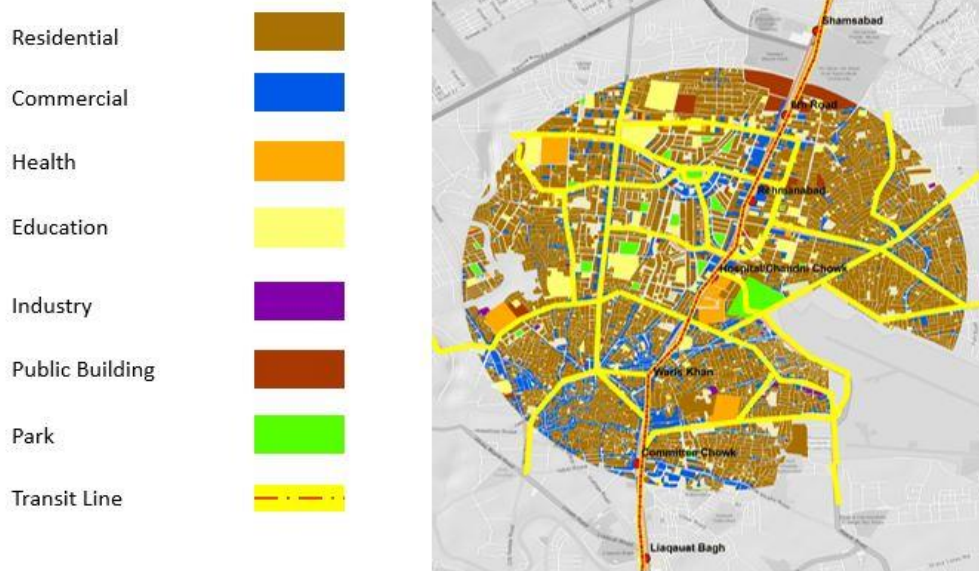
Transit Oriented Development considerations are the guidelines which will govern the development of the metro zone. These considerations are derived from the principles of TOD which we have already discussed.

- ✓ Aligning and integrating land use planning and urban spaces with transit.
- ✓ The zone is to be treated with the following development regulators.
- ✓ Increased FAR for the residential to increase density and create highest density within five minutes walking distance which is 400 meter of the station and then, lowering it till 2 kilometers which is 25 minutes walking distance.
- ✓ Increase Land Use Mix (LUM) promotion and allowing cottage industry, commercial, and residential uses to coexist.
- ✓ Preserving facades with heritage value to increase diversity in development and urban renewal for revitalizing the zone.
- ✓ Introducing bike lanes with ergonomic pavement design, shading and lightening, street furniture (ergonomically designed dustbins and street furniture or docking stations), and amenities (public Toilets) to make cycling convenient and safe at all times for everyone.
- ✓ Authority should engage stakeholders to establish a clear vision for infill, redevelopment, and revitalization in areas targeted for growth and reinvestment.
- ✓ Promoting and inviting businesses to have indoor and outdoor activity areas like outdoor seating, expo centers education institutes and such to increase the vibrance of the area.
- ✓ Designing footpaths with sufficient width, shading, pavement, and physical segregation and a continuous and thorough network to access all green areas, public places and traffic for a comfortable and enjoyable walking experience.
- ✓ Providing wider footpaths with physical segregation from the flow of traffic and shading.

- ✓ Introducing accessible green areas on roads, streets, and stations
- ✓ Employ place-making principles for the stations, streets, and the areas around them for accessible, improved and socially inclusive experiences for the citizens.
- ✓ Traffic calming measures on the streets for a vibrant streetscape
- ✓ Ensuring social inclusion, human scaliness, and appreciation of local culture in design and planning

9.2.4. Current Urban morphology of TOD Metro Zone Rawalpindi.

For the application of the consideration and choosing the appropriate methodology, the analysis of current urban morphology is imperative. This section will analyze the existing land use and the density of development in the buffer area. Out of total 11.29 sq,km lies in this buffer zone, there is 48.9 % residential, 12.8% commercial, 2.4% health, 5.1% education, 0.3% industry, 2.2% public buildings and 1.9% of parks.



Map 30: Land Use in Hospital/Chandni Chowk Metro Zone

The analysis shows the high level of segregation of the land uses. It means that the land use mix needs to be focused. Secondly, the green spaces are not coherently spread throughout the metro zone. The only use that is better in terms of coherent spread is commercial use.

The figure below shows the transportation infrastructure in the buffer area. As mentioned earlier this buffer area utilizes the accessibility of 25-minute walk time as its diameter.



Map 31: Connectivity within the Metro Zone

9.2.5. Methodology and Implementing Tools for TOD Metro Zone

In order to materialize the considerations to instigate the development that aligns with exploiting the presence of transit and bringing about sustainable development, as discussed earlier, requires a methodology.

The following flow diagram explains the methodology well.

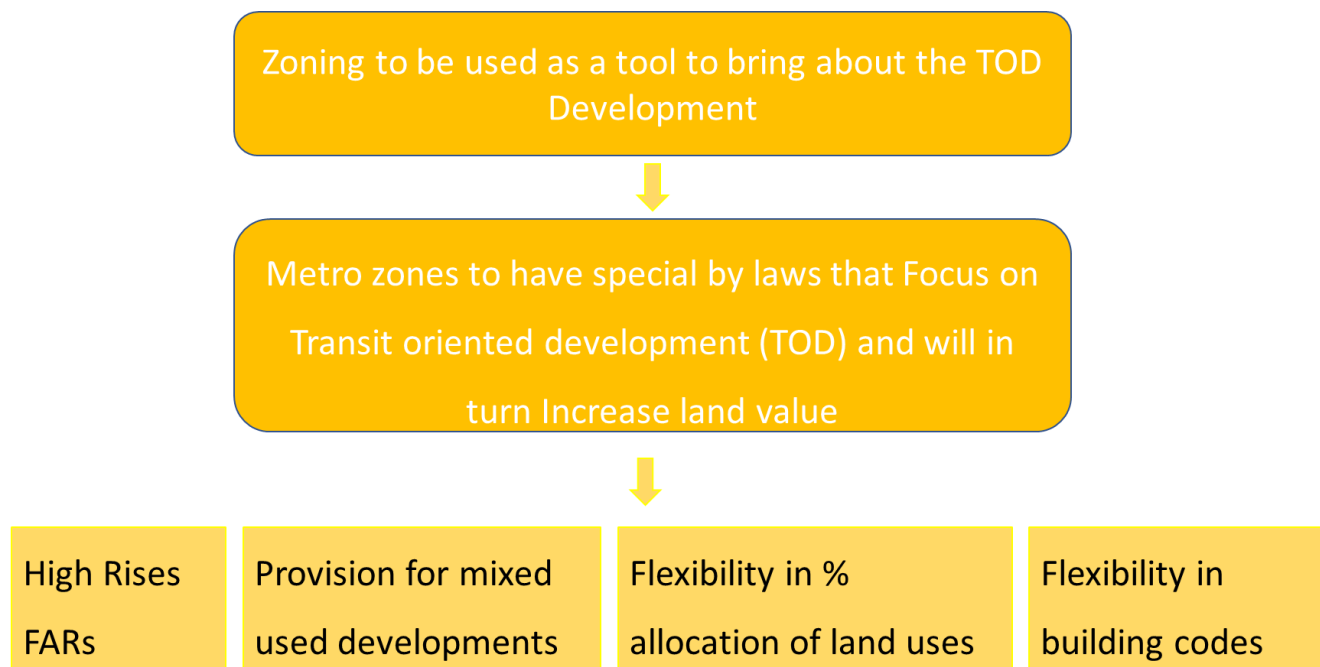


Figure 100. Methodology for TOD

The regional plan suggests using zoning as a tool for implementing TOD. The area that is accessible within 2 kilometers as shown in the following buffer is to be treated as a special zone, and this special zone is to be treated with special bylaws. These bylaws will be focused on our principles and considerations. They will also ensure that all developments that has already occurred changes and transforms itself. Lastly, the bylaws will ensure the inaccessibility of the area within 2 kilometers as shown in the following buffer.

For the high-rise development, the RDA has notified the Building and Zoning Regulations 2023.

Table 15. Building and Zoning Regulations, 2023

Zones	Plot size	Permitted Height	Storey
Low Rise	Min. 10 Marla	Upto 48 ft	G+3
Medium Rise-1	Min. 1 Kanal	Upto 90 ft	G+6

Medium Rise-2	Min. 2 Kanal	Upto 120 ft	G+9
High Rise-1	Min. 4 Kanal	Upto 200 ft	G+14+Service Floor
High-Rise-2	Min. 8 Kanal	Upto 300 ft	G+23+Service Floor
Skyscraper	Min. 12 Kanal	Above 300 ft	(No restriction), NOC from CCA

The following diagram shows a cross section of the metro zone suggesting the treatments to the area. It depicts the gradual increase of density from periphery of the metro zone to the main corridor. It also makes it clear to see how pedestrianization and walking are used to make the streetscape better.

It also illustrates the kind of interventions we propose on the streets to promote active transportation, i.e., bicycling and walking. Social inclusion by designing for people of all ages and genders is ensured. The considerations discussed already in previous sections are to be materialized here.

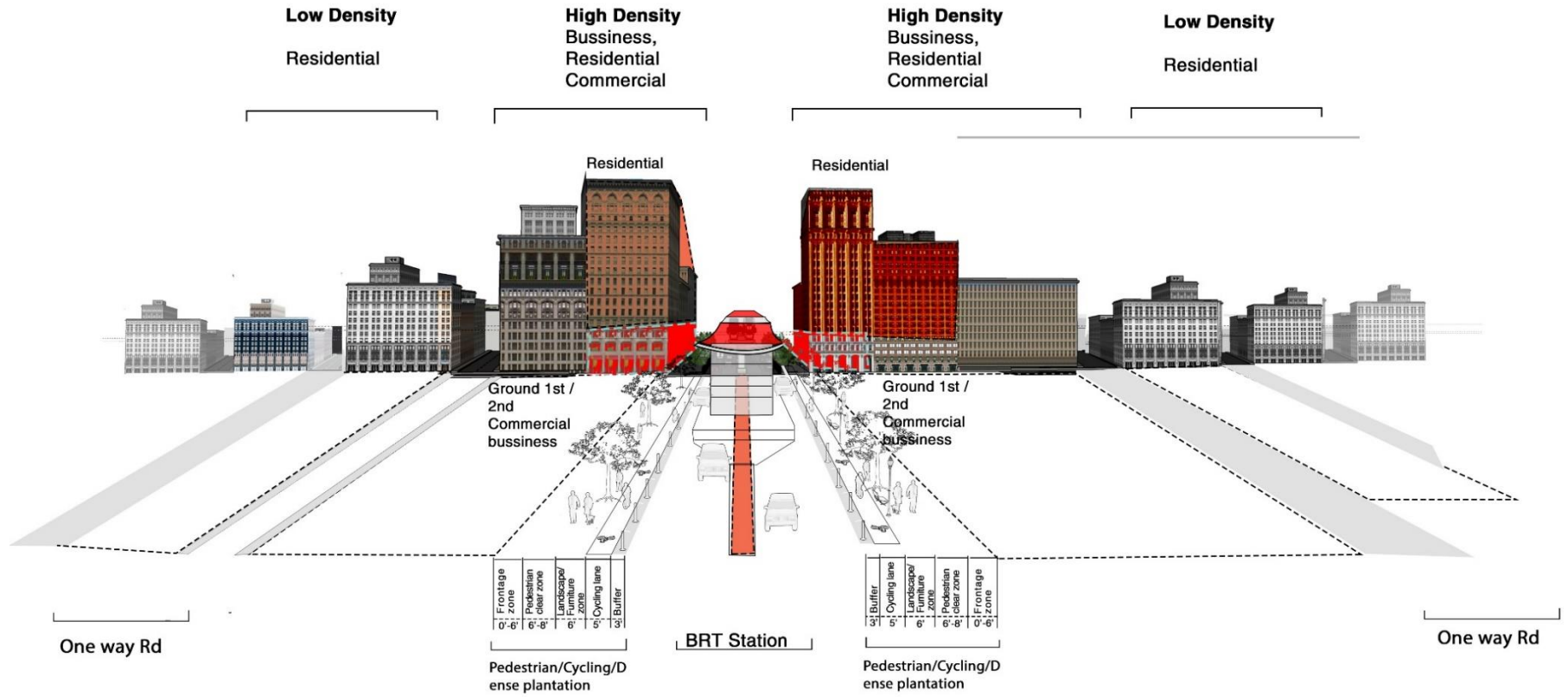


Figure 101. Concept Diagram of Cross Section of Metro Zone BRT Rawalpindi

9.2.6. Phase wise Development of TOD Metro Zone Multan

An Incremental phase-wise and retrofitting of development, urban redevelopment and readjustment, making it compact and employing streetscaping, infill development and place-making will act as tools for vibrant and people-oriented streets, public spaces, bazaars and neighborhoods lying within TOD zone. TOD Induces agglomeration that is proven to spur the economy.

The following term-wise interventions are proposed for their respective years.

Short-term Interventions (2025)

- Streetscaping
- Bikeways
- Footpaths

Mid-Term Interventions (2028)

- Traffic calming
- Placemaking
- Facade Upgradation
- Increasing Land use mix

Long-term Interventions (2048)

- Increasing FAR
- Urban Renewal Projects
- Diversifying uses, forms, and architecture forms for vibrant streets
- Learning and appropriating the design to other stations

9.3. Commercial Areas Upgradation

9.3.1. Raja Bazaar Rawalpindi

9.3.1.1. Existing Condition

Raja Bazar has connections to the following markets: Bara Market, Ganjmandi, Nankari Bazaar, Moti Bazaar, and Bohar Bazaar. The wholesale market is also located here, making it Rawalpindi's primary commercial center. For their commercial purposes, a large number of commuters and retailers come here. Encroachments on the main roads are the cause of the delays in Raja Bazaar, and more especially the Ganjmandi region. There is an anti-encroachment drive run once a month. There are illegal stands of public transport around Fawara Chowk near Raja Bazar leading to narrowing down the main roads. Additionally, street furniture is also non-existent to accommodate the visitors. Below map shows the location of Raja Bazar and pictures show the existing condition of Bazar.



Map 32. Location Map of Raja Bazar.

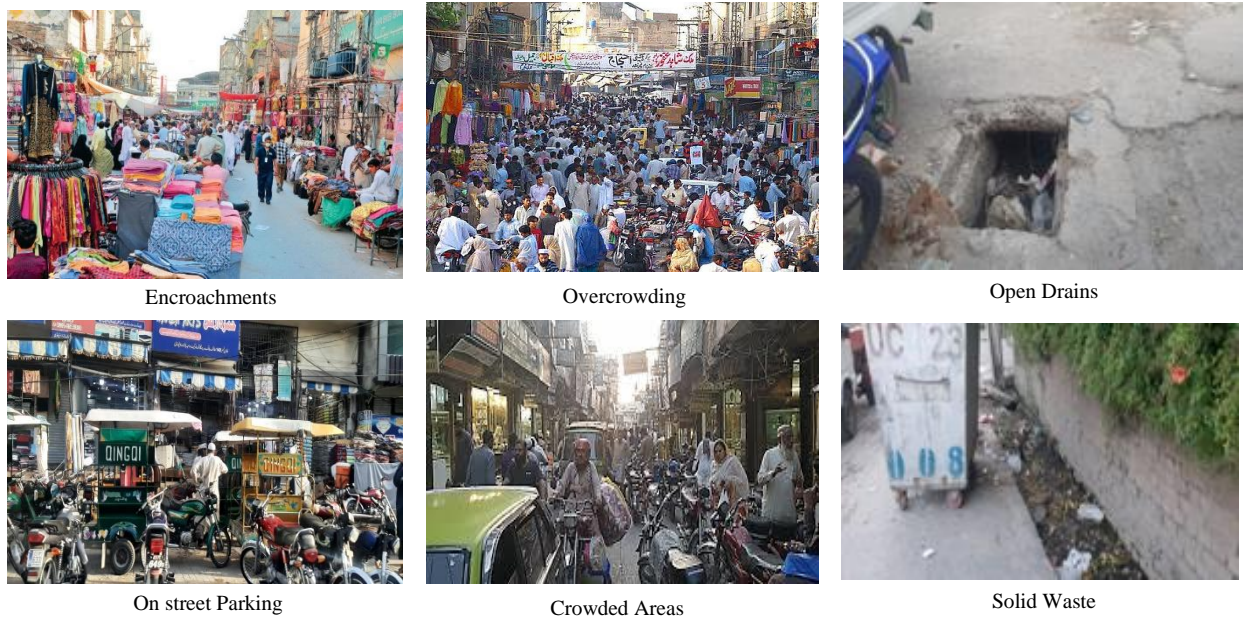


Figure 103. Existing Condition of Raja Bazar and its connected bazars

9.3.1.2. Proposed Interventions

After identifying the problems in the Raja Bazar area, the following interventions have been conceived. Implementing these interventions will upgrade the condition of Raja Bazar. More importantly, the main purpose of these interventions is to provide convenience to both the shoppers and buyers.

It is pertinent to mention here that improving the parking space in Raja Bazar will complement the proposal for upgradation of the existing parking plaza in the bazar. This proposal has already been explained earlier. Other than that, we propose following recommendations for the Raja Bazar:

i. Cover Open Drains

The open drains should be covered in the Raja Bazar area. This will improve the cleanliness and sanitation issues in the bazar too. Moreover, open drains and manholes depict an ugliness in the bazar and also pose safety risk to the passerby people.



Figure 104. Cover open drains that exist at sideways of streets and roads in Raja Bazar area

ii. Uplift Façade

Uplifting the façade in buildings in Raja Bazar area will improve aesthetics of the area.



Figure 105. An example of facade uplift in a street

iii. Remove Encroachments

It is also essential to remove encroachments in the bazar. Removing encroachments will also avert traffic jams and will provide ease to the passerby citizens. To remove the encroachment by vehicles, an alternative parking space must be provided which can be in the form of an upgraded parking plaza (as elucidated above).



Figure 106. Removing encroachments will make space for pedestrians

iv. Fines on parking in undesignated area

One way to discourage encroachments by vehicles is to impose fines i.e., in the form of challans by traffic police authority on parking in undesignated areas. This will improve the traffic flow as well as will remove encroachments.



Figure 107. Challan on Parking in non-designated area

v. Place Street Furniture

Placing street furniture will provide convenience to buyers and sellers in the bazar area.



Figure 108. An example of street furniture

vi. Place Wastebins

It is also essential to place more waste bins in the area. The waste must be collected from these waste bins to ensure cleanliness in the area.



Figure 109. Example of waste bins to be placed in the bazar

9.3.2. Chapar Bazar Chakwal

9.3.2.1. Existing Condition

This is Chakwal's primary commercial area, and it suffers from problems including traffic, pollution, encroachment, and unpaved and poorly maintained pathways. Because of the limited streets, it is difficult for visitors to conveniently shop. Along with other things, there is no street furniture to accommodate people. Below map shows the location of Chapar Bazar and pictures show the existing condition of Bazar.



Map 33: Location Map of Chakwal Bazar

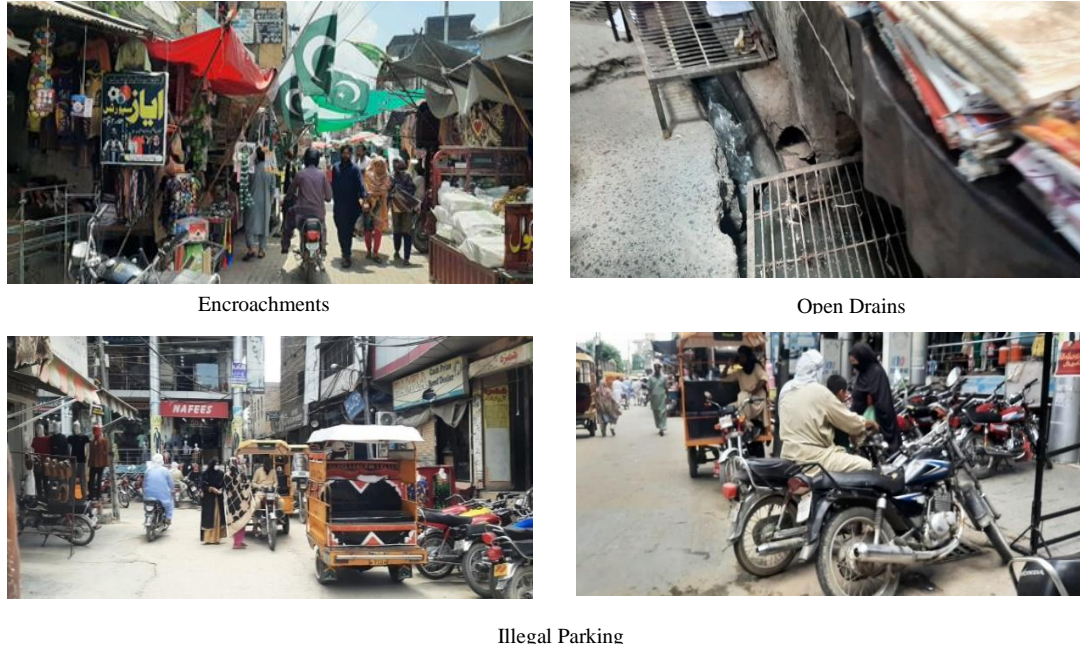


Figure 110. Existing Issues in Bazar in Chakwal

9.3.2.2. Proposed Interventions

After spotting the issues in bazars in Chakwal, the following recommendations have been proposed. These interventions will improve the existing conditions of bazars. In particular, these recommendations also take into account the future needs of the area, therefore, implementing them will reap benefits for both buyers and sellers for a longer time period.

i. Designate Parking Space

It is essential to create proper parking space in the bazar. This will also remove encroachments by vehicles from the Chapar Bazar area, which will eventually provide convenience to buyers and sellers, as well as to the passerby citizens.



Figure 111. Example of a designated parking space

ii. Uplift Façade

Uplifting the façade of some buildings in streets in the bazar will improve the overall aesthetic outlook of the area.



Figure 112. An example of facade uplift of a street

iii. Cover Open Drains

Another important recommendation is to cover the open drains and manholes in the bazar area. Most of the drains are open at the sideways of streets and adjacent to shops.



Figure 113. A depiction of how to cover open drain at sideways of streets.

iv. Add Signage

Adding signage will provide ease to the passerby citizens, especially to the buyers who may come from different areas of the Chakwal district.



Figure 114. An example of signage

v. Place waste bins

Placing waste bins and collecting the garbage daily from the bazar area will ensure cleanliness in the area.



Figure 115. An example of waste bins to be placed in the bazar

vi. Place street furniture

Placing street furniture will provide ease to the buyers in the bazar area.

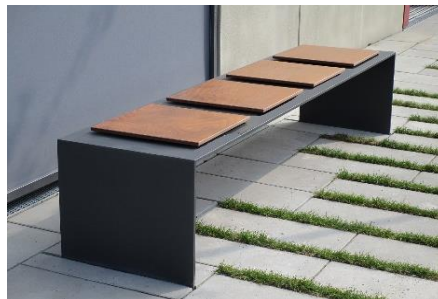


Figure 116. An example of street furniture for buyers in the bazar

9.3.3. Naya Bazar Jhelum

9.3.3.1. Existing Condition

In Jhelum, Naya bazaar is a significant business center that is faced with a number of obstacles and difficulties. Traffic congestion is seen as a major problem that contributes to delays and encroachments that result in poor accessibility and connection. Unmaintained sidewalks and ramps for pedestrians are present; these are mostly utilized by cars, motorbikes, and bazaar vendors. As a result, there is traffic on the main roadways. Because there are not enough designated parking spaces, the phenomenon of on-street parking has emerged. Additionally lacking along these are

street fixtures including benches, streetlights, trash cans, and parking lanes. Overall, this results in the area's economic development being adversely affected. Below map show the location of Naya Bazar and pictures show the existing condition of Bazar.



Map 34: Location Map of Naya Bazar, Jhelum



Encroachment of space by vehicles



Illegal Parking at road connecting bazaar



Traffic congestion



Damaged streets

Figure 117: Existing Condition of Naya Bazar, Jhelum

9.3.3.2. Proposed Interventions

In order to improve the condition of bazars, the following recommendations are suggested:

i. Designate Parking Space

In order to solve the issue of traffic jams and encroachments, a designated parking space should be created. We propose that this space can be created within the bazar at one side of the road. Alternatively, other measures for parking can also be adopted. Nonetheless, such measures must designate a parking space because, currently, there exists no designated parking area within and outside the bazar.



Figure 118. An example of creating parking space at one side of a road.

ii. Uplift Façade and Create Sidewalks with Soft Landscape Elements

We suggest that sidewalks should be created in the bazar and soft landscape elements should be added along with the sidewalks. Moreover, the façade should be uplifted via painting some buildings in the bazar. These measures will provide ease to the buyers and will also improve the aesthetics of the bazar area.



Figure 119. An Example of Creating sidewalks with soft landscape elements

iii. Cover Open Drains

It is necessary to cover open drains in the bazar to improve sanitation.



Figure 120. An example of covering open drains

iv. Add Street Furniture and Wastebins

It is suggested that street furniture and waste bins should be placed in the bazar.



Figure 121. Examples of Street Furniture and Waste bins

9.3.4. Panja Bazar Hasan Abdal

9.3.4.1. Existing Condition

Panja Bazar is the main commercial area of Hassan Abdal. It suffers from problems including traffic, pollution, encroachment, and unpaved and poorly maintained pathways. Because of the limited streets, it is difficult for visitors to conveniently shop. Along with other things, there is no street furniture to accommodate people. Below map shows the location of Panja Bazar and pictures show the existing condition of Bazar.



Map 35: Location Map of Bazar



Encroachments



Waste issues



Parking



Open Drains

Figure 122: Existing Condition of Panja Bazar, Hassan Abdal

9.3.4.2. Proposed Interventions

It is the need of the hour to improve the existing condition of bazars in Hasan Abdal. Therefore, we propose the following interventions to be implemented in the bazar:

i. Cover Open Drains

The most pressing issue is the presence of uncovered drains and manholes in the bazar. The open drains and manholes must be covered.



Figure 123. An example of covering open drains and manholes

ii. Repair Streets and Roads

The streets within the bazar and the roads connected to the bazar are broken. They must be repaired.



Figure 124. An example of repairing a road

iii. Place Street furniture and Waste bins

No waste bins or street furniture were found in the bazar. Therefore, we propose that waste bins and street furniture must be placed on immediate basis. Furthermore, waste from the bins must also be collected daily.



Figure 125. Sample Street furniture and waste bins

iv. Uplift Façade

It is suggested to uplift façade of buildings in the areas to improve aesthetics of the bazar.



Figure 126. An example of uplifting facade

v. Designate Parking Space

As the streets in the bazar are narrow and the vehicles such as motorbikes coming to the bazar create congestion, therefore it is recommended that a parking space must be designated outside the bazar.

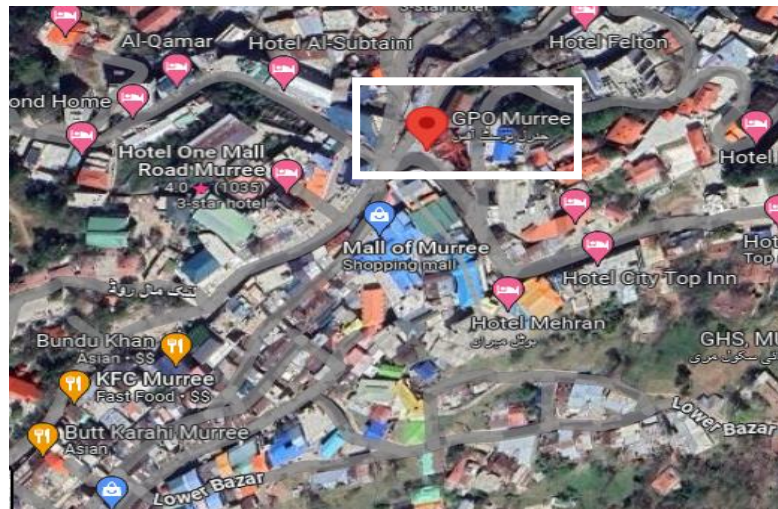


Figure 127. Designate parking space outside bazar

9.3.5. Commercial Area at GPO Chowk and Adjacent to Mall Road, Murree

9.3.5.1. Existing Condition

A significant tourist location is Murree. People visit here from a great distance. But there are several problems in the business districts. Serious traffic bottlenecks may be witnessed in the area of GPO Chowk. This resulted in parking on the street, congestion, and needless delays. Additionally, there are no local anti-encroachment drives to address this issue. Furthermore, the absence of sideways and pedestrian ramps contributes to the deterioration of the problem. Below map show the location and pictures show the existing condition of an area.



Map 36: Location Map



Traffic jam due to poor condition and narrow width of road



Lack of proper parking space outside restaurants

Figure 128. Existing Condition of Commercial Area

9.3.5.2. Proposed Interventions

The commercial area in Murree attracts a high number of tourists in almost all seasons of the year. Therefore, attention should be given to uplifting the experience of these tourists on a regular basis. At present, we are proposing the following interventions to be adopted in the commercial area of Murree:

i. Designate Space for Parking

We propose that a proper space must be created for parking vehicles.



Figure 129. Designate Parking Space

ii. Challan on Parking in undesignated area

We further propose that challan should be imposed for the vehicles parked in undesignated parking area. This will discourage people from randomly parking their vehicles in the bazar. Ultimately, this will provide convenience to the people by reducing traffic congestion in the bazar area.



Figure 130. Immediate challan on illegal parking

iii. Create Side Walkways for Pedestrians

We further propose that side walkways should be created for pedestrians. However, this can only be done if random parking of vehicles does not take place in the bazar.

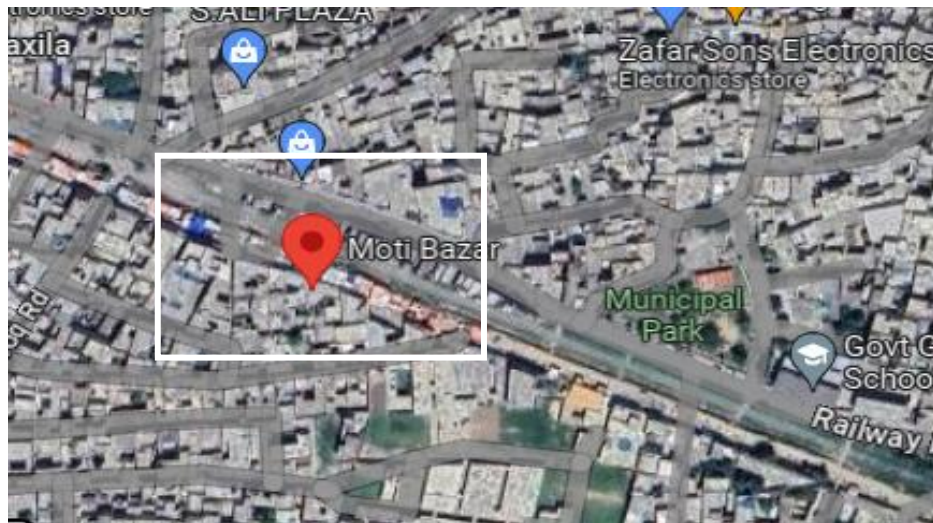


Figure 131. A Depiction of Side walkways for pedestrians

9.3.5. Bazars on Railway Road (Moti Bazar and Purana Bazar) in Taxila

9.3.5.1. Existing Condition

The old bazar in Taxila and its connected Moti Bazar has several issues, which particularly include encroachments, open drains, and poor condition of streets.



Map 37. Location Map of Old Bazar and Moti Bazar



Poor condition of streets



Broken and Narrow Streets



Open Drains outside shops

Figure 132. Existing Condition of Streets in Old Bazar

9.3.5.2. Proposed Interventions

The following recommendations are proposed for upgrading the existing condition of Old Bazar /Moti Bazar in Taxila.

i. Ensure Cleanliness

Proper cleanliness must be carried out in the bazar area. For this purpose, we propose that at least two workers as sweepers should be hired in the bazar area.



Figure 133. Hire sweepers

ii. Repair Streets

The most pressing issue is to repair the streets. We propose that all the streets in the Moti Bazar area must be repaired. Funds should be allocated for this purpose.



Figure 134. Repair streets

iii. Cover Manholes and Open Drains

It is mandatory to cover the open drains and manholes that exist in the bazar. This action must be carried out as a priority.



Figure 135. Cover manholes and open drains

iv. Place Wastebins

It is suggested that waste bins must be placed in the bazar, especially at the entrance of the bazar and at the corner of every street in the bazar. Moreover, the garbage must be collected on a daily basis from the waste bins. This will ensure cleanliness in the bazar.



Figure 136. Examples of waste bins to be placed in the bazar area.

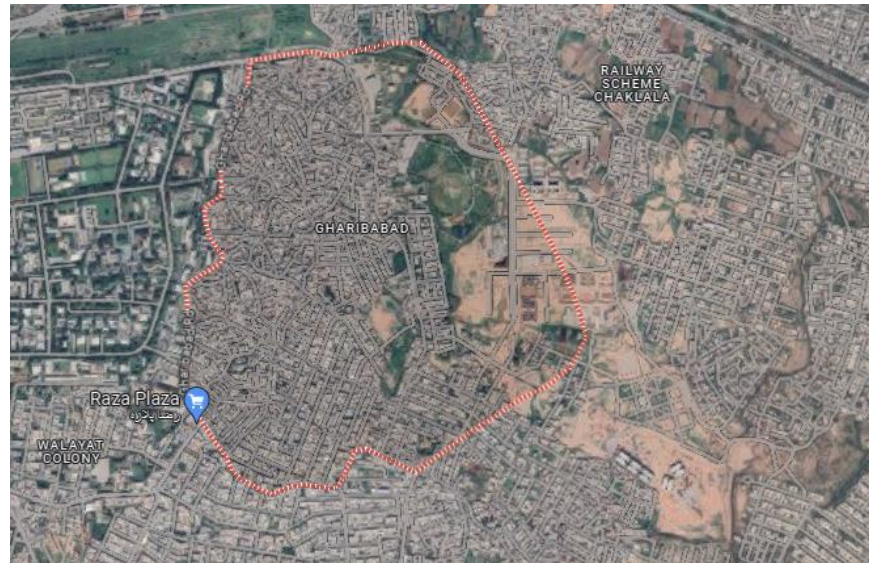
9.4. Upgradation of Katchi Abadis

9.4.1. Existing Condition

The Katchi Abadis, characterized by their lack of municipal services, present a host of challenges for their inhabitants. These settlements feature closely clustered houses, making them susceptible to various hazards, notably waterlogging. In particular, the condition of roads and streets within these settlements is deteriorated. Moreover, the open drains are present that lead to stagnant water, thereby increasing the likelihood of waterborne diseases. Sanitation is a pressing concern, with inadequate waste disposal systems and limited access to clean drinking water, while a dearth of proper disposal points and the absence of sufficient street lighting further intensify the difficulties faced by residents. The below description further clarifies the existing situation in Katchi Abadis.

9.4.1.1. Katchi Abadis in Rawalpindi City

In Rawalpindi, Ghareebabad and Sadiqabad were identified as katchi abadies, as per the information provided by the stakeholders. Among these two, Ghareebabad has poor urban infrastructure. The streets are narrow and lack cleanliness. Likewise, there are issues of solid waste. Most of the streets are broken and require substantial overhaul.



Map 38. Location Map of Ghareebabad.



Narrow unplanned streets



Insufficient wastebins



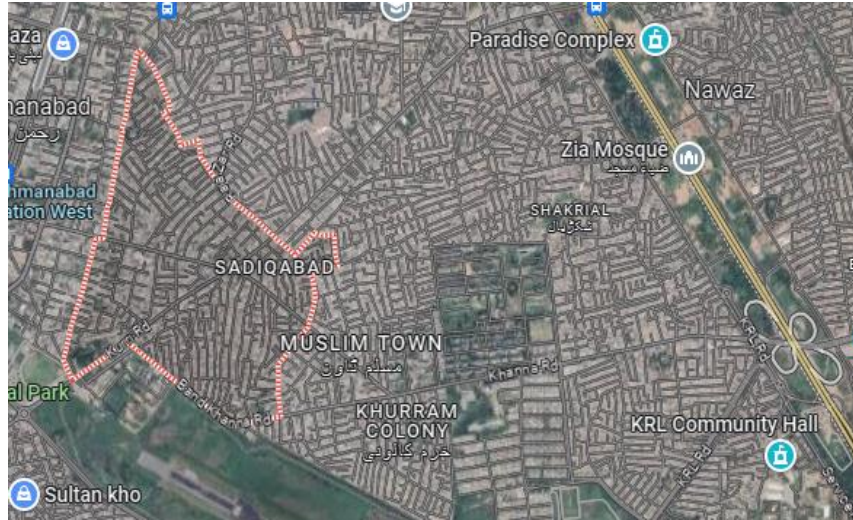
Lack of cleanliness



Damaged streets (All)

Figure 137. Existing situation in Ghareebabad in Rawalpindi.

On the other hand, in Sadiqabad, the open drains and sanitation issues were the major problems. Pertinently, open manholes are located almost outside every house in the colony, which also pose health-related hazards to the residents.



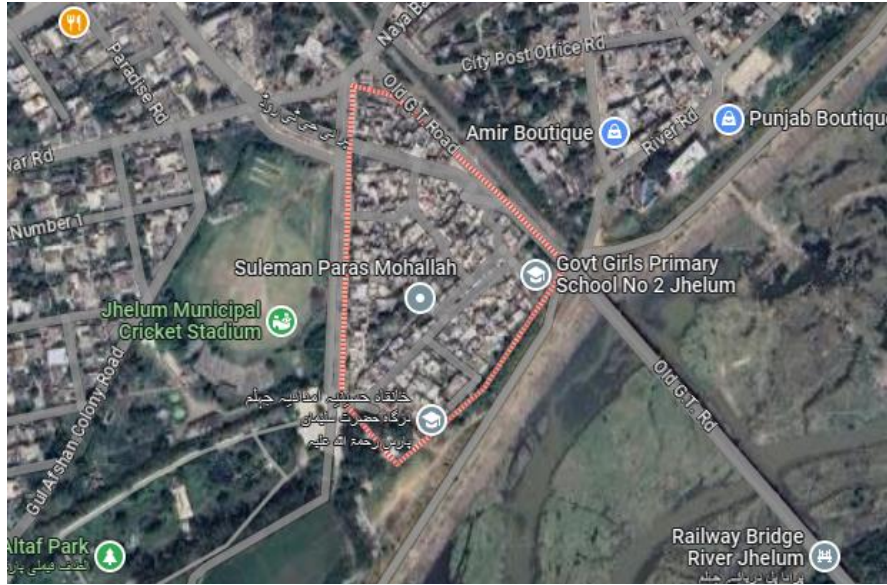
Map 39. Location Map of Sadiqabad



Figure 138. Existing Situation in Sadiqabad, Rawalpindi.

9.4.1.2. Katchi Abadi in Jhelum

In Jhelum city, the Mohallah Suleman Paras is identified as katchi abadi, as per the information provided by the MC. This mohallah has issues related to damaged streets that also have cleanliness issues. Some streets are in good condition while some need immediate repair.



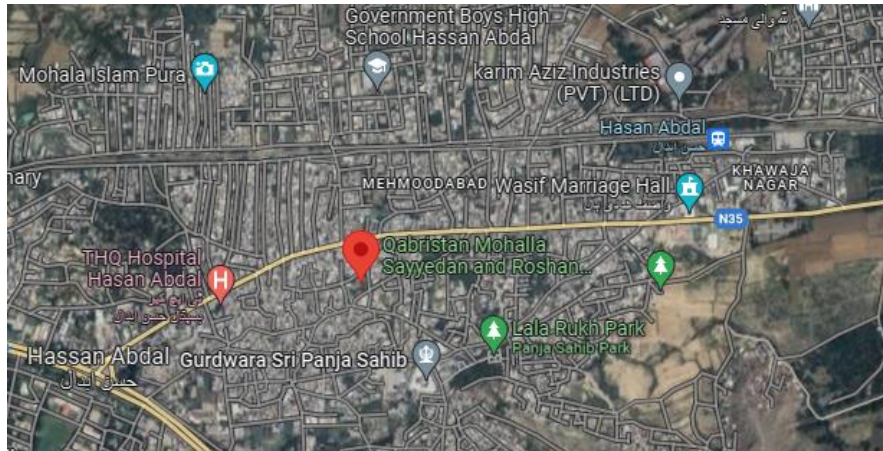
Map 40. Location Map of Mohallah Suleman Paras.



Figure 139. Issues in Suleman Paras Mohallah, Jhelum.

9.4.1.3. Slums in Hasan Abdal

Several residential areas in Hasan Abdal are in poor condition. The streets are broken and have open drains. Moreover, manholes are also open in several areas. In some areas, the water supply and sewerage pipes are overlapping which pose severe health hazard to the locals. In particular, the Mohallah Roshan pura, Reham pura, Khawaja Nagar, Mohallah Islam pura, and Mehmoodabad were in poor condition.



Map 41. Location map of some of the slums like residential areas in Hasan Abdal.



Narrow unclean streets



Damaged condition of roads connecting slums



Water supply and sewer pipes together



Open manholes

Figure 140. Situation of Slums in Hasan Abdal

9.4.2. Proposed Interventions

Recommendations have been provided for improving the situation of katchi abadis that exist in the four districts of Rawalpindi division. In this regard, a particular focus has been given on ensuring that the recommendations are pragmatic and feasible considering the closely clustered houses in these settlements. Financial aspects of recommendations have been particularly considered for making them sustainable. These recommendations include:

i. Repair Streets

The first and foremost recommendation is to carry out repair for all streets in the katchi abadis. This will require allocation of funds.



Figure 141. Repair Streets and roads

ii. Cover Open Drains and Manholes

The second recommendation is to cover manholes which should occur on emergency basis. The open manholes pose health hazard for the residents as well as also pose safety risk for the kids in these areas. Furthermore, the open drains that exist at the sideways of streets should also be covered.



Figure 142. A depiction of how open drains in streets can be covered.

iii. Place more Waste bins

It was noted during the reconnaissance survey that the waste bins were overfilled with garbage. Moreover, a large amount of garbage was also thrown outside these bins. This indicates that the waste bins are short in number. Therefore, it is suggested that more waste bins should be placed in the residential areas, especially in katchi abadis.



Figure 143. Waste bins to be placed in katchi abadis

iv. Remove Solid Waste

It is also essential that the solid waste must be removed timely from the waste bins placed in residential areas. Moreover, the solid waste should also be removed from streets. This requires hiring of new staff for removal of solid waste from streets and from waste bins. On the other hand, a private agency can also be given a contract to remove solid waste.



Figure 144. Workers removing solid waste

v. Uplift Façade

The uplifting of façade of houses in katchi abadis will improve their outlook and will upgrade the areas in terms of urban development scope.



Figure 145. Images depicting façade uplift

9.5. Proposed Green Spaces

It is a recommendation by the World Health Organization (WHO) that every city must have an area of 9 square meters allocated for parks or green space per person in an urban population. Therefore, every city must have green urban spaces for the well-being of the citizens. Availability of sufficient green spaces in a city improves the air quality and biodiversity of the city. Moreover, the green spaces also help in maintaining temperature and lowering greenhouse gases in a city.

Due to the benefits of the green spaces, new sites for parks or green spaces have been proposed below for the major cities of Rawalpindi division. These sites have been identified as vacant as of now. The location maps have also been provided for each city.

9.5.1. Proposed Sites for Green Spaces in Rawalpindi City

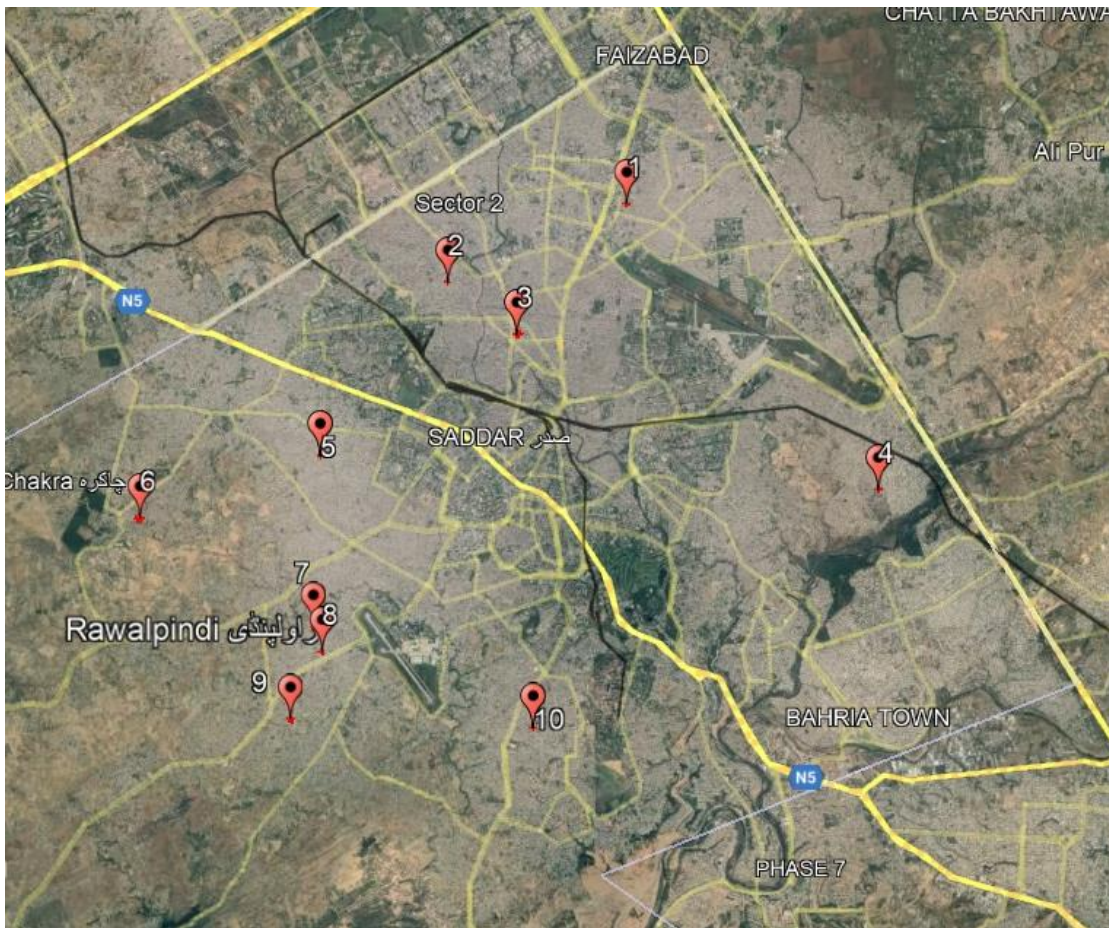
The population in Rawalpindi city is rising rapidly. Therefore, as per the directives of WHO, the need for new spaces for parks is also growing. Moreover, commercialization is also expanding in the city. To meet the health demands and environmental requirements, the following sites have been proposed to be allocated for parks or similar green spaces.

Table 16. Location for the Selected Sites for Parks in Rawalpindi City

Number	Location	Area (Kanal)
1	Located in Sadiqabad and along the Jinnah Road	3.5
2	Located in Dhoke Mangtal and Hazara Colony	1.5
3	Located in Mughal Sarai and along the Ganj Mandi Road	4.2
4	Located in Gulbahar Scheme	2.0
5	Located in Shalley Valley	1.45
6	Located in New Chakra	5.2
7	Located in Quaid-e-Azam Colony	1.7

8	Located in Bahar Colony	3.9
9	Located in Mohra Chappar	4.5
10	Located in Munawar Colony	3.2

These sites have also been marked on the map as given below.



Map 42. Location Map of Proposed Sites for Proposed Green Spaces/Parks in Rawalpindi City

9.5.2. Proposed Sites for Green Spaces in Chakwal City

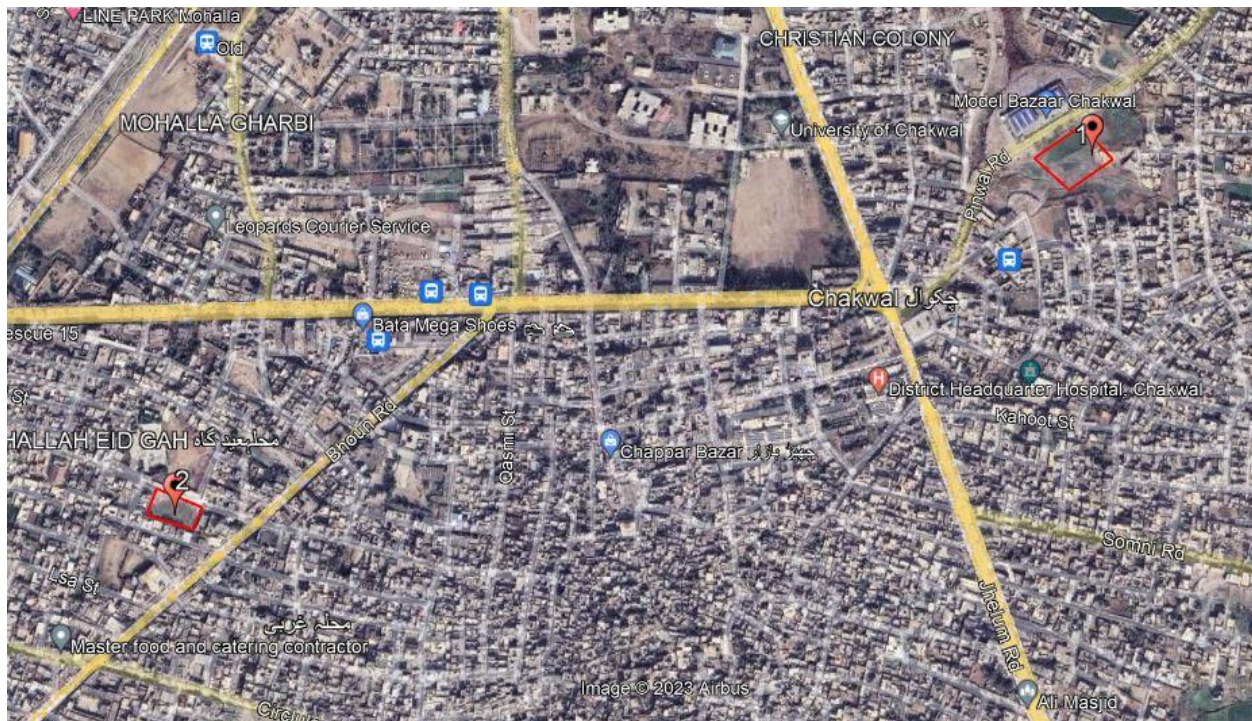
The Chakwal city significantly lacks green spaces. This is particularly true for the inner area of the city that is being crowded due to the increase in population and rise in commercialization. However, some vacant sites also exist in the city. It is suggested to convert two of these vacant

sites into parks/green spaces for the well-being of the locals. The two selected sites for parks/green spaces are given below.

Table 17. Location for the Selected Sites for Parks in Chakwal City

Number	Location	Area (Kanal)
1	Located opposite to Model Bazaar	8.0
2	Located along Eidgah Road	4.7

These sites are further shown on a map below.



Map 43. Location Map of Proposed Sites for Proposed Green Spaces/Parks in Chakwal City

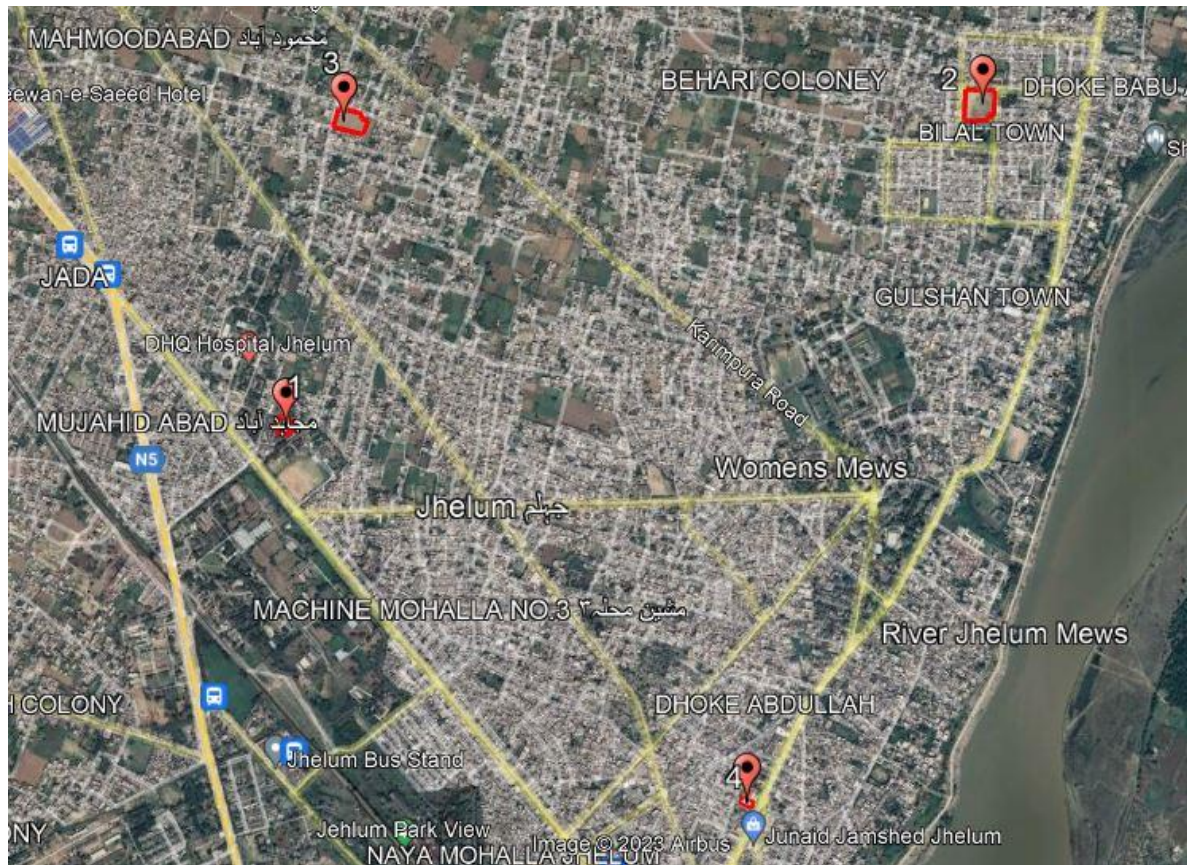
9.5.3. Proposed Sites for Green Spaces in Jhelum City

Similar to Chakwal city, the Jhelum city also lacks parks/green spaces. Following the same directives of WHO, the following locations have been marked as suitable for building parks/green spaces.

Table 18. Location for the Selected Sites for Parks in Jhelum City

Number	Location	Area (Kanal)
1	Located in Islam Pura	4.5
2	Located in Bilal Town	7.5
3	Located in Mahmoodabad	8.0
4	Located in Naya Mohallah Jhelum	2.0

These sites are also shown in the below map.



Map 44. Location Map of Proposed Sites for Proposed Green Spaces/Parks in Jhelum City

9.5.4. Sample Design for Parks

A sample design for parks is also proposed below. New parks or similar green space on this model or on any suitable model should be built in the proposed locations. This design is given in the below figure.



Figure 146. Conceptual Design for Parks/Green Spaces

9.6. Proposal for Capacity Building

9.6.1. Existing Situation

There are several issues related to the capacity of the government offices, especially of the MC Offices. The stakeholders have also communicated about this. For example, there is only one building inspector in RDA who also deals with MC Chakwal. Attock has its own building inspector while Hassan Abdal has no building inspector. Similarly, there is severe shortage of cleaning staff, which hinders the waste collection agencies from door-to-door collection of garbage. Furthermore, in almost all MCs, there is a shortage of technical personnel. Especially, the GIS staff is lacking. Moreover, there are no town planners in some offices that have town planning as their core responsibility. For instance, as communicated by the deputy director of PHATA, there are no town planners in PHATA Rawalpindi division offices.

It is pertinent to mention here that most of the staff use old methods to keep records. Data is also not updated as per existing need. Moreover, no official training is conducted for the existing staff. This is particularly true for the MC Offices in all districts of the Rawalpindi division.

9.6.1. Proposed Interventions

The following interventions are proposed to overcome the capacity building issues in the government offices in Rawalpindi division:

- i. Vacancies should be filled immediately, especially at the positions of urban planners and building inspectors in MC Offices.
- ii. Budget should be allocated for salaries of new hiring staff.
- iii. Training sessions for computer literacy should be conducted, especially at the MC Offices on an immediate basis.
- iv. GIS professionals should be hired, especially in MC Offices.

9.7. Proposal for Managing Urban Growth

The urban areas within the division exhibit a pattern of unregulated expansion. To enhance their compatibility and sustainability, a well-structured plan is required. This entails the identification of specific areas suitable for controlled development. Additionally, it's essential to demarcate and

safeguard continuous agricultural zones against potential urbanization. Therefore, in this section of the report, a strategy of infill development has been proposed to better land use in urban areas. Moreover, as the growth is taking place unsustainably due to factors inducing it, therefore, a proposal for diverting growth to certain areas has also been provided in this section.

9.7.1. Infill Development

Infill development strategies refer to using underutilized or vacant spaces within existing urban areas for new development projects. These strategies focus on maximizing the use of available land and infrastructure, promoting sustainable growth, and revitalizing established communities. Unlike urban sprawl, which involves expanding into undeveloped areas, infill development enhances the efficiency and vibrancy of existing urban landscapes.

In Rawalpindi urban areas, it is suggested that infill development should be carried out to address the issues of urban sprawl and consequent housing shortages. Infill development will lead to better allocation of land, especially for residential purposes.



Figure 147. Image showing infill development in built-up area.

We propose the following strategies to carry out infill development in Rawalpindi division:

i. Utilization of Underutilized Spaces

To make use of parcels of land or buildings that are vacant, abandoned, or not fully optimized.

ii. Efficient Infrastructure Use

To capitalize on existing infrastructure such as roads, utilities, public transportation, and community services.

iii. Sustainable Land Use

By redeveloping existing urban spaces, this infill strategy helps prevent the need to convert green fields (undeveloped land) into new developments.

iv. Revitalization of Urban Areas

The revitalization leads to improved community amenities and a greater sense of place.

v. Diverse Housing Options

To introduce a mix of housing options, catering to different income levels and demographics.

vi. Walkability and Connectivity

To create pedestrian-friendly environments that encourage people to walk, bike, and use public transportation, reducing reliance on cars.

vii. Reduction of Commute Distances

To create housing, workplaces, and amenities in close proximity, infill development reduces the need for long commutes.

viii. Regulatory and Zoning Adaptations

To adapt zoning codes and regulations to support infill development. This involves creating mixed-use zoning, allowing for higher densities, and offering incentives to developers.

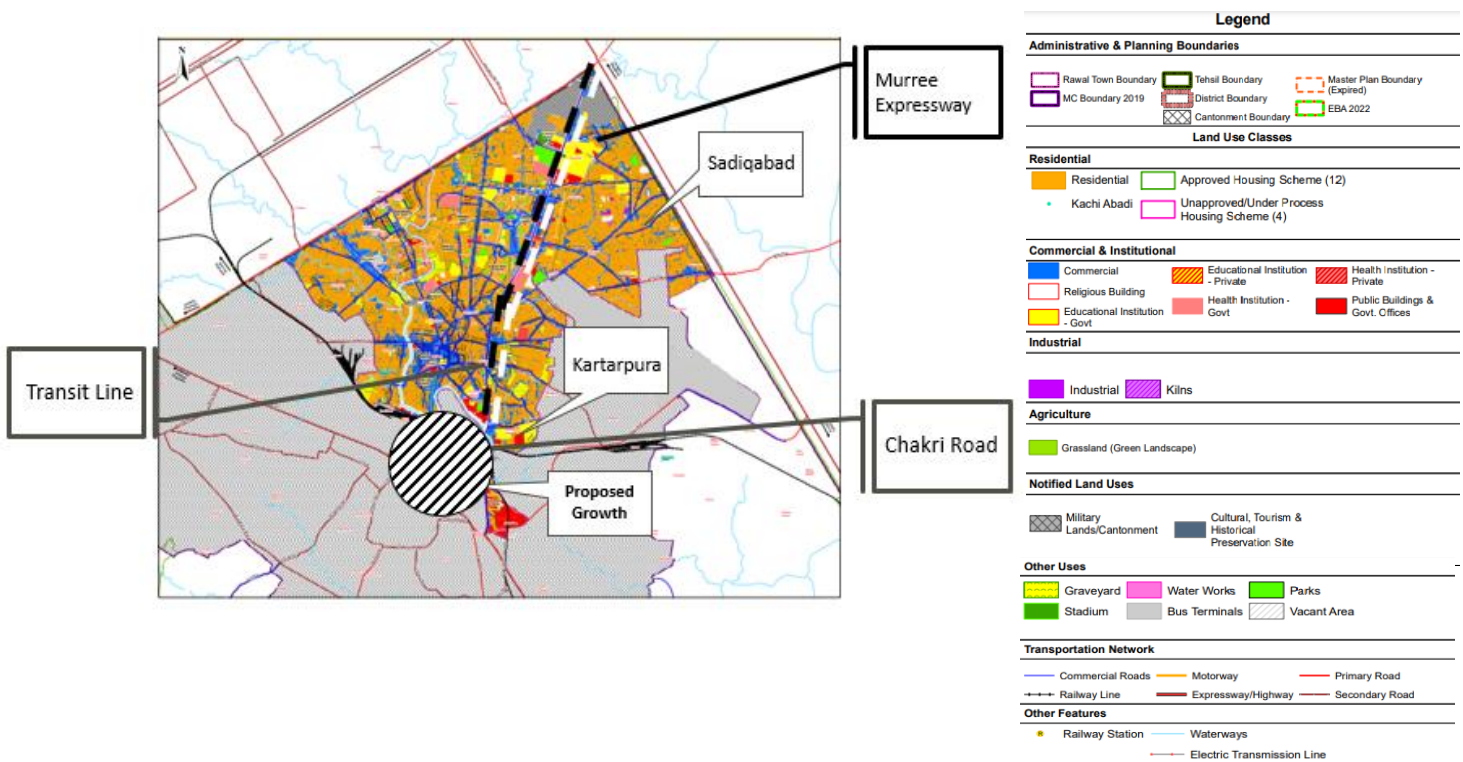
9.7.2. Proposed Growth Zones for Future

The selection of future growth areas is contingent upon a city's distinct requirements, obstacles, and its enduring vision. The primary aim of proposing growth areas within districts is to pinpoint growth zones with suitability for urban expansion, facilitating the burgeoning population and fostering economic progress. These zones could be situated on the city's periphery or within underdeveloped or underutilized sectors within the existing urban boundaries. To accommodate forthcoming developments, this regional plan encourages a preference for compacting and increasing population density within the established urban areas.

9.7.2.1. Proposed Growth Zone in Rawalpindi City

At present, the development is taking place towards South, around Transit line and along the Murree Expressway Road.

We suggest proposed future growth trend along Chakri road at southern direction of cardinal points. This proposal is also according to the future growth that is expected in the region as new housing schemes are expected to emerge in this area. The future development in this area will also off-set the burden on housing in the center of the city. The proposed growth area is shown below in in the circular area depicted with black-and-white stripes. Furthermore, the proposed growth area is especially feasible for residential growth because the residential expansion is forecasted to take place here primarily due to the emergence of new housing schemes in the area.

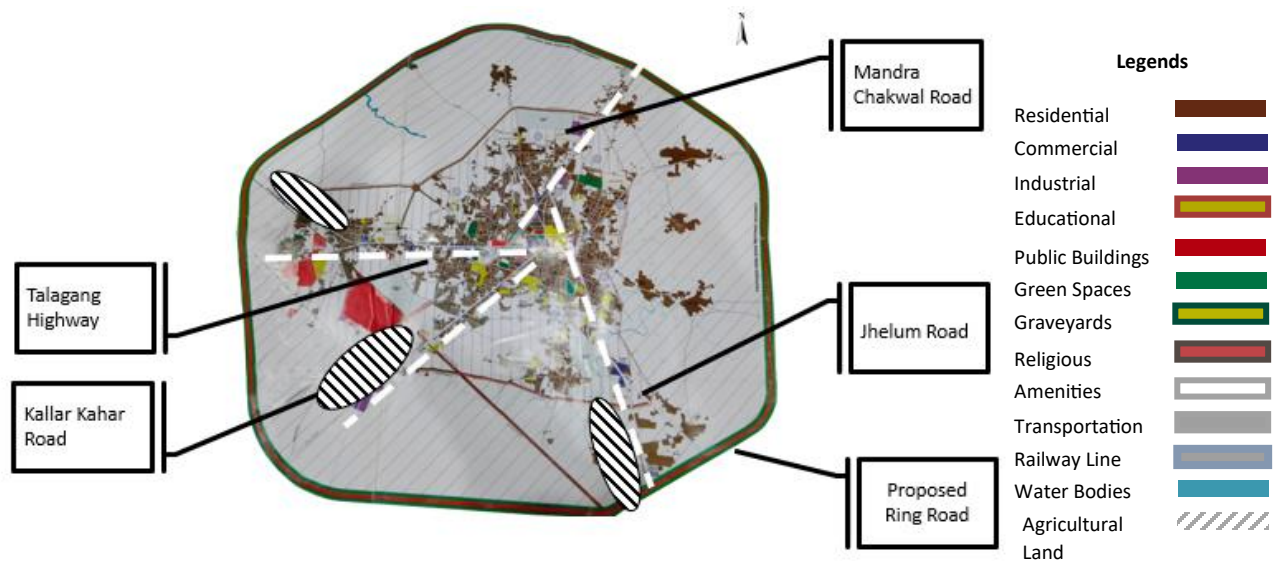


Map 45. The black-and-white circular area depicting proposed growth for Rawalpindi city

9.7.2.2. Proposed Growth Zone in Chakwal City

In Chakwal city, the development is taking place in all directions mostly along southwest side at present.

We propose the future development along Talagang Highway, Kallar Kahar Road, Mandra Chakwal Road, and Jhelum Road, as illustrated below in black-and-white stripes area. As the future development has been proposed at the peripheral areas, therefore, it will reduce the burden of population growth and consequent increase in housing demand in center of the city. A main reason to propose growth here is the enhanced road connectivity which the above mentioned roads offer to the connected areas. Moreover, the growth in these areas will balance out the burden on the economic resources at the center of the city.

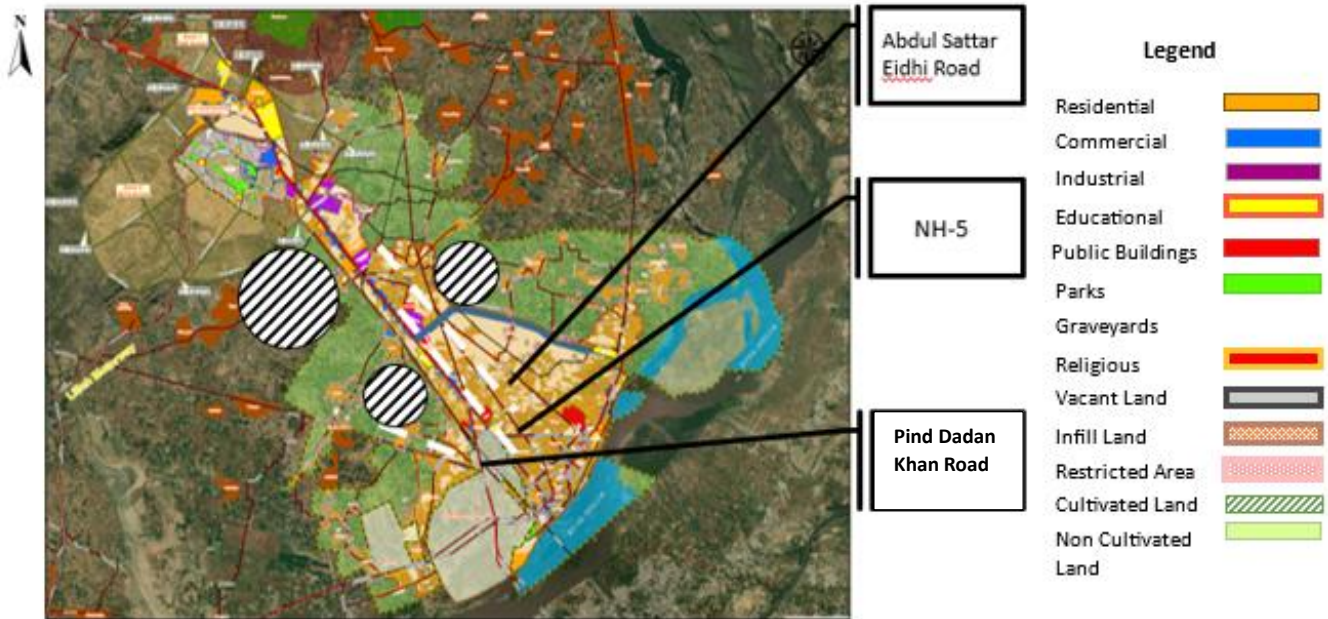


Map 46. Proposed future growth as shown on Chakwal ODP (2014-2039) Map

9.7.2.3. Proposed Growth Zone in Jhelum City

Currently, the development is taking place towards East and West, around NH-5 and along the Pind Dadan Khan Road.

We propose that future growth should be taking place along NH-5 in the western direction of cardinal points as illustrated below. The three growth zones below will connect to the NH-5.



Map 47. Proposed future growth shown on Site Development Zone and Structure Plan of MC Jhelum.

Currently, growth is taking place at the northern and southern areas of the city. To balance out this trend, we propose new growth zones in the shaded areas. This will create alignment in future growth trends to make it more sustainable. Inviting growth in the proposed areas will require new infrastructure built up which will further pathways for further development. Yet these sites are also in proximity to existing major roads and existing built up, making them feasible for land uses such as industrial, commercial and residential.

9.8. Costs of Above Proposals

The costs for the proposed projects have been estimated based on the costs of different projects of previous ADPs of Rawalpindi division. For each proposed cost below, 3 to 4 costs were considered and then, a mean of these costs was calculated. Therefore, the below suggested costs are pure estimations. These costs also include yearly inflation estimations. For any future seasonal inflations, it depends upon the agency that will carry out implementation of these projects to accrue them in the future. Moreover, we suggest that if these projects are implemented after a year or so, then inflation should be adjusted accordingly per year in these costs.⁴

Sr. No.	Department	Project	Cost (Million Rs.)
1.	Rawalpindi Development Authority	Rehabilitation of Parking Plaza in Raja Bazar Area (including the cost of adding three floors)	450
2.	Rawalpindi Development Authority (for Rawalpindi city); Municipal administration	Transit Oriented Development (This includes the cost of streetscaping, footpath, place-making, façade uplift, urban renewal, and replicating to other metro zones)	1,700
3.	Local Government & Community Development Department	Upgradation of Raja Bazar* and Connected Commercial Area (façade uplift, manholes, and waste bins) *This excludes the cost of upgradation of parking plaza which has been provided above.	15

⁴ **Disclaimer:** These costs have been estimated based on the current prices. The actual costs can vary depending upon the time when these proposals will be implemented, due to the inflation and other unforeseen factors.

4.	Local Government & Community Development Department	Upgradation of Chapar Bazar in Chakwal city cost (manholes, generating parking space, and waste bins) ⁵	15
5.	Local Government & Community Development Department	Upgradation of Naya Bazar Jhelum cost (façade uplift, manholes, and waste bins)	25
6.	Local Government & Community Development Department	Upgradation of Panja Bazar Hasan Abdal (Repairing streets, covering manholes, and placing waste bins) ⁶	37.8
7.	Local Government & Community Development Department	Upgradation of Old Bazar Taxila (Repairing streets, covering manholes, and per year cleanliness cost ⁷)	36.1
8.	Local Government & Community Development Department	Upgradation of Katchi Abadis Part a) Sadiqabad (This cost includes covering manholes and open drains including one large open nullah, per year cleanliness ⁸ cost)	61.4
8.	Local Government & Community Development Department	Upgradation of Katchi Abadis Part b) Ghareebabad	41

⁵ The cost is low because streets do not require to be repaired. Only covering open drains/manholes and waste bins are required with some façade uplift.

⁶ The high cost is due to the need that the streets are needed to be repaired.

⁷ We propose hiring two workers for cleanliness/sweeping in the area.

⁸ We propose hiring four workers for cleanliness/sweeping in the area.

		(Repairing streets and per year cleanliness ⁹ cost).	
9.	Local Government & Community Development Department	Upgradation of Katchi Abadis Part c) Suleman Paras Mohallah (including cost of repairing streets, covering open drains, and cleanliness ¹⁰ cost)	29
10.	Local Government & Community Development Department	Upgradation of Slums Part d) Hasan Abdal (repairing streets, covering open drains, and cleanliness cost ¹¹)	51
11.	Local Government & Community Development Department	Proposal for Capacity Building: Part a) For each MC Office: ¹² Cost for MC Office Rawalpindi = 6.48 Cost for MC Office Chakwal ¹³ = 5.04 Cost for MC Office Jhelum = 6.48 Cost for MC Office Attock = 6.48 Cost for MC Office Hasan Abdal = 6.48 Cost for MC Office Taxila = 6.48	37.44

⁹ We propose hiring four workers for cleanliness/sweeping in the area

¹⁰ We propose hiring two workers for cleanliness/sweeping in the area.

¹¹ We propose hiring of four workers for cleanliness/sweeping in the area.

¹² (This cost includes the cost of hiring 1 building inspector, 1 urban planner, 2 GIS experts i.e., 1 to assist urban planner and 1 to assist building inspector, 1 IT expert, and 1 yearly training)

¹³ MC Chakwal office already has an urban planner working as MO(P). Therefore, this cost excludes hiring of an urban planner.

12.	Concerned PHATA Department	Proposal for capacity building: Part b) PHATA Offices ¹⁴	7.2
13.	Local Government & Community Development Department	Cost for Proposed Green Spaces = <ul style="list-style-type: none"> • Cost for proposed green spaces in Rawalpindi city = 67.8 • Cost for proposed green spaces in Chakwal city = 27.6 • Cost for proposed green spaces in Jhelum city = 47.9 Total Cost = 143.25	143.25
Total Cost for the Proposals			2601.9

¹⁴ This cost includes the hiring cost of 2 urban planners (1 for Rawalpindi office, and 1 for Jhelum office), hiring cost of 2 GIS experts (for two offices) and hiring cost of 2 IT experts (for two offices). These costs are yearly salaries estimations.

ANNEXURES

Annexure – A

NOTIFICATION

LIST OF ROADS / SEGMENTS OF ROADS DECLARED FOR FUTURE COMMERCIAL USE / CONVERSION OF LAND USE IN CITY DISTRICT GOVERNMENT, RAWALPINDI.

No. DO(SP)/ 091

Date. 30/06/2011.

District Planning & Design Committee constituted by the Government of the Punjab under Section 56 of the Punjab Land Use (Classification, Re-classification & Re-development) Rules, 2009 issued vide No. SOR(LG)38-18/2009 dated 27-06-2009, keeping in view the amendment made by the Government, in the Punjab Land use (Classification, Re-classification & Re-development) Rules, 2009 vide No. SOR(LG)38-18/2009 dated 25-05-2011 & as per clarification issued by the worthy Secretary LG & CD Department, Government of the Punjab bearing No. SO.ESSTATE(LG)2-26/09 dated 08-06-2011, decided to declare following roads for future change of land use with or without conditions / restrictions, as discussed in the meeting of DP&DC held on 21-06-2011, under the Chairmanship of the Commissioner, Rawalpindi Division, Rawalpindi / Chairperson DP&DC:

TMA TAXILA

Sr. #	Name of Road	Detail of Segment		Minimum Building Line / Setback (From Property Line)	Approved Height
		Starting Point	Ending Point		
1.	G.T Road	Within TMA Limits		Minimum 20 ft Irrespective of the size of plot	38 ft, G+2
2.	Faisal Shaheed Road	Sarai Kala Chowk	Railway Crossing	Upto 10 M = 10 ft Above 10 M - 1 kanal = 15 ft Above 1 K = 20 ft	38 ft, G+2
3.	Tatha Khalil Road	Sarai Kala Chowk	WAPDA office	Upto 10 M = 10 ft Above 10 M - 1 kanal = 15 ft Above 1 K = 20 ft	28 ft, G+1
4.	Sher Shah Suri Road	GT Road	Faisal Shaheed Road	Upto 10 M = 10 ft Above 10 M - 1 kanal = 15 ft Above 1 K = 20 ft	38 ft, G+2
5.	Main Bazaar (Commercial allowed on G. Floor only & no basement allowed)	Railway Road	Mashraqi Bazar	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1

6.	Railway Road	Railway Crossing	Babu Hotel	Upto 10 M= 10 ft Above 10 M - 1 kanal = 15 ft Above 1 K = 20 ft	38 ft, G+2
7.	Jamilabad Road	GT Road	Tatha Kahlil Road	Upto 10 M= 10 ft Above 10 M - 1 kanal = 15 ft Above 1 K = 20 ft	28 ft, G+1
8.	HMC Road	Railway Crossing	Dhamra Bridge	Minimum 15 ft Irrespective of the size of plot	38 ft, G+2
9.	Fateh Jang Road	Within TMA Limits		Minimum 20 ft Irrespective of the size of plot	38 ft, G+2
10.	Khan Pur Road (I)	Taxila Museum	Canal Bridge	Frozen for future commercial activity	
	Khan Pur Road (II)	Canal Bridge	TMA Limits	Upto 10 M= 10 ft Above 10 M - 1 kanal = 15 ft Above 1 K = 20 ft	38 ft, G+2
11.	AC Wash Road	GT Road	Upto 02 Km	Minimum 15 ft Irrespective of the size of plot	28 ft, G+1
12.	Abbottabad Road	Mohra Chowk	Lab-e-Mir	Minimum 20 ft Irrespective of the size of plot	38 ft, G+2

TMA KALLAR SYEDAN

Sr. #	Name of Road	Detail of Segment		Minimum Building Line / Setback (From Property Line)	Approved Height
		Starting Point	Ending Point		
1	Rawalpindi Kallar Road	Sheh Baghiz Dhakala CNG	Sar Soba Shah	Minimum 20 ft Irrespective of the size of plot	38 ft, G+2
2	Manglora Road	Murced Chowk	Manglora Kassi	Minimum 20 ft Irrespective of the size of plot	38 ft, G+2
3	Doheran Road	Murced Chowk	Mughal Abad	Minimum 20 ft Irrespective of the size of plot	38 ft, G+2
4	Gujar Khan Road	Main Chowk Kallar Syedan	Govt. Boys College	Minimum 20 ft Irrespective of the size of plot	38 ft, G+2
5	Thana Road (1) (Commercial allowed on G. Floor only & no basement allowed)	Niaz Baker	Noor Plaza	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1
	Thana Road (2)	Noor Plaza	Police Station	Upto 10 M= 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2

6.	Jamia Masjid Road	Main Chowk Pindori	Jamia Masjid Pindori	Upto 10 M= 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2
7.	Bhata Road	Main Chowk Pindori	Govt. Girls School, Pindori	Upto 10 M= 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2

TMA, GUJAR KHAN

Sr. #	Name of Road	Detail of Segment		Minimum Building Line / Setback (From Property Line)	Approved Height
		Starting Point	Ending Point		
1	Sarafa Bazaar (Commercial allowed on G. Floor only & no basement allowed)	Khurshed Jewellers	Iqbal Chowk	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1
2	Main Bazar Sukha Road (Commercial allowed on G. Floor only & no basement allowed)	London Sweet	Iqbal Agency	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1
3	Hayat Sar Road	Sadiq Shop	Grid Station	Upto 10 M= 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2
4	New Gulyana Road	Attique Vegetable Shop	Indus College	Upto 10 M= 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2
5	Railway Road	Tariq Kiyani Plaza	Faisal Market	Upto 10 M= 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2
6	Old Gulyana Road	Ch. Karyana Store	Ch. Raza Shop	Upto 10 M= 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2
7	Lakri Katra (Commercial allowed on G. Floor only & no basement allowed)	Mouzam Shop	Shop of Tiles	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1
8	Sandai Road	Kh. Rafiq	Qamar Hosuc	Minimum 15 ft Irrespective of the size of plot	28 ft, G+1

9	G.T Road	Missa Kaswal	Channi Pul	Up to 1 Kanal = 20 ft Above 1 kanal = 30 ft	48 ft, G+3
10	Halwai Gali (Commercial allowed on G. Floor only & no basement allowed)	Qayyum Shop	Al-Noor Printing Press	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1
11	Qasai Gali (Commercial allowed on G. Floor only & no basement allowed)	Sethi Arshad	Naeem Trunk Shop	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1
12	Tehsil Road	Animal Hospital	Muhammed Ali Sweet	Upto 10 M = 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	38 ft, G+2
13	Katra Tambaku (Commercial allowed on G. Floor only & no basement allowed)	Pakistan Swess	Moulvi Inikhar Shop	Exempted from set back / building line as already declared under Commercialization Rules 2004, dated 24-02-2007.	28 ft, G+1
14	Barki Road	College	Railway Track	Upto 10 M = 10 ft above 10 M - 1 kanal = 15 ft above 1 K = 20 ft	28 ft, G+1

TMA MURREE

On the recommendations of Administrator / Assistant Commissioner, Murree the Committee decided that the roads of Murree will be declared for future commercial use after the completion of Master Plan exercise taken up by the Tourism Development Corporation of Pakistan (TDCP), till that time all the roads for Murree will be frozen for future commercialization / change of land use.

The Commissioner, Rawalpindi Division, Rawalpindi / Chairperson DP&DC City District Government, Rawalpindi, has consented & cleared the format & contents of this notification.

D. Qureshi
District Coordination Officer
Rawalpindi.

Annexure – B**LIST OF APPROVED HOUSING SCHEMES IN RDA**

Sr. #	Name Scheme	Location / Mouza
1.	Doctor's Cooperative Housing Society	Lohi Bher
2.	Foreign Office Employees Cooperative Housing Society	Lakhu, Rupa, Nasrala
3.	Abad Cooperative Housing Society	Kaliyal
4.	Judicial Employees Cooperative Housing Society	Gangal
5.	Municipal Corporation Co-operative Housing Scheme (Sector A&B)	Bagga Sheikhan (Merged with DHA)
6.	Pakistan Atomic Energy Employees Cooperative Housing Society	Abban Chak
7.	Pakistan Employees Cooperative Housing Society	Mohri Khatran and Gurbal
8.	Revenue Employees Cooperative Housing Society	Morgah (Merged with DHA)
9.	Work, No words Cooperative Housing Society (Gulshan-e-Fatima)	Rupa
10.	PIA Officers Co-operative Housing Society	Adyala
11.	Shifa Cooperative Housing Scheme	Gangal
12.	T&T Employees Cooperative Housing Society	Dhagal
13.	Rawalpindi Railway Employees Cooperate Housing Society	Loi Bher
14.	PARC Cooperative Housing Scheme	Bagga Sheikhan
15.	Golden Jubilee Cooperative Housing Society	Kotha Kalan
16.	Bahria Town (Phase-I,II&III (Partially))	Kotha Kalan
17.	Fizaia Housing Scheme	Gangal
18.	Garden Villas	Dhagal (Merged with DHA)
19.	Kehkashan Town	Shahpur
20.	Kohsar View Housing Project	Lakkhu
21.	Rabia Bangalows Memon Construction company Pvt. Ltd	Kotha Kalan
22.	Bostan Avenue Housing Project	Kotha Kalan

23.	Army Welfare Housing Scheme (Defence-I)	Morgah (Emerged as DHA)
24.	Safari Villas-II	Kotha Kalan
25.	Khudadad City	Nasrala
26.	Eastridge Housing Scheme (Cornerstone Pvt. Ltd.)	Kotha Kalan
27.	Tarnol Housing Scheme	Nasrallah & Chahan
28.	Clifton Town	Kalri
29.	Up-Country Enclosure	Kot Kolian, Rupa, Jataal
30.	Sanober City	Kalri, Kalyal
31.	Safari Encalve II (Land Sub Division)	Dhagal
32.	Elite Reverie	Phamra & Bajnial
33.	Mumtaz City (Revised)	Pind Nasrala

**LIST OF APPROVED HOUSING SCHEMES IN DISTRICT COUNCIL, TEHSIL
RAWALPINDI**

Sr. No	Name of Scheme	Location / Mouza
1.	Safari Valley	Kalli Adyala Road
2.	Pakistan Govt. Employees Cooperative Housing Society	Jonyal, Rawat Road
3.	Al-Haram City	Kolian Par, Chakri Road
4.	Bankers City (Court case)	Nakriyali Adyala Road
5.	Qartaba City	Kolian Hamed Chakra, Chakri Road
6.	Rabia Residency	Chahan Chakri Road
7.	Lake Vista	Dhoke Abdullah, Banda Nagyal

LIST OF APPROVED / HOUSING SCHEMES IN TEHSIL, MURREE BY TMA

1.	Bahria Golf City	Approved from TMA
2.	Dream Valley Housing Scheme	Approved from TMA
3.	Pakistan Atomic Energy Employees Cooperative Housing Society	Under process in TMA / Court case

LIST OF HOUSING SCHEMES IN TEHSIL MURREE APPROVED BY RDA,

Sr. #	Name Scheme	Location / Mouza
1.	Commoners Sky Garden (Approved By RDA)	Menghle & Kathar, Angoori Road

Annexure – C

Housing Schemes of PHATA:

Number	Name	Area (Acre)	Location
Existing			
1	ADS <u>Khayaban-e-Sir</u> Syed (RWP I)	300	IJP road Rawalpindi
2	ADS Gulzar-e-Qaid (RWP II)	53.71	Old Airport road
3	Gujar khan I	20	Railway road near railway station Gujjar Khan
4	ADS Gujar Khan II	40	GT road near Govt. degree college Gujjar Khan
5	ADS Hassan Abdal	30.38	Main Haripur road
6	ADS Attock (People Colony)	50	Main Kamra Attock road
7	ADS Hazro (Naya Paksitan)	50	Hattian road Hazro
8	ADS Talagang	26.56	Main Chakwal Talagang
9	Satellite Town (Block A-F)	Above 200	Murree road
Future			
1	ADS II (ADP) Attock II	50	Near Fateh Jhang road

**BRIEF OF AFFORDABLE PRIVATE HOUSING SCHEMES
UNDER PHATA AFFORDABLE PRIVATE HOUSING SCHEME RULES 2020
AS STOOD ON 07/08/2023**

➤ **DISTRICT ATTOCK**

▪ **Tehsil Attock**

Sr. #	Name of Scheme	Tehsil	District	Status
1	Akbar Housing Mouza Jamgah	Attock	Attock	Approved
2	Taj Enclave Mouza Jamgah, Kamra Road	Attock	Attock	Map is clear but approval is Under Process
3	AIWA Residencia Mouza Jamgah	Attock	Attock	--do--

▪ **Tehsil Fateh Jang**

Sr. #	Name of Scheme	Tehsil	District	Status
4	NOVA City Mouza Kanial	Fateh Jang	Attock	Approved
5	D-I Capital Park City Mouza Ratwal & Dolat Pur	Fateh Jang	Attock	Approved
6	New Airport City Mouza Thatti Gujran, Off Ratwal Road	Fateh Jang	Attock	Approved
7	Islamabad Co-operative Housing Society Mouza Bango	Fateh Jang	Attock	Map is clear but approval is Under Process

▪ **Tehsil Hassan Abdal**

Sr. #	Name of Scheme	Tehsil	District	Status
8	New City Paradise Mouza Kohliya, Islam Garh, Khaliq Dad	Hassan Abdal	Attock	Approved

▪ **Tehsil Hazro**

Sr. #	Name of Scheme	Tehsil	District	Status
9	Campbellpur Greens Attock Mouza Qutba & Jatial	Hazro	Attock	Approved
10	National Aerospace City Mouza Pind Suleman Makhhan Tehsil Attock & Mouza Kamla, Sahiba, Shamsabad, Veero, Taja Baja, Qutba And Jatial Tehsil Hazro District Attock	Hazro	Attock	Map is clear but approval is Under Process

