



Government of the People's Republic of Bangladesh  
Ministry of Local Government, Rural Development and Co-operatives  
Local Government Engineering Department (LGED)

# Feasibility Study and Research for Developing Rural Compact Housing in Bangladesh

## Draft Final Report

June 2022

Submitted by: Joint Venture (JV) of



DPM CONSULTANTS LTD.



SARM ASSOCIATES LIMITED



## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>CHAPTER 01: BACKGROUND AND PROJECT PURPOSE.....</b>	<b>3</b>
<b>1.1 General.....</b>	<b>3</b>
<b>1.2 Background of the Project .....</b>	<b>3</b>
<b>1.3 Vision and Objectives .....</b>	<b>4</b>
<b>1.4 Project Components.....</b>	<b>4</b>
1.4.1 Rural Compact Housing.....	5
1.4.2 Social and Economic Perspective .....	5
1.4.3 Possibilities and Challenges.....	6
<b>1.5 Consultants Services .....</b>	<b>6</b>
<b>1.6 Approach to Feasibility Study .....</b>	<b>7</b>
<b>CHAPTER 02: STRATEGIES, PRACTICES AND POLICIES .....</b>	<b>10</b>
<b>2.1 Policies and Acts.....</b>	<b>10</b>
2.1.1 Development Goals of Bangladesh: Vision 2041 .....	10
2.1.2 Eighth Five-year Plan (8FYP).....	11
2.1.3 Election Manifesto, 2018 .....	11
2.1.4 National Housing Policy, 2016 .....	12
2.1.5 Sustainable Development Goals (SDGs) .....	13
<b>2.2 Relevant Housing Practices.....</b>	<b>14</b>
2.2.1 Ashrayan Project by Prime Minister’s Office.....	14
2.2.2 Palli Janapad Housing Project by RDA .....	14
2.2.3 Site and Services Development Project by NHA.....	15
<b>CHAPTER 03: COMPERATIVE ANALYSIS FOR SELECTION OF STUDY AREA .....</b>	<b>16</b>
<b>3.1 Study Area Selection.....</b>	<b>16</b>
<b>3.2 Physical Conditions.....</b>	<b>17</b>
3.2.1 Hafizpur Village (Monohardi Upazila).....	17
3.2.2 Shimulbak Village (Shantiganj Upazila) .....	19
<b>3.3 Socio Economic Conditions .....</b>	<b>21</b>
3.3.1 Demography.....	21
3.3.2 Housing Condition .....	21
3.3.3 Economic Development.....	21
3.3.4 Education and Institutional Facilities.....	22
<b>3.4 Field Visits to The Study Area .....</b>	<b>22</b>
3.4.1 Stakeholders Consultation.....	22
3.4.2 Discussion with Local People and Stakeholders.....	23
3.4.3 Existing Landuse:.....	24
<b>3.5 Priority Consideration of The Study Areas.....</b>	<b>27</b>

<b>3.6 Selection of Housing Area .....</b>	<b>29</b>
3.6.1 Identification of Potential Sites.....	29
3.6.2 Opportunities and Constraints in Potential Sites.....	29
<b>CHAPTER 04: DESIGN OF COMPACT HOUSING .....</b>	<b>31</b>
<b>4.1 Plan Overview of Compact Housing .....</b>	<b>31</b>
<b>4.2 Compact Housing Design of Hafizpur Village, Monohardi Upazila, Narsingdi .....</b>	<b>31</b>
4.2.1 Neighborhood Master Plan for Hafizpur Village, Monohardi Upazila.....	31
4.2.2 Housing Design Prototypes (3D Design).....	33
4.2.3 2- D Neighborhood Plan .....	43
4.2.4 Civic Facilities .....	44
4.2.5 Accessibility.....	45
4.2.6 Open Space .....	46
4.2.7 Adaptability.....	47
4.2.8 Built Form Height / Density.....	48
4.2.9 Accommodation Diversity/ Amenity .....	48
4.2.10 Architectural Expression.....	49
<b>4.3 Compact Housing Design of Shimulbak Village, Shantiganj Upazila, Sunamganj .....</b>	<b>50</b>
4.3.1 Neighborhood Master Plan for Shimulbak Village, Shantiganj Upazila .....	50
4.3.2 Housing Design Prototypes (3D Design).....	52
4.3.3 2- D Neighborhood Plan .....	63
4.3.4 Civic Facilities .....	63
4.3.5 Accessibility.....	63
4.3.6 Open Space .....	64
4.3.7 Built Form Height / Density.....	64
4.3.8 Orientation .....	65
<b>4.4 Sustainability of Compact Housing Scheme.....</b>	<b>66</b>
<b>CHAPTER 05: LAND MANAGEMENT .....</b>	<b>67</b>
<b>5.1. Review of The Existing Land Management System and Land Rights in Bangladesh.....</b>	<b>67</b>
5.1.1 Under Two Separate Ministries: .....	67
5.1.2 Resulting Property Regimes and Regulatory Frameworks .....	68
<b>5.2 Socio-Economic and Land Information of Hafizpur Village, Chalakchar, Manohardi, Narsingdi.....</b>	<b>71</b>
5.2.1 General Observation .....	71
5.2.2 Public Demand in Proposed Project (from FGD, 2/6/2022) .....	72
5.2.3 Required minimum Civic Benefits .....	73
5.2.4 Price of the Land inside of 67 acres (2020-21) (Per Decimal).....	73
5.2.5 House Hold Survey Result in Graphs .....	73
5.2.6 Critical considerations for planning Rural Compact Housing in Hafizpur .....	86
<b>5.3 Possible Land Management Technique (Land Readjustment/PPP) for Rural Compact Housing .....</b>	<b>88</b>

5.3.1 Partnership Based Land Pooling Method for Rural Compact Housing - An Overview .....	88
5.3.2 Project evaluation.....	88
5.3.3 Implementation phase .....	89
<b>5.4 Establishment of Memorandum of understanding (MOU).....</b>	<b>89</b>
5.4.1 Feasibility Assessment:.....	89
5.4.2 Formed Association: .....	90
5.4.3 Preparing policy for Project implementation: .....	90
5.4.4 Preparation of Planning:.....	90
5.4.5 Implementation of Planning:.....	91
5.4.6 Handover the ownership: .....	91
5.4.7 Home Loan facilities:.....	91
5.4.8 Maintenance:.....	91
<b>5.5 Facilities:.....</b>	<b>92</b>
<b>5.6 Risk of This Method and Way to Reduce Risk .....</b>	<b>92</b>
<b>5.7 Legal Aspects of Establishing Rural Compact Housing.....</b>	<b>92</b>
<b>CHAPTER 06: FINANCIAL ANALYSIS.....</b>	<b>95</b>
<b>6.1 Economic Analysis of Compact Housing Project in Hafizpur Village, Shantiganj.....</b>	<b>95</b>
6.1.1. Economic Analysis .....	95
6.1.2 Sensitivity Test.....	100
6.1.3 Results of sensitivity analysis .....	100
6.1.4 Recommendations:.....	100
<b>CHAPTER 07: IMPLEMENTATION ARRANGEMENT .....</b>	<b>101</b>
<b>7.1 Implementation Strategy.....</b>	<b>101</b>
<b>7.2 Inter- Organizational Collaboration .....</b>	<b>102</b>
<b>7.3 Suitable Agency for Development Control.....</b>	<b>102</b>
7.3.1 Role of Local Government Engineering Department (LGED) .....	102
7.3.2 Role of Upazila Parishad.....	102
<b>7.4 Project Implementation Steps.....</b>	<b>102</b>
7.4.1 Establishment of Project Management Committee.....	102
7.4.2 Preparation of Policy for Project Implementation .....	102
7.4.3 Land Management.....	103
7.4.4 Project Planning and Implementation .....	103
7.4.5 Transfer of Ownership .....	103
7.4.6 Regulation and Maintenance.....	103
<b>7.5 Monitoring and Evaluation.....</b>	<b>103</b>
<b>CHAPTER 08: CONCLUSION.....</b>	<b>104</b>
<b>ANNEX -1.....</b>	<b>105</b>
<b>ANNEX -2.....</b>	<b>110</b>

## List of Figures

Figure 1.1: Project Component .....	4
Figure 1.2: Visionary concept of Compact Housing.....	5
Figure 1.3: Visionary concept of Compact Housing.....	5
Figure 1.4: Approach to Compact Housing .....	8
Figure 1.5: Road to Feasibility.....	8
Figure 1.6: Approach to Feasibility Study .....	9
Figure 2.1: Ashrayan Project .....	14
Figure 2.2: Palli Janapad Housing Project.....	15
Figure 3.1: Location Map of Study Area .....	16
Figure 3.2: Hafizpur Village .....	17
Figure 3.3: Regional Linkage of Hafizpur Village .....	18
Figure 3.4: Shimulbak Village.....	19
Figure 3.5: Regional Linkage of Shimulbak Village .....	19
Figure 3.5: Regional Linkage of Shimulbak Village .....	20
Figure 3.6: Consultation meeting with stakeholders.....	22
Figure 3.7: Community meeting in Shimulbak And Hafizpur Village.....	23
Figure 3.8: Discussion with villagers of Shimulbak and Hafizpur village .....	24
Figure 3.9: Existing landuse of Hafizpur Village, Monohardi, Narsingdi.....	25
Figure 3.10: Existing landuse of Shimulbak Village, Shantiganj, Sunamganj .....	26
Figure 3.11: Potential Site - 01 for Compact housing in Shimulbak Village.....	29
Figure 3.12: Potential Site for Compact housing in Hafizpur Village .....	29
Figure 4.1: Neighborhood master plan for Hafizpur Village, Monohardi, Narsingdi.....	32
Figure 4.2: Layout of proposed prototype Type A .....	33
Figure 4.3: Unit plan of proposed prototype Type A.....	34
Figure 4.4: Floor (double unit) plan of proposed prototype Type A. ....	35
Figure 4.5: Cut view (double unit) plan of proposed prototype Type A.....	35
Figure 4.6: Cut view (double unit) plan of proposed prototype Type A.....	36
Figure 4.7: North East view of proposed prototype Type A.....	36
Figure 4.8: Layout of Proposed prototype Type B. ....	37
Figure 4.9: Unit Plan of Proposed prototype Type B.....	37
Figure 4.10: Floor (Double Unit) Plan of Proposed prototype Type B.....	38
Figure 4.11: Cut View (Double Unit) Plan of Proposed prototype Type B .....	38
Figure 4.12: South West view of Proposed prototype Type B. ....	39
Figure 4.13: North-East view of Proposed prototype Type B .....	39
Figure 4.14: Layout of Proposed prototype Type C. ....	40
Figure 4.15: Unit Plan of Proposed prototype Type C.....	40
Figure 4.16: Floor (Double Unit) Plan of Proposed prototype Type C.....	41

Figure 4.17: Cut View (Double Unit) Plan of Proposed prototype Type B.....	41
Figure 4.18: South West view of Proposed prototype Type C. ....	42
Figure 4.19: North-East view of Proposed prototype Type C. ....	42
Figure 4.20: Plan of neighborhood of Compact Housing, Hafizpur. ....	43
Figure 4.21: Civic Facilities of Compact Housing, Hafizpur. ....	44
Figure 4.22: Road Network of Compact Housing, Hafizpur. ....	45
Figure 4.23: Open Spaces of Compact Housing, Hafizpur.....	46
Figure 4.24: Adaptability of Compact Housing, Hafizpur.....	47
Figure 4.25: Built form Density of Compact Housing, Hafizpur. ....	48
Figure 4.26: Architectural Expression of Compact Housing, Hafizpur.....	49
Figure 4.27: Neighborhood master plan for Shimulbak Village.....	50
Figure 4.28: Neighborhood master plan for Shimulbak Village.....	51
Figure 4.29: Blow up view (01) of Shimulbak housing.....	52
Figure 4.30: Blow up view (02) of Shimulbak housing.....	52
Figure 4.31: Blow up view (03) of Shimulbak housing.....	53
Figure 4.32: Side view of Shimulbak Rural housing .....	53
Figure 4.33: 3D view of Shimulbak Rural housing – Phase 01 .....	54
Figure 4.34: Ground floor of Shimulbak Rural housing– Phase 01.....	55
Figure 4.35: Aerial cut view of Shimulbak Rural housing – Phase 01 .....	55
Figure 4.36: Side view of Shimulbak Rural housing– Phase 01 .....	56
Figure 4.37: Side view of Shimulbak Rural housing – Phase 01 .....	56
Figure 4.38: 3D view of Shimulbak Rural housing – Phase 02 .....	57
Figure 4.39: Ground floor of Shimulbak Rural housing – Phase 02.....	57
Figure 4.40: Aerial cut view of Shimulbak Rural housing – Phase 02.....	58
Figure 4.41: Side view of Shimulbak Rural housing – Phase 02.....	58
Figure 4.42: Side view of Shimulbak Rural housing– Phase 02.....	59
Figure 4.43: 3D view of Shimulbak Rural housing – Phase 03 .....	60
Figure 4.44: Ground floor of Shimulbak Rural housing – Phase 03.....	60
Figure 4.45: Aerial cut view of Shimulbak Rural housing (1 <sup>st</sup> floor) – Phase 03.....	61
Figure 4.46: Aerial cut view of Shimulbak Rural housing (Ground Floor) – Phase 03.....	61
Figure 4.47: Side view of Shimulbak Rural housing – Phase 03.....	61
Figure 4.47: Side view of Shimulbak Rural housing – Phase 03.....	62
Figure 4.48: Aerial view of Shimulbak Rural housing – All Phases .....	62
Figure 4.49: Plan of neighborhood of Compact Housing, Shimulbak.....	63
Figure 4.50: Built form Density of Compact Housing, Shimulbak. ....	64
Figure 4.51: Orientation Pattern 01 of Compact Housing, Shimulbak. ....	65
Figure 4.52: Orientation Pattern 02 of Compact Housing, Shimulbak. ....	65
Figure 5.1: Gender Status of Household Head ..... 73	73
Figure 5.2: Age Category of Household ..... 74	74

Figure 5.3: Types of Houses .....	74
Figure 5.4: Use of Houses.....	74
Figure 5.5: The profession of Household Head .....	75
Figure 5.6: Age category of HH members .....	75
Figure 5.7: Sex category of HH Members .....	76
Figure 5.8: Educational status of HH Members.....	76
Figure 5.9: The profession of HH members .....	76
Figure 5.10: HH settlement size in Decimal:.....	77
Figure 5.11: Area of HH settlement in sq. ft.....	77
Figure 5.12: HH under the Mouza covered during survey.....	77
Figure 5.13: Status of having Agricultural land.....	78
Figure 5.14: Size of Agricultural land in Decimal.....	78
Figure 5.15: Is there enough space to live with family members?.....	79
Figure 5.16: How many HHs are thinking about making a new house?.....	79
Figure 5.17: Reasons behind making new house .....	79
Figure 5.18: Having enough land to make a new house? .....	80
Figure 5.19: Are you interested in a high-rise building? .....	80
Figure 5.20: How will you manage money to make a new house?.....	80
Figure 5.21: Are you interested in the housing initiative taken on a partnership basis?.....	81
Figure 5.22: What kind of partnership do they want?.....	81
Figure 5.23: What kind of income-generating training do you need? .....	81
Figure 5.24: Is there any large entrepreneurs in your HH?.....	82
Figure 5.25: Do you want to take any long-term loan facility to increase your income?.....	82
Figure 5.26: Monthly income Range .....	82
Figure 5.27: Monthly expenditure .....	83
Figure 5.28: Monthly savings .....	83
Figure 5.29: Main source of earning.....	84
Figure 5.30: Source of drinking water .....	84
Figure 5.31: Availability of latrine .....	85
Figure 5.32: Types of latrine using .....	85
Figure 5.33: Where do they dump their wastage .....	85
Figure 5.34: Existing Project Area Map of Hafizpur Village (67 Acre).....	94
Figure 6.1: Institutional Arrangement Chain .....	101
Figure 6.2: Project Management Flowchart.....	101



**List of Tables**

Table 1.1: Possibilities and Challenges in Bangladesh.....	6
Table 3.1: Road Facility in Hafizpur Village.....	18
Table 3.2: Road Facility in Shimulbak Village.....	20
Table 3.3: Total Area and Population of Study Areas .....	21
Table 3.4: Educational Institutions in Pilot Areas .....	22
Table 3.5: Priority Consideration of Study Areas.....	27
Table 3.6: Opportunities and Constraints in Potential Sites .....	29
Table 4.1: Prototype area analysis .....	33
Table 4.2: Housing block analysis .....	43
Table: 5.1 Analysis of Current Land Tenure System and Property Rights of Bangladesh.....	69
Table 5.2 Landuse and other information about the Project Area .....	72
Table: 6.1 Investment, Maintenance and Management costs.....	96
Table: 6.2 Project Economic and Financial Benefits .....	97
Table 6.3: Financial Analysis Stream (Base Case) .....	98
Table 6.4: Economic Analysis Stream (Base Case).....	99
Table-6.5: Results of CBA Base Case .....	99
Table- 6.6: Results of Sensitivity Analysis.....	100

## EXECUTIVE SUMMARY

This “**Feasibility Study and Research for Developing Rural Compact Housing in Bangladesh**” envisages a new development plan for Bangladesh. The content of the report includes a series of development strategies, plan proposal in order to fulfill the requirements stated in the Terms of Reference (ToR). The report has been prepared on the basis of systematic studies, survey and stakeholders consultations conducted during the study period.

The study is conducted to analyze the present housing condition and pattern in rural Bangladesh and to identify the trend of shrinking cultivable land through horizontal expansion of housing. The study also tries to find alternative ways of rural housing like Compact Rural Housing (CRH) / Community Housing with basic infrastructural facilities and utmost utilization of land.

Bangladesh is a land scarce country with high-density population. As most of the people live in rural areas and depend on agriculture and allied activities, proper rural land management is crucial. The paper presents an overall view of rural land management in Bangladesh and looks at some potential measures taken by the government to protect the country’s agricultural land through compact housing initiative. Finally, the paper provides a set of guidelines to deal with present land management challenges

Two villages have been selected as a preliminary consideration for Compact housing initiative. Initially one area will be taken for initial implementation. The rationale for priority area among these two areas are compared below

Table: Priority Consideration

Priority Consideration	Shimulbak Village Shimulbak Union, Shantiganj, Sunamganj	Hafizpur Village, Chalakchar Union, Monohardi Upazila, Narsingdi
1. Location	<ul style="list-style-type: none"> <li>Located 17 km away from Shantiganj Upazila Sadar area</li> </ul>	Only 5 km away from Monohardi Upazila Sadar area.
2. Land Information	<ul style="list-style-type: none"> <li>The village is mainly composed of wetland.</li> <li>Although majority land is farmland, some parts of the village are not in condition for cultivation due to wetlands.</li> <li>Lower land areas remain under water in most of the time of a year.</li> </ul>	<ul style="list-style-type: none"> <li>Land Character is relatively Plain.</li> <li>Most of the lands are used for paddy production.</li> <li>Most of the land in the village has been inherited by the villagers.</li> </ul>
3. Connectivity	<ul style="list-style-type: none"> <li>The village is remote and pretty far from the major road.</li> </ul>	<ul style="list-style-type: none"> <li>The village is connected to Monohardi Paurashava through Mathkhola road to Manohardi bus stand.</li> </ul>

<b>Priority Consideration</b>	<b>Shimulbak Village Shimulbak Union, Shantiganj, Sunamganj</b>	<b>Hafizpur Village, Chalakchar Union, Monohardi Upazila, Narsingdi</b>
4. Infrastructural Facilities	<ul style="list-style-type: none"> <li>• Access to necessary infrastructure facilities is limited.</li> </ul>	<ul style="list-style-type: none"> <li>• All infrastructure amenities are relatively near to village.</li> </ul>
5. Socio – Economic Condition	<ul style="list-style-type: none"> <li>• Primary occupation of the villagers is farming.</li> <li>• Most of the villagers depend on remittances sent by family members living abroad.</li> <li>• Katcha and Semi- Pucca houses are prominent.</li> </ul>	<ul style="list-style-type: none"> <li>• Primary occupation of the villagers is farming.</li> <li>• Many villagers are involved in cane and handicrafts business.</li> <li>• Tin shed houses are more common in this village.</li> </ul>
6. Education	<ul style="list-style-type: none"> <li>• Only primary school is available.</li> </ul>	<ul style="list-style-type: none"> <li>• Both primary and high school is present in the village.</li> </ul>
6. Flood/ Waterlogging	<ul style="list-style-type: none"> <li>• As the village is surrounded by large amounts wetlands, it remains under water for long period in rainy season.</li> </ul>	<ul style="list-style-type: none"> <li>• Waterlogging prevails during rainy season.</li> </ul>

It is evident from the above list that the Hafizpur site has several advantages and will be quicker to implement from the physical point of consideration. The consultant has proposed a 3-type phased development of the 67 acres of land. Land development cost and schematic site design for the proposed sites are also given in the report.

The priority selection is also based on many social, physical, and economic factors from which the local people must be benefitted, mainly to solving the housing problem. Considering the vast undeveloped hinder land, good accessibility and easy of land availability, we definitely propose selection of Hafizpur village as a priority.

## Chapter-01

### BACKGROUND AND PROJECT PURPOSE

#### 1.1 General

Design Planning & Management Consultants Limited (DPM) and SARM Associates Limited in a Joint Venture has been appointed by Local Government Engineering Department (LGED) as the consultants to conduct the “**Feasibility Study and Research for Developing Rural Compact housing in Bangladesh**”. The Present report has been prepared in the fulfillment of the Terms of Reference (TOR). The submission is the result of investigation and planning effort by the consultant after detail research and discussion with the client.

#### 1.2 Background of the Project

Rural development is the process of improving the quality of life and economic well-being of people living in rural areas. It aims at the development of the rural economy as a whole and also incorporates the full range of technological, economic, political, and social developments associated with private and public activities aimed at improving the well-being of rural people. Bangladesh has almost 87 thousand villages. It is a prime source of food, nutrition, and of available workable manpower. Villages are also a reservoir of ecology and natural resources. Village was the center of development philosophy of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman. To realize this vision, which included the article 16 in the constitution of Bangladesh states,

*“The State shall adopt effective measures to bring about a radical transformation in the rural areas through the promotion of an agricultural revolution, the provision of rural electrification, the development of cottage and other industries, and the improvement of education, communications and public health, in those areas, so as progressively to remove the disparity in the standards of living between the urban and the rural areas.”*

In this regard a comprehensive development plan is required to address the required land use transformation which will not allow any unauthorized and unplanned-development, either in urban area or in rural area.

Bangladesh Awami League (ruling political party of Bangladesh) had declared its election manifesto before the 11th National Election. The manifesto articulates specific sectoral plans and objectives grounded on the achievements over the last two terms of the ruling party. Although the prime slogan of this manifesto is “**My Village - My Town,**” it seeks to extend modern urban facilities to every village. The main aim of the project is to fulfill the Bangabandhu's dream of Golden Bengal by providing the essential facilities to all the village.

The manifesto makes it a point that “initiatives will be taken to provide every village with facilities of modern towns, including developed roads, communication facilities, safe drinking water, modern health care and proper treatment, standard education, developed sewage and waste management, electricity and fuel supply, computer and high-speed internet facilities as well as employment opportunities. One of the major objectives of this vision is to comply the Constitution through reducing disparity between the urban and rural. Apart from these the other commitments made in the manifesto also covered the issue of improving villages. This commitment covered the concept of four major interrelated issues to improve the villages including, Infrastructural Development and Planning, Human Resource

Development and Poverty Reduction, Agricultural Development, Climate Change and Environmental Protection and Education and Health Services.

Considering this situation, the project on “My Village My Town” has been initiated with a view to conduct a feasibility study and research for developing rural compact housing in Bangladesh. LGED has already initiated a Technical Assistance (TA) project for these policy- level efforts. The TA project for “My Village My Town” is now initiating process for conducting necessary studies.

**1.3 Vision and Objectives**

The vision of the assignment is the creation of a livable environment where the people can live and enjoy within affordable means without sacrificing interests. The broad objective of this study is to research and assess the feasibility of rural compact housing in Bangladesh in a sustainable manner, in accordance with the National Housing Policy, Vision 2041 targets, SDG goals, targets of the Eighth Five Year Plan, and commitments made in the present government's election manifesto.

**Specific Objectives:**

- Prevent unplanned human settlement and the establishment of non-agricultural uses on agricultural land.
- Environmental, ecological, and resource conservation in rural areas through long-term planning and design.
- Providing quality basic services and utilities, such as quality education, health care, water supply, sanitation, and housing opportunities in the compact housing areas while lowering infrastructure and service costs.
- Create an innovative and effective land management/land exchange strategy that will aid in the development of 'compact housing'.

**1.4 Project Components**

In general, terms project component means the activities to be performed under the stated project. Ideally **A feasibility study** analyzes the viability of a project to determine whether the project or venture is likely to succeed. It will determine whether this project is worth the investment—in some cases, a project may not be doable. In this report consultants have made a feasibility study of two rural villages whether compact township can be an innovative solution for rural people, where people can live in compact houses with all civic amenities without hampering the rural characteristics of the area. It will prevent the unplanned settlement in agricultural lands and will make the village more self dependent in terms of functionality.

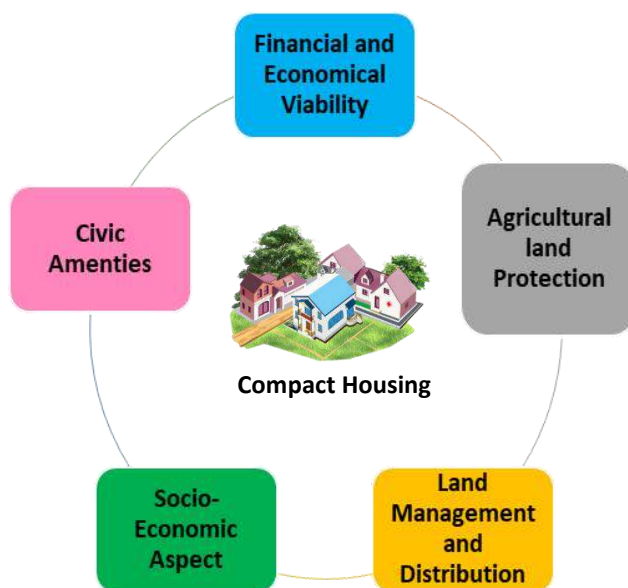


Figure 1.1: Project Component

The major component this study is to design a functional Compact township with all necessary

urban facilities and make up as role model for further new similar developments in other rural areas of Bangladesh.

**1.4.1 Rural Compact Housing**

Rural Compact Housing is an innovative initiative from the " My Village My Town " technical assistance project aimed at establishing a planned, integrated and conventional housing area enriched with urban civic amenities and services in rural areas. The concept mainly focused on the agglomeration of houses, hospitals, schools, markets, rural industries and local governmental units that provide all basic services to a specific population. It is a generic idea to provide infrastructure, housing and economic opportunities for the general people. A proper compact housing solution can provide the most effective safeguard against migration of rural people towards the city through its self-governed and self-financed facilities.

In last few decades Bangladesh has seen the rise of non-agricultural based professionals and medium-large agribusiness-based middle and upper classes in rural areas. For this new economic group, major housing development are ongoing throughout different urban and rural areas. Most of these housing developments in are not following any planning standard. Rural compact housing can be considered one of the finest planning solutions for controlling this haphazard growth of rural areas and the establishment of non-agricultural uses on agricultural land. It has a lot of potential for the development of planned 'rural housing' for building new settlements across the country.

**1.4.2 Social and Economic Perspective**

Traditionally, Rural settlements are developed around the agricultural lands as agriculture was the main livelihood people. Over the time, the economic structure of Bangladesh is changing. Due to Urbanization, rural people are now migrating to cities to get better livelihood opportunities and better living facilities.



Figure 1.2: Visionary concept of Compact Housing



Figure 1.3: Visionary concept of Compact Housing

In rural compact housing, a small-town center will be built around the large growth center in the vicinity of the village area. The core center can be very useful in providing water, electricity, roads, security, education, advanced medical care and other facilities at short distances. This type of housing initiative is a potential opportunity to bring about a fundamental and positive change in the land management of the country by building a small or medium sized growth center in rural areas.

Why do rural areas of Bangladesh need Compact Housing/ township –

- An innovative solution for feasible use of limited land resources and more people can be easily accommodated.
- There will no longer be necessary to convert agricultural property to residential land. In fact, much land will be freed up for purposes of agriculture when the traditionally dispersed rural settlements transform into efficient compact houses.
- In Compact Housing / Township, necessary urban service will be available in the housing area within convenient distance. It will significantly reduce the need for people to relocate to nearest urban areas. Instead, they can live considerably closer to their ancestral land while enjoying the benefits of modern life.
- Compact Township can be enriched with various small-scale economic opportunities and local governance can be much more efficient there.

**1.4.3 Possibilities and Challenges**

Compact townships appear to be a feel-good device with many prospects, but they will also present certain actual difficulties that must be addressed before this concept is implemented. Then people can adopt and accept the positive aspects of this new habitation pattern on their own.

Table 1.1: Possibilities and Challenges in Bangladesh

Possibilities	Challenges
<ol style="list-style-type: none"> <li>1. Innovative solution for management of land scarcity.</li> <li>2. A practical approach to prevent the alarming loss of agricultural land.</li> <li>3. A housing approach with all essential civic amenities.</li> <li>4. It will have advantages in terms of drainage, sanitation, air pollution reduction, and flood protection.</li> <li>5. It will facilitate good governance in the housing area.</li> <li>6. Cost effective provision of electricity, water supply and natural gas in the housing area</li> </ol>	<ol style="list-style-type: none"> <li>1. Changing the habitation pattern of rural people could be difficult unless they are forced to live in compact houses.</li> <li>2. Building multistoried structures in the alluvial land of rural area is challenging.</li> <li>3. People may be unwilling to give up their land unless the government provides 'appropriate' economic compensation.</li> <li>4. Wealthy rural individuals may not be interested to live in this type of housing system and if agrees, they will not allow the poor to be accommodated</li> <li>5. Proper land management framework must be needed to handle the distribution of land as per the amount of land rural people possess.</li> </ol>

**1.5 Consultants Services**

The consultancy services are designed to develop a feasible model framework for rural Compact Housing with specific focus on land development and land conversion. All necessary works mentioned in the ToR has been conducted during the planning period based on the methodology of the work, technology available and detailing needed for phasing out plans.

**A. Reviewing the existing policy documents**

- Examine land development policies and other relevant National level policies as well as other related papers.
- Study legislative, regulatory framework in the context of land, water, forest, environment, economy and spatial development.
- Review Acts/laws/rules pertaining to land administration, land management etc.
- Determine regulatory loopholes, particularly in the areas of developing housing/townships and housing under various forms of ownership.

**B. KII and Rapid Assessment**

- Conduct key informant interviews to develop a thorough understanding of compact rural housing in Bangladesh.
- Conduct rapid assessment on physical growth trend in urban and rural areas.
- Determine the pattern of rural growth.
- Review development policies and guidelines to identify gaps, weaknesses, and priority needs for policy adjustments.

**C. Reviewing the similar practices**

- Collaborate closely with concerned departments and other related development agencies.
- Review and identify the success and drawbacks of relevant projects taken by various agencies in Bangladesh.
- Explore the best practices of developing and developed countries, as well as the possibility of contextualizing their learning in Bangladesh.

**D. Planning and Design Consideration**

- Establish criteria and principles for selecting suitable location of compact housing
- Consider hierarchy of Compact Housing (CH) units and tentative required lands.
- Conduct financial and economic analysis and establish a cost recovery mechanism.
- Identifying a suitable implementing agency to regulate and administer the project.
- Develop guidelines for the implementation, operation, and management of CH over a reasonable time frame.

**E. Design and Report Preparation**

- Develop a feasible model framework for rural Compact Housing, focusing on land development and conversion.
- Make 2-D plan and 3-D design for Compact housing with sufficient analysis and drawings,
- Prepare and submission of final report.

**1.6 Approach to Feasibility Study**

In this study consultants have explored the opportunities of compact housing as a pilot scheme in two rural villages of Bangladesh. The consultants have considered opinion of stakeholders from stakeholder consultation meetings at Upazila and Union level where UNO, Union Chairman, Civil Society, Political Leader and local people were present and gave their opinion and suggestions on the feasibility of a compact housing in study areas. In addition, consultants collected primary and secondary data of housing area which work as important resource in the study. In coordination of efforts consultants have developed a feasible model framework for Rural Compact Housing with specific focus on land Management. This framework has boundless probabilities and prospects of transforming the traditional, scattered, unplanned and pricy Rural Housing into a planned, growth-oriented, modern, and smart Housing Chunk.



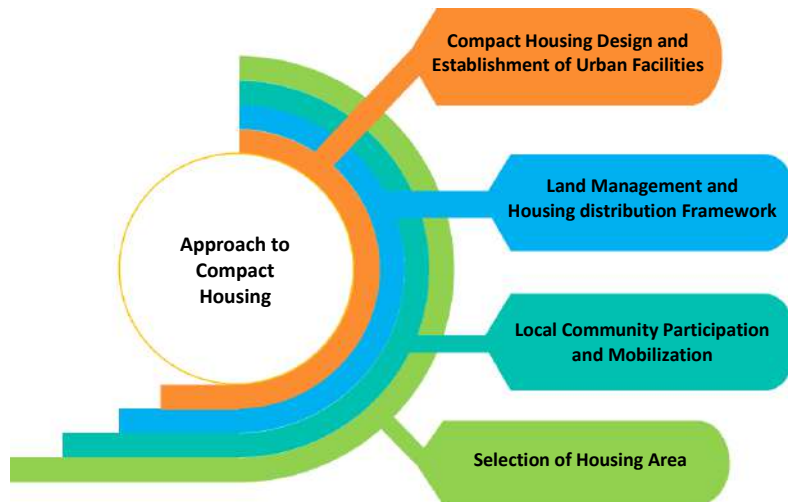


Figure 1.4: Approach to Compact Housing

Below following figures shows the overall methodology of feasibility study.

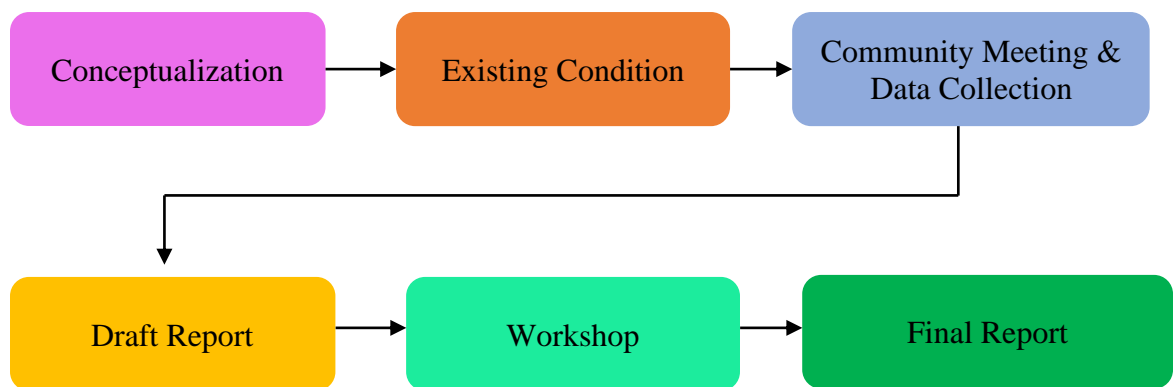


Figure 1.5: Road to Feasibility

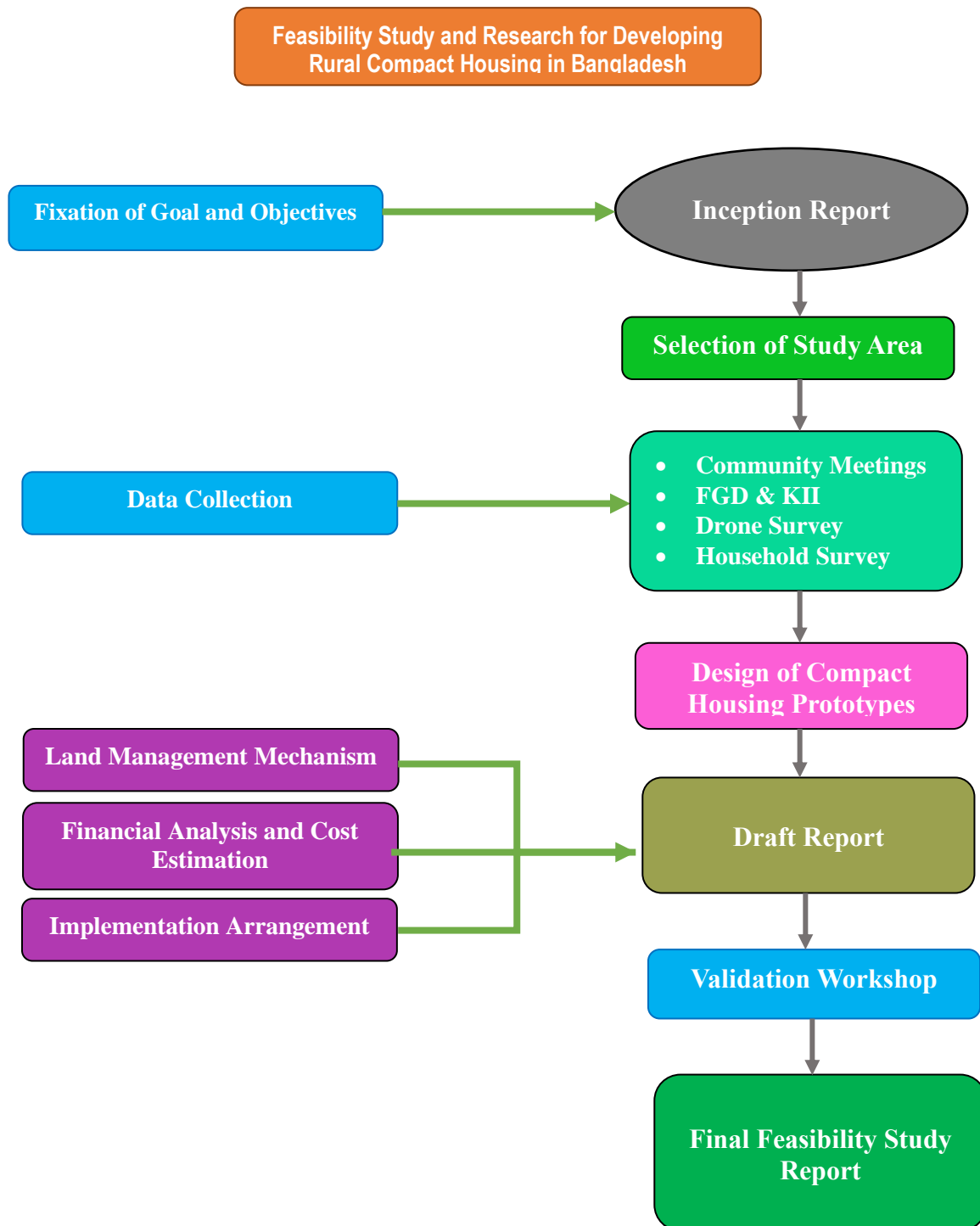


Figure 1.6: Approach to Feasibility Study

## Chapter-02

### STRATEGIES, PRACTICES AND POLICIES

In recognition of the long-term development challenges., policies, law and regulations can play pivotal role. These policies and law can help for best use of land development. In this section, the consultants have carefully reviewed some important national and important policies which are guiding document in conducting study in line with the TOR of the consultancy services.

#### 2.1 Policies and Acts

##### 2.1.1 Development Goals of Bangladesh: Vision 2041

The Government is preparing to undertake a program to realize the dream of Father of the Nation Bangabandhu Sheikh Mujibur Rahman to have a country that is free of poverty, where economic and social justice prevails, and where prosperity is shared. As a result, the government has adopted Vision 2041, which is a continuation of Digital Bangladesh Vision 2021 and aims to take the nation to the development path dreamt by Bangabandhu. Specifically, Vision 2041 seeks to eliminate extreme poverty and reach Upper Middle-Income Country (UMIC) status by 2031, and High-Income Country (HIC) status by 2041 with poverty approaching extinction.

Two principal vision of the Vision 2041 are –

- Bangladesh will be a developed country by 2041, with per capita income of over USD 12,500.
- Poverty will become a thing of the past in Sonar Bangla.

Although Bangladesh has made significant economic progress during the last decade, there remains a huge

gap between the urban and rural areas in respect of citizen's services and facilities. Vision 2041 gives priority to future development through phasing out of rural-urban divide. To bring that end the following major initiatives will be undertaken:

#### Priority initiative for Rural Development:

- The Local Government Division will take appropriate measures to prepare Upazila Master Plan and enact the plan through the LGIs so that the villages can transform into rural township in a proper, efficient and planned way restoring the ecosystem of the economy.
- Local Government Engineering Department (LGED) under Local Government Division will develop community spaces and recreation facilities in the villages under their 'My Village-My Town' programs.
- Climate resilient core road network development up-to every village supportive to accommodate high middle-income economy will be given priority.
- Effective Waste Management Model will be developed for Rural Growth Centers /Markets and as well as villages.
- Rural infrastructure development with support services will be given high priority in order to create a positive environment for rural job creation;
- Agro-based small industries will be encouraged in rural areas and congenial atmosphere for business and commerce should be ensured to create employment opportunities for youths

### 2.1.2 Eighth Five-year Plan (8FYP)

The main purpose of the Eighth Five-Year Plan (8FYP) is to begin implementing Vision 2041 in such a way that it brings Bangladesh closer to the goals of UMIC status, major SDG targets, and poverty eradication by FY2031. In light of these considerations, the 8th Plan focuses on six key themes:

- Rapid recovery for COVID-19 to restore human health, confidence, employment, income and Economic activities;
- GDP growth acceleration, employment generation, productivity acceleration and rapid poverty reduction;
- A broad-based strategy of inclusiveness with a view to empowering every citizen to participate fully and benefit from the development process and helping the poor and vulnerable with social protection- based income transfers;
- A sustainable development pathway that is resilient to disaster and climate change; entails Sustainable use of natural resources; and successfully manages the inevitable urbanization transition;
- Development and improvement of critical institutions necessary to lead the economy to UMIC status;
- Attaining SDG targets and coping up the impact of LDC graduation.

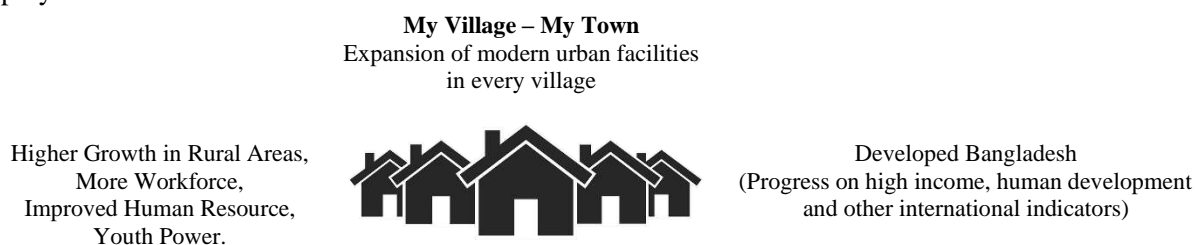
#### Observation

Major objective of the Seventh Five Year Plan (7FYP) was to narrow the rural-urban divide by diversifying the economic activity base and the government has been very much successful in this regard through expansion of non-farm rural enterprises and services. 8FYP has also set up vision, objectives and strategies for promoting pro-poor and inclusive growth. The vision of promoting pro-poor and inclusive growth includes rural infrastructure development especially roads and electrification.

### 2.1.3 Election Manifesto, 2018

Present Government has taken some special undertakings to accelerate the development of Bangladesh regarding to their stated election manifesto. They are stated below-

- My Village—My Town: extending modern urban facilities to every village Power of youth—progress of Bangladesh: Transformation of the youth into skilled manpower and ensuring employment.



- Adopting ‘zero-tolerance policy’ against corruption.
- Women empowerment, gender parity and child welfare.
- Ensuring nutritious and safe food.
- Uprooting terrorism, communalism, militancy and drugs proliferation.
- Speedy and proper implementation of the mega projects.

- Consolidating democracy and the Rule of law.
- Elimination of poverty and upgrading the standard of education at all tiers.
- Increasing investments in public and private sectors.
- Ensuring quality healthcare for all.
- Increased utilization of digital technology in overall development in every sector.
- Ensuring power and energy security and road safety.
- Modern agricultural system: Mechanization is the goal.
- Efficient and service-oriented Public Administration.
- Welfare of the elderly, disabled and autistic people.

#### ***2.1.4 National Housing Policy, 2016***

The main goal of this policy is to provide accessible, sustainable and quality housing for all to ensure sustainable development and equity so that the right of healthy and affordable housing will be reserved. The policy gives special emphasis on rural housing as major share of population of Bangladesh lives in rural areas. The policy stated some special measures for rural housing–

- People should not be displaced from their homestead, except emergency need for development projects and public welfare.
- The propensity of constructing houses on agricultural land will be discouraged. If needed, through enactment of relevant legal act such tendency will be controlled. Encouragement and guidance will be given for planned, compact housing development in rural areas.
- Basic infrastructures and social facilities will be developed in a planned and coordinated manner in the existing and new settlements.
- Measures will be taken to provide interest free or soft loan for house construction, repair, renovation, expansion and for other needs related to housing of rural people
- Affected people due to river erosion and other disaster will be rehabilitated in the government land obtained through the establishment of rural land bank.
- Programs will be adopted to create employment opportunities and income generation opportunities.
- Housing capability of rural people will be enhanced through improvement of overall environment, expansion of education and health facilities and generation of more investment opportunities by increasing economic activities.
- All housing projects will be implemented with the incorporation of local people.

#### **Rural Housing**

Clause 5.9 of the housing policy describes about the rural housing. Rural character is a dominating issue in housing sector. In housing policy, following measures are suggested to improve rural housing:

- Encroachment of agricultural land by proliferation of homestead should be discouraged. Efforts should be made for planned densification of rural homesteads. Subject to availability of Khas lands, Programme similar to “Adarsha Gram” programme of the ministry of land will be undertaken in rural areas.
- The coordinated provision of water supply, sanitation, electricity, roads and other basic infrastructure services to existing and new habitations.
- Providing assistance by way of providing credit, dissemination of appropriate technology and delivery system for promoting housing.

### **2.1.5 Sustainable Development Goals (SDGs)**

Sustainable Development Goals are accompanied by targets and will be further elaborated through indicators focused on measurable outcomes. They are action oriented, global in nature and universally applicable. These goals constitute an integrated, indivisible set of global priorities for sustainable development. The goals and targets integrate economic, social and environmental aspects and recognize their inter linkages in achieving sustainable development in all its dimensions.

Principal goals of SDG include the following:

- SDG - 1: End poverty in all its forms everywhere.
- SDG - 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- SDG - 3: Ensure healthy lives and promote well-being for all at all ages.
- SDG - 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- SDG - 5: Achieve gender equality and empower all women and girls.
- SDG - 6: Ensure availability and sustainable management of water and sanitation for all.
- SDG - 7: Ensure access to affordable, reliable, sustainable and modern energy for all.
- SDG - 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all.
- SDG - 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- SDG - 10: Reduce inequality within and among countries.
- SDG - 11: Make cities and human settlements inclusive, safe, resilient and sustainable.
- SDG - 12: Ensure sustainable consumption and production patterns.
- SDG - 13: Take urgent action to combat climate change and its impacts.
- SDG - 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.
- SDG - 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- SDG - 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.
- SDG - 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

#### **Role of Housing/Rural housing in achieving SDGs:**

Building houses in urban and rural areas alone can have major footprints in the attainment of various sustainable development goals. Housing is related to positive changes in the areas of education, health, security, empowerment, women's empowerment as well as inclusive development.

- *SDG Target 1.4:* By 2030, ownership and control of economic resources and basic services, land and other assets in favor of all women and men, especially the poor and vulnerable people have been talked about. At the same time, the determination to establish equal rights in obtaining financial services including micro-credit is reaffirmed.
- *SDG target 1.5:* To build the resilience of the people living in poverty and vulnerable conditions and to reduce the risk of those affected and distressed by climate change.
- *SDG target 3:* Ensuring good health and well-being for all people of all ages:

- *SDG target 5.a:* Carrying out necessary reforms to ensure ownership, control and equal rights of women on all types of property, including economic resources and land, financial services, inheritance in natural resources.
- *SDG Target 10.2:* Empowerment of all irrespective of age, gender, disability, ethnicity, anthropological identity, origin (place of birth) religion or economic or other status and initiation of their socio-economic and political inclusion.
- *SDG target 11.5:* Significant reduction in the number of victims and deaths in other disasters including water-borne disasters, with special emphasis on protecting people living under poor and vulnerable conditions.

## 2.2 Relevant Housing Practices

In this portion, some of the relevant housing projects are analyzed at a limited level in which the knowledge of these projects will be helpful for considering and developing compact housing project.

### 2.2.1 Ashrayan Project by Prime Minister's Office

The Ashrayan Project is a government project run by Bangladesh's Prime Minister's Office that offers housing to landless and homeless families, as well as individuals who own land but don't have a home.

The project aims to ensure housing for the landless and homeless people. Since the project's commencement in 1997, it has rehabilitated a total of 5 lakh 7 thousand 244 landless and homeless households into barracks, flats, and various types of housing. Through the Ashrayan Project, the Hon'ble Prime Minister is bringing the landless-homeless-uprooted people under inclusive development. The backward and backward sections of the society are being provided semi-permanent single houses with ownership of 2 Shatak land.



Figure 2.1: Ashrayan Project

But expanding such idea to develop compact housing for people of rural areas will be helpful in some aspects, not whole. In this case some issues need to be considered.

**Major issues** regarding the Ashrayan project –

- Housing constructions are designed specifically for landless and uprooted people.
- Full financial subsidy by the Government.

### 2.2.2 Palli Janapad Housing Project by RDA

In order to prevent wastage of agricultural land and to ensure better housing for the rural population, Rural Development Academy of Bogra has taken a project entitled “Palli Janapad Project” since 2014 to improve the Living Standards of Rural People through settling them into Cooperative Multi-Floor Buildings with Modern Citizen Facilities". This has been taken as a pilot project. RDA has plans to implement 6 projects in 6 sections. At present the project is being implemented on the outskirts of City Corporation of Sadar Upazila of Rangpur District, Aria Union of Shahjahanpur Upazila of Bogra District and Haridaspur Union of Sadar Upazila of Gopalganj District.

In the ongoing 3 projects, a total of 72 families are being allotted 84 flats of 915 sq ft, 96 flats of 610 sq ft, 32 flats of 480 sq ft and 60 flats of 365 sq ft. The keys of the flat will be transferred within two years (less/more) subject to advance payment of 30% of the construction cost of the flat as down payment. The remaining 60% of the money has to be paid within 15 years after the transfer of the keys with a 5% service charge. Palli Janapad project is a very good project in terms of architectural aesthetics. But there is a risk in expanding such an idea to meet the needs of the whole country.



Figure 2.2: Palli Janapad Housing Project

**Major issues** regarding the Palli Janapad project –

- The location of this project is not in the village, but on the outskirts of the city.
- High financial subsidy by the Government.
- Unlike a small number of beneficiaries, the implementation of projects is costly and extremely slow

### ***2.2.3 Site and Services Development Project by NHA***

The National Housing Authority (NHA) has recently taken up some site and services development projects. These projects comprise of allotment of plots for construction of planned housing for low and middle-income citizens in 10 upazila of the country. These upazila are: **Sadar upazila** of Pirojpur district, **Sonapur upazila** of Noakhali district, **Srivardi upazila** of Sherpur district, **Sunamganj upazila** of Sylhet, **Shibchar upazila** of Madaripur district, **Terkhadia upazila** of Rajshahi district, **Sadar upazila** of Jhenaidah district and **Maijdi upazila** of Noakhali district. In such projects, allotment of plots is being provided by developing various community services including roads / drains, sewerage, street lights, playgrounds, schools. All these projects are being funded through land acquisition and the investment is exclusively from the National Housing Authority. The average budget of these projects is initially Tk. 14-15 crore for 160-165 plots and new projects have been already taken up by NHA in different phases and expanded up to 300 bighas.

There is a need to build such planned housing in most of the Upazila's. However, in this case some issues need to be considered.

**Major issues** regarding the Site and Services Development project –

- Investment budget is executed from the National Housing Authority's own recurring budget.
- Housing rate is low and subsequent initiatives to involve the people in housing were not visible.



## Chapter-03

### COMPERATIVE ANALYSIS FOR SELECTION OF STUDY AREA

#### 3.1 Study Area Selection

As per the TOR, the consultant's primary task was to select a suitable site for compact housing. The consultants have made field visit to Shantiganj Upazila of Sunamganj District and Monohardi Upazila of Narsingdi district. The field visit includes an overall visit to the upazila area, discussions with key personnel and government officials in Upazila/Union parishad complex and community participation meetings etc. Different type of suggestions and opinion has emerged during the consultations for a feasible location of compact housing initiative.

The consultants have analyzed the selection criteria and conducted rigorous study to possible location based on the information acquired from field visits. Two villages in the above-mentioned Upazilas could be a feasible location for a compact housing initiative.

These are –

1. Hafizpur Village, Chalakchar Union, Monohardi Upazila
2. Shimulbak Village, Shimulbak Union, Shantiganj Upazila

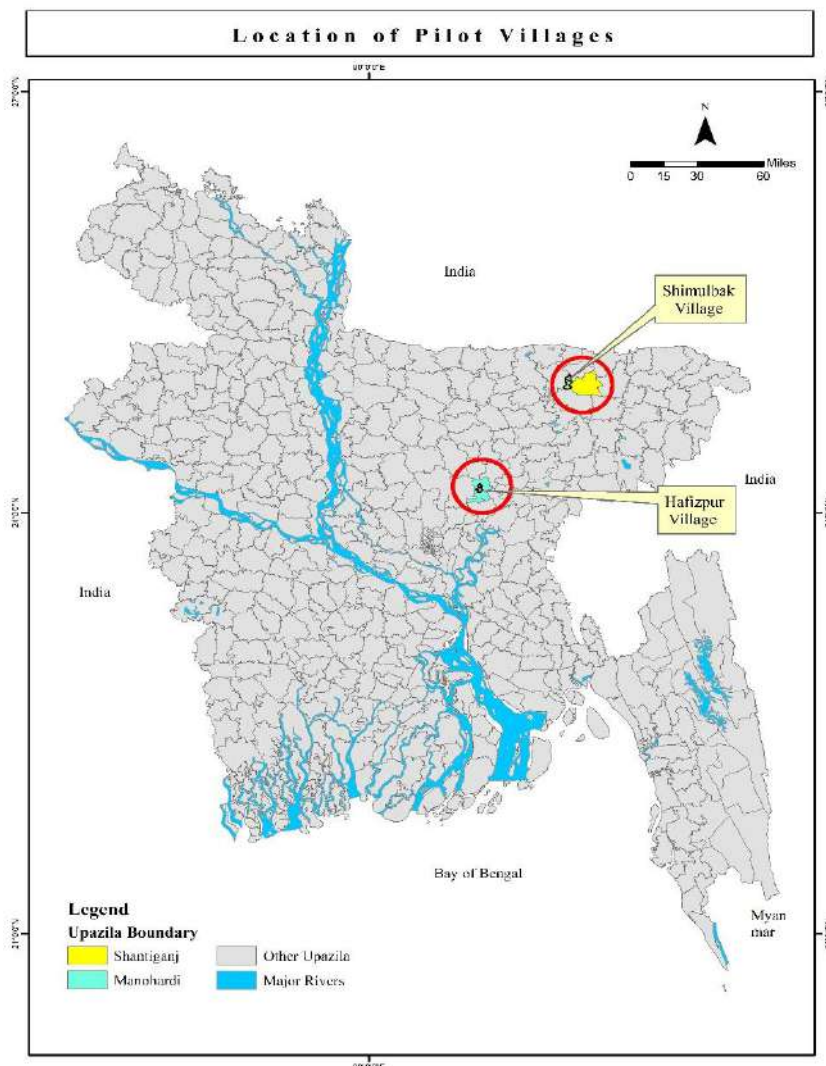


Figure 3.1: Location Map of Study Area

### 3.2 Physical Conditions

#### 3.2.1 Hafizpur Village (Monohardi Upazila)

**Hafizpur Village** is located in the Chalakchar union of Monohardi Upazila. It is only 35 km away from the Narsingdi Sadar Upazila and nearest from Capital city Dhaka comparing to Shimulbak village. It has a total area of 1050 acre. It is wholly situated in a flat land and is one of the main villages from 5 villages of Chalakchar Union.

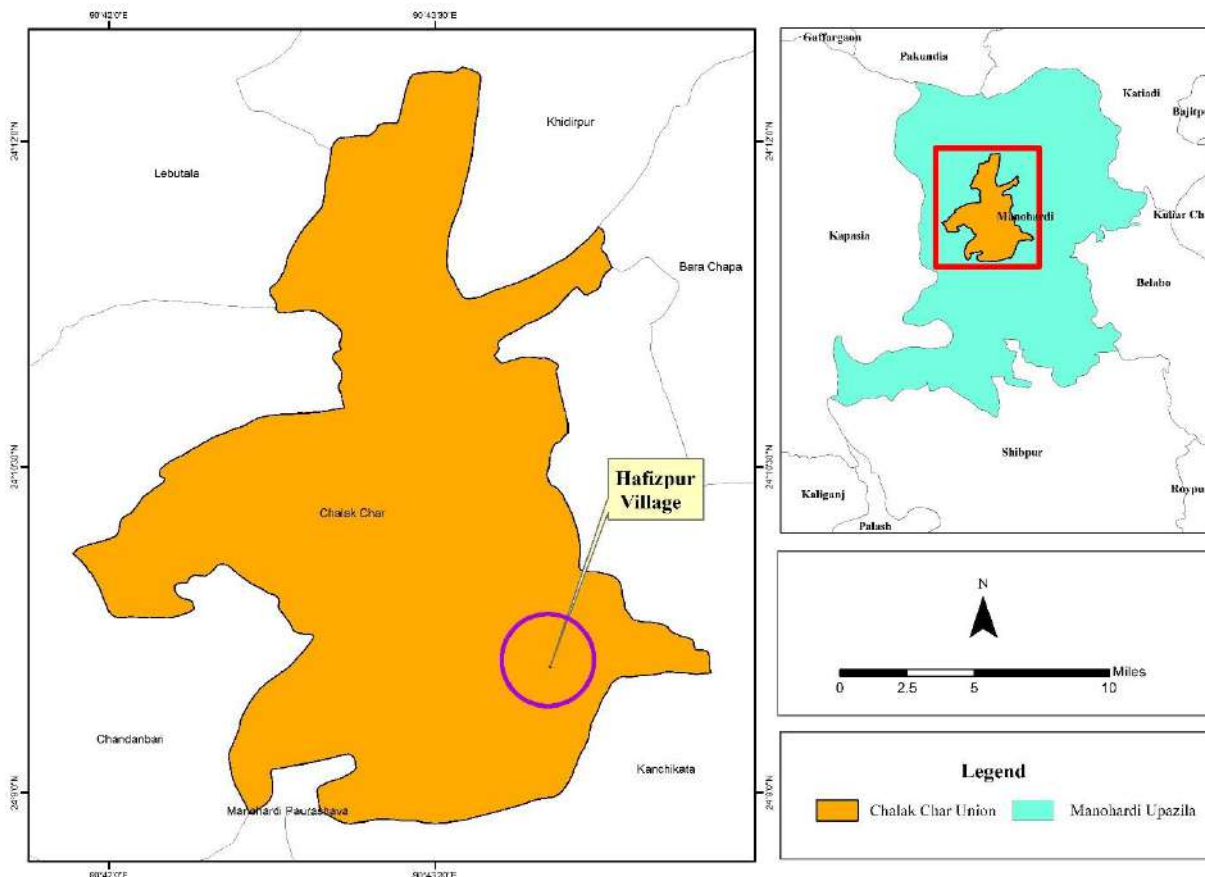


Figure 3.2: Hafizpur Village

Temperature rises steadily from January to May, remains steady from June to October with highest rainfall in July. Waterlogging during the monsoon season is a typical occurrence in this area.

Hafizpur is near to the Monohardi Paurashava. So, infrastructural developments are gradually happening with the progress of time. Hat bazar, Industrial and commercial facilities are available in convenient distance. But the drainage condition of the village is not satisfactory. During monsoon season frequent waterlogging is a common scenario in this village.

The village is connected to Monohardi Paurashava through Mathkhola road to Manohardi bus stand. Roads are suitable for local transportation and connected to different thoroughfares. Autorickshaw's are used as means of communication between other areas. Most of the roads in this village are semipucca and katcha. linear development of houses is going along these roads. Autorickshaw's are used as means of communication between other areas. Personal bikes are also used for personal transportation. Following table shows the length of internal roads which connects villages to nearby area

Table 3.1: Road Facility in Hafizpur Village

Project Area	Name of Roads	Length of Road (Km)
Hafizpur Village	1. Mathkhola road from Manohardi bus stand	6.00
	2. Hetemadi turn to Sheikh Bazar road via Hafizpur road	3.00

The village also has good transportation network with Narsingdi and Dhaka as national highway is near to the village area. People can easily transport in the other regional cities. As the village is in a well-connected position, it has potentiality of undergoing fast change as regional settings expand.

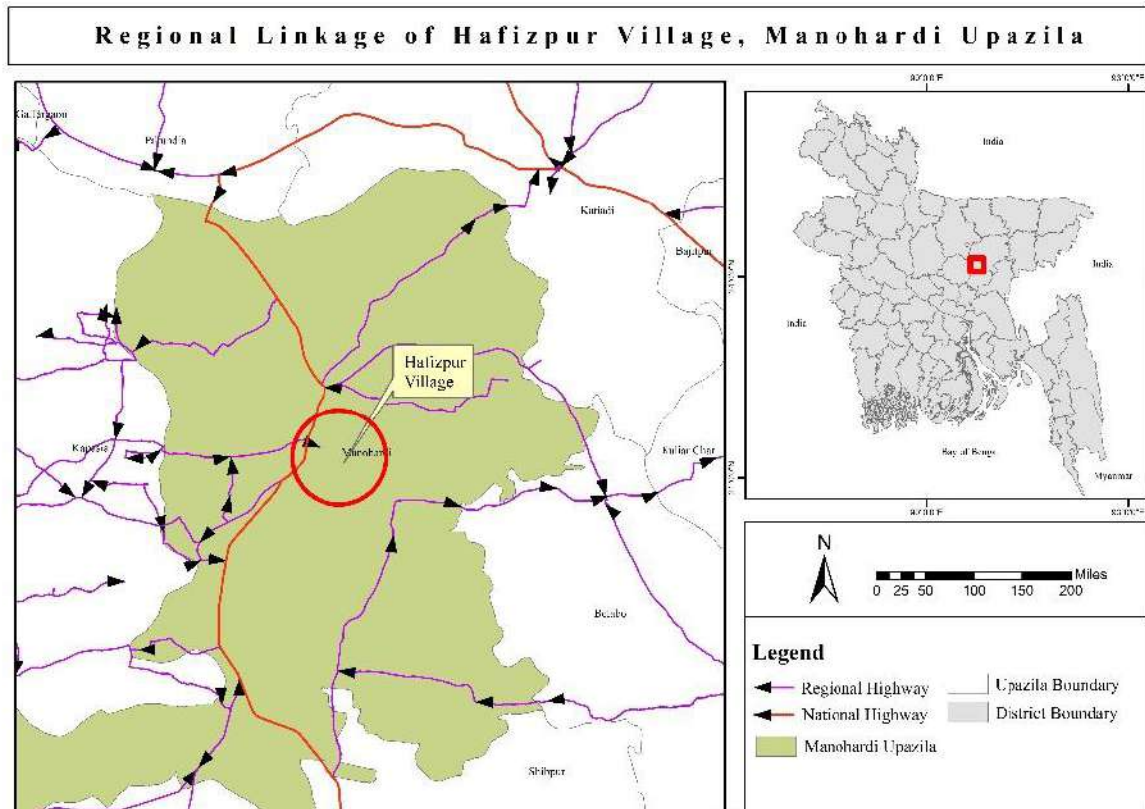


Figure 3.3: Regional Linkage of Hafizpur Village

**3.2.2 Shimulbak Village (Shantiganj Upazila)**

**Shimulbak Village** is in Shimulbak Union under the administrative jurisdiction of Shantiganj Upazila, away around 70 km from the Sylhet city. It is located in the southern side of Sunamganj district and northeastern region of Bangladesh. The village has a total area of 153.94 acre. Most of its area are surrounded by wetlands and large canals. It has followed its major development along the river Suma and Nitai. It is one of the main villages from 24 villages of Shimulbak Union with a population of 2094.

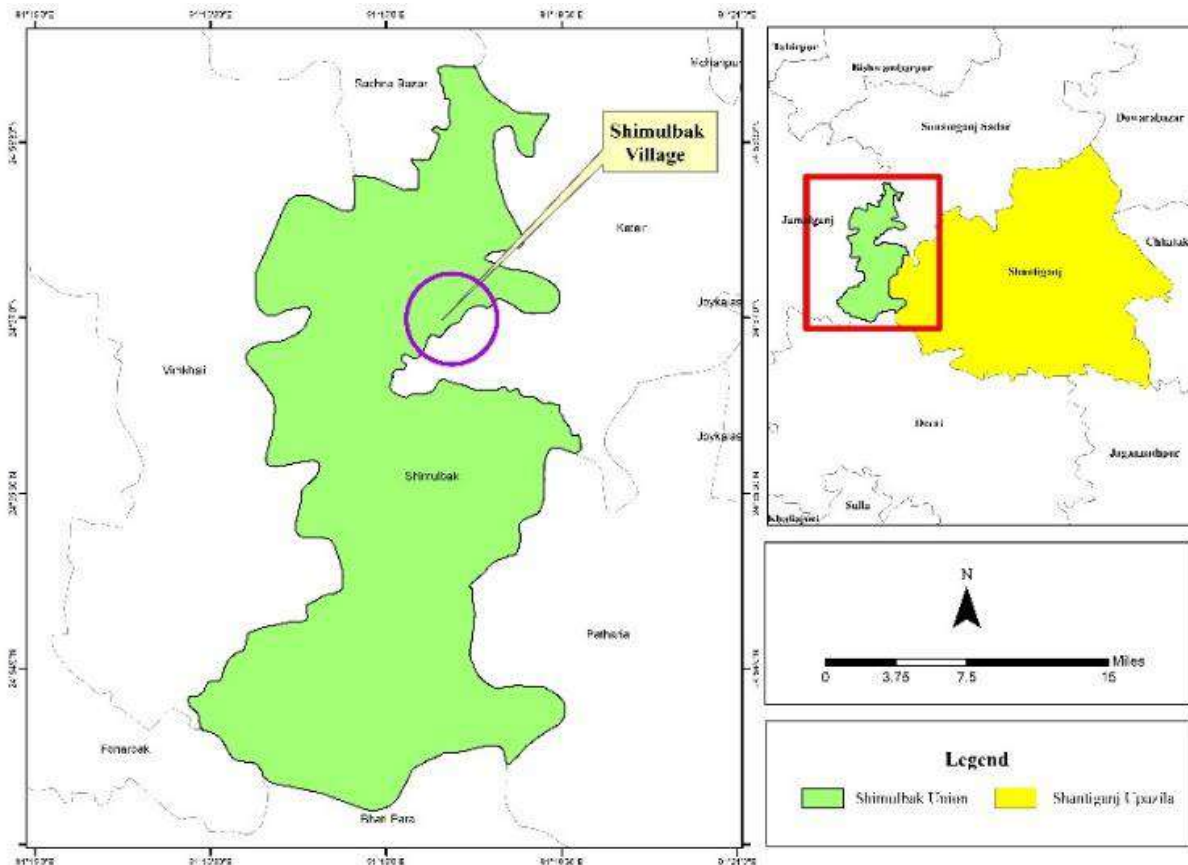


Figure 3.4: Shimulbak Village

Shimulbak village falls within extensive wet land, located on the north eastern part of Bangladesh. Climatic characteristics are almost similar like Hafizpur village. In rainy season, lower land areas remain under water and becomes island due to heavy rainfall.

In this village, required infrastructure amenities are not easily accessible as the area is somehow isolated from nearby growth centers. Hat bazar, Industrial and commercial facilities are not available in nearby distance. Most of the roads in this village are unpaved and suitable for boats. Due to wetlands, frequent flooding has made the situation more difficult for rapid infrastructural development.

Mobility facility is also not satisfactory in this village. The area is quite far and isolated from the main road. Villagers have to walk more than 1 km of katcha road to reach the main road. Some villagers use private motor cycles as a transportation medium to go to nearby growth centers.

Table 3.2: Road Facility in Shimulbak Village

Project Area	Name of Roads	Length of Road (Km)
Shimulbak Village	1. Patharia U / P (Ganiganj) - Muradpur Bazar via Tehkia Bazar Road	9.83
	2. Joynagar GC-Upazila Headquarters via Dhanpur-Sardarpur Road	2.73
	3. RHD (Noakhali Bazar) -Bhimkhali Bazar GC Via Jibdara Bazar-Muktakhai Road	4.75
	4. Shimulbak U / P Office -Joynagar GC Via Muktakhai Chanpur GPS Road	4.50

In rainy season the situation gets more worse, when all walking areas gets remain under water for long time. Internal street roads which connect the village with regional roads also goes under water. At that time people have no other way rather than using boats to transport to nearby Sadar area.

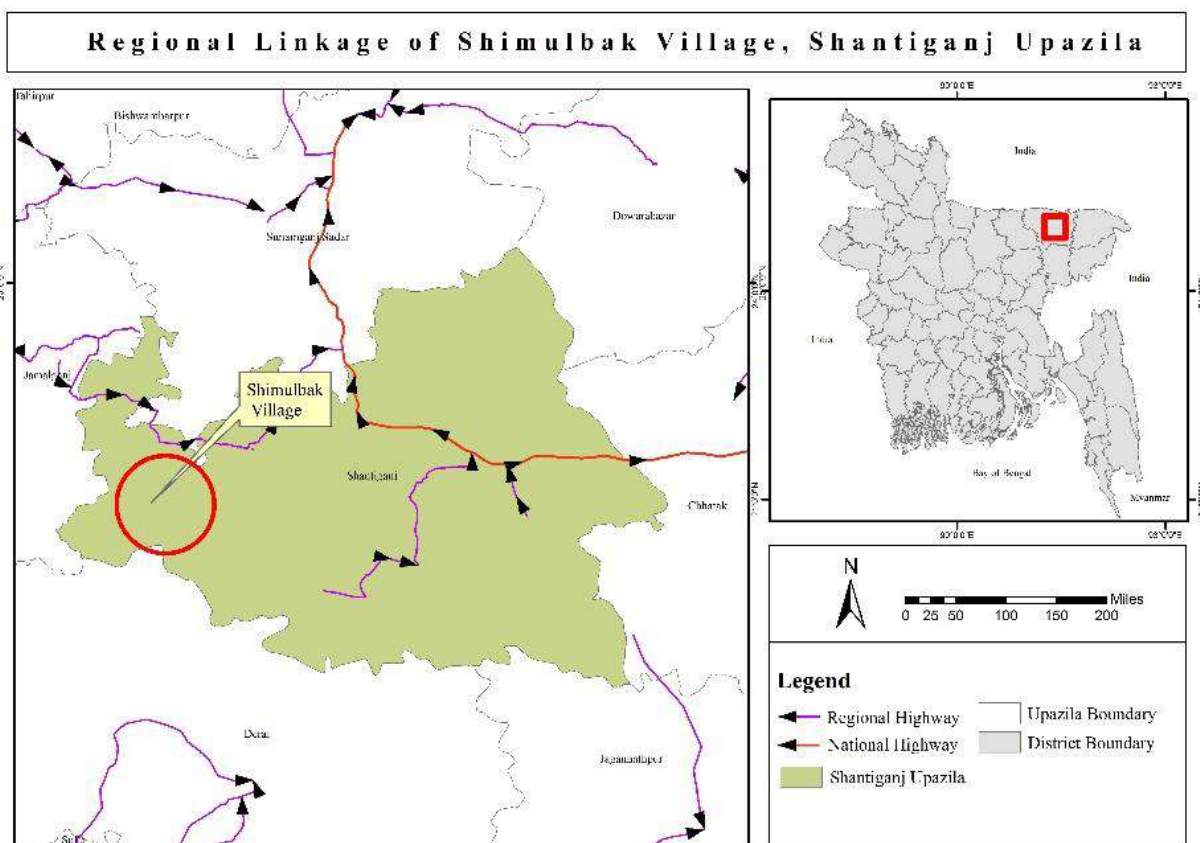


Figure 3.5: Regional Linkage of Shimulbak Village

### 3.3 Socio Economic Conditions

Socio – economic indicators are an important ingredient for knowing socio -economic condition of areas. It includes demography, housing, economy development etc.

#### 3.3.1 Demography

Shimulbak and Hafizpur area are facing population change within the recent years. Increase of Population are creating extra pressure on agriculture land. Some people are constructing houses in their agriculture land to at least secure a land for live. Below table provides population and number of households of this project area as found in the 2011 census report.

Table 3.3: Total Area and Population of Study Areas

Study area	Area (Acres)	Number of Household	Total Population
Shimulbak Village	153.94	382	2094
Hafizpur Village	1050	1652	8400

Source: Field Survey, 2022

#### 3.3.2 Housing Condition

**In Hafizpur village** of Chalakchar Union, Mostly Tin shed houses are predominant. Yet some pucca structures are seen in this area as many people have built pucca structures within the recent decade. Many people in this village are now permanently settled in nearest Sadar area and built up a modern designed pucca home to their Inherited land to spend up their vacation during holidays.

The majority of the houses in **Shimulbak** are kutcha and semi-pucca. Houses share common walls with neighboring structures. The plan shape of this type of construction is generally rectangular with lengths around 20-30 ft. and width around 10-15 ft. The main structural elements are mud walls which carry the load of the roofing. Many houses have open verandas at the front with roof supported by posts. Most of the owner of the houses were belong to their inherit property. The houses are near their lands.

#### 3.3.3 Economic Development

Economy of an area is one of the major notions of the development condition of Upazila's. It also reveals that which sectors of economy has been flourished and which sectors are favorable for this area. The chapter aims to explore the existing economic conditions of the study area.

**In Hafizpur village**, the soil condition is favorable for producing paddy and natural vegetables. The farmer of both villages uses modern farming equipment's and technologies which makes more comfortable. Although majority of the people are farmer, but some are now migrating to other profession. Some people are now built up their own poultry firm and doing business profitably. Hafizpur village is famous for its cane and bamboo made handicrafts.

**In Shimulbak village**, most of the people here are involved in fish and paddy production. Villagers supplies Paddy to the surrounding areas every year to meet their livelihood demand. The soil conditions are ideal for growing paddy and natural vegetables. Besides that, the economy of this area is also dependent on remittances sent by many people of the village living abroad. Since secondary

employment opportunities are seriously lacking in the area, many people have moved to self-employment like small business and grocery shops. In most cases the trader himself plays the role of all the work in these shops. This village is famous for handmade “Shitol Pati” in surrounding areas.

**3.3.4 Education and Institutional Facilities**

In comparison to Shimulbak village, Hafizpur village has more developed institutional facilities. In Hafizpur village, there are three government primary schools, a high school (with vocational attachment), and the Union Health and Family Welfare Center Committee Clinic. However, the growth of institutional facilities in Shimulbak village has been slow due to the haor's waterlogging condition for about 6-7 months each year. This village has only one primary school, a community clinic, and a hat bazaar.

From field survey it is found that the literacy rate in both study areas is increasing day by day, but still, most of the people of these villages dropped out of education before passing SSC. Only a small portion of people can achieve the ladder of graduation. Over the decade, the literacy rate of these areas has now been changed and in 2022 it has been increased to a greater extent. As Only one government primary school is available in Shimulbak Village. People need to travel Union or Sadar area for further education. In addition to primary schools, Hafizpur contain one government high school.

Table 3.4: Educational Institutions in Pilot Areas

<b>Educational Institutions</b>	<b>Shimulbak Village</b>	<b>Hafizpur Village</b>
<b>Govt. Primary School</b>	01	03
<b>Govt. High School</b>	00	01

Source: Field Survey, 2022

**3.4 Field Visits to The Study Area**

Consultants have made several field visits to Shimulbak and Hafizpur village to find out the best possible area where compact housing project can be developed. Selection process involves meetings with key informants and community people. Then a specific portion of area are selected for the project development in respect of suggestions and valuation of selection criteria. After the selection, necessary qualitative and quantitative data are collected through field visits to explore the visual scenario of these villages in respect of the compact housing perspective.

**3.4.1 Stakeholders Consultation**

During field visits in Shantiganj and Monohardi Upazila, several meetings with respective government officials and public representative are arranged to make discussions about the goals and objectives of the compact housing project. These meetings are conducted to know about potentialities and opportunities of compact township in from the perspective of local officials and elected representatives. The following key informants were the participant of these meetings:



Figure 3.6: Consultation meeting with stakeholders

- Upazila Chairman
- Upazila Female Vice Chairman
- Assistant Commissioner (Land)
- Upazila Engineer
- Consultants
- Other Upazila officials

During the meetings, officials recommended Shimulbak village from Shantiganj Upazila and Hafizpur village from Monohardi Upazila, where compact housing concept can be easily replicated and people can be influenced migrate in newer compact houses.

### ***3.4.2 Discussion with Local People and Stakeholders***

Open discussion workshops were conducted in both Shimulbak and Hafizpur village to find out the interest and eagerness of the community people in compact housing initiative. These meetings were presided by LGED and Consultant team and explained the overall concept of compact township to the respective villagers. Many villagers show deep interest about the project and want to know the what opportunities they will get if they contribute their lands for the project development.



Figure 3.7: Community meeting in Shimulbak And Hafizpur Village

They were ensured that the compact houses where they will live in future, will have ample amount of green space and utility facilities, improved waste disposal and drainage system and will also be nearer to necessary infrastructural facilities & community earning facilities. Hat bazar, religious and educational facilities will also be available in the housing area. Then consultants encouraged the villagers to give their valuable opinion which will be taken as a major part in the design process of compact housing initiative.





Figure 3.8: Discussion with villagers of Shimulbak and Hafizpur village

### ***3.4.3 Existing Landuse:***

The land use character of Shimulbak and Hafizpur village are primarily rural in nature. Both villages are surrounded by ample number of agricultural lands and almost have a similar land use character. Agricultural land use dominates the areas, followed by residential, water bodies, commercial, transportation, and education. Only Hafizpur village has a small portion of administrative landuse within its boundary.

In **Hafizpur village**, density of houses is high along the roadside and particularly in areas nearer to hat-bazar. But in **Shimulbak village**, housing has been seen as dispersed settlements on higher grounds to protect the houses from flooding during rainy season. It is notable that, the land use pattern of both areas has been mostly the result of natural growth.

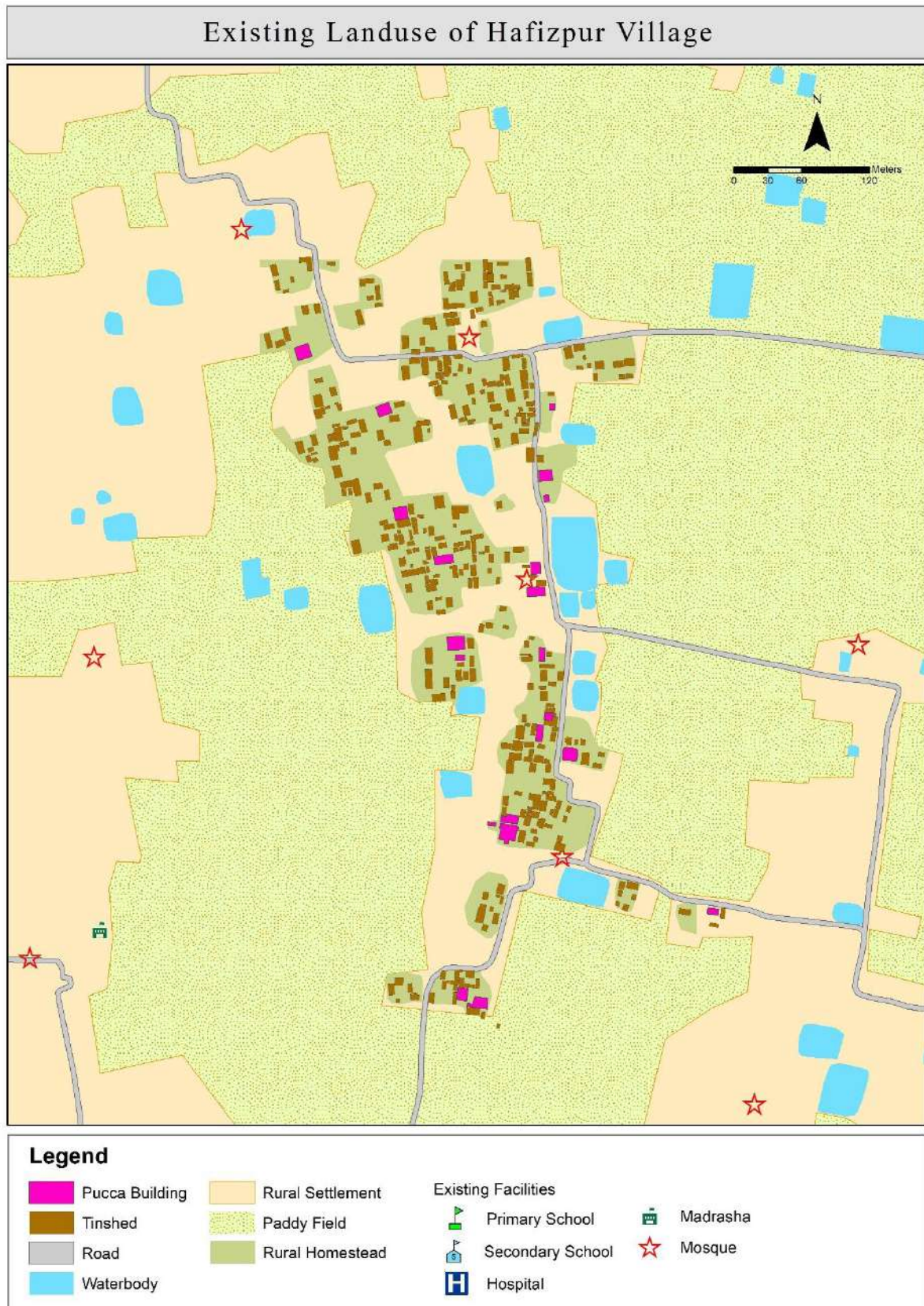


Figure 3.9: Existing landuse of Hafizpur Village, Monohardi, Narsingdi

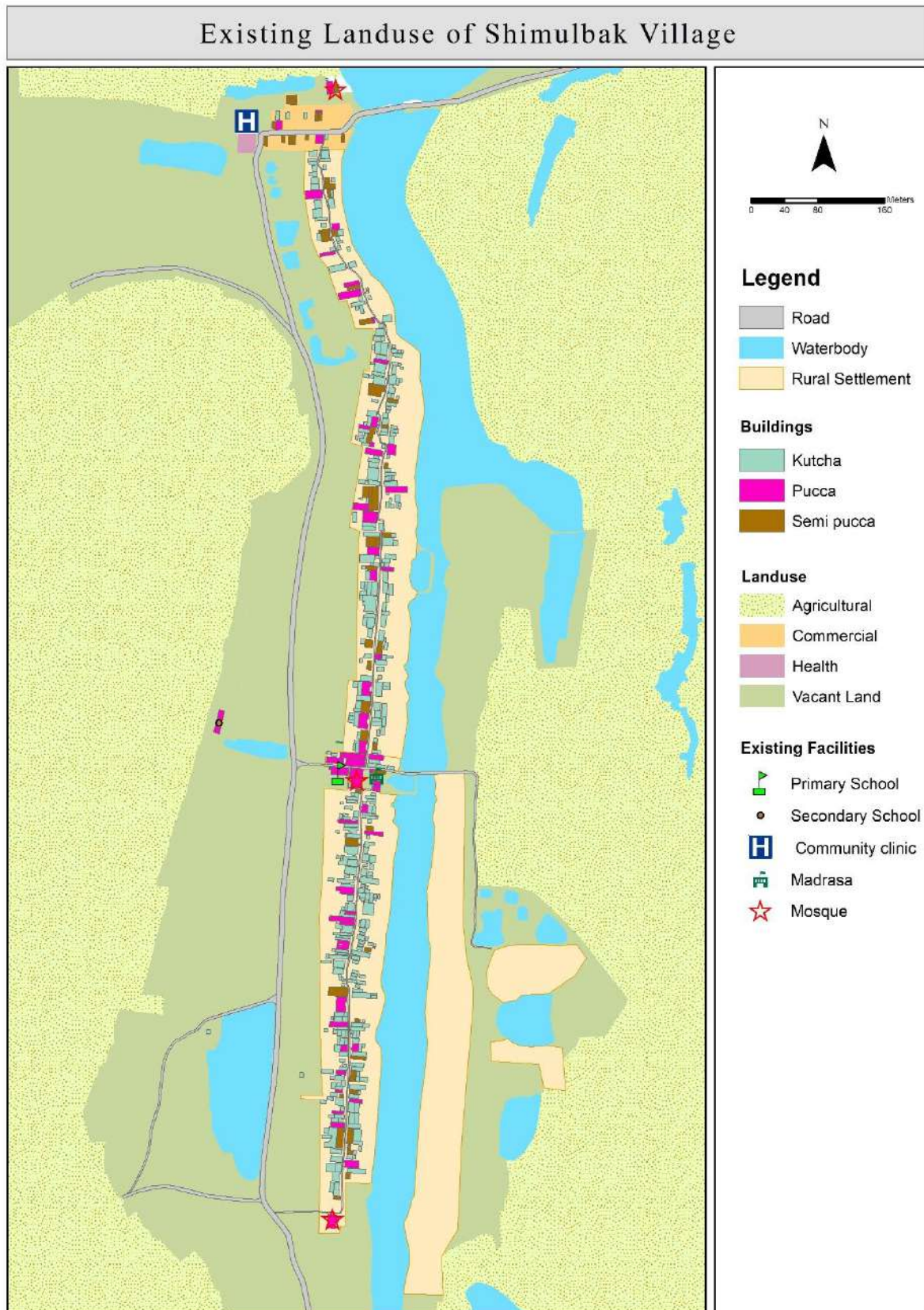


Figure 3.10: Existing landuse of Shimulbak Village, Shantiganj, Sunamganj

### 3.5 Priority Consideration of The Study Areas

After discussion with the local elite and stakeholders, field visit, consultants have considered a number of essential selection criteria's that will serve as key indicators in priority consideration of both study area.

Selection Criteria / Indicators -

- Location
- Land Information
- Infrastructural Facilities
- Natural Drainage
- Connectivity
- Socio – Economic Condition
- Reason for migration
- Protection from Flash flood

On the basis of selection criteria, the rationale for priority area for rural compact housing project among these two areas are compared below –

Table 3.5: Priority Consideration of Study Areas

Priority Consideration	Shimulbak Village Shimulbak Union, Shantiganj	Hafizpur Village, Chalakchar Union, Monohardi Upazila
1. Location	<ul style="list-style-type: none"> <li>• Located 17 km away from Shantiganj Upazila and 70 km road distance from the Sylhet city.</li> <li>• 297 km far from Dhaka city.</li> </ul>	<ul style="list-style-type: none"> <li>• Only 5 km away from Monohardi Upazila and 34 km away from the Narsingdi city.</li> <li>• 86 km far from Dhaka city.</li> </ul>
2. Land Information	<ul style="list-style-type: none"> <li>• The village is mainly composed of wetland.</li> <li>• Although majority land is farmland, some parts of the village are not in condition for cultivation due to wetlands.</li> <li>• Lower land areas remain under water in most of the time of a year.</li> </ul>	<ul style="list-style-type: none"> <li>• Land Character is relatively Plain.</li> <li>• Most of the lands are used for paddy production.</li> <li>• Most of the land in the village has been inherited by the villagers.</li> </ul>
3. Connectivity	<ul style="list-style-type: none"> <li>• Although the main road is connected to the Sunamganj – Sylhet Highway, the potential area is quite far and isolated from the main road</li> </ul>	<ul style="list-style-type: none"> <li>• The village is connected to Monohardi Paurashava through Mathkhola road to Manohardi bus stand.</li> </ul>

Priority Consideration	Shimulbak Village Shimulbak Union, Shantiganj	Hafizpur Village, Chalakchar Union, Monohardi Upazila
	<ul style="list-style-type: none"> <li>To reach the area, people have to walk more than 1 km of katcha road from the main road.</li> </ul>	
4. Infrastructural Facilities	<ul style="list-style-type: none"> <li>Since the village is far from the Sadar area, required infrastructure amenities are not easily accessible.</li> </ul>	<ul style="list-style-type: none"> <li>As the village is adjacent to the Monohardi Paurashava, all infrastructure facilities are available within convenient distance.</li> </ul>
5. Socio – Economic Condition	<ul style="list-style-type: none"> <li>Primary occupation of the villagers is farming.</li> <li>Major secondary occupation is fishing.</li> <li>Most of the villagers depend on remittances sent by family members living abroad.</li> <li>Most of the houses are Katcha and Semi- Pucca.</li> <li>Only primary school is available.</li> <li>There is no Upazila health complex in Shantiganj upazila.</li> </ul>	<ul style="list-style-type: none"> <li>Primary occupation of the villagers is farming.</li> <li>Many villagers are involved in cane and handicrafts business.</li> <li>Tin shed houses are more common in this village.</li> <li>Both primary and high school is available.</li> <li>Upazila health complex is available in Monohardi upazila.</li> </ul>
6. Protection from Flash flood	<ul style="list-style-type: none"> <li>As the village is surrounded by large amounts wetlands, it becomes island in rainy season.</li> <li>Excavation is needed to uphold the flood water.</li> </ul>	<ul style="list-style-type: none"> <li>The village is not prone to flash flood.</li> <li>Waterlogging prevails during rainy season.</li> </ul>
7. Reason for migration	<ul style="list-style-type: none"> <li>Working people have no other source of income besides paddy and fishing after the monsoon season. As a result, people are forced to migrate for a period of 4 to 6 months in order to avoid unemployment.</li> </ul>	<ul style="list-style-type: none"> <li>To get better education and employment facilities.</li> </ul>

### 3.6 Selection of Housing Area

#### 3.6.1 Identification of Potential Sites

Consultants have identified two potential areas for compact housing in Shimulbak and Hafizpur Villages, based on suggestions from key informants and community participation meetings in both villages. According to physical and socioeconomic factors, these two sites offer enough potential for compact township development. One of these two locations can be used for the preliminary execution of the compact house concept.



Figure 3.11: Potential Site - 01 for Compact housing in Shimulbak Village, Shantiganj Upazila



Figure 3.12: Potential Site for Compact housing in Hafizpur Village, Manohardi Upazila

#### 3.6.2 Opportunities and Constraints in Potential Sites

Table 3.6: Opportunities and Constraints in Potential Sites

	<b>Potential Site - 01 (Shimulbak Village, Shantiganj Upazila)</b>	<b>Potential Site - 02 (Hafizpur Village, Manohardi Upazila)</b>
<b>Opportunities</b>	<ol style="list-style-type: none"> <li>1. Vacant lands are available enough in the site, where urban facilities can be easily established.</li> <li>2. River based livelihood opportunities can be flourished as the site is nearer to Suma and Nitai river.</li> </ol>	<ol style="list-style-type: none"> <li>1. Better connectivity to Sadar Area.</li> <li>2. Educational institutions are already present in the site.</li> <li>3. Pond beautification can be possible as many ponds are located in the site</li> </ol>

<b>Constraints</b>	<ol style="list-style-type: none"><li>1. No road communication facility</li><li>2. Boats are the only means of transportation during the rainy season.</li><li>3. Severe housing crisis, many people live within small portion of area.</li><li>4. Health care facilities are not available, people have to go far to receive medical services.</li><li>5. There is only one primary school in the village and a high school is in under construction on social initiative.</li><li>6. The working people of the village work outside for 6-7 months due to lack of employment opportunities.</li><li>7. Excessive rainfall makes advance flooding during rainy season.</li><li>8. No embankment is present to protect the land from flash floods.</li><li>9. Soil Erosion.</li></ol>	<ol style="list-style-type: none"><li>1. Waterlogging during rainy season.</li><li>2. No proper waste management facility.</li><li>3. Internal streets are not wide enough.</li><li>4. No nearby Bazar area.</li></ol>
--------------------	---	--

## Chapter-04

### DESIGN OF COMPACT HOUSING

In this chapter, Consultants have proposed some compact housing scheme for the pilot villages on the basis of its physical, socio-economic and topographic condition. These housing designs have been developed as an evolving, long-term sustainable housing solution for the rural people not hampering the agricultural lands of villages.

#### 4.1 Plan Overview of Compact Housing

The compact housing is one of the leading paradigms of sustainable housing. Compact housing has, over the last decade, been the preferred response to the challenges of sustainable housing. It is strongly promoted by Bangladesh government due to its positive outcomes in terms of contributing to the economic, environmental, and social goals of sustainability.

#### 4.2 Compact Housing Design of Hafizpur Village, Monohardi Upazila, Narsingdi

##### 4.2.1 Neighborhood Master Plan for Hafizpur Village, Monohardi Upazila

Plan of compact housing develops some patterns and embrace functionality. Hafizpur proposed master plan consists of some clusters, which have 3 prototypes of units with some basic amenities. Besides, a primary school, mosques, community parks, bazaar, community clinic and public green spaces have become integral part of the compact master plan.



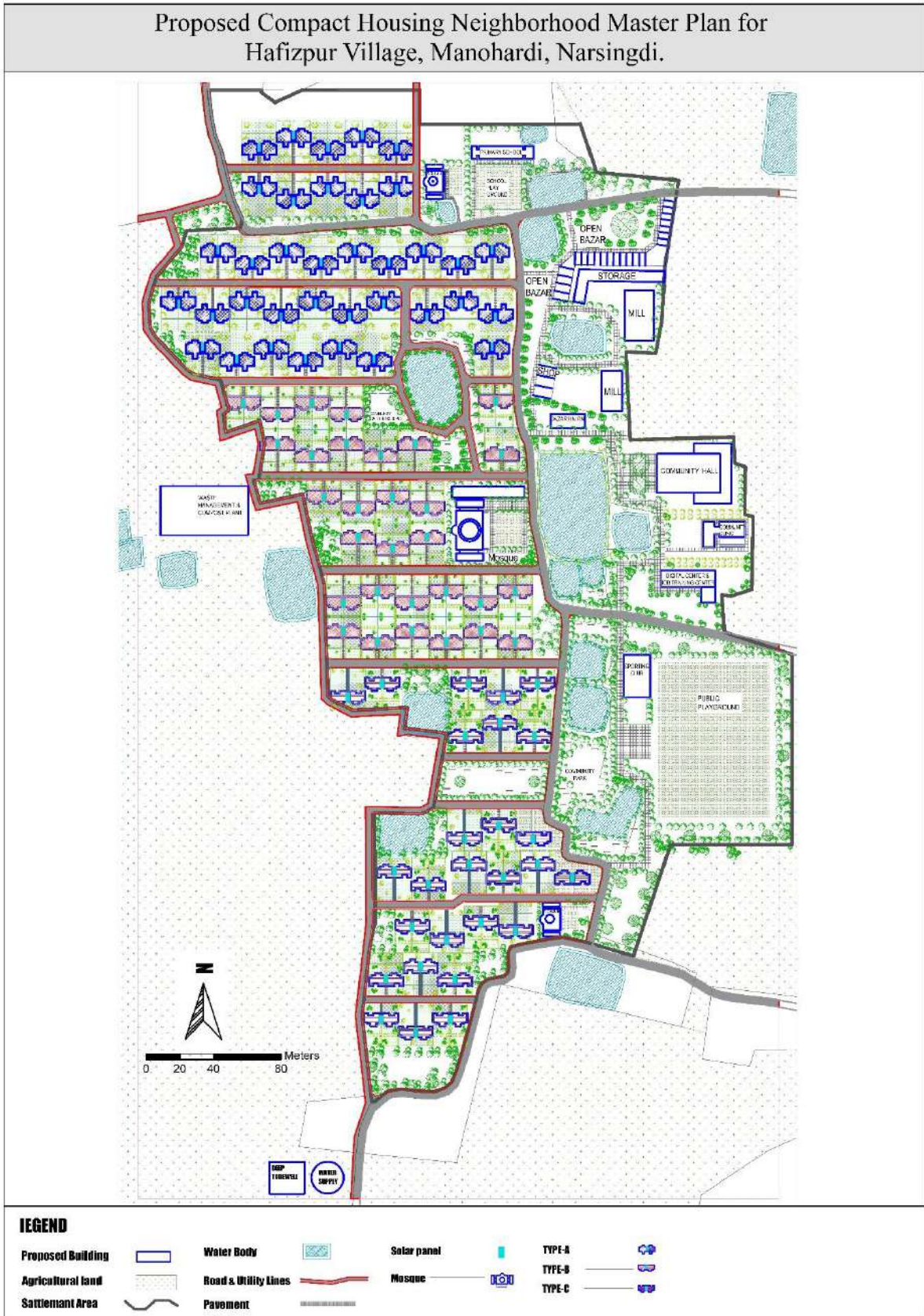


Figure 4.1: Neighborhood master plan for Hafizpur Village, Monohardi, Narsingdi

**4.2.2 Housing Design Prototypes (3D Design)**

There are three prototypes in proposed master plan of Hafizpur. They are- Type A, Type B and Type C. Each type has different organization of functions with different sizes. And, there are phasing and future development options according to the users’ need. Brief discussion of each prototype is given below.

To develop the design, at first the local practices and availability of local materials were studied. Besides, it was considered essential to understand and accommodate the need and culture of the community. At the same time, it is important to consider environmental issues.

Table 4.1: Prototype area analysis

Prototype Area Analysis								
Type	Land Area		Built Area		Green Area		No of Types	No of Units
	Sq. m	Acre	Sq. m	Acre	Sq. m	Acre		
Housing Built Area	71216.00	17.59	14829.00	3.66				
Prototype B (6 Units)	564.00	0.14	146.00	0.04	418.00	0.10	30 NOS	180 NOS
Prototype C (6 Units)	564.00	0.14	155.00	0.04	409.00	0.10	27 NOS	162 NOS
Prototype D (6 Units)	564.00	0.14	172.00	0.04	392.00	0.10	36 NOS	216 NOS
<b>Total</b>		<b>18.01</b>		<b>3.78</b>		<b>0.30</b>	<b>93 NOS</b>	<b>558 NOS</b>

**Type A:** The unit type has 850 sq. ft with 3 bedrooms, living room, dining room, 1 kitchen, 1 bath and 1 toilet. There are sufficient openings for daylight and ventilation.

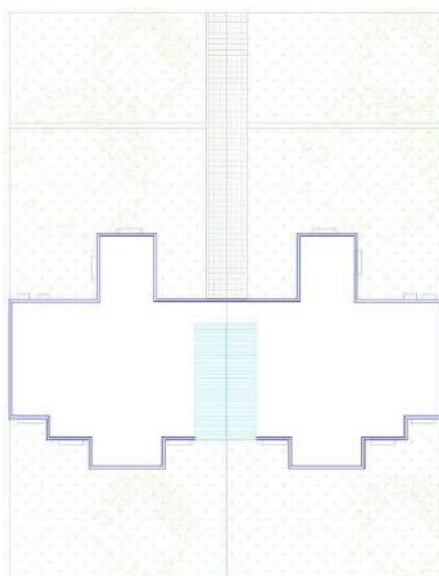


Figure 4.2: Layout of proposed prototype Type A

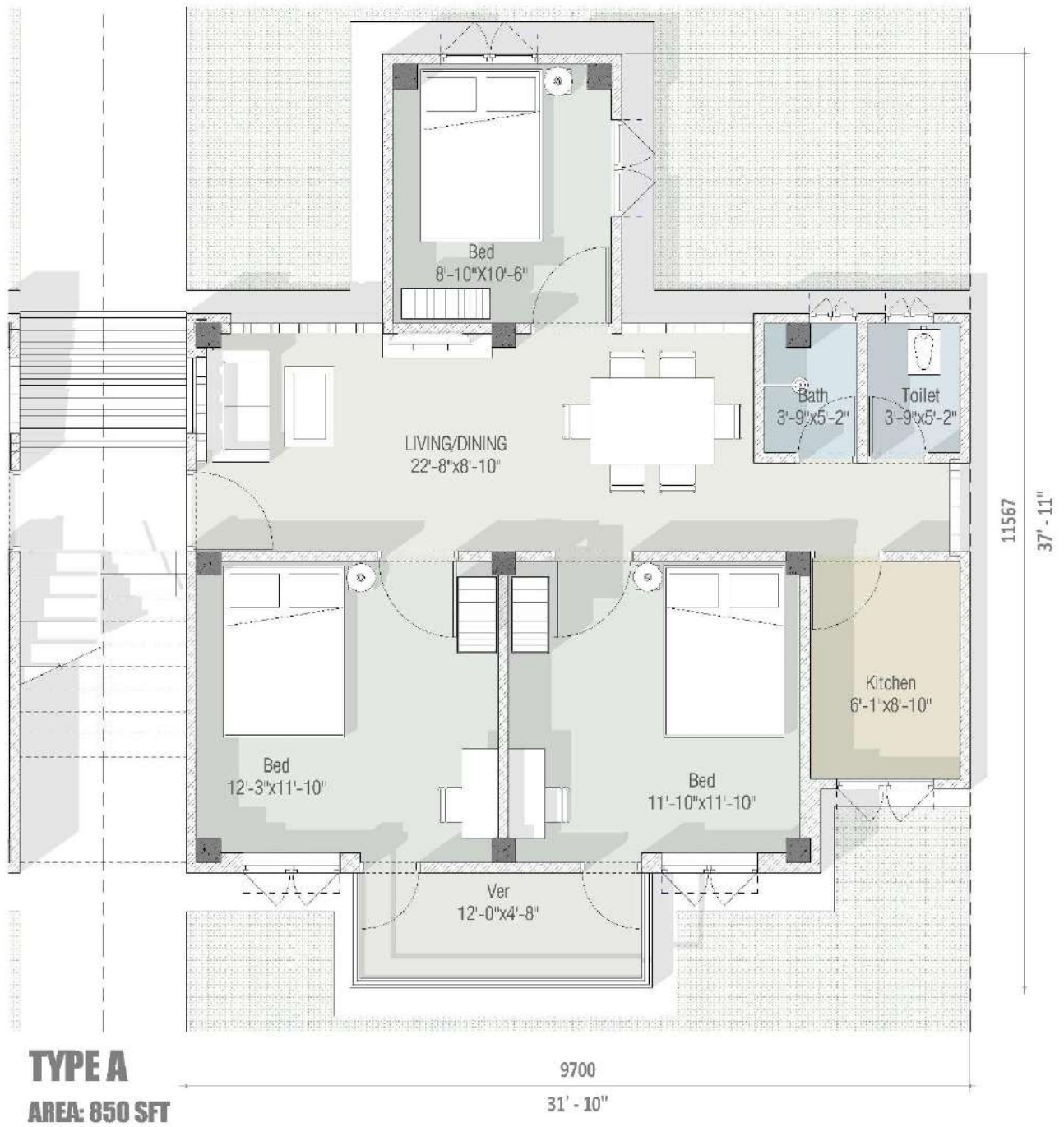
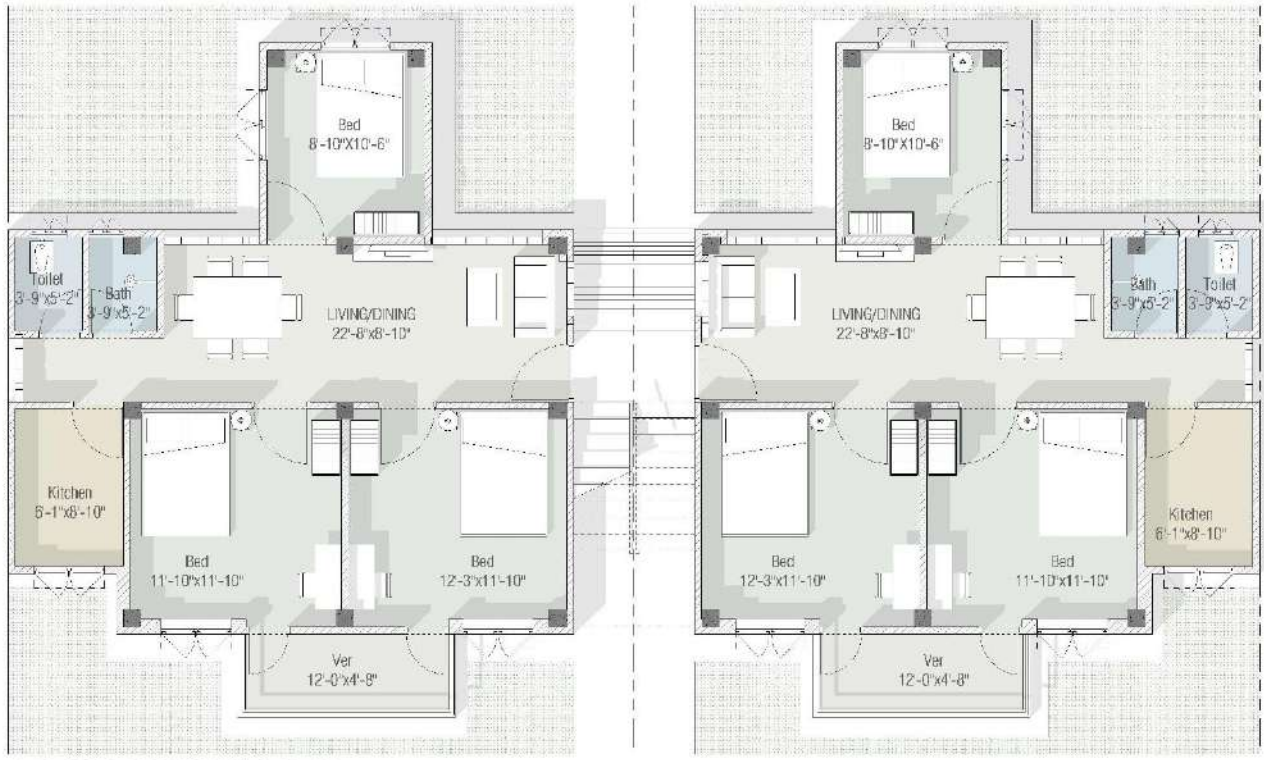


Figure 4.3: Unit plan of proposed prototype Type A.



**TYPE A DOBLE UNIT PLAN**

Figure 4.4: Floor (double unit) plan of proposed prototype Type A.



**GROUND FLOOR 3D CUT VIEW**

Figure 4.5: Cut view (double unit) plan of proposed prototype Type A.



Figure 4.6: Cut view (double unit) plan of proposed prototype Type A.



Figure 4.7: North East view of proposed prototype Type A.

**Type B:** The unit type has 750 sq. ft with 2 bedrooms, living room, dining room, 1 kitchen, 1 bath and 1 toilet. There are sufficient openings for daylight and ventilation.

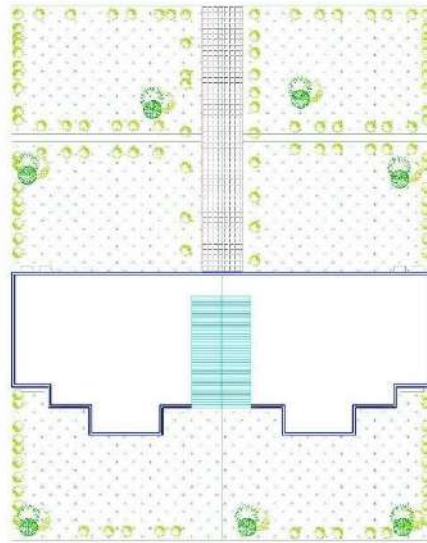


Figure 4.8: Layout of Proposed prototype Type B.

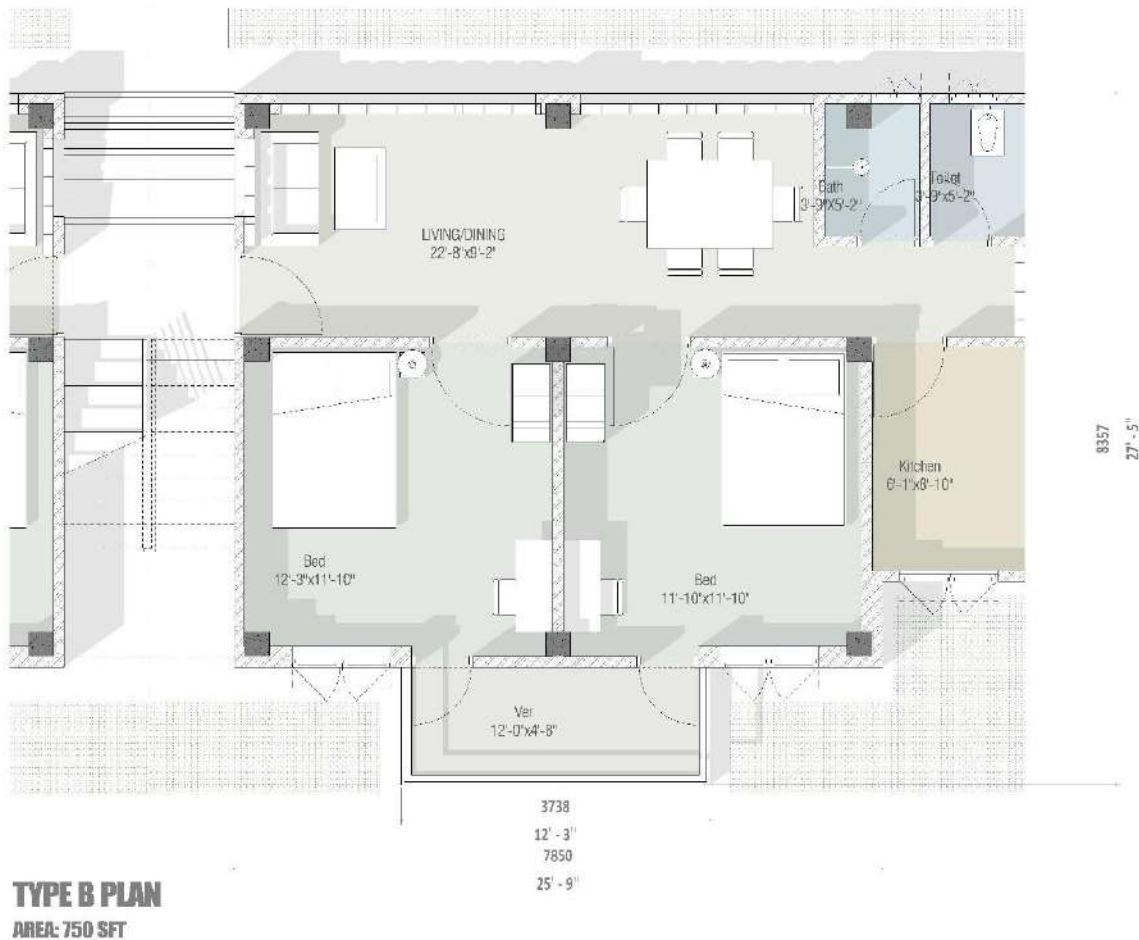
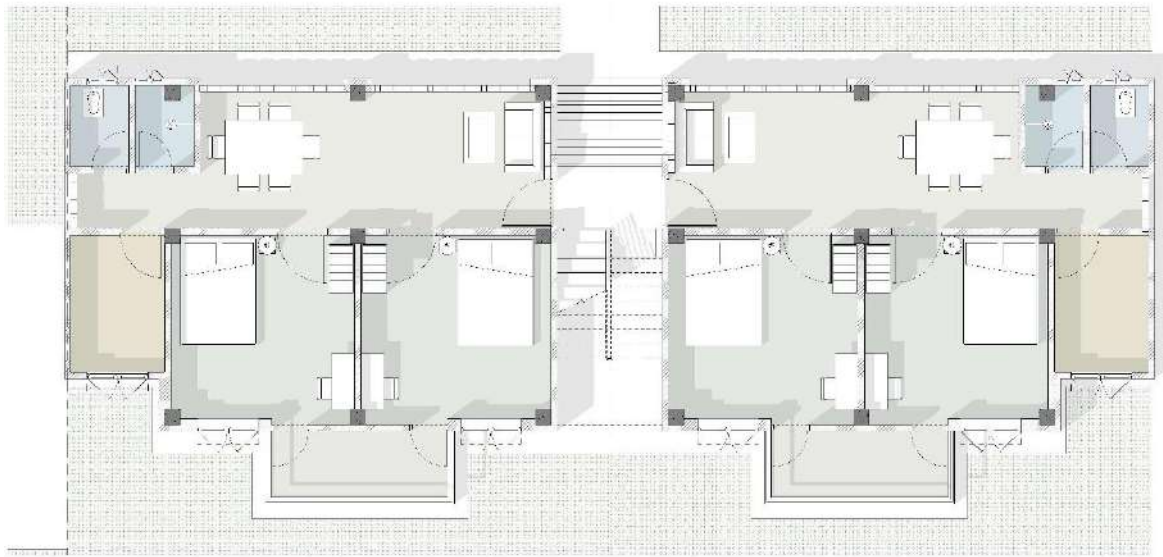


Figure 4.9: Unit Plan of Proposed prototype Type B.



**TYPE B PLAN DOUBLE UNIT**

Figure 4.10: Floor (Double Unit) Plan of Proposed prototype Type B

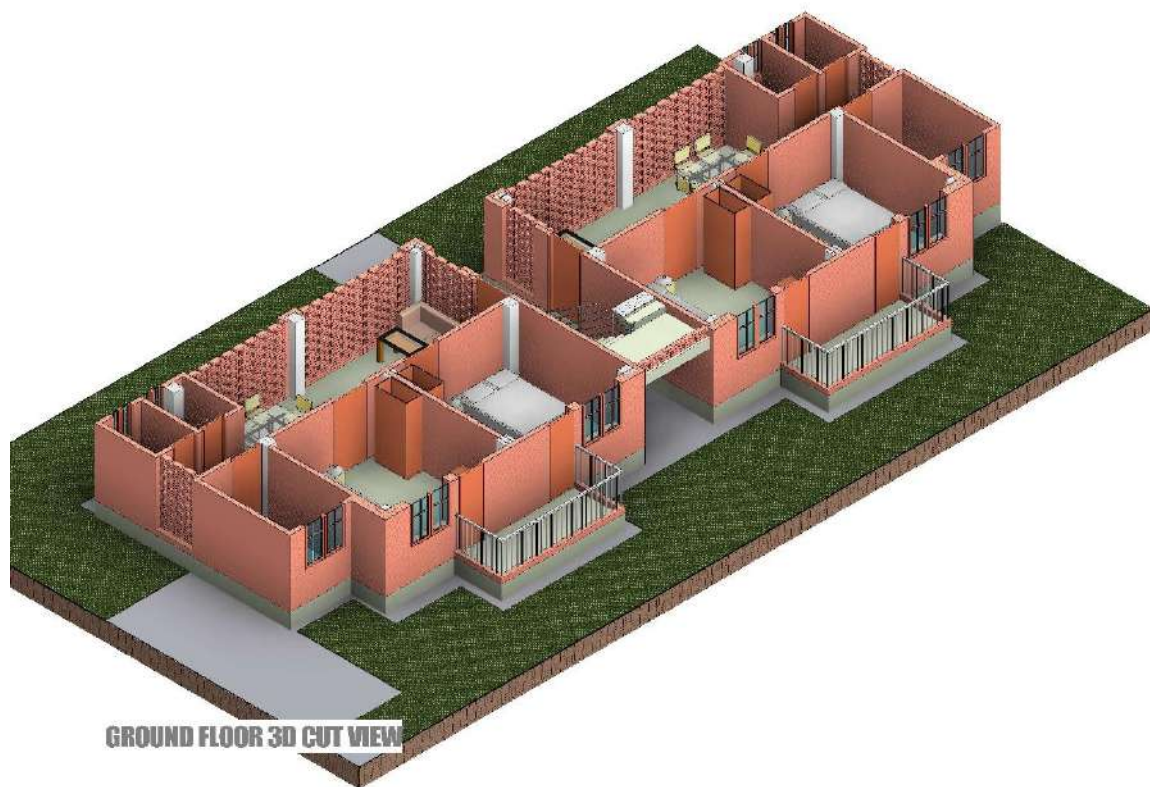


Figure 4.11: Cut View (Double Unit) Plan of Proposed prototype Type B



Figure 4.12: South West view of Proposed prototype Type B.

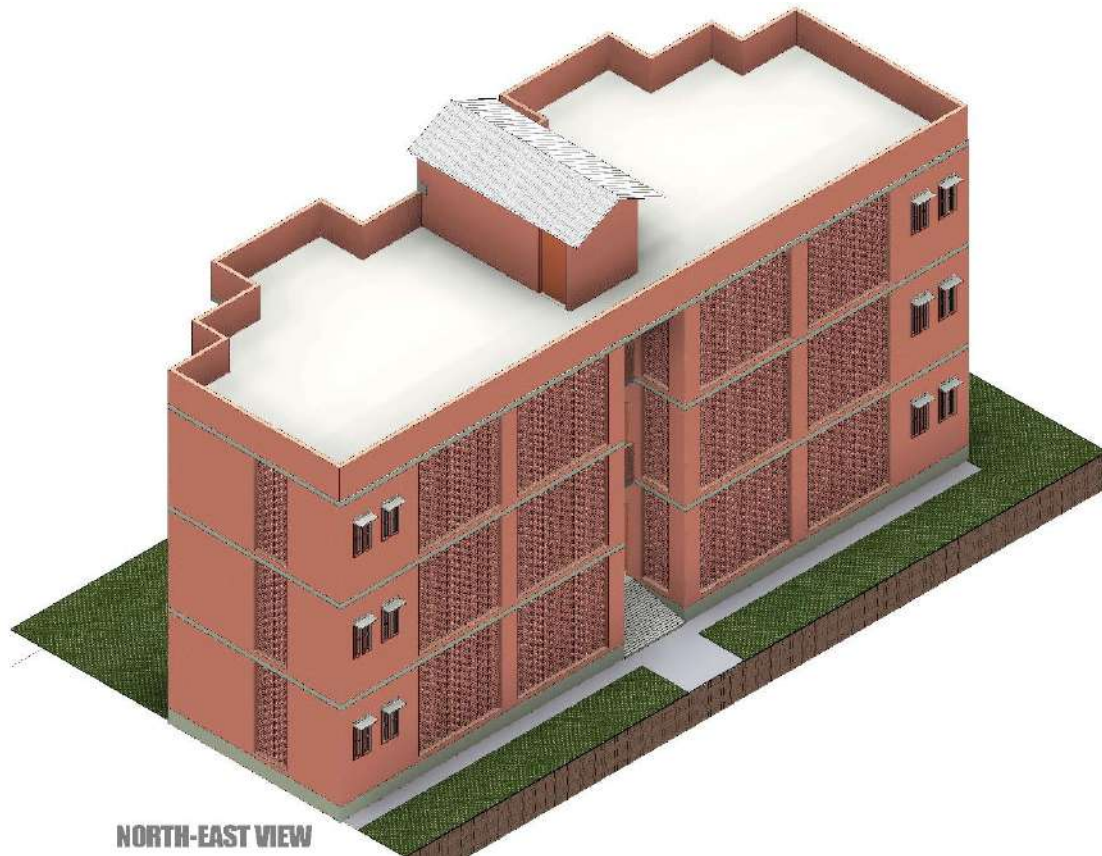


Figure 4.13: North-East view of Proposed prototype Type B



**Type C:** The unit type has 700 sq. ft with 2 bedrooms, living room, dining room, 1 kitchen, 1 bath and 1 toilet. There are sufficient openings for daylight and ventilation.

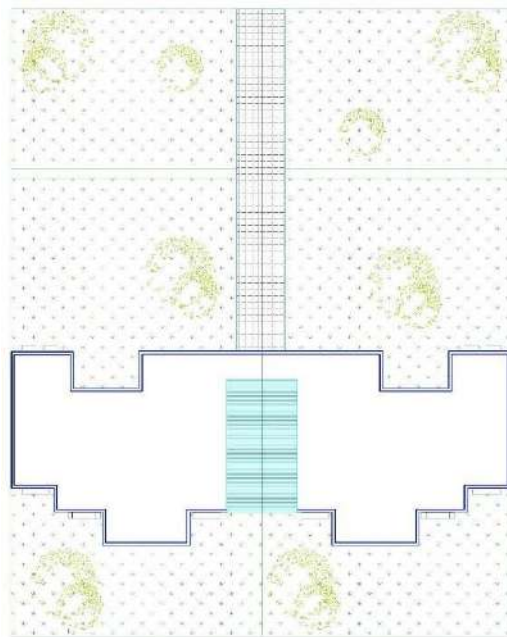


Figure 4.14: Layout of Proposed prototype Type C.

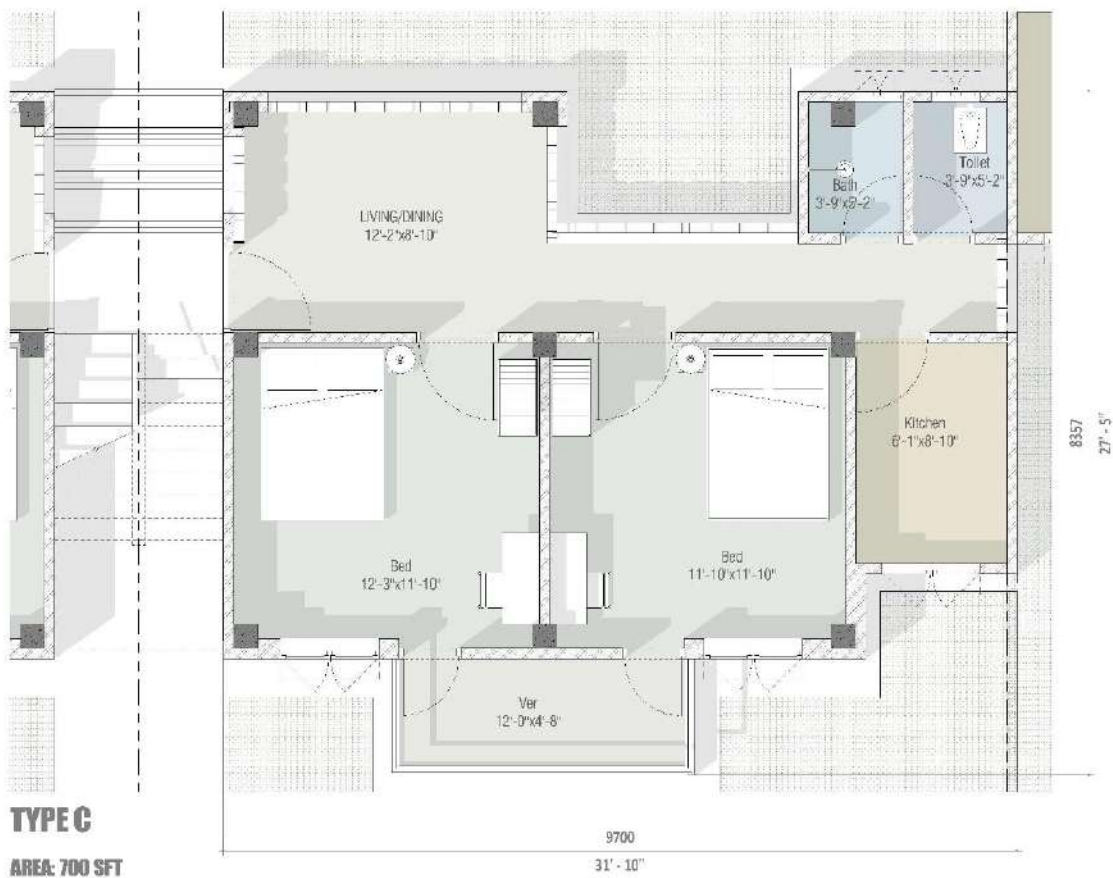
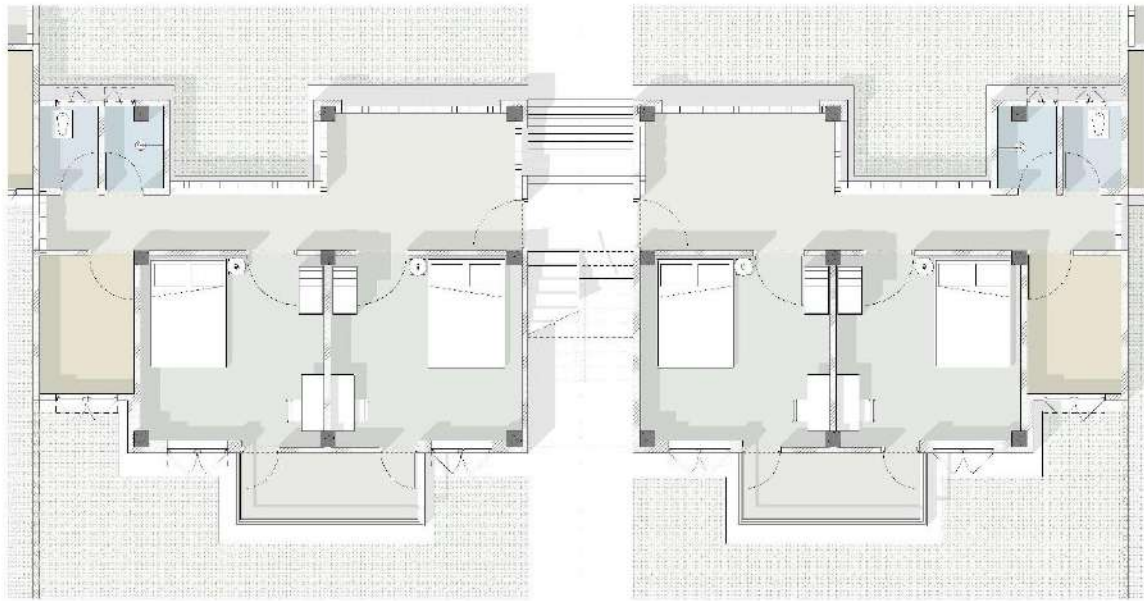


Figure 4.15: Unit Plan of Proposed prototype Type C.



**TYPE C DOBLE UNIT PLAN**

Figure 4.16: Floor (Double Unit) Plan of Proposed prototype Type C.



**GROUND FLOOR 3D CUT VIEW**

Figure 4.17: Cut View (Double Unit) Plan of Proposed prototype Type B.



Figure 4.18: South West view of Proposed prototype Type



Figure 4.19: North-East view of Proposed prototype Type

**4.2.3 2- D Neighborhood Plan**

This proposal of Hafizpur village consists of some blocks which are defined by roads and paves. These blocks act as small neighborhoods. Each neighborhood has some small housing clusters, green spaces, cultivable lands and sometimes amenities or community spaces. These properties have been designed following the traditional and existing planning of villages of Bangladesh. The main task in the design is to combine conventional architecture and planning strategies through an optimal balance. Moreover, the traditional planning of neighborhood planning and design also have different social and cultural development needs.

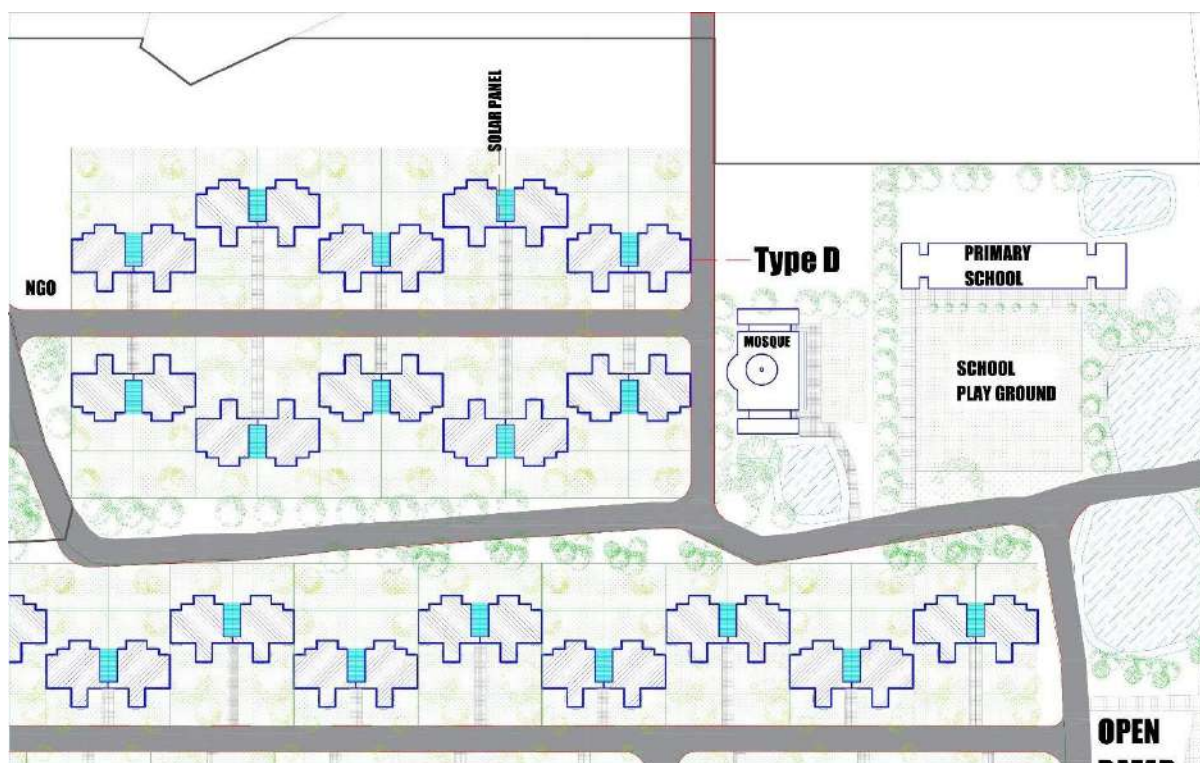


Figure 4.20: Plan of neighborhood of Compact Housing, Hafizpur.

Table 4.2: Housing block analysis

Housing Block Analysis						
Number of Blocks	Unit Per Block	Total Unit	Built Area Per Unit		Total Built Area	
			Sq. m	Acre	Sq. m	Acre
30	6.00	180.00	146.00	0.04	4380.00	1.08
27	6.00	162.00	155.00	0.04	4185.00	1.03
36	6.00	216.00	174.00	0.04	6264.00	1.55
93	6.00	558.00	172.00	0.04	14829.00	3.66
<b>Total</b>				<b>0.16</b>		<b>6.24</b>

4.2.4 Civic Facilities

Housing projects must keep land reserved for civic amenities and utilities such as road network, educational institutions, shopping centers, health centers, religious institutions, community centers, parks and playgrounds. Besides these basic amenities, Hafizpur village has playgrounds, parks and open spaces which make the village more vibrant. Such facilities provide a breathing space for inhabitants of the village.

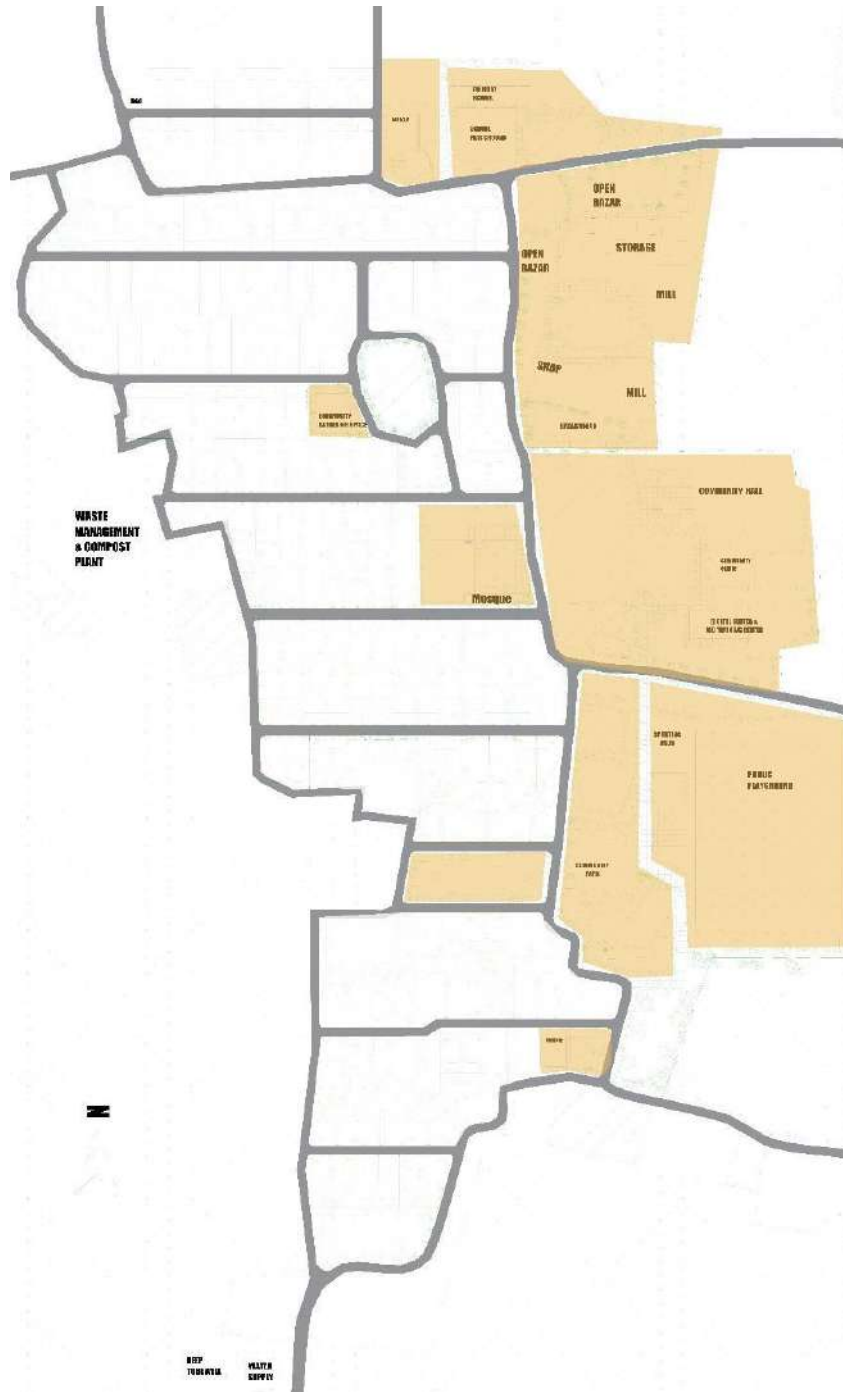


Figure 4.21: Civic Facilities of Compact Housing, Hafizpur.

### 4.2.5 Accessibility

There are peripheral roads around the site which connect villagers to the outside of the village. These roads are divided into branches which go to every neighborhood. It makes grid pattern in the master plan. From a road of a particular neighborhood each housing cluster families have a pave for their own. Thus, makes the village easily accessible for people and transports. Also, all community gathering spaces and infrastructures are well accessible.

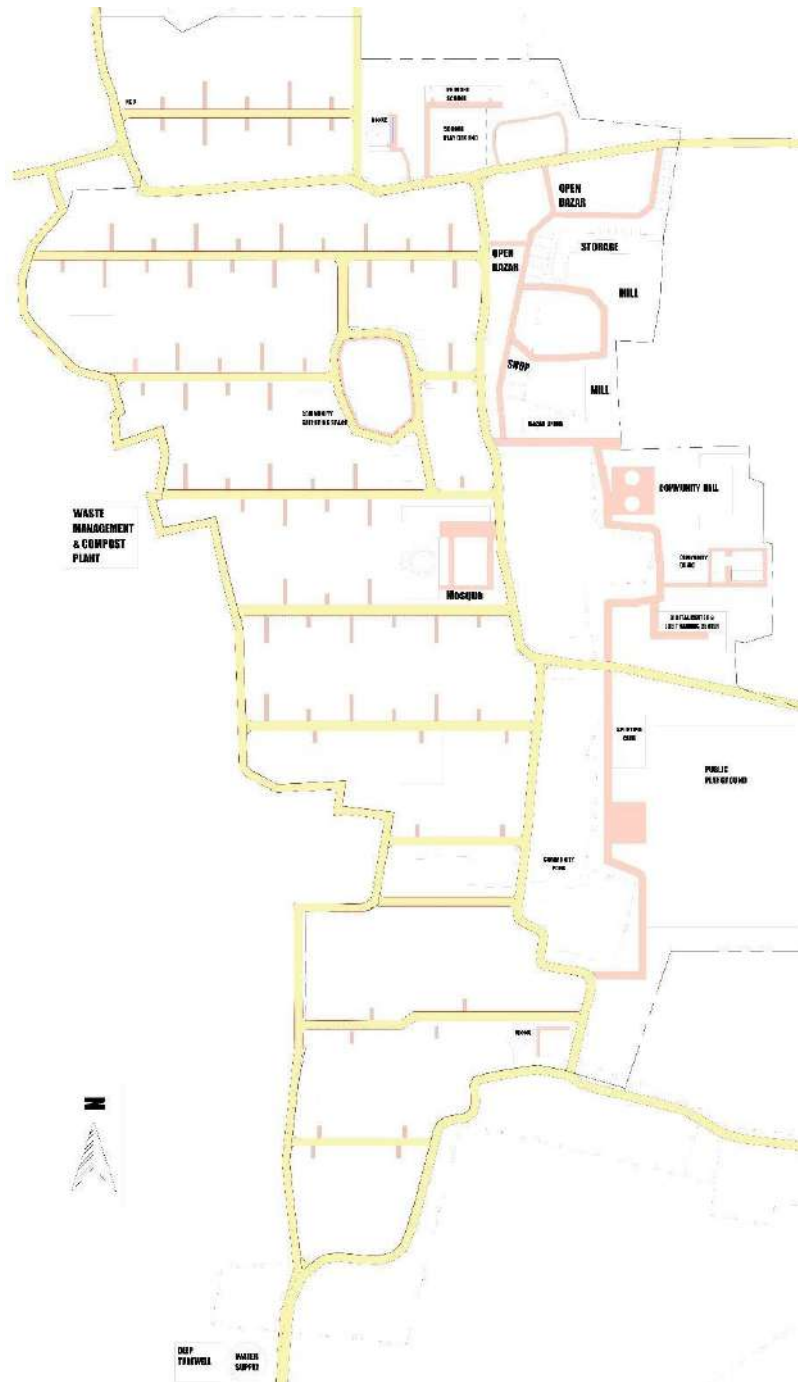


Figure 4.22: Road Network of Compact Housing, Hafizpur.

**4.2.6 Open Space**

There are dedicated open spaces for individual units, up to a small cluster, as well as the village. It is an essential need for the mental and physical health of the inhabitants and increases the aesthetic appeal. Also, it makes the design flexible for users and sustainable.



Figure 4.23: Open Spaces of Compact Housing, Hafizpur.

### 4.2.7 Adaptability

This special issue will explore multiple perspectives for both developed and developing families & neighborhood.

#### ➤ Planning

- Basic layout is based on rural housing concept as they can adopt with the space easily. –
  1. Open Space,
  2. Entry Alley
  3. Common space (Verandah)
  4. Rooms

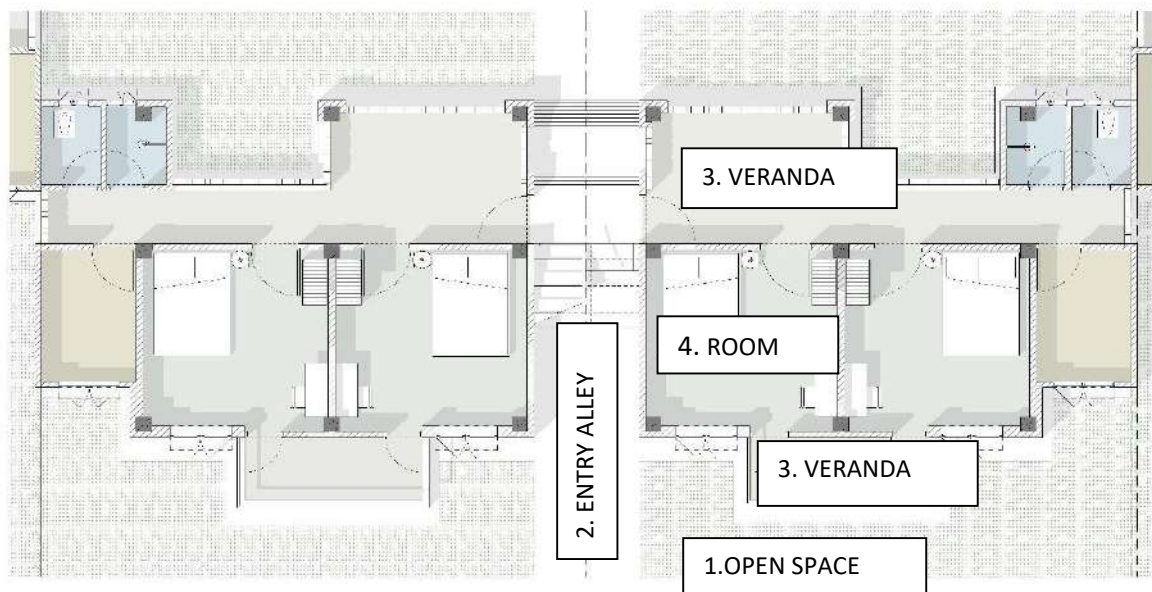


Figure 4.24: Adaptability of Compact Housing, Hafizpur.

#### ➤ Multi-story and multi-user adaptability

- In rural areas now a days growing population demands new space for shelter but due to scarcity of plot they are developing multistory building.
- It may become a challenge for multiuser to share the spaces, but there are separate open plots provided for each family

#### ➤ Spatial & environmental adaptability

#### ➤ Social adaptability

#### ➤ Living & sharing adaptability



**4.2.8 Built Form Height / Density**

According to inhabitants need each built form can rise up-to second floor. There are 25 sqm area for one person in housing block. There are policies of density control in the design proposal.

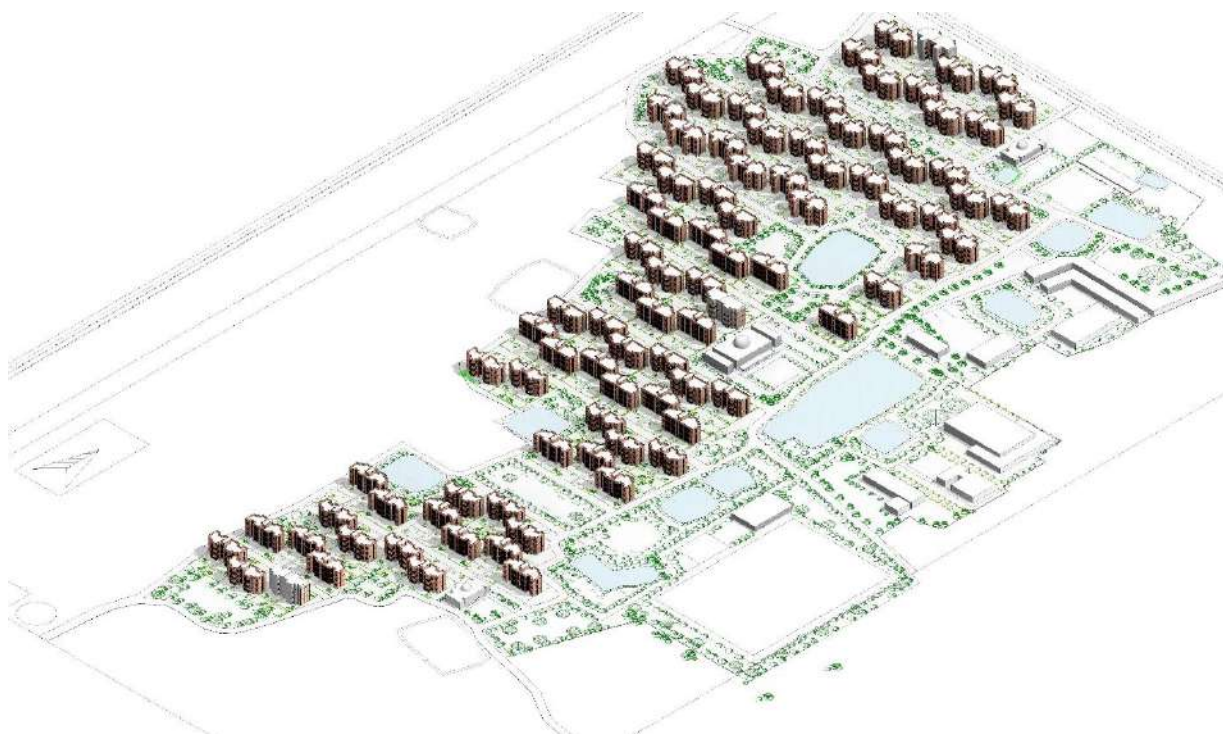


Figure 4.25: Built form Density of Compact Housing, Hafizpur.

**4.2.9 Accommodation Diversity/ Amenity**

As the growth of this compact housing proposal has its organic way, it will achieve diversity in its built environment from the very beginning of the project. Moreover, there are opportunities for future expansion according to users need. In fact, amenities like mosques, bazaar, primary school and others have enough spaces to grow.

Table 4.3: Housing block analysis

Spaces	Area (Sq m)	Area (Acre)	Ratio
Waterbody	11288.42	2.79	8.00%
Roads	17191.00	4.25	12.18%
Pavements	6823.00	1.69	4.83%
Housing Area	71216.00	17.59	50.44%
Community Park	6822.01	1.69	4.83%
Primary School	4814.19	1.19	3.41%
Mosques	5389.17	1.33	3.82%
Community Clinic	7603.12	1.88	5.39%
Bazaar	11397.98	2.82	8.07%
<b>Total Site Area</b>	<b>142570.75</b>	<b>35.23</b>	<b>100%</b>

**4.2.10 Architectural Expression**



Figure 4.26: Architectural Expression of Compact Housing,

**4.3 Compact Housing Design of Shimulbak Village, Shantiganj Upazila, Sunamganj**

*4.3.1 Neighborhood Master Plan for Shimulbak Village, Shantiganj Upazila*

The compact housing plan embraces efficiency and develops various characteristics. Shimulbak proposed master plan consists of housing blocks in three phases with some basic amenities. It has ample green space which keeps scope to grow for future and prioritizes the natural landscape. Besides, a primary school, mosques, community parks, education center and public green spaces have become integral part of the compact master plan.

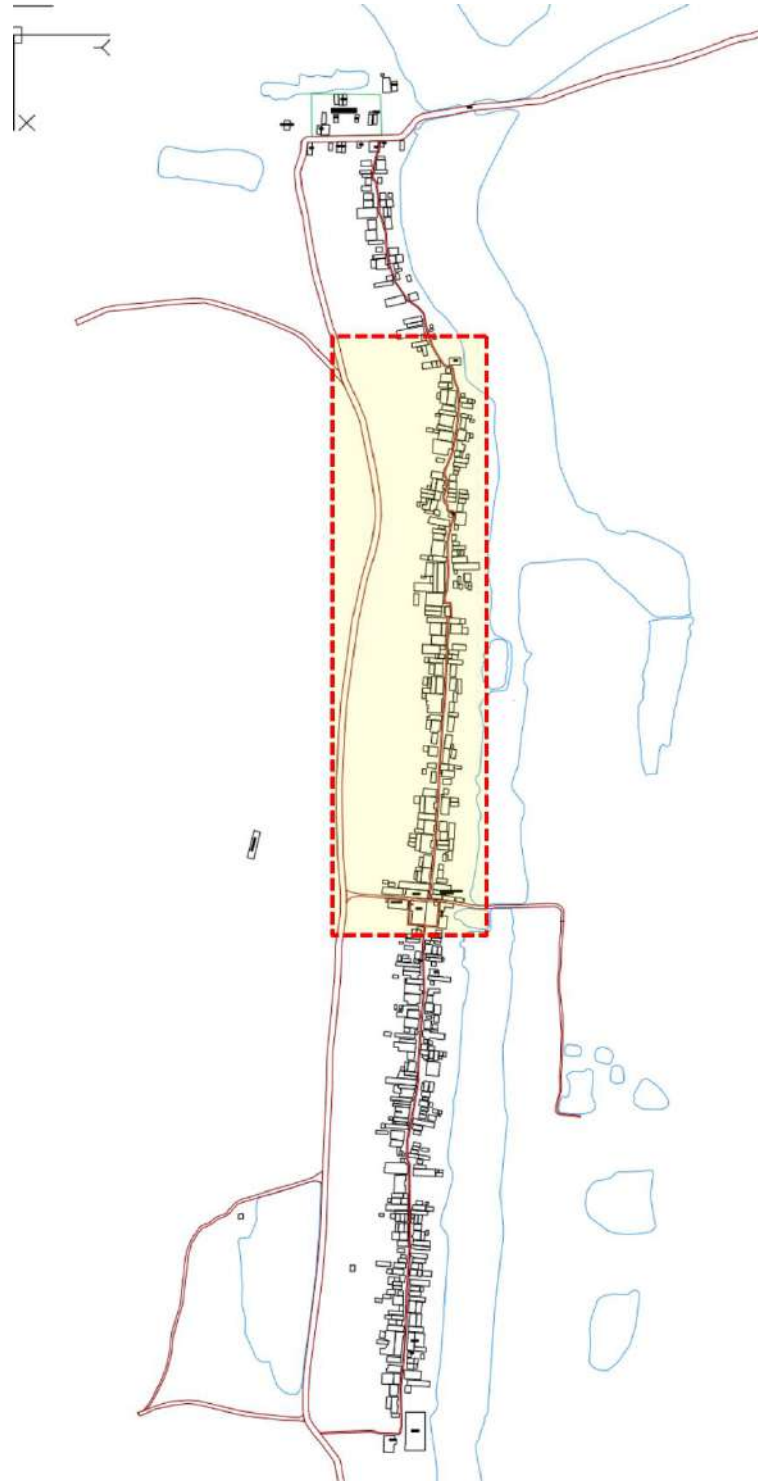


Figure 4.27: Neighborhood master plan for Shimulbak Village, Shantiganj, Sunamganj

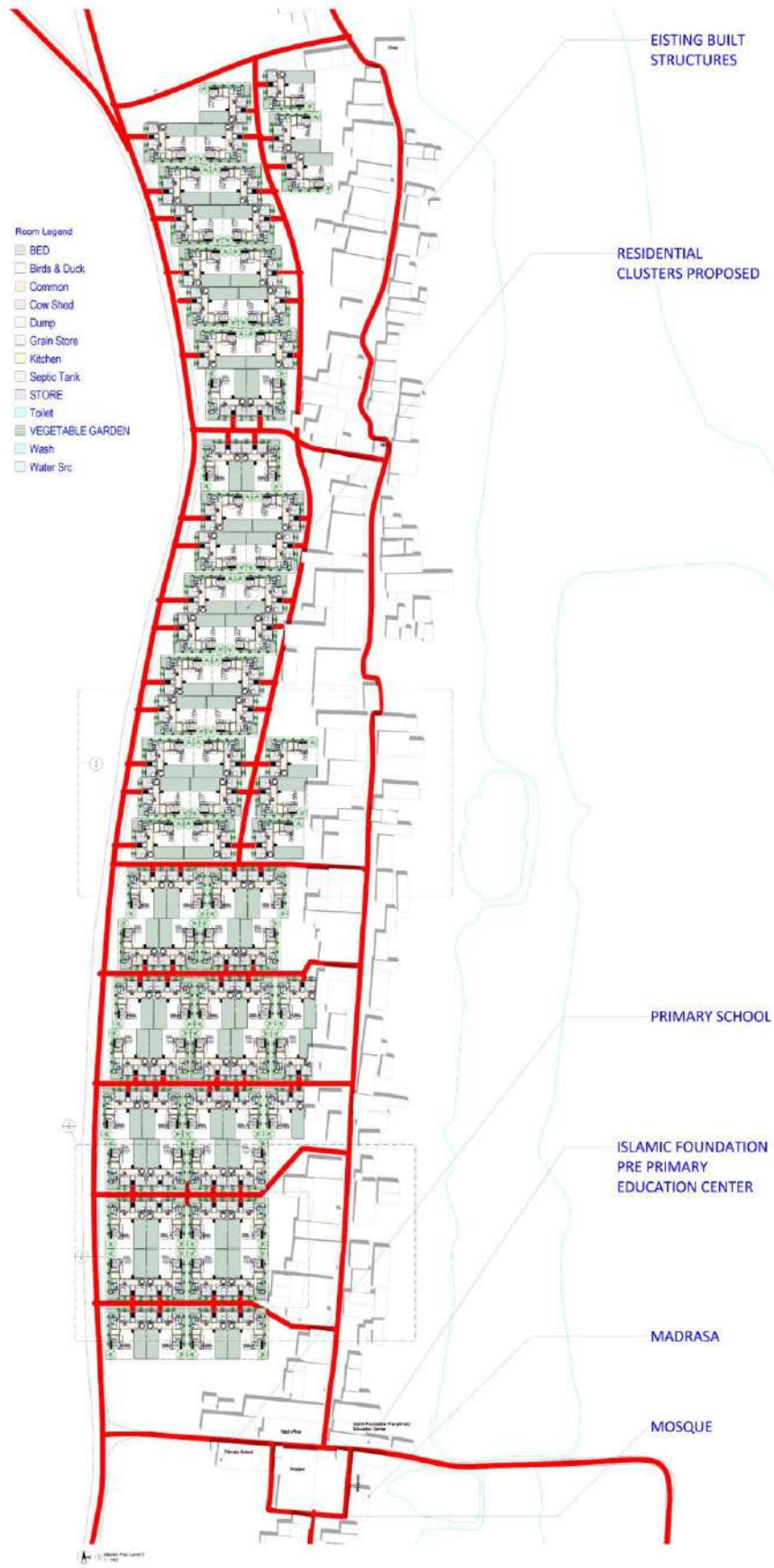


Figure 4.28: Neighborhood master plan for Shimulbak Village, Shantiganj, Sunamganj

### 4.3.2 Housing Design Prototypes (3D Design)

Houses are proposed in three phases in master plan of Shimulbak. They are- Phase 01, Phase 02 and Phase 03. These phasing are conducted as per considering the users' need. To develop the design, at first the local practices and availability of local materials were studied. Besides, it was considered essential to understand and accommodate the need and culture of the community.



Figure 4.29: Blow up view (01) of Shimulbak housing



Figure 4.30: Blow up view (02) of Shimulbak housing

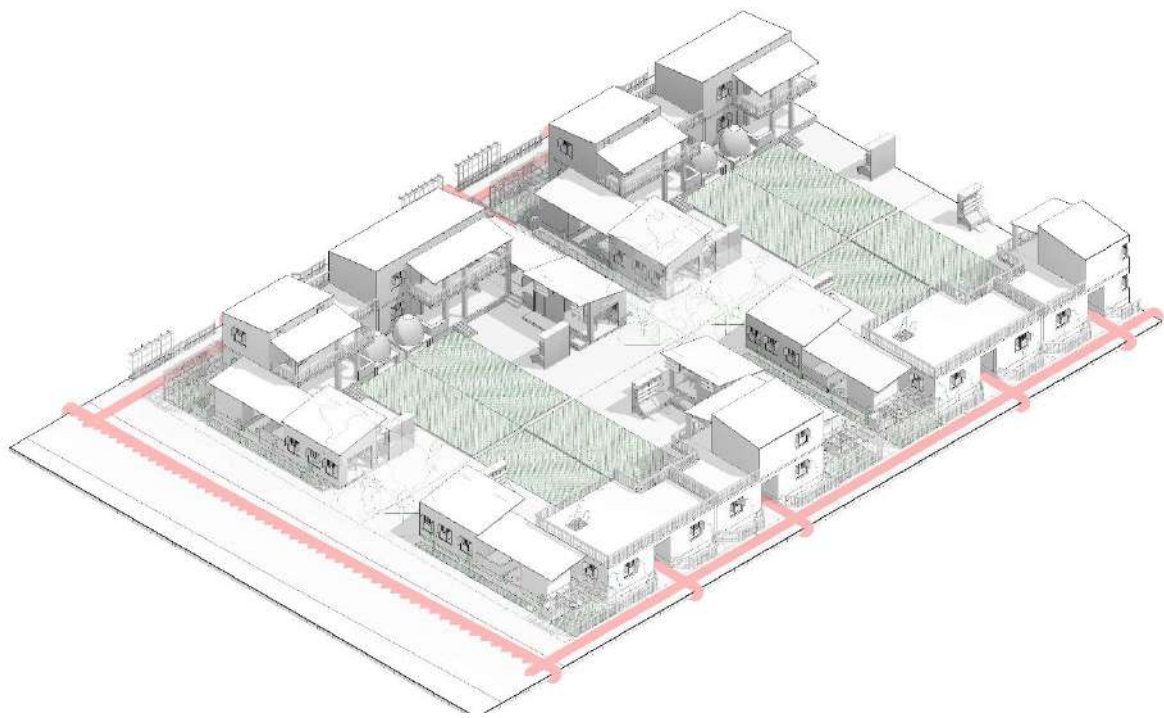


Figure 4.31: Blow up view (03) of Shimulbak housing



Figure 4.32: Side view of Shimulbak Rural housing

Brief description of each housing phases is given below -

**Phase 1:** Each individual house of phase 01 will be developed within 7.7 decimal plot of land. These houses will consist of -

- 2 bed room
- Common verandah
- Kitchen
- Toilet
- Wash zone
- Grain store
- Common store
- 1 animal shed
- Pigeon kuthi
- Kuthi for chicken & duck
- Open court
- 3 different spaces for vegetable
- Garbage dumping space
- Green drainage system

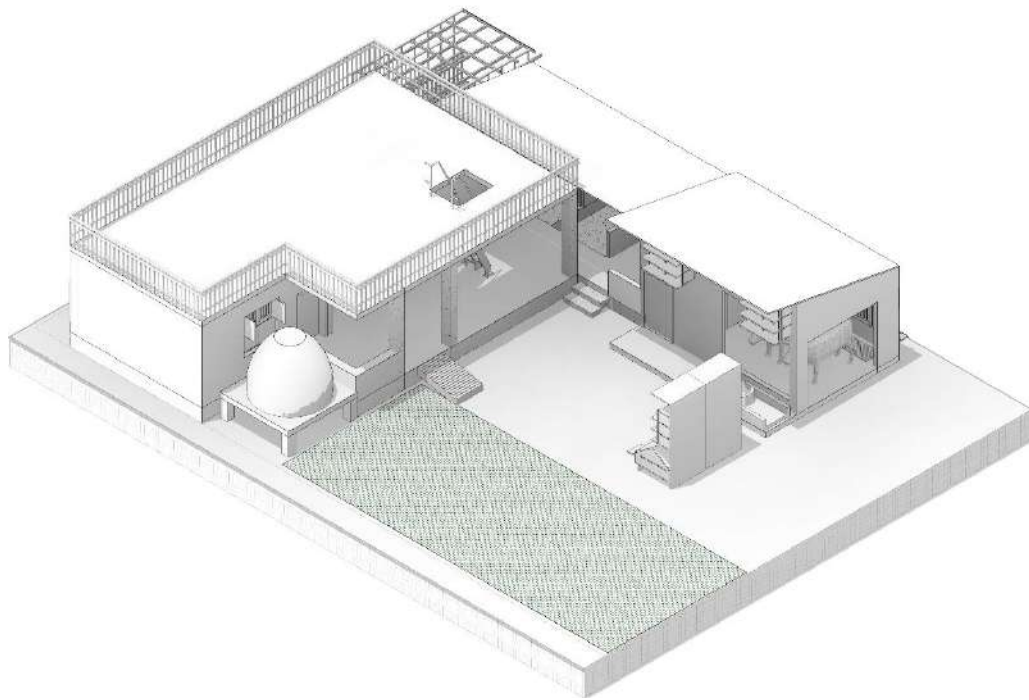


Figure 4.33: 3D view of Shimulbak Rural housing – Phase 01

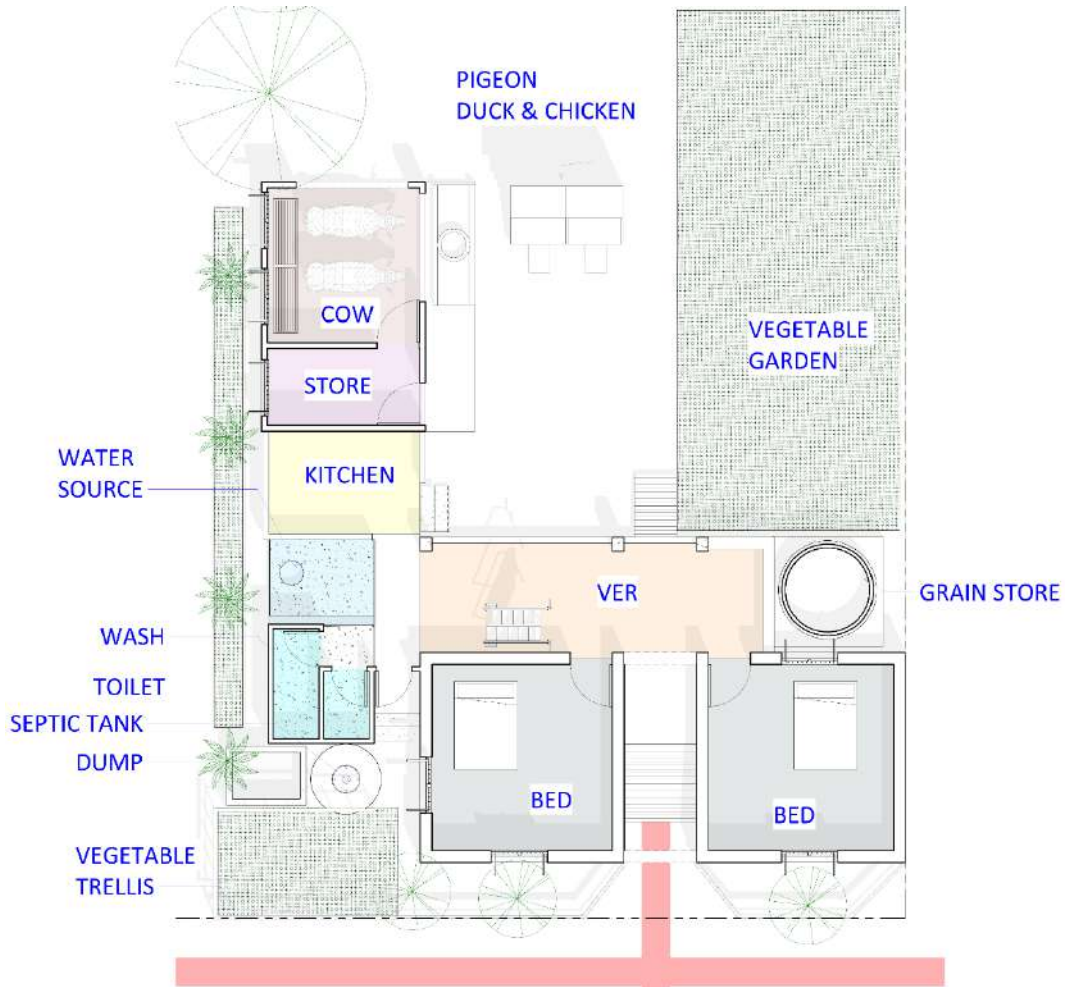


Figure 4.34: Ground floor of Shimulbak Rural housing– Phase 01

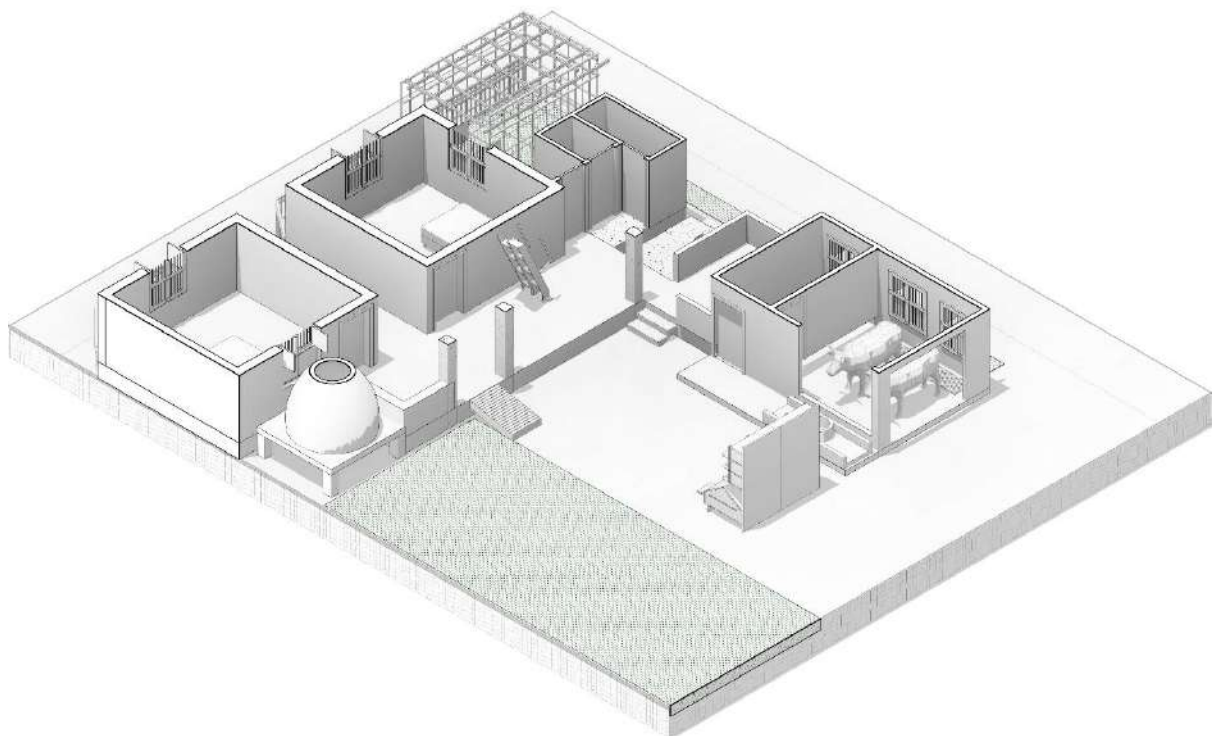


Figure 4.35: Aerial cut view of Shimulbak Rural housing – Phase 01





Figure 4.36: Side view of Shimulbak Rural housing– Phase 01

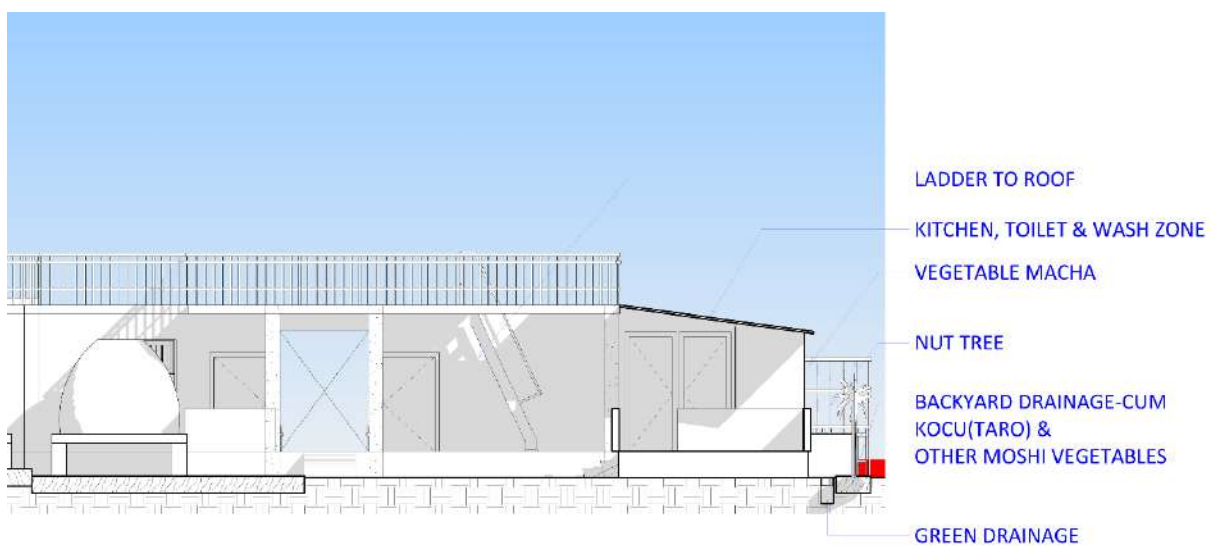


Figure 4.37: Side view of Shimulbak Rural housing – Phase 01

**Phase 2:** Phase 02 houses will each be constructed on a 7.7 decimal plot of land. These houses will consist of -

- 3 bed room
- Common verandah
- Kitchen
- Toilet
- Wash zone
- Grain store
- Common store
- 1 animal shed
- Pigeon kuthi
- Kuthi for chicken & duck
- Open court
- 3 different spaces for vegetable
- Garbage dumping space
- Green drainage system

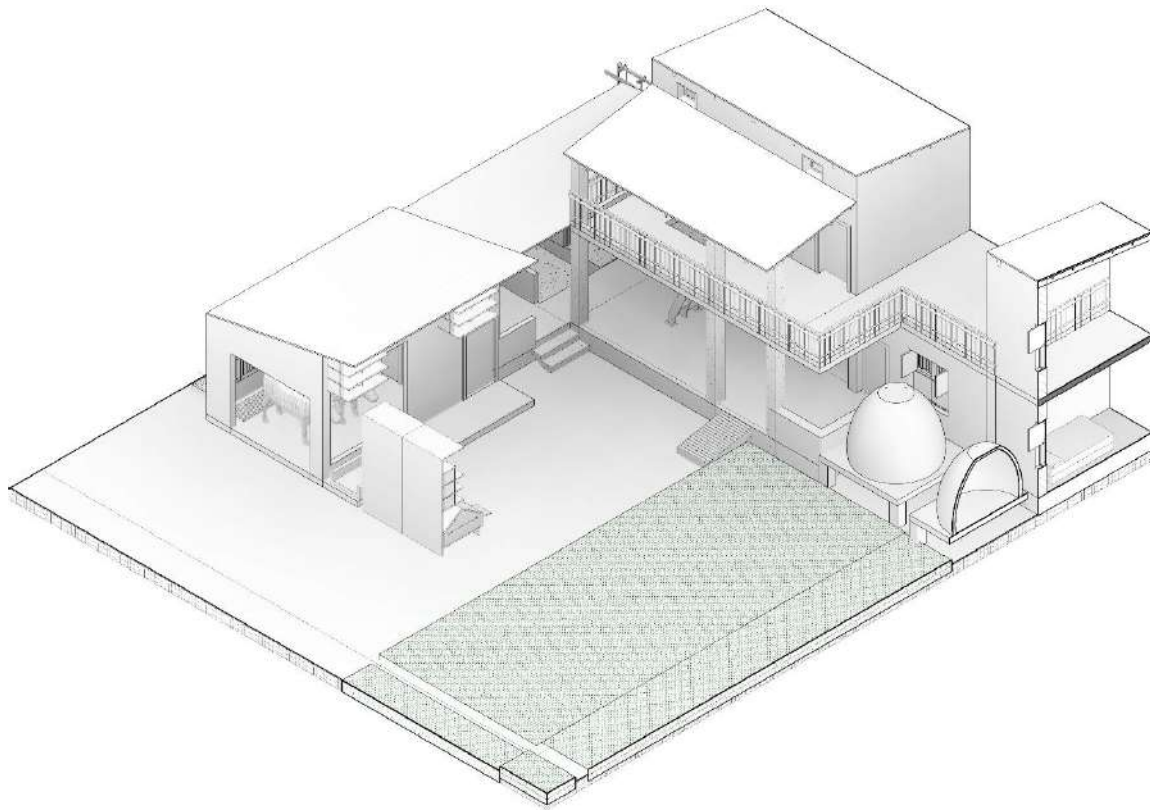


Figure 4.38: 3D view of Shimulbak Rural housing – Phase 02

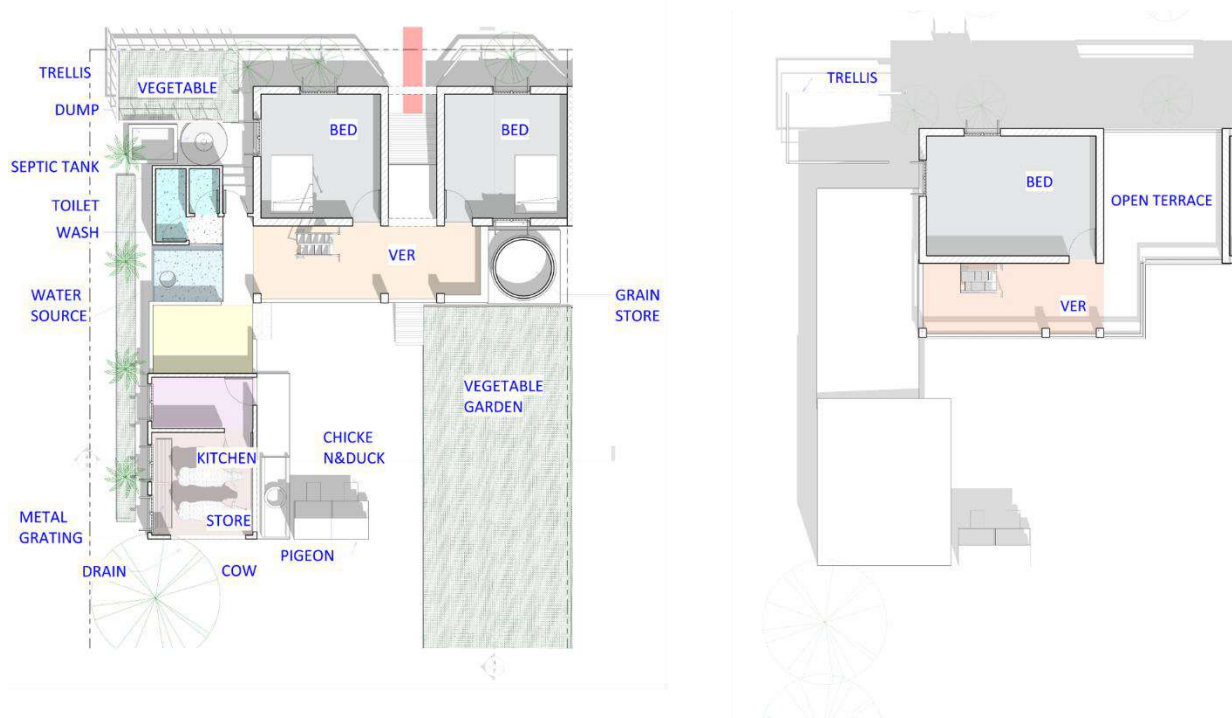


Figure 4.39: Ground floor of Shimulbak Rural housing – Phase 02

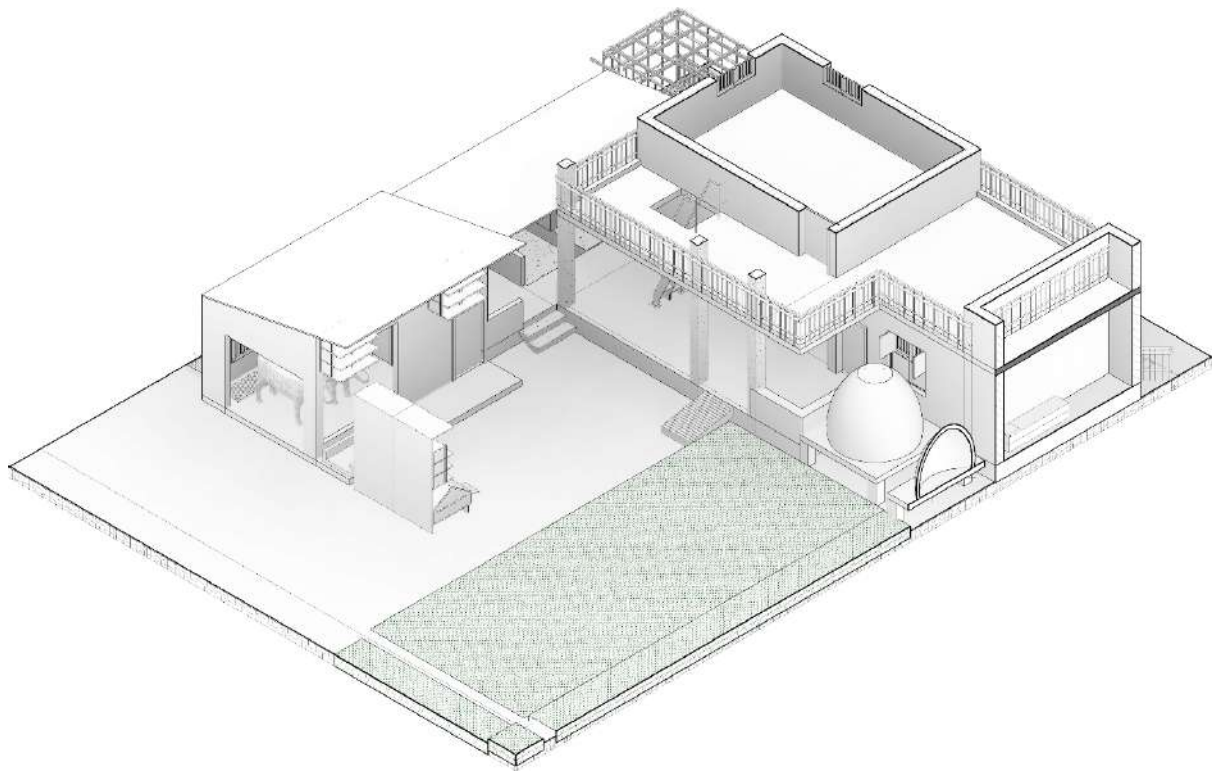


Figure 4.40: Aerial cut view of Shimulbak Rural housing – Phase 02



Figure 4.41: Side view of Shimulbak Rural housing – Phase 02



Figure 4.42: Side view of Shimulbak Rural housing– Phase 02

**Phase 3:** Each individual house of phase 03 will be developed within 7.7 decimal plot of land. These houses will consist of -

- 4 bed room
- Common verandah
- Kitchen
- Toilet
- Wash zone
- Grain store
- Common store
- 1 animal shed
- Pigeon kuthi
- Kuthi for chicken & duck
- Open court
- 3 different spaces for vegetable
- Garbage dumping space
- Green drainage system

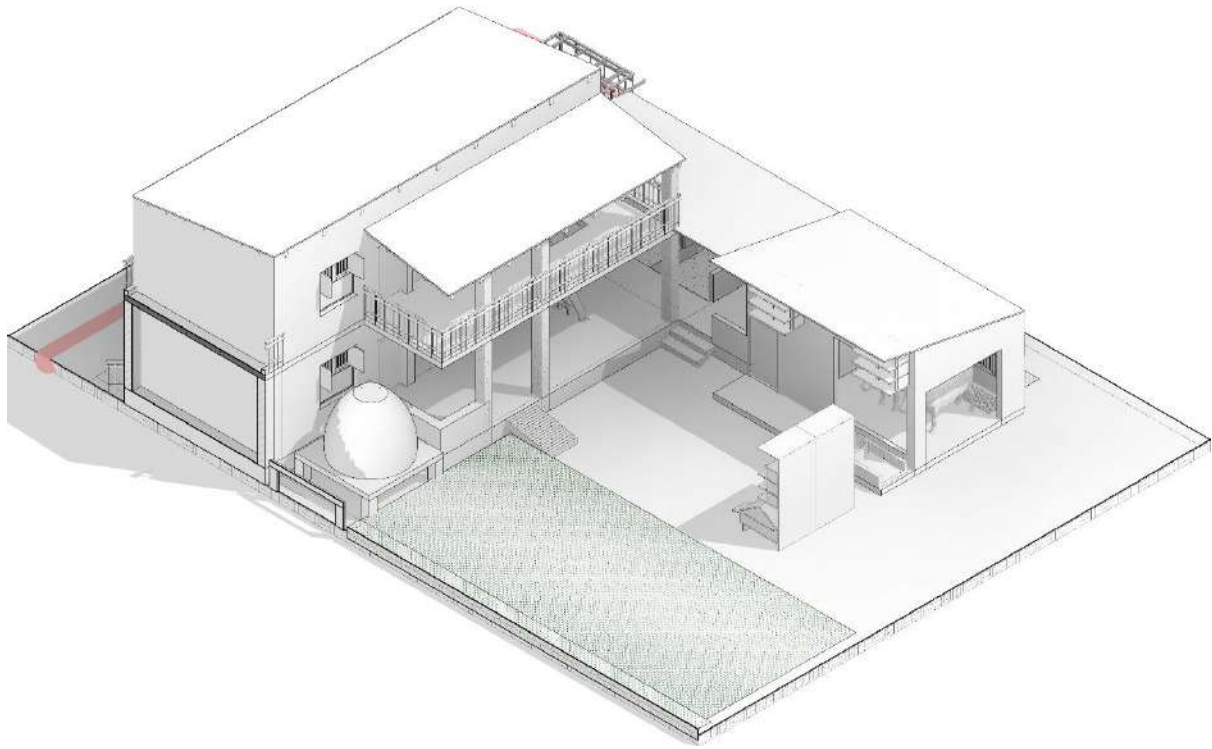


Figure 4.43: 3D view of Shimulbak Rural housing – Phase 03

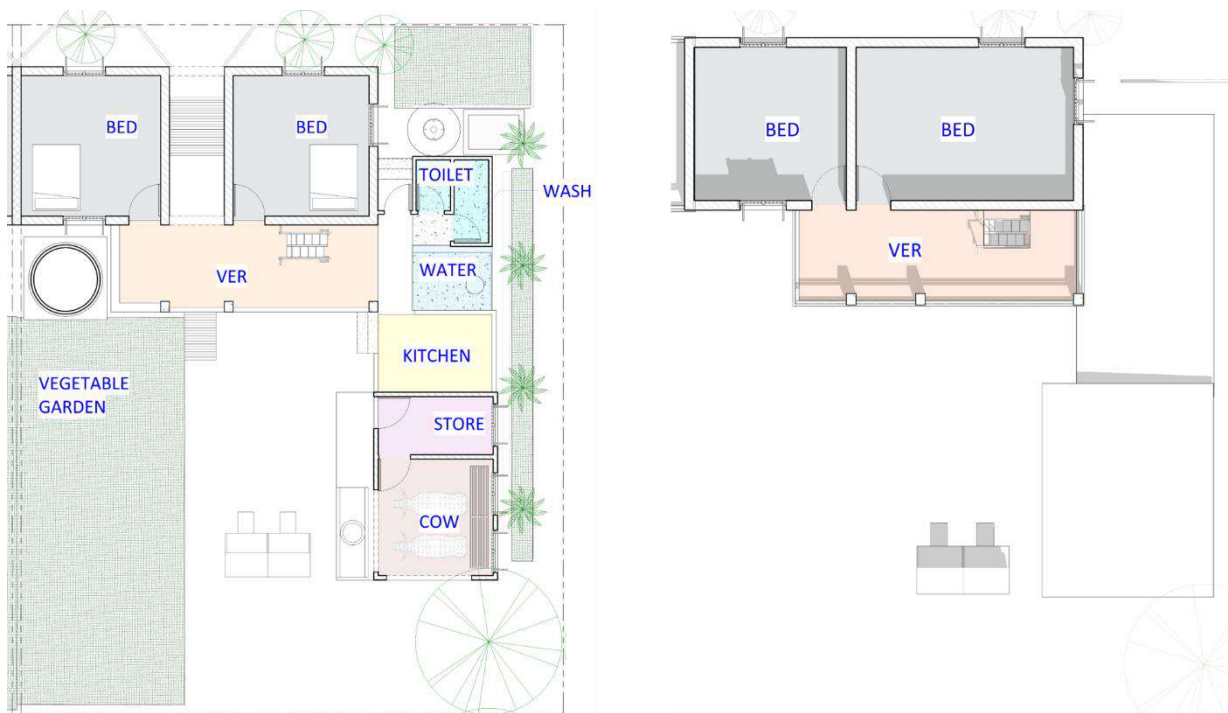


Figure 4.44: Ground floor of Shimulbak Rural housing – Phase 03

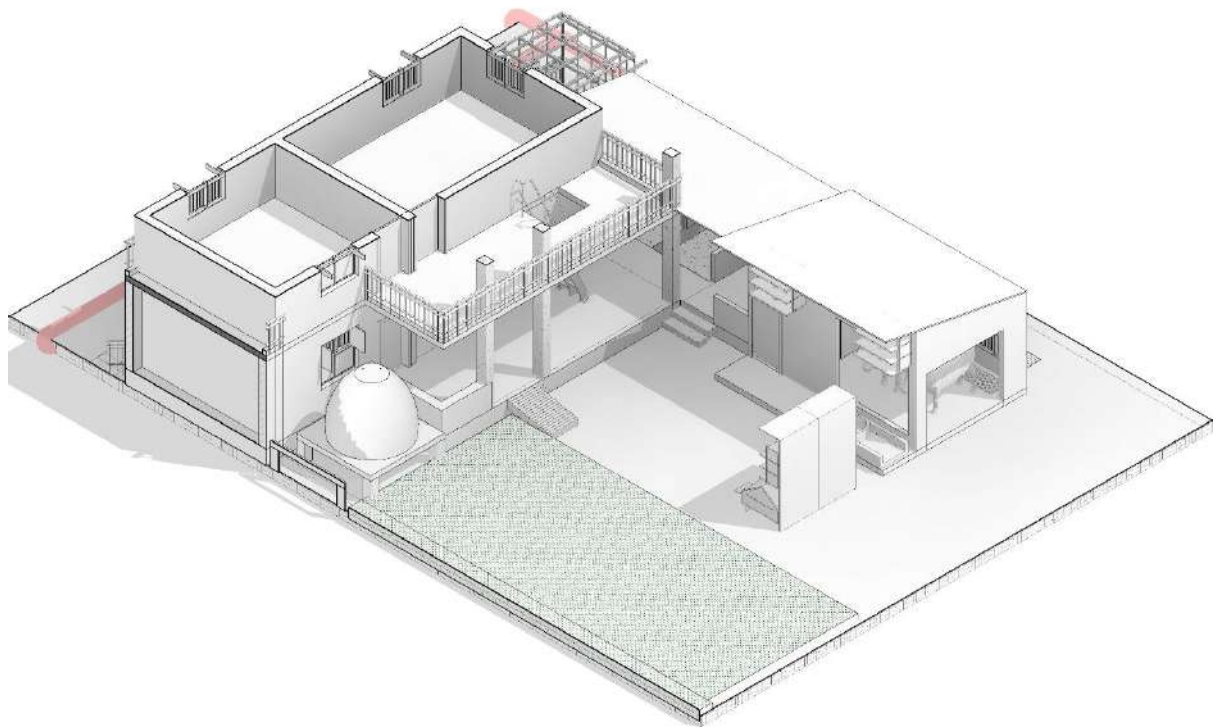


Figure 4.45: Aerial cut view of Shimulbak Rural housing (1<sup>st</sup> floor) – Phase 03

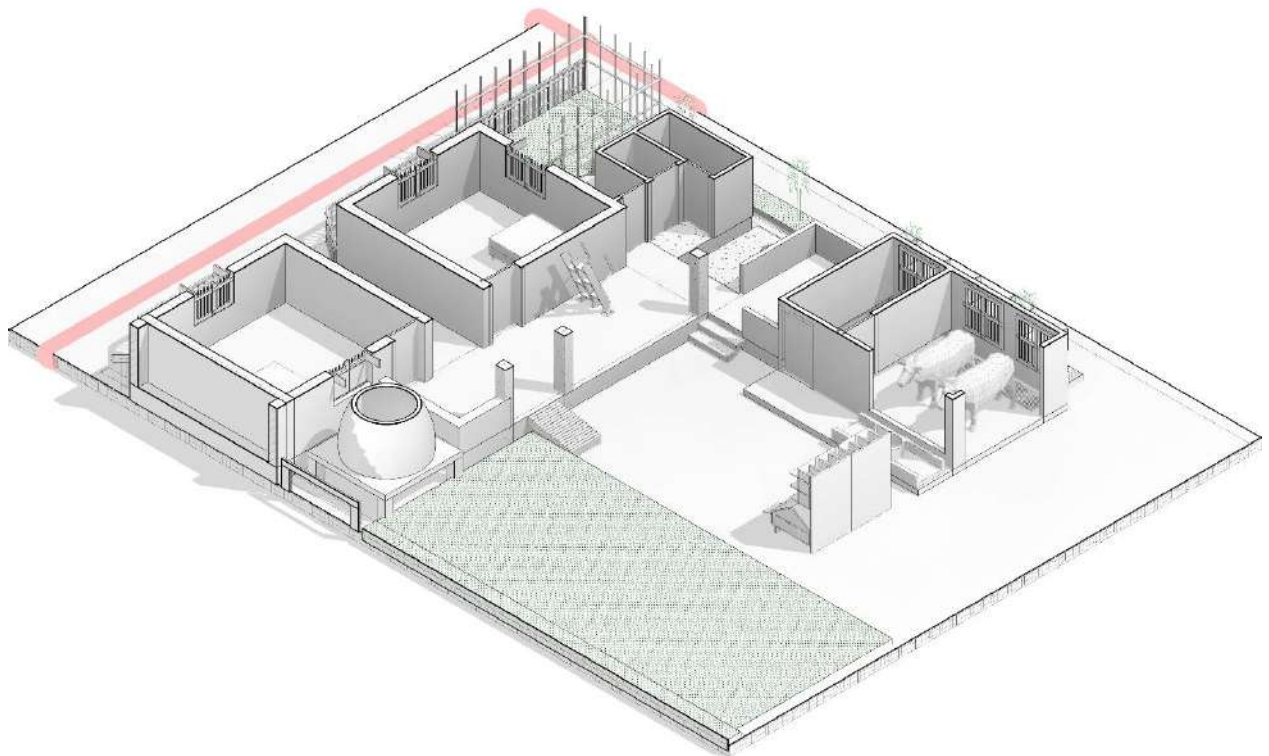


Figure 4.46: Aerial cut view of Shimulbak Rural housing (Ground Floor) – Phase 03



Figure 4.47: Side view of Shimulbak Rural housing – Phase 03

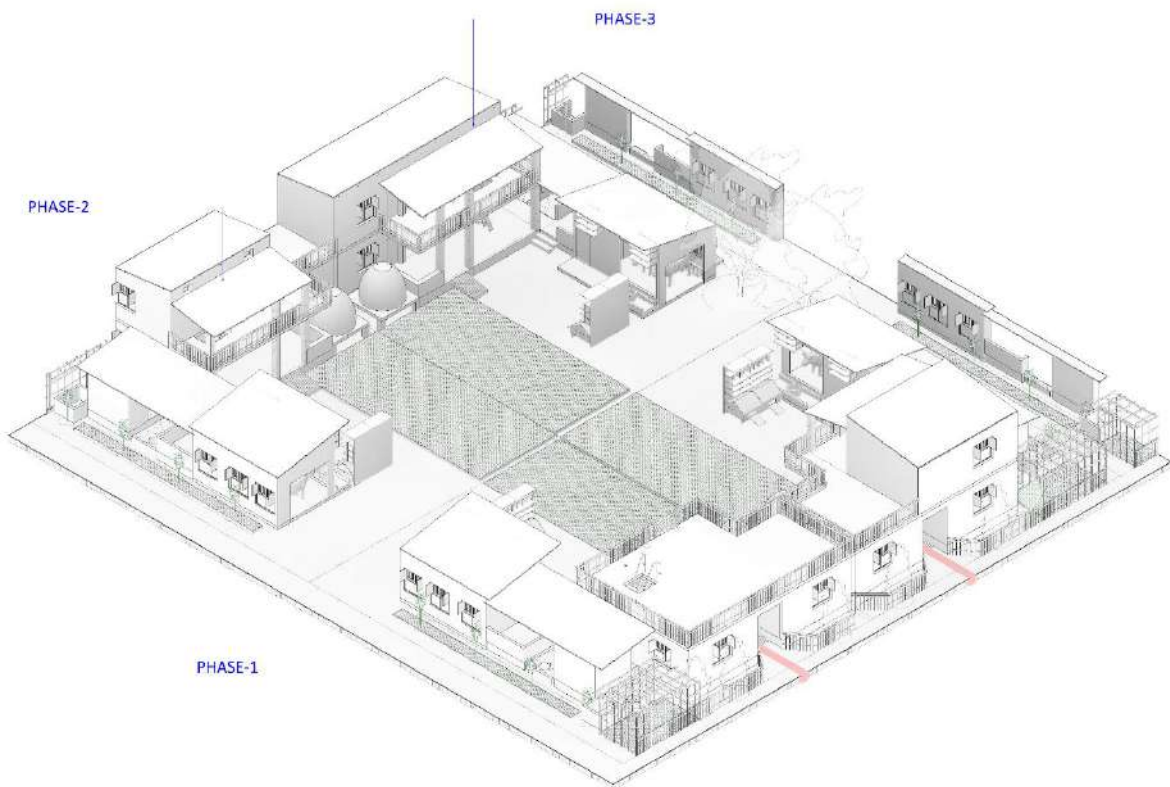


Figure 4.48: Aerial view of Shimulbak Rural housing – All Phases

### ***4.3.3 2- D Neighborhood Plan***

This proposal of Shimulbak village consists of compact houses in three phases. These houses are defined by roads and paved. Full housing block of this housing design act as small neighborhood. It has small housing clusters, green spaces, cultivable lands and sometimes amenities or community spaces. These properties have been designed following the traditional and existing planning of villages of Bangladesh. Combining traditional architecture and planning ideas through an ideal balance is the fundamental goal of the design.



Figure 4.49: Plan of neighborhood of Compact Housing, Shimulbak.

### ***4.3.4 Civic Facilities***

Housing developments must reserve space for public services and amenities like the road system, schools, retail stores, healthcare facilities, religious institution, community centers, parks, and playgrounds. Shimulbak village has vast number of open spaces to feature parks, playgrounds, and other open areas that will add to the vibrancy of village.

### ***4.3.5 Accessibility***

There are internal roads around the housing site which paves the accessibility in the village. These roads are divided into branches which go to every houses. It makes grid pattern in the master plan and makes the neighborhood more suitable for transport services.



#### ***4.3.6 Open Space***

Shimulbak village is blessed up with high number of open spaces. For the villagers physical and emotional health, these open places are a need. Additionally, open areas make the design more aesthetically pleasing, user-friendly, and sustainable.

#### ***4.3.7 Built Form Height / Density***

According to inhabitants need each built form can rise up-to second floor. There are policies of density control in the design proposal.

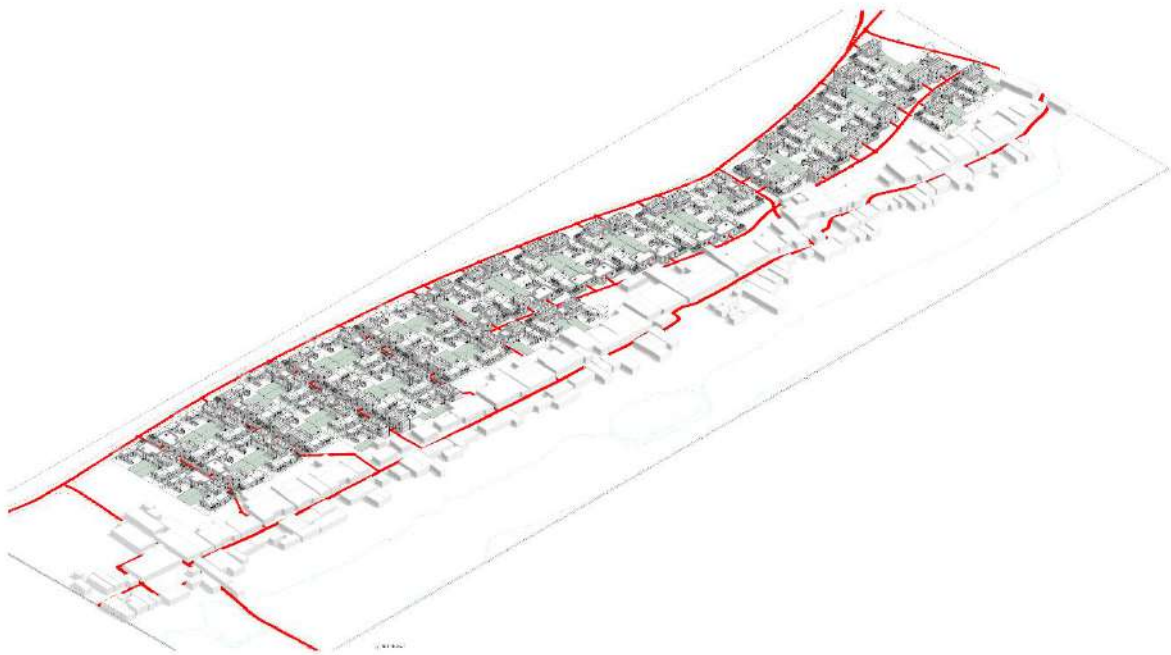


Figure 4.50: Built form Density of Compact Housing, Shimulbak.

**4.3.8 Orientation**



Figure 4.51: Orientation Pattern 01 of Compact Housing,

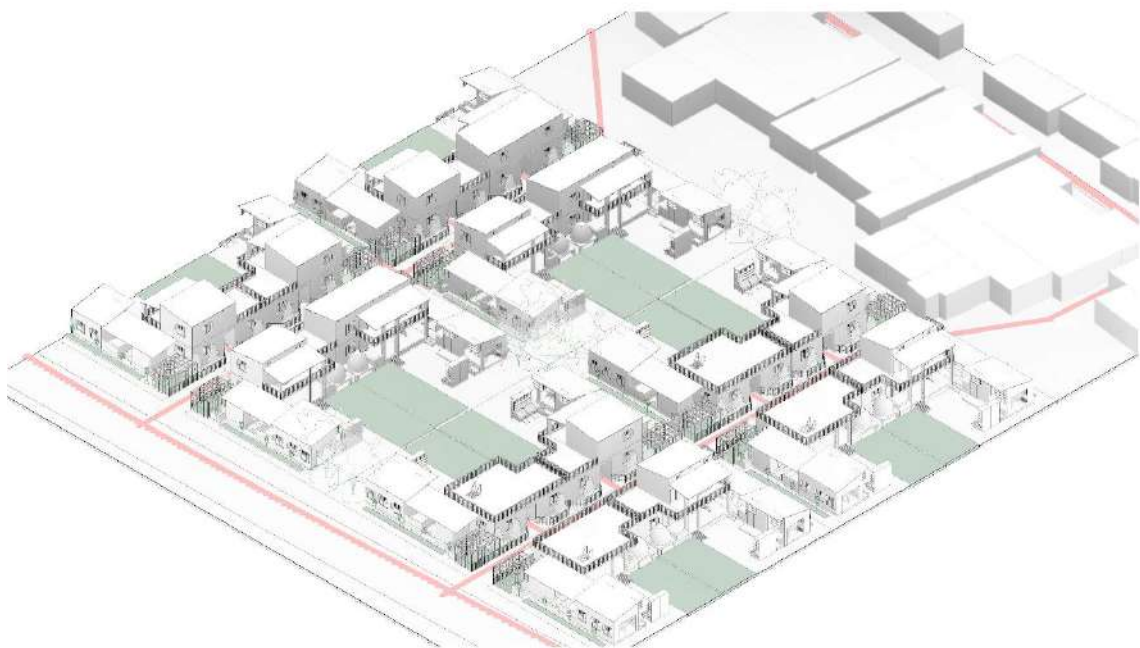


Figure 4.52: Orientation Pattern 02 of Compact Housing, Shimulbak.

#### 4.4 Sustainability of Compact Housing Scheme

Compact Housing scheme should be socially, economically and environmentally appropriate. Accommodation type, support services and amenities that have been provided in the proposal are the basic need of the villagers. The construction technique is familiar and materials are locally available. Reflection of existing footprint has been kept. Ample green spaces, cultivable lands and existing water bodies are kept same in the proposal. Natural resources have given the maximum priority all over the master plan. Also, the proposal considers the long-term consequences as well as the short-term goals.

Intelligent use of rural residential land and sustainable construction is inexorably linked to cost; however, options exist that are eco-friendly and have a positive return on investment. In 2011, a research residence was built to evaluate various land-use and sustainable components. This Texas house has subsequently been used for both residential and research purposes.

The purpose of this case study was to evaluate break-even construction considerations, to assess environmental impacts, and to evaluate qualitatively efficacy of sustainable options incorporated in the research residence. Some of the specific components discussed are home site placement (directional positioning); materiel acquisition (transportation); wood product minimization; rainwater harvesting; wastewater management; grid-tied solar array power; electric car charging via a solar array; geothermal heating and cooling; insulation selection; windows, fixtures, and appliance selection; and on-demand electric water heaters for guest areas.

## Chapter-05

### LAND MANAGEMENT

#### 5.1. Review of The Existing Land Management System and Land Rights in Bangladesh

Land administration in Bangladesh has a long history. The ancient Hindu Rulers of India established all sorts of mechanisms for collecting tax from the tiller. From the literature of Abul Fazal, the advisor of Great Mughal Emperor Akbar, it was apparent that there was a fastidious and efficient land management system in Bengal, used mostly to collect taxes and to provide some service delivery. During their colonial period, the British introduced the administrative structure of land administration. They also introduced a scientific land survey system and a cadaster system for better administration. Currently, land administration, as well as land management, is overseen by four authorities

##### *5.1.1 Under Two Separate Ministries:*

The Directorate of Land Records and Surveys (DLRS) in the Ministry of Land is responsible for conducting cadastral surveys and settlement works. They produce cadastral maps which are popularly known as the mouse or revenue map. Another major activity of that organization is to generate individual land record certificates.

The Land Reform Board (LRB) in the Ministry of Land is the most significant component of this ministry and it oversees the most important tasks such as the implementation and monitoring of land reform activities. Its activities affect the grass-root level as much as the union level. It directs the distribution of Khas land, supervises vested and abandoned properties, and is responsible for collecting vast amounts of land development taxes. A few years ago, it played a vital role in implementing the land reform programs and was a custodian of tenant's rights.

The Land Appeals Board (LAB) in the Ministry of Land is the highest-ranking body to resolve disputes over Khas land. Disputes which cannot be solved at the local and the land appeal board deals with district levels.

The LAB has a close association with national and district level revenue officials and with the Assistant Commissioner of Land at a sub-district level. Finally, the Department of Land Registration in the Ministry of Law, Justice, and Parliamentary Affairs, and its associates, are responsible for the transformation of ownership through legal and administrative processes, selling, buying, or the other forms of transactions due to the transfer of property. This ministry is exclusively responsible for land registration activities.

In addition, the Ministry of Forests, the Department of Fisheries, the Directorate of Housing and Settlement, the Department of Roads and Railways, and other agencies are insignificant components in the administration of land.

Land management is complex. A large number of government ministries, directorates, divisions, agencies, and municipalities are involved in the management of land. The basic functions of the current LA are three folds: record-keeping, (2) registration, and (3) settlement. The key problem here is the multiplicity of documents or records of rights maintained in different offices under different un-coordinated ministries. This system is inefficient; nontransparent; responsible for dual ownership; forms the basis for fictitious records, disputes, and litigations; acts as a disincentive for a product, and helps the land grabbers; also forms the basis for land-related corruption (. No single agency is entirely responsible for the execution of any projects of land policy or administration. The private (formal/commercial) sector's operation in land and housing development is still very small and limited to Metropolitan Dhaka and a few other cities. Individual households (upper, and middle-income plays the most significant role in land management. The role of the NGOs in the field of land areas has been started but is very minimal so far. In the whole process of land management or development, the households face a series of obstacles created by public sector agencies, and quite often they have to take recourse to illegal or irregular methods.

### ***5.1.2 Resulting Property Regimes and Regulatory Frameworks***

Land management is a complex task and it involves a large number of ministries, directorates, divisions, agencies, and municipalities. The basic functions of the current LA are (1) record keeping, (2) registration, and (3) settlement. The key problem is the numerous documents or records of rights that are maintained in different offices under separate, un-coordinated ministries. This system is inefficient, not transparent and ultimately leads to dual ownership. It facilitates fictitious records, disputes, and litigations; it acts as a disincentive for production and helps land grabbers also enables land-related corruption. No single agency is entirely responsible for the execution of any projects of land policy or administration. The private commercial sector's operation in land and housing development is still very small and limited to Metropolitan Dhaka and a few other cities.

Table: 5.1 Analysis of Current Land Tenure System and Property Rights of Bangladesh

Tenure type	Strengths	Weakness	Opportunities	Threat
Freehold	Ownership in perpetuity	<ul style="list-style-type: none"> <li>• High-cost access.</li> <li>• Collateral value may not be relevant if incomes are low or financial institutions are weak.</li> <li>• Property values may be very high, but the poor cannot afford them.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides a high degree of security.</li> <li>• Freedom to dispose or use as collateral for loans.</li> <li>• Maximizes commercial value, enabling people to realize a substantial increase in property values.</li> </ul>	
Delayed freehold	Conditional Ownership	<ul style="list-style-type: none"> <li>• Low-income households are not eligible for a conventional mortgage and are only able to borrow from the source not requiring property as collateral.</li> <li>• Collateral value is not relevant if incomes are low.</li> <li>• Property values vary and trap the unwary in property worth less than they paid for them.</li> <li>• Expectation of increased values can divert investments from more productive sectors.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides the same high degree of security as freehold, payments are made as required or when developments have been completed.</li> <li>• Freedom to dispose or use as collateral for loans. Maximizes commercial value, enabling people to realize substantial increases in property value.</li> </ul>	<ul style="list-style-type: none"> <li>• Failure to maintain payments or undertake developments may result in evictions and loss of funds invested.</li> </ul>
Leasehold	<ul style="list-style-type: none"> <li>• Fixed Property</li> <li>• Longer ownership up to 99 years.</li> <li>• Right to hold or use the property for</li> </ul>	<ul style="list-style-type: none"> <li>• Requirement of a legal framework.</li> <li>• Costs of access are generally high.</li> <li>• Requires legal advice in preparing leases.</li> </ul>	<ul style="list-style-type: none"> <li>• As secure as freehold, but only for the period of question.</li> <li>• Provides residents with full security for lease duration.</li> </ul>	<ul style="list-style-type: none"> <li>• Leaseholds tenure may discourage acceptance by authorities or residents.</li> <li>• Failure to meet obligations</li> </ul>

	a fixed period at a given price, without given or ownership	<ul style="list-style-type: none"> <li>• May not facilitate access to formal credit.</li> <li>• Land ownership remains with the government.</li> <li>• If lease duration is sufficient to attract higher-income households to buy into a settlement, it may encourage speculative pressure and downward raiding.</li> </ul>	<ul style="list-style-type: none"> <li>• Rent or other cost stated within lease contact.</li> <li>• Makes minimum demands on the administrative system for land management.</li> <li>• Discourage the tendency for higher-income groups to buy houses in the settlement making it easier for it to be available on a long-term basis to low-income households.</li> </ul>	may therefore prejudice the lease.
Private Rental	<ul style="list-style-type: none"> <li>• Rental tom privately owned land or house.</li> </ul>	<ul style="list-style-type: none"> <li>• Only use rights.</li> <li>• Deterioration may result if maintenance costs are not met.</li> </ul>	<ul style="list-style-type: none"> <li>• Legally enforceable contact provides good security.</li> <li>• Movement is flexible to tend.</li> </ul>	Open to abuse disreputable owners.
Shared quality	<ul style="list-style-type: none"> <li>• One can invest 50% to purchase property and others pay the rest as rent to the investor.</li> </ul>	Requires legal framework and efficient management as tenure is the combination of delayed freehold and rental property.	<ul style="list-style-type: none"> <li>• Combines the security and potential increase in property value of delayed freehold and the flexibility of rentals.</li> <li>• Residence can increase their stake over time ultimately leading to full ownership.</li> </ul>	<ul style="list-style-type: none"> <li>• This requires a high level of institutional management. Likely to be applicable in Bangladesh except for special cases.</li> </ul>
Cooperative Ownership	<ul style="list-style-type: none"> <li>• Ownership cooperative basis</li> </ul>	<ul style="list-style-type: none"> <li>• Requirement of double registration-land, and association.</li> </ul>	<ul style="list-style-type: none"> <li>• High Security</li> <li>• Social Unity</li> <li>• Legal framework exists in Bangladesh.</li> </ul>	<ul style="list-style-type: none"> <li>• Restriction led to reduce investment.</li> </ul>

		<ul style="list-style-type: none"> <li>• Not suitable for low-income groups.</li> </ul>		
Community-based tenure	<ul style="list-style-type: none"> <li>• Community-led rental property option for an agreed period.</li> <li>• Community Areas Permits, Community Leases, or community ownership.</li> </ul>	<ul style="list-style-type: none"> <li>• Enquires trust on behalf of both parties to honor the agreement.</li> <li>• All community-based tenure systems require a well-established community structure or support system- or at least the potential to create these.</li> </ul>	<ul style="list-style-type: none"> <li>• Owners can generate an income from property until it is to be used commercially.</li> <li>• Low-income communities can live in areas that would otherwise be unaffordable.</li> <li>• Permits increasing security and strengthening communities.</li> </ul>	<ul style="list-style-type: none"> <li>• In At the end contact tenants have to move if contacts are not renewed.</li> </ul>
Religious tenure systems (Islam)	<ul style="list-style-type: none"> <li>• Waqf, mulk, Miri, Kassouf, etc. provide family/com mon tenure</li> </ul>	<ul style="list-style-type: none"> <li>• Properties absent in commercial landmarks.</li> <li>• Lands are often inefficiently managed.</li> </ul>	<ul style="list-style-type: none"> <li>• Good tenure security</li> <li>• Affordable land management procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• This is not applicable in Bangladesh</li> <li>• Inheritance disputes can cause land conflicts.</li> </ul>

**Source:** Adopted and own estimation from *Author based on Jayarathe (2009), Shafi and Payne (2007), Islam and Chowdhury (1990)*

## 5.2 Socio-Economic and Land Information of Hafizpur Village, Chalakchar, Manohardi, Narsingdi

Hafizpur is a village under Manohardi Upazila, Narsingdi district consisting of an 8400 population. There is a high school, 3 government primary schools, 1 high school (vocational), a union health and family welfare center, a and community clinic in the village. Facilities of roads, electricity, water supply, and telephone-internet are available in the village. The number of families in the village is 1852. In terms of discussions on the field and demand, it is found that the village may need 400 housing units in the next ten years. In this village of Chalakchar Union, 150-200 families, who are living on 67 acres of land in Ward No. 7, are interested in availing the opportunity of a planned housing scheme based on voluntary partnership.

### 5.2.1 General Observation

1. The proposed land for intensive housing of Hafizpur village which is 67 acres, is located across ward 7 of Chalakchar union. There are 20 pucca houses (brick-built houses) along with 301 tinshed and Kacha houses (mud-built houses).
2. Seasonal waterlogging is an extensive problem all around the village. In the rainy season, the agricultural land submerges in the water (6 inches - 8 inches). The land sinks into the water



throughout the monsoon season. For this issue, most of the areas have 2 crops (Aman and Boro). Paddy or vegetables are not cultivated in another season due to waterlogging problems. According to local people, unplanned infrastructure and building houses here and there are the main reasons for the floods. Seasonal waterlogging is a huge problem in this village. The families who are highly dependent on agriculture, have nothing to do in these 3/4 months and income decreases a lot.

3. There is no Khas land in these 67 acres of land initially selected for the project. There are 2 khas ponds on this land. There is an opportunity to develop entrainment and amusement spot in the area.

Table 5.2 Landuse and other information about the Project Area  
(Total 383 Dag in 67 acres of land)

Use of land and other information	Acre/others
House	Pacca (brick built)-.52 and Tin-shed-3.31 acre
Agricultural land	34.52 acres (Dual crops)
Household	14.37 acre
Rural settlements	32.52 acre
Mosque	0.29 acre (3)
Road	1.5 acre
Pond	2.8 acres (15, Khas-2)
Others	.05 acre
<b>Others</b>	
Total line-	383
Ledger number	102
Latest survey period	1968-69
Amount of land rejection	Not worth mentioning

Source: Field survey June 2022

**5.2.2 Public Demand in Proposed Project (from FGD, 2/6/2022)**

1. Road repairing and widening
2. Alleviating seasonal waterlogging
3. Skill-oriented training, ICT training
4. Improving the quality of school
5. Building playground and entertainment spots
6. Mini market inside the village
7. Advanced Community Clinic and Community Dispensary
8. Community center, club
9. Village-based center
10. Training in backyard vegetable cultivation, poultry, and cow rearing
11. Improved housing, expansion of government service infrastructure
12. Solar power, conversion of rainwater

**5.2.3 Required minimum Civic Benefits**

- a) Road connection
- b) Growth center (Opportunity of business)
- c) Fresh drinking water
- d) Waste management
- e) Planned housing (There will be space in the Upazila community)
- f) Electricity/Energy
- g) Fuel
- h) Drainage system

**5.2.4 Price of the Land inside of 67 acres (2020-21) (Per Decimal)**

**Mouza- Kishmot Hafizpur, JL 13/163 (Survey 1968-69)**

- 1. Naal (Agricultural land) – Tk.40837
- 2. Viti (Slightly high land) – Tk.60000 tk
- 3. Boro (Land where only paddy is grown) – Tk.21000 taka
- 4. Bamboo bushes – Tk.217045 taka
- 5. House – Tk.112239

**5.2.5 House Hold Survey Result in Graphs**

**1. Demographic Information**

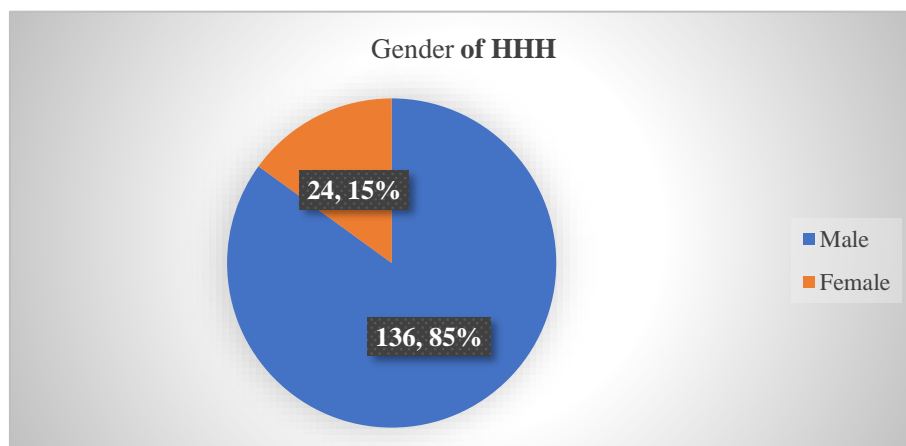


Figure 5.1: Gender Status of Household Head

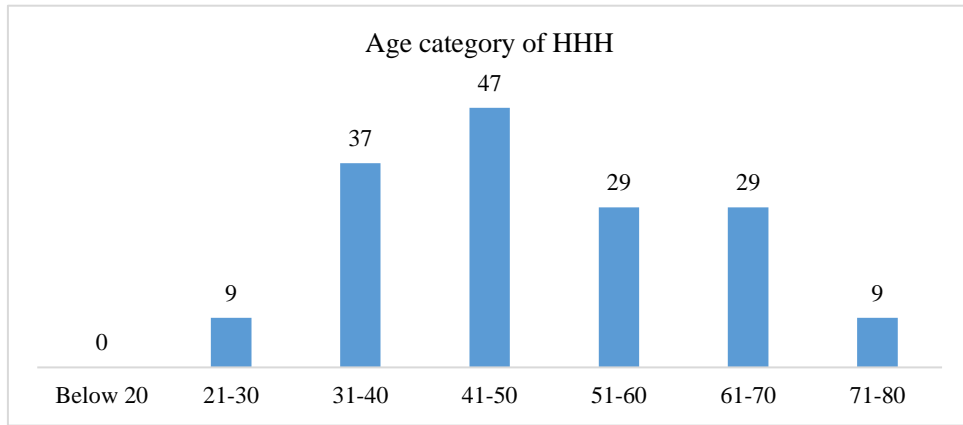


Figure 5.2: Age Category of Household

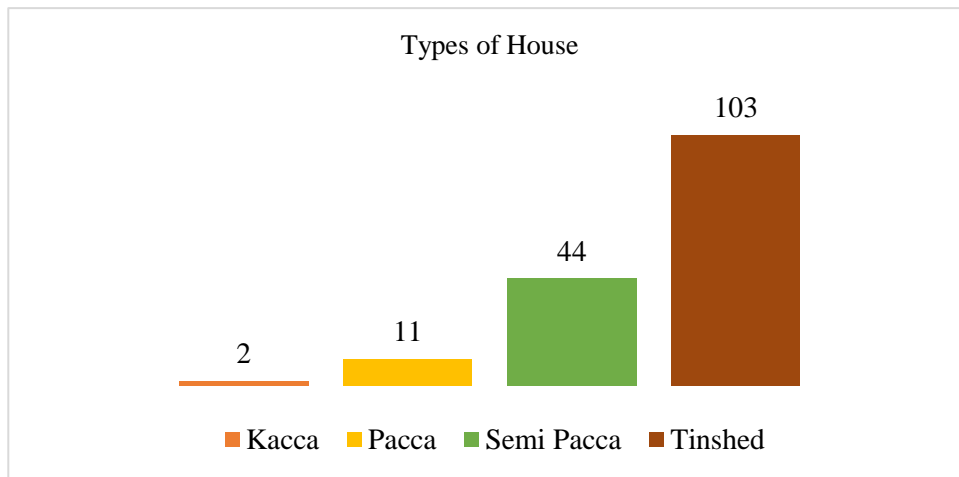


Figure 5.3: Types of Houses

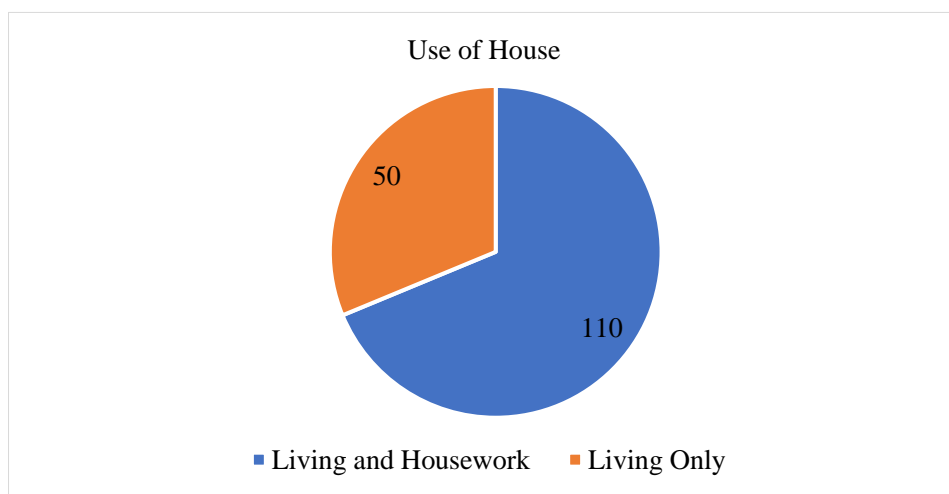


Figure 5.4: Use of Houses

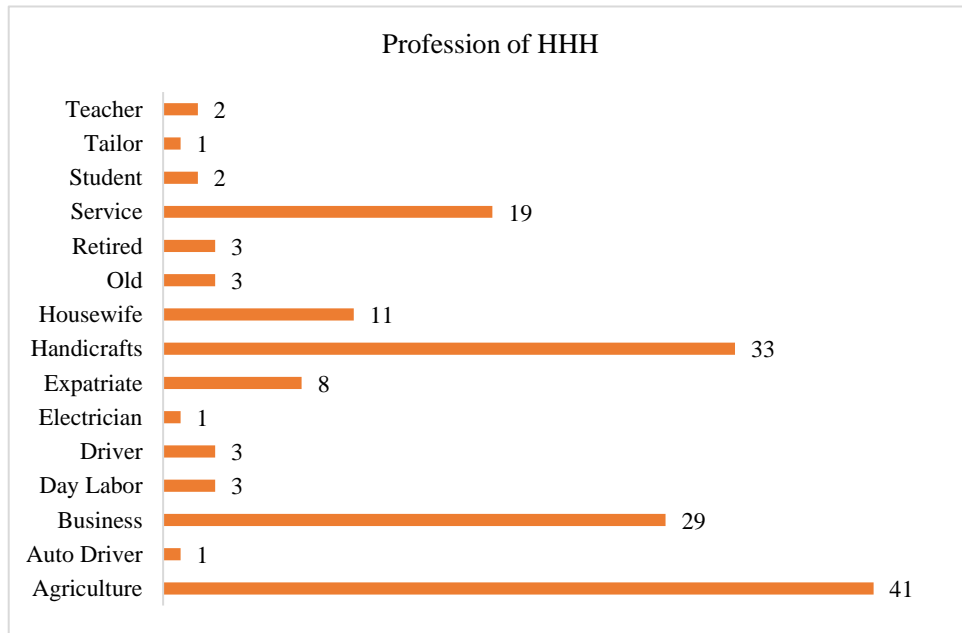


Figure 5.5: The profession of Household Head

**2. Socioeconomic Information of Household Members**

- Average HH size is 4 (3.8)

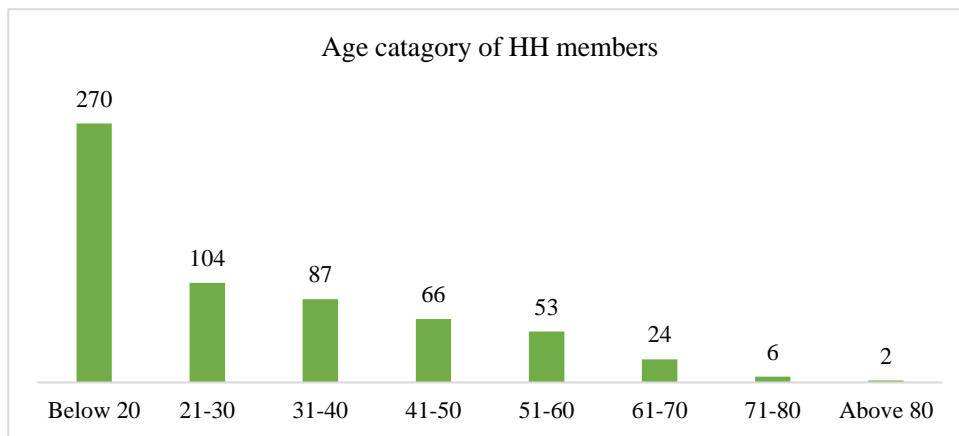


Figure 5.6: Age category of HH members

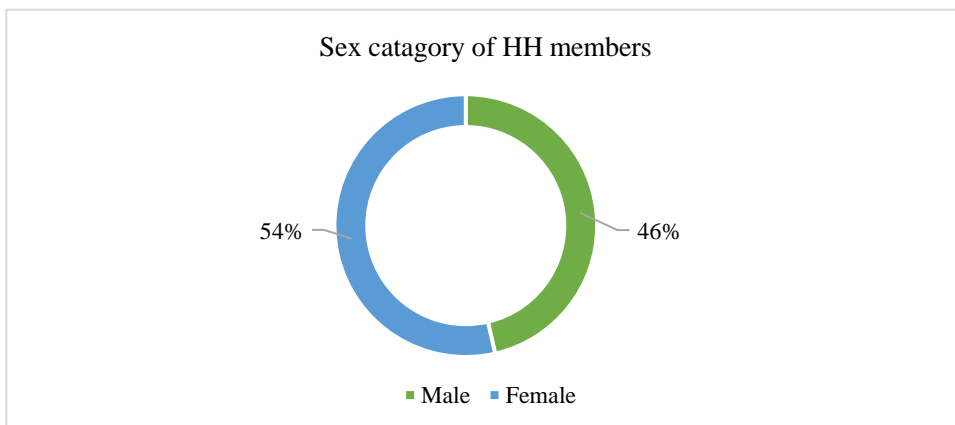


Figure 5.7: Sex category of HH Members

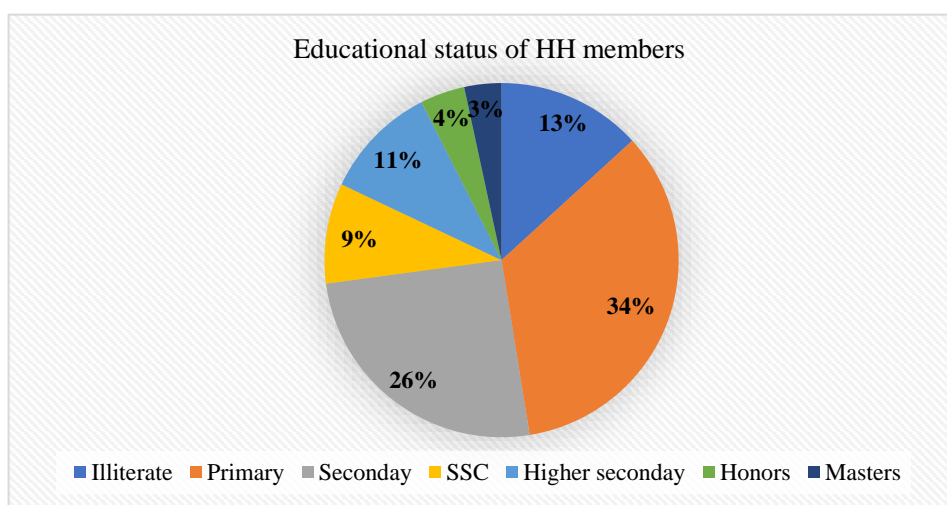


Figure 5.8: Educational status of HH Members

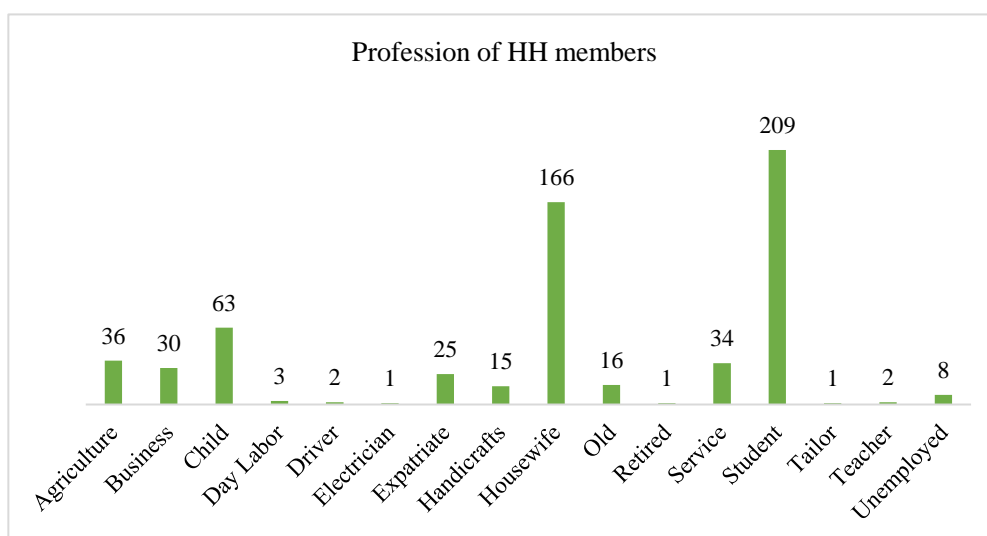


Figure 5.9: The profession of HH members

**3. Asset**

- Average HH settlement size is 9.367 Decimal

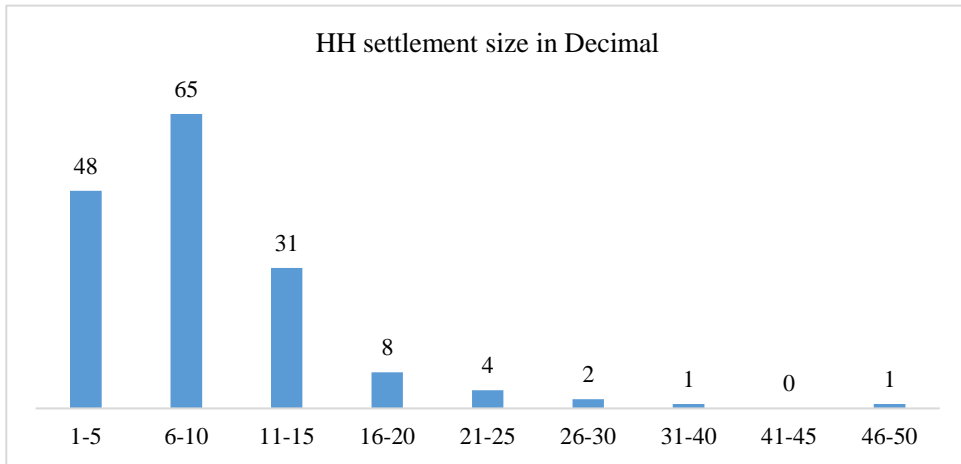


Figure 5.10: HH settlement size in Decimal:

- Average area of HH settlement is 446 sq. ft

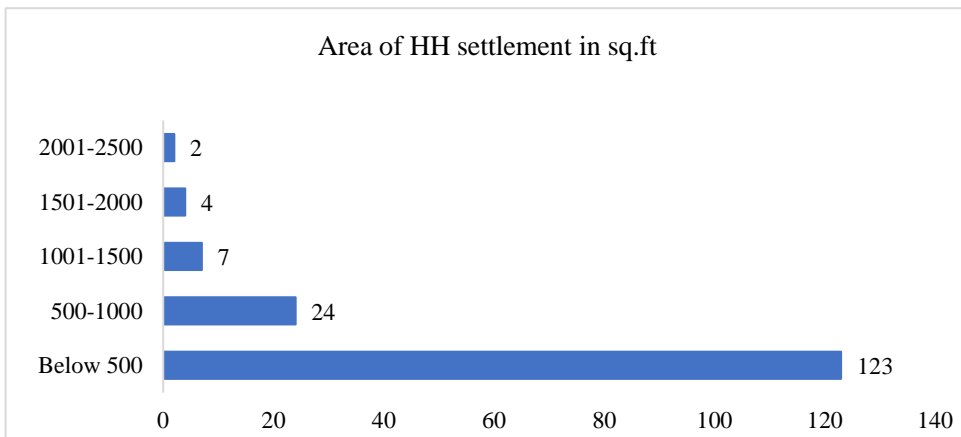


Figure 5.11: Area of HH settlement in sq. ft

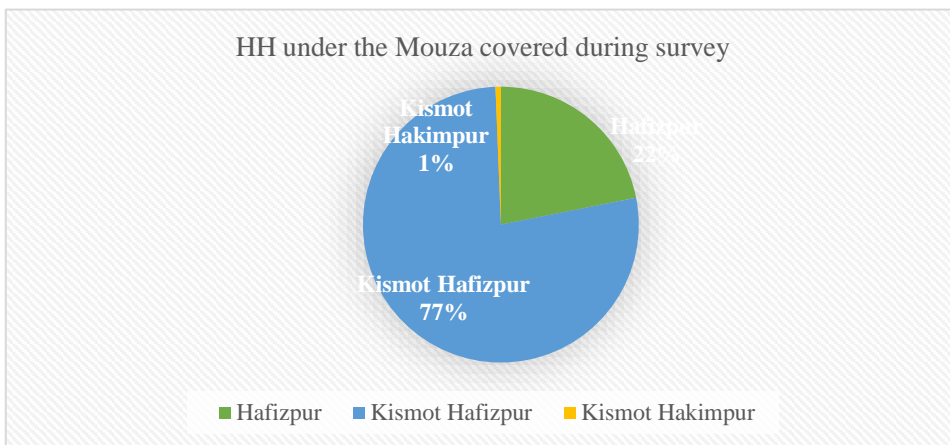


Figure 5.12: HH under the Mouza covered during survey

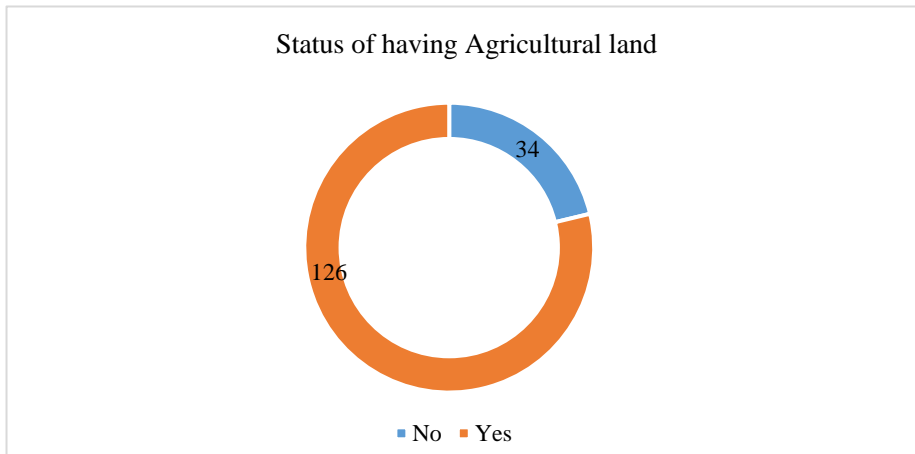


Figure 5.13: Status of having Agricultural land

- Average Size of Agricultural land in Decimal is 137.581 and all the lands are self-owned.

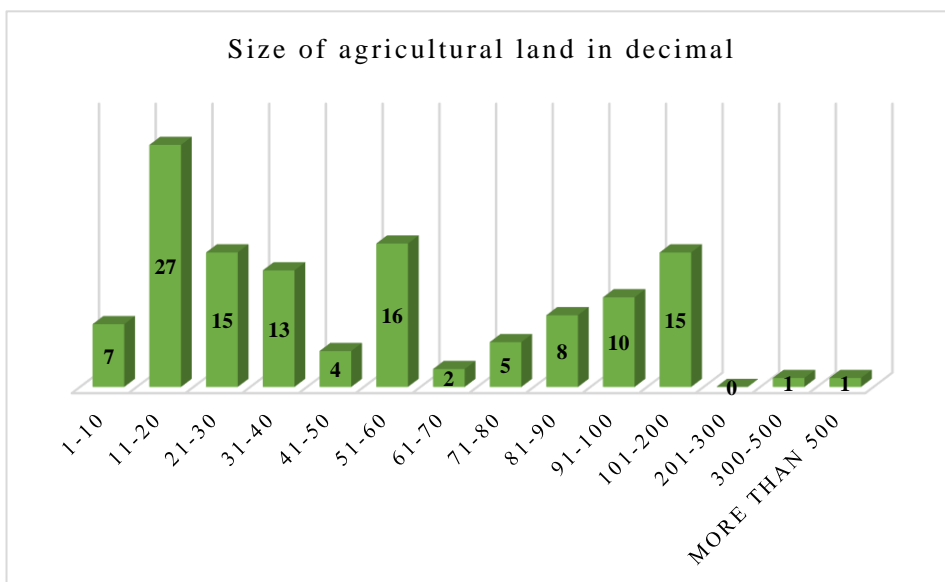


Figure 5.14: Size of Agricultural land in Decimal

### 3. Housing Demand Status

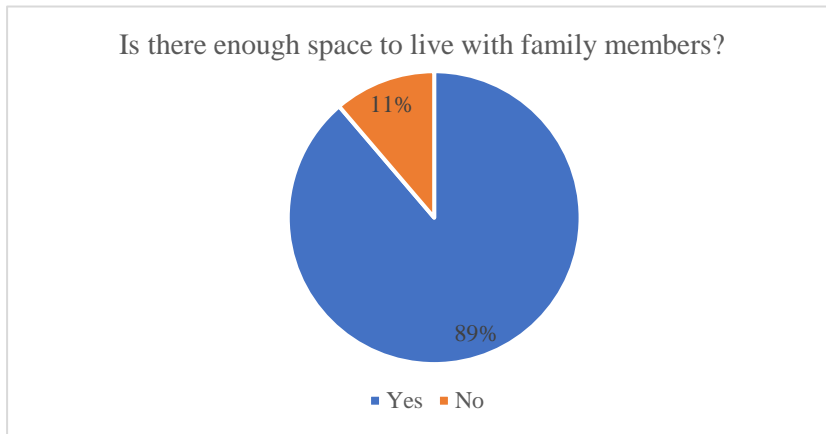


Figure 5.15: Is there enough space to live with family members?

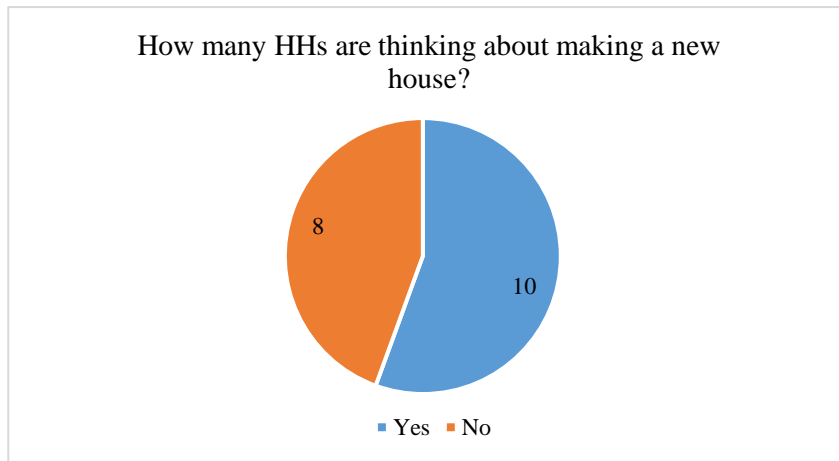


Figure 5.16: How many HHs are thinking about making a new house?

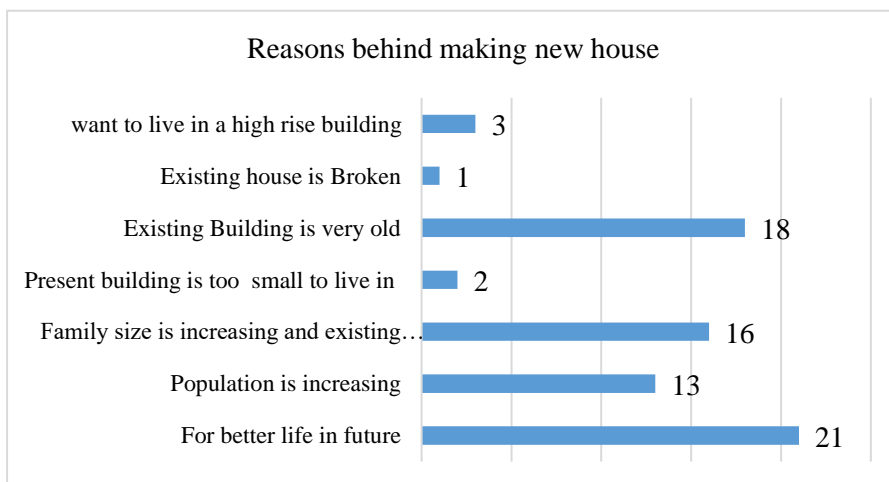


Figure 5.17: Reasons behind making new house



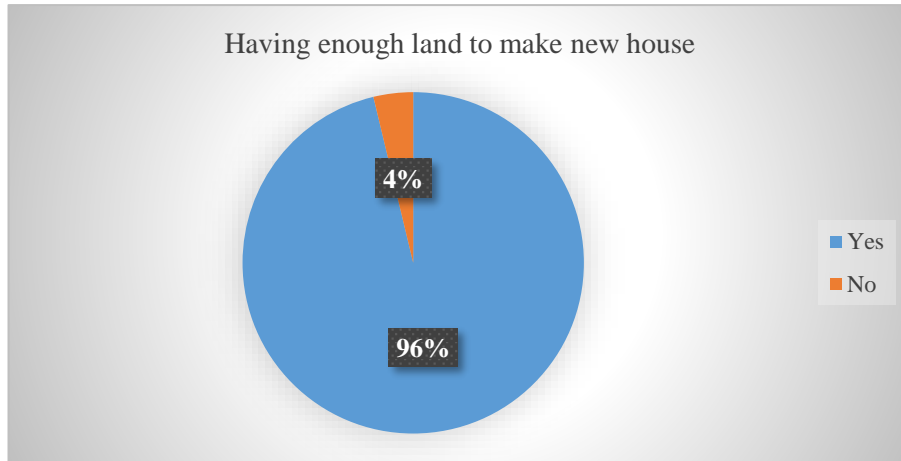


Figure 5.18: Having enough land to make a new house?

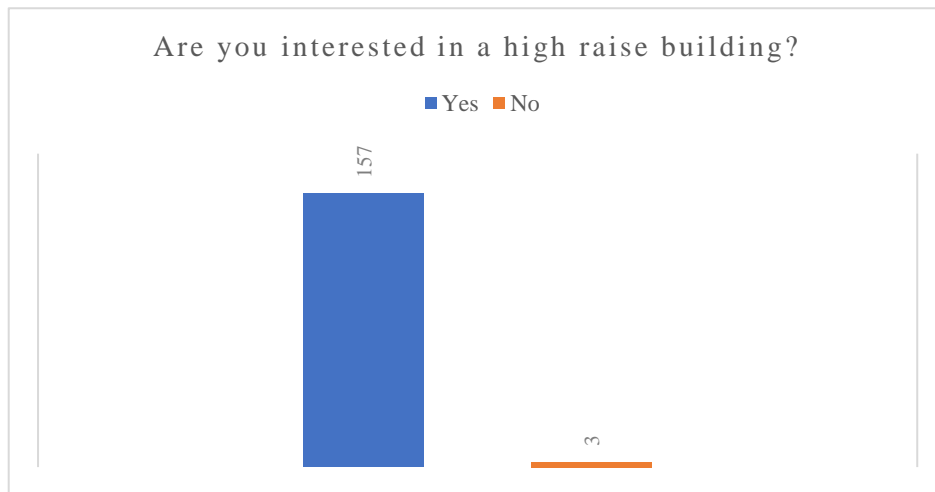


Figure 5.19: Are you interested in a high-rise building?

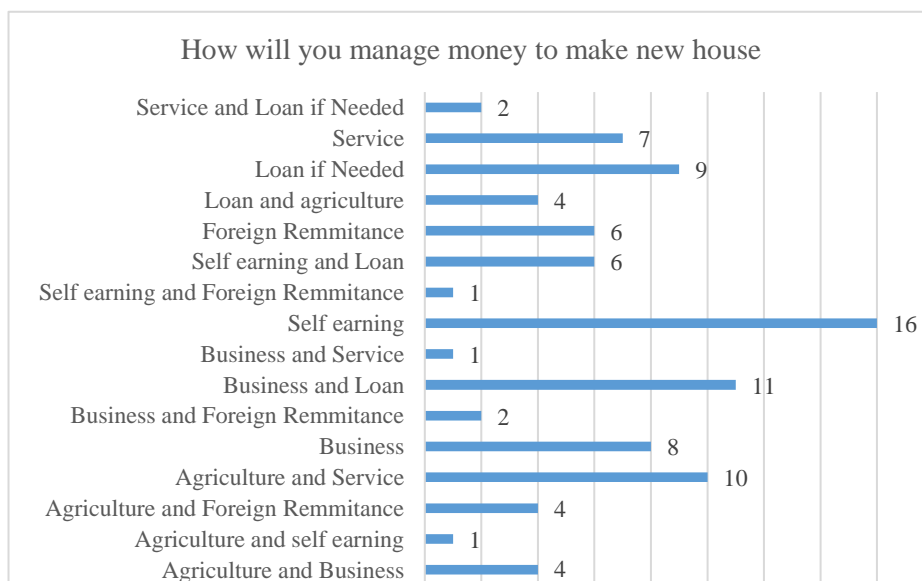


Figure 5.20: How will you manage money to make a new house?

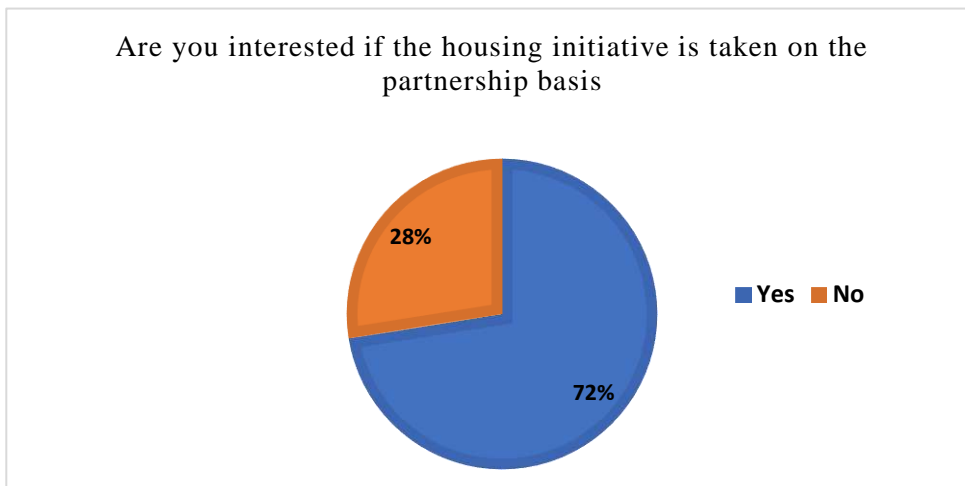


Figure 5.21: Are you interested in the housing initiative taken on a partnership basis?

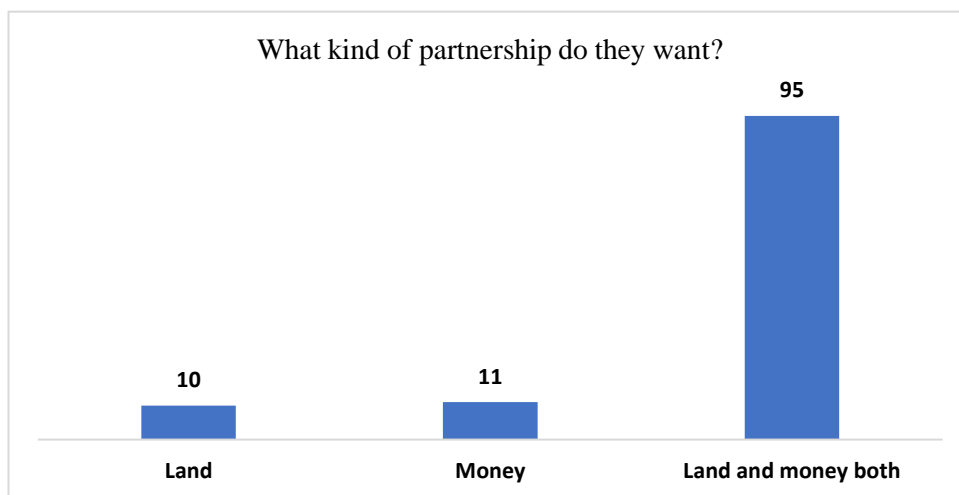


Figure 5.22: What kind of partnership do they want?

**4. Skill**

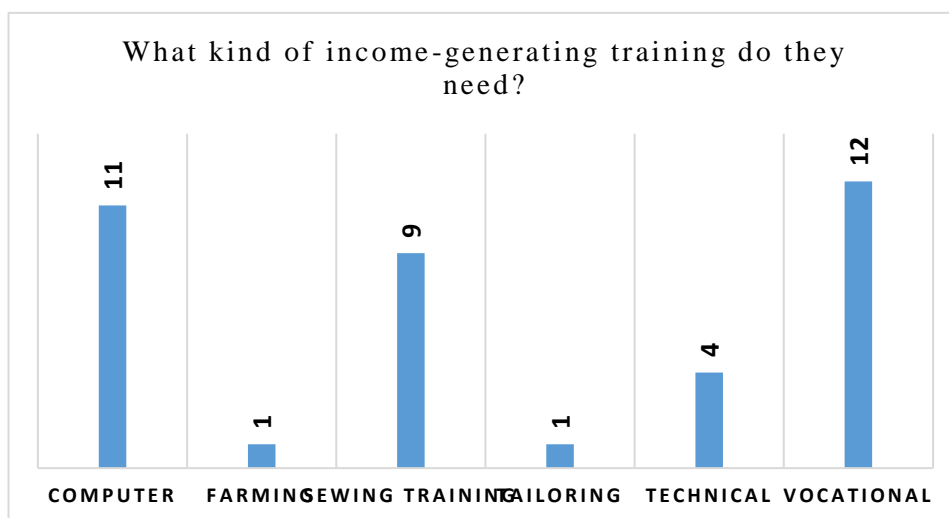


Figure 5.23: What kind of income-generating training do you need?

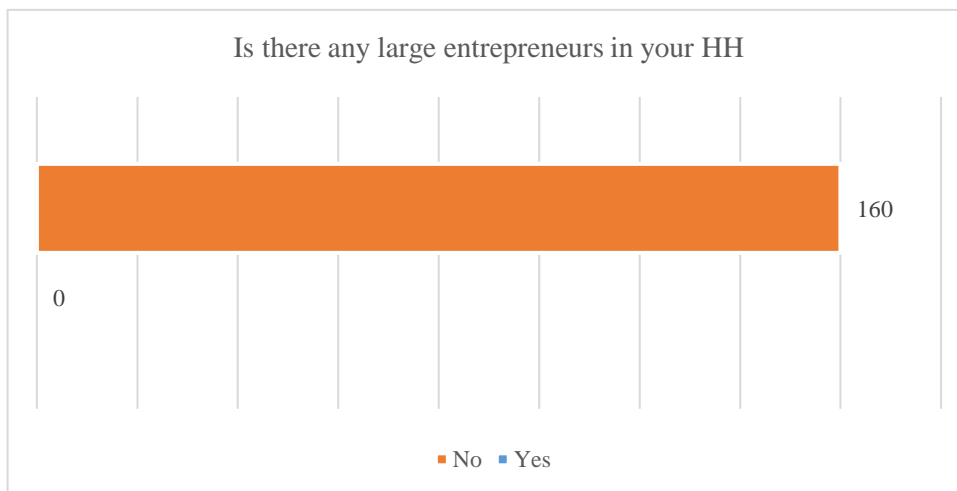


Figure 5.24: Is there any large entrepreneurs in your HH?

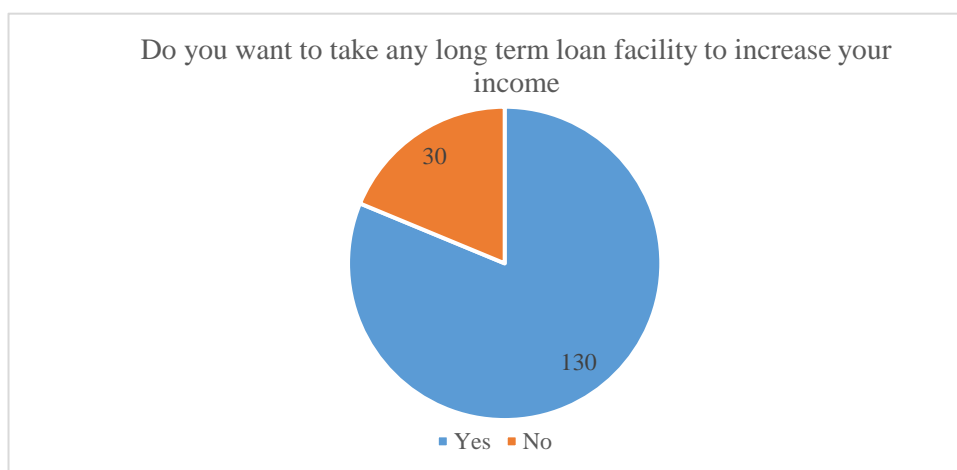


Figure 5.25: Do you want to take any long-term loan facility to increase your income?

**5. Income**

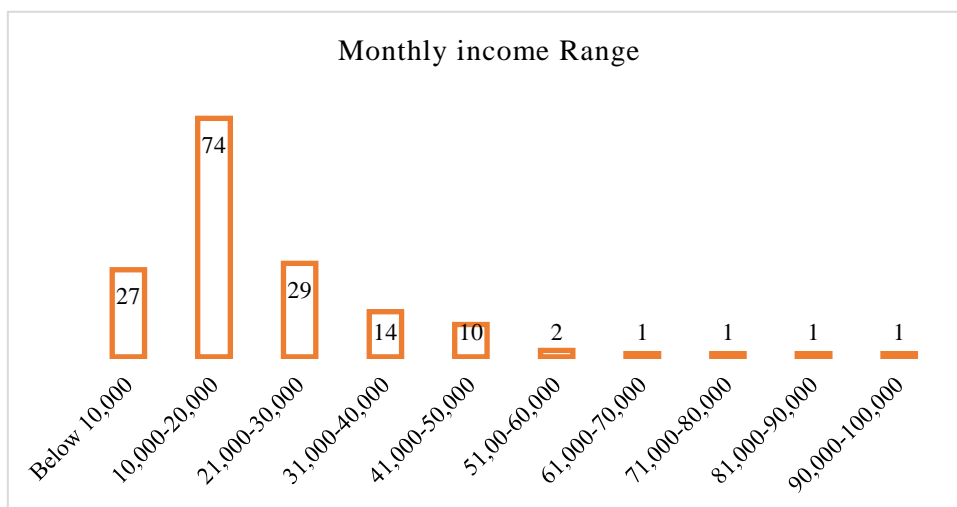


Figure 5.26: Monthly income Range

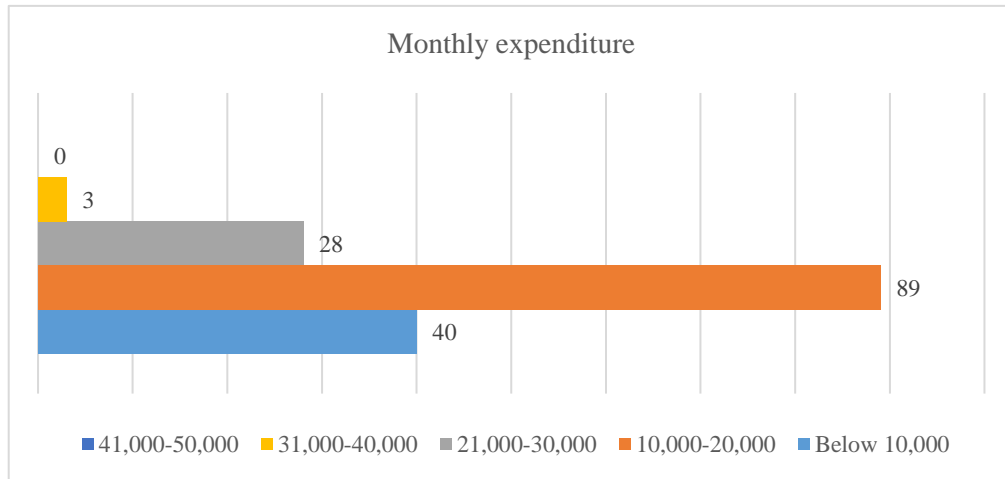


Figure 5.27: Monthly expenditure

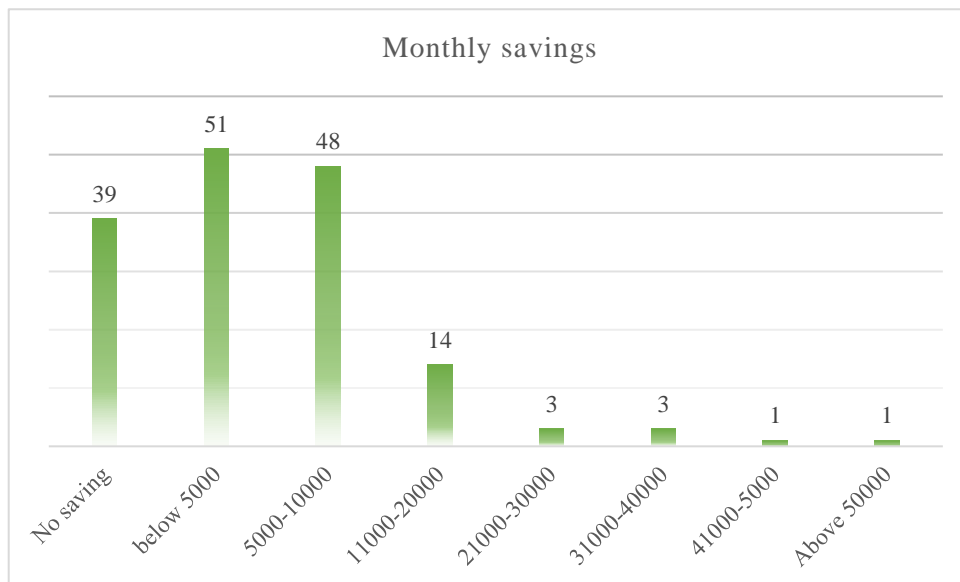


Figure 5.28: Monthly savings

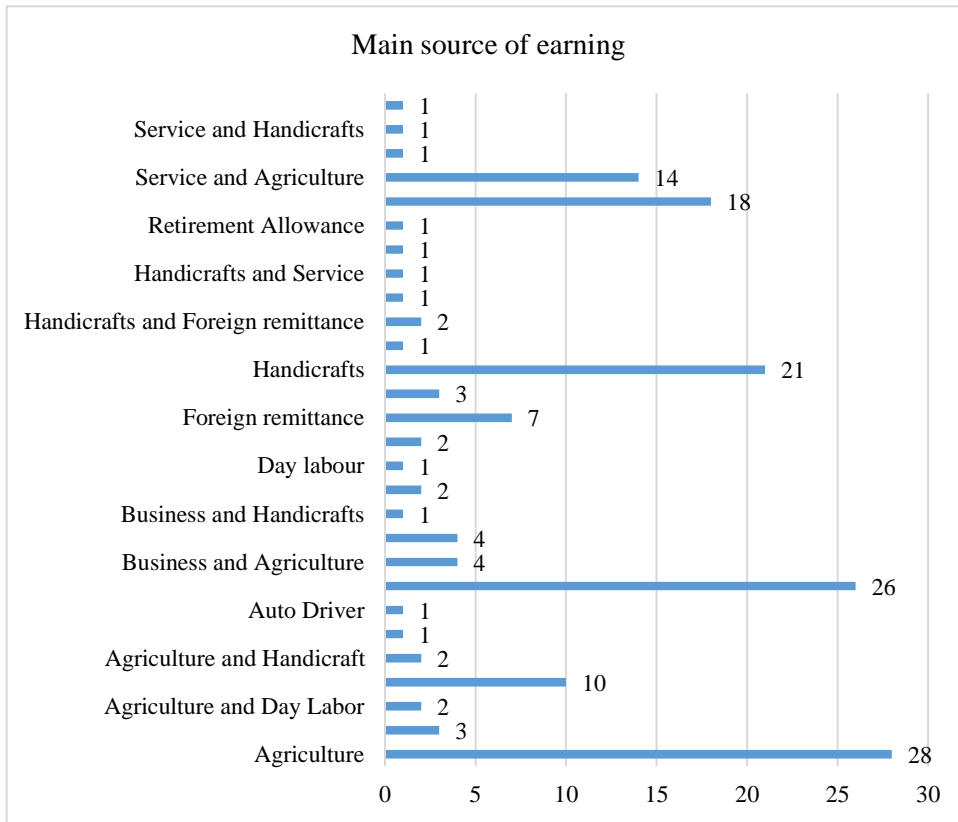


Figure 5.29: Main source of earning

**6. Water and Sanitation**

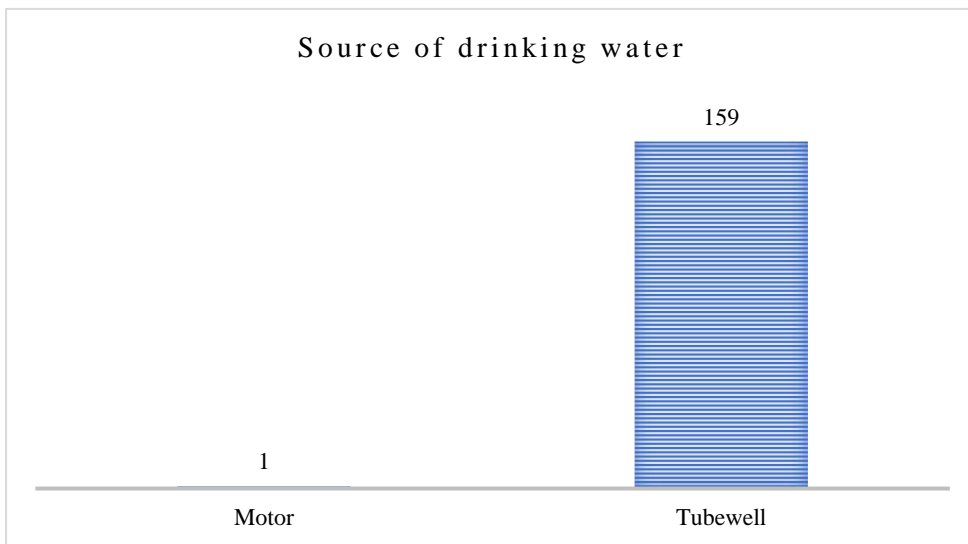


Figure 5.30: Source of drinking water

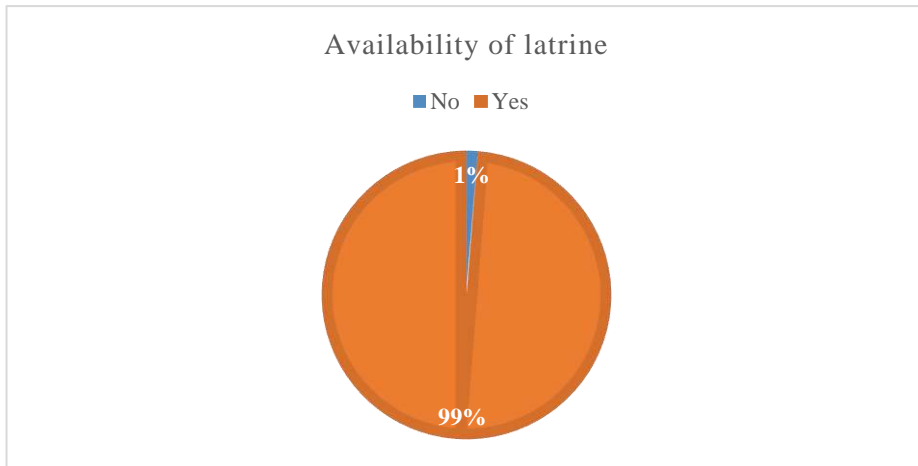


Figure 5.31: Availability of latrine

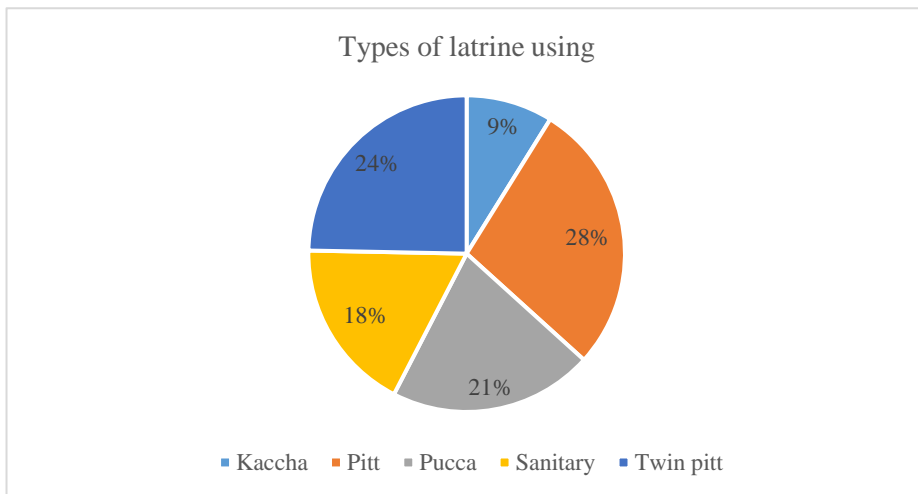


Figure 5.32: Types of latrine using

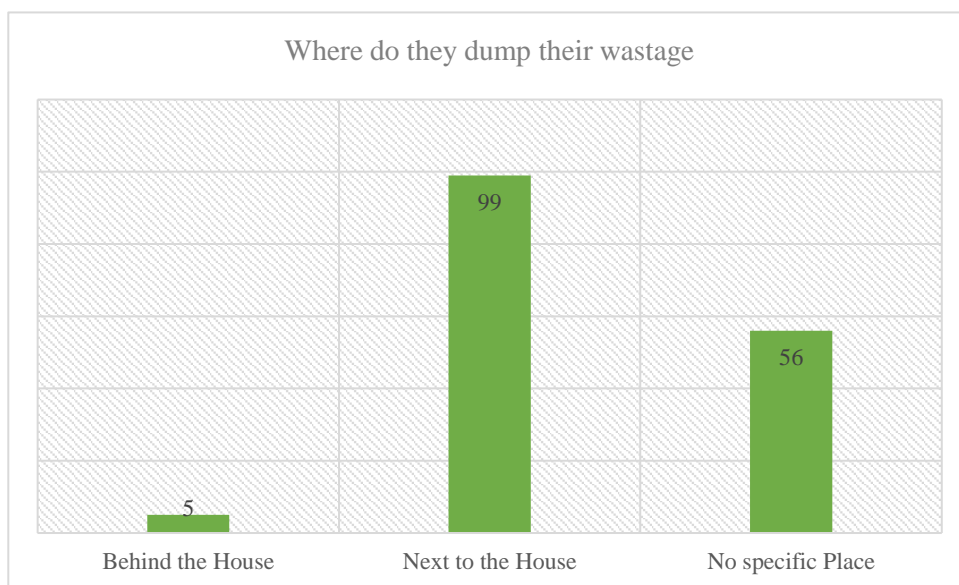


Figure 5.33: Where do they dump their wastage

**5.2.6 Critical considerations for planning Rural Compact Housing in Hafizpur**

1. How many families can move to new housing? and the total amount of land required for new housing?
2. Can the existing residential land of the interested people be used for the construction of new infrastructure?
3. How many years should be planned for the new residential areas?
4. What services can be introduced in the new residential areas?
5. How the Union Parishad and other Upazilas can be involved in activities?
6. Is it possible to land pooling re-adjustment (LP/LR)? (At least 70% landlord needs to be agreed).
7. Is it possible to resettlement? (Resettlement is happening here by transferring one place to another multi-storied building).
8. Direct Purchase method (Here a small amount of land can be purchased and transferred for housing) .
9. Co-Housing Model-Private Housing (Owner of the house) + Community facilities (Government)-Office, Market, Shop, Community Halla, Drainage system, Garden, Playground, Mosque, School, Culvert, Industrial Factory, Value Addition, Solar, Rain Harvesting, Mini-Grid, Vegetable Plot, Fish Farming, Micro Credit, Housing Loan, Training Center, Providing socio-economic services of Government.
10. Now we have to determine exactly what percentage of the houses are paved and tin sheds? And what percentage of the space will be replaced there? How much space will be saved as a result of this process?
11. Will the place for the new settlement be taken from this existing settlement or will it be taken from the new place? When it comes to land acquisition, it would be better to select the site from the existing settlement and rehabilitate the owners of the land with a part of the house.
12. Of the 363 spots, there are NAL (Agricultural Land) lands, BORO lands (Rice Field), agricultural lands, ponds, mosques, and roads. The price of each of these lands is different. Those who are interested in relocation must do the right amount of land and valuation of the house.
13. Interested people should look at the income level from the survey to see if it is affordable. In this case, it is necessary to see whether those who are interested in relocation are eligible to pay down 30% of the installment of the apartment.
14. How will the rest of the money be raised? Will the money for the cost of the building be repaid in large part from the price of the land and house of the interested?

15. If the interested landowners give the land to the government, what will be the future use of that land? Will utility, widen the road, playground, shop be built here?
16. Will the government recover the cost of the project by constructing commercial plots, income generating project infrastructure on the land given to the interested parties?
17. There is no direct law on land pooling or land re-adjustment in the country. However, in the country's private housing sector, residential areas are developing in these two processes.
18. Rural Housing will not be successful if the Agricultural Land Conservation Act 2018 (Draft) and Urban and Regional Planning Act 2018 (Draft) are not passed immediately and strictly implemented.
19. The Union Parishad has no experience in carrying out such projects, the Union Parishad Act does not specifically mention such initiatives. However, the Union Parishad can take such initiative by using two rules **Signing of Contract and Instructions for taking project / acquiring property**. The concerned Upazila Parishad and the office of the Local Government Engineering Department at the local level can take responsibility for all the implementation. The local government department and the central office of the local government engineering department may have separate projects and cells for formulating policies and functions.
20. The last Land survey was conducted in Hafizpur in 1986-89. Records of that period. There is no up-to-date government information. Currently, the spot numbers are divided into many parts. The lands of those owners in 1967-69 are now widely inherited. That is, the current status and number of records and real owners are not the same. Many now own an apartment, so how many landowners are interested in moving from one site to another? Another problem is that the number of land rejections here is very low. As a result, although the owner information of the record was found, the current owner information has not been updated. This factor will be a big hassle in the implementation.



## **5.3 Possible Land Management Technique (Land Readjustment/PPP) for Rural Compact Housing**

### ***5.3.1 Partnership Based Land Pooling Method for Rural Compact Housing - An Overview***

The Land Pooling method is used to prepare comparatively usable land use plans in collaboration with the landowners. In this method, isolated and irregular plots are arranged, and infrastructure and facilities are provided in a relatively effective way. In this process, the landowner will provide a portion of his land according to and-use which a new land use plan for the whole area is made by assembling the portions of a few private plots.

The government will identify the plot as per the strategy and sell it at market price so that the cost of investment for infrastructure and facilities can be recovered. As a result, there is an opportunity to create new places for the public with infrastructure and facilities. At the end of the implementation of the whole planning process, the government will give a piece of land to each land owner as per the agreement, which will be less than before. If the market value of the land is relatively high in the new plan, the new plot of land allotted by the government will be smaller in size than the previous plot of land (for example 50% -60% of the previous plot of land). Land Pooling is also called Virtual Land Acquisition.

#### **Land pooling process in Bangladesh (an outline)**

In the most populous countries of the world, land pooling is done based on partnerships in infrastructure development in semi-urban or affluent rural environments. The land pooling process is done through collaboration between the various government agencies in charge and private landowners. A land pooling process in general and its project plot and service delivery method are described below.

### ***5.3.2 Project evaluation***

Project evaluation includes pre-feasibility and feasibility study of the land pooling project

#### **Pre-feasibility stage**

**Step 1:** Select project area as per land use plan.

**Step 2:** Determining the project area based on consensus with the land owners.

**Step 3:** Campaign.

#### **Probability stage**

**Step 4:** Application from landowners with 51% consent for land pooling, then detailed information is collected from the landowners including their name, type of land, and area of each parcel.

**Step 5:** Formulation of Project Governance Model: To carry out land pooling, project implementing agencies, user committees, and project management committees are formed as per the Land Development Act.

**Step 6:** Detailed project report is prepared including project infrastructure standards and work schedule. At this stage, block plans are prepared, where roads, open spaces, reserved plots, and undivided land are accounted for. Also, economic and financial analysis is done.

**Step 7:** Block plan, transfer of land ownership, and development of rich land return policy are approved by the User Committee and Land Pooling Project Office. The contribution of a reserved plot depends on the valuation of the land. The contribution of roads and open spaces depends on the existing roads and open spaces adjacent to the plot before and after land pooling.

**Step 8:** Issue public notice for land fragmentation and building construction regulations.

**Step 9:** Approval of land pooling project from the government.

### *5.3.3 Implementation phase*

**Step 10:** Repotting Work: If the government approves the block plan, the Land Pooling Project will divide the office blocks into a standard parcel. The contribution of the land owner is usually proportional to the area of the land. Landowners will receive their land after cutting off their area for roads, community infrastructure, and reserved plots.

**Step 11:** Discuss land pooling design with landowners and other concerned stakeholders, seek their advice, hear complaints and make necessary design changes.

**Step 12:** Public notice regarding approval of land pooling project.

**Step 13:** Delimitation of land according to new plot/parcel.

**Step 14:** Allocation of ownership of temporary land.

**Step 15:** Contract Award for Infrastructure Development.

**Step 16:** Sell reserved plots to recover construction, road, water supply, drainage, and other infrastructure costs.

**Step 17:** Issuance of permanent ownership certificate of land from Land Revenue Office.

**Step 18:** Transfer of project with infrastructure to top organization.

## **5.4 Establishment of Memorandum of understanding (MOU)**

### *5.4.1 Feasibility Assessment:*

Assessing the feasibility of the area as well as finding a suitable place by planning and reviewing the use of the land plan. The final selection of the land will take place in the project after discussing with the land owner of the probable land.

**5.4.2 Formed Association:**

A “Project Management Committee” will be established with the land owners of the selected area, Union/Upazila as Local Government, and LGED as implementation organization. An agreement will be signed between the land owners and Project Management Committee

- Landowners will hand over the lands to the Project Management Committee
- All the information on lands will be recorded from the land owners based on a baseline study.
- Project Management Committee will accumulate all the lands along with preparing a plan with the help of a technical person.

**5.4.3 Preparing policy for Project implementation:**

To implement the project, Project Management Committee will formulate policy in terms of project management, decision making, way of carrying on the development cost of the land, organization management, re-plotting and handover, financing and recovering expenses, and operation and maintenance. The interested persons in the housing project will agree with Union Parishad to rearrange/redistribute their land.

- a) Union Parishad will take a detailed plan where the place of housing, improved water supply, waste management, security system, playground, and pond following specified place for animal farming/vegetable garden for the families where applicable. The rest of the place, except the general spaces, will be divided equally among the participants of the project.
- b) Initiatives will be taken to construct houses as multistory (up to 2-4 stores considering the capacity of the soil) with the help of the project. The land will be reserved for those living on the 2nd floor and for vegetable cultivation/animal farms.
- c) To construct every house, 12-15 lakh taka might be needed. While accomplishing the agreement, 15% of the total amount needs to be deposited. The government might subsidize 30% of the cost. The rest of the 55% will be paid on a long-term installment.
- d) People of the village will develop a Community Association among themselves. All the maintenance of the building will be administered by this association after the handover of the housing.
- e) Union Parishad might provide support for the maintenance of the community facilities. In that case, taxes need to be paid to Union Parishad regularly

**5.4.4 Preparation of Planning:**

The planner/engineer/architect and other professionals will prepare the land plan. During the formulation of the plan, residential plots, commercial plots, service plots, open spaces, roads, reserved (for sale) plots, etc. will be identified.

- Generally, landowners will own 50% of their plot/flat. In every plot, there will be access to roads, water supply, drainage, electricity, and others facilities. The contribution of the land is proportioned to the size, service, and value of the land.
- 30% of the land will be assigned for roads, parks, open spaces, and other social service.

- 20% of the land will be authorized as a “Reserved plot/flat”-by selling these plots, the rest of the expenditure of the project will be carried on (If Government subsidizes the project, it will also be considered).
- However, the calculation of percentage will not be the same everywhere. The calculation of percentage may vary depending on the location of the project, geography, development costs, etc.

#### ***5.4.5 Implementation of Planning:***

- According to the plan, the construction work for road infrastructure, drainage, etc. will be completed by the contractor, depending on the nature of the work and the estimated cost of the project. The land pooling project must comply with the Public Procurement Act and regulations of the Government of Bangladesh.
- According to the plan, a new boundary will be constructed based on the ownership of land. The amount of the new plot will be proportioned to the original owners of the land. The amount of allocated land for roads, social, civic service, shopping, market, and open spaces will be 30%.

#### ***5.4.6 Handover the ownership:***

- After the implementation phase, the boundary will be determined according to the new plots and a completely new number will be given to the plots. At the time of the allotment, land which is equal to 50% of the original owner will be allotted to the owner. Arrangements will be made to issue a permanent ownership certificate of land from the Land Revenue Office.
- Plots, obtained from 20% of the reserved land, will be sold out at market price by constructing a market, commercial space, market or residential plot / flat, etc. as required. That money will be used to cover project costs. Government subsidies will be added here.
- The remaining 30% will be used by all based on equal rights as common property in all residential areas including parks, fields, and open spaces.

#### ***5.4.7 Home Loan facilities:***

- There will be a specified design and guideline to construct a building on the plot. Everyone can construct the house based on the guideline through individual initiatives and have the opportunity to sell the full or partial size of the plot.
- The government will arrange bank loans for housing on such plots easily. Banks will also be interested in lending here due to the gradually increasing demand for civic housing.
- An employment arrangement will be made for the villagers to facilitate loan repayment in installments.

#### ***5.4.8 Maintenance:***

After recovering the project expense, the proceeds from the sale of the reserved plots will be in the name of the user committee and cannot be distributed among the individual landowners. It remains the property of the community and is often used for operation and maintenance.

### 5.5 Facilities:

- At In the village level, unplanned rural housing is a major issue behind the excessive per capita expenditure for the expansion of civic facilities. On the other hand, due to the lack of a well-planned environment, waterlogging is increasing. Pond and the environment are declining and destroyed because of an improper waste management system.
- There will be plenty of facilities under this model. One, civic services can be expanded under minimal expenditure. Two, proper planned rural settlement is possible by keeping our environment intact. Three, school-college, growth center, and park entertainment will be within a short distance which encourages the people to build this type of infrastructure.
- Skilled development will be possible if houses are built in this type of planned housing and as a result, the country's GDP will increase. By properly coordinating with the market system, the private housing sector will be interested in commercial housing facilities in all these centers. This will accelerate the planned urbanization of small and medium towns outside the big cities.
- Phase-based development can be done without developing the whole residential area at a time. As a result, there will be no pressure to invest huge sums at once. And in the long run, along with economic growth, it will be possible to meet the demand for housing step by step.
- Although landowners are more interested in the acquisition, the acquisition does not benefit the people in the long run. In this method, the land owner will have his land in the form of a plot. The landowner can sell at a fair price or build a house at any time along with cultivating the land till the time of housing.

### 5.6 Risk of This Method and Way to Reduce Risk

- If all landowners are not interested - this method cannot be easily implemented. Therefore, to make land owners interested in land management, it is advisable to keep the land contribution below 40% for recovering the community service cost from the land to be constructed. The land of the reluctant land owner can be purchased directly by the Union Parishad. If compelled, the acquisition may have to go. But if there is a suitable incentive, the land owners will be more interested in sharing than selling the land.
- Union / Upazila Council will need efficient leadership. The success of the project will be greater if the role of all concerned and the outline of changing land ownership are well-planned.
- Owners of land inside the residential area will be able to avail housing facilities as easily as outside landowners will not get housing facilities as easily.

### 5.7 Legal Aspects of establishing Rural Compact Housing

- Possible opportunities and gaps have been identified from the conventional land administration and land management, type of land ownership, forest and environment, agriculture, water-related laws, policies, and rules related to rural housing and housing in the country. Relevant recommendations have already been prepared after analyzing the Agricultural Land Protection

(Draft Act 2017) and Urban and Regional Planning Act (Draft 2018). the rural intensive housing initiative may be in vain if the last two laws are not enacted quickly and the issues involved are not implemented,

- An important goal of this study is to develop effective partnership methods, such as land pooling or land re-adjustment methods based on the partnership of landowner-government or more effective models that can be successful for ‘Rural Intensive Housing’. For this reason, countries with the same experience, such like-Delhi Development Authority of India, and the partnership-based Land Pooling/Land Readjustment method which is ongoing for decades by the government of Nepal and Bhutan are observed rigorously.

Recently, RAJUK is imposed DAP Report 2021 in which the first volume-Chapter 7 is described partnership-based Land Pooling/ Land Readjustment techniques as land development methods in marginal areas. In other words, the government has adopted a PPP-based land pooling system to solve housing and infrastructural problems.

- Selecting the right agency (e.g. - Upazilla Parishad ) for the implementation of rural (intensive) housing projects is an important fundamental aspect of this survey. Selecting the right agency, such as-Union Parishad, Upazilla Council or LGED, National Housing Authority, etc., to implement rural (intensive) housing projects across the country.

Recommendations are being made by determining the legal aspects of those organizations, scope of work, required manpower, sustainable implementation and financing methods, skill development, sustainable implementation, and financing methods.

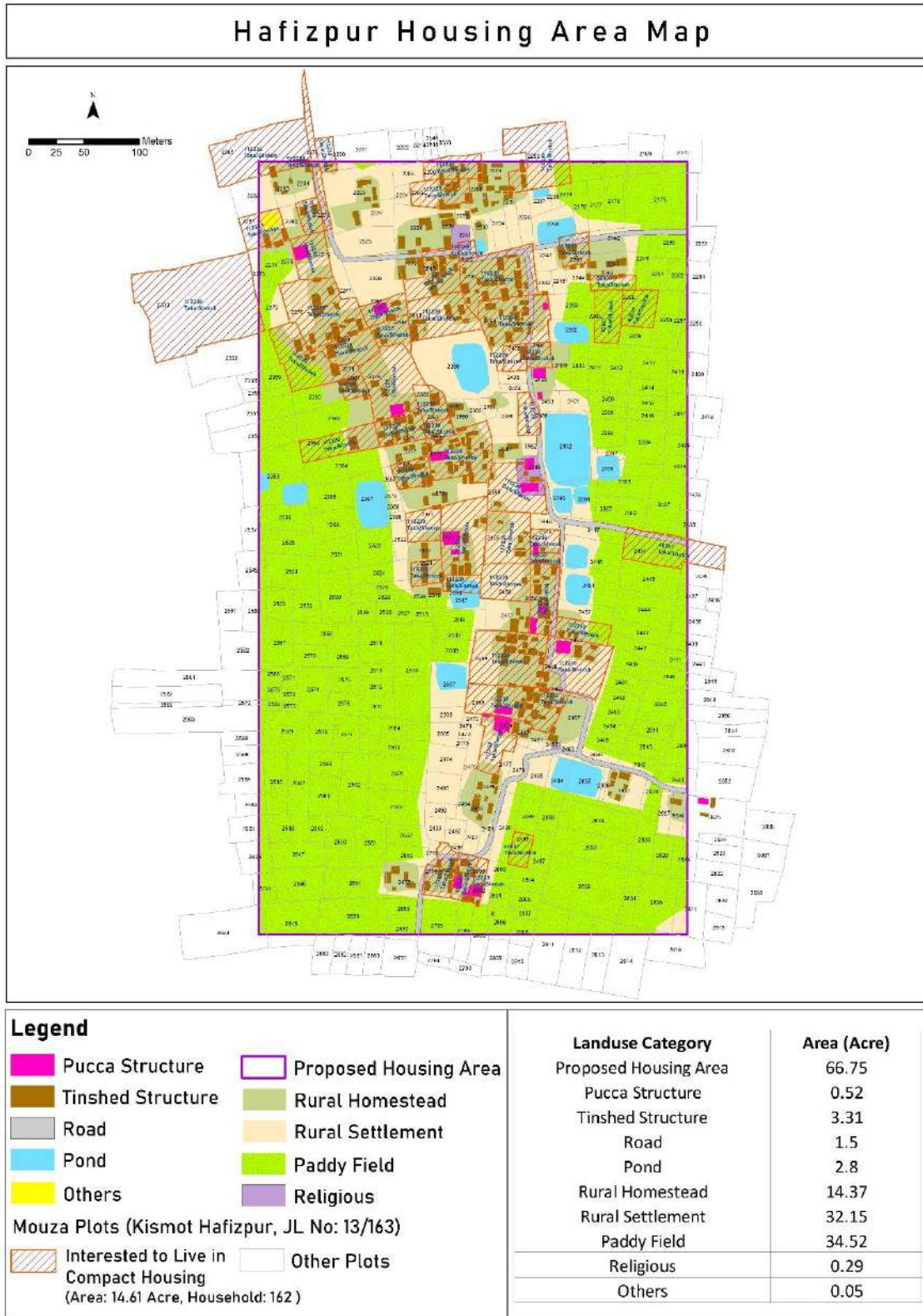


Figure 5.34: Existing Project Area Map of Hafizpur Village (67 Acre)

## Chapter-06

### FINANCIAL ANALYSIS

#### 6.1 Economic Analysis of Compact Housing Project in Hafizpur Village, Shantiganj

##### 6.1.1. Economic Analysis

###### 1. Overview:

An economic analysis was prepared for the Hafizpur (Monohardi Upazila) Compact Township Development Project in accordance with the Guidelines for the Financial and Economic Analysis of Project. The guidelines describe four basic steps to analyze a project's financial and economic viability: (i) identify financial and economic costs and benefits, (ii) quantify financial and economic costs and benefits (comparing with- and without-project scenarios), (iii) value financial and economic costs and benefits, and (iv) compare costs and benefits.

###### 2. Identification and Quantification of Economic Costs and Benefits:

The project's incremental financial and economic costs and benefits were identified and quantified for 2022–2056, including the 30-year implementation period following construction completion in 2026. All costs and benefits were initially expressed in 2021 prices (at the time of approval of the initial project) and updated using 2022 prices. This includes physical contingencies but excludes transfer payments (such as taxes, duties, and subsidies). The economic cost–benefit analysis was conducted at the world price level (using construction cost conversion factor 0.75- and 3-year average SCF 0.82, SCRDP, LGED, JICA), and from the perspective of Bangladesh.

###### 3. Comparison of Economic Costs and Benefits:

A project is deemed financially and economically feasible if the financial and economic net present value of the project's discounted (net) benefit streams is at least zero, or if the economic internal rate of return (EIRR) of these benefit streams exceeds the financial and economic opportunity cost of capital (EOCC) employed to finance the project. The assumed WACC was 5.6% (UGIIP-III, LGED) and EOCC was 12%.

###### 4. Investment Cost:

This cost consists of the investment cost of the proposed infrastructure for the project, including implementation support and technical assistance, and the cost of buildings to be constructed by the public sector. The financial and economic present value of the cumulated costs of the project was estimated at 9.58 million BDT and 28.44 million BDT. To reflect benefits that may accrue after the end of the project's economic lifetime in 2056, the project's residual value was set at 50% of the economic investment cost.

###### 5. Management, Operation, and Maintenance cost:

This is the incremental cost of two items:

- i) Management cost is the overhead cost of the authority that manages the new township. The annual management cost was estimated at 3% of the lease/rent revenue.



- (ii) The operation and maintenance (O&M) cost covers the common infrastructure. The annual O&M cost was estimated at 3% of the project's total investment cost.

Table: 6.1 Investment, Maintenance and Management costs

Capital investment	Maintenance	Management
12.47	0.374	0.138

Fig. in mill. BDT

## 6. Financial and Economic Benefits;

The project's quantifiable financial and economic benefits consist of benefits from increased land values and increased value of public infrastructure services, such as; rent/lease revenue, Govt. revenue, water supply, Health and production benefits;

- a) **Economic benefits from increased land values.** According to ADB's Guidelines for the Economic Analysis of Projects (2017), the value of land is best determined through its opportunity cost. Land value generally provide a good estimate of this cost. The economic value of land in project area is currently negligible. The project is expected to increase land value in project area and adjacent areas. The government so its implications have been carefully considered on both sides to develop the area as an economic hub through the urban, transport, and trade sectors with a flatter land thus increased land planning option.
- b) **Compact Housing Save Farmland** – a lots of acres of farmland would not be lost due to compact housing development.
- c) **Incremental benefits from water supply services.** On completion of all residential buildings in project area in 2026, the project will provide treated piped water to some -----  
--people. The incremental benefits from project-financed water supply services will be 0.50 million BDT from 2026.
- d)
- e) **Economic benefits from house rent:** The project is therefore expected to boost the economic value of the entire project area, estimated at 271,000 square meters in the "residential scenario." The project authority estimated end-user rent/lease amount 0.69 million BDT for residential housing about 1,200 BDT per unit/ month and ----- for commercial space. It was assumed that end-user lease rates would reflect the willingness to pay (WTP) of the township's future tenants, and these rates were used to estimate the value of leasable land in project area. The WTP of social housing occupants, who will be exempt from paying lease rates, was estimated at 50% of the WTP for residential housing. Some residential buildings near (but not inside) project area will also benefit from the other social services provided by the project; these economic benefits were quantified separately.
- f) **Economic benefits from other public services:** An important secondary economic benefit of the project is the improved quality of public infrastructure services in project area. Following Table 1, shows the calculated economic and financial benefits.

Table: 6.2 Project Economic and Financial Benefits

Project Economic Benefits (BDT Million)	Project Financial Benefits (BDT Million)
7.39	2.02

**g) Benefit Cost Stream Analysis:**

The following assumptions have been applied to carry out the IRR, NPV and BCRs;

- Project life 30 years
- 3 years construction period
- Discount rate 5.6 percent for financial and 12 percent for economic analysis (World Bank Guide line)
- After completion every year routine maintenance
- Construction conversion factor .75 percent
- Standard conversion factor .82 percent (3-year national level average)
- 2022 constant price considered
- After 5 years project completion full benefits were considered
- After the design life the residual value has been considered 40 percent.

Table 6.3: Financial Analysis Stream (Base Case)

Years	Benefit cost stream (Base case)			Financial			Total project benefits	Net cash flow
	Costs			Benefits				
	Capital	OM & Mang.	Total	Increase land value	Rental income	Others		
2024	2.49		2.49					-2.49
2025	6.23		6.23					-6.23
2026	3.74		3.74					-3.74
2027		0.051	0.05	0.41	0.06		0.47	0.42
2028		0.051	0.05	0.66	0.18	0.12	0.96	0.91
2029		0.512	0.51	0.82	0.36	0.24	1.42	0.91
2030		0.512	0.51	0.82	0.54	0.42	1.78	1.27
2031		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2032		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2033		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2034		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2035		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2036		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2037		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2038		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2039		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2040		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2041		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2042		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2043		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2044		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2045		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2046		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2047		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2048		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2049		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2050		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2051		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2052		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2053		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2054		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2055		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51
2056		0.512	0.51	0.82	0.60	<b>0.60</b>	2.02	1.51

Table 6.4: Economic Analysis Stream (Base Case)

Years	Benefit cost stream (Base case)			Economic			Fig. in million BDT	
	Costs			Benefits			Total project benefits	Net cash flow
	Capital	OM & Mang.	Total	Increase land value	Rental income	Others		
2024	1.87		1.87					-1.87
2025	4.68		4.68					-4.68
2026	2.81		2.81					-2.81
2027		0.04	0.04	0.34	0.07		0.41	0.36
2028		0.04	0.04	0.54	0.21	1.10	1.85	1.80
2029		0.42	0.42	5.49	0.30	2.20	7.98	7.56
2030		0.42	0.42	5.49	0.44	2.59	8.53	8.11
2031		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2032		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2033		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2034		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2035		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2036		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2037		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2038		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2039		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2040		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2041		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2042		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2043		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2044		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2045		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2046		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2047		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2048		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2049		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2050		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2051		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2052		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2053		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2054		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2055		0.42	0.42	5.49	0.69	2.59	8.77	8.35
2056		0.42	0.42	5.49	0.69	2.59	13.45	13.03

## 7. Results of Cost Benefit Analysis (Base case):

The results of financial and economic analysis of compact township sub-projects under Narsingdi Zilla are summarized in following Table-6.5.

Table-6.5: Results of CBA Base Case

Indicators	Indicators		
	IRR in %	NPV (mill. BDT)	BCR
Financial	23.80%	103.69	2.13
Economic	24.96%	77.83	2.15

The results of financial and economic analysis shows that the compact township sub-project is financially and economically viable from the point of view of all the financial and economic parameters considered important for the above analysis.

### 6.1.2 Sensitivity Test

Investments in compact township projects, like any other investments, involve uncertainties and risks, such as cost overrun, non-realization of the benefits, or altogether. The effect of these uncertainties has been evaluated under the Sensitivity Analysis. The Sensitivity Analysis has been carried out for varying sub-project cost and benefits and reworking the costs and benefits analysis for the following scenarios:

- i) Investment cost increase by 20%
- ii) Decrease in project benefits by 20%
- iii) Increase and Decrease in cost and benefit by 20%

### 6.1.3 Results of sensitivity analysis

Table- 6.6: Results of Sensitivity Analysis

Variables	IRI in %		
	Costs increase by 20%	Benefits decrease by 20%	Both case
Financial	6.75%	6.76%	4.16% %
Economic	33.30%	32.45%	28.82%

The above results (Table-32) show that in the worst scenario of increasing cost by 20 percent and decreasing benefits by 20 percent (both case) would results in reduced both IRR near about discount rate. So, the proposed investments of compact township sub-project are thus highly financially and economically justified.

### 6.1.4 Recommendations:

After CBA of compact township subprojects under Narshingdi Zilla has been found that the proposed project are essential for implementation to enhance the improvement of socio-economic condition of project catchment area and should be considered for finance. The economic development of project area will be achieved through the execution of the recommended compact township subprojects.

## Chapter-07

### IMPLEMENTATION ARRANGEMENT

#### 7.1 Implementation Strategy

Local Government Engineering Department (LGED) can take the leading position of maintaining liaison with Upazila Parishad and will be responsible for operation and management at all levels including design and implementation of the project. LGED will work from the city level as facilitating institutions. Upazila Parishad will work with the help of LGED to implement housing solution. In this connection, LGED will set up Project Management Unit (PMU) as a regulatory unit for monitoring the project in national level and Project Management Committee (PMC) for implementing the project.

#### Institutional Arrangement

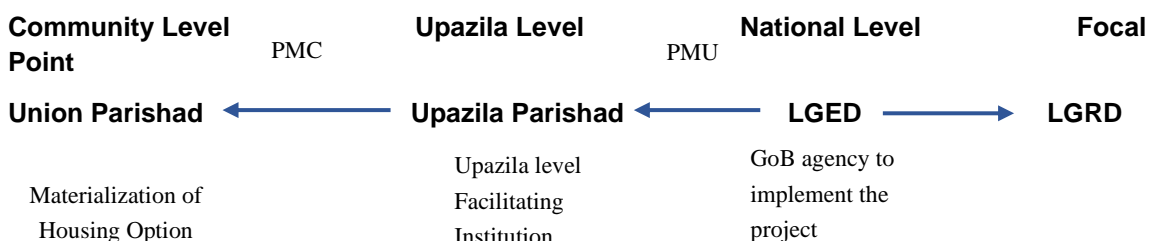


Figure 6.1: Institutional Arrangement Chain

**Implementation Process:** Project Management Unit (PMU), Project Management Committee (PMC), Upazila Engineer Office of LGED, Upazila Parishad, and Union Parishad with their combined effort will manage the project.

**Project Management Unit:** LGED will set up the Project Management Unit (PMU). The member of this unit will be Project Director and other national level important officials of My Village – My Town Project. For implementation, PMU will be directly in touch with Project Management Committee and Upazila Parishad to monitor the overall progress. The following diagram describes how the implementation process of the project will be conducted under supervision of LGED. Upazila Parishad will supervise the works of staffs who will work at the field level.

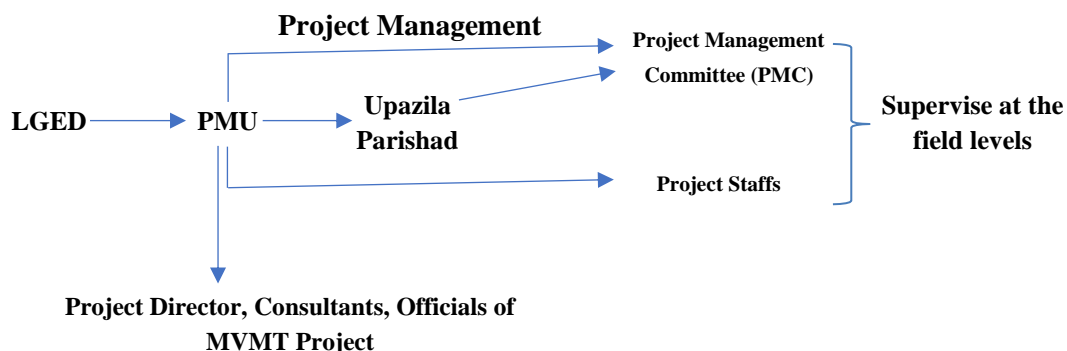


Figure 6.2: Project Management Flowchart

## **7.2 Inter- Organizational Collaboration**

To establish a sustainable compact housing solution, there needs to be a multisectoral and decentralized approach for executing its required activities and related interventions under an agreed coordination framework. As the output of compact housing unfolded, many and diverse stakeholders will be emerged and need to be involved in different aspects of the project for providing different service facilities. So, Inter- Organizational Collaboration is the path to enhance coordination between the different government agencies, relevant stakeholders and sectors and contribute to implementation of rural compact housing. The main challenge for the responsible agency is coordination and monitoring among stakeholders after starting the implementation phase. Despite the fact that this initiative is stated to be handled by a number of inter-organizational collaborations, but it is beyond doubt that the LGED and Upazila Parishad authority will have to shoulder heaviest burdens on a national and local level, respectively.

In collaborative manner, LGED with assistance of Upazila Parishad will establish a "Project Management Committee (PMC)" and start the project with organized and listed landowners whom can be taken to established compact housing. A Memorandum of Understanding (MoU) will be signed between PMC and Landowners to make up their potential participation in compact housing through Public – Private Partnership. Committee will ensure operations and maintenance plans are discussed with all stakeholders during implementing the housing project.

## **7.3 Suitable Agency for Development Control**

### ***7.3.1 Role of Local Government Engineering Department (LGED)***

LGED will facilitate the development, coordination, implementation, and management of the Compact housing project by providing urban public services to village areas. The organization will undertake resource mobilization both from government and development partners for the compact housing project. PMU of LGED will ensure access to urban services and the implementation of program-specific sustainability strategies in the housing area with local level assistance from project management committee (PMC). Also, LGED will be responsible for developing strategic partnerships and alliances for further expansion of the project.

### ***7.3.2 Role of Upazila Parishad***

The specific responsibilities of Upazila authority are to work as local authority and monitor the implementing activities of the project. Upazila parishad will directly work with Project Management Committee (PMC) and will provide necessary assistance to the selected communities and will help community members to conceptualize the project considering design and preparedness for the project. However, another responsibility of Upazila parishad will be to give periodical updates to PMU of LGED about the implementation status of the project.

## **7.4 Project Implementation Steps**

### ***7.4.1 Establishment of Project Management Committee***

A "Project Management Committee" will be formed, with landowners from selected areas, the Union/Upazila as the local authority, and LGED as the implementing agency.

### ***7.4.2 Preparation of Policy for Project Implementation***

The project management committee will develop policy management policies, decision-making policies, land development expenditure management procedures, organization management, re-plotting and transfer, financing and cost recovery, operation and maintenance etc. for the implementation of this project

### ***7.4.3 Land Management***

The Project Management Committee and the landowners will sign a Memorandum of Understanding. The landowners will transfer their property to PMC for housing development and committee will consolidate all the lands for establishment of compact housing.

### ***7.4.4 Project Planning and Implementation***

At first, identification of residential plots, commercial plots, service plots, open spaces, roads and reserved (for sale) plots etc. will be conducted. Landowners will usually own 50% of their plots / flats. Each plot will have access to roads, water supply, drainage, electricity and other facilities. Land contribution is proportional to land size, service delivery and land valuation. 30% of land will be allocated for roads, parks, open space, other social services. 20% of the land will be kept as "reserved plots" / flats - which will be sold to cover the cost of project implementation. (If government subsidy is given for the project, it will also be considered.) The percentage may vary depending on the location of the project, geography, development cost, etc.

According to the plan, the construction work of infrastructure, road, drainage, etc. will be done by the contractor, depending on the nature of the work and the estimated cost of the project. The new plot size will be proportional to the original ownership of the land. 30% land will be allotted for roads, social, civic services, shopping, market, open space.

### ***7.4.5 Transfer of Ownership***

Land boundaries will be delineated according to the new plots and a new plot number will be assigned at the completion of the implementation. Land owners will receive 50% of the plots as the original ownership at the time of allotment of new plots. Market, commercial space, market or residential plot / flat etc. will be constructed on required 20% of the reserved land and sold outside at market price. That money will be used to cover project expenses. Government subsidies will be added here. The remaining 30% of all social space including parks, fields, open spaces will be used by all on the basis of equal rights as common property in the housing area.

### ***7.4.6 Regulation and Maintenance***

After recovering the project cost, the proceeds from the sale of the reserved plots will be in the name of PMC and cannot be distributed among the individual landowners. It remains the property of the community, which is often used for operation and maintenance.

## **7.5 Monitoring and Evaluation**

Monitoring and evaluation is a very important part of any housing development project. PMU of LGED will take necessary steps to fill up an evaluation team with qualified professionals to make such evaluation. Selected professionals will help LGED carrying out an internal monitoring consists of administrative monitoring and social management issue. Their job is to develop monitoring format, whereas PMC and Upazila Parishad will receive a thorough brief about monitoring system. Finally, monthly progress report will be sent to PMU. With progress report, community update, and updates on formal supervision will make sure that project activities are complying with the project's requirements



## Chapter-08

### CONCLUSION

Proper land ownership policy is vital for the majority of the people who live in rural areas and depend on subsistence agriculture. Therefore, efficient rural land administration and management is a must for effective implementation of compact housing initiative in rural areas.

But it has been obvious that scope of rural land management in Bangladesh is narrow. Present land administration system is also inappropriate and not favorable to the poor farmers and marginal groups. Moreover, rural land management has been increasingly complicated as many multi-stake actors and multi-sectors are getting involved, while different interests paint the disadvantaged and poor people into a corner. Therefore, a comprehensive paradigm shift in policy and strategy is required, in order for community people to be enthusiastic about compact housing schemes.

Within the two study areas, both the probable selected sites at Hafizpur and Shimulbak are land areas that can be procured without any difficulty. But designing a nice house under limited budget is a big challenge for the local people.

**ANNEX -1**

## সমঝোতা স্মারক

**প্ৰেক্ষাপট:** কৃষি জমি অপচয় রোধ ও “ গ্রামীণ অধিবাসীদের জন্য উন্নত আবাসন” ব্যবস্থা নিশ্চিতকরণে বাংলাদেশ সরকারের স্থানীয় সরকার প্রকৌশল বিভাগ (এলজিইডি) “গ্রামীণ জনগোষ্ঠীর জীবনমান উন্নয়ন এবং আধুনিক নাগরিক সুযোগ সুবিধা সম্বলিত বহুতল ভবন নির্মাণের মাধ্যমে "আমার গ্রাম-আমার শহর" প্রকল্পের অংশ হিসেবে “গ্রামীণ নিবিড় বসতি” (গ্রামীণ কমপ্যাক্ট হাউজিং)” নামে একটি আবাসন প্রকল্প তৈরির উদ্যোগ গ্রহণ করেছে।

### সমঝোতা স্মারকের উদ্দেশ্য (প্রকল্পের মূল উদ্দেশ্য):

কৃষি জমি অপচয় রোধ, গ্রামীণ জনগোষ্ঠীর আধুনিক নাগরিক সুযোগ-সুবিধা সম্বলিত উন্নত “গ্রামীণ নিবিড় বসতি” (গ্রামীণ কমপ্যাক্ট হাউজিং)” আবাসনের সুযোগ সৃষ্টি করাই এই প্রকল্পের মূল উদ্দেশ্য।

### প্রকল্পের সুনির্দিষ্ট উদ্দেশ্যবলী নিম্নরূপ:

১. আধুনিক নাগরিক সুযোগ-সুবিধা সম্বলিত ফ্লাট নির্মাণের মাধ্যমে গ্রামীণ এলাকায় বাসস্থানের সুযোগ সৃষ্টি করা এবং জীবনযাত্রার মান উন্নয়ন করা।
২. মানব বসতি এবং অন্যান্য অকৃষি ব্যবহার স্থাপনের অপরিবর্তনীয় সম্প্রসারণ থেকে কৃষি জমি রক্ষা করা।
৩. একটি টেকসই পরিকল্পনা এবং নকশার মাধ্যমে গ্রামীণ এলাকার পরিবেশের ভারসাম্যতা বজায় রাখা এবং সম্পদ সংরক্ষণ করা।
৪. মানসম্মত মৌলিক সেবা প্রদান করা যেমন মানসম্মত শিক্ষা, স্বাস্থ্যসেবা, পানি সরবরাহ, স্যানিটেশন, নিবিড় আবাসন তৈরী এবং অবকাঠামো নির্মাণ ও সেবাসমূহের খরচ নিশ্চিত করা।
৫. গ্রামীণ জনপদ থেকে শহরে ক্রমবর্ধমান অভিবাসন রোধ করা।

যেহেতু, প্রথম পক্ষ উপজেলা পরিষদ/উনিয়নের পরিষদ “গ্রামীণ নিবিড় বসতি (গ্রামীণ কমপ্যাক্ট হাউজিং)” বাস্তবায়নের জন্য নিযুক্ত হয়েছে এবং জমির মালিকগণ তার/তাদের নির্ধারিত জমিতে একটি “গ্রামীণ নিবিড় বসতি (গ্রামীণ কমপ্যাক্ট হাউজিং)” প্রকল্প বাস্তবায়নের জন্য সম্মতি জ্ঞাপন করেছে।

এবং যেহেতু পরবর্তীকালে জমির মালিকগণ ----- ইং তারিখে সাব-রেজিস্ট্রি অফিসে নিবন্ধিত হয়ে তফসীলভুক্ত জমিতে বহুতল ভবন নির্মাণের উদ্দেশ্যে একটি চুক্তি পরিচালনা/সম্পাদন করে, যেখানে সাধারণ সুযোগ সুবিধা যেমন- বিদ্যুৎ, গ্যাস, পানি ও পয়ঃনিষ্কাশন ইত্যাদি বিষয়ে কার্যকর পদক্ষেপ গ্রহণ/বাস্তবায়নের জন্য উপজেলা পরিষদ// ইউনিয়ন পরিষদ দায়ী থাকবে।

এবং যেহেতু জমির মালিকগণ উপজেলা পরিষদ// ইউনিয়ন পরিষদের অনুকূলে ----- ইং তারিখে সাব-রেজিস্ট্রার অফিসে নিবন্ধিত হয়ে (যার নিবন্ধিত নং ----- ) তফসিলভুক্ত জমিতে

একটি "গ্রামীণ নিবিড় বসতি"(গ্রামীণ কমপ্যাক্ট হাউজিং) প্রকল্প উন্নয়নের উদ্যোগ গ্রহণের জন্য প্রথম পক্ষ  
----- উপজেলা পরিষদ/ ইউনিয়ন পরিষদকে ক্ষমতায়ন করেছে।

**অতএব, পারস্পরিক চুক্তি এবং প্রতিশ্রুতি বিবেচনায়, উভয় পক্ষ এখানে নিম্নরূপ শর্ত সাপেক্ষে  
সম্মত হয়:**

১. জমি ক্রয়কারীগণ ৩০-৪০ বিঘা জমি ক্রয় করবে এবং উপজেলা পরিষদ/ইউনিয়ন পরিষদক্রয়কৃত জমি/বাড়ি ক্রয়কারীগণের মধ্যে হস্তান্তর করবে এবং যার আনুপাতিক হারে জমির পরিমাণ (----- শতাংশ)।
২. "গ্রামীণ নিবিড় বসতি"(গ্রামীণ কমপ্যাক্ট হাউজিং) প্রকল্পের ফ্ল্যাট নির্মাণ ব্যয়ের ৩০% অর্থ ডাউন পেমেন্ট হিসেবে অগ্রিম প্রদান সাপেক্ষে দুই বছর সময়কালের মধ্যে (কম/বেশি) ফ্ল্যাটের চাবি হস্তান্তর করা হবে। চাবি হস্তান্তরের সময় অবশিষ্ট ৭০% টাকা সর্বোচ্চ ১৫ বছরের মধ্যে মাত্র ৫% সার্ভিস চার্জসহ পরিশোধ করতে হবে। উপজেলা পরিষদ/ইউনিয়ন পরিষদ টাকা গ্রহণ করার দায়িত্বে নিয়োজিত থাকবেন।
৩. ফ্ল্যাটে বসবাসকারী সদস্যগণ কর্তৃক ফ্ল্যাটের সমৃদয় মূল্য পরিশোধ সাপেক্ষে ফ্ল্যাট ও প্রাপ্য জায়গা অনুপাতিকহারে প্রত্যেক সদস্য প্রচলিত নিয়ম অনুযায়ী নিজ খরচে রেজিস্ট্রি দলিলের মাধ্যমে মালিকানা পাবেন।
৪. আগ্রহী ফ্ল্যাট মালিকদের কাছে ফ্ল্যাটের নকশা সুন্দর ও পরিষ্কারভাবে ব্যাখ্যা করা ও বুঝানো হবে।
৫. প্লটের কিস্তির টাকা পরিশোধে ব্যর্থতার জন্য উপজেলা/ইউনিয়ন পরিষদ নিবন্ধিত ডাকযোগে ৬০ (ষাট) দিনের রেজিস্ট্রার নোটিশের মাধ্যমে ক্রেতার নামে বরাদ্দ বাতিল করতে পারবে। বরাদ্দ বাতিলের পর, উপজেলা/ইউনিয়ন পরিষদ বাতিলের তারিখ থেকে ০৩ (তিন) মাসের মধ্যে ক্রেতার জমাকৃত টাকা প্রাপককে এ্যাকাউন্ট পে চেকের মাধ্যমে ফেরত দেবেন।
৬. বিলম্বের সময়কালের জন্য ১০% সুদের সাথে কিস্তির বকেয়া পরিশোধ করে ক্রেতা এই ধরনের বাতিলকরণ এড়াতে পারবেন। কিন্তু উপজেলা পরিষদ ৬০ (ষাট) দিনের নোটিশ দিয়ে ক্রেতার প্লটের জায়গার বরাদ্দ বাতিল করতে পারবেন।
৭. যদি ক্রেতা পর পর তিন (০৩) কিস্তির বকেয়া টাকা পরিশোধে ব্যর্থ হন, তাহলে উপজেলা পরিষদ উপরে বর্ণিত ধারা চ-এ উল্লিখিত বিধান অনুযায়ী ফ্ল্যাটের বরাদ্দ বাতিল করতে পারবেন।

### প্রথম পক্ষের দায়িত্ব ও বাধ্যবাধকতা সমূহ:

১. প্রথম পক্ষ (উপজেলা পরিষদ) হস্তান্তরের সময়সূচি অনুযায়ী (পাওনা পরিশোধের জন্য নির্ধারিত তারিখের পরে দেওয়া সময় পর্যন্ত) বরাদ্দকৃত ফ্ল্যাট ক্রেতাকে প্রদানের জন্য দায়ী থাকবে।
২. "গ্রামীণ নিবিড় বসতি"(গ্রামীণ কমপ্যাক্ট হাউজিং) প্রকল্পে ইউটিলিটি সংযোগ যেমন বিদ্যুৎ, গ্যাস, পানি ও পয়ঃনিষ্কাশন ইত্যাদি বিষয়ে কার্যকর পদক্ষেপ/বাস্তবায়ন করার জন্য উপজেলা পরিষদ দায়ী থাকবে।
৩. ক্রেতা/ ক্রেতাদের নিবন্ধন/দলিল খরচ সহ সম্পূর্ণ অর্থ প্রদানের তারিখ থেকে ০৩ (তিন) মাসের মধ্যে ক্রেতা/ ক্রেতাদের অনুকূলে ফ্ল্যাট বিক্রির জন্য উপজেলা পরিষদ দলিল সম্পাদন ও নিবন্ধন করবেন।

৪. এই চুক্তির অধীনে সমস্ত অর্থ প্রাপ্তির পরে বা উভয় পক্ষের মধ্যে সম্পাদিত চুক্তি অনুযায়ী প্রকল্পের নির্মাণকাজ সম্পূর্ণ হওয়ার পরে উপজেলা/ইউনিয়ন পরিষদ আনুষ্ঠানিকভাবে ক্রেতাদের অনুকূলে ক্রয়কৃত ফ্ল্যাটের ভৌত দখল/অধিকার প্রদানের সকল ব্যবস্থা গ্রহণ করবেন।

৫. যদি উপজেলা/ইউনিয়ন পরিষদ নির্দিষ্ট সময়ের মধ্যে প্রকল্পটি সম্পূর্ণ করতে এবং বরাদ্দকৃত অ্যাপার্টমেন্টটি / ফ্ল্যাট ক্রেতাদের নিকট হস্তান্তর করতে ব্যর্থ হন বা এরূপ পরিস্থিতিতে উপজেলা/ইউনিয়ন পরিষদের নিয়ন্ত্রণের বাইরের চলে যায়, যেমন প্রাকৃতিক দুর্ঘটনা, রাজনৈতিক গোলযোগ, রাজতৈনিক অস্থিরতার কারণে নির্মাণ সামগ্রীর অস্বাভাবিক মূল্যবৃদ্ধি এবং সংশ্লিষ্ট সরকারী কর্তৃপক্ষের কাছ থেকে ইউটিলিটি ( যেমন গ্যাস, বিদ্যুৎ, পানি সংযোগ) পেতে দেরি হলে, তাহলে ক্রেতা উপজেলা/ইউনিয়ন পরিষদে তার দ্বারা প্রদত্ত অর্থের সম্পূর্ণ অর্থ ফেরত পাওয়ার অধিকারী হবেন। ক্রেতা কর্তৃক লিখিতভাবে দাবি জানানোর ৬ (ছয়) মাসের মধ্যে উপজেলা পরিষদ ক্রেতাকে এই টাকা ফেরত প্রদান করবেন। শুধুমাত্র সেইসব ক্রেতাগণ প্রদেয় টাকার সুদ প্রাপ্তির যোগ্য বলে বিবেচিত হবেন, যারা নির্দিষ্ট সময়সূচি অনুযায়ী কিস্তির টাকা পরিশোধ করেছেন।

৬. উপজেলা পরিষদ জমি ক্রয়কারীর লিখিত সম্মতিতে ক্রেতাকে বরাদ্দকৃত ফ্ল্যাট পরিবর্তন বা প্রতিস্থাপন করতে পারবেন।

৭. ফ্ল্যাটের বুকিং মানি/ডাউন পেমেন্ট হিসেবে প্রদেয় অর্থ যাহা ক্রেতা/ ক্রেতাগণ রশিদের মাধ্যমে অর্থ উপজেলা/ইউনিয়ন পরিষদকে প্রদান করেছেন, সেই অর্থ উপজেলা পরিষদ ফেরত প্রদান করতে বাধ্য থাকবেন।

### দ্বিতীয় পক্ষের দায়িত্ব ও বাধ্যবাধকতাসমূহ:

১. তফসিলে বর্ণিত সম্পত্তি এবং বরাদ্দকৃত ফ্ল্যাটের শেয়ারের মূল্য বাবদ ক্রেতা/ ক্রেতাগণ প্রকৃত বাজার মূল্য অনুযায়ী বুকিং মানি হিসেবে ৩০% টাকা **উপজেলা পরিষদ/ ইউনিয়ন পরিষদকে** প্রদান করবেন।

২. ক্রেতা/ ক্রেতাগণ কিস্তির বকেয়া টাকা পরিশোধের ক্ষেত্রে ১০% সুদ সমেত কিস্তির অর্থ পরিশোধ করতে পারবেন। কিন্তু উপজেলা পরিষদ ৬০ (ষাট) দিনের নোটিশ দিয়ে ক্রেতার ফ্ল্যাট/প্লটের স্থান বরাদ্দ বাতিল করতে পারবে।

৩. ক্রেতা/ক্রেতাগণের হস্তান্তর দলিলের জন্য নথি, নন-জুডিশিয়াল স্ট্যাম্প, এবং কার্টিজ পেপার, রেজিস্ট্রেশন খরচ, ক্রয়কারীর দ্বারা প্রদেয় কর এবং অন্যান্য সমস্ত আনুষঙ্গিক খরচগুলি প্রস্তুত এবং প্রক্রিয়াকরণের জন্য প্রকৃত খরচ ক্রয়কারীর দ্বারা দলিল সম্পাদন/নিবন্ধনের কমপক্ষে ১৫ (পনের) দিন আগে সম্পূর্ণরূপে প্রদান করতে হবে।

পক্ষদয় উপরোক্ত শর্তাবলী পড়ে এবং প্রতিপালনে অঙ্গীকারাবদ্ধ হয়ে অদ্যকার তারিখে অত্র চুক্তি নামায় স্বাক্ষর করতঃ চুক্তি সম্পাদন করলেন। পক্ষদয় চুক্তির শর্তাবলীর যে কোনটি লঙ্ঘন করলে আইন আমলে আসবেন।

## DRAFT REPORT

Feasibility Study and Research for Developing Rural Compact Housing in Bangladesh

----- মৌজার আর এস -----নং খতিয়ানের আর এস -----দাগের -----একর----- কৃষি/  
অকৃষি খাস জমি থেকে ----- শতক জমি, প্লট নং -----: ( সীমানা চৌহদ্দি: পূর্বে -----,  
পশ্চিমে-----, উত্তরে -----, দক্ষিণে -----। অত্র চুক্তিপত্রটি ১০০+১০০+১০০  
=৩০০/- (তিনশত) টাকার তিন পাতার নন-জুডিশিয়াল স্টাম্পে লিখিত/ সম্পাদিত হয়েছে। মূলকপি ২য় পক্ষ  
সংরক্ষণ করবেন এবং ২য় পক্ষ কর্তৃক সত্যায়িত ফটোকপি

### ১ম পক্ষ: ভূমি ব্যবহার উপ-চুক্তি প্রদানকারী

(-----)

চেয়ারপার্সন / ভাইস চেয়ারপার্সন  
উপজেলা পরিষদ / ইউনিয়ন পরিষদ/গ্রাম  
পরিষদ/ বাস্তবায়কারী সংস্থার স্থানীয় দপ্তর

### ২য় পক্ষ: ভূমি ব্যবহার উপ-চুক্তি প্রদানকারী

(-----)

জমি গ্রহিতার নাম: -----  
পিতা/ স্বামীর নাম: -----  
মাতার নাম: -----  
ফ্ল্যাট নং: -----  
জাতীয় পরিচয়পত্র নম্বর: -----  
বাড়ি নং: -----, ডাকঘর:-----  
উপজেলা:-----, জেলা:-----

## ANNEX -2

**Land Valuation Analysis According to Class**

SI No.	House Hold No	Are you interested in living in rural housing?	Dag Number	Amount of settlement land (Percentage)	Mouza	J.L No.	Land Class	Land Value (2020-21) (Per Shatak)	Land Valuation
1	1	Yes	2376	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
2	2	Yes	2375	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
3	3	Yes	2375	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
4	4	Yes	2378	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
5	5	Yes	2378	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
6	6	Yes	2378	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
7	7	Yes	2382	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
8	8	Yes	2376	2	Kismot Habizpur	13/163	Homestead	112,239	224,478
9	9	Yes	2458	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
10	10	Yes	2458	2.5	Kismot Habizpur	13/163	Homestead	112,239	280,598
11	11	Yes	2458	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
12	12	Yes	2458	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
13	13	Yes	2453	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
14	14	Yes	3025	3	Kismot Habizpur	13/163	Homestead	112,239	336,717
15	15	Yes	2361	18	Kismot Habizpur	13/163	Homestead	112,239	2,020,302
16	16	Yes	2379	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
17	17	Yes	2521	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
18	18	Yes	2518	50	Kismot Habizpur	13/163	Homestead	112,239	5,611,950
19	19	Yes	2521	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
20	20	Yes	2373	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
21	21	Yes	2450	11	Kismot Habizpur	13/163	Homestead	112,239	1,234,629
22	22	Yes	2450	13	Kismot Habizpur	13/163	Homestead	112,239	1,459,107
23	23	Yes	2450	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
24	24	Yes	2455	16	Kismot Habizpur	13/163	Homestead	112,239	1,795,824
25	25	Yes	2455	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
26	26	Yes	2456	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
27	27	Yes		8	Kismot Habizpur	13/163			
28	28	Yes	2518	18	Kismot Habizpur	13/163	Homestead	112,239	2,020,302
29	29	Yes	2518	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
30	30	Yes	2373	13	Kismot Habizpur	13/163	Homestead	112,239	1,459,107
31	31	Yes	2374/2375/2376	6	Kismot Habizpur	13/163	Homestead	112,239	673,434



## DRAFT REPORT

### Feasibility Study and Research for Developing Rural Compact Housing in Bangladesh

SI No.	House Hold No	Are you interested in living in rural housing?	Dag Number	Amount of settlement land (Percentage)	Mouza	J.L No.	Land Class	Land Value (2020-21) (Per Shatak)	Land Valuation
32	32	Yes	2374/2375/2376	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
33	33	Yes	2375	8	Kismot Habizpur	13/163	Homestead	112,239	897,912
34	34	Yes	2375	13	Kismot Habizpur	13/163	Homestead	112,239	1,459,107
35	35	Yes	2375	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
36	36	Yes	2406	14	Kismot Habizpur	13/163	Homestead	112,239	1,571,346
37	37	Yes	2264	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
38	38	Yes	2200	15	Kismot Habizpur	13/163	Homestead	112,239	1,683,585
39	39	Yes	2200	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
40	40	Yes	2200	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
41	41	Yes	2796	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
42	42	Yes	2468	2	Kismot Habizpur	13/163	Homestead	112,239	224,478
43	43	Yes		4	Kismot Habizpur	13/163			
44	44	Yes	2458	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
45	45	Yes	2458	8	Kismot Habizpur	13/163	Homestead	112,239	897,912
46	46	Yes	2459	15	Kismot Habizpur	13/163	Homestead	112,239	1,683,585
47	47	Yes	2468	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
48	48	Yes	2468	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
49	49	Yes	2382	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
50	50	Yes	2434	12	Kismot Habizpur	13/163	Null	40,837	490,044
51	51	Yes	2802	7.5	Kismot Habizpur	13/163	Homestead	112,239	841,793
52	52	Yes	2478	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
53	53	Yes	2478	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
54	54	Yes	2478	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
55	55	Yes	2454	14	Kismot Habizpur	13/163	Homestead	112,239	1,571,346
56	56	Yes	2802	5.5	Kismot Habizpur	13/163	Homestead	112,239	617,315
57	57	Yes	2798	3	Kismot Habizpur	13/163	Homestead	112,239	336,717
58	58	Yes	2454	6.5	Kismot Habizpur	13/163	Homestead	112,239	729,554
59	60	Yes	2796	15	Kismot Habizpur	13/163	Homestead	112,239	1,683,585
60	61	Yes	2478	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
61	62	Yes	2363	30	Kismot Habizpur	13/163	Homestead	112,239	3,367,170
62	63	Yes	2381	30	Kismot Habizpur	13/163	Homestead	112,239	3,367,170
63	64	Yes	2371	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
64	65	Yes	2373	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151

## DRAFT REPORT

### Feasibility Study and Research for Developing Rural Compact Housing in Bangladesh

Sl No.	House Hold No	Are you interested in living in rural housing?	Dag Number	Amount of settlement land (Percentage)	Mouza	J.L No.	Land Class	Land Value (2020-21) (Per Shatak)	Land Valuation
65	66	Yes	2373	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
66	67	Yes	2373	2	Kismot Habizpur	13/163	Homestead	112,239	224,478
67	68	Yes	2386	3	Kismot Habizpur	13/163	Homestead	112,239	336,717
68	69	Yes	2450	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
69	70	Yes	2455	13	Kismot Habizpur	13/163	Homestead	112,239	1,459,107
70	71	Yes	2389	25	Kismot Habizpur	13/163	Homestead	112,239	2,805,975
71	72	Yes	2449	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
72	73	Yes	2373	8	Kismot Habizpur	13/163	Homestead	112,239	897,912
73	74	Yes	2407	8	Kismot Habizpur	13/163	Homestead	112,239	897,912
74	75	Yes	2264	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
75	76	Yes	2450	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
76	77	Yes	2264	11	Kismot Habizpur	13/163	Homestead	112,239	1,234,629
77	78	Yes	2264	11	Kismot Habizpur	13/163	Homestead	112,239	1,234,629
78	79	Yes	2265	11.5	Kismot Habizpur	13/163	Homestead	112,239	1,290,749
79	81	Yes	2265	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
80	82	Yes	2265	11.5	Kismot Habizpur	13/163	Homestead	112,239	1,290,749
81	83	Yes	2264	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
82	84	Yes	2265	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
83	85	Yes	2330	15	Kismot Habizpur	13/163	Homestead	112,239	1,683,585
84	86	Yes	2245	3	Kismot Habizpur	13/163	Homestead	112,239	336,717
85	87	Yes	2285	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
86	88	Yes	2248	11	Kismot Habizpur	13/163	Viti	60,000	660,000
87	89	Yes	2285	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
88	90	Yes	2285	4.5	Kismot Habizpur	13/163	Homestead	112,239	505,076
89	91	Yes	3545	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
90	92	Yes	3545	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
91	93	Yes	2270	33	Kismot Habizpur	13/163	Homestead	112,239	3,703,887
92	94	Yes	2270	18	Kismot Habizpur	13/163	Homestead	112,239	2,020,302
93	95	Yes	3545	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
94	96	Yes	2281	25	Kismot Habizpur	13/163	Homestead	112,239	2,805,975
95	97	Yes	2285	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
96	98	Yes	2281	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
97	99	Yes	2285	18	Kismot Habizpur	13/163	Homestead	112,239	2,020,302

## DRAFT REPORT

### Feasibility Study and Research for Developing Rural Compact Housing in Bangladesh

SI No.	House Hold No	Are you interested in living in rural housing?	Dag Number	Amount of settlement land (Percentage)	Mouza	J.L No.	Land Class	Land Value (2020-21) (Per Shatak)	Land Valuation
98	100	Yes	2278	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
99	101	Yes	2206	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
100	102	Yes	2278	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
101	103	Yes	2268	2	Kismot Habizpur	13/163	Homestead	112,239	224,478
102	104	Yes	2268	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
103	105	Yes	2379	15	Kismot Habizpur	13/163	Homestead	112,239	1,683,585
104	106	Yes	2270	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
105	107	Yes	2270	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
106	108	Yes	2378	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
107	109	Yes	2267	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
108	111	Yes	2268	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
109	112	Yes	2278	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
110	113	Yes	2271	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
111	114	Yes	2269	12.5	Kismot Habizpur	13/163	Homestead	112,239	1,402,988
112	115	Yes	2269	12.5	Kismot Habizpur	13/163	Homestead	112,239	1,402,988
113	116	Yes	3544	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
114	117	Yes	2261	6	Kismot Habizpur	13/163	Null	40,837	245,022
115	118	Yes	2361	20	Kismot Habizpur	13/163	Homestead	112,239	2,244,780
116	119	Yes	2206	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
117	120	Yes	2245	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
118	121	Yes	2245	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
119	122	Yes	2206	8	Kismot Habizpur	13/163	Homestead	112,239	897,912
120	123	Yes	2206	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
121	124	Yes	2206	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
122	125	Yes	2206	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
123	126	Yes	2206	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
124	127	Yes	2203	8	Kismot Habizpur	13/163	Homestead	112,239	897,912
125	128	Yes	2203	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
126	129	Yes	2303	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
127	130	Yes	2303	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
128	131	Yes	2330	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
129	132	Yes	2330	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
130	133	Yes	2261	10	Kismot Habizpur	13/163	Null	40,837	408,370

## DRAFT REPORT

### Feasibility Study and Research for Developing Rural Compact Housing in Bangladesh

Sl No.	House Hold No	Are you interested in living in rural housing?	Dag Number	Amount of settlement land (Percentage)	Mouza	J.L No.	Land Class	Land Value (2020-21) (Per Shatak)	Land Valuation
131	134	Yes	2488	15	Kismot Habizpur	13/163	Null*	40,837	612,555
132	135	Yes	2469	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
133	136	Yes	2260	8	Kismot Habizpur	13/163	Null	40,837	326,696
134	137	Yes	2276	9	Kismot Habizpur	13/163	Homestead	112,239	1,010,151
135	138	Yes	2276	10	Kismot Habizpur	13/163	Homestead	112,239	1,122,390
136	139	Yes	2260	10	Kismot Habizpur	13/163	Null	40,837	408,370
137	140	Yes	2798	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
138	141	Yes	2458	12	Kismot Habizpur	13/163	Homestead	112,239	1,346,868
139	142	Yes	2469	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
140	145	Yes	2376	7	Kismot Habizpur	13/163	Homestead	112,239	785,673
141	146	Yes	2376	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
142	147	Yes	2378	2	Kismot Habizpur	13/163	Homestead	112,239	224,478
143	148	Yes	2376	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
144	149	Yes	2379	8.75	Kismot Habizpur	13/163	Homestead	112,239	982,091
145	150	Yes	2478	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
146	151	Yes	2478	6	Kismot Habizpur	13/163	Homestead	112,239	673,434
147	152	Yes	2478	15	Kismot Habizpur	13/163	Homestead	112,239	1,683,585
148	153	Yes	2232	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
149	154	Yes	2220	16	Kismot Habizpur	13/163	Homestead	112,239	1,795,824
150	155	Yes	2279	8	Kismot Habizpur	13/163	Homestead	112,239	897,912
151	156	Yes	2285	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
152	157	Yes	2279	25	Kismot Habizpur	13/163	Homestead	112,239	2,805,975
153	158	Yes	2285	4.5	Kismot Habizpur	13/163	Homestead	112,239	505,076
154	159	Yes	2285	18	Kismot Habizpur	13/163	Homestead	112,239	2,020,302
155	160	Yes	2285	15	Kismot Habizpur	13/163	Homestead	112,239	1,683,585
156	161	Yes	2478	4	Kismot Habizpur	13/163	Homestead	112,239	448,956
157	162	Yes	2478	5	Kismot Habizpur	13/163	Homestead	112,239	561,195
<b>Total</b>				<b>1460.75</b>					<b>157,676,100</b>