KPU International Journal of Engineering & Technology
Volume 6, Issue 1, Mar. 2026
e-ISSN:2790-0819, p-ISSN:2790-0800

Date Received: 2026-03-03
Date Accepted: 2026-03-11
Date Published: 2026-03-30

Designing Affordable Incremental Housing in Kabul through the Open Building Approach

MOHAMMAD OMID WAHIDI[1*], ALI SAJJAD KHAZAEE[1] & AHMAD JAWAD NIAZI[2]

[1]Master's Students in Department of Architecture at Kabul Polytechnic University, 5th district, Kabul, Afghanistan. Emails: omidwahidy60@gmial.com, alisajjadkhazaee4@gmail.com.

[2]Associate Professor in Architecture Department at Kabul Polytechnic University, 5th District, Kabul, Afghanistan. Email: a.j.niazi@kpu.edu.af.

Abstract

This article aims to propose a long-term and community-driven strategy to solve Afghanistan's acute affordable housing crisis, especially in Kabul, where more than 70% of the residents live in informal settlements with no basic structure of permanent tenure. This study provides a flexible, culturally relevant, and cost-effective method for Kabul's complicated and post-conflict environment by combining the Open Building Approach (OBA) and Incremental Housing.
The study creates a phased model to support progressive self-built housing renovations with the use of a mixed-method approach and combining GIS spatial analysis, policy reviews, and participatory planning. To achieve the goal, some important components like modular construction techniques, locally obtained sustainable materials like Compressed Stabilized Earth Blocks (CSEB), and adaptive design to accommodate extended family structures and shifting household incomes are needed.
This framework emphasizes on some important values for people, like the value of community involvement, decentralized governance, and institutional collaboration in developing scalable solutions, environmental sustainability, safe land tenure, and compatibility with indigenous Afghan construction methods. This method contains great capability to enhance urban resilience, improve livelihoods, and guide future post-conflict reconstruction efforts in Afghanistan and similar contexts.

Keywords: Affordable Housing, Incremental Housing, Informal Settlements, Open Building Approach, Participatory Planning, Post-Conflict Reconstruction.

* Corresponding Author

1. Introduction and Importance of the Topic

1.1 Background and Context

Kabul, as the capital and one of the great cities of Afghanistan, is faced with one of the most severe housing crises in developed countries. Kabul city has seen a significant urbanization rate due to a variety of reasons, with the population increased 500,000 people in 1979 to over 4.6 million in 2023. Rural to urban migration, conflict due to displacement, and economic concentration are the major reasons in increasing of population [1]. Rapid growth in population without development of infrastructure or official housing provision resulted in a lack of affordable and appropriate housing for everyone [2].

The housing problem in Kabul city has emerged from numerous interconnected issues. Over 70% of Kabul's populations reside in informal settlements, which normally lack basic utilities involving clean water, electricity, sanitation, and waste management [1]. These settlements, which are locally known as "Zor Abadi" have emerged on both public and private land, and the results are complex tenure condition that restricts official development and infrastructure provision [3]. These settlements are different in their characteristic, ranging from well-established towns with some infrastructure developments to newly established settlements, with none of few services [4].

The special distribution of informal settlements reflects Kabul's topographic restrictions and security concerns. Many cities exist in environmentally dangerous locations such as flooding areas, steep hillsides, and toxic soil [5]. Due to a lack of formal planning areas, the city faces inadequate access roads, insufficient open space, and overcrowded settings, all of which pose extensive health and safety issues [6].

The housing crisis is more complicated due to economic dimensions; most of the residents in the informal areas are laborers in the informal economy, thus have irregular outcomes, which makes repaying financial regular mortgages impossible [7]. Deficiency of the banking system and international sanctions have limited access to finances even more [8]. Material shortage and devaluation of currencies resulted in higher construction cost which makes even basic housing units to be not affordable for most people [9].

Social and cultural aspects produce further issues. Traditional families in Afghanistan involve extended families living together in a compound system, which is in contradiction to standard home designs [10]. Special requirements according to gender, allowance for home-based economic activities, preserving community networks, and social cohesiveness are essential when developing housing options, and in-place upgrades are preferable [12].

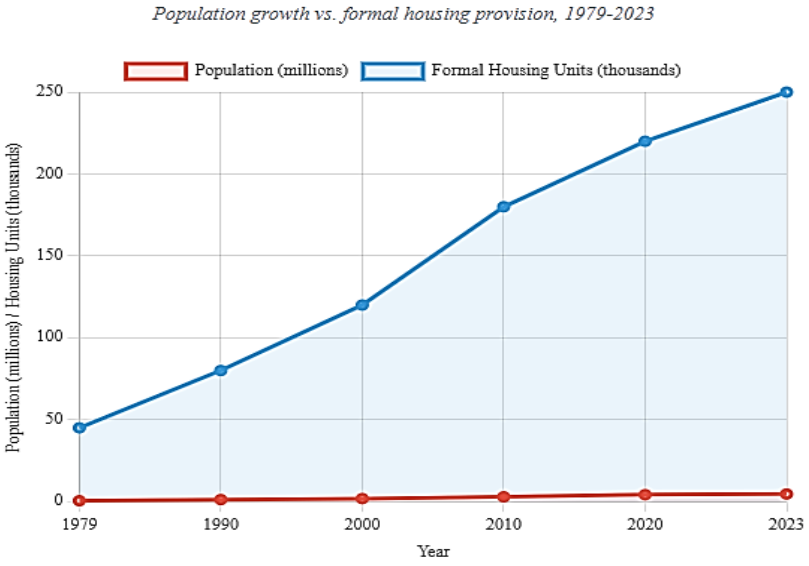


Fig. 1. Kabul Population Growth and Housing Crisis Development (Author)

1.2 The Incremental Housing and Open Building Paradigm

With the start of designing incremental housing, there was a paradigm shift from a conventional mass housing approach to strategies that were more flexible, adaptive, and responsive to community needs. This strategy is based on an idea; low-income families can't afford a complete house unit at once but can invest and pay for improvements and expand over time as their economic capabilities grow better [13]. The pioneer of this concept is architect John F.C. Turner, who developed the concept of improving houses over time in the 1960s and 1970s, which emphasizes the process of house development rather than a complete product at once, and the focus was on the environment, to be able to support the gradual expansion of the house [13].

Several key principles are the core foundation of this idea. First, this idea considers housing as a process rather than a mere product; it means emphasizing the ongoing process of creation and improvement of the house over time [13]. Second, is acknowledging the capability of low-income households and preparing a suitable condition in which those households can invest to finally own a house [14]. Third, this idea prioritizes the affordability and accessibility of the house over completeness, and allows people to initially have a house and then gradually construct the rest [15].

In the context of Afghanistan, especially in Kabul city, the incremental housing strategy provides several advantages. It accords with Afghanistan's traditional housing practice, where one family expands to two or several smaller families, so the house expands gradually to meet the needs of the expanded family [10]. This approach acknowledges the economic realities of each household with irregular income and limited access to the banking loan system [7]. Moreover, the incremental housing approach allows the existing social networks and community structure to maintain and thrive while allowing physical enhancement of the houses [11].

There is another term that boosts the incremental housing strategy by defining a systematic framework, the Open Building Approach (OBA). This approach divides the housing system into a) Support structures, which is shared foundations, core services, structural frameworks and etc. and b) Infill elements, which are concluded in interior walls, finishes, room configurations and etc. [13] this approach allows the living spaces according to requirements and at the same time ensures the stability and efficiency in infrastructure [15].
In Kabul city, self-constructing and household-driven development is very much common, so OBA presents itself as a powerful tool for scalable, resilient, and culturally appropriate urban transformation [10]. It concludes special requirements for traditional Afghan families and ensures essential services are maintained at the same time [16].

1.3 Research Objectives and Scope

The goal of this study is to examine affordable incremental housing as a solution to the housing crisis of Kabul city. The scope of the study is as follows:

1. **Extensive Analysis:** to analyze the current housing situation of Kabul city and identify the key issues and opportunities with the aid of special mapping, assessment of infrastructure, and economic analysis of targeted households.
2. **Global Experiences:** Identifying and analyzing international incremental housing best practices to evaluate their applicability in Kabul city's context, community, and economic situation, focusing on post-war habitats.
3. **Integrated framework development:** develop a framework to combine participatory approaches, sustainable building strategies, and inclusive administration mechanisms.
4. **Implementation approaches:** Identifying specific strategies for pilot implementation and scale-up, including phasing plans, resource mobilization, and capacity construction programs.
5. **Policy Recommendations:** Identify extensive policy recommendations that support the comprehensive adoption of incremental housing strategies.

2. Literature Review and Previous Studies

2.1 Global Perspectives on Incremental Housing and the Open Building Approach

Turner, in 1976, established a theoretical framework, "Housing by People". This framework was the foundation for self-built housing and emphasized household control over future expansion. Turner's framework highlighted three principles:

1) User control means the household has the authority to make a decision.
2) gradual development, which is progressive and takes time.
3) utilize local resources, from material to labor [13].

"Progressive Housing" is a program based on an incremental housing strategy started in Chile, Latin America, which demonstrated the government's support for incremental housing. This program aims to support essential housing units and basic needs within a house for households with the capability of expansion over time [9]. Clear legal frameworks, technical support, and micro-credit access are the most successful factors of

this program [15]. Long-term assessments demonstrate better housing outcomes than old program systems, which maintain stronger community networks [13].
In Mexico, there was another program called “Pie de Casa”, this program was based on incremental design, which achieved 30-40% costs saving compared to a complete house strategy with better satisfaction for households [9].
The Open Building Approach (OBA), which was mentioned before, has been utilized globally with distinguished focuses. There are successful global implementations, like in the Netherlands, where the OBA strategy addressed the flexibility preferences of middle-income households [13], while in Japan focuses on earthquake-prone conditions and high-density urban environments through modular construction methods [15]. In Chile, the focus of this strategy was on “half house” which was proposed by architect Alejandro Aravena, that provides structural frameworks and essential services needed for a household, and completing the remainder of the house was the current owner and resident’s duty at different time intervals [9].

2.2 Regional and Local Studies

There is a globally recognized model of community-led development in Karachi, Pakistan, named “Orangi Pilot Project”, which was established in the 1980s. According to this project, the government did not provide any subsidies or infrastructure development, but rather provided technical support as a boost for housing improvement, which emphasized community organization [17].
According to (Hassan, 2006), the Orangi Pilot Project covered 90% of sanitation coverage at a significantly lower cost than conventional municipal costs. The causes of cost reduction were mainly local manufacturing of construction material and labor training by local contractors [17]. Furthermore, the project created opportunities for women's participation while respecting the cultural traditions [17].
Slum Networking Project in Ahmedabad, India, illustrates tenure security and community organization combined with infrastructure investment [3]. This model, which consists of multi-stakeholder collaboration, could be easily adapted to the institutional context of Kabul city [4].
There are crucial insights into sustainable policy approaches for Afghan cities provided by Sharifzai et al. (2016). The emphasis is on policies, which back up informal settlement improvement instead of demolition; they argue for design solutions that regulate land tenure, building on existing community institutions, and are culturally appropriate for the context of Kabul city [10].
Sarwari et al. (2022) had proposed a twin-track approach for conventional settlements with planning for the development of newly growing areas. This study established empirical data for households’ preferences, economic capabilities, and special patterns while illustrating the will of the households to invest in improvements and provide tenure security and technical support [18].

2.3 Kabul-Specific Context Studies

The studies at the Hotkhel district in Kabul city show that organic settlement can coexist with formal infrastructure developments. The development of Hotkhel reveals potential

for incremental strategy implementation; this potential resides in households' progression from basic mud-brick structures to multi-story concrete houses and apartment buildings. Having community support, access to local material, local skilled labor, and relatively secure tenure are strong success factors for implementing an incremental strategy, however challenges like insufficient access roads, inadequate public spaces, overcrowding, construction quality problems, and lack of formal building codes and inspection systems may cause some friction in implementing the incremental strategy [16].

Another study was conducted on Afshar, the 5th district of Kabul city, which is helpful to provide insight on war and conflict-affected settlements and community resilience. The study on this district illustrates community-led reconstructions and emphasize on participation by all households, including women and marginalized groups [19]. Traditional leadership structures and social networks were encouraged and mobilized for incremental development while adapting to a changing environment [19].

3. Methodology

3.1 Research Design

A mixed-method approach is used in this study to incorporate quantitative and qualitative research methods. These methods were employed to develop an extensive understanding of Kabul city's housing challenges and opportunities, while the research design combines multiple analytical methods and data sources to provide strong and valid results.

The structure of methodology concludes three main components: (1) spatial analysis for better understanding the settlement patterns, remove obstacles, solve complications and identify the opportunities for incremental developments; (2) analysis of existing policies for better evaluation of regulatory frameworks and identify gaps and opportunities; and (3) participatory inspections from community engagement to understand the level of community cooperation and to ensure the incremental framework reflects on local priorities.

3.2 Data Collection Methods

Spatial Data Collection and Analysis: This study employs high-resolution satellite images, documents from the municipality, and field surveys to prepare a comprehensive map of Kabul city's settlement patterns. Analysis of these maps allows researchers to identify low and high-utilized plots, a lack of infrastructure, and potential sites for incremental strategy developments.

Collect & Review of Policy Documents: the documents related to the existing housing policies, urban planning regulations, and national, provincial, and municipal level development frameworks are gathered for a comprehensive review, which provides useful insights of the environment. This includes analysis of municipal development plans, national urban policy, and national priority programs.

Case studies and Analysis: detailed case studies are performed to have a better analysis of the specific settlements and housing projects. Empirical data from case studies are utilized in the development of the incremental framework. Case studies are selected carefully to fully represent different types of settlements, like established informal

settlements, formal low-income housing projects, recent displacement sites, and different geographical areas within Kabul city.

3.3 Analytical Framework

The analytical framework of this research is integrated from theoretical perspectives to make sure a total coverage of housing challenges. The analysis of households' economic strategies and housing investment patterns is guided by the sustainable livelihood framework. The analysis of community engagement and decision-making process is based on the participatory development approach, and the urban resilience framework provides ideas on how intervention in housing can contribute to wider urban sustainable developments.

Spatial analytical techniques provide information on density, accessibility analysis, and suitable modeling, and identify optimal locations for incremental housing development. Availability of basic services, proximity to employment centers, land tenure status, and environmental limitations are the main consideration factors in performing the analysis.

A systematic review of existing policies is required to identify and analyze the gaps and contradictions in policy and ensure to capture the opportunity to reform it. The analysis is performed on different levels; it starts from national housing approaches to local building codes and regulations, for a better understanding of how regulation frameworks can best support the incremental housing development.

4. Selection of Suitable Materials and Technologies

4.1 Material Assessment Criteria

The appropriate material selection for incremental housing development can be tricky, and careful consideration is required. Many factors, such as durability, sustainability, cost-effectiveness, and OBA compatibility, are necessary in selecting suitable materials for the incremental housing method, moreover the materials must be economically suitable, culturally acceptable, locally available, and technically feasible for community-based laborers and construction methods.

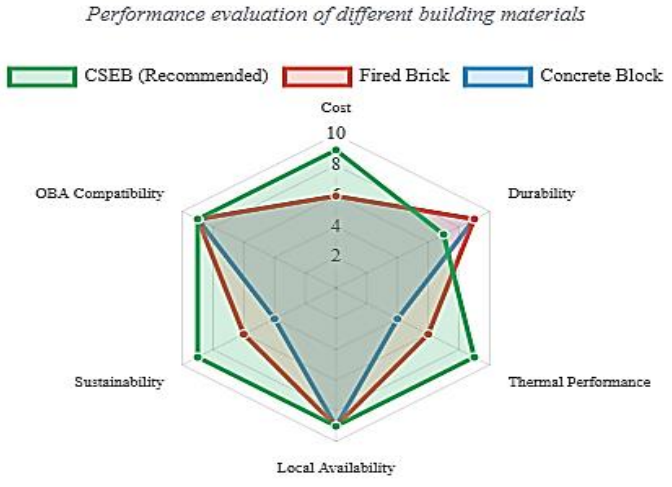


Fig. 2. Construction material comparison for Kabul context (Author)

4.2 Comparative Material Analysis

Table 1. Comparative Material Analysis [Author]

Material	Cost	Durability	Thermal Insulation	Local Availability	Sustainability	OBA Compatibility
CSEB (Compressed Stabilized Earth Block)	Low	Medium	High	High	High	High
AAC (Autoclaved Aerated Concrete)	Medium	High	High	Moderate	Moderate	High
Bamboo	Low	Medium	Medium	Low/Seasonal	High	Moderate
Adobe	Very Low	Low	High	High	Medium	High
Fired Brick	Medium	High	Medium	High	Medium	High
Concrete Block	Medium	High	Low	High	Low	High

4.3 Material Recommendations

The recommended material to use in an incremental housing strategy is CSEB (compressed stabilized earth block). This material offers the optimal balance among affordability, sustainability, and performance. CSEB is considered a local material in Kabul city, which is made of available soil resources with local labor, creating job openings and reducing transportation cost at minimum level. Kabul's climate requires materials with excellent thermal insulation properties, and CSEB is a perfect match. Furthermore, it is CSEB can be compatible with both modern construction methods and traditional construction techniques.

4.4 Technology Integration

Production Technologies: CSEB production does not require high technology; CSEB production equipment can be easily installed for small-scale production within the communities, providing employment opportunities for local labor and being cost-effective for households. Mass production of this material can be arranged with the aid of the government in industrial towns, which will reduce the production cost even more.

Construction Technologies: In order to use CSEB in construction, no special technology is required. Using CSEB in construction is simple, and almost every skilled laborer in Afghanistan already knows how to use it in construction. The owner is obligated to employ skilled labor for incremental construction, and unchallenging use of CSEB paves the way for enhancing the usage of the incremental strategy.

Quality Control: controlling the quality of CSEB material can be done without any complication; the soil tests or the compression test of the CSEB can be performed in laboratories. The strength of CSEB at the community level is possible with local techniques and labor, such as the free fall of CSEB from a distance or the sound of clashing them with each other, which local experts can estimate the strength and quality of the material.

5. Incremental Design and Construction Process

5.1 Phased Development Strategy

Strategy for an effective incremental housing needs careful planning for phased growth, which allows households to expand their dwelling gradually while retaining structural integrity and infrastructure efficiency [13]. Method of using phased by phased must create a balance between affordability and usefulness, ensuring that each phase offers residential space while allowing for future extension [15].

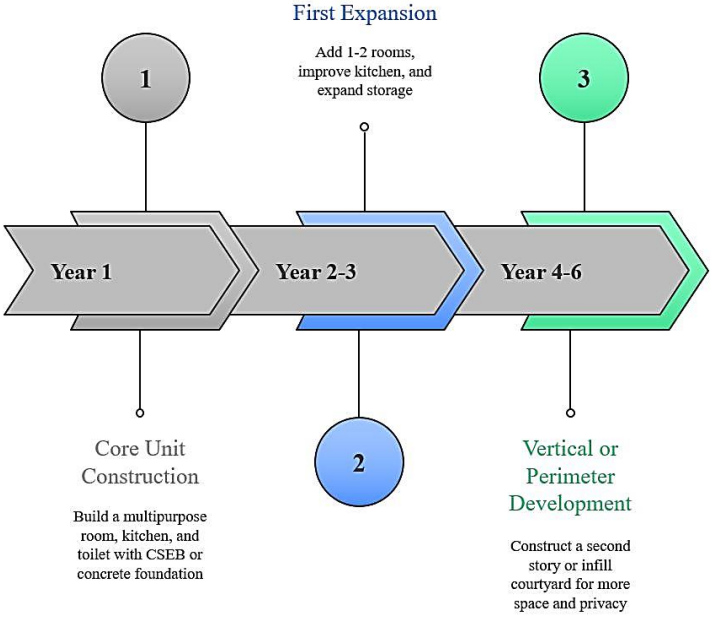


Fig. 3. Phase by phase Housing development (Author)

Phase 1: Core Unit Construction (Year 1)
In phase one, we can expand a 1x multipurpose room (18-20 m^2), a small kitchen, and a toilet block. The structure includes a concrete CSEB as well as load-bearing walls with vertical expansion capabilities. Also, the estimation cost for the first phase is 1600-1800 USD.
Phase 2: First Expansion (Year 2-3)
In phase two, we can add 1-2 rooms using the same structural system, improve the kitchen with its electrical and plumbing system, and other facilities, and the cost of estimation is around 900-1200 USD.
Phase 3: Vertical or Perimeter Development (Year 4-6)
In the 3rd phase, we can construct a second story or infill the courtyard for more space and privacy, also we can extend utility systems, possibly solar installation, and the estimated cost is around 1200-2000 USD.

5.2 Integrated Framework for Incremental Housing

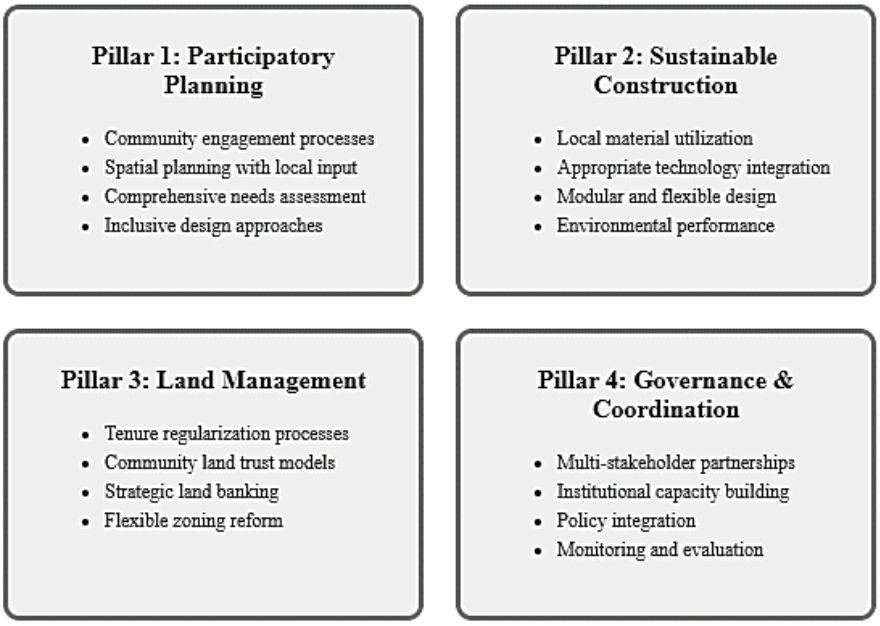


Fig. 4. Four core pillars of the proposed approach (Author)

5.3 Design Principles

1. Structural continuity: Phases are built on the same support structure to ensure structural integrity and efficient resource use. Also, foundation and structural elements are designed to adapt to planned expansion.
2. Service integration: Utility systems are planned for ultimate service development to ensure they can provide basic services and allow houses for expansion without any major reconstruction.
3. Cultural Appropriateness: Design should represent Afghan cultural norms and privacy.

4. Environmental consideration: (Passive solar design, natural ventilation, rainwater harvesting) These mentioned consideration integrated into all phases, and we can also add renewable energy in later phases.

5.4 Construction Management

1. Community participation
2. Quality Control
3. Material supply

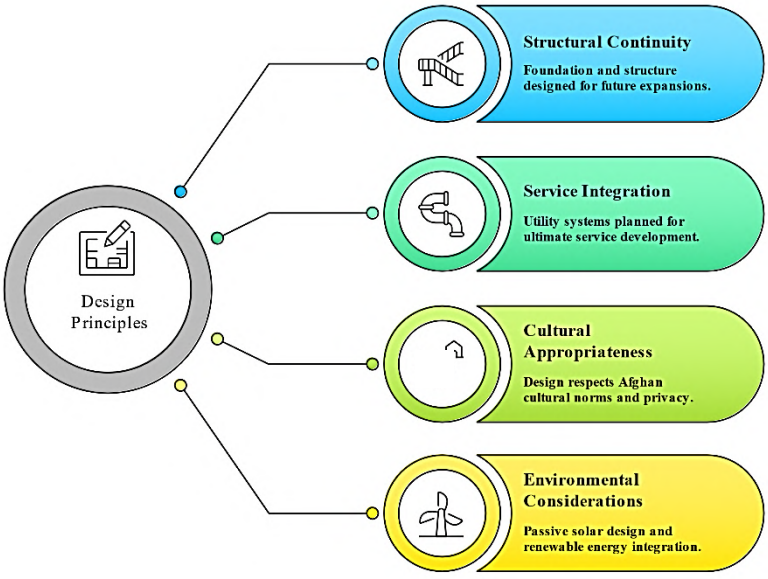


Fig. 5. Incremental Design principles

Construction Management Framework

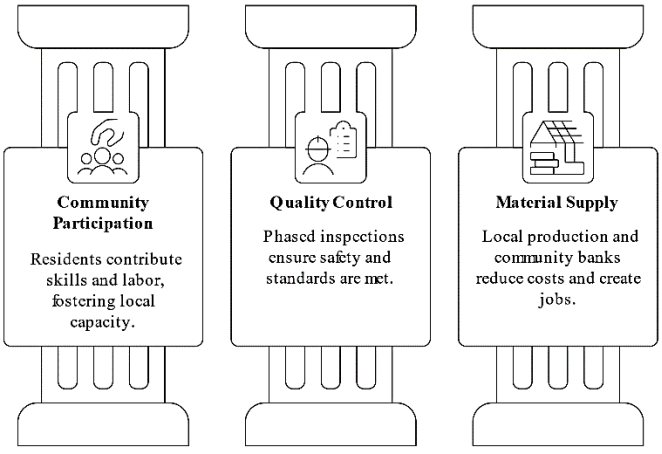


Fig. 6. Construction management framework (Author)

6. Proposed Model or Design Framework

6.1 Integrated Framework Overview

This proposed framework integrates four core pillars that can create sustainable, affordable, and culturally appropriate housing solutions. Also, this framework can provide a systematic approach to address multiple dimensions at the same time.

6.2 Core Pillars

1. **Participatory planning:** A consultation process that can involve all community members in identifying needs, priorities, and some preferred solutions.
2. **Sustainable Planning:** Using local materials and technologies for environmentally friendly building, which helps to reduce costs too.
3. **Land management**: Ensuring secure land rights and strategic land acquisition.
4. **Governance and coordination:** Coordinating governance and strengthening NGOs for effective housing programs.

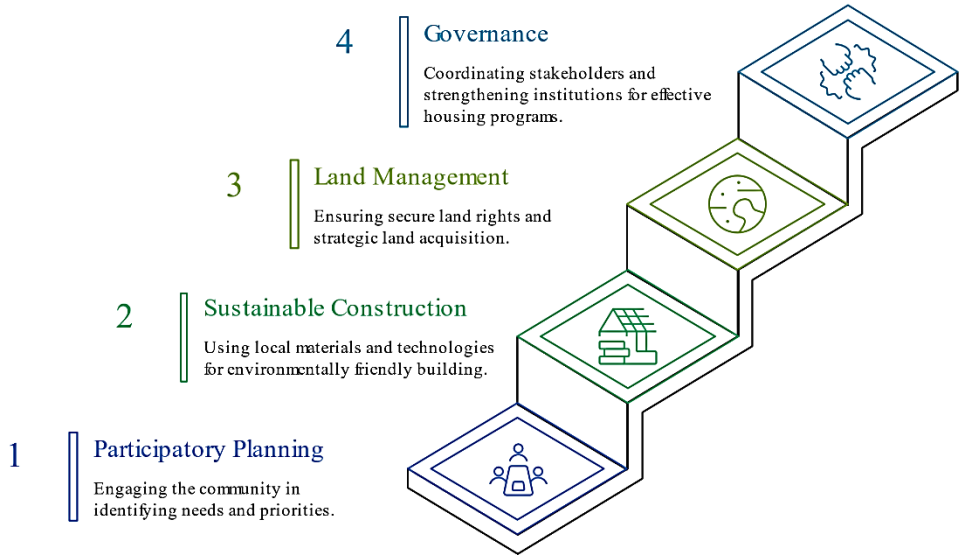


Fig. 7. 4 core pillars for achieving incremental houses (Author)

6.3 Implementation Roadmap

- Phase 1: Pilot Implementation (4 years)
- Phase 2: Expansion and Refinement (5 to 7 years)
- Phase 3: Scaling and Institutionalization (8 to 15 years)



Fig. 8. Implementation roadmap cycle (Author)

7. Case Studies and Examples

7.1 Kabul District Case Studies

7.1.1. Case Study 1: Hothkhel District - Incremental Formalization

Hothkhel district is the best and one of the successful examples of spontaneous gradual development, which has resulted in major improvements in housing while preserving community cohesion [16]. Residents improved their homes steadily over the last two decades, progressing from simple mud brick houses to multi-story concrete complexes thanks to people's cooperation and household investment [16].

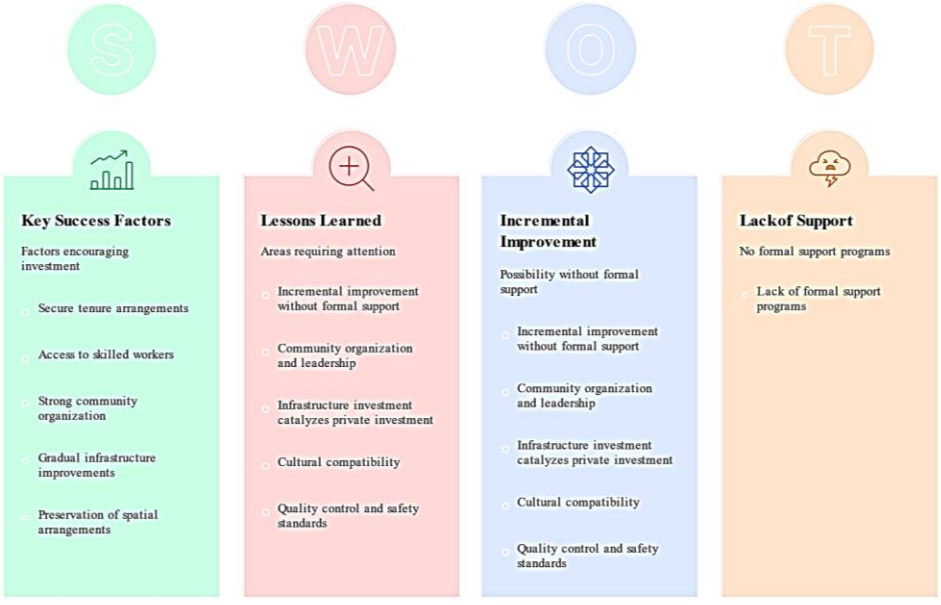


Fig 9. Hothkhel District - Incremental Formalization (Author)



(a) (b)

Fig. 10. a: Hothkhel incremental housing problems, b: Gradual integration into formal urban infrastructure.

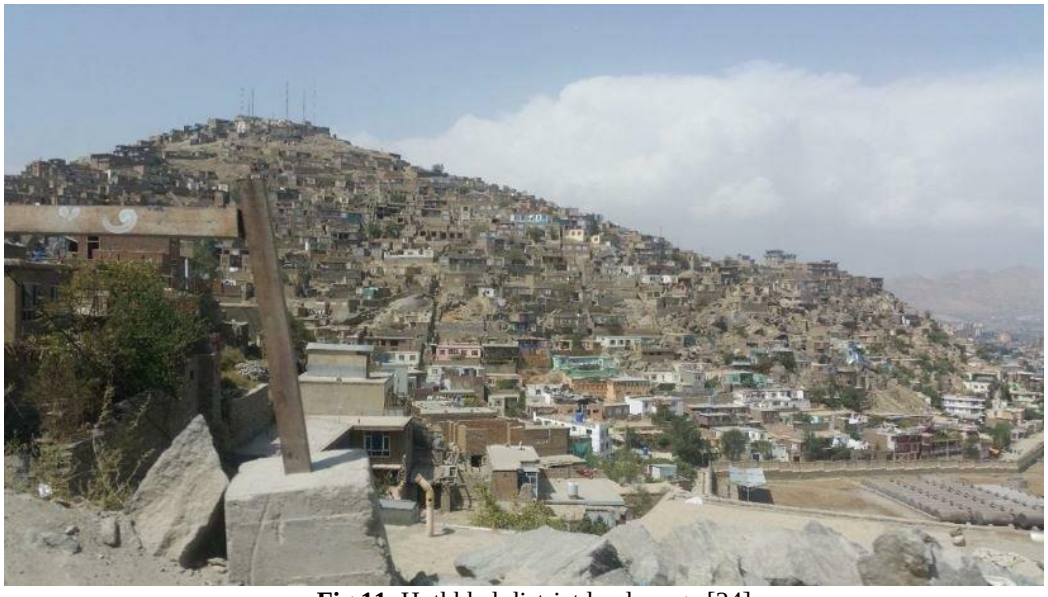


Fig.11. Hothkhel district land usage [24]

7.1.2. Case Study 2: Afshar District - Post-Conflict Reconstruction

The districts of Afshar experience with community-led reconstruction following conflict-related destruction, which indicates the viability of step-by-step approaches in post conflict settings [19]. The community organized its response to damage and destruction, which included communal reconstruction planning, mobilization of resources, and improvement implementation [19].



Fig. 12. Satellite view of Afshar, 5th District, illustrating post-conflict residential densification, irregular street patterns, small plot subdivisions, and incremental housing expansion [25].



Fig. 13. Afshar District Key factors (Author)

7.2 International Comparative Case Studies

7.2.1. Case Study 3: Orangi Pilot Project, Karachi - Community-Led Infrastructure

This project is located in Karachi, Pakistan, which offers a globally renowned paradigm of community-led infrastructure development that is mostly applicable to the situation in Kabul city.

The project's approach to sanitation improvement, housing modifications, and economic development teaches important insights about scaling up incremental housing approaches.



Fig. 14. Orangi pilot project

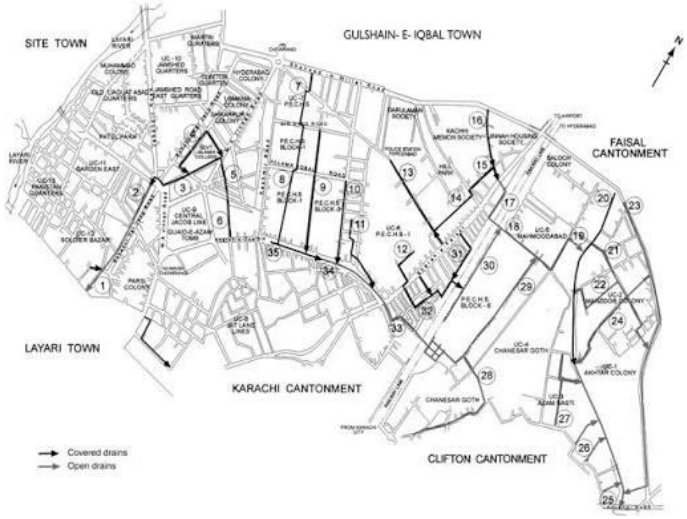


Fig. 15. Location of the Orangi pilot project

7.2.2. Case Study 4: Elemental Housing, Chile - Half Houses

“Half houses” Concepts of Alejandro Aravena’s offer some methods for integrating professional design with user completion that might be applied to the Kabul city situation. These methods provide basic frameworks and essential services while allowing inhabitants to tailor housing to their specific needs.

Relevance for Kabul:

These incremental housing developments can be adapted to Kabul’s situation perfectly. As they are based on household capacity, an increase in development in Kabul city is also based on the capacity of the household, and furthermore, the need for customization and

changes over time is necessary for Kabul's society, which these incremental projects are capable of. The traditional techniques combined with an incremental strategy help make cost-effective houses while maintaining the quality requirements according to users' needs, and they can be a scalable model for implementing in different scales.
Incremental development can be adjusted with varying climates of Kabul city while being able to accord with Afghan building techniques and the Afghan socio-cultural situation. Local material availability raises the level of relevance of the incremental strategy to Kabul's situation, and adding skilled local laborers turns the situation in favor of easy implementation of the incremental housing strategy in Kabul city.



Fig. 16. Quinta Monroy Housing Project, illustrating the "half-house" model in initial phase [26], [27].



Fig. 17. Quinta Monroy housing units, illustrating the situation of houses after expansion [26], [27].

7.3 Proposed Model Settlement

7.3.1. Design Concept: A hypothetical model village highlights how the integrated framework might be used in the Kabul situation, combining the best components from successful case studies with local adjustments.

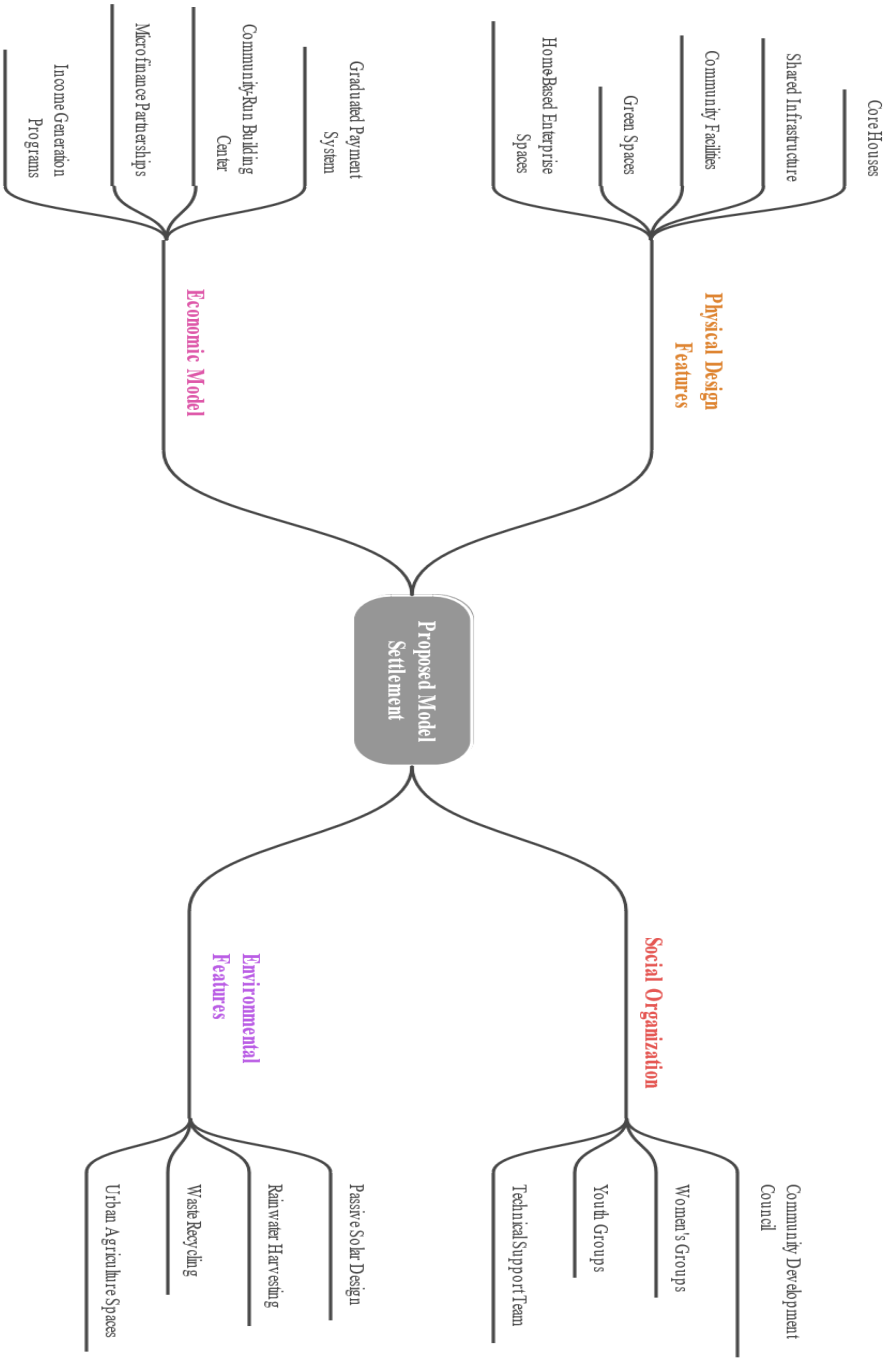
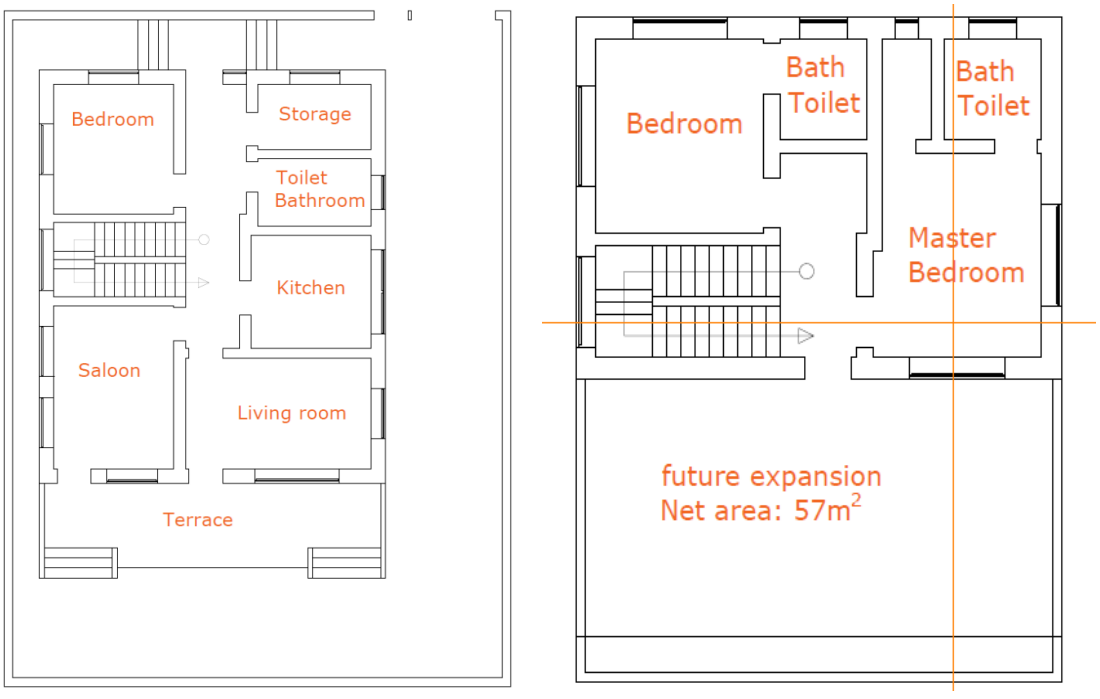


Fig. 18. Proposed model settlement design (Author)

8. Technical Drawings



(a) (b)

Fig. 19. a: Yard & First floor plan, b: Second floor plan with future expansion(Author)

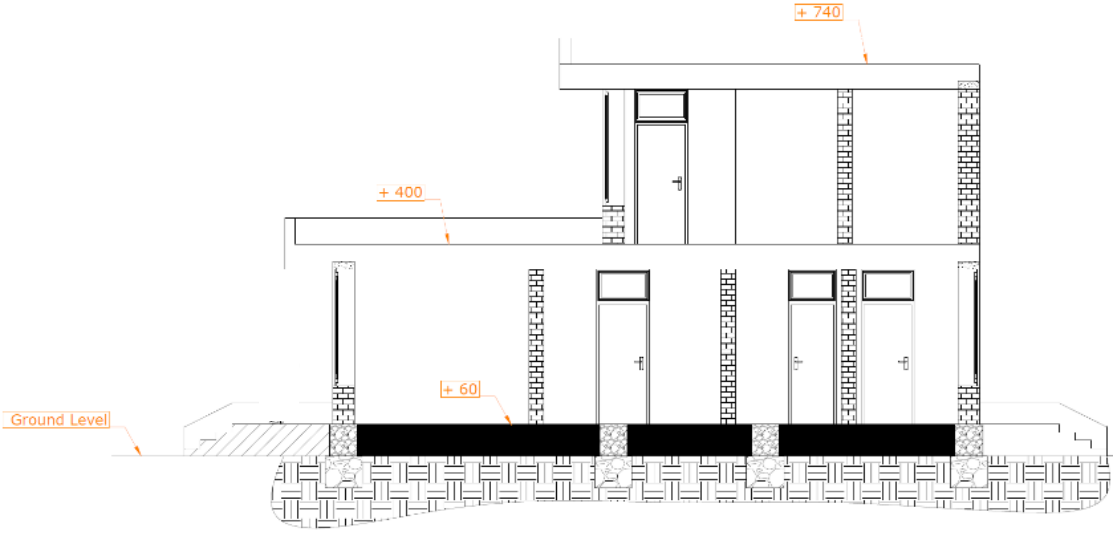


Fig.20. Section A-A (Author)

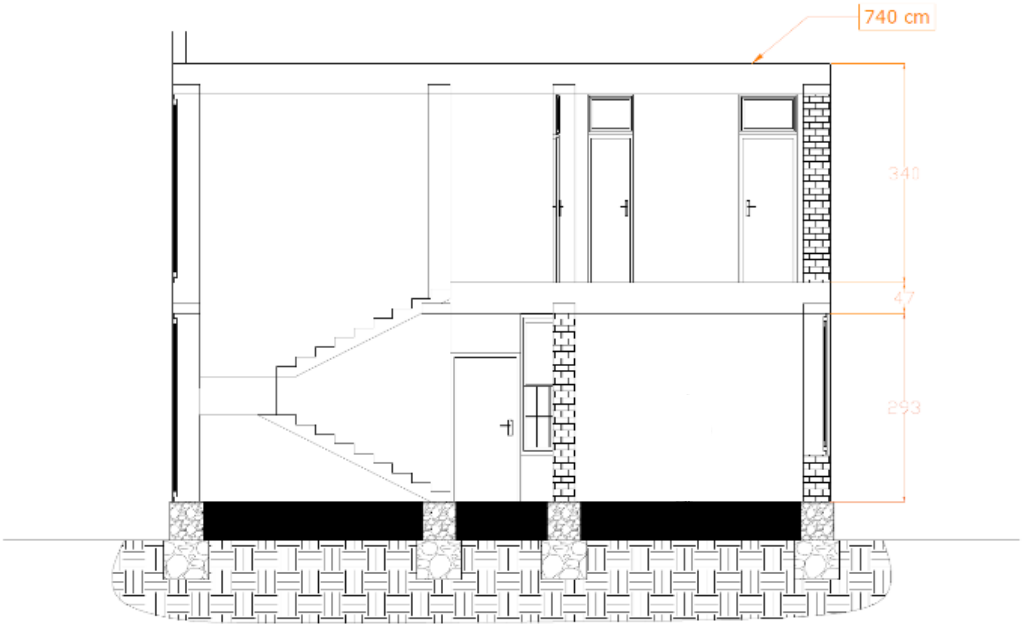


Fig.21. Section B-B (Author)

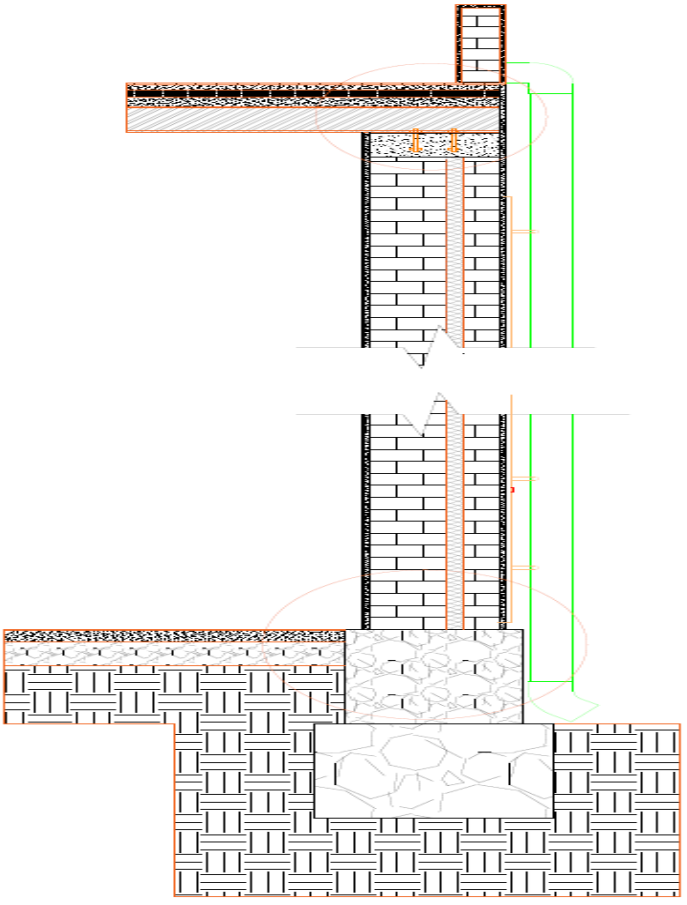


Fig. 22. Wall section (Author)

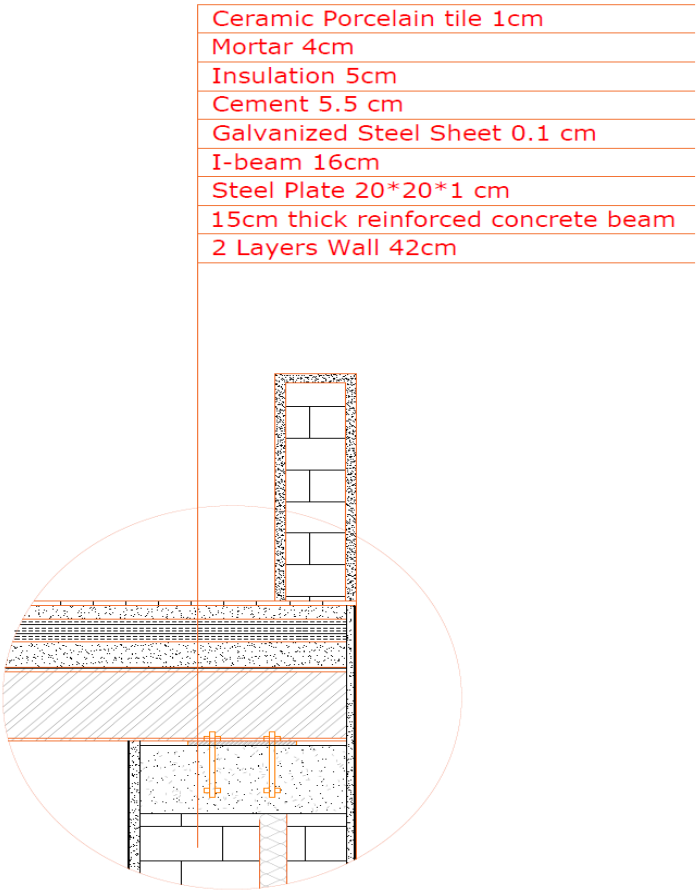


Fig.23. Roof detail, Illustrating Affordable material (Author)

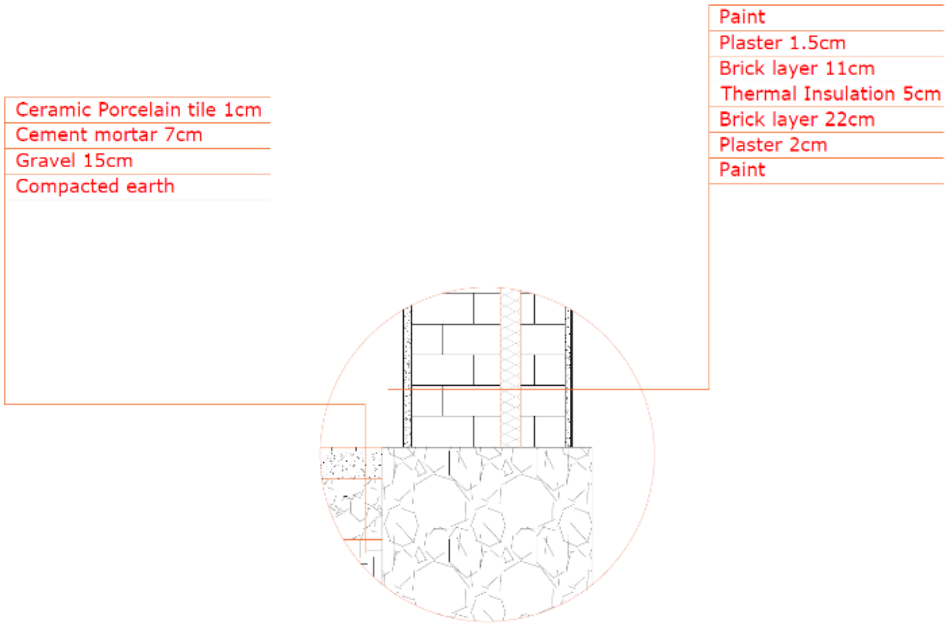


Fig. 24. Wall detail- CSEB (Author)



(a)



(b)



(c)



(d)



(e)



(f)



(g)



(h)

Fig. 25. a: Proposed neighborhood, b: Proposed neighborhood, c: Proposed neighborhood, d: Proposed house, e: Illustrating the 3D, f: showing the yard, g: Illustrating future expansion area, h: Proposed model

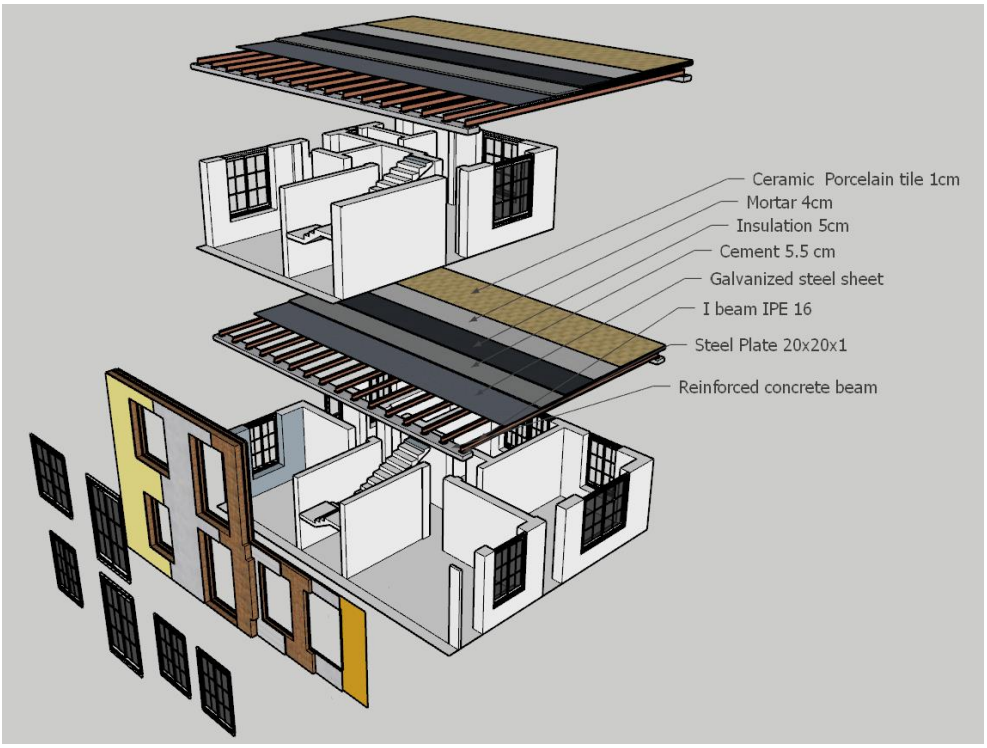


Fig. 26. 3D of roof material (Author)

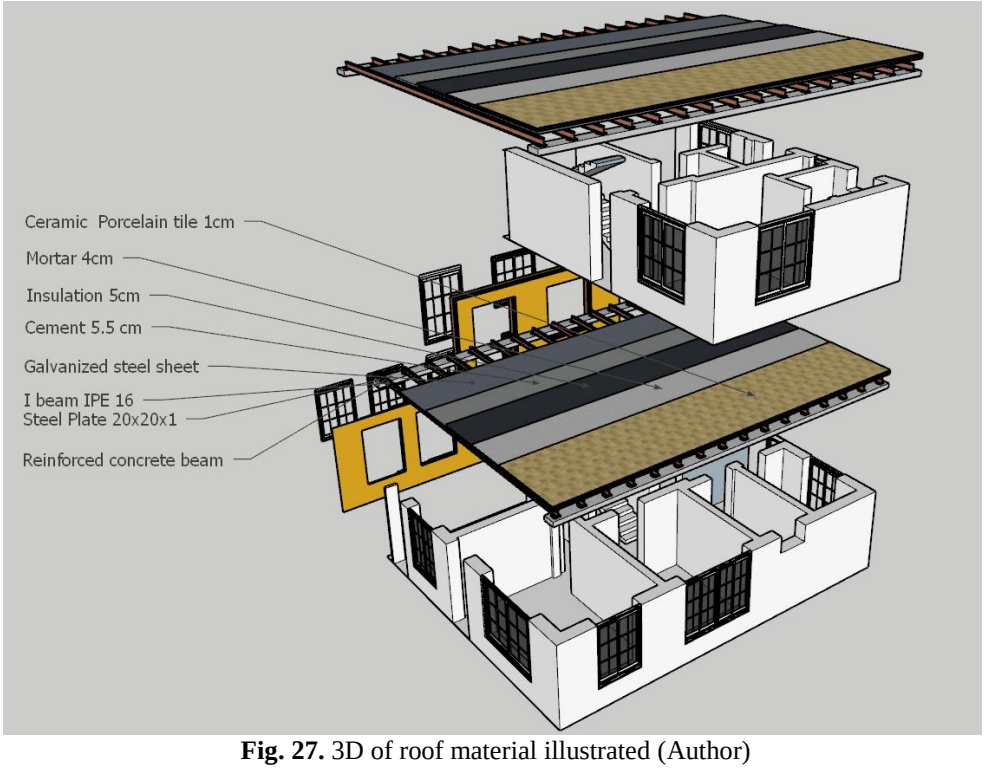


Fig. 27. 3D of roof material illustrated (Author)

9. Policy Recommendations

9.1. Legal and Regulatory Framework

- Assessing and refurbishing the building codes to best comply with the incremental development strategy while considering safety and security standards.
- The processes for approval of incremental projects must be simplified.
- Developing legal frameworks for collective ownership and land trusts.
- Create legal frameworks for the protection of incremental households.

9.2. Financial Policy

- Establish a loan guarantee program backed up by the government, for incremental housing.
- Developing tax stimulus procedures for sustainable materials and techniques.
- Creating a funding source for incremental development with multiple origins.

9.3. Urban Planning Policy

- Increase the range of incremental housing to citywide planning
- Create flexible zoning regulations to allow vast incremental developments
- Develop a mechanism to allow active community participation in incremental development processes
- Establish integrated systems to regulate informal settlements

10. Conclusion and Future Directions

10.1. Summary of Findings

This study shows that cheap incremental development is a viable and sustainable way to address Kabul's severe housing issue. The suggested integrated framework, which brings together participatory planning, sustainable building, secure tenure, and inclusive governance, can produce a complete solution that tackles the complex, linked nature of urban housing issues.

The research key findings are included:

10.1.1. Technical Feasibility: The Open Building Approach (OBA) can be successfully adapted and applied to the Kabul situation. This approach can be very useful by integrating traditional Afghan building traditions with modern sustainable technologies. The use of indigenous resources, particularly CSEB, offers a cost-effective and environmentally friendly construction alternative.

10.1.2. Economic Viability: Incremental housing is also consistent with the reality of Kabul inhabitants, which allowing household to invest in their homes and upgrades overtime based on their means and priorities. The technique can lower early costs while allowing for an ongoing process.

10.1.3. Cultural Appropriateness: The framework is also consistent with traditional Afghan arrangement such as privacy requirements and their social systems, while including modern facilities and safety measures. Community participation can guarantee that solutions address actual needs and preferences.

10.1.4. Social Impact: Incremental housing maintains and improves neighborhood networks while improving living circumstances. The method generates job possibilities, strengthens local capability, and improves social cohesion.

10.1.5. Institutional Feasibility: The framework may be applied within current institutional structures, hence increasing capacity for more effective urban governance. Multi-stakeholder collaborations have the potential to overcome individual institutional restrictions.

Reference

[1] Central Statistics Organization of Afghanistan (CSO). (2022). Afghanistan demographic and health survey 2022. CSO Afghanistan.

[2] Ministry of Urban Development and Housing (MUDH). (2020). National Urban Policy of Afghanistan. MUDH.

[3] Huchzermeyer, M. (2011). Cities with 'slums': From informal settlement eradication to a right to the city in Africa. UCT Press.

[4] Slum Dwellers International (SDI). (2019). Community-led upgrading: Lessons from SDI's experience. SDI.

[5] Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2015). Geographic information science and systems. John Wiley & Sons.

[6] Burrough, P. A., & McDonnell, R. A. (2015). Principles of geographical information systems. Oxford University Press.

[7] Department for International Development (DFID). (1999). Sustainable livelihoods guidance sheets. DFID.

[8] Government of Afghanistan. (2021). National Priority Programs: Framework for development. Government of Afghanistan.

[9] . Rodriguez, A., & Sugranyes, A. (2004). The problem of informal settlements. In Los con techo: Un desafío para la política de vivienda social (pp. 71-124). Ediciones SUR.

[10] Sharifzai, A., Wardak, M., & Stanekzai, J. (2016). Sustainable policy approaches for Afghan cities: Lessons from community-led development. Urban Studies International, 29(4), 112-128

[11] Chambers, R., & Conway, G. (1992). Sustainable rural livelihoods: Practical concepts for the 21st century. Institute of Development Studies.

[12] Hickey, S., & Mohan, G. (2004). Participation--from tyranny to transformation?: Exploring new approaches to participation in development. Zed Books.

[13] Turner, J. F. C. (1976). Housing by people: Towards autonomy in building environments. Marion Boyars Publishers.

[14] Chambers, R. (1994). The origins and practice of participatory rural appraisal. World Development, 22(7), 953-969.

[15] Bredenoord, J., & van Lindert, P. (2010). Pro-poor housing policies: Rethinking the potential of assisted self-help housing. Habitat International, 34(3), 278-287.

[16] Ahmadi, R., & Lashkaripour, G. (2019). Urban development patterns in Kabul's Hothkhel district: Formal and informal settlement interactions. Journal of Afghan Urban Studies, 12(3), 45-62.

[17] Hassan, A. (2006). Orangi Pilot Project: The expansion of work beyond Orangi and the mapping of informal settlements and infrastructure. OPP-RTI.

[18] Sarwari, M., Nazari, A., & Hashemi, S. (2022). Twin-track approach for informal settlement improvement in Kabul: Integrating in-situ upgrading with planned development. Journal of Urban Planning and Development, 148(2), 04022001.

[19] Rostami, S., Ahmadi, M., & Karimi, H. (2021). Post-conflict reconstruction and community resilience in Kabul's Afshar district. International Journal of Disaster Risk Reduction, 58, 102-115.

[20] Holling, C. S. (1973). Resilience and stability of ecological systems. Annual Review of Ecology and Systematics, 4(1), 1-23.

[21] Walker, B., & Salt, D. (2006). Resilience thinking: Sustaining ecosystems and people in a changing world. Island Press.
[22] Meerow, S., Newell, J. P., & Stults, M. (2016). Defining urban resilience: A review. Landscape and Urban Planning, 147, 38-49..
[23] Central Statistics Organization of Afghanistan (CSO). (2022). Afghanistan demographic and health survey 2022. CSO Afghanistan.
[24] https://doi.org/10.24193/JSSP.2022.2.01 journal of settlement and spatial planning.
[25] https://earth.google.com/web/search/afshar+district+kabul
[26] Aravena, A., & Iacobelli, A. (2016). Elemental: Incremental housing and participatory design manual. Hatje Cantz Verlag.
[27] ELEMENTAL. (2004). Quinta Monroy housing project, Iquique, Chile. https://www.elementalchile.cl
[28] Monroy, J. Q. (2008). Incremental housing and urban integration: The case of Quinta Monroy. Harvard Design Magazine, 28, 1–7.
[29] United Nations Human Settlements Programme (UN-Habitat). (2012). Going incremental: Housing design and planning strategies. UN-Habitat.