

Reassessing the living standards: Baurara Hussain Bari, Lucknow – India

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Abstract— Rural development is stated as the process of improving and upgrading the quality of life and economic prospects of people living in rural settlements. According to 2011 Census 68.84% of population resides in villages. It is considered as a technique pointing towards discovering approaches to improve the rural livelihood along with the participation of the rural community to meet the required need of the rural area giving them a sense of belongingness to that built environment. There are various strategies that could be opted for betterment of the rural redevelopment such as the utilization of the local resources, establishment of small-scale industries, promoting local farms etc. Also, rural development is a continuous process of not only increasing the level of per capital income in the rural people but also improving the standard of living by improving multiple sectors such as health, education, housing, recreation and security. Lucknow is a state in India Uttar Pradesh that holds the cultural history of Nawabs and their settlements in the country. Better living standards of rural development can stimulate and enhance the rural economy, create new prospects of jobs and help maintain critical and vital ecosystem.

The basic objective of this research paper is to find a suitable design approach to improve the living standards of the rural people by providing ways to develop the built environment of Lucknow: Baraura Hussain Bari. However, to provide maximum benefit to the development of the case area, there is a need for coordination among various Government agencies, NGOs, Self-help groups and other institutions engaged in the betterment of the rural areas. This will also help in minimizing and bridging the rural-urban gap in terms of basic infrastructure and facilities essential for 'Sustainable Development of a rural settlement, which is not addressed by the policies and the development agencies in terms of developments.

Keywords— Rural Development, Sense of belongingness, Living standards, Critical ecosystems, Community Participation, Settlement planning

I. INTRODUCTION

Throughout the years, Baraura have been developed as a settlement where the pioneers have been either migrants or inhabitants residing, who have been a part of this settlement since long. The custom of Baraura Hussain Bari has been significantly into chikankari work as the real brokers and real work calling.



Fig 1: map of India highlighting Uttar Pradesh and marking Lucknow

The paper emphasizes on sustainable rural development that is important to economic, social and cultural background (Dr. Manish Tanwar, 2011). The settlement is a part of a growing population that had started to become unhealthy and unlivable where the community had started to accept the poor conditions and live with that (IDFC, 2012-13). The paper emphasizes on the improvement of the residential plans and rural sectors with the issues of hygiene, gathering spaces, parking areas, health hazards and numerous more (Sahu, 2018).

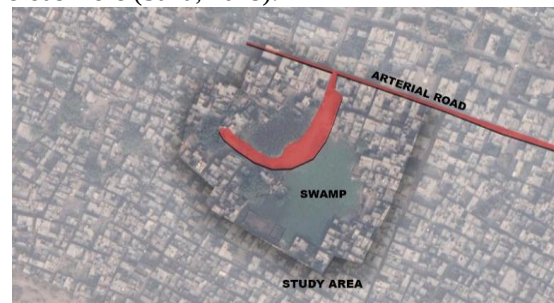


Fig 2: Baraura Hussain Bari, highlighted study area

The proposed is part of an academic project which critically analyses the need of redevelopment and the impact that it could lay upon the lives of the residents. The paper also focuses on presenting design proposal for the improvement in the living conditions of the residents.

II. LITERATURE REVIEW

The developing requests and needs of lodging leads to improvement with smothering the country communities and demolishing the legacy and the substance of culture of the zone and the nation. Urbanization states to allow superior living guidelines but the reality appears the incongruity of that (Cecilia Taco, 1998). The academic approach of the paper shows through the case study about the living conditions of the site in Baraura Hussain Bari in Lucknow Uttar Pradesh India (Raheja, 2015). The improvement in the quality of life (Rashmi Hullalli*, M. R. Gudadinni, Shailaja S. Patil, 2014) and redeveloping the area in order to give and establish better health conditions and provide improved living scenario (Joseph Kihika Kamara 1,2,*, Moses Galukande 3 Florence Maeda 4 Andre M. N. Renzaho 6, 2017). Studying from the grassroot level about the local conditions of the site from its conditions of living to the commercial and market connectivity, emphasizing to improve the same (Yakanna, 2017). Relationship with the growing population and the health goes hand in hand for the redevelopment of the area.

III. TRADITIONAL BACKGROUND OF THE STUDY AREA

The village has been a part of history of Lucknow as a ward in the state. It holds many residents who are involved in the traditional making of Chikankari work which is the main culture of Lucknow and depicts its past. Chikankari work has been a work that is native to the city of Lucknow (Pandey, 2018). The village consists of a set traditional and Cultural values.

IV. BUILT ENVIRONMENT PROFILE OF THE AREA

The area contains a mixed living pattern where both Hindu and Muslim population resides, having Muslim population in majority. The area holds a religion free boundary in the settlement (Das, 2019).

Assembly constituency: Lucknow central assembly

Lok Sabha constituency: Lucknow parliamentary constituency

Material and built-form Analysis as per census reports 2011

Table 1: House listing and housing census, 2011 table HH14

1. Households

Good	Bad	Dilapidate
43.7	54.8	1.5

2. Material analysis (Roof and wall)

Grass/thatch/bamboo/mud		Burnt bricks	GI/Metal/A C sheets
35.6		62.2	2.2
Grass/Thatch/bambo o	Mud/unburn t bricks	Burnt brick s	Any other
15.6	6.7	75.6	2.2

3. Roofing material

Mud	Cement
99.3	0.7

4. Number of dwelling rooms

No	1 room	2 rooms	3 rooms	4 rooms	5 rooms	6+ rooms
2.32	59.3	25.2	10.4	3	0	0

5. Married couples in each house

None	1	2	3	4	5+
17	63	14.8	4.4	0	0.7

6. Drinking water analysis

Tap water treated	Tap water untreated	Hand pump
6.7	82.2	11.1

7. Households having WC and bathroom in the homes

Having latrine	Not having latrine
17.8	82.2
Having bathroom	Not having bathroom
2.2	97.8

8. Households having kitchens

Having kitchen	Not having kitchen
1.5	98.5

9. Residents analysis

Permanent	Semi-permanent	Temporary
61.5	14.8	21.5
Serviceable	Non serviceable	Un classified
5.9	15.6	2.2

V. NEED FOR STUDY

The chosen zone has been taken into the issue for concentrate so as to comprehend the settlement example of the town the Baraura Hussain Bari in Lucknow that is a ward (Alam, 2016). The town holds the most extreme occupants getting engaged with the customary artistic expression of the Lucknow the Chikankari work that is the principle craftsmanship ability in Lucknow. The town holds a swamp in the center along which the settlement is occurring (G. Whitelaw, 2013), the swamp in the current condition appears as though an earth gatherer where all the sewage is being depleted out and the refuse is dumped in the swamp.

Fig 3: Map of Baraura Hussain Bari 2003, no swamp highlighting the main connection



Fig 4: Map of Baraura Hussain Bari 2005



Fig 5: Map of Baraura Hussain Bari 2008



Fig 6: Map of Baraura Hussain Bari 2010



Fig 7: Map of Baraura Hussain Bari 2012



Fig 8: Map of Baraura Hussain Bari 2017



VI. STUDY AREA

The zone taken for study is Baraura Hussain Bari, Hardoi street Lucknow. The territory pursues a settlement design as Radial arranging which is along the bog. Throughout the years, settlements have occurred taking up the territory and step by step settling along the bog. The bog went about as a water repository where the water used to get gathered and was utilized by the inhabitants for little needs, though with developing pilgrims the marsh began to transform into the landfill zone and sewage outlet for occupants making the territory very much uncovered and building up a smaller scale unfortunate region.

Fig 9: Ambedkar statue

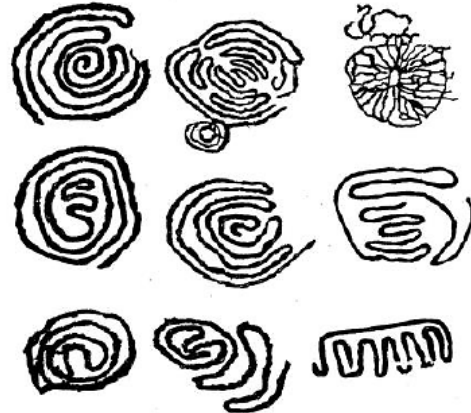


Fig 10: shading Devices Near Swamp



Fig 11: Radial planning concept

Fig 11: Radial planning concept



The lifestyle of the residents is to use the fetch water for basic needs that is washing clothes, cleaning domestic animals and the area is polluted by the same activities (Hirway, 1987).

The micro conditions attract various diseases and the living conditions are very risky for the residents (Anon., 1982). The area was found to have various gathering spots as trees and small nodes.

Fig 12: Graphic showing the shadow casted on streets due to narrow lanes and creating a micro gathering pocket.

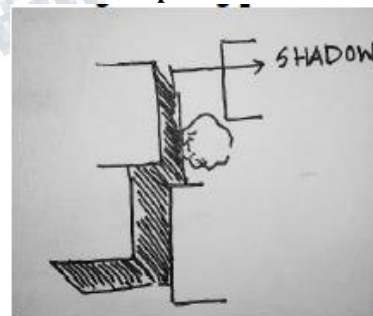


Fig 13: Settlement pattern of the study area.

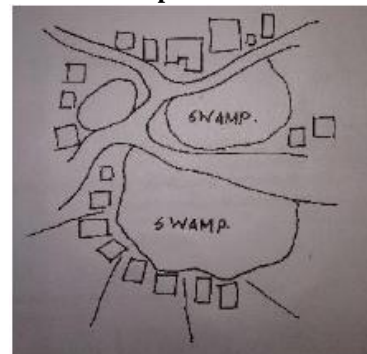


Fig 14: On-site sketches showing the current situation of the site.

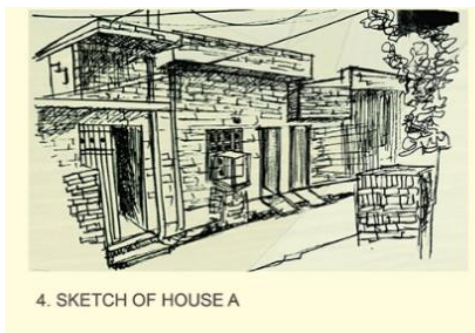


The houses are planned in a simple manner where it's simple in planning keeping the wet and dry areas separate where the gathering spaces are kept as the main entrance and following with the bedrooms and the kitchen (Shuji Funo, 2002).

Fig 15: plan of houses
A: Single bedroom house
B: Double bedroom house



PLAN OF HOUSE B

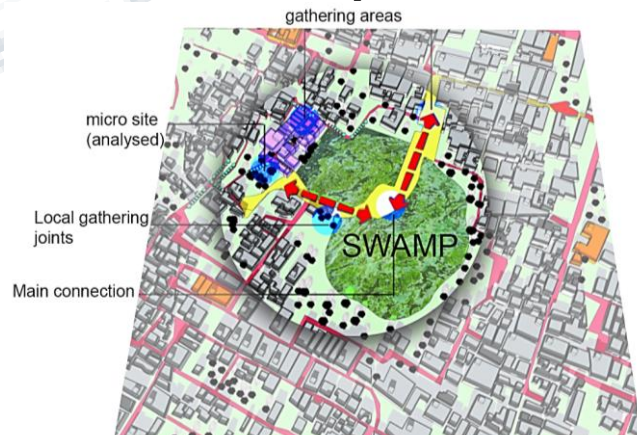


VII. DESIGN PROPOSALS

On the analysis of the site the problems faced by the residents are the problems in living standards, the cleanliness issues, the health hazards due to micro conditions, connectivity and the condition of swamp in the local site (Okhovvat, 2016).

Over the examination of the conditions the plan proposition stresses on the living conditions (Karthikeyan2, 2013), feeling of belongingness, neighborhood condition enhancements, cleaning the marsh and settling stopping issues (Peggy Teo, 1996). The occupants hold bikes as the significant vehicle for transportation and close about each tenth house are the holders of a little family estimated vehicle precedents: nano, alto, and so on.

Fig 16: Site plan highlighting the site and the proposal area showing nodal connectivity of the site across the swamp



The marsh is isolated in two sections by a sloppy way made by areas and is utilized as the primary network by the inhabitants. The examined zone was a nearby path comprising about 20-30 houses connecting the bog. (Shalheh, 2018) It was on a plinth raised on a tallness of about 1000 mm. over the marsh. The houses were of single

room or twofold room in major.

Fig 17: Isometric view of the studied area.



The studied area consisted of the domestic animals roaming freely and garbage lumps collected on junctions or free available plots, which raised to a need of redevelopment of the area and need of a hygiene and a clean environment.

The hubs are treated as the social affair spaces utilized for areas to come and sit in gatherings (Carmona, 2019) and pursued to the arranging plans are where ladies met up and do family unit works or private companies. Significantly there the verandahs are involved for the chikankari work which is the fundamental occupation.

Fig 18: Elevation showing the lumps of garbage and the domestic animals roaming freely.

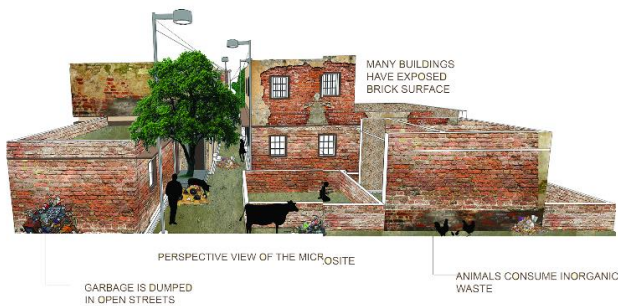
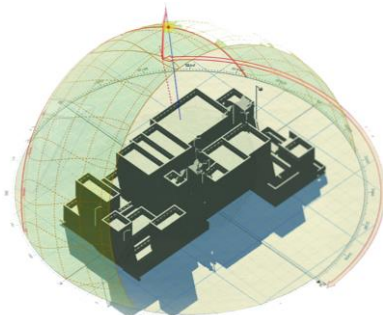


Fig 19: Sundial of the micro site showing the shaded areas and the cluster.



The area was surveyed and settlement analysis was done which presented the lacked of gathering spaces, poor hygiene conditions, no parks for children and events gatherings along with various other issues to which the respond could be the proposal of the redevelopment of the settlement with improved living conditions and better planning scheme for the residents (Chengli Tang, 2018). The area in the redevelopment would include better living standards and clean environment creating better connectivity and sense of belongingness (Zohreh Yousefi, 2017).

Fig 20: Present living conditions of the site



Fig 21: Elevation of the site



Fig 22: Elevation of the site



Fig 23: Sections of the studied area



Fig 24: Section of the studied area

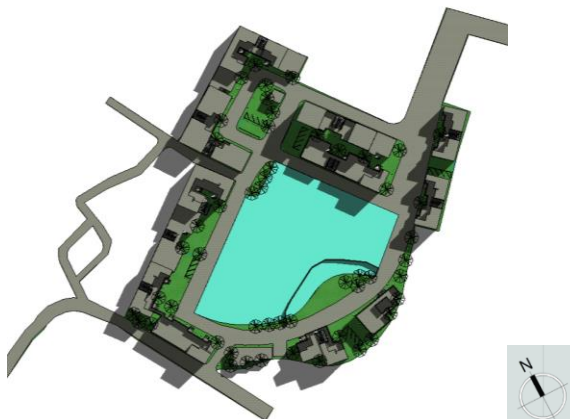


The elevations depict the façade of the building and the level variations in the planning reaching from ground floor to ground plus two levels in the houses making it different in single bedroom to 4-bedroom planning in different houses.

The proposed planning shows the division of units in the planning scheme keeping the units different from one other, keeping in mind the need of connecting spaces, interaction areas, providing toilets and bathing areas and kitchen to every house, providing the clean environment (Mohammed Firoz C, 2014).

The study of the area showed how the different living standards are observed and how different occupations segregate the living style and the change in the typology of the built pattern (Kumari Moothedath Chandran, 2015). The analysis of the family volumes and the members showed how the occupants responded to the betterment of the house conditions in terms of better living and provision of a healthy environment. The proposed planning scheme also emphasize over the cultural context of the area with the planning conditions and basic requirements and the design solution is a response to the same (YANG Ren, 2015).

Fig 25: Proposed site plan



The site plan is designed keeping the prerequisites into thought where the network is improved and the redevelopment is finished keeping the social setting into consideration and redevelopment is done keeping in mind the expectations of the residents (Kumari Moothedath Chandran, 2015).

The area is divided on the basis of units U1, U2, U3, U4 & U5. The units are planned keeping the basic needs and hygiene into consideration and are well planned with separate areas as kitchen in every house, water closet WC and bathing areas with living spaces and bedrooms (Doloi, 2018).

The proposed planning would help the residents to get a healthy life and better living standards (Anoop C K, 2018).

7.1 Unit 1

The smallest unit of the proposal for economically weaker section (EWS) for 24 squares meter where residents who has a small family accommodating three to four residents.

The house consists of a living space, single bedroom, WC, bathroom and a kitchen along with it is the open verandah.

The existing conditions of this area of land is not well planned where the area is divided and lacks proper sanitation facilities and other facilities.

In proposed plan the residents will be given a better life with proper areas and facilities.

Fig 26: Proposed EWS unit – U1 – 24 sqm.

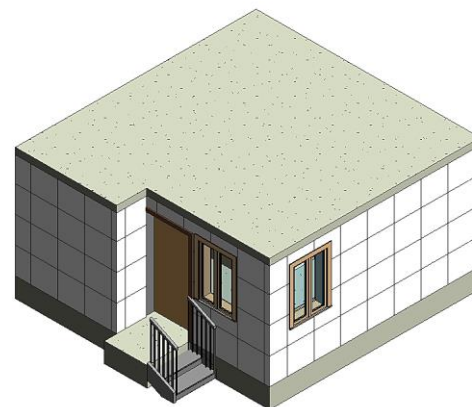


Fig 27: Plan of unit 1 – 24 sqm.

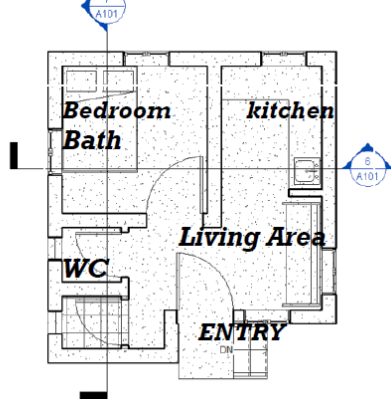
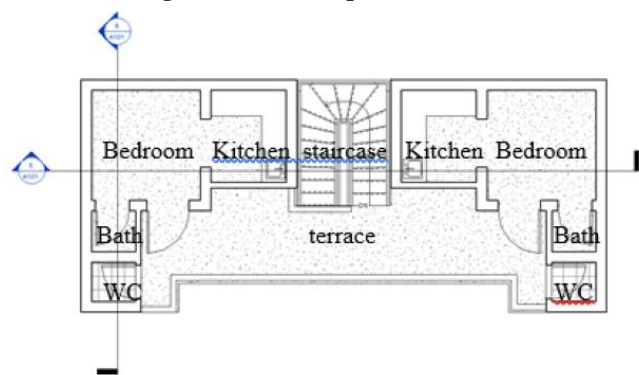


Fig 30: First floor plan of unit 2 A



7.2 Unit 2 A

The second unit of the proposal for 24 squares meters where the cluster is of two plans which is G+1 structure where the ground floor is 24 sqm and the first floor is 18 sqm.

The ground floor consists of a living area, kitchen, WC and bath and single bedroom. The first floor consists of a bedroom, kitchen, WC and bath area.

The unit is designed for a medium family where there are two bedrooms under small piece of land.

Fig 31: Section unit 2 A

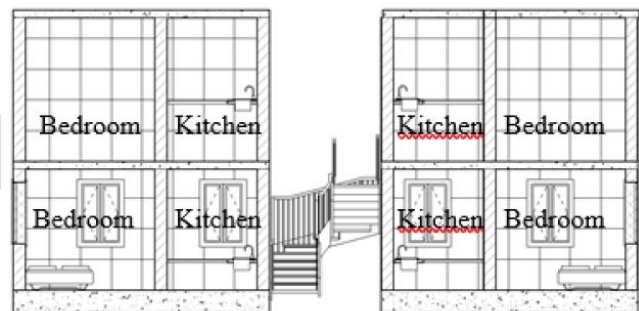


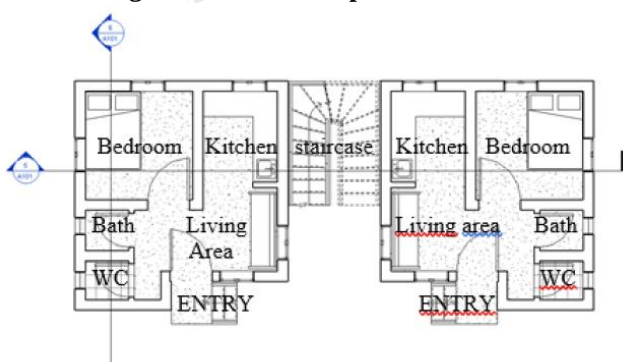
Fig 28: Proposed unit- U2A 24 sqm GF and 18 sqm FF



Fig 32: Elevation unit 2 A



Fig 29: Ground floor plan of unit 2 A



7.3 Unit 2 B

The third unit 2B is proposed for 36 sqm where the bunch is of single arrangement possessing a bigger real estate parcel. The house plan comprises of 2 rooms, kitchen, living zone, WC and shower territory in the house plan. The bunch comprises of two indistinguishable plans associated with the normal stairway to the patio. The passageway of the house is associated by the mutual yard territory where it can go about as the social event space of the inhabitants that is a piece of the social setting of the neighborhood. The house is a sort of LIG unit having 2 rooms and a territory of 36 sqm.

Fig 33: Proposed unit – U2B 36 sqm GF

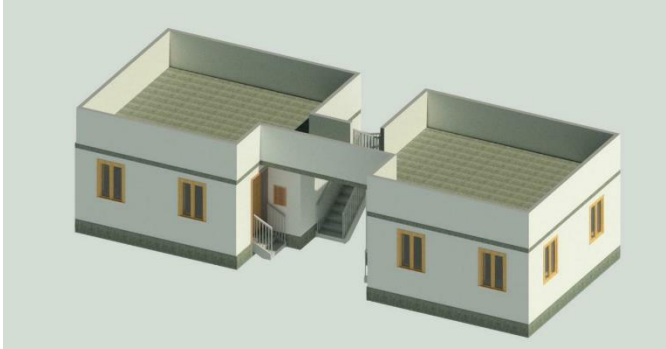


Fig 34: Plan ground floor unit 2B – 36 sqm

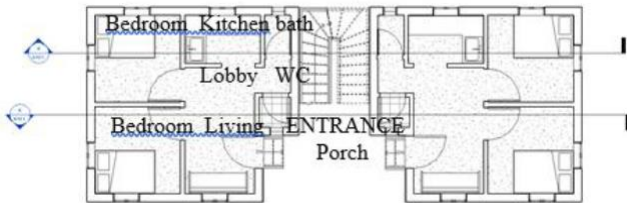


Fig 35: Section unit 2B



Fig 36: Section unit 2B

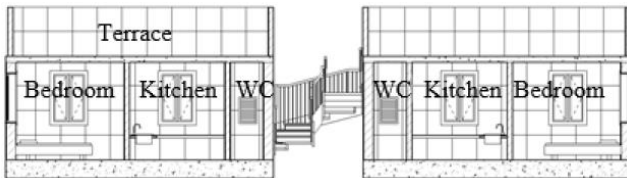


Fig 37: Elevation unit 2B



7.4 Unit 3 A

The fourth unit 3A is proposed for 45 sqm where the cluster is of single plan occupying a larger piece of land.

The house plan consists of 2 bedrooms, kitchen, living area, bath and WC. The units have larger space provided to the residents in terms of the bedroom area and more of gathering spaces.

The plan is a cluster of ground plus one structure keeping the floor plans identical with the ground and the first floor connected with a common staircase and a porch area.

The cluster will provide the residents with a better living standard and a good space for their gatherings.

Fig 38: Proposed unit –U3A 45 sqm GF+FF

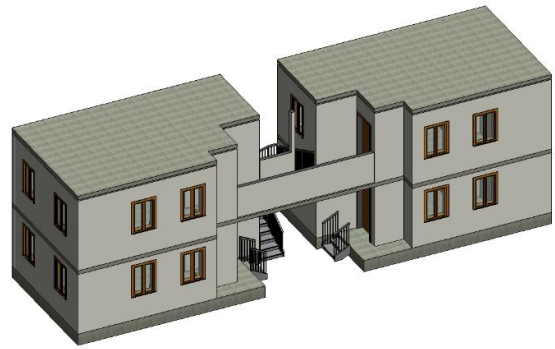


Fig 39: Plan ground floor and first floor unit

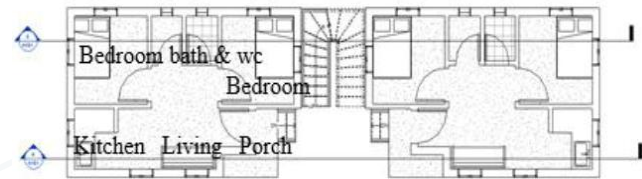


Fig 40: Section unit 3A

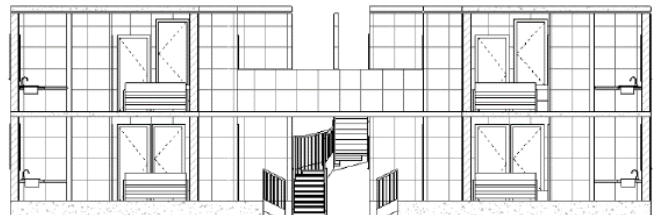
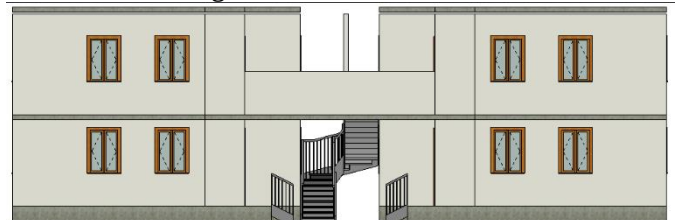


Fig 41: Elevation unit 3B



7.5 Unit 3B

The fifth unit 3B is the largest of all the three units' clusters. The unit consists of ground plus two units where the ground floor is 45 sqm and plus two units are 25 sqm each. The ground floor consists of 2-bedroom, kitchen, living space, gathering space, WC and bath area. Where the upper two floors consist of single bedroom floors along with a kitchen, living area, WC and bath area.

The cluster consists of two identical floor plans connected with a common staircase core.

Fig 42: Proposed unit –U3B 45+25+25 sqm



Fig 43: Ground floor plan unit – 3B 45 sqm

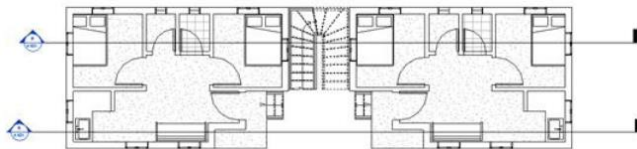


Fig 44: First floor plan unit – 3B 25 sqm

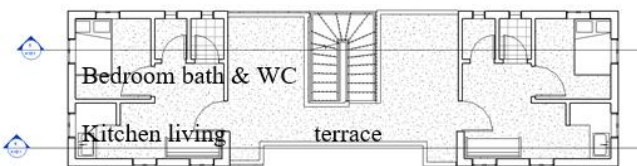


Fig 45: Second floor plan unit – 3B 25 sqm

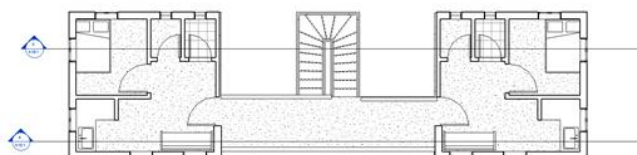


Fig 46: Section unit 3B

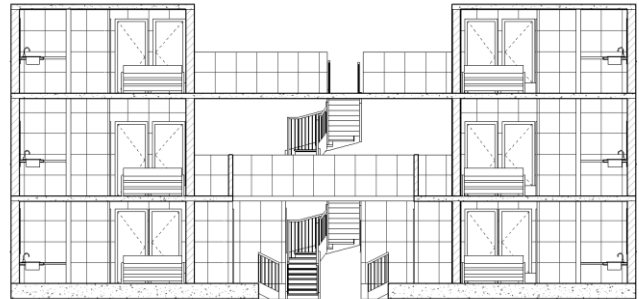
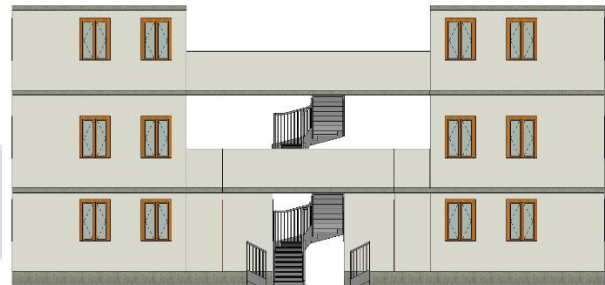


Fig 47: Elevation unit 3B



The proposed clusters are arranged on the site in order to create a sense of belongingness among the residents and the local customs and beliefs are carried forward (Duygu Gokce, 2017). The culture of the area is well maintained by proposal of the lake view garden and commercial zone and even introduction of various small gathering pockets being created as a part of planning. (Rajashree Kotharkar, 2012)

The main arterial road already existing on site and improving the planning scheme that connects the site.

At the edge of the road the units start in order to create a visual barrier to the site and providing privacy to the redeveloped area. The visual barrier gives the visitors to the site the view of lake. In the proposed planning there is a lake view park that is being proposed and an Anganwadi is being produced keeping the health hazards and the need of basic medical aid into consideration.

Fig 48: Ground floor plan with cluster arrangement – PROPOSED



Fig 49: First floor plan with cluster arrangement – PROPOSED



Fig 50: Second floor plan with cluster arrangement – PROPOSED

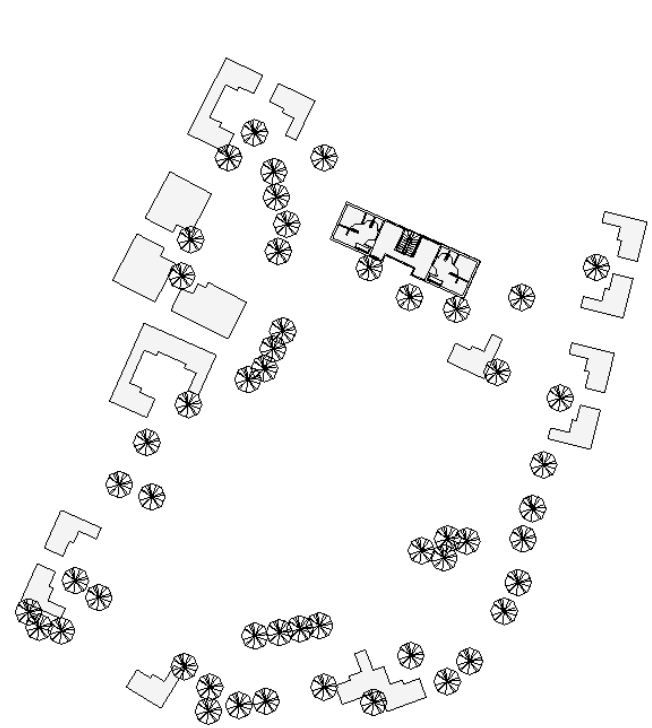


Fig 51: Site 3d – PROPOSED with cluster



Fig 52: Site elevation – PROPOSED



Fig 53: Site elevation – PROPOSED



Fig 54: Site elevation – PROPOSED

Fig 6: Site section – PROPOSED


VIII. CONCLUSION

The investigation of the Baraura Hussain Bari in Lucknow is a conventional town which had a poor living condition (Nor Rashidah Zainal, 2012). Through this paper the researcher had tried to investigate the living standards of the community and tried to develop more suitable living condition for their well-being.

The primary point was to comprehend the social setting of the inhabitants and to understand and comprehend the circumstance and propose a better life for the occupants. The proposition was made out from the neighborhood analysis of the site and its nearby conditions which demonstrated the living style of the community. The proposition incorporated the groups of the plot regions which were examined and surveyed from the site visit and new plans was made in agreement to the community.

IX. FUTURE ASPECT

The future aspect of the rural redevelopment could possibly be the actual the site from micro level to macro level could be a part of providing better living standards (Ghosh, 2017), providing better opportunities for locals for small businesses and promoting the traditional art form of the city (Joanna A. Pawlowicz, 2017), Chikankari work as the main skill. The government could initiate the development policies for better conditions of the site and the residents. construction of roads, proper educational institutions, medical aids, cleaning and maintaining area, provision of fresh treated water to all and various other scheme could be very helpful for the development of the area and the residents (Mathur, 2011)..

REFERENCES

- [1] Alam, A. A., 2016. Rural settlements dynamics and the prospectes of densification strategy in rural Bangladesh. Springer plus , pp. 1-11.
- [2] Anon., 1982. Rural housing in India. Habitat International, 6(4), pp. 513-525.
- [3] Anoop C K, N. N. M. J. P. N. P. R., 2018. Technological and Green Solutions for Rural House Construction – A Review. International Research Journal of Engineering and Technology (IRJET) , 5(6), pp. 2291-2293.
- [4] ASDSFSD, 122324. DVXFBCGGB. DVSFBCGB, p. W2E2E.
- [5] Carmona, M., 2019. Principles for public space design, planning to do better. Springer, volume 24(URBAN DESIGN International), p. pages47–59(2019).
- [6] Cecilia Tacoi, 1998. Rural-Urban ineractions: a guide to literature. Environment and urbanization , Volume vol. 10, no. 1, pp. 147-166.
- [7] Chengli Tang, Y. H. G. Z. S. Z. & L. X., 2018. Optimizing the spatial organization of rural settlements based on life quality. Journal of Geographical Sciences volume, p. pages685–704.
- [8] Das, i., 2019. Politics of a Transformative Rural: Development, Dispossession and Changing Caste-Relations in West Bengal, I. South Asia Multidisciplinary Academic Journal.
- [9] Doloi, V. I. K. & H. K., 2018. Understanding housing design and expectations of Assamese rural communities: Case Study Selection. Engaging Architectural Science: Meeting the Challenges of Higher Density: 52nd, p. 619–626.
- [10] Dr. Manish Tanwar, 2011. The Dimensions of Indian Rural Development: Issues and Challenges. International journal of contemprary practice , 1(Rural redevelopment), pp. 1-33.
- [11] Duygu Gokce, 2017. Sense of place in the changing process of house form: Case studies from Ankara, Turkey. Environment and Planning B: Urban Analytics and City Science, pp. 1-25.
- [12] G. Whitelaw, P. H. & M., 2013. Restoration of swampland: planning guidelines and reccomendations. Taylor & Francis , Volume 14 no 2, pp. 1-9.
- [13] Ghosh, M., 2017. Infrastructure and Development in Rural India. The Journal of Applied Economic Research, p. 256–289.
- [14] Hirway, I., 1987. Housing for the Rural Poor. Economic and Political Weekly, 22(34), pp. 1455-1460.
- [15] IDFC, 2012-13. India rural development report, s.l.: orient black swan.
- [16] Joanna A. Pawlowicz, E. S., 2017. CONCEPT OF RURAL SPATIAL PLANNING IN LINE WITH SOCIAL EXPECTATIONS. ENGINEERING FOR RURAL DEVELOPMENT, pp. 1186-1190.
- [17] Joseph Kihika Kamara 1,2,*, Moses Galukande 3 Florence Maeda 4Andre M. N. Renzaho 6, 2017. Understanding the Challenges of Improving Sanitation and Hygiene Outcomes in a Community Based Intervention: A Cross-Sectional Study in Rural Tanzania. Int. J. Environ. Res. Public Health, pp. 1-16.
- [18] Karthikeyan2, P. N. A. M., 2013. Application of science and technology in rural areas (ASTRA): An

- Ethiopian context. academics journals , pp. 1-13.
- [19] Kumari Moothedath Chandran, N. C. B. & M. M., 2015. Transition Studies in Rural Building Typologies: A Case-study. Conference Paper- CISBAT 2015, pp. 345-350.
- [20] Kumari Moothedath Chandran, N. C. B. a. M. M., 2015. Understanding transitions in a rural Indian building typology in the context of well-being. CURRENT SCIENCE- SPECIAL SECTION: DESIGN FOR WELL-BEING, 109(9), pp. 1610-1621.
- [21] Lanrewaju, A. F., 2012. Urbanization, housing quality and environmental degeneration in Nigeria. Journal of Geography and Regional Planning, Volume 5, pp. 422-429.
- [22] Mathur, A., 2011. The Dimensions of Indian Rural Development: Issues and Challenges. International Journal of Contemporary Practices, 1(2), pp. 29-34.
- [23] Mohammed Firoz C, H. B. & J. S., 2014. A Methodology To Define The Typology Of Rural Urban Continuum Settlements In Kerala. Journal of Regional Development and Planning, Volume 3, pp. 49-60.
- [24] Moztaazadeh, I. Y. a. 2., 2014. Sense of Belonging in Research Building. AENSI JOURNALS, pp. 561-567.
- [25] Nor Rashidah Zainal, G. K. & J. M. K., 2012. Housing Conditions and Quality of Life of the Urban Poor in Malaysia. Procedia - Social and Behavioral Sciences, Volume 50, pp. 827-838.
- [26] Okhovvat, M., 2016. Sustainable development of rural vernacular architecture. Bulletin of Environment, Pharmacology and Life Sciences, Volume 5, pp. 57-65.
- [27] Pandey, R. S., 2018. Chikankari- The Craft of Nawabi Shaan. JETIR, pp. 42-45.
- [28] Peggy Teo, S. H., 1996. A sense of place in public housing: A case study of Pasir Ris, Singapore. Habitat International, 20(2), pp. 307-325.
- [29] Raheja, K., 2015. Rural Development in Haryana. International Journal of Scientific and Research Publications, 5(6), pp. 1-7.
- [30] Rajashree Kotharkar, R. D., 2012. A Comparative Study of Transformations in Traditional House Form: The Case of Nagpur Region, India. Journal of the International Society for the Study of Vernacular Settlements, Volume 2, pp. 17-33.
- [31] Rashmi Hullalli*, M. R. Gudadinni, Shailaja S. Patil, 2014. Water sanitation and hygiene in the schools of rural field practice area. International Journal of Community Medicine and Public Health, Volume vol 4, pp. 4307-4309.
- [32] Sahu, D., 2018. RURAL DEVELOPMENT; A NECESSARY CONDITION FOR SOCIOECONOMIC DEVELOPMENT: AN ANALYSIS IN INDIAN CONTEXT. Journal of Rural Development Review , Volume 6.
- [33] Shalheh, E. R. & S. M. M., 2018. Comparative study of the effect of native architecture on planning of pond-based villages (case study: Sarakhiyeh village in the pond of Shadegan). Journal of Cogent Engineering, Volume 5, pp. 1-17.
- [34] Shuji Funo, N. Y. & J. S., 2002. Typology of Kampung Houses and Their Transformation Process-- A Study on Urban Tissues of an Indonesian City. Journal of Asian Architecture and Building Engineering, pp. 193-200.
- [35] Yakanna, A., 2017. Issues and Challenges of Rural Development in India. Issues and Challenges of Rural Development in India, 7(10), pp. 560-562.
- [36] YANG Ren, L. Y. L. H. Q. L., 2015. Spatio-temporal characteristics of rural settlements and land use in the Bohai Rim of China. Journal of Geographical Sciences, pp. 559-572.
- [37] Zohreh Yousefi, S.-B. H. S.-A. Y. S. N.-M., 2017. Promoting the Residents' Sense of Belonging in Housing Design. Asian Journal of Behavioural Studies, pp. 33-43.