iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** X **Month of publication:** October 2021

DOI: https://doi.org/10.22214/ijraset.2021.38586

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue X Oct 2021- Available at www.ijraset.com

Role of Community Participation in The Regeneration of a Colony: Railway staff Colony (Kamrup, Assam)

Nirmitsaa Chowdhury[1], Sayon Pramanik[2]
[1, 2]*Department of Architecture, National Institute of Technology Raipur, NIT Raipur Girls Hostel, Raipur, 492010, Chhattisgarh, India*

Abstract: ***In the recent period of fast economic development, population growth and demands, and changing lifestyles, most outdated regions in metropolitan centers have faced many difficulties in making the required adjustments and adaptations to current needs and changes. This paper looks at the role of community participation in urban regeneration projects and reviving run-down areas and how it can be used to help localities in economic as well as social renewal without changing the identity of the area. The urban regeneration of a Railway Staff Neighbourhood (N.F., B. Colony) in the district of Kamrup Metropolitan, Assam, North-Eastern India, is the subject of this research. The paper also aims at an urban reuse idea to develop a regenerative approach as a countermeasure to urban degradation, with a strategy that involves community engagement in the project. The research was based on numerous site visits and interviewing various stakeholder groups, particularly the local community, at all levels. The study examines a new experience in the neighbourhood in establishing an alternative use of the abandoned quarters based on addressing the community and the problems faced by them.***
Keywords: Community participation; Urban regeneration; Sustainable development; Railway neighbourhood

I. INTRODUCTION

Urban Regeneration according to Roberts and Sykes [1] is the outcome of the interaction of numerous sources of influence, and it is, furthermore, a response to the opportunities and problems given by urban degeneration in a specific location at a certain time. All urban problems are unique to a particular town or city and the solutions advocated and tried in the past are irrelevant to particular situations. Each urban challenge will almost certainly necessitate the development and implementation of a unique response. Urban regeneration provides an opportunity to address issues like a neighborhood's lack of identity, an absolute lack of public spaces, and excessive urban density, which makes road widening, green space development, and tree planting along sidewalks unfeasible. [2]
While change is required in vulnerable regions with fragile historic treasures, it must be progressive rather than abrupt, to prevent what Jacobs [3] called "the sacking of a city." "If change is necessary, it should be managed and controlled to avoid extreme dislocation and reestablish the greatest possible link with the past," writes Lynch [4] . To maintain a strong sense of continuity with the past, it is critical to preserve the physical legacy without sacrificing intangible values.
In the 1970s, large-scale urban transformation and renewal projects in the West began to fade, and urban regeneration emerged as a viable alternative. Urban regeneration addresses both intellectual and emotional urban issues, such as the gentrification of losing neighborhoods and centers, to solve this concern. It also restores the physical and intangible characteristics that have been lost as a result of increasing urbanization and globalization. To ensure a smooth and comprehensive transition in cities, local stakeholders must incorporate urban regeneration and identity into their city planning policy agenda [5]

II. LITERATURE REVIEW

A. Comprehending community engagement in urban renewal initiatives in the Indian context

In planning, community involvement is a process, not a product, in which the planner learns to know the people and their circumstances well enough to offer himself or herself as a resource. It is when the beneficiary communities participate in a specific way with the underlying premise that their involvement will lead to additional action on their side to effect specific change [6].
However, successful participation is contingent on several factors, including the political context (a political system that promotes active citizenship and is committed to equity and redress), the legal basis for participation (processes and outcomes are legally defined), and available resources (skilled and committed professionals, well resourced and empowered local governments, and informed financially empowered and organized communities) (United Nations Human Settlements Programme [6]

©IJRASET: All Rights are Reserved

1) *Nizamuddin Basti Urban Renewal Initiative, a community participation approach:* The Nizamuddin Urban Regeneration Program in Delhi has served as a model for conservation-led development in India's ancient urban centers, with programs that satisfy the various needs of the local population while also ensuring their participation in the renewal process. The Hazrat Nizamuddin Basti, Sunder Nursery, and the World Heritage Site of Humayun's Tomb are part of the project area, which is centrally placed in Delhi. The Hazrat Nizamuddin Basti is one of the city's oldest neighborhoods, featuring a shrine (Dargah) dedicated to the Sufi saint Hazrat Nizamuddin Aliyah, who lived at this location in the early 14th century and is named after him [9]



Fig. 1 Hazrat Nizamuddin Baoli renovation (Picture Courtesy: https://www.nizamuddinrenewal.org)

Residents of Basti were originally concerned about relocation and displacement when the project began, which led to some skepticism about the project and many problems in its execution. Physical surveys, for example, could only be conducted if extensive and regular conversations with the local people and communication of the project's aims were initiated during the project planning stage [7]



Fig. 2 Involving youths from the local Basti in the project (Picture Courtesy: https://www.nizamuddinrenewal.org)

The urban renewal project in the Basti area started a community participation process with the primary goal of improving the people's quality of life. The basti's residents were given not only open spaces, good education, and prompt health care, but also new opportunities to interact with their own culture. Based on considerable community interaction, the AKTC extended its program into a comprehensive urban revitalization initiative that included socioeconomic and cultural components. The initiative has developed a culturally "sensitive" and "informed" urban development paradigm. The project has not only addressed the basti area's infrastructure issues but has also empowered the community to become a driving force behind this urban revitalization endeavor.

©IJRASET: All Rights are Reserved

B. Revitalization Of Localities Through Urban Regeneration Instead Of Redevelopment

The word "urban regeneration" is a technical term that must be distinguished from other types of city-rebuilding projects. On the other side, there is the renewal that comes from a city's never-ending expansion process, in which older structures are demolished, rebuilt, or altered [10]. Urban regeneration is not the spectacular demolition and construction of new buildings, such as enormous flats and office complexes. Similarly, urban regeneration is not the constant creation of governmental services to stay on track with urban expansion.

Urban renewal initiatives are defined as a process of modifying urban areas through rehabilitation, conservation, and redevelopment in the literature. Urban renewal initiatives are implemented in a variety of methods [11] . The urban redevelopment refers to destroying the existing buildings and changing the land use at that location [12] . The redevelopment strategy, on the other hand, relates to the construction of new projects to replace old building stock that is seriously degraded and has no preservation value, or where the arrangement of buildings cannot provide adequate living circumstances [13].

Urban heritage revitalization entails intervening to address urban issues such as traffic congestion, environmental degradation, city expansion, and heritage loss, among others. The intervention focuses on actions that are not only limited to the project area but are frequently extended to the entire city.

1) *Achieving Economic & Environmental Goals Through Urban Preservation Initiatives: The Asia Urbs Programme, Pondicherry 2002-2004:* Pondicherry is a heritage city with a diverse cultural landscape, due in large part to the town's cross- cultural 'Indo-French' influence. The Pondicherry Municipality, with the help of the INTACH Pondicherry Chapter, launched the Asia Urbs Project in collaboration with the European Commission and two European cities: the ancient hill town of Urbino, Italy, a UNESCO World Heritage Site, and the historic walled city of Villeneuve-sur-Lot, France. The program's principal goal was to promote urban and economic growth through preservation efforts. [14]



Fig. 3 Houses In Vysial Street Before(left) And After (right) Restoration in Pondicherry (Picture Courtesy: National Institute of Urban Affairs: Compendium Of Good Practices)

The heritage listing in 2000 was backed up with a geographic information system (GIS) that combined data and photographs with spatial aspects of buildings for better and faster data access for referencing and monitoring and was followed up by a 2002 "heritage perception survey." [15]

The owners of buildings were interviewed, and their replies showed that preservation was critical in maintaining city's character, and therefore improving the local economy. Incentives and subsidies for building rehabilitation and related activities were also expected. The Asia Urbs Project's heritage preservation efforts were created in direct response to these demands. [7]



Fig. 4 Meeting with building owners and other stakeholders at INTACH Pondicherry (Picture Courtesy: National Institute of Urban Affairs: Compendium Of Good Practices)

©IJRASET: All Rights are Reserved

Some of the beneficial practices learned through the Asia Urbs experience in Pondicherry have lasted long after the program has officially ended. The project helped to create jobs as a consequence of the increased restoration activities. Jobs have been created as a result of increasing tourism, retail, and hospitality, which have expanded several-fold since the Asia Urbs Program ended in 2004. The project's experience has now spread beyond Pondicherry.

2) *The Stuttgart 21 Case: Railway Station mega-project as public controversies, an example of redevelopment without community participation :* Stuttgart 21 is now one of Europe's most significant and ambitious railway and urban rebuilding projects. It's also one of the most controversial megaprojects in recent times. Rarely has a comparable project sparked as many problems and controversies as Stuttgart 21, and rarely, if ever, have disagreements surrounding a mega- project resulted in larger and more strong political consequences. Not only has the fight over the multibillion-euro project sparked a national public debate about megaprojects and issues of accountability, transparency, and participation in urban and infrastructure development in general, but commentators believe it is also to blame for seismic shifts in Germany's political landscape. [16]

The Main Issues regarding this controversial project as noted by Johannes Novy and Deike Peters [16] -

a) *Cost and Economic Viability Issues:* Critics argue that the public sector faces a disproportionate part of the costs and risks associated with a potential "billion-euro hole," and that German Railways has significantly reduced its financial commitment and exposure overtime.

b) *Environmental Costs/Ecological Risks:* Critics also object to the project's environmental consequences. Concerns about negative effects on the city's groundwater and mineral water springs, the second largest in Europe, as well as increased air pollution and reduced natural airflow through the city as a result of the envisaged deification, include the chopping down of nearly 300 trees, some over 100 years old, in the historic castle grounds just behind the existingstation

c) *Transportation Benefits and Impacts:* S21's actual transportation benefits are far less than what supporters say. Stuttgart 21, they argue, will not result in an expansion of the railway junction's capacity but rather threat- ens to reduce it; it will not eliminate bottlenecks but instead create new ones; and, at best, it will lead to negligible long-distance travel time reductions at the expense of regional rail services.

d) *Historic Preservation/Urban Improvement:* One of the most contentious aspects of the plan is the partial demolition of Stuttgart's ancient central station. The historic station, with its large rough-hewn stone clock tower, is widely regarded as an emblem of 1920s architecture and one of the city's most distinctive sights. The planned demolition of its northern and southern wings has been condemned by architectural experts around the world as "a callous disrespect for architectural heritage" [17] and a continuation of destructive, modernist urban redevelopment.



Fig. 5 The Stuttgart rail terminal, designed by Paul Bonatz between 1914 and 1928, is one of the city's most iconic structures. (Picture Courtesy: Horst Rudel)

e) *Decision-Making/Process/Participation:* Opponents complain that decisions were made mostly behind closed doors, with little public involvement or monitoring from the local or state legislatures. In this con- text, formal involvement methods have been criticized as solely serving legitimizing reasons, and the whole decision-making process has been characterized as opaque, avoiding established democratic accountability channels, and at times even violating democratic ideals [18]. Affected parties i.e., those who hold a stake in the project were not involved in the decision-making process, and also the wider citizenry was not engaged in public deliberation on projects.

©IJRASET: All Rights are Reserved

The government's decision to exclude the project's stakeholders turned out to be a poor choice. Parallel to developing alternative proposals, project opponents waged a multi-pronged campaign against Stuttgart 21, which included legal action, signature gathering, the presentation of counter-assessments to refute the information provided by project stakeholders, the organization of workshops and other community events, and, most recently, the use of social media. The protest demonstrations drew up to 100,000 people by autumn 2010, when building and demolition work began, garnering national and worldwide news due to their scale and odd composition. The outrage over the violent scenes on September 30, 2010, when police used force against demonstrators who attempted to stop construction workers from felling the first trees for the project in the Schlossgarten, injuring several hundred people, including schoolchildren and elderly people, was even greater. injuring several hundred people, including schoolchildren and elderly people, was even greater.

As a result, officials who had earlier stated that they would not back down in the face of protests have been obliged to change their minds. They asked project opponents to participate in a series of public mediation talks to resolve the project's increasing tensions. Tree felling and demolition work were halted, and a commitment was made to have open and honest discussions about the difficulties, to present all information, and to examine all alternatives that resulted in abandoning the project.

III. METHODOLOGY

A. Urban Transformation Matrix- A Tool for Sustainable Urban Regeneration in identifying the areas in need of renewal

The Matrix examines both heritage characteristics and the planned post-refurbishment use of a structure before beginning the approval procedure for construction work. This multi-criteria evaluation Matrix is unique in that it analyses the intended occupancy of the upgraded building as well as its predicted influence on the urban environment.

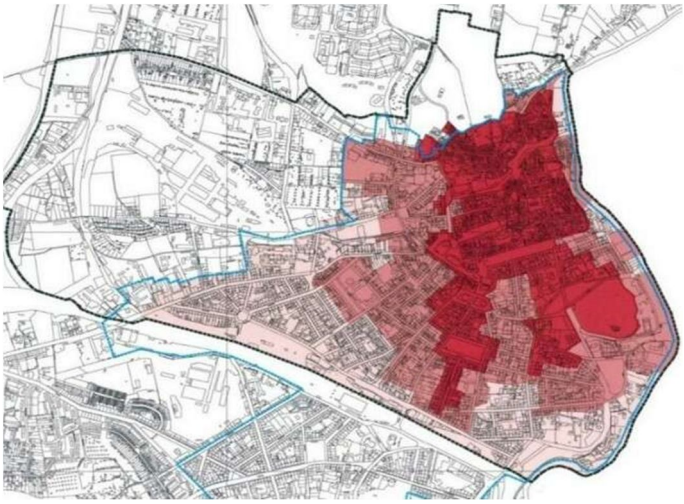


Fig. 6 Use of Urban Transformation Matrix for the Heritage Preservation of Görlitz in south-eastern Ger- many. Three zones of urban consolidation—dark red: consolidated area, medium red: area undergoing consolidation, light red: non-consolidated area. (Picture Courtesy: The Menzel, W. Stadt Görlitz, Amt für Stadtentwicklung Görlitz Model: Urban Transformation Matrix. An evaluation system for developing the inner-city building stock

IV. BACKGROUND OF THE AREA

The Northeast Frontier Railway (abbreviated as NFR) is one of the Indian Railways' 18 railway zones. It is based in Maligaon, Guwahati, Assam, and is in charge of operating and expanding the rail network throughout the Northeastern states, as well as some regions in eastern Bihar and northern West Bengal [20]

Bg Colony, Maligaon is a locality in Guwahati City in Assam State, India. It is located around 0.9km away from the Maligaon Bus Stand and 2.1km from Kamakhya Railway Station. The lo- cation, Maligaon, which is in charge of the North- eastern Frontier Railway (N.F.R.), is aided by all of the benefits provided by the Indian Rail- ways, which include the Maligaon Rly. Head- quarter Post Office, Rly. Officers' Club, Rly. secondary and higher secondary schools, Rly. Hospital, and most importantly, the staff quarters located around Maligaon and some parts of Paltan Bazar, Uzan Bazar, Ambari, and Kharguli. Staff quarters are found in Nambari Rly. Colony, Gosala Rly. Colony, Rly. B.G Colony, Gotanagar Rly. Colony, Green Park Colony, Joynagar, Adarsh Colony, and many more places in Maligaon. The area of B.G. Colony consists of around 60 Rly. Quarters were constructed in 1955 almost 75 years after the railway first came to Assam.

©IJRASET: All Rights are Reserved

This article will focus on the Rly. B.G Colony neighborhood, which spans 29.31 acres and is located in Ward 1 of the Guwahati Municipal Corporation (GMC). Although the ethnic makeup of the area is diverse, Assamese and Bengali are the primary languages of communication. Ward 1 has a population of about 1,05,236 people [21], with B.G. Colony has a population of about 12,000 people.

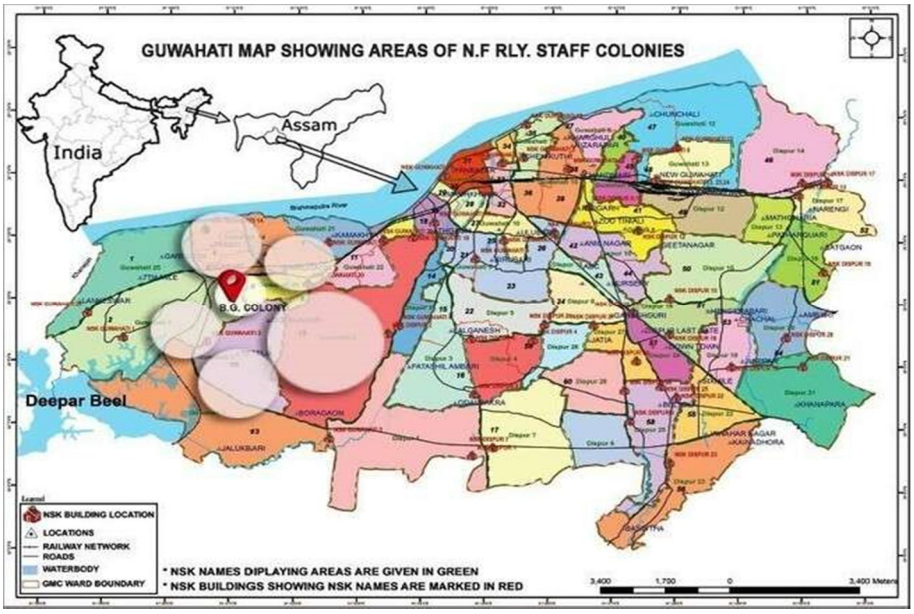


Fig. 7 Map of Guwahati indicating B.G Colony and neighboring Rly. Colonies (Picture Courtesy: http://nrcassam.nic.in)

V. RESEARCH ANALYSIS AND FINDINGS

A. *Overview of dilapidated Rly. Quarters in Different Parts of India and the risks they Possess*

Because of their decrepit state, N.F. Rly. quarters all across India are under fear of destruction. This is true not only of quarters in B.G. Colony but also of quarters throughout the north-eastern area and elsewhere in India.

These quarters are over a century old, which means they have a lot of social and emotional significance linked to them, despite their poor state. Demolition of these quarters and the revitalizing neighborhood, re-construction of an urban identity would not only destroy the intangible qualities associated with them but will also put the government under financial strain. Employees are obliged to live in these quarters due to their economic circumstances, which also pose a significant danger of death. Following reports of several Rly. quarters falling, railway workers are afraid to live in such unstable and decrepit quarters.

Residents are also at risk of the abandoned quarters being transformed into pockets for anti- social activity, in addition to the possibility of losing their lives. The few families who still live there live in continual terror, since empty quarters have become a hive for anti-social elements. Residents of B.G. Colony experiences comparable issues as a result of the state of the Rly. quarters and they are always terrified of illegal possession and activities spreading around it.



Fig. 8 Balcony of a Rly. quarter collapsed due to heavy rains in Nagpur (Picture Courtesy: https://timesof india.indiatimes.com/city/nagpur/miraculous-escape-as- rly-quarter-balcony-collapses/articleshow)

©IJRASET: All Rights are Reserved

B. Railway Staff Quarters in Desperate need of Repair: An overview on the Condition of Rly. Quarters in B.G. Colony

Only 23 of the 60 Rly. quarters in B.G Colony were found to be occupied by families on a legal basis, with the majority being left vacant.

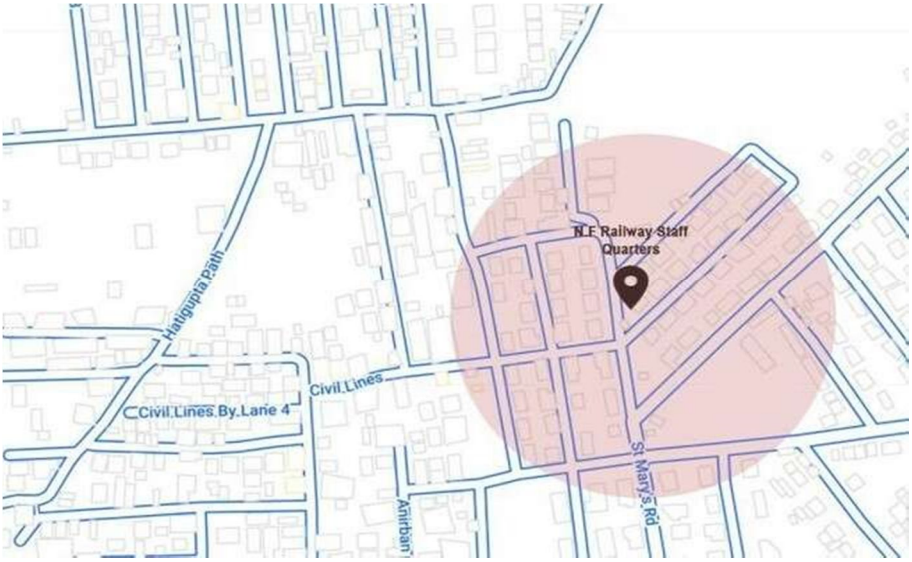


Fig. 9 Mapping of Location of the area (Survey size) of Rly. Quarters in B.G. Colony (Base map courtesy- https://snazzymaps.com/my-maps)

Employees with grade pay of Rs 1800-Rs 2500 are generally assigned to Type II (a category of Rly. quarter) quarters in this area. Some quarters of these regions, such as Quarters 304(A) and 304(B), were deemed 'Not suitable for allotment' by the Senior Sectional Engineer (SSE) of B.G.Colony in 2019, but the rest quarters are in comparable situations and have been abandoned. The infrastructure of the region has deteriorated as a result of the bulk of the quarters being abandoned. The streetlights aren't working properly. Illegal activities such as gambling, public indignation following alcohol usage, and a variety of other issues affect the people. According to locals, there have also been a few incidents of theft.

"I have lived here for the previous 14 years and this location has never been so unsafe," said Subir Bhattacharya, a resident. "Many strangers come here only to drink and cause a commotion. Even though there are street lights, the majority of them are broken. If we are attacked or looted, there will be no evidence" he added.

Residents of these railway quarters, which are surrounded by towering shrubs and trees, confront a slew of issues. Several railway employees who live in these quarters have reported that they experience problems during rainy seasons and are frequently attacked by vermin and reptiles that live in the wilderness surroundings surrounding them. Apart from these a filthy atmosphere was also produced by the lingering rubbish and dumps in the abandoned quarters from the surrounding region.



Fig. 10 Visuals showing dilapidated condition of the quarters around the neighbourhood

©IJRASET: All Rights are Reserved

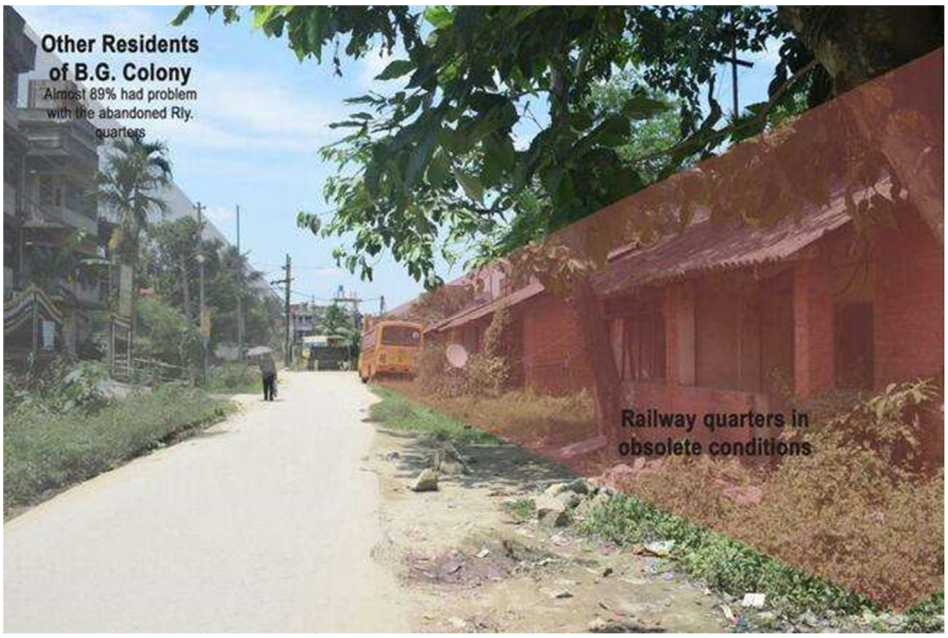


Fig. 11 The visual impression of the locality affected by the condition of the Rly. Quarters

After interviewing almost 30 families, it was found that 89% of them believe that the quarters are in bad shape and are causing them problems. Almost 60% of them agreed that the area should be rehabilitated.

Following an interview with Office Superintendent (O.S.G) Mr. Bijoy Kr. Das, a master list with the quarter number and legal information was created, followed by an urban transformation map to analyze the region in need of renovation. The dark tone and medium tone in the matrix diagram are significantly higher than the light tone, indicating that the consolidated area and regions undergoing consolidation in B.G Colony are much more numerous than non-consolidated areas. This suggests that the colony requires immediate regeneration. The outcomes of the visual survey and interviews show similar results.

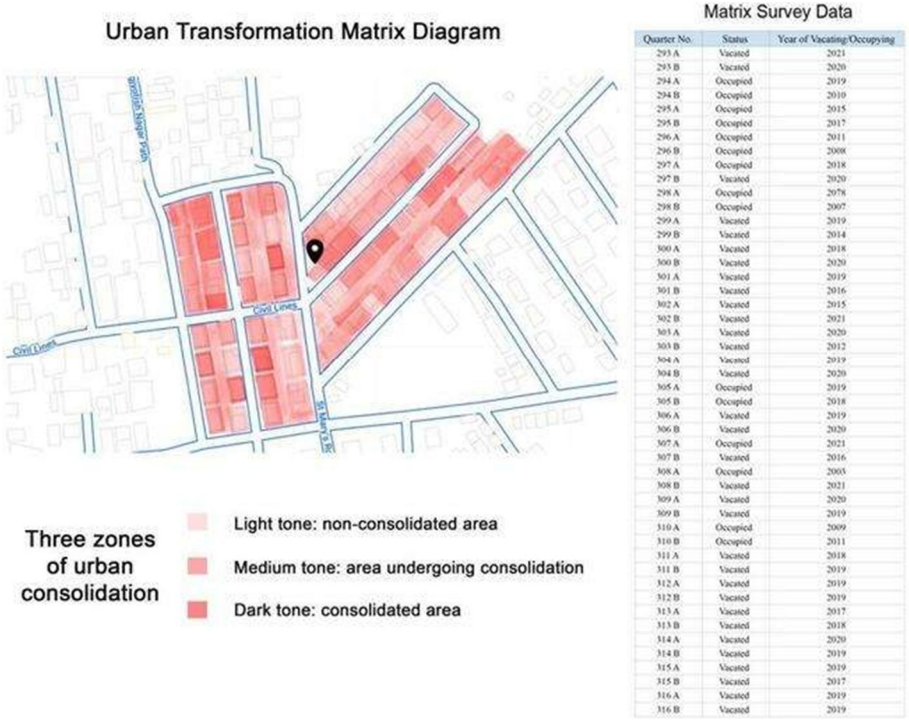


Fig. 12 Urban Transformation Matrix diagram for B.G. Colony from the master list (Base map courtesy- https://snazzymaps.com/my-maps)

©IJRASET: All Rights are Reserved

C. Identifying the Engagement of Stakeholders in the idea of the Regeneration of the Area.

During interviews with the people of the region, it was discovered that 93% of the employees were opposed to staying in B.G. Colony. Employees were forced to stay in leased housing, they added, leaving some of the quarters empty.

M.Kalita, a neighboring resident, claimed he had no option but to stay in these cramped accommodations with inadequate facilities. He added, "I couldn't pay the rent for a private apartment." Around these quarters, there has been no adequate fencing or border.

"It has been almost six months since we petitioned officials to give us a new quarter owing to insufficient infrastructure," Debjani, another resident, said. "Our request has yet to be taken into consideration. Furthermore, the quarter in which we are currently residing is insufficient for basic needs. During the rainy season, one of the issues we confront in these quarters is leaking roofs."

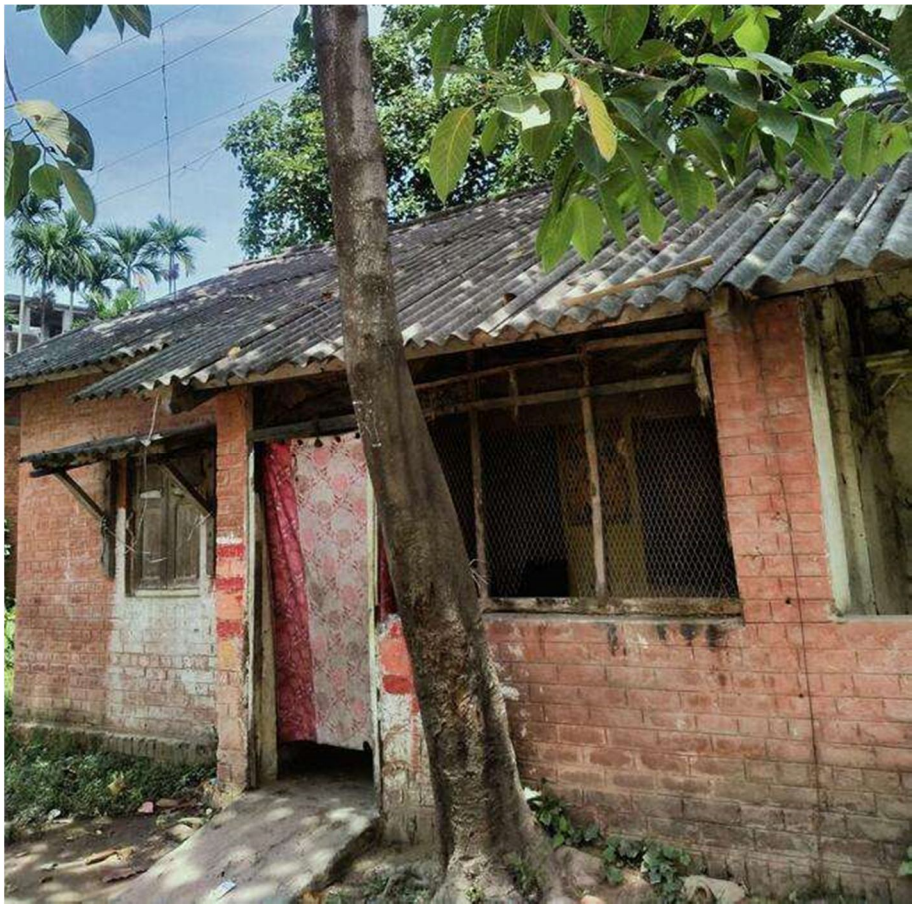


Fig. 13 An occupied N.F. Rly. quarter in B.G. Colony without door and proper security

Things began to change a few years later, according to a senior railway official. After receiving improved home rent allowances, several employees began to vacate their quarters. "However, there are still many employees who live there, and they require security," said Pattowary, B.G.Colony's Inspector of Works (IOW). Deputy General B.B Pandey claimed in an interview that a similar situation existed in other parts of Guwahati, such as East Gosala and West Nambari, and that the area had been rebuilt by demolishing the quarters and erecting apartments for the employees in the same location.

This may appear to be a nice option, but it may not be as good when viewed from the perspective of the residents. They have an emotional and cultural tie to their living spaces. Furthermore, the N.F. Rly. quarters have their distinct personality, with their red brickwork and sloping roof. Each quarter type (Type I, Type II, Type III, and Type IV) has its own distinct identity that must be kept. However, destroying it and replacing it with an apartment makes it look like any other location in Guwahati, and the distinctive touch is lost. In addition, 70% of the inhabitants opposed the demolition of the quarters.

When it was asked that instead of demolishing and redeveloping the area, did they consider regenerating the area, which would provide additional economic options for the employees as well as raise the social value of the region, he liked the concept and noted that it would be an extra economic advantage. Furthermore, the identity of a Rly. Colony, as well as its distinguishing traits, would be retained, which are not evident in the concrete, high-rise flats.

©IJRASET: All Rights are Reserved

The Senior Sectional Engineer (SSE) and Inspector of Work (IOW) of B.G. Colony also stated that rehabilitating the land rather than destroying it will provide the N.F Railway with further economic benefits. When asked if they preferred the sites to be demolished and redeveloped or transformed into public spaces such as skill development hubs or training centers, over 88% of locals preferred the latter, and wanted the region to benefit economically.

The majority percent of the households in the area are from the poor to a lower middle class, since the employees who live in these quarters are paid between Rs1900 and Rs 2500 a month, and most families had a male working member in the railways, thus the entire family was reliant on a single source of income. As a result, most resident families in B.G colonies chose an additional source of income. The majority of locals preferred regeneration to redevelopment, however when asked what they would like the area to be if, given the option, a wide range of opinions were obtained, as indicated in the pie chart.

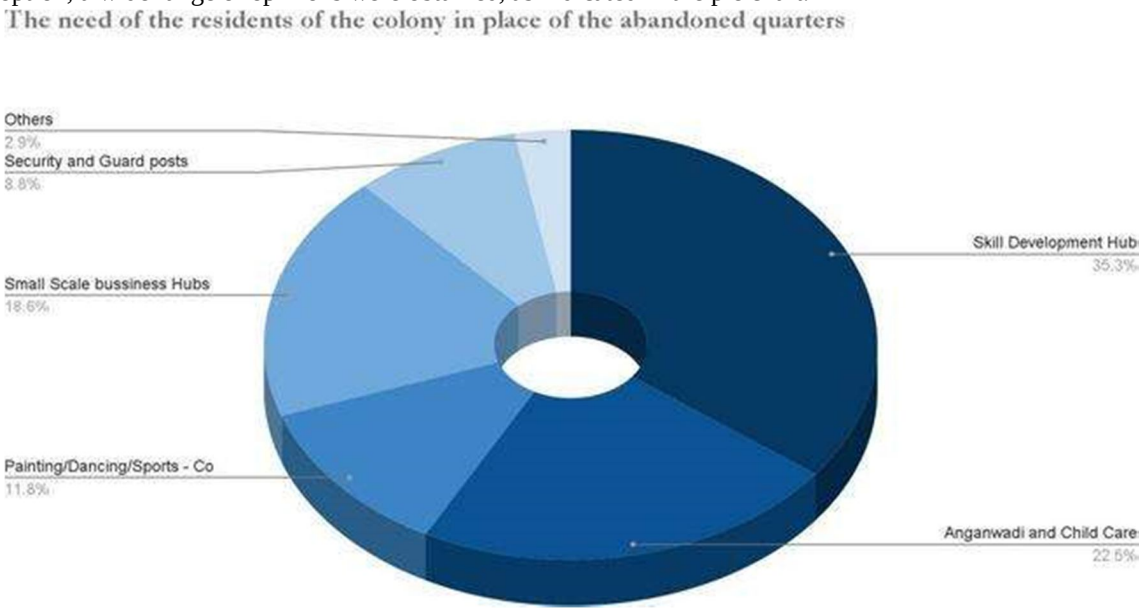


Fig. 14 Response of the residents (30 families) to what they wanted the quarters to be regenerated into.

VI. CONCLUSION

From the literature study of Nizammudin Basti Urban Renewal Initiative and Regional Mapping of West Midnapur District, West Bengal, it is clear that community engagement in urban renewal initiatives aids in the development of better solutions for the region, while also benefiting the residents and the government. On the other side, the instance of Stuttgart 21, Germany, demonstrates how ignoring the community and stakeholders involved in the decision may lead to public controversies and even the failure of the government. There were several problems with the development project which possibly could have been avoided if the public's opinion were considered. The Asia Urbs Programme, Pondicherry 2002-2004, was also a remarkable approach to restoring heritage properties and surrounding regions rather than removing them and losing the location's character. As a result of the increased restoration efforts, the initiative contributed to creating jobs. Even in this project, it was noted that the stakeholders and local community's opinions were taken into account, and their issues were taken into account when renewing the area.

Therefore, it can be concluded that a significant, collective engagement of locals is required for an active manner of achieving significance. Even if an area lacks a historically significant lo- cation, residents can participate in a long-term process of making their environment meaningful. This expansion may eventually lead to a stronger feeling of local identity for them.

Because urban identity enhances the quality of a project, it should be a key component of urban planning tools, making it a must in any city development project. As a result, the destruction of historical neighborhoods, as seen in the Stuttgart 21 project, must be avoided. It is necessary to maintain the features that make a city distinctive based on its heritage history to promote the specific character of a city and to counter the homogeneity of spaces, which makes them identical, as we saw in the Asia Urbs Programme, Pondicherry 2002-2004.

As a result of the main survey and interviews with inhabitants of the B.G. Colony area, as well as the analysis of the urban transformation matrix, the region is in desperate need of renovation. The abandoned quarters and the region surrounding them were causing the majority of the people in that neighbourhood issues. Many individuals said it had turned into a centre for illicit items and activities.

©IJRASET: All Rights are Reserved

It was also discovered that most people felt compelled to stay in the area, despite the fact that the area holds a high value of emotions and identity. According to officials, one possible solution to this problem is to demolish the area and build apartments in its place, as has been done in other parts of Guwahati facing similar problems. However, by doing so, the identity of a Rly. the colony would be obliterated, and tall concrete blocks would be constructed in its place, with no harmony with the surrounding area.

However, after interviewing around 30 local families, a better option was discovered. The majority of the families in the neighbourhood are experiencing financial difficulties and are unable to find alternative housing, forcing them to live in these quarters. After addressing the community's concerns in the region and including locals in the development of ideas for the project's regeneration, different uses for the abandoned quarters arose, which proved to be preferable than destroying the area and erecting new structures. It included suggestions for how the area may be regenerated while maintaining the area's character and contributing to the community's as well as the railway government's economic development. As a result, it is clear that community involvement and incorporating stakeholders in the regeneration of any region is critical to the area's long-term growth and sustainable development of the area.

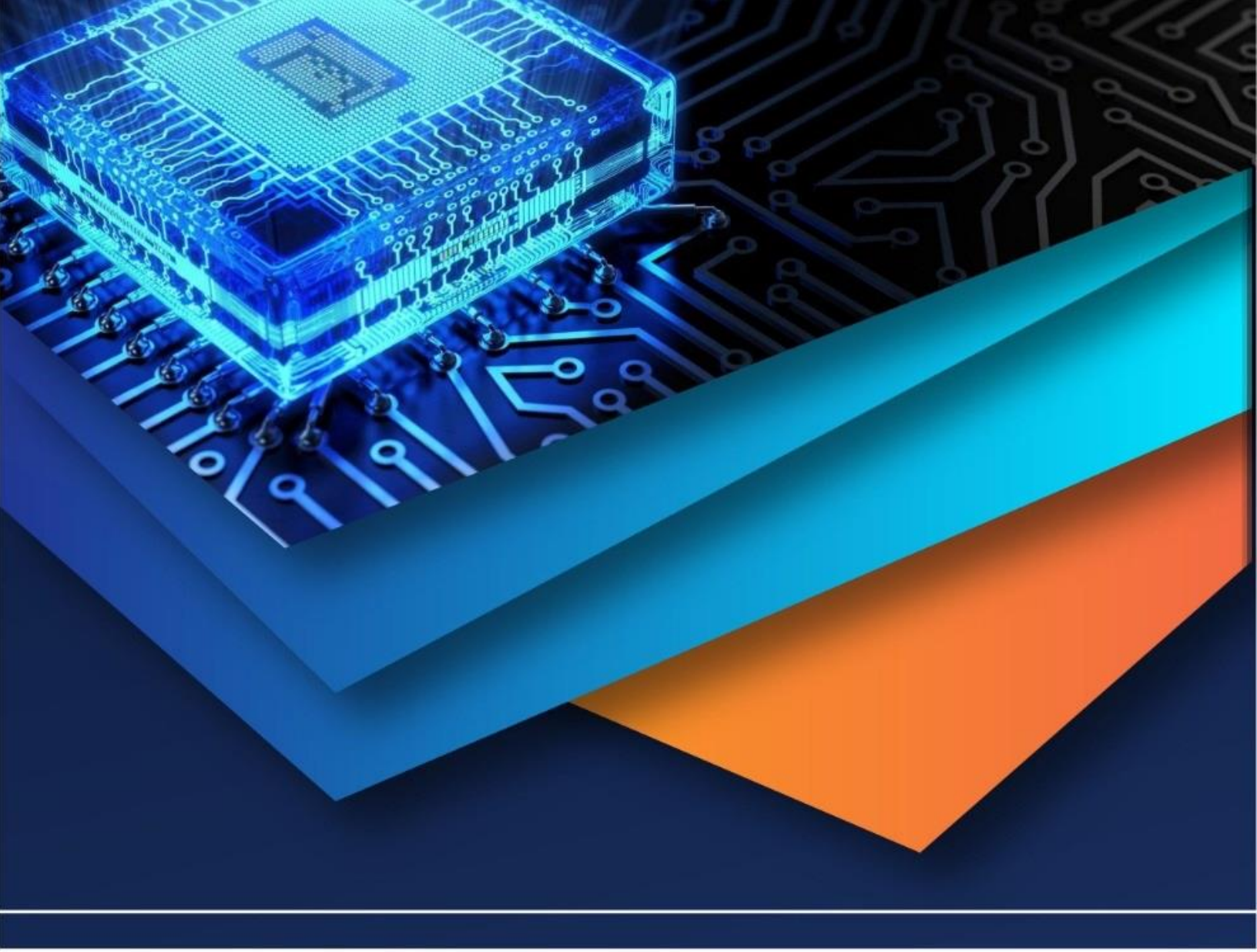
VII. ACKNOWLEDGMENTS

The authors would like to thank Dr. Abir Bandyopadhyay at Department of Architecture, NIT Raipur for his helpful and constructive comments that greatly contributed in improving this work. A special thanks to Aneree Satra for helping in the technical aspects of writing and also for proofreading this contribution.

REFERENCES

[1] P. Roberts, H. Sykes, A Handbook 12 Lessons from America in the 1990s, SAGE Publications Ltd, 2000. URL http://www.posgrado-faua.uni.edu.pe/images/ Lecturas/Urban-Regeneration_Roberts-Sykes.pdf
[2] C. Alpopi, C. Manole, Integrated Urban Regeneration - Solution for Cities Revitalize, Procedia Economics and Finance 6 (13) (2013) 130–135.
[3] J. Jacobs, The Death and Life of Great American Cities, vintage books edition, 1992 Edition, New York: Random House, 1961. doi:10.1002/9781119084679.ch4.
[4] K. A. Lynch, What Time is This Place, The MIT Press Cambridge, 1972. URL https://web.arch.virginia.edu/arch542/docs/ reading/pdflynch/lynchg.pdf
[5] D. Boussaa, Urban Regeneration and the Search for, Identity in Historic Cities Djamel. Sustainability (Switzerland) 10 (1) (2017).
[6] United Nations Human Settlements Programme (UN-Habitat), PLANNING SUSTAINABLE CITIES GLOBAL REPORT ON HUMAN SETTLEMENTS, Earthscan, 2009.
[7] N. I. of Urban Affairs (NIUA), I. N. T. for Arts & Cultural Heritage (INTACH), Compendium Of Good Practices- Urban Heritage in Indian Cities (2014). doi:10.1007/978-1-4419-0465-2_1251.
[8] M. Minkler, A. Garcia, V. Rubin, N. Wallerstein, Community-Based Participatory Research: A Strategy for Building Healthy Communities and Promoting Health through Policy Change (2012). URL http://www.policylink.org/sites/default/files/ CBPR.pdf
[9] Aga Khan Trust for Culture, About Nizamuddin Urban Renewal Initiative. Retrieved from Nizamuddin Urban Renewal Initiative (2008).URL https://www.nizamuddinrenewal.org/
[10] A. Dunham, Urban Renewal and Redevelopment: The Community's Stake, The University of Chicago Press Journals 36 (1962).URL https://doi.org/10.1086/641282
[11] C. Brebbia, A. Galiano-Garrigos, Urban Regeneration and Sustainability, WIT Press, 2016.
[12] N. Y. Bakır, Project-Based Urban Renewal and Transformation of Urban Landscape in Turkey 13 (2012). [link].URLhttp://dx.doi.org/10.1039/C7RA00172J\%0Ahttps://www.intechopen.com/books/advanced-biometric-technologies/liveness-detection-in-biometrics\%0Ahttp://dx.doi.org/10.1016/j.colsurfa.2011.12.014
[13] A. M. Broudehoux, Neighborhood Regeneration in Beijing: An Overview Of Projects Implemented in the Inner City Since (1990).URL https://www.mcgill.ca/mchg/student/ neighborhood
[14] P. Department of Tourism, I. Pondicherry, Achieving Economic & Environmental Goals through Heritage Preservation Initiatives. URL http://intachpondicherry.org/flipbook/pdf/ Flyer_English_Asia_Urbs.pdf
[15] I. Dronah, A Special Issue on Cultural, Economics and Livelihoods. Context- Built, Living and Natural (2) (2012).
[16] J. Novy, D. Peters, Railway station mega-projects as public controversies: The case of Stuttgart 21, Built Environment 38 (1) (2012) 128–145.
[17] N. Ouroussoff, Last call for an elegant rail station, New York Times (2009).
[18] M. Wolfram, Planning the integration of the high speed train : a discourse analytical study in four European regions, Stuttgart, 2003.URL http://dx.doi.org/10.18419/opus-24
[19] R. Knippschild, C. Zöllter, Urban Regeneration between Cultural Heritage Preservation and Revitalization: Experiences with a Decision Support Tool in Eastern Germany, International Journal of Urban Management and Energy Sustainability (IJUMES) 2 (2019) 19–29.
[20] Northeast Frontier Railway. URL http://dictionary.sensagent.com/Northeast\%20Frontier\%20Railway/en-en/
[21] Guwahati Metropolitan Development Authority, Master Plan for Guwahati Metropolitan Area - 2025 (2009).

©IJRASET: All Rights are Reserved



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)