THINK INDIA JOURNAL

ISSN:0971-1260
Vol-22-Issue-34-December -2019

ADAPTIVE REUSE

Suprita Baruah[1], Hardeep kumar[1]

[1]*School of Design-II, Interior and Furniture Design, Lovely Professional University, Punjab*

Abstract

Old buildings give their distinct quality to the surrounding area and provide a connection to the past at th e same time. Buildings still fail their original purpose at times.How does the adaptive reuse of these build ings lead ultimately to the reenhancement of the existing structure and the environment as something new , while retaining its original structure as a symbol for the preservation of past times in future?The very first Cinema hall introduced in the Barpeta district of Assam in 1974 has a significant memory in local people's mind. To keep that part alive, reusing and adapting it in the form of a live theatre and orchestra which has the maximum viewers in Assam and introducing a new feature of skylight inside an auditorium which provides the flexibility to experience both nature and technology. Mobile theatre of Assam has a long heritage in the field of performing Art. It has given Assamese culture a unique identity. In this paper an attempt has been made to analyse the challenges that has come up to these mobile theatres and the existing structure as well as to provide solutions to it by working on adaptive reuse as a prior motive. It not only focuses on sustainability but also helps the tourism department and the district of Barpeta (Assam) to develop. As a matter of fact, Theatre halls or auditoriums are mostly dark, so that we get a clear vision of the stage where the performances are held. However, that is not the only option available. A natural source of light can also play an interesting role in shaping up an auditorium which is quite of a challenge to bring up to reality. The materials are vernacular which adapts itself in the design without leaving the trace of the original design. The concept focuses on to bring up the ancient building techniques and materials used to build an Assam type house, collaborating its design inside the abandoned hall that has been adapted as a live theatre and orchestra which gives the sense of an Ancient Assam type house.

Key words:

Adaptive reuse, building reuse, historic preservation, renovation , urban regeneration,

The main purpose of adaptive reuse is the reuse process of an existing structure / building or site for a purpose other than the one originally constructed or designed for. It is also known as transformation or conservation of functionality. Conservation can be an attractive choice for adaptive reuse of buildings or infrastructure. The new function of these structures can provide advantages in the financial, social, cultural and environmental sectors. Reuse is one of many sustainability approaches as it preserves original persistent construction materials. When old structures became unfit for their original purpose and for a long time remained unused, for a long time, adaptive reuse comes into play as a sustainable option for reformation of sites.

Adaptive reuse is described as an attractive process that adapts buildings to new functions while retaining their previous characteristics, in order to bring back the memories of the past. It is also

ISSN:0971-1260
Vol-22-Issue-34-December -2019

described as a revitalization strategy which engages a sequence of connected procedures to plan for, inventory, possession, manage and reuse the unused or abandoned property. [1] Adaptive reuse has prevented the demolition of many buildings and has allowed them to relive from the state where it lost its use and to again become a viral part of the urban generation.[2]

The topic not only explains the process of reusing or conversion of a structure to a different purpose but it also provides a challenge to the user to adapt to the building without much of the changes done and coping with the new design and purpose, so that we don't forget the memories that the original building holds.

1.1.1. Principles of Adaptive reuse

The challenge is to find the desired balance in order to satisfy the user between change, adaptation and restoration. There are 5 principles in the design described below to find the right balance-• Perform better functions for which they are redesigned.
• In the future, be sustainable and adaptable to new uses.
• Their surroundings react well and improve their circumstances.
• Give users and passers-by a visual continuity and build' joy.'
• Be sustainable:-Non-polluting, energy-efficient, user-friendly and environmentally friendly. [3]

1.1.2. Benefit of Adaptive reuse

1.1.2.1. **Environment**

For sustainable development, adaptive reuse of buildings has a crucial role to play. Environmental benefits are enjoyed because these buildings take on no new land, reduce pollution from
buildings and give the city and the culture to which they belong a new chance to produce something else
in the same old town.

The reuse of the original "stored energy" building is one of the key environmental benefits of restoring buildings. That is to say, the energy consumed by all the construction of a house, including mining, materials production as well as various machinery, transport and management functions: from the acquisition of natural resources to the distribution of products / materials. When recycling buildings / structures, their stored energy is preserved and the design is much sustainable rather than being completely new.

1.1.2.2. **Social**

ISSN:0971-1260
Vol-22-Issue-34-December -2019

Retaining ownership of the family and reuse buildings will benefit the communities who still val ue their properties much better and longer-term.

1.1.2.3.**Economic**

On economic basis there has been various financial savings and returns that can be made from adaptive reuse of buildings. It saves us enough money and energy required for demolition or new construction. It also becomes economically beneficial when it comes to live again with a new purpose to serve to the society. Development of the surrounding area and market economically due to demands.

1.1.2.4.**Promoting innovation**

It gives the architects and designers a genuine challenge of adapting to the old building left out for so many years and finding innovative solutions to it that separates it from the rest. As new generations grow in pressures in our cities further buildings will be reused and creative designs that retain their significance will be excellent examples. [4]

1.1.3. Advantages of Adaptive reuse

1. Older buildings are more often made of higher grade, better-quality materials, and thus have a lifetime than the ones used in new buildings. As a result, the potential to recycle materials is improved.

2. The old buildings usually have thicker walls and no more windows that help heating and cooling efficiently without using much technology.

3. Reuse initiatives have the social benefits of reviving a building's cultural and memorial traditions.

4. In the area to which people were connected in one way or the other during the time when the building was first in use, it served a certain function.

i. Impact of Adaptive reuse on city development

ISSN:0971-1260
Vol-22-Issue-34-December -2019

In current scenario the controversial issue of urban expansion is the adaptive reuse of old urban systems in the current scenario. Instead of Greenfields, these areas are known as Brownfield because of industrial contamination; this issue must be resolved before residential and commercial buildings can be converted. A successful adaptive reuse project may provide growth and also bring to your neighbourhood tourism and new life. [5]

Adaptive reuse is a much better alternative to new construction or demolition, contributing economically, socially, culturally and environmentally to the development of the city.

ii. Strategic approach

The strategic approach centers on the processes and methods used to better adapt important or si gnificant structures. Essentially, there are three conversion strategies[6] –

1. Intervention – Refers to involvement.
2. Insertion – Refers to adding up of something.
3. Installation – An occasion when equipment, furniture or computer program is put into position.

a. Table 1 International existing building code [6]

Category	Description
Repairs	Restoration to good or sound condition of any part of an existing building for the purpose of its maintenance.
Alterations	Level 1 similar to a repair except newer materials, elements, equipment, or fixtures replace the previous ones.
	Level 2 includes reconfiguration of space, additions or elimination of doors or windows, building system updates.
	Level 3 where the work area, including al reconfigured spaces, exceeds 50% of the total building area.
Change of use	Applies when new occupancy of an existing building is different from the previously approved occupancy.
Additions	Applies if the building is increased in area, number of stories, or height.
Historic buildings	Covers buildings that are listed in either a state or national register of historic places, designated by local or state agencies, certified as a contributing resource within a historic district, or eligible for official historic designation.
Relocated buildings	Applies if a building is moved from one site to another, regardless of distance.

iii. Criteria for Adaptive reuse

ISSN:0971-1260
Vol-22-Issue-34-December -2019

1. The significance for the community of the site and its value, in other words the social value of a particular site and structure.

2. Potential for reuse of a specific site and building; the structural harm to the site and its further use; the essence of the current structure with respect to the reuse proposed.
3. The site and the historic importance of the building both in terms of their physical nature and their role in the community's understanding of the past.

4. The location and building are natural ecological environments, whether it is climateappropria te or can contribute to the environmental plan.

Conclusion

Wrapping up the paper, Adaptive reuse has led to the now famous proposal for the division of the ideal modern city into four main functions: dwelling, recreation, work and transportation. The future of adaptive reuse has many chances and opportunity for technical innovation, enhancing community value and to secure the environment. However, it might not be that easy to construct as compared to the construction of a new building but it has a lot of advantages which can led us to a brighter environment. And as for 21st century, environment is degrading day by day, so must be our prior concern to look after the betterment our home(Earth).

References

[1] https://www.ladbs.org/docs/default-source/publications/misc-publications/adaptive-reuse-projects-permitting-guidelines.pdf?sfvrsn=8
[2] https://www.chescoplanning.org/MuniCorner/Tools/AdaptiveReuse.cfm
[3] Research paper on “Building re-imagined: A dialogue between new and old” by Michael (Mike) Louw.
[4] Adaptive reuse to promote social values by Kenneth Jacob
[5] Book: Adaptive reuse – Extending the lives of buildings by Liliane Wong
[6] Burchell, R.W. and Listokin, in The adaptive reuse handbook: procedures to inventory, control, manage, and reemploy surplus municipal properties, New Brunswick, N.J, Rutgers University, Center for Urban Policy Research., 1981.
[7] Loures, L. and Panagopoulos, in Sustainable Development and Planning III, Southampton, UK, WIT Press, 2007.
[8] C. o. Australia, in Adaptive Reuse: Preserving our past, building our future, Australia, 2004.
[9] A thesis by Ramola Helena lewis on the topic of “Re-architecture: Adaptive reuse of buildings”, November 2013.