#### DECLARATION

- I, Arshiya Chhabra hereby solemnly declare that the thesis work undertaken by me titled,
- "Adaptive Reuse of Building" is my original work and whatever information I have incorporated in the form of photographs, text, data, drawings etc., from different resources has been duly acknowledged in my dissertation.

Date: 26th June, 2023

Place: Gurugram, Haryana

Arshiya Chhabra
1906810002
IV<sup>th</sup> year, B.I.D
School of Architecture & Design
K.R. Mangalam University, Gurugram

Registrar K.R. Mangalam University

Sohna Road. Gurugram (Haryana)

### **CERTIFICATE**

This thesis is submitted by **Arshiya Chhabra**, **1906810002** student of 4<sup>th</sup> Year, School of Architecture & Design, K.R. Mangalam University, Gurgaon.

Originality of information and opinion expressed in this thesis are of the Author and do not necessarily reflect those of the guide.

Date: 26th June, 2023

Place: Gurugram, Haryana

Student: Arshiya Chhabra

Guide:

Ar. Hemani Singh

**External**:

Ar.

Dean

Prof. Hemani Singh

#### **ACKNOWLEDGEMENT**

A thesis is an amalgamation of vital inputs, critical insights and unquestioned support.

I would like to express my special appreciation and thanks to my advisor Professor Hemani Singh, you have been a tremendous mentor for me who gave me the golden opportunity to do this wonderful project on the topic Adaptive Reuse of Buildings, and also helped me in doing a lot of Research due to which I came to know about so many new things.

Secondly I would also like to thank my parents and friends who helped me a lot in finalizing this project within the limited time frame. Their immense knowledge and plentiful experience have encouraged me in all the time of my academic research and daily life.

Finally, I would like to thank God for letting me through all the difficulties. I have experienced your guidance day by day.

#### **ABSTRACT**

The purpose of the study is how the adaptive reuse of buildings helps in promoting a sustainable environment and helps in conservation of historical and cultural background. As time changes, the need for various types of space diminishes. These buildings whose function is no longer required become a subject of abandonment. In many situations, the types of buildings most likely to be forgotten include industrial buildings, political buildings and community buildings. Adaptive reuse reaffirms building presence in the neighbourhood. Also one less building is added to urban fabric and there is a lesser negative impact on the environment.

An amalgamation of uses occurs when adaptive reuse is carried out creating a more vibrant atmosphere. Adaptive reuse, will ensure that while the building is functional it remains true to its essence. Also, while the identity of the building undergoes transformation it still retains its integrity.

Through understanding why buildings fail it can be made possible to stop further buildings from becoming abandoned. And this new lease of life can come in the form of renovation, restoration or reuse. Adaptive reuse is just one solution and is popular due to its wide array of solutions.

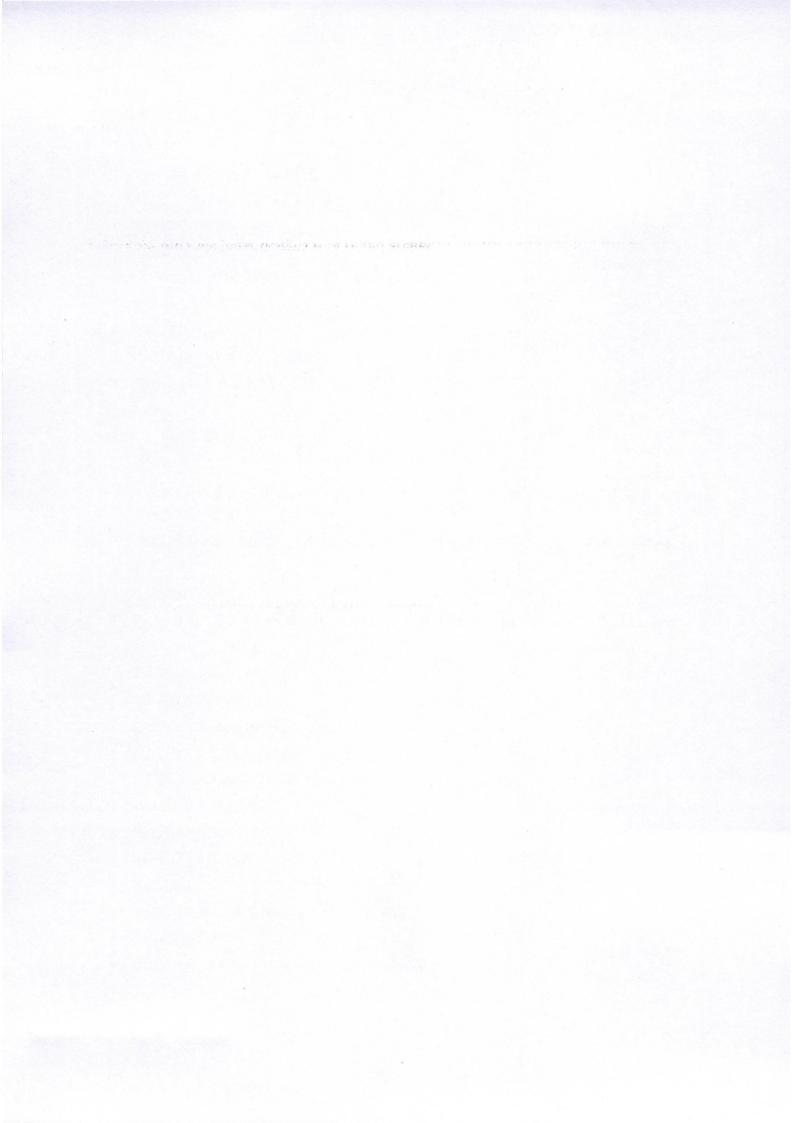
# LIST OF FIGURES

Figure 1- Jai Vilas Palace, Gwalior	12
Figure 2- Soro Village Pub, Goa	13
Figure 3- Neemrana Fort, Rajasthan	15
Figure 4- Alembic factory, Vadodara(BEFORE)	16
Figure 5- Alembic factory, Vadodara(AFTER)	17
Figure 6- Neemrana Fort Palace, Rajasthan	17
Figure 7- Quarry theatre at St Luke's church , Bedford, United Kingdom	18
Figure 8- Dharampura Haveli, Chandni chowk, Delhi	20
Figure 9- Before and after, Dharampura Haveli, Chandni chowk,	
Delhi	21
Figure 10- Courtyard with fountain	22
Figure 11- Existing plan for Dharampura Haveli	23
Figure 12- Entry for Jaipur House.	24
Figure 13- Past use plan for Jaipur House.	25
Figure 14- View from entry gate 3.	26
Figure 15- Main Ballroom with dark wood	27
Figure 16- Spiral staircase leading to upper floor	27
Figure 17- Staircase area to be used as picturization.	28
Figure 18- Niches added for aesthetic display	29
Figure 19- Chimney decorated with woods	30
Figure 20- Chimney is covered with a plank	30
Figure 21- Inside Lift	31
Figure 22- Existing plan for Jaipur House	32
Figure 23- Chail Palace	33
Figure 24- Exterior of Rambagh Palace.	34
Figure 25- Interior of Rambagh Palace	37
Figure 26-Taragarh Palace	38
Figure 27- Naggar Castle	40
Figure 28- Front of Cinnamon Boutique.	41
Figure 29- Before and After of Cinnamon Boutique.	42
Figure 30- Plan and elevation of Cinnamon Boutique	43
Figure 31- Google earth map site marking	45

Figure 32- Connectivity to site	47
Figure 33- Nearest attractions to site.	47
Figure 34- St. James church	48
Figure 35- Old GPO	
Figure 36- BR Ambedkar University.	49
Figure 37- Timeline of the evolved architectural features in kashmere gate	50
Figure 38- Jaali pattern with detailed pillar designs	50
Figure 39- Intricate pillar designs with round arches.	51
Figure 40- Different pillars on bracket with ceiling supporting Upper floors	51
Figure 41- Kashmere gate, Old delhi	51
Figure 42-High Vaulted Arched Gateway	53
Figure 43-Decorative and intricate carvings on pillars	53
Figure 44-Detailed patterns on pillars and skirting.	54
Figure 45-Detailed jaali patterns on windows.	54
Figure 46- Balconies supported on carved brackets	55
Figure 47-Different arches and Latticed screens.	55
Figure 48-Construction material marked on Elevation A	56
Figure 49-Construction material marked on Elevation C	56
Figure 50-Construction material marked on at the entrance gateway	57
Figure 51-Physical restriction	58
Figure 52-Less flexibility	58
Figure 53-Deliberation over social impact	59
Figure 54-Material Incompatibility	59
Figure 55-Community character	60
Figure 56-Location	60
Figure 57-Economic Consideration	
Figure 58-Potential Code problems	
Figure 59-Existing ground floor layout	
Figure 60-Proposed ground floor layout	63
Figure 61-Existing first floor layout.	
Figure 62-Proposed first floor layout	
Figure 63-Existing terrace floor layout	
Figure 64-Proposed terrace floor layout	

# **CHAPTERIZATION**

•	DECLARATION1
•	CERTIFICATE
•	ACKNOWLEDGEMENT
•	ABSTRACT4
•	LIST OF FIGURES5
•	CHAPTERIZATION 6
1.	INTRODUCTION8
	1.1. NEED FOR RESEARCH
	1.2. AIM & OBJECTIVES
	1.3. SCOPE OF THE RESEARCH
	1.4. LIMITATION
	1.5. METHODOLOGY
2.	INTRODUCTION TO ADAPTIVE REUSE- REUSE OF EXISTING
	BUILDINGS
3.	ADAPTIVE REUSE- INFLUENCE OF HISTORICAL AND CULTURAL
	BACKGROUND14
	3.1. INTRODUCTION
	3.2. HISTORY OF ADAPTIVE REUSE
	3.3. BUILDING TYPOLOGY
4.	ADAPTIVE REUSE- CASE STUDIES23
	4.1. DHARAMPURA HAVELI
	4.2. JAIPUR HOUSE
	4.2. JAIPUR HOUSE 4.3. CHAIL PALACE
	4.3. CHAIL PALACE
	4.3. CHAIL PALACE 4.4. RAMBAGH PALACE
	4.3. CHAIL PALACE 4.4. RAMBAGH PALACE 4.5. TARA GARH



	ADAPTIVE REUSE - SITE SETH RAMLAL KHEMKA
	HAVELI46
	5.1. ABOUT THE SITE
	5.2. CONNECTIVITY TO THE SITE
	5.3. ARCHITECTURAL STYLE OF SITE SURROUNDINGS
	5.4. LOCAL SURROUNDINGS OF KASHMERE GATE
	5.5. SWOT ANALYSIS OF SITE(SETH RAMLAL KHEMKA HAVELI)
	5.6. ARCHITECTURAL STYLE OF SETH RAMLAL KHEMKA HAVELI
	5.7. CONSTRUCTION MATERIAL USED IN SETH RAMLAL KHEMKA HAVELI
	5.8. PARAMETERS OF ADAPTIVE REUSE INCONTEXT WITH STH RAMLAI
	KHEMKA HAVELI
	5.9. PROPOSED PLANNING AND LAYOUTING
	5.10. PLANS AND SECTIONS OF SETH RAMLAAL KHEMKA HAVELI
	5.11. 3D RENDER OF SETH RAMLAL KHEMKA HAVELI
ó.	REFERENCES. 47

# CHAPTER-1 INTRODUCTION

### **NEED OF RESEARCH-**

Adaptive reuse restores historically and culturally significant sites to contemporary uses that would otherwise be left to decay or demolished to make room for new buildings. It is not only an opportunity to conserve heritage sites, but also as an important element of sustainable development, in terms of ecology, economy and sociocultural aspects.

SUSTAINABILITY- The ability of something to maintain or sustain itself over time.

ADAPTIVE REUSE- The re purposing of an existing structure for new use.

#### AIM-

The aim is to study how the adaptive reuse of buildings helps in conservation of historical and cultural aspect while reusing the interior space other than it was originally used. Also, how adaptive reuse maintains sustainable environment.

#### **OBJECTIVES-**

- To examine the influence of historical and cultural background on interiors in adaptive reuse.
- To investigate a relationship between adaptive reuse and sustainability.
- To understand the concept of reuse the buildings in the era of constantly changing urbanscape.
- To understand through the case studies the parameters of adaptive reuse.

#### LIMITATION-

- The research is limited to the study of adaptive reuse of those buildings built before the 20th century.
- Only those case studies of adaptive reuse will be taken up that conform to the context of the building and help in conserving the heritage value.

#### **CHAPTER 2**

#### INTRODUCTION TO ADAPTIVE REUSE

Adaptive reuse refers to the process of reusing an old site or Building for a purpose other than it was originally built or designed for. This process of re-utilizing a building allows culturally and historically important buildings to be redeveloped and repurposed instead of demolished.

Through adaptive reuse, the internal and external structure of a building is adapted so that the character of the old influences the format of the new. (Onay N.S., 2014)

By reusing an existing structure within a site, the energy required to create these spaces and the material waste that comes from destroying old sites is lessened. (Teixeira F.F. Ozge C.,2014)

An increasing number of examples can be found around the world. A closed school may be converted into condominiums. An old factory may become a museum. A historic electric building can become apartments. A rundown church finds new life as a restaurant, or a restaurant may become a church.(Larsen N.M., 2020)

## POSITIVES OF ADAPTIVELY REUSING-

The most successful built adaptive reuse projects are those that retain the building's significance and add a contemporary layer that provides value for the future.

(https://www.awe.gov.au/parks-heritage/heritage/publications/adaptive-reuse).

Abandoned buildings often have a great deal to offer in terms of location and character and should be viewed as opportunities rather than eyesores. In many cases retaining old buildings, especially those of architectural or historic character, can strengthen the enduring legacy and enjoyment of a community. (Teixeira F.F. Ozge C.,2014)

Adaptive reuse contributes to the livability and sustainability of communities for generations to come.(Ezzat A.A., 2018)

"THE GREENEST BUILDING IS THE ONE THAT IS ALREADY BUILT"
-CARL ELEFANTE (Elefante, 2007)

Adapting a building to suit contemporary needs requires a responsive approach to issues created by existing materials, dimensions and condition of the structure.

#### ADVANTAGES OF ADAPTIVE REUSE-

- Energy conservation- Adaptive reuse aids energy efficiency in multiple ways. The
  energy required to demolish an existing building and then rebuild with fresh materials
  increases the carbon footprint of the building. Also, debris generated from the old
  structures goes into landfills and is rendered useless. Apart from these, the older
  buildings are built in response to the climate hence reducing the need for mechanical
  systems to sustain it.
- Enhances community character- Repurposed buildings can act as a great element to
  enhance the authentic character of a place or town. These buildings will not just serve
  their aesthetic purpose but will also stand strong to cater the modern man's
  requirements.
- Contributes to sustainability- Adaptive reuse is itself considered sustainable because of the reduction in building materials needed to transform a space.
- Enhances innovation- To reuse a building and make it viable for today can be quite challenging. This will create opportunities for architects and designers to come up with innovative solutions.
- Environmental benefits- Adaptive reuse has several benefits considering the environment. Building materials have high embodied energy which is not environmentally friendly. Moreover, the process of construction creates high levels of sound and air pollution causing damage to the environment. By reusing buildings we can contribute to a healthier environment to some extent.
- Increases market value- Historic manufacturing facilities, such as old warehouses, allow for adaptive redevelopment into trendy and in-demand creative office space, generating significant interest from today's creative workforce.

#### **EXAMPLES OF ADAPTIVE REUSE-**

## 1. Jai Vilas Palace, Gwalior

The Jai Vilas Palace is a 19th Century palace constructed in the European architectural style, by the Scindia Dynasty in Gwalior. While some portion of the palace is the residence of the descendants of the royal family, a major part of the palace has been converted into the 'Jivajirao Scindia Museum'. In addition to artefacts that display the rich culture of Gwalior under the Scindias, the museum also includes lavish and well-furnished drawing rooms,

bedrooms, banquet halls, and dining areas. Some of these interior spaces are also dedicated to various members of the royal families and portray their lifestyles.



Fig.1- Jai vilas palace, Gwalior

**Source:**https://www.re-thinkingthefuture.com/wp-content/uploads/2020/06/A1099-8-Instances-of-Adaptive-Reuse-in-India-Jai-Vilas-Palace-Image-2.jpg

## 2. Soro Village Pub, Goa

The Soro Village Pub is a bar in Goa that was formerly an industrial warehouse built in the 1940s. The original structure of the warehouse has been preserved as much as possible by Raya Shankar Architects, who undertook this project. In addition to this, a hip and pop warehouse look has been given to the bar. This has been done by painting various graffiti on the interior walls and leaving all the electrical wiring exposed to adhere to the industrial theme of the bar.

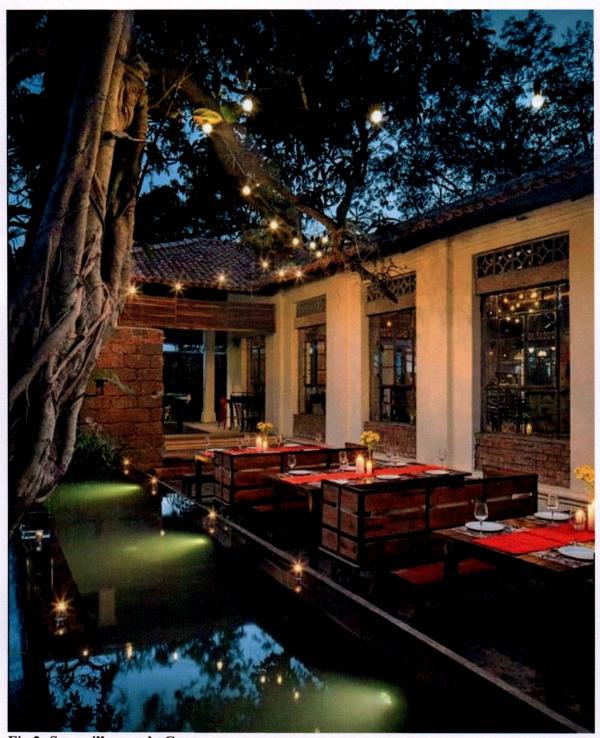


Fig.2- Soro village pub, Goa

**Source:**https://www.re-thinkingthefuture.com/wp-content/uploads/2020/06/A1099-8-Instances-of-Adaptive-Reuse-in-India-Soro-Village-Pub-Image-1.jpg

#### **CHAPTER 3**

# ADAPTIVE REUSE- INFLUENCE OF HISTORICAL AND CULTURAL BACKGROUND

#### 3.1 INTRODUCTION-

Introducing a new function into the old walls is the only way to save the degrading architectural heritage of the city and thus preserve its identity and architectural continuity(Heim J.S., 2020)

The preservation of the architectural heritage and its integration within contemporary social life foster a harmonious social balance and the formation of a complete and sustainable living environment

(Fatemeh H. et.al., 2022)

Adaptive reuse program will be a solution to re-energize and revitalise such neglected areas and therefore contribute to increasing living standards within the society and can attract investment and lead to economic growth.(Heim J.S., 2018).

#### 3.2 HISTORY OF ADAPTIVE REUSE-

The historic building is an asset that has an essential element of any building which is cultural and social significance. According to Alananga and Lucian heritage also involves artistic value, historic value, spiritual value, and economic value. (Misirli S.D., 2016)

- The economic value of building heritage goods defines the extent to which people would be prepared to sacrifice something else to obtain.
- Heritage sites usually have local meanings and are associated with the heritage and identities of local communities living on or around them.
- Local meanings attached to a site may differ from those of academics, national authorities, and the tourism industry.
- Loss of symbolic and economic values of sites for local communities often results in resistance to conservation efforts. (Heim J.S., 2018)

## One of the first examples renowned for adaptive reuse of buildings in India was

## NEEMRANA FORT-PALACE - 15TH CENTURY (NEEMRANA, RAJASTHAN)

Built in 1464, abandoned in 1947, acquired in 1986, this splendid ruin was restored into an exquisite resort near Delhi, opened in 1991. Today it has 77 rooms/suites spread over 14 levels cut into the hill. Additional wings house the pool and health spa, an amphitheatre, the hanging gardens with a salon, a restaurant with a roof-top garden and conference halls rooms with special suites offering exceptional views of the Fort-Palace. A host of features make our heritage property the best place to stay near Delhi ensuring a memorable experience.



Fig3- Neemrana Fort, Rajasthan

**Source:**https://cf.bstatic.com/xdata/images/hotel/max1280x900/214744433.jpg?k=59287ac4f6 b1888301b1e28caf20b3f321c17dcad5b85eecc2faf89f78500332&o=&hp=1

• Unlike the adaptive reuse of industrial buildings, which creates something completely new by reusing old structures, historic preservation has a different goal. Specifically, it is a process in which architects and designers attempt to protect, conserve and preserve buildings that have historical significance. Furthermore, a historic district is a group of buildings that are historically significant. Of course, historic preservation experts can restore a rundown landmark to its former glory. Full restoration can be quite expensive, due to the use of period practices and materials.

#### 3.3 BUILDING TYPOLOGY -

Historic buildings give the neighbourhood a distinct character and at the same time provide a tangible connection to the past(Bullen, P. and Love, P., 2011). The types of building most like;y to become a subject for adaptive reuse are-

Industrial buildings- such as automobiles, power plants, manufacturing industries etc.
 Examples of industrial buildings are-

#### THE ALEMBIC FACTORY, VADODARA

The Alembic factory is located in the middle of the city and along the main railway line of the city of Baroda. In its 112th year of existence, the first-ever Alembic industrial building in Vadodara has seen multiple surgical interventions. Similar to many old factory buildings, the building got altered over time due to change in the original purpose of the facility. Starting from manufacturing penicillin to alcohol. The space within is meant to serve the Alembic Museum, art studios, display and exhibition space with ancillary spaces for a library, AV room, and a café.



Fig.4- Alembic factory, Vadodara(BEFORE)

**Source:**https://www.re-thinkingthefuture.com/wp-content/uploads/2020/06/A1099-8-Instances-of-Adaptive-Reuse-in-India-Alembic-Industrial-Heritage-Development-Image-1.jpg



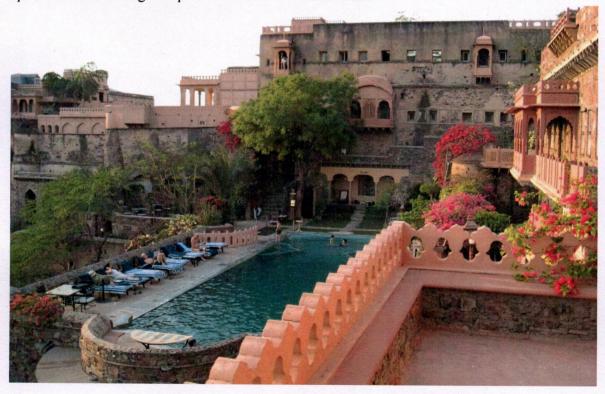
Fig.5- Alembic factory, Vadodara(AFTER)

**Source:** https://www.re-thinkingthefuture.com/wp-content/uploads/2020/06/A1099-8-Instances-of-Adaptive-Reuse-in-India-Alembic-Industrial-Heritage-Development-Image-1.jpg

• Political buildings- such as palaces. Examples of political building are-

### NEEMRANA FORT-PALACE - 15TH CENTURY (NEEMRANA, RAJASTHAN)

Built in 1464, abandoned in 1947, acquired in 1986, this splendid ruin was restored into an exquisite resort near Delhi, opened in 1991. Today it has 77 rooms/suites spread over 14 levels cut into the hill. Additional wings house the pool and health spa, an amphitheatre, the hanging gardens with a salon, a restaurant with a roof-top garden and conference halls rooms with special suites offering exceptional views of the Fort-Palace.



## Fig.6-Neemrana fort palace, Rajasthan

**Source:**https://cf.bstatic.com/xdata/images/hotel/max1280x900/214744433.jpg?k=59287ac4f6 b1888301b1e28caf20b3f321c17dcad5b85eecc2faf89f78500332&o=&hp=1

Community buildings- such as churches and schools. Examples of community buildings are-

#### **QUARRY THEATRE AT ST LUKE'S**

The completed project has involved the conversion of the chapel into a 300 seat galleried courtyard theatre, restoration of the Minister's House to provide front of house facilities, offices and a studio, and the addition of a new foyer and backstage extension at the rear. The new foyer wraps around the apsidal wall to the original chancel and a curved wall of glass provides views over the secluded gardens of the old churchyard.

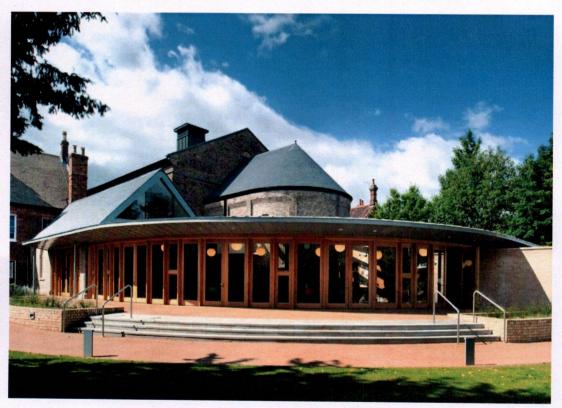


Fig.7-Quarry theatre at St Luke's church, Bedford, United Kingdom Source:

 $https://images.adsttc.com/media/images/5640/b5d1/e58e/cee3/cf00/0006/newsletter/VIL3.jpg? \\1447081412$ 

Re-use of historical interiors as retail space is an important design issue that has to be evaluated from different points of view. While preserving the heritage significance of these interiors, it is

also important to create up-to-date commercial spaces. Historic cities and all their components including buildings and their interiors are living structures, and they need to be used for some socially useful purpose. If they are abandoned without a use, they become frozen in time. Reuse is the way to make them a part of our lives.

EXAMPLE- Florence, the starting point of Renaissance still reflects the real spirit of the era with many of its architectural structures. In this study, selected ground floor interiors used for commercial activities in the old market place of Florence were evaluated in order to draw attention to the tension created between the existing historic environment and contemporary additions while adapting interiors to new uses. Therefore, the study mainly aims to discuss the effect of additions on the existing. The heritage values of historic buildings and interiors need to be preserved but without ignoring technological advancements that help us to create a better environment. While creating re-use proposals for interiors, preserving historical values and creating effective retail spaces are not contradicting approaches. They are both to be maintained throughout design.

# CHAPTER 4 ADAPTIVE REUSE- LIVE CASE STUDIES

## 4.1. DHARAMPURA HAVELI, DELHI

YEAR OF CONSTRUCTION-1887 CE

LOCATION-2293, Dharampura, Gali Gulian, Jama Masjid, Chandni Chowk, Old Delhi,

AREA-500 SQ. YARD APPROX.

**ARCHITECT-** Vijay Goel

**ARCHITECTURE STYLE-**Their distinctive architecture (inspired by Mughal, Persian and Indian architecture) and decor style are all clubbed under Haveli style.

SUSTAINABILITY- The ability of something to maintain or sustain itself over time.

ADAPTIVE REUSE- The repurposing of an existing structure for new use.

Adaptive reuse and sustainability works simultaneously to conserve a building.

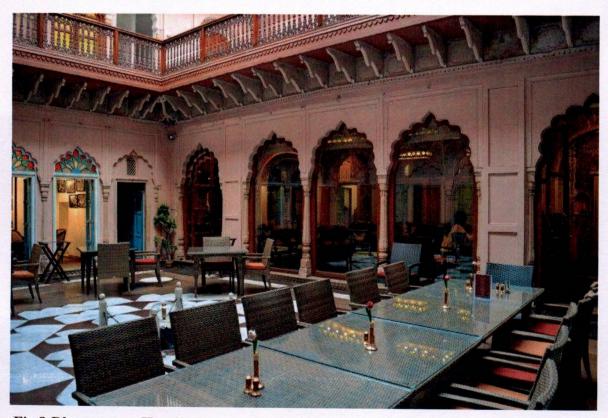


Fig.8-Dharampura Haveli, Chandni chowk, Delhi

Source: https://i.pinimg.com/originals/31/e5/67/31e5674c5ea15a8b108b87e889adc2a0.jpg

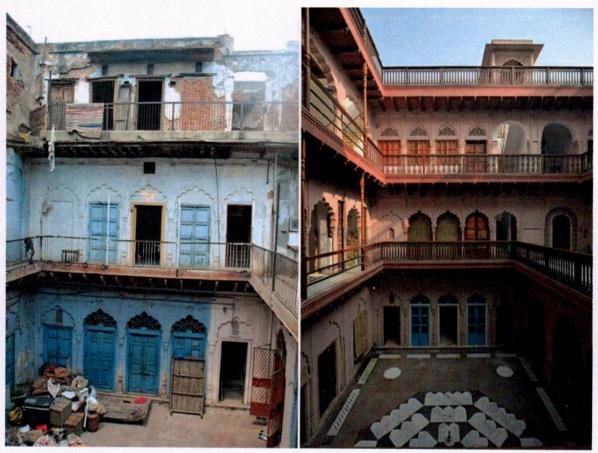


Fig.9- Adaptive reuse before and after, Dharampura Haveli, Chandni chowk, Delhi Source: https://mediaindia.eu/wp-content/uploads/2020/03/then-now-screenshort-1.jpg

#### **OBSERVATION-**

The Haveli reflects the rich cultural heritage of the Mughal period. The Haveli bears a distinctive style of the late Mughal architecture and is featured in the INTACH listing, an organisation aimed at preserving and restoring the important historical buildings in India. Decorated with intricate designs of wood work on the rooftops, sculptures and Hindu goddesses engraved in stone and steel, antique balconies and jharokha.

# ASPECTS RELATED TO ADAPTIVE REUSE-

It was originally designed to have a mixed use pattern, both residential and commercial. Shops on the lower ground floor that open towards the street and the remaining floors, designed as residences, portray the mixed use of haveli. The ground floor with a grand entrance and first floor were constructed at the same period. But now the haveli is reused as a restaurant and a

modern 14-rooms 5-star hotel with ancestral haveli look and feel also has a restaurant named lakhouri.



Fig.10- Courtyard with fountain

**Source:**https://www.secret-retreats.com/wp-content/uploads/gallery/dharampura/haveli-dharampura-01.jpg

#### PILLARS OF SUSTAINABILITY APPLIED IN DHARAMPURA HAVELI-

**ENVIRONMENTAL BENEFIT-**Constructing a new building results in tons of release of carbon and increase in more waste. At the time of reuse the construction material used includes a mix of jaggery, urad dal, wood apple pulp and crushed bricks to match the old haveli texture. Cracked walls have been reconstructed with lime mortar and small kiln-fired bricks called "lakhori" bricks.

**SOCIAL BENEFIT-** Social benefit is achieved when the haveli was put to another use with the same architecture feature and same building. Haveli also serves as a landmark as it becomes part of adaptive reuse.

**ECONOMIC BENEFIT-** From residential to a 5 star hotel the haveli gives a new opportunity to earn revenue. Also, there will be no construction costs. Only some parts of haveli have to be renovated.



Fig.11-Existing plan for Dharampura Haveli

Source: https://spacesarchitects-ka.com/admin/project\_picture/zoom/569a2c3795d1a\_02.jpg

## 4.2. JAIPUR HOUSE, DELHI

LOCATION- Princes Park, Tilak Marg, India Gate, New Delhi, Delhi 110001

**ARCHITECT-** Arthur Blomfield

AREA- 12000 metres, the main museum in jaipur house

ARCHITECTURAL STYLE-European neo-classical mixed with Indian and Art Décor style
YEAR OF CONSTRUCTION- 1936

Jaipur House is the former residence of the Maharaja of Jaipur in the city of New Delhi, India. It is situated at the end of Rajpath, facing the India Gate. It was designed by Arthur Blomfield, after construction of Lutyens' Delhi, in 1936.

The structure has a butterfly layout and a central dome. The structure is clad in red and yellow sandstone.

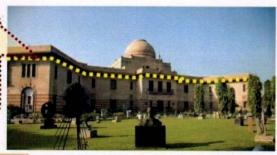


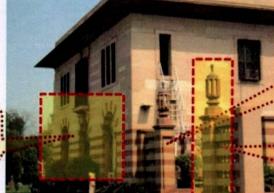
Fig.12- Entry for Jaipur House

The dome is saucer-shaped, decorated with Mughal patterns, chattris.

A continuous sunshade or 'chajja' in red stone casts a deep shadow and caps the whole facade.

The overall impression is of solid mass, grand horizontal sweeps, and of monumentality.





#### Ornamentation is used sparingly

a horizontal band of interlocking pattern in red and buff stone reminiscent of Mughal monuments.

Arch

carved ornamental 'Rajput' columns that frame a few arched openings

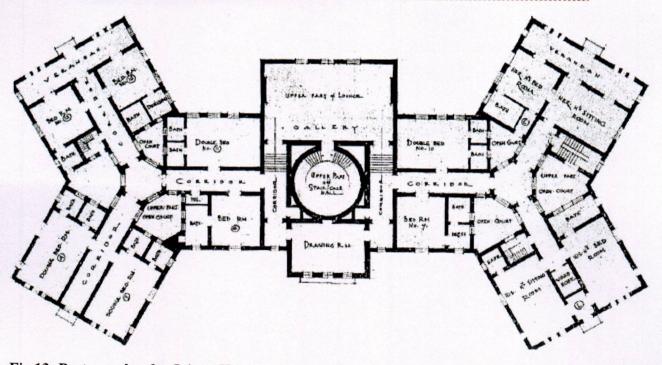


Fig.13- Past use plan for Jaipur House

Source: https://www.tandfonline.com/doi/pdf/10.1080/02666030.2008.9628690

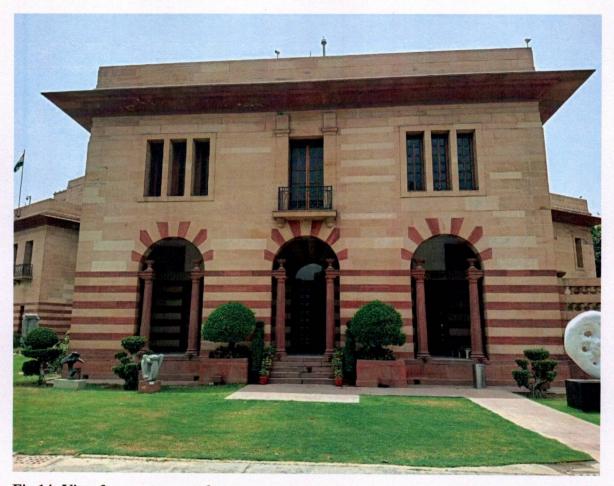


Fig.14- View from entry gate 3

# ASPECTS RELATED TO ADAPTIVE REUSE-

Jaipur House is the former residence of the Maharaja of Jaipur in the city of New Delhi, India. Today it houses the National Gallery of Modern Art (NGMA), India's premier art gallery which was established here by the Ministry of Culture in 1954.

 To the back of the palace is a large garden, which can be entered through the main ballroom on the ground floor. The ballroom is panelled in dark wood.



Fig.15- Main Ballroom with dark wood

#### Source:

 $https://images.hindustantimes.com/rf/image\_size\_630x354/HT/p2/2019/02/19/Pictures/jaipur-house\_35006c5a-3408-11e9-9527-26b2d5de00dc.jpg$ 

• Inside is the main hall underneath the central dome, with a large spiral staircase leading to the upper floor.



Fig.16- Spiral staircase leading to upper floor

#### Source:

 $https://images.hindustantimes.com/rf/image\_size\_630x354/HT/p2/2019/02/19/Pictures/jaipur-house\_323ac998-3408-11e9-9527-26b2d5de00dc.jpg$ 



Fig.17- Staircase area to be used as picturization

• The addition of niches to display the paintings gives an aesthetic appearance to the display.



Fig18- Niches added for aesthetic display

 The chimneys were covered rather than removed in every room so that the charm of the house can be maintained and can be felt after being reused.



Fig.19- Chimney decorated with woods



Fig.20- Chimney is covered with a plank

Installation of lifts were done at the time of adaptive reuse. But the placement of the lift
was behind a wooden door which can be easily perceived as a normal room.

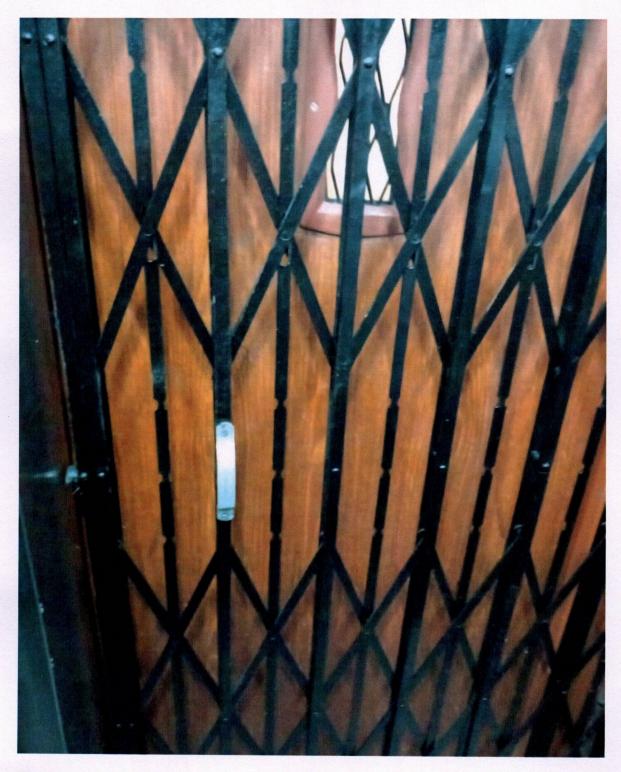


Fig.21- Inside lift

The corridors and the rooms on the first floor exhibited the works of great masters such as Nandalal Bose, Abanindra Nath Tagore, Rabindranath Tagore among others. The ground floor displayed works of Jamini Roy etc.

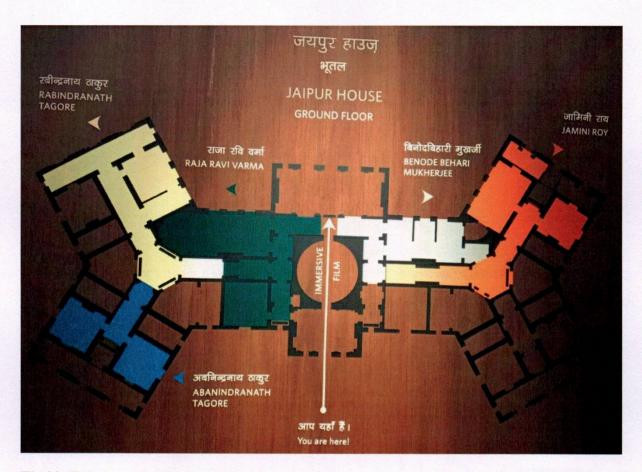


Fig.22- Existing plan for Jaipur House

#### PILLARS OF SUSTAINABILITY-

**ECONOMIC BENEFIT-** The gypsum partitions, walls and closures that covered most of the building's original walls, grand doors. The conservation work includes reinforcing damaged roofs, and repairing and polishing the original doors, windows and the teak wood panelled walls. Polishing doors and windows requires less cost rather than new. Also, the cost of building construction is saved at the time of adaptive reuse as the jaipur house is already built.

**ENVIRONMENTAL BENEFIT-** Constructing a new building, new doors and windows adds to cost as well as emission of gases and use of more woods gives the environment a negative impact.

**SOCIAL BENEFIT-** Doing adaptive reuse, restores a building for a new use. And it stores the history and culture of the building. In the case of Jaipur house, the restoration of the building to its original glory gives the experience of viewing art in a royal house, not in a typical gallery.

#### 4.3. CHAIL PALACE, HIMACHAL

Chail palace, which is set in approximately 75 acres of land, was built in 1891. The palace is also known as Maharaja Bhupinder Singh's (Maharaja of Patiala) palace and it is where Maharaja Bhupinder Singh shifted to after his expulsion from Shimla. Located at an elevation, the palace offers a spectacular view of Shimla. With tennis and badminton courts, an orchard, elegant lawns, quaint log cottages and children's park, the palace is an ideal vacation spot. You can walk through the thick forest surrounding the palace or try angling or trekking.

The palace has been converted into a Premium Heritage Hotel, which offers a variety of accommodation options like suits and cottages. The sumptuously furnished rooms will let you experience the Maharaja's creation. The estate also includes an open air cafe.



Fig.23- Chail palace

**Source:** https://dynamic-media-cdn.tripadvisor.com/media/photo-s/02/a7/3c/c3/filename-chail-stills.jpg?w=600&h=-1&s=1

#### 4.4. RAMBAGH PALACE, JAIPUR



Fig.24- RamBagh Palace

#### Source:

https://upload.wikimedia.org/wikipedia/commons/e/ef/Rambagh\_Palace\_hotel\_Jaipur\_lobby\_c ourtyard.jpg

Rambagh Palace is located 8 km outside of the walls of the city of Jaipur on Bhawani Singh road. The palace served as the former residence of the royal family of Jaipur. The palace and its construction started in 1835. The first building on the site of the palace was a garden house built for a wet nurse for Ram Singh II. The palace and the landscaped garden around the palace are spread across an area of 47 acres.

In 1887, the site and the houses were transformed and converted into a royal hunting lodge by Maharaja Thakur Sawai Madho Singh.

However, in the 20th century, the modest lodge was expanded and converted into a palace, designed by Samuel Swinton Jacob.Rambagh Palace was made the principal residence by

Maharaja Sawai Man Singh II with the addition of royal suites in the year 1931. It was resided by Maharaja Sawai Man Singh II and his queen Maharani Gayatri Devi and their family.

Rajasthan evokes images of erstwhile royalty, a history steeped in princely living and legends. Here one is transported back in time to relive Rajput history. The romance of Rajasthan comes alive at Rambagh Palace Rambagh Palace is a living legend in Jaipur. A palace veiled in the mists of time to narrate an interesting story. Built in 1835 on a modest scale for the queen's favourite handmaiden Kesar Badaran, and later refurbished as a royal guesthouse and hunting lodge, the mansion was renamed Rambagh, after the then reining Maharaja Sawai Ram Singh II. His grandson, prince Sawai Man Singh II, was brought here on his accession in 1922.

In those years princely living entailed having a school for the prince within the premises, so a private school was set up for a few chosen sons of aristocracy, to escape the confines of the city palace. Sawai Man Singh II later went to England to finish his studies. While in England he often dreamt of making Rambagh his official residence and palace. On his return he began actualizing his dream by converting Rambagh into the magnificent palace it is today, with neat manicured gardens, drawing inspiration from Mughal and Rajasthani styles of architecture. In 1925, Rambagh Palace became the permanent residence of the Maharaja of Jaipur.

Rambagh remained the home of Rajasthan's Royalty until 1957, when it was first converted into a luxury hotel run by the royal family. In 1972, the palace's management was handed over to Taj Hotels Resorts and Palaces. Over the years Rambagh has played gracious host to several illustrious guests, royalty and celebrities such as Lord Louis Mountbatten, who has a suite named after him, Prince Charles, Jacqueline Kennedy and several others Continuing in the tradition of the Rajputana hospitality Rambagh Place offers a Royal Experience, which is truly unique. At Rambagh Palace, each wall, each room, each corridor and garden has a story to tell.

#### Architecture of Rambagh Palace

 The garden house was built in the complex for the first time in 1835. It was a small house built for the wet nurse of Ram Singh II. The garden house was surrounded by a welllandscaped garden.

- In the 20th century, Sir Swinton Jacob transformed the place and constructed the Rambagh Palace. The architecture is a mix of Mughal and Rajasthani styles. The palace consists of a marble hall, courtyards, and opulent corridors.
- The garden around the Rambagh Palace is a Mughal garden with flower beds. The palace also has a mini-golf course.
- The palace is decorated with hand-carved marble latticework, cenotaphs, sandstone balustrades, and a beautifully maintained Mughal Garden.
- The palace ballroom was built in the 18th-century and inspired by French architecture with crystal chandeliers.

Currently, the Sawai Man Mahal is used for royal destination weddings as well as top-notch business events.

#### Conversion of the Palace into a Luxurious Hotel

Rambagh Palace has been converted into a 5-star heritage hotel, operated by Taj Hotel Groups. After starting its operation as a hotel in 1987, it attracted many celebrities from across the world.

The palace has hosted affluent people including Queen Elizabeth and Prince Philip. Although the palace is converted into a hotel, visitors are allowed to take a tour of the property. The hotel retains its former glory and royal look with rooms decorated with rich texture, elegant carpets, and walls adorned with paintings and hand-painted motifs. The Rajput Room is an exquisite space for tea, per-dinner cocktails, and champagne. The Suvarna Mahal serves Indian cuisine. Rambagh Palace sponsored the "Rajmata Gayatri Devi Memorial Cup" in honour of Maharani Gayatri Devi after her death in 2009.

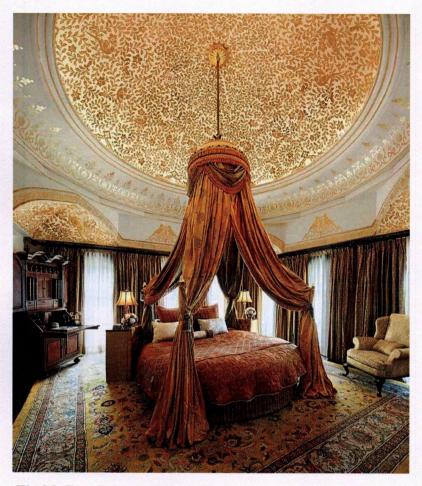


Fig.25- RamBagh Palace rooms

#### Source:

https://upload.wikimedia.org/wikipedia/commons/e/ef/Rambagh\_Palace\_hotel\_Jaipur\_lobby\_c ourtyard.jpg

#### 4.5. TARAGARH, HIMACHAL

The Taragarh Palace is nestled in the Kangra Valley in Taragarh, Himachal Pradesh. The palace was built as a summer resort and till date is one of the favorite holiday locations. The Palace stands majestically at 1,000 meters above sea level, amidst 15 acres of lush forests and tea gardens. Currently, it is one of the best heritage hotels in Himachal Pradesh. Breathe in the fresh air of mountains. The hotel offers splendid views of the snow-clad ranges of the Dhauladhar Mountains. Enjoy the luxuries of your accommodation. Delicious food appetizes your taste buds. Adventures await in the backyard. The resort is creates refreshing holidays ever experienced.

The Taragarh Palace is nestled in the Kangra Valley in Taragarh, Himachal Pradesh. The palace was built as a summer resort and till date is one of the favorite holiday locations. The

Palace stands majestically at 1,000 meters above sea level, amidst 15 acres of lush forests and tea gardens. Currently, it is one of the best heritage hotels in Himachal Pradesh. Breathe in the fresh air of mountains. The hotel offers splendid views of the snow-clad ranges of the Dhauladhar Mountains. Enjoy the luxuries of your accommodation. Delicious food appetizes your taste buds. Adventures await in the backyard. The resort is creates refreshing holidays ever experienced.

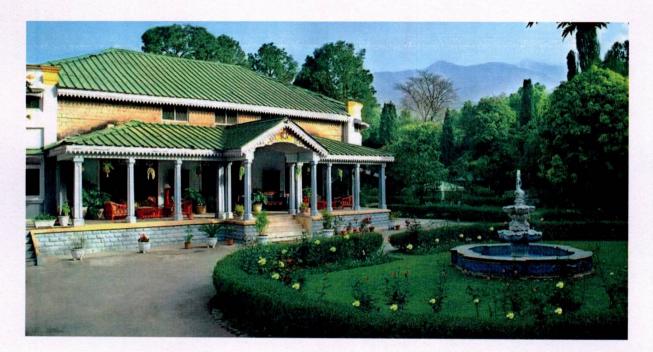


Fig.26- Taragarh Palace

Source: <a href="https://www.holidify.com/images/compressed/5955.jpg">https://www.holidify.com/images/compressed/5955.jpg</a>

Taragarh Palace Hotel is managed by the Royal family of Jammu and Kashmir. This palace hotel is in the name of Maharaja Karn Singh's mother, Tara Devi.

Tara Devi was from Kangra valley, she came from a very poor Katoch family of Jaisingh Pur region in Kangra.

Taragarh Palace is situated on a 15 forested estate surrounded by tea gardens of the Kangra valley, one of the most scenic and unexplored areas of Himachal Pradesh.

Located at an altitude of 3,400 feet above sea level, Taragarh Palace is at the foot of the Dhauladhar mountains with a splendid view of the surrounding snow-capped peaks.

0Formerly known as Alhilal (land of the crescent moon), the palace, was built in the early 1930s as a summer resorts. It was bought by the royal family of Jammu & Kashmir in 1951 for the dowager Maharani who lived there for several years. It is now run as a hotel by the present royal family, Vikramaditya Singh, who is eldest son of Dr. Karn Singh runs this place.

In 1931, the 27 year old Nawab of Bahawalpur built large European-style summer residence for himself up in the cool Himalayan jungle of Kangra district. He laid out lush gardens, built a glass pleasure pavilion and a mosque and christened his country palace Al Hilal ( The Crescent Moon ).

The ravishingly beautiful land of Kashmir saw many a golden age- of Ashoka, of Zain Al Abidin, of Mughal emperors Akbar, Jehangir and Shah Jahan. After the decline of Mughal authority in the 18th century, Kashmir passed into the hands of Afghan kings. In 1819, the city of Srinagar and parts of Kashmir were conquered by the Sikh armies of Maharaja Ranjit Singh. The successful military expedition was led by his Dogra general, Raja Gulab Singh of Jammu and went on to create the state of Jammu and Kashmir.

#### 4.6. NAGGAR CASTLE, HIMACHAL

It was the official seat of kings for centuries.[3] According to a legend, Raja Sidh Singh used stones from the abandoned palace (Gardhak) of Rana Bhonsal to build the castle.[4] He ordered the labourers to form a human chain over the Beas river connecting its left and right banks to transfer the stones manually. The castle survived the earthquake of 1905. While most houses in the valley and the nearby city of Jawa were completely ruined, the castle's use of earthquake-proof techniques helped it sustain despite the calamity.

The Castle was converted into a rest house, a hundred year back and in 1978 this ancient building was handed over to HPTDC to run as a heritage hotel. This medieval Castle was built by Raja Sidh Singh of Kullu around 1460 A.D. The hotel overlooks the Kullu Valley and apart from the spectacular view and superb location this has a flavour of authentic western Himalayan architecture. Here, a gallery houses the paintings of the Russian artist Nicholas Roerich. Naggar also has three other old shrines. Hotel Castle is an unique medieval stone and wood mansion, once the home to the Raja of Kullu and now an HPTDC Heritage hotel.

The Castle also has a small art gallery showcasing pieces from the Russian artist Nicholas Roerich.



Fig.27- Naggar castle, Himachal Pradesh

#### Source:

https://www.holidify.com/images/cmsuploads/compressed/27993585\_1761082990610367\_ 100197793121599141\_o\_20191112013444.jpg

#### 4.7. CINNAMON BOTIQUE, BANGLORE

The property was used as an orphanage and subsequently, the trust used it as an office. Once the office moved, the building became vacant. Due to under utilization and a lack of maintenance, a sequence of events affected the Madras terrace roof, slabs, and walls. From 2005 to 2013, the ruined building was unused. A study was done by INTACH and the building was renovated keeping the facade intact.

They added a plinth in front of the building, to prevent cars from driving directly in front of the store. The pebbled yard, the building on an elevated platform, the imposing columns that form the entrance to the building.

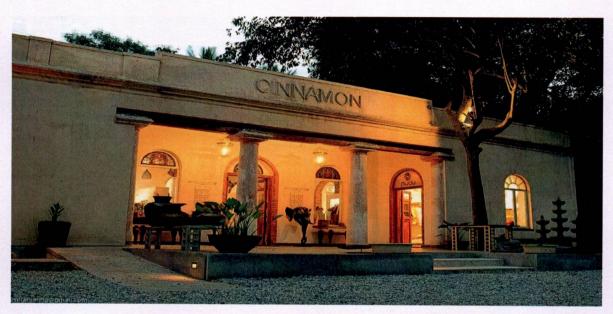
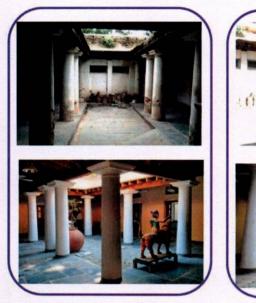


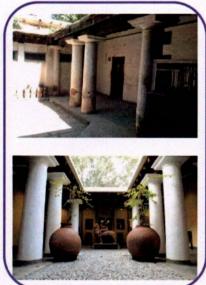
Fig.28- Front of Cinnamon Boutique

Source: https://www.facebook.com/cinnamonthestore/

#### ASPECTS RELATED TO ADAPTIVE REUSE-

- The building, over 120 years old, had been unused and was in a very bad condition. The building's reconstruction and renovation with ace architect Soumitro Ghosh was undertaken.
- All ornamental features in the limestone plaster have been maintained, and the space has been made disabled-friendly by introducing ramps.
- The 8,000 square foot space has maintained the original Kadappa stone flooring, and opens to a traditional courtyard.





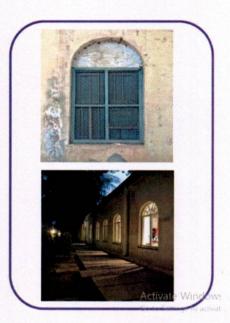


Fig.29- Before and After of Cinnamon Boutique

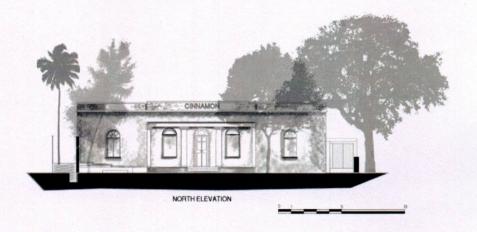
**Source:** https://bengalurureview.com/2019/09/21/rbanms-orphanage/

#### PILLARS OF SUSTAINABILITY-

**ECONOMIC BENEFIT-** The original structure has been largely preserved, including the old flooring, pillars, and wooden rafter ceiling beams. Ample natural light, window arches, and stained glass displays along with an interior design that uses historic wooden latticework, canopies, rustic mirrors, and antique frame props build an atmosphere of old-world charm.

**ENVIRONMENTAL BENEFIT-** Reusing of old structure saves the construction costs and also the wastage of materials is reduced. Reduction of materials gives environmental benefits.

**SOCIAL BENEFIT-** Underpinning the foundation, stitching wall cracks with steel, and replacing rafters that were considerably damaged with old teak wood from other places. Exposed electrical wiring has been done, similar to the style of the olden days. These elements have helped the building to retain its essence.



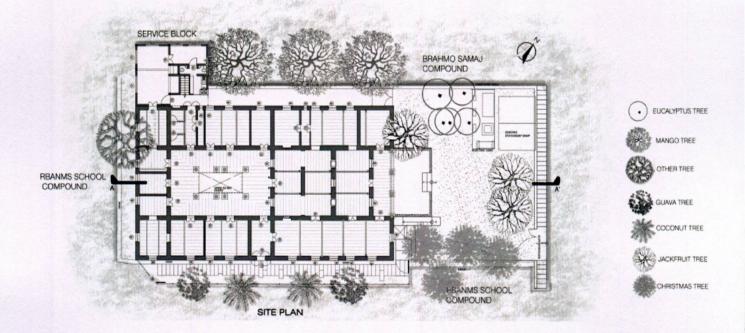


Fig.30- Plan and Elevation for Cinnamon Boutique

Source: https://www.re-thinkingthefuture.com/wp-content/uploads/2020/06/A1099-8-

In stances-of-Adaptive-Reuse-in-India-Cinnamon-Boutique-Image-2.jpg

### TABLE REPRESENTING THE RESEARCH ANALYSIS BETWEEN VARIOUS ASPECTS-

- USE OF BUILING INTERMS OF SOCIAL, ECONOMICAL AND ENVIRONMENTAL BENEFIT.
- CHANGES IN INTERIORS AT THE TIME TIME OF ADAPTIVE REUSE.
- CONSTRAINTS AT THE TIME OF ADAPTIVE REUSE

#### ADAPTIVE REUSE OF HISTORICAL BUILDINGS-

The adaptive reuse strategy is used to help communities maintain their own local identity and culture. Adaptive reuse calls for architectural conservation which ensures the significance of economic, social and cultural sustainability to the urban communities. Heritage buildings are crucial in terms of transferring the cultural identity for further generations. Where heritage buildings can no longer function with their original use, proposing a new function is inevitable in order to preserve the significance of the heritage building. The model can be used to propose adaptive reuse strategies for the abandoned or disused heritage buildings.

#### **CHAPTER-5**

#### ADAPTIVE REUSE-SITE SETH RAMLAL KHEMKA HAVELI

#### 5.1. ABOUT THE SITE-

Name- Seth Ramlal khemka haveli

Year of construction- 1850

Location- 743, chhota bazar, kashmere gate, Delhi 110006

Owner/client- Shri DN Bagla and Family.

Old use- The haveli was used as a residence from more than 150 years

**Present use-** The building is currently not in use by the present owners. As they want to use it for different purpose other than residence.

Area- 9000 sqft. Approx



SITE AREA- 9000 SQ. FEET APPROX.

Fig.31- Google earth map site marking

Source: Google earth pro

The Seth Ram Lal Khemka Haveli is a derelict haveli situated in the heart of the commercial whole sale market of Chotta Bazaar in the Kashmere Gate area of the walled city of Delhi. The original haveli dates back to the 1850s, but the present owner's family acquired it in 1920. The present owner bought out his cousins and consolidated the front courtyard of the haveli in his ownership in 2010.

The brief of the project was that the present owner has three sons and he wished to restore and renovate the house to facilitate their marriages. Being a typical Indian Marwari joint family, seeking arranged alliances for their sons, the aim was to showcase a nice house for their prospective brides.

The first site visit proved beyond doubt that beyond the layers of decay and dereliction lied a gem, that had tremendous potential to be carefully adapted and reused into a beautiful heritage home, keeping its old world charm and yet catering to the needs of contemporary living!

A project like this required immense planning and a methodological approach, analyzing its evolution and architecture and thus its significance and then developed policies and principles for its reuse.

#### ABOUT THE AREA-

- 1) Located within the Chotta Bazaar area of Kashmere Gate.
- 2) The building is easily accessible by bus and car from the. Ring Road as well as the yellow lines of the Delhi Metro.
- 3) The main access road from the Bada Bazaar to the haveli is narrow and is mostly used by two-wheeler and cycle rickshaws.
- 4) Traditionally an important residential neighbourhood within Shahjahanabad, the area has today transformed into a wholesale market for motor parts.
- 5) The grand havelis have been converted into shops and go-downs while few still retain their residential function.

#### 5.2. CONNECTIVITY TO THE SITE-

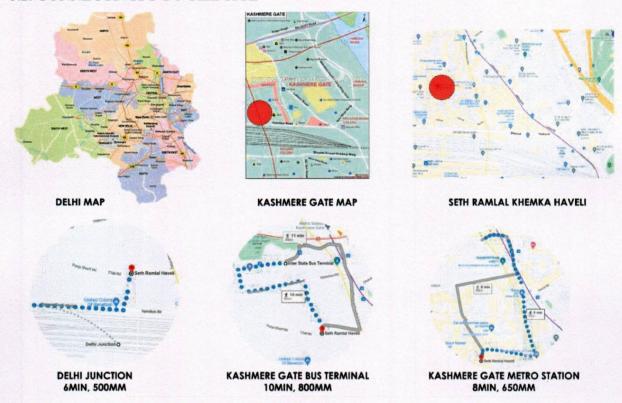


Fig.32- Connectivity to Seth ramlal khemka haveli

Source: Self

#### 5.3. ARCHITECTURAL STYLE OF SITE SURROUNDINGS-

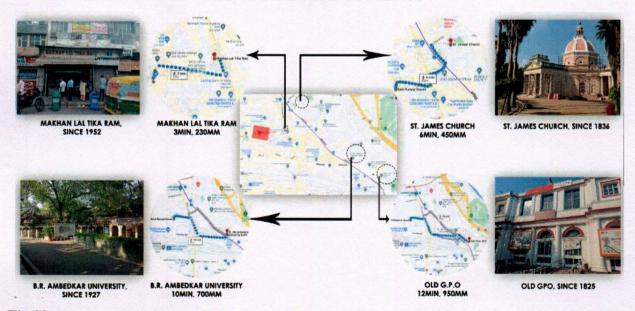


Fig.33- nearest attractions with architectural style of site surroundings

#### 1) ST. JAMES CHURCH-

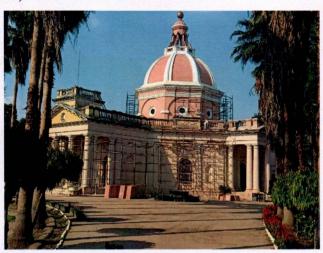


Fig.34 St. James Church

Source: Self

Built in 1836, is at 6min walking distance from site.

This was the first church to be built by the British in Delhi. It is a fine example of Colonial classical architectural of the early 19th century. The church was built by James Skinner, the military adventurer who gave his name to the church. The pointed ribbed dome and drum with circular openings are based on the Florence cathedral which initiated the entire movement of the Renaissance. The church is based on a Greek cross plan. The church consists of an altar in the eastern end and porticoes at all other three sides. The western portico is the main entrance. There is a composite moulding band runs over the head of the arches. At the top of the drum circular shaft placed on a pedestal and surmounted by an ionic capital.

The plain moulding that curves around the openings is very prominent. The cornice is the most elaborate, being more like an overhang.

There are niches of various types found in the exterior wall surfaces. External niches are apsidal, over which are arranged elliptical, set within a rectangular. There is large arched niches appear on the southern wall next to the front portico and on the rear of the chapel where it forms a blind window. The pulpit is intricately carved and decorated. The metal lectern is stands besides. Many late Mughal elements can also be noticed in the building. The building is painted in a soft combination of off-white and yellow.

#### 2) OLD GPO-



Fig.35-Old GPO

Source: Self

Built in 1825, is at 12min walking distance from site.

Built in the neoclassical style of colonial architecture, the two-storey building's facade is divided into five bays by engaged columns of the classical Tuscan order on the ground storey, and by pilasters on the upper storey.

#### 3) B.R. AMBEDKAR UNIVERSITY-

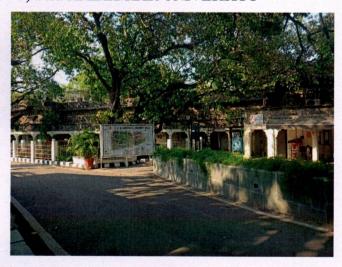


Fig.36-BR Ambedkar University

Built in 1927, is at 10min walking distance from site.

About Dara Shikoh Library, the building has a rectangular plan with a flat terrace. The most significant elements of the structure are high circular columns which form the southern facade with louvered openings between them.

The central portion of the facade is slightly projected. The building is entered through a large veranda surrounded by 16 circular columns. The interior has one large room at the centre where remains of Mughal structure can be seen.

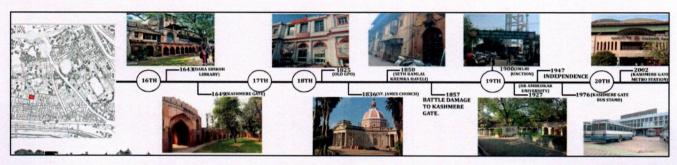


Fig.37- Timeline of architectural style evolved.

Source: Self

#### 5.4. LOCAL SURROUNDINGS OF KASHMERE GATE





Fig.38- Jaali pattern with detailed pillar designs

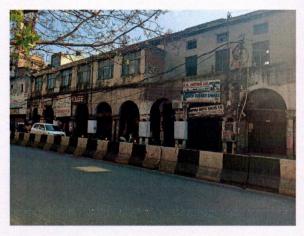


Fig.39- Intricate pillar designs with round arches

Source: Self



Fig.40- Different pillars on bracket with ceiling supporting

Upper floors

Source: Self



Fig.41- Kashmere gate, old Delhi

#### 5.5. SWOT ANALYSIS OF SITE(SETH RAMLAL KHEMKA HAVELI)

#### STRENGTH

1) HISTORIC AND ARTISTIC VALUE-HAVELI HOLDS A GOOD HISTORIC AND ARTISTIC VALUE AS IT MAINTAINS THE MUGHAL STYLE ARCHITECTURE.

2) IDENTITY VALUE-

3) SPACIOUS- THE HAVELI WAS BUILTIN A 9000 SOFT AREA SERVING A RESIDENTIAL PUPROSE. BY GOOD DESIGN.NATURAL AND LOCAL MATERIALS IT CAN BE RESTORED RESPECTING ITS HERITAGE SIGNIFICANCE.







2) COURTYARDS- FEATURE OF MUGHAL ARCHITECTURE.



#### WEAKNESS

1) UNSATISFACTORY MAINTENANCE.

2) ARCHITECTURAL AND STRUCTURAL DETERIORATION.

3) MONKEY PRONE AREA



1) DISMANTLING OF RAILING. CHIPPING OF PLASTERS



2) CRACKS ON CEILING IN BALCONY



#### OPPORTUNITY

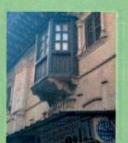
1) CONSERVATION (PROTECTION AND VALORIZATION)
OF THE HERITAGE SITE.

2) IMPROVEMENT OF SPACE USAGE.

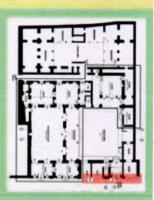
3) THE RESIDENTIAL HERITAGE BUILDING CAN BE CONVERTED INTO A SPACE FOR PUBLIC PURPOSE SO THAT THE CHARM OF THE MUGHAL ARCHITECTURE DOESN'T SINK WITHIN THE URBAN SCAPES.



1) CONSERVATION OF HERITAGE SITE



2) BRACKETS SUPPORTING BAY WINDOW



#### THREAT

I) NARROW PATH FOR CARS FOR TOURISTS. ONLY LOCAL CAN PARK THEIR CARS.

2) DISCONNECTION WITH THE PAST AS THERE IS CONSTANT NEED FOR NEW URBAN SPACES.

3) Possibility to raise Conflicts as there are shops rented.



1) NARROW PATH



2) RENTED SHOPS







#### 5.6. ARCHIETCTURAL STYLE OF SETH RAMLAL KHEMKA HAVELI



Fig.42-High Vaulted Arched Gateway

Source: Self



Fig.43-Decorative and intricate carvings on pillars



## K.R. MANGALAM UNIVERSITY

THE COMPLETE WORLD OF EDUCATION

# SCHOOL OF EDUCATION BACHELOR OF ELEMENTARY EDUCATION

(SCHOOL ENGAGEMENT II) COURSE CODE: SEED362A

Paris 23

SUBMITTED TO:

Dr. Shika

(Assistant professor)

o ham 18183

SUBMITTED BY:

Amisha Anand 2011260011



Fig.44-Detailed patterns on pillars and skirting

Source: Self

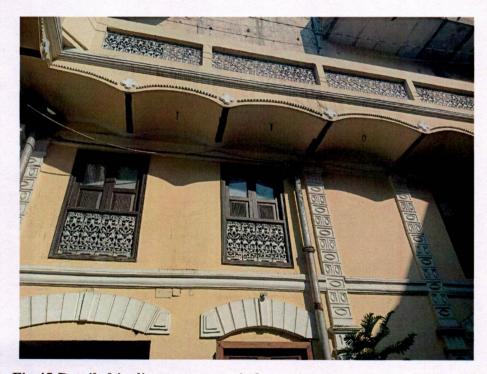


Fig.45-Detailed jaali patterns on windows



# K.R. MANGALAM UNIVERSITY THE COMPLETE WORLD OF EDUCATION

# SCHOOL OF EDUCATION BACHELOR OF ELEMENTARY EDUCATION

(SCHOOL ENGAGEMENT II) COURSE CODE: SEED362A

SUBMITTED TO: Dr. Shika (Assistant professor) o ham 18 18 3

SUBMITTED BY:
Amisha Anand
2011260011

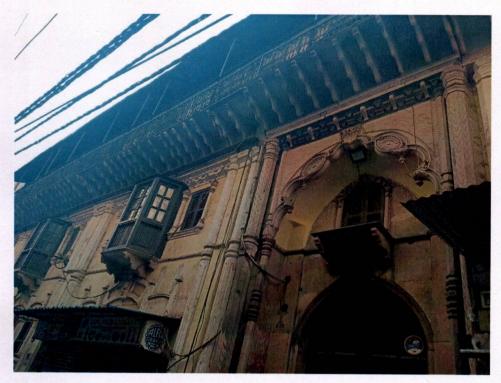


Fig.46- Balconies supported on carved brackets

Source: Self

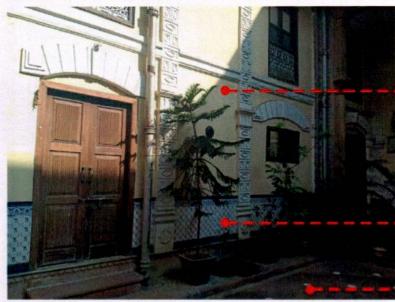


Fig.47- Different arches and Latticed screens

#### TABLE OF CONTENTS

	Page No
Declaration	i
Certificate	ii
Acknowledgement	iii
Abstract	iv
List of Tables	v
List of Figures	vi
List of Symbols	vii
List of Abbreviations	viii
Chapter 1: INTRODUCTION	7
Chapter 2: LITERATURE REVIEW	15
Chapter 3: PROBLEM FORMULATION AND OBJECTIVES	19
Chapter 4: METHODOLOGY OF THE PROJECT	20
Chapter 5: IMPLEMENTATION	26
Chapter 6: RESULTS	32
Chapter 7: CONCLUSION AND FUTURE SCOPE	34
REFERENCES	36

#### 5.7. CONSTRUCTION MATERIAL USED IN HAVELI



LIME STUCCO PLASTER

**CHINA MOSAIC TILES** 

COURTYARD STONE FLOOR

Fig.48-Construction material marked on Elevation A

Source: Self



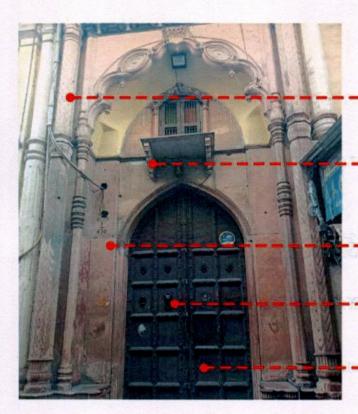
LIME STUCCO PLASTER

WHITE PAINT ON ARCHES

DARK WOOD FINISH

Fig.49-Construction material marked on Elevation C

Delinition Over the Past Century, Significant/advances have been made in gender quality. Nevertheless, Souther worldwilde Continue to have a considerable presence of gender soles, meaning the combined behaviors, appearances, & attitudes that society capects & considers appropriate for an individual based on the individual's gender. The prescription of different occupations of suspensibilities for men & women, for ex-falls under the gender roles defination. A gender Roles Sociology definition unpacks the origin of gender roles & how they are perpetuated in Society. Gender Roles are Rooted in the gender binary The gender binary is the idea that only two genders correspond to two senes, male & female Feminist & queer Scholars have advanced Saiety's understanding of gender & Sen diversity byond the gender binary. These theories hold that an individual's biological Characteristics determine Their Sex. In Contrast, gender is understood as an individual's expression of unious attribules & Sepavious coded as musculine or feminine. The gender binary acknowledges



WHITE PAINT ON INTRICATE COLUMN DETAIL

BRACKETS SUPPORTING LEDGE

RED SANDSTONE-MATERIAL IN MUGHAL ARCHITECTURE

DOOR KNOCK

DARK WOOD FINISH ON ARCHED GATEWAY

Fig.50-Construction material marked on at the entrance gateway

lot about their forsonalities en-Personality - She is suserved & does not like to take sisks. In essence, we leaven five attributes of children when we observe them charely. Their interests & preferences Their strategies for creating desired effects.

Their skills of accomplishments Their personalities of temperaments. how does these points helps: knowing Children's Skill might help us think about games to play that might encourage them to punctice their skills, but it does not help us have better Conversations. prowing children's interest might help us pressure the environment, but it does not help us have better conversation. knowing children's developmental level night help us predict what questions that children can answer. knowing their personality might help us be Sensitive about our tone of voke or topics to avoid

### 5.8. PARAMETERS OF ADAPTIVE REUSE INCONTEXT WITH SETH RAMLAL KHEMKA HAVELI

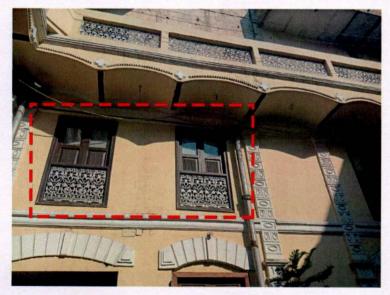


#### 1) PHYSICAL RESTRICTIONS

REUSING AN EXISTING STRUCTURE THERE ARE MANY PHYSICAL RESTRICTIONS, STRUCTURAL ELEMENTS- COLUMNS, ARCHES, FLOOR LAYOUTS, CANNOT BE CHANGED.

Fig.51- Physical restriction

Source: Self



#### 2) LESS FLEXIBILITY

AN EXISTING BUILDING MAY BE LESS FLEXIBLE THAN NEW CONSTRUCTION. A DESIGNER CAN DESIGN A NEW BUILDING TO FIT THE NEEDS, BUT WITH AN EXISTING BUILDING THEY NEED TO ADAPT TO ITS CONDITIONS.

Fig.52- Less flexibility

Few reasons to observe Children !~ If we watch the Children play, we can discover their Interests en-Interests - he loves to play with brucks. By observing Children, Le Can assess their developmental fevels en-Developmental level - She throws the ball either very hand or not at all not vary the throw along a Continuum of very hand, hand or soft. we get to see what strategies children sue to attain their goals. en-Strategies - She tries to influence her friends actions by controlling all of the crayons Observing Children helps to see or what Skills the Children need to practice. Skill- She has twouble stringing a knotted shoestring When we observe children, we learn a

Source: Self

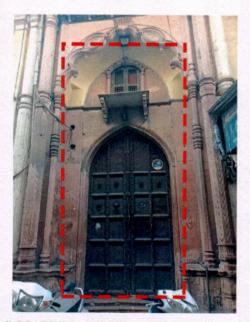


#### 3) DELIBERATION OVER SOCIAL IMPACTS

EXISTING BUILDINGS USUALLY HAVE INTANGIBLE ASPECTS AND ATTACHED SENTIMENTS IN THE SOCIAL SPHERE. EACH STRUCTURE HAS A NOTIONAL VALUE TO THE CONTEXT AND PAST USERS. WHEN REUSING THE DESIGNER MUST CONSIDER THE PERSPECTIVES OF HISTORY AND VALUE.

Fig.53- Deliberation over social impacts

Source: Self



4) MATERIAL INCOMPATIBILITY
WHILE ADAPTING OR CONSERVING AN EXISTING STRUCTURE, THERE MAY BE INCONSISTENCIES AND DIFFICULTIES IN FINDING SUITABLE MATERIALS. THIS MAY EVEN EXTEND TO THE NON AVAILABILITY OF THESE MATERIALS OR FINDING SKILLED WORKERS TO ACHIEVE THIS COMPATIBILITY.

Fig.54- Material incompatibility

Child at play why observing children's play is important. Observing of Children's play gives the Observer a Collection of important information. It frances information about the learner in suspect of them 100 Observing Children's play is about sitting back y watching what is happening, depending on purpose of observation also effects it. Many Settings follow the Simple rule Look , Listen & Note By sumembering this will help providing with the answer observer is looking for in There are many reason to observe children's play, these may be influenced by Coulain factors however the general purpose will be to; find out more about the child on group of Children. Evaluate the provision Observe & monitor practitioners practic. Find out how children suspond to Certain activities. Find out how children's skills Skills are developing Observe the interactions between adult & Children Observe childs's language development.

#### Source: Self

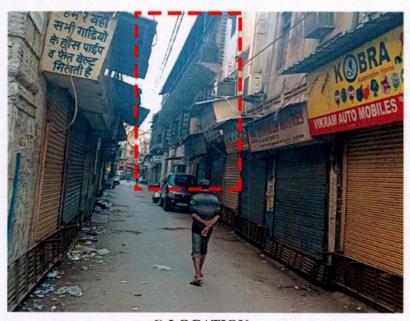


#### 5) COMMUNITY CHARACTER

EXISTING BUILDING CONTRIBUTES TO A COMMUNITY'S HISTORY AND HELP CULTIVATE A SENSE OF CULTURAL IDENTITY. ADAPTIVE REUSE IS A WAY TO RESTORE SIGNIFICANT STRUCTURES. THE APPROACH OFTEN GAINS COMMUNITY SUPPORT AND CAN INCREASE INTEREST IN A PROJECT.

Fig.55- Community center

Source: Self



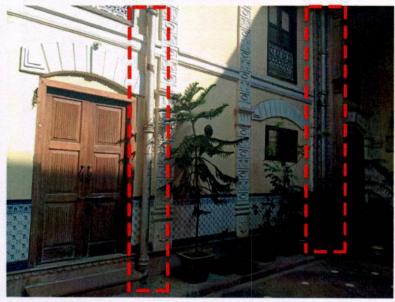
6) LOCATION

EXISTING BUILDINGS ARE IN MORE POPULATED AREA. LOCATING YOUR BUILDING IN A MORE POPULATED AREA HELPS FIGHT URBAN SPRAWL. ADAPTIVE REUSE OFFERS AN ALTERNATIVE TO SPRAWLING DEVELOPMENT.

Fig.56- Location

Topic\_ Tottings literally jotting down buil Sentences detailing important events Conscrue Conversation. This can be done together with other observation methods in childran: work Samples & photographs. Work Samples. these are the child's paintings, My figures, deawings, cutouts, Jerritings & other Educators can provide descriptions is Said or done Gurrounding these work Samples. Photographs arents flow seeing Pictures of their children So how best to describe what's going on while they've away than with images their child in action. Add apportations photographs to give a description about what was taking place when the image was taken.

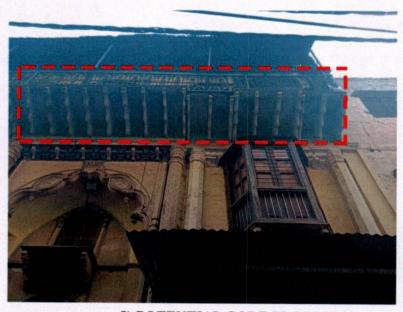
ne Cari



7) ECONOMIC CONSIDERATIONS
INTERIOR SERVICES MAY BECOME MORE EXPENSIVE DUE TO THE REPAIRING OF VARIOUS DEFECTS. THERE ARE POTENTIALLY HIGH COSTS OF ADAPTING, UPDATING THE INFRASTRUCTURE AND MODERNIZING THE ELECTRICAL SYSTEMS.

Fig.57- Economic considerations

Source: Self



#### 8) POTENTIAL CODE PROBLEMS

DEPENDING ON ITS AGE, THE BUILDING MAY NOT MEET CURRENT ENERGY AND ACCESSIBILTY REQUIREMENTS. ONE MAY NEED TO INVEST MORE UPFORNT TO BRING THE BUILDING UPTO THE MODERN STANDARDS.

Fig.58- Potential code problems

Oillevent Child Chevritain Americatal Kewards -This method involves factual accounts of events that should answer the possible What, when & where questions of parents or quardians. Anecdotal Reverds are eventlen Child had Sough & done during an event. The documentation should also include Other non verbal ares like body language \* facial expressions. It should also describe The child's seaction & behaviour during Kinning Records -You note down what you see & what the shild says while it is happening. This method of observation should be souther in the present tense & include as much detail as possible.

# 5.9. EXISTING AND PROPOSED LAYOUTING OF SETH RAMLAL KHEMKA HAVELI

The proposal for the haveli is to design a hotel with old haveli look to restore the charm of the haveli. Reusing it from a residence to a hotel is bit challenging. But the purpose of the hotel is to make maximum profit.

#### Benefits to locals-

- 1) Near by land value will increase.
- 2) The haveli with the proposed museum will increase the footfall which will be beneficial to the local vendors.

#### Benefits to clients-

1) Reusing client's ancestors haveli in a more innovative way to increase the land value and to earn profit out of it.

#### Benefits to Visitor's-

1) More designed and themed oriented hotel with old charm of haveli with the museum and an art gallery followed by a welcoming high vaulted arched gateway.

observation takes place & cat what time of the day or session. However, although for observation may be varied, the genera purpose will be to find out a child or group of the effectiveness of praision. what is interesting of motivating them as inclinidual how they have exesponded to a particular activity, experience or farea of provisions factors that influence their involvement & Sense being during what they now know & understand Of the foundation Stage how they orteract with adult & other Children; about friendships & dynamics within groups; how they apperoach Marning, for ex, their attitudes of learning styles; which areas of provision & activities they choose to acess ecgularly; · about patterns in behaviour.

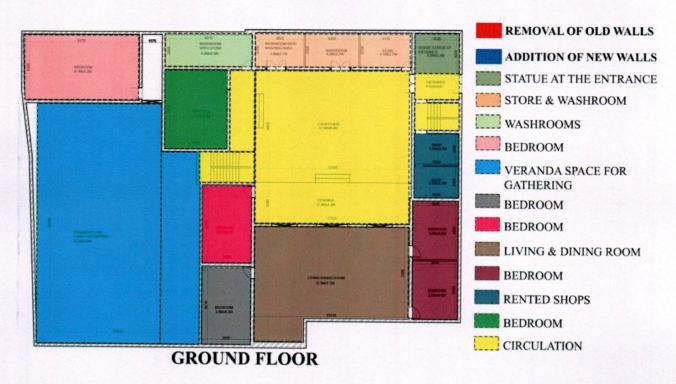


Fig.59- Exisitng ground floor layout with legend

Source: By Architect

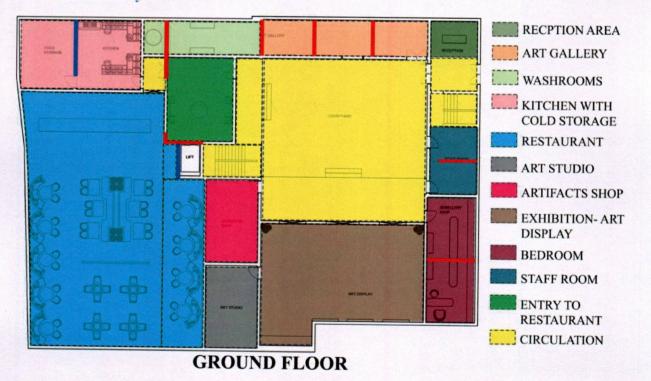


Fig.60- Proposed ground floor layout with legend

Source: Self designed

= Child-Bleeviation = Observation is the key to upderstanding young Children as learners & a vital stack in finding out more about them as individuals. It is an integral part of assessment & planning cycle & a frem busis for uflection in any high-quality setting, observation is recognised as a fundamental & cruins aspect of the pray titioner's rule & as such. is given high privily in terms of turing Observation if about watching children's actions, enpressions, gestures & behaviours, & listening to their talk & interactions. Sometimes it is about joining in with their play or Conversation O a & Sometimes about asking & aspending to questions Murays, It suquieus a sensitive & suspenful approach to children's play & are attitude of spenings to the individual's learning aguide long do we sperved There are many good reasons why adults obscure children in their care of the reason may influence the nature of the Observation in forms of who is observed / observing, where . the

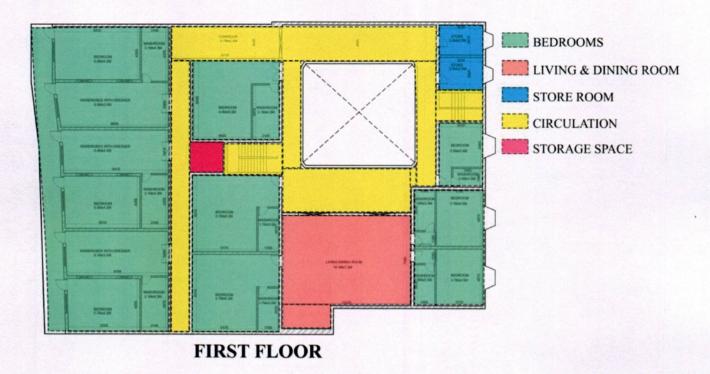


Fig.61-Existing first floor layout with legend

Source: Self designed

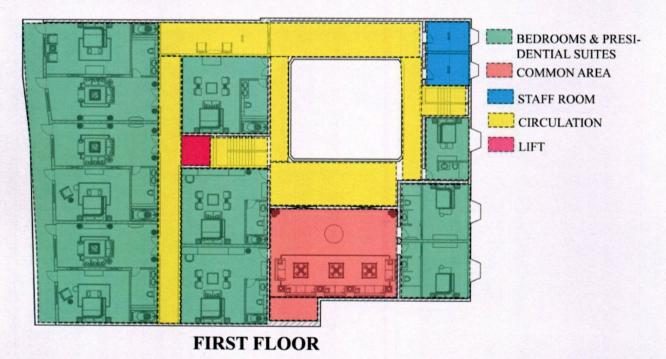


Fig.62- Proposed first floor layout with legend

Source: Self designed

type of behavious would be wearday Participant Opservation Harticipant observation is a consider of the above (natural Observations) but in this the researcher Joins in & becomes part of the group May are Studying to get a degred consight into their lives Participant observations fan he alther coverlor overt. Covert is where the study is carried out undercover the susedycher's seal Schooling purpose are kept conscaled from the group being studied. The susearcher takes a false identity of ruste. usually posing as a genuine member of the group. on the other hand, overt is where the surewicher seweals his or her true identity purpose to the group of ask permission to cheeve

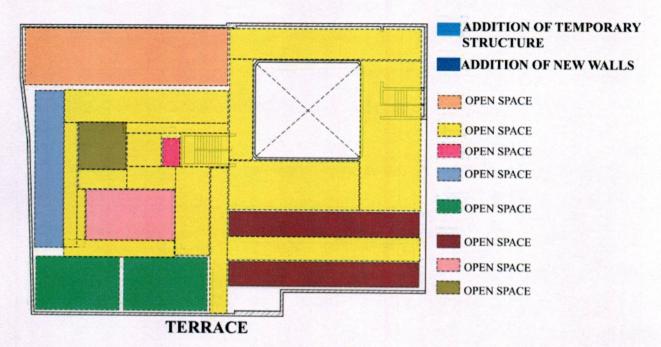


Fig.63- Existing terrac layout with legend

Source: Self designed

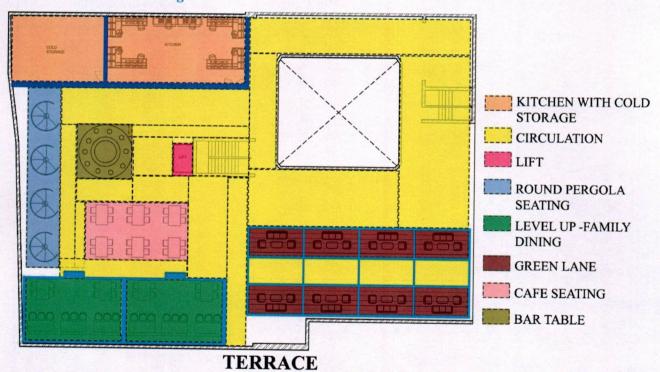


Fig.64- Proposed terrace layout with legend

Source: Self designed

Topic\_\_\_\_\_\_Date\_\_\_\_\_

-3

-

-

-

-

3

(-3

1

-

5

-

1

-

0

C

(-)

6

(

0 -2

0

U

ting.

tir O

A

1

CK

CLA

1

TO P

& uses a standardized procedure Participants are Mandomly allocated to each independent musicible group Rather than writing a detailed description Sall behavior observed, it is often easier to Code behavior according to a pherbously agreed Scale cuing a behaviour schefule (i.e. Conclucting a structured observation. The susearcher Systematically classifies the behaviour they obscripe into distinct categories. Carling night involve numbers or letters to describe a characteristic. or use of a Scale to measure behavior intensity. Naturalistic / Observation Maturalistic observation is a research method Commonly used by psychologists & other Social Scientists This technique involves observing which includes studying the spontaneaus behaviour of participants in natural Suproundings. The researcher Simply seconds what they see in whatever way they can unstructured Observation, the researcher

System. There may be two much to sucord

be the most important so the approach is

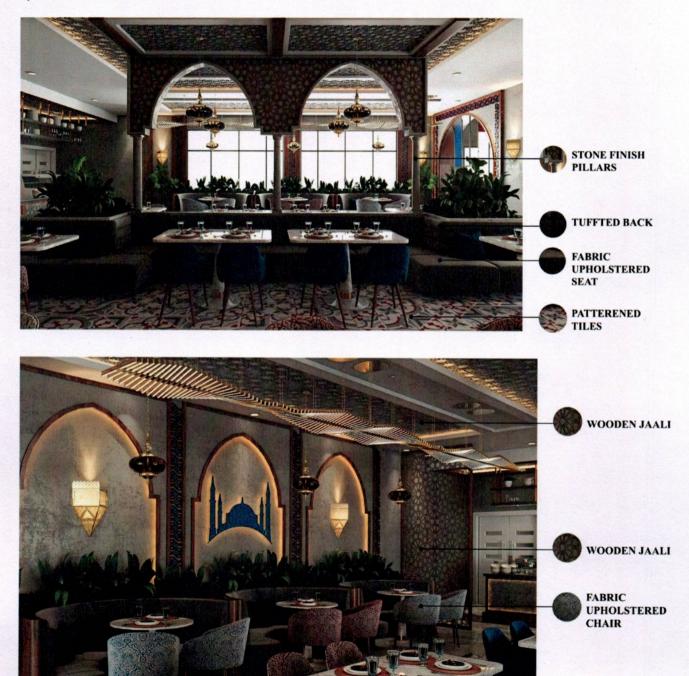
usually used as a pilot study to sec what

1 (C)

# 5.10. PLAN, SECTIONS OF SETH RAMLAL KHEMKA HAVELI

# 5.11. 3D RENDERS OF SETH RAMLAL KHEMKA HAVELI GROUND FLOOR 3D RENDERS--

1) RESTAURANT-

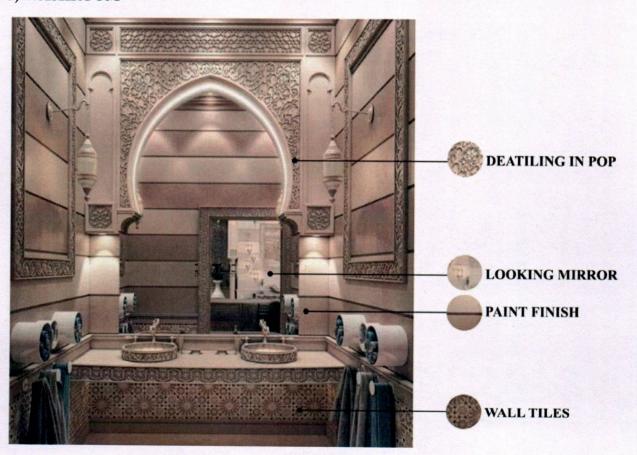


observation method involves Rungins de mechanical observation of what people do or what events takes place Observation would seem to be for obvious method Carrying out research in psychology. There are different types of observational methods & distinction needed to be made, 1 Controlled Opservations Naturalistic Obscriptions Participant Observations Observations can also be either overt/disclosed the participants know they are being studied) or Covert/ undisclosed ( the susearch keeps their real identity a secret from the uesearch subjects, acting as a genuine members of the group. 1 Types of Observation Г Controlled Observation Controlled Observations (usually a Structured Observation) are likely to be Carried out in a psychology laboratory. The sucrearcher decides where the observation will take place, at what time, with which participants, in what circumstan

# 2) JEWELLERY STORE-

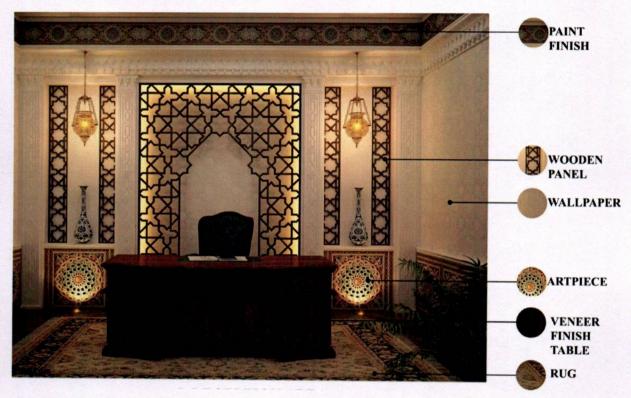


# 3) WASHROOM-



observation is something that you have seing or watching Something & thinking about If a person makes an observation, they make Someone, usually a comment about something or as a sesult of watching how they kehowe. It is an ability to pay a The person of get information it does not recquire to interact all the time. 2) isadvantages Advantages · Nost direct measure of behav. May require training jour · Provides direct informat. Easy to complete, artificial situation Can be used in nature · Potential to overlook or experimental setting meuningful aspects

#### 4) RECEPTION AREA-



# 5) EXHEBITION AREA-





# BACHELOR OF ELEMENTARY EDUCATION (B.El.Ed. Batch 2021-2025) ACADEMIC SESSION 2021-22

SEED217A

OBSERVING CHILDREN

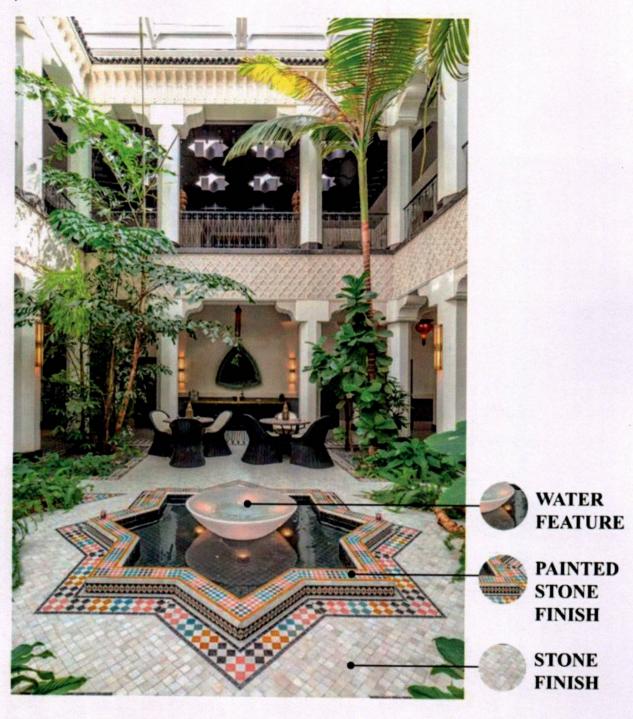
PRACTICAL FILE

Submitted To DR. Shabia Subuhi **Submitted By** 

Akansha 2111260003

B.21.Ed-8em-3

# 6) COURTYARD AREA-

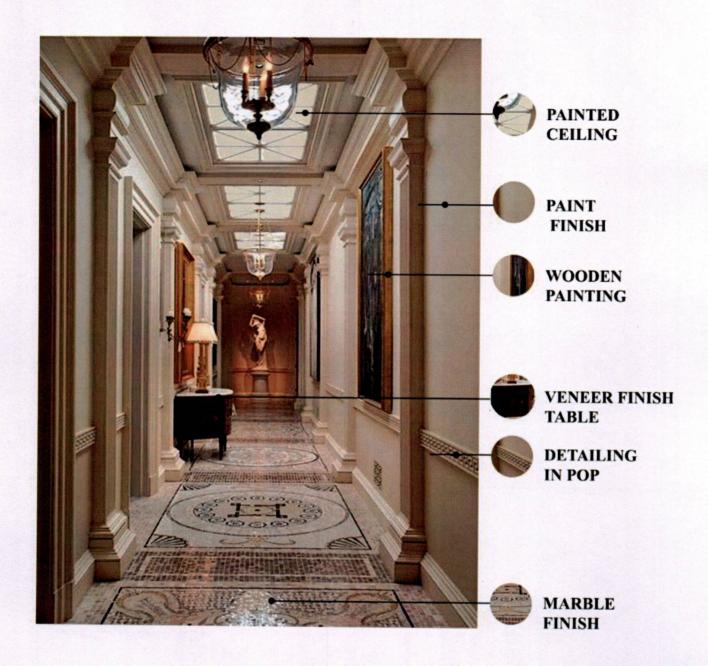


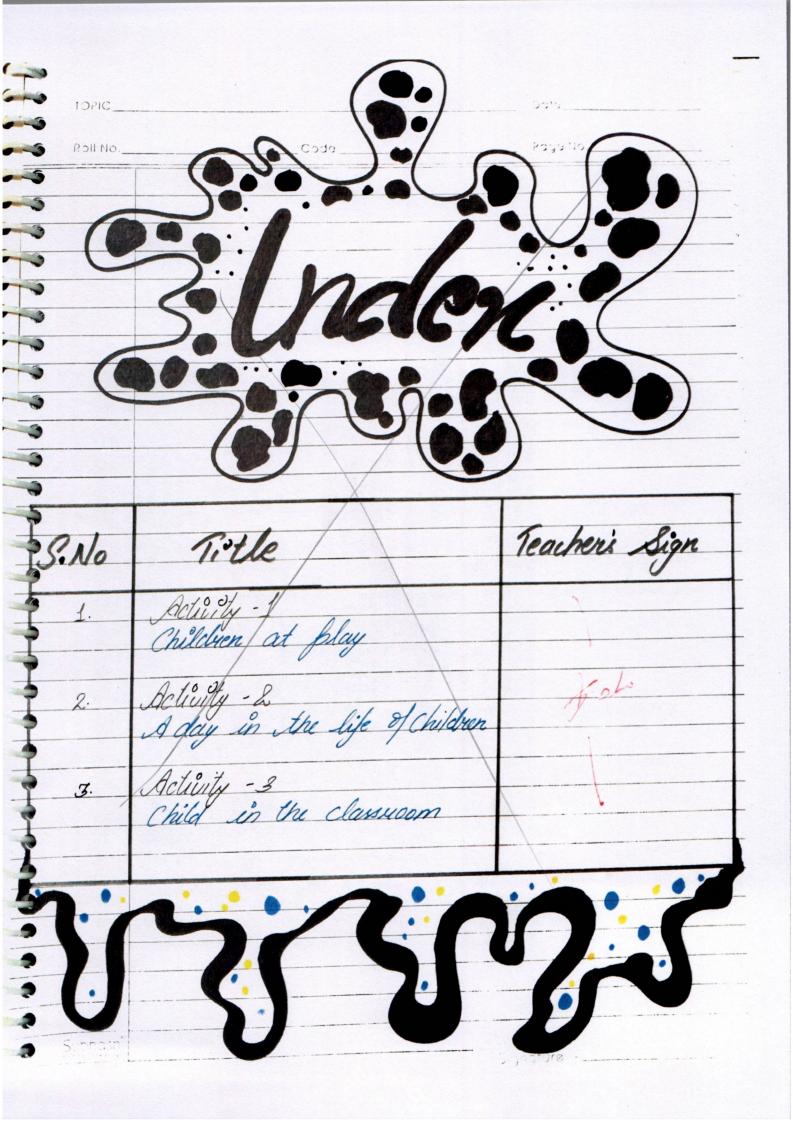
Date\_



I would like to express my Special thanks of grafitude to my tracher Dr. Shabia Subuhi who gave me the golden specitually for do this wonderful forweld about also helped me in doing a lot of research & Came to frow about so many new trings of am really thankful to them secondly, would like its thank my forwerts & friends who helped me a lot in finalizing this project within the limited time.

# 7) ART GALLERY-



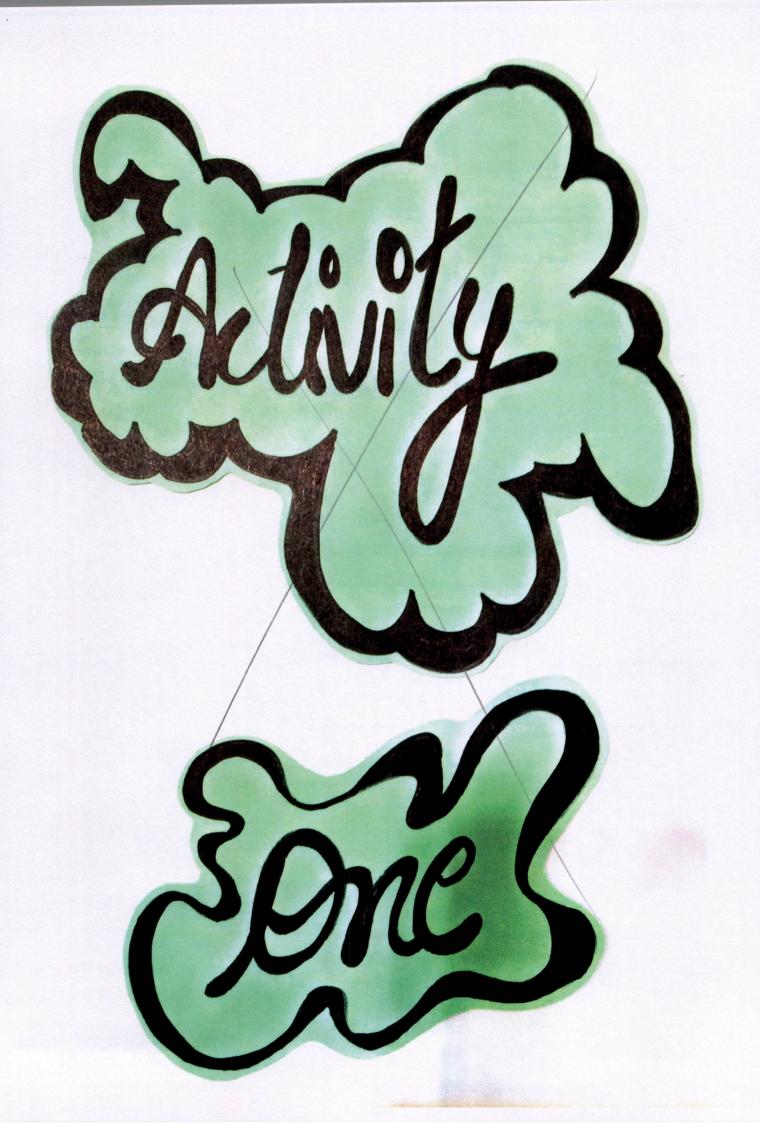


#### FIRST FLOOR 3D RENDERS-

# 1) BEDROOM 01







#### 2) BEDROOM 02



# 3) BEDROOM 03





# INTERIOR LANDSCAPE

# SANSKRITI SRIVASTAVA

190680005 3<sup>rd</sup> Year, B.I.D

Coordinator: Prof. Hemani Singh

Dissertation submitted in partial fulfilment of the B.I.D Degree.

School Of Architecture & Design

K.R. Mangalam University
Gurugram, Haryana

# 4) BEDROOM 04



# 5) WASHROOMS



willing to keep what is there and just amend it, they found the water feature in the garden which was extended into a far more effective large pond while keeping the original feature at the centre.



Fig 41: Keeping the water feature as the Highlight

The design is not only beautiful but also something that can last, and is not too difficult to maintain. The focus was to producing something that is easy to maintain, and the scope of interior landscape can grow.

It was ecologically more important to give a pleasurable interior landscape can be preserved. Preserving native plants is equally important as bringing some other plants to some totally different environment.

#### 6) COMMON AREA



#### 7) BEDROOM SUITE



			wrapped around the wooden duct.
4	SCALE	At the end this café was all about different types of potted plants.	Café was about showing greenery in the environment from keeping potted plants in the corner to used green walls and grass ceiling.
5	BENEFITS	Plants that are kept in the enclosed space helps in cleaning the air quality and also due to huge variety of plants present there, some of the plants even absorb background noise.	It purifies the air and create an ecofriendly environment

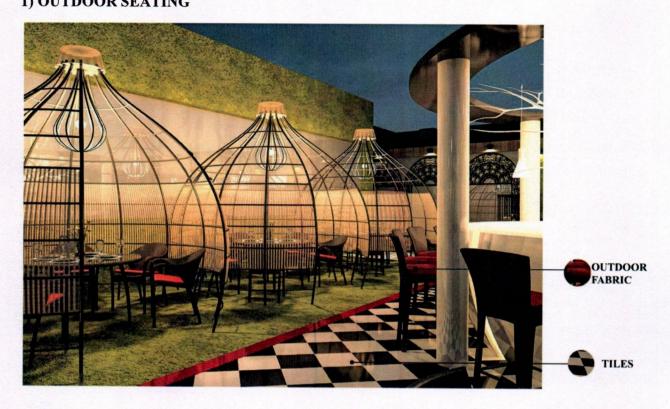
#### 6.1.3 India Habitat Centre

Site name- India Habitat Center

Location- Lodhi Road Near Airforce Bal Bharati School, Lodhi Rd, Lodhi Estate, New Delhi, Delhi 110003

The place was filled with plants and the purpose was to conserve as much as possible of what was already on site. Landscape Architects of that place does not believe in adding something by ripping out plants and materials just to impose their own design on a garden. Instead, they were

# TERRACE FLOOR 3D RENDERS1) OUTDOOR SEATING





# COMPARISION BETWEEN GARDEN LOVER CAFÉ AND GUFTAGU CAFE

S.NO	TOPICS	GARDEN LOVER CAFE	GUFTAGU CAFE
1	PURPOSE	The purpose of place is to have a real connection with nature and create an ecofriendly environment for customers	The purpose of the place is to conserve the trees which are already there and provide the seating around the trees.
2	THEME	The theme of the place was the combination of white and green.	The theme of the place was green land. The café was surrounded with trees and small plants even on the ceiling.
3	TYPE OF LANDSCAPING	Nature plants used in the courtyard and open space, artificial planters where in the enclosed spaces	There were no artificial plants all plants and trees were original.  The ceiling had the crawling plants on









Fig 40: GRASS CEILING WITH HANGING LAMPS

Devil's ivy

# 2) PATIO SEATING

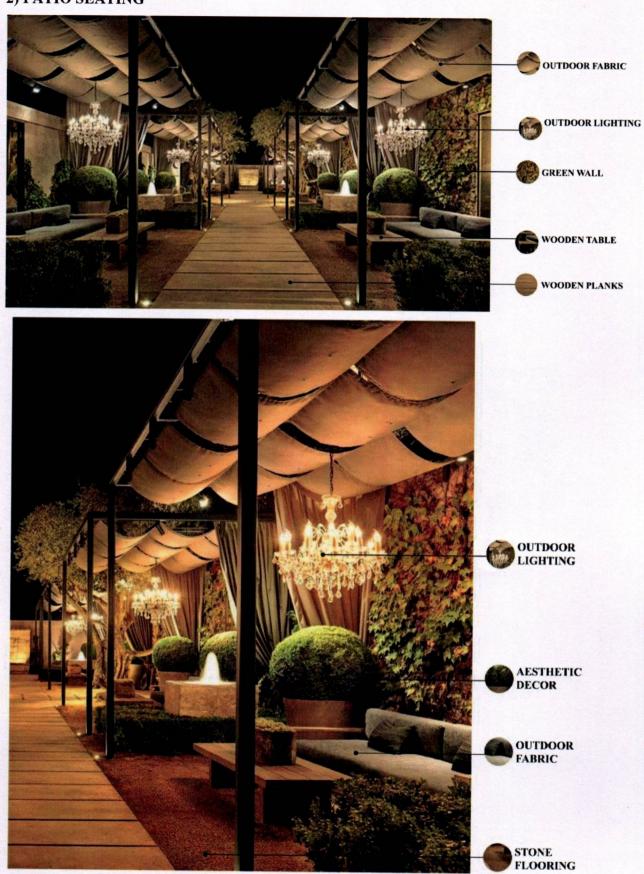




Fig 39: ORIGINAL PLANT WITH FAIRY LIGHT



Ashoka tree

#### REFERENCES

- **1.** Abastante, F.; Lami, I.; Gaballo, 2021. M. Pursuing the SDG11 targets: The role of the sustainability protocols. *Sustainability*.
- **2.** Abdulameer Z.A. Abbas S.S. 2020. Adaptive reuse as an approach to sustainability. Sustainable Engineering Techniques.10.1088/1757-899X/881/1/012010
- **3.** Bullen, P. and Love, P. (2011), "Factors influencing the adaptive re-use of buildings", *Journal of Engineering, Design and Technology*, Vol. 9 No. 1, pp. 32-46. https://doi.org/10.1108/17260531111121459
- **4.** Bullen P.A.2011. Adaptive reuse of heritage buildings. Sustaining an icon or eyesore. Proceedings of RICS Construction. 10.12987/9780300158786-006
- **5.** Ezzat A.A. Elsaye H. 2018 Adaptive reuse. *Approach for generating sustainable values*. 10.2478/otmc-2018-0002
- **6.** Fatemeh Hedieh Arfa, Hielkje Zijlstra, Barbara Lubelli & Wido Quist (2022) Adaptive Reuse of Heritage Buildings: From a Literature Review to a Model of Practice, The Historic Environment: Policy & Practice, DOI: 10.1080/17567505.2022.2058551

Guftagu cafe is a semi open cafe with ecofriendly and green environment.

The flooring differs according to the spaces, the wooden flooring has the table chair seating with the space provided for live performance.

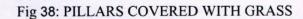
The concrete flooring has the wooden deck seating which surround with the original tree concept and the overall cafe has grass ceiling with hanging lamps.

Fairy light are surrounded around the tree.

Other than original plants, there are some different types of potted plants on side walkway Strip lights are used on the side of the walls

Arch shaped windows are being used with crawling plants also the pillars are covered with artificial grass carpet.







Devil's ivy

- **7.** Heim.J.S, 2018. Adaptive Reuse. Reconstruction of Urban Identity. 10.3390/su12198054.
- **8.** Heim.J.S, 2020. Adaptive Reuse of Architectural Heritage. *Sustainability*. 10.3390/su12198054
- **9.** Larsen N.M. 2020. Adaptive Reuse of Architectural Heritage. *Giving Old Buildings New Life Through Adaptive Reuse*. 10.1007/978-3-030-29829-6 5
- **10.**Li, Y., Zhao, L., Huang, J. *et al.*2021. Research frameworks, methodologies, and assessment methods concerning the adaptive reuse of architectural heritage: a review. *Built Heritage*. https://doi.org/10.1186/s43238-021-00025-x
- **11.** Mısırlı Soya D. Günçeb K. 2016 Adaptive reuse strategies for heritage buildings: A holistic approach. *Sustainable Cities and Society*./10.1016/j.scs.2016.05.017
- **12.** Onay N.S. April 2014. Evaluating Partial Reuse of Historical Buildings as Commercial Interiors. *The International Journal of Architectonic Spatial and Environmental Design*.10.18848/2325-1662/CGP/v07i03/38369
- **13.** Peter A. Bullen, (2007),"Adaptive reuse. Sustainability of commercial buildings", Facilities, Vol. 25 . http://dx.doi.org/10.1108/02632770710716911
- **14.** Plevoets B. Cleempoel K.V. 2011. Adaptive Reuse as a Strategy towards Conservation of Cultural Heritage. *International Journal of Environmental Impacts*. 10.2495/STR110131
- **15.** Teixeira F.F. Ozge C. 2014. Adaptive Reuse in Interior Architecture. The International Journal of Architectonic, Spatial, and Environmental Design. 10.18848/2325-1662/CGP/v08i01/38376
- **16.** Teixeira F.F. 2019. Adaptive Reuse in Interior Architecture. The International Journal of Architectonic, Spatial, and Environmental Design. 10.18848/2325-1662/CGP/v08i01/38376
- **17.** Thornton, B.J. The greenest building (is the one that you don't build!): Effective techniques for sustainable adaptive reuse/renovation. J. Green Build. 2011, 6, 1–7
- **18.** Vivian W. Y. Tam & Jane J. L. Hao (2019) Adaptive reuse in sustainable development, International Journal of Construction Management, 19:6, 509-521, DOI: 10.1080/15623599.2018.1459154



Fig 36: NURSERY



Fig 37: RELIGIOUS STATUES FOR DISPLAY

# 6.1.2 Guftagu café

Site name- Guftagu café

Location- 34 Main Road, opposite Pillar No 33, DLF Phase 2, Gurugram, Haryana 122002