

Centre for Integrated Urban Development



POST EARTHQUAKE SUPPORT



Centre
for Integrated
Urban Development
(CIUD)

.....fostering liveable cities

Pre –Disaster Work: Innovations and Solutions for Communities and Government at local and central level



- Urban poor is our priority
- Advocating for deprived and vulnerable urban communities
- Multi-disciplinary approaches and Technologies
 - Innovative Tools
 - ✦ Urban poverty mapping
 - ✦ Livelihood: Enterprise development for urban poor
- Community based sustainable *urban solutions*
 - Decentralized Technologies
 - ✦ Solutions to waste water treatment
 - ✦ Solutions to water and sanitation problems
 - ✦ Solutions to management of solid waste
- Urban Planning Solutions
 - Community led planning and Implementation
 - Public open space management

Post Earthquake work in Urban/Peri Urban



- Started relief work in Urban/Peri Urban areas of
 - Kathmandu District
 - ✦ Kirtipur Municipality
 - ✦ Shakarapur Municipality
 - Lalitpur District
 - Karyabinayak Municipality – Dukuchap, Khokana and Bungamati
 - Bhaktapur Municipality
 - ✦ Ward no. 1 and 2
 - Kavre District
 - Nala

Current Work in Urban communities



- Temporary Shelters for about 400 Households in (Funded by UNHABITAT, Foundation and Individuals)
 - Kathmandu
 - ✦ Parts of Kirtipur Municipality
 - ✦ Sankharapur Municipality – Shanku
 - Lalitpur
 - ✦ Karyabinayak Municipality
 - Dukuchap, Khokana and Bungamati
 - Parts of Bhaktapur Municipality
 - ✦ ward no. 1 and 2
 - Kavre
 - ✦ Nala
- Temporary Shelters in Dolakha District for about 500 HH (Funded by UNHABITAT)
 - Bhimeshwor Municipality – ward no. 7

Additional support in communities



- Psycho social counseling in communities
- Information centers to Build Back Better
 - Circulation of IEC materials
 - Coordination with local committees and communities



Additional support in communities



Challenges in urban context



- Urban challenges and context are different
- Fundraising/resource mobilization in urban context
 - Always been a challenge
 - Post Disaster fundraising has not very difficult
- Land issue
 - Availability
- Winter
 - Temp structures for winters ?
- Environment sanitation
 - Living in clusters and groups
- Few current needs in temp shelters and communities
 - Partially damaged houses
 - ✦ Will require shelter support during rebuilding process
 - ✦ To store belongings etc.
 - Studying places for children
 - Bathing places for women/girls
 - Play area for kids

Way Forward: Recovery, Reconstruction and Revitalization



- Partnering with like minded organizations
- Resource Mobilization
- Capacity building of communities
 - Build Back Better concept
- Community Led Approach
- Integrated Approach
- Resilient urban communities for future disasters

Some Positive Changes: Visible economic activities in communities















Thank you



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facebook.com/CIUD.org



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PILACHHEN CONSERVATION

Architectural Design:

CE 
SERVICES PVT. LTD.

Project Concept:



MAYA FOUNDATION

Structural Design:



CE ENGINEERING SOLUTIONS (CES) PVT. LTD.

July, 2015

Naag Bahal



Patan Durbar Area



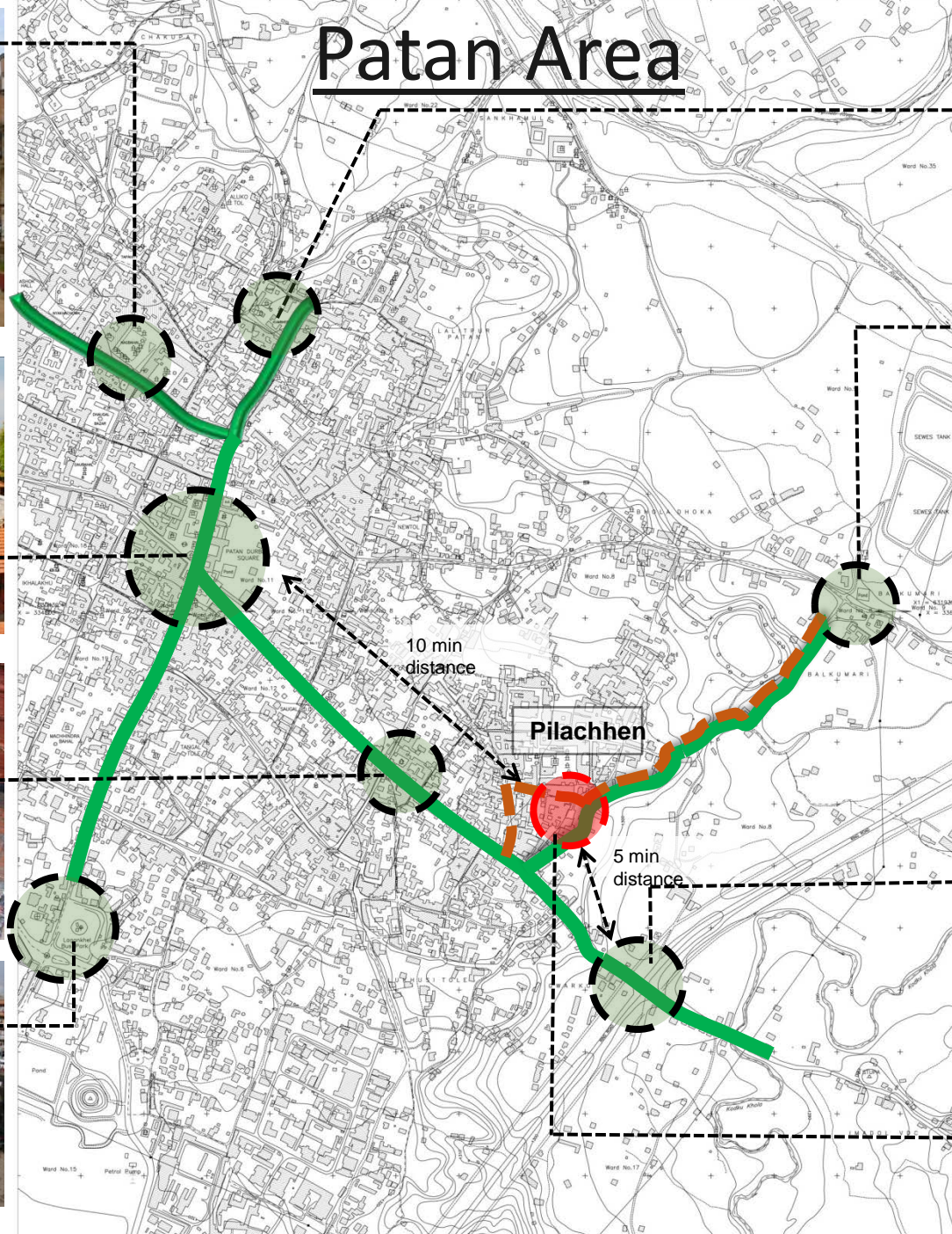
Sundhara



Lagankhel Bus park



Patan Area



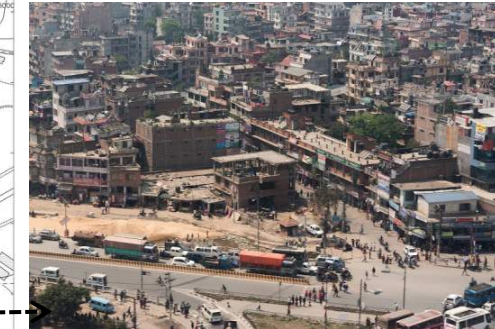
Banglamukhi Temple



Balkumari Temple



Gwarko Chowk



Pilachhen Chowk



Legend	
Symbol	Description
	Main road
	Jatra Route

Background

No of house: 75

Ethnic Group: Newars (Mostly Maharjan)

Occupation: Agriculture, mason, straw-mat weaving, metal craft and hakupatasi weaving



Hakupatasi Weaving

Socio-cultural values

- Ganesh Mandir (*Natya Mudra*)
- Pilachhen Bahal (*Hemchandra Mahabihar*)
- Guthi Ghar
- Cha:pa Chhen
- Pilachhen pond
- Traditional Hakupatasi weaving area



Ganesh Temple

Festivals

- Macchindranath Jatra
- Bhimsen Jatra
- Balkumari Jatra
- Gathamuga
- Dewali



Machhindranath Jatra



Balkumari Jatra

Use of Open Space

- Interaction Area
- Parking Area
- Children play area



Open Space used as parking



Pati as interaction space

SWOT Analysis

Strength

- Presence of important socio-cultural heritages like Ganesh temple, Hemchandra mahabihar, Guthighar, Cha:pa chhen, Pond, etc.
- Local occupations like straw-mat weaving, metal crafting, hakupatashi weaving etc.

Opportunity

- 10min and 5min walking distance from Patan Durbar square and Gwarko respectively.
- Rich cultural heritages.
- Popular for metal craft and hakupatashi weaving

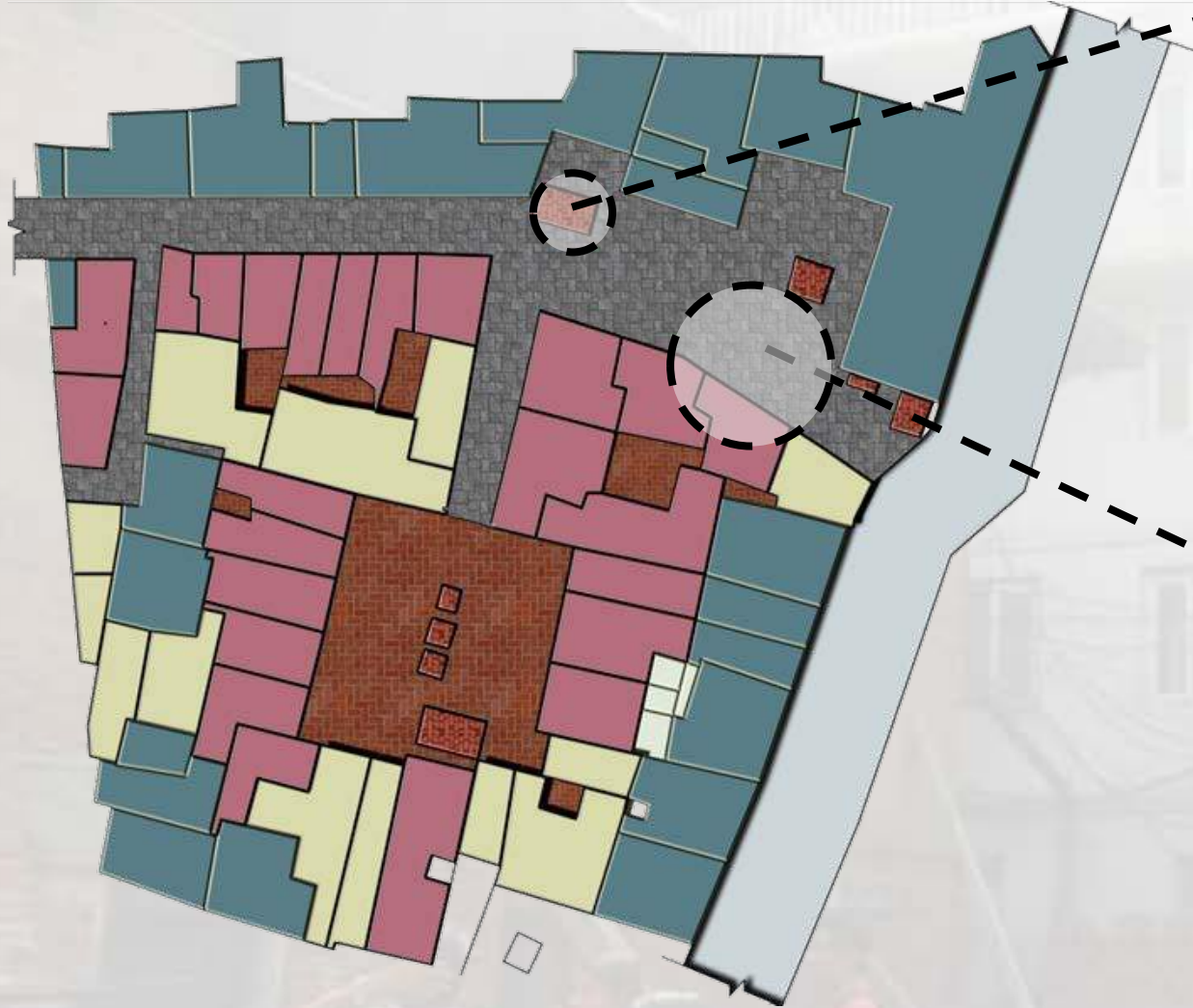
Weakness

- Loss of traditional building architecture.
- No definite space for parking.
- Low repair and maintenance of buildings
- Haphazardly placed electric poles.

Threat

- Lack of open space
- Lack of exposure of local occupation.
- Mixed building construction technology i.e. RCC extension over load bearing system.

Present Condition



Ganesh Mandir



Houses outside Courtyard

Present Condition

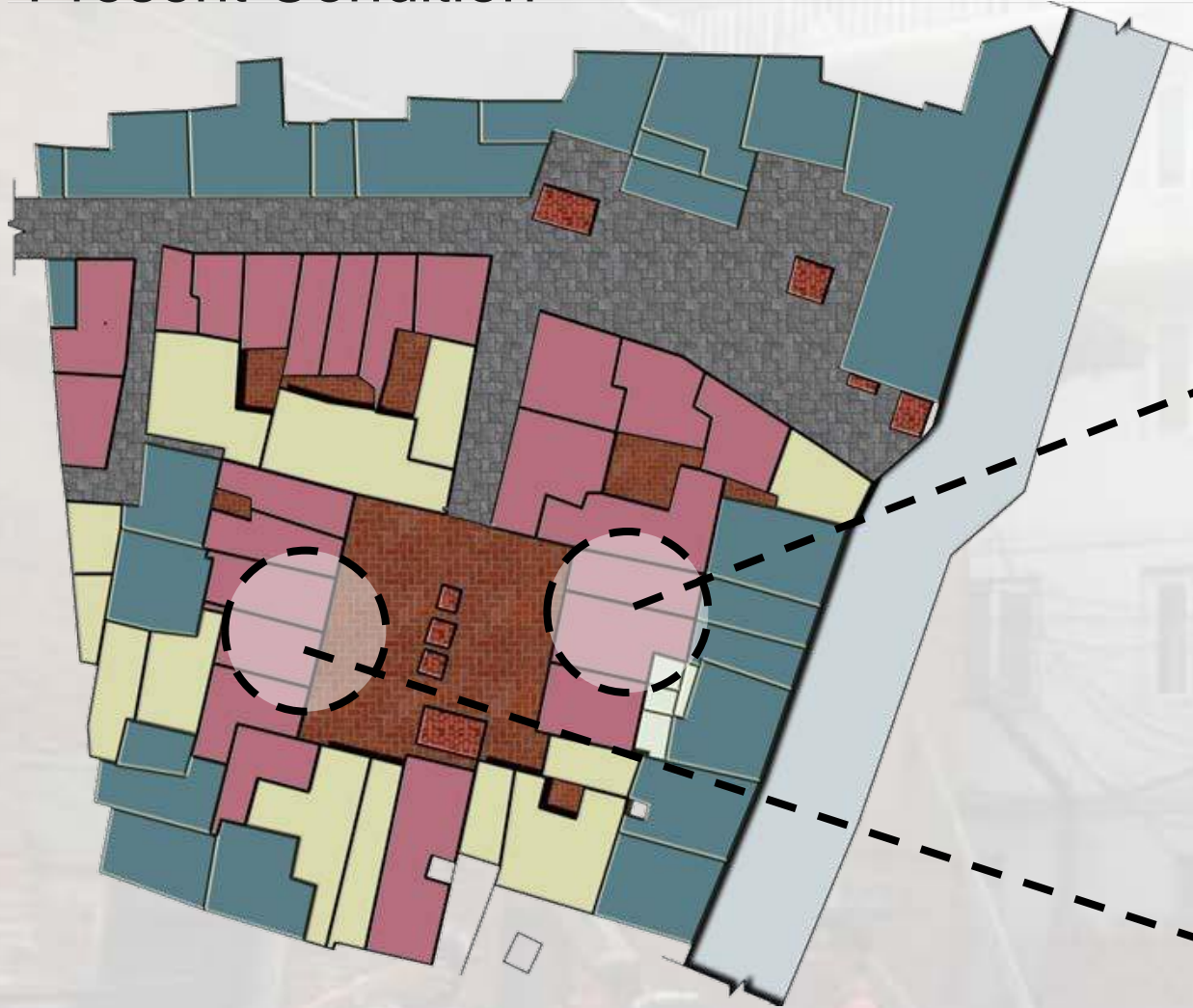


Houses
Outside
Courtyard



Lane to
Courtyard

Present Condition



Houses outside Courtyard

Problem Identification

- Historically important heritages neglected.
- Local people migrated due to lack of infrastructures.
- Mixed building construction technology and violence of building bye-laws.
- Local occupations being extinct.
- Narrow alleys with tall buildings.
- Loss of socio-cultural activities.



Narrow Alley



Mixed Building Construction

Objectives

- To provide healthy living environment for the residents through restoration and reconstruction programs.
- Promotion of tourism through preservation of traditional architecture and local occupations.
- Promotion of tourist oriented business like home stay, service apartment, handicraft shops, souvenir shops, etc. for local economic growth.
- Infrastructure development.
- Generating public participation activities in public buildings and open spaces.

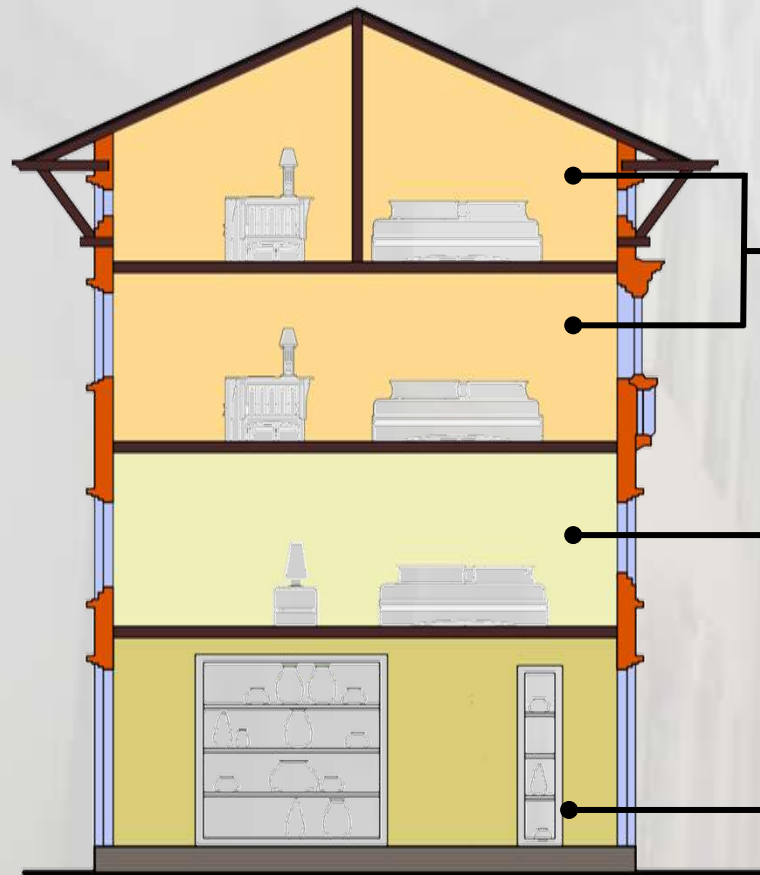
Proposal

1. Building Use
 - A. Mixed Use
 - B. Residential Use
2. Preservation of traditional architecture
3. Conservation and promotion of socio-cultural heritages and activities
4. Developing the surrounding
5. Construction technology and materials

1. Building Use

Proposal A: Mix use of building

- Bye-laws permits maximum height of 45 ft. i.e. 5 storey building.
- Ground floor can be used for carving workshops, café, restaurant, museum, training center.
- First floor can be used for guest house, homestay/ service apartments for tourist accommodation.
- Second and third floor can be used for residential use.



Section



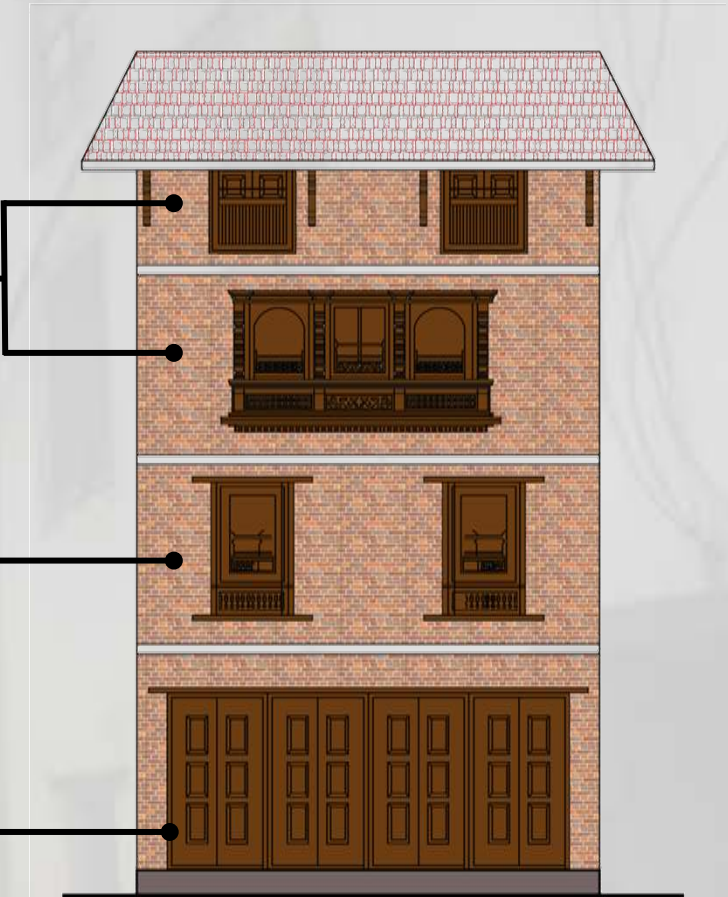
Second and Third Floor



First Floor



Ground Floor



Elevation

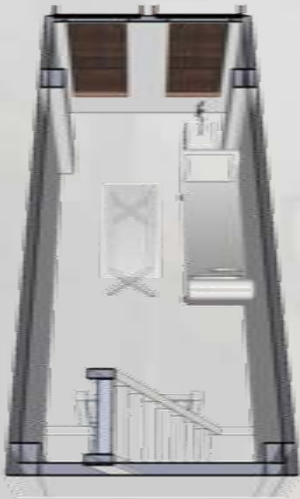
1. Use of building

Proposal 2: Residential use of building

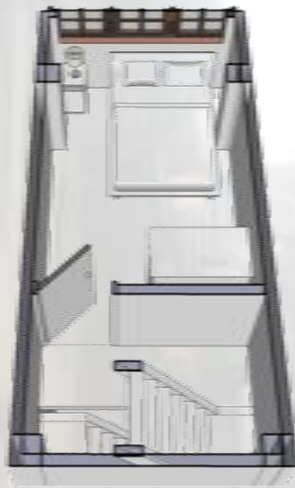
- Building can be used solely for residential purpose if necessary.



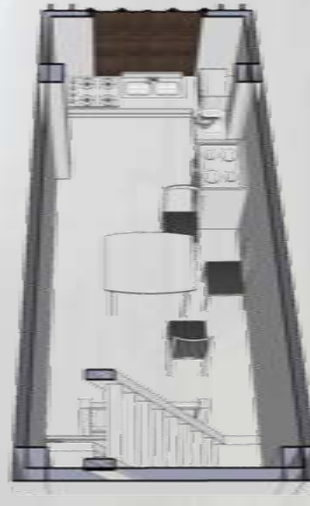
Ground Floor
(Shop/ Bike Parking
& Toilet)



First Floor
(Living Room or
Bed Room)



Second Floor
(Bed Room)



Third Floor
(Kitchen & Dining)

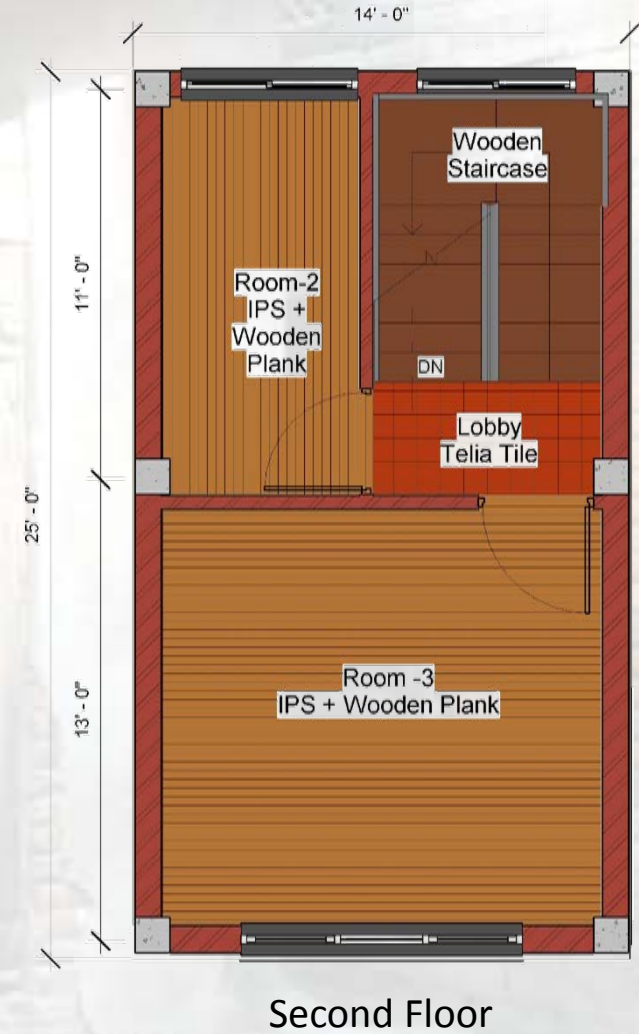
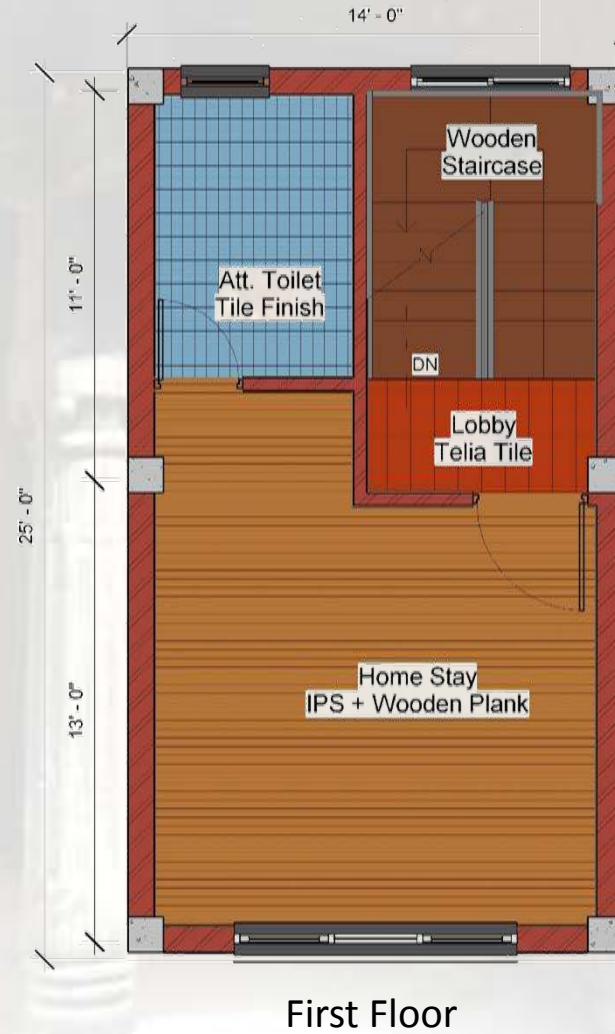
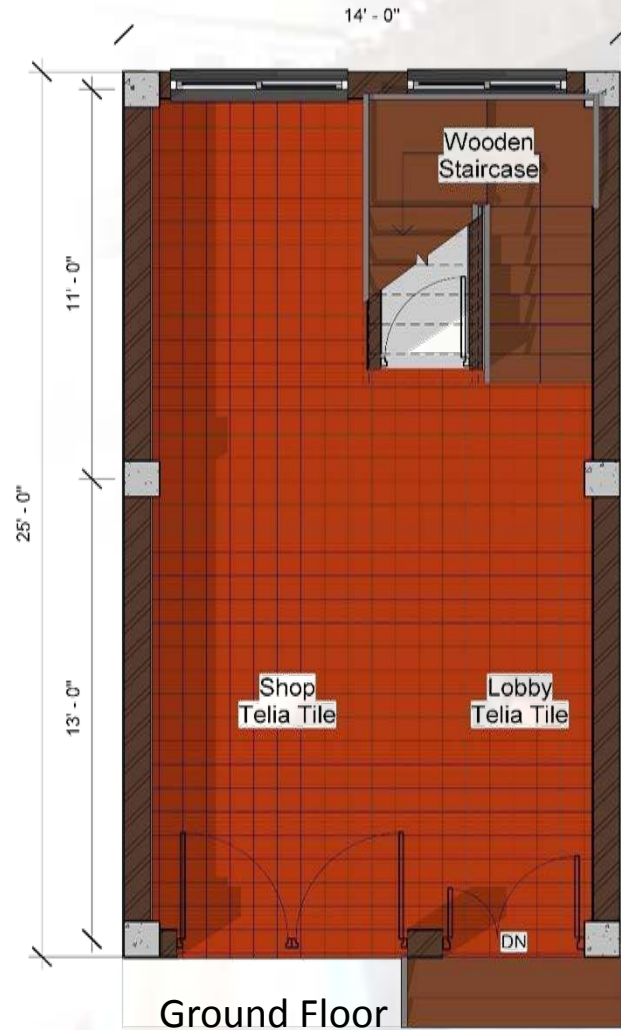


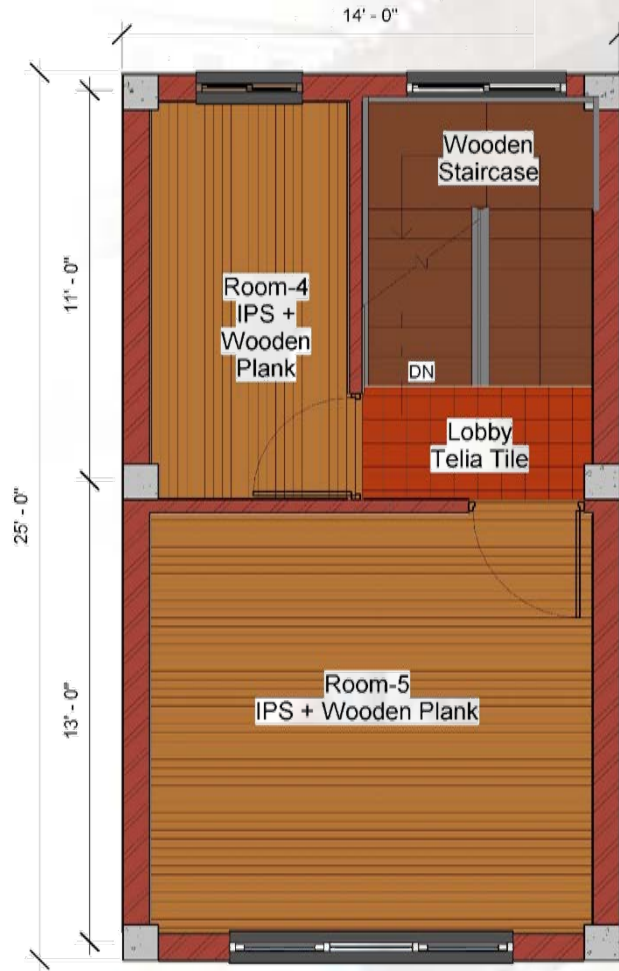
Fourth Floor
(Puja/Laundry
& Toilet)



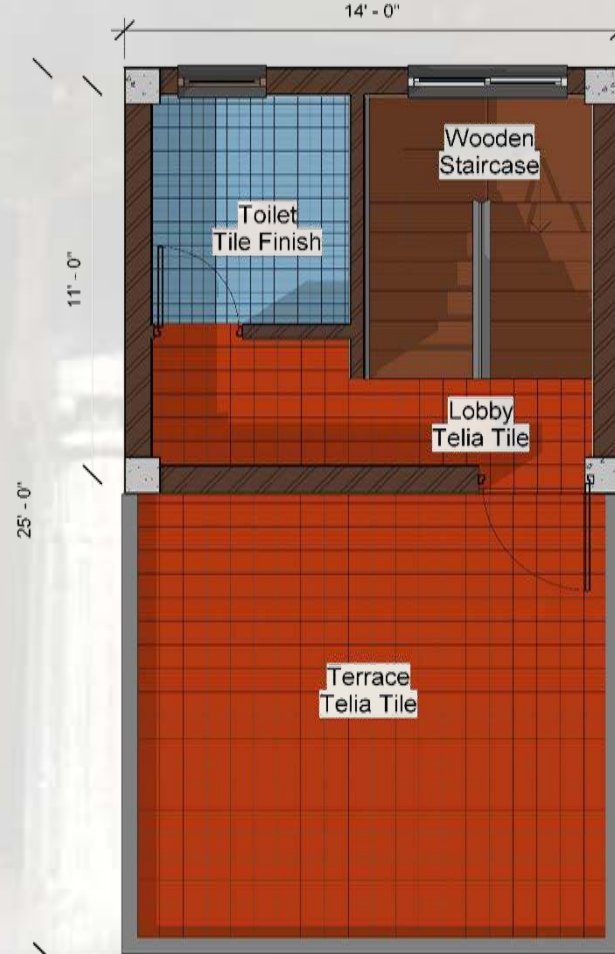
Section

Costing (14' x 25' Plot size)





Third Floor



Top Floor

Structure RCC

Wall Brick Wall

Front Facade Exposed Brick

Door/Window Wooden

Stair Case Wooden

Floor	Lobby	Telia
	Bed Rooms	IPS + Parquet
	Kitchen Dining	Telia
	Toilets	Tile
	Terrace	Telia

Roof Jhingati Tiles

Costing

- Preliminary Estimate: Rs. 3200 per sq. ft.
- Cost of 1 Anna, 4.5 storey:
Rs. 50,40,000 (Rs. 50.4 lakhs)

2. Preservation of traditional architecture:

- Preservation and promotion of traditional architecture helps reviving its identity and public activities which helps in tourist oriented business enhancement.



Traditional look enveloping RCC structure



Chaitya inside Courtyard

3. Conservation & Promotion of socio-cultural heritages & activities:

- Conservation of monuments
- Promoting local occupation
- Promoting traditional practices like Balkumari Jatra and Khya dance.



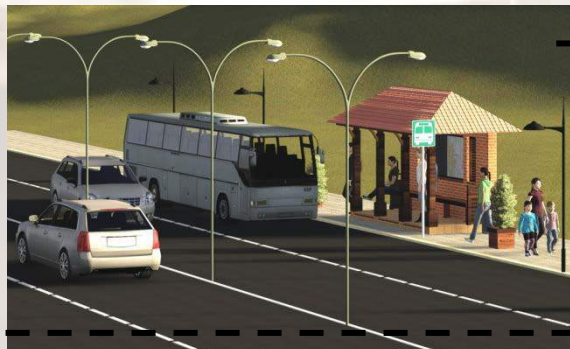
Promotion of local occupation and social activities in courtyards and open spaces

4. Developing the surrounding

- Stone and brick paving on tertiary road.
- Developing entrance gate, bus stop, information center, ticket counters at Gwarko junction.
- Improving street lights, seating, signage and route map at strategic location.
- Allocating parking areas at suitable spaces.



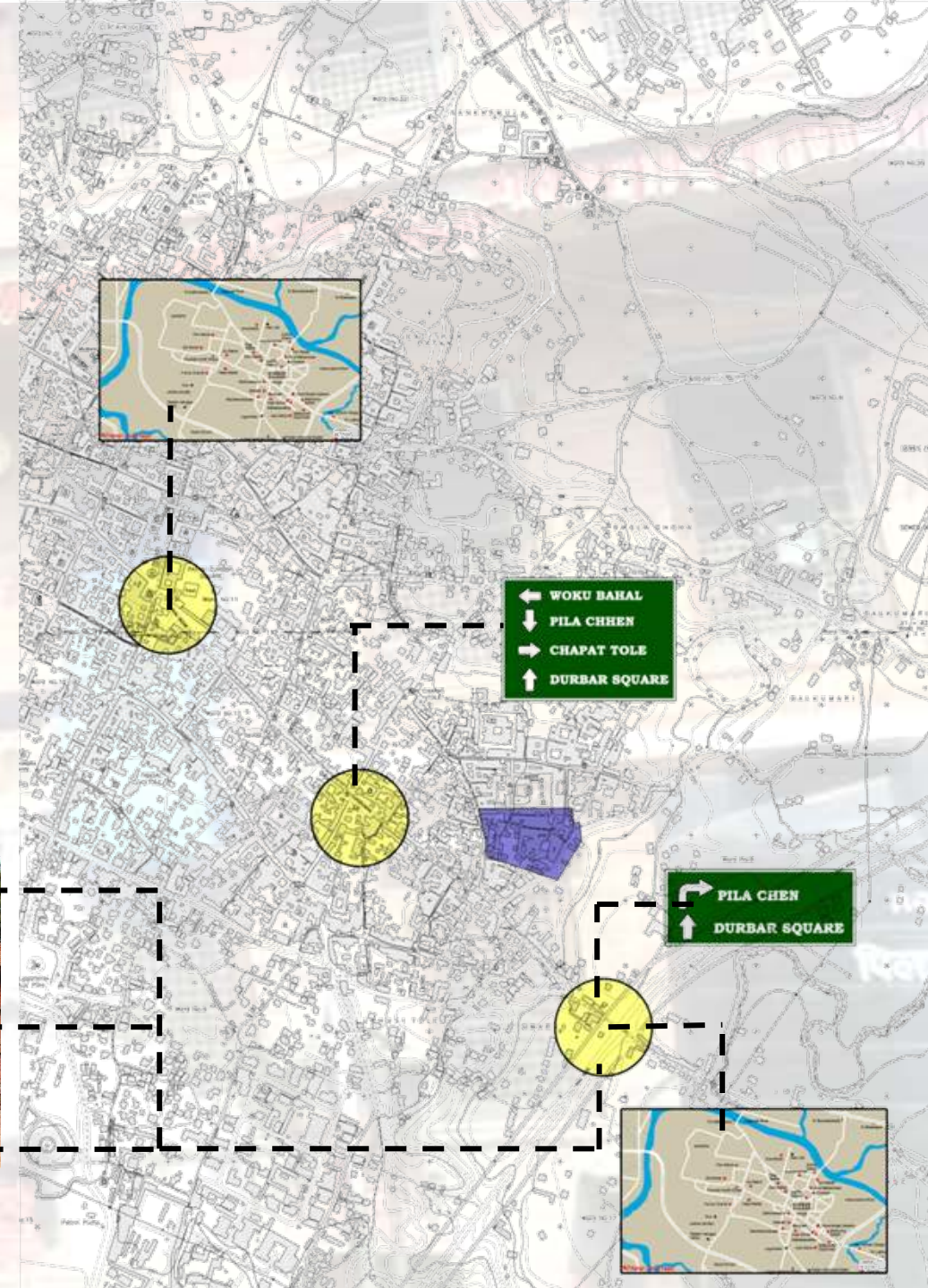
Entrance Gate



Bus Stop



Tourist Information Center



5. Construction technology and materials

- RCC structure with traditional architecture facades.
- Brick walls for building envelop and room partitions.
- Sill and lintel band in doors and windows for earthquake resistance.



RCC Construction with Brick Cladding

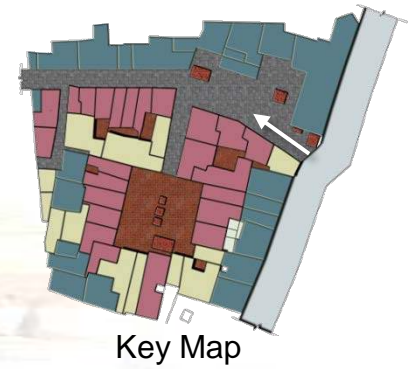
PILACHHEN CONSERVATION

Lane to Cha:pa Chhen



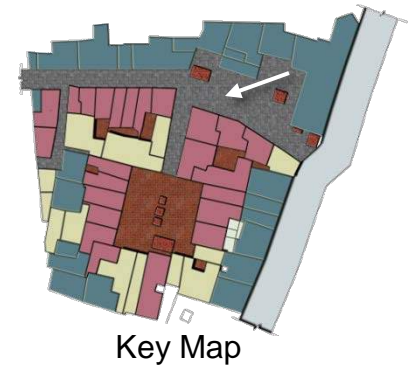
PILACHHEN CONSERVATION

Lane to Cha:pa Chhen and Ganesh Temple



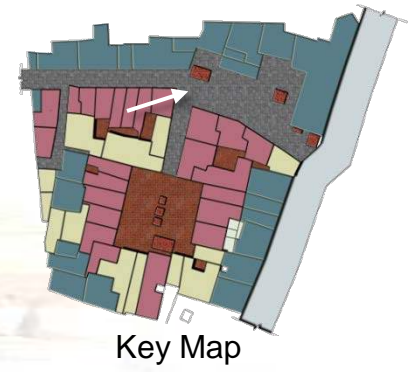
PILACHHEN CONSERVATION

Ganesh Temple and Houses outside courtyard



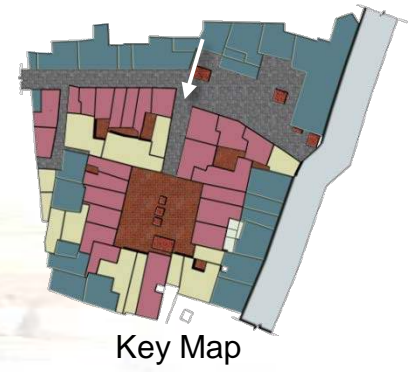
PILACHHEN CONSERVATION

Ganesh Temple



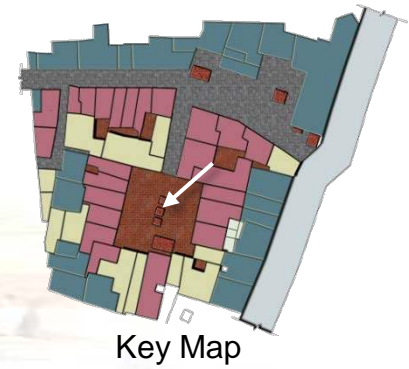
PILACHHEN CONSERVATION

Lane to Courtyard



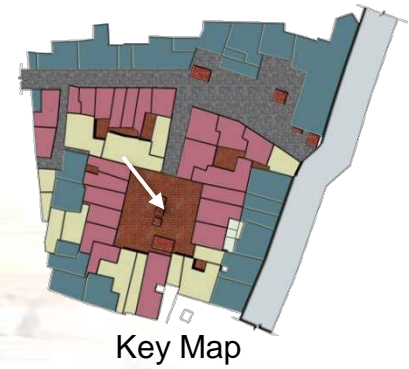
PILACHHEN CONSERVATION

Houses inside courtyard



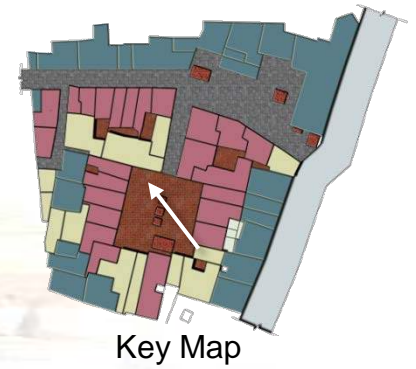
PILACHHEN CONSERVATION

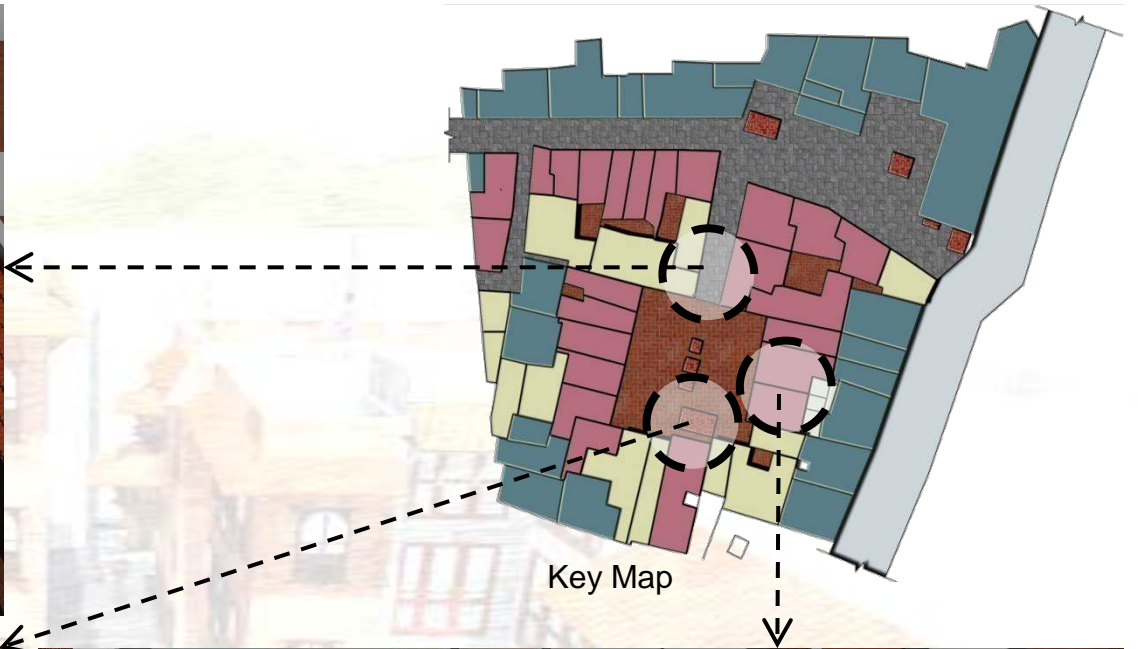
Houses inside courtyard

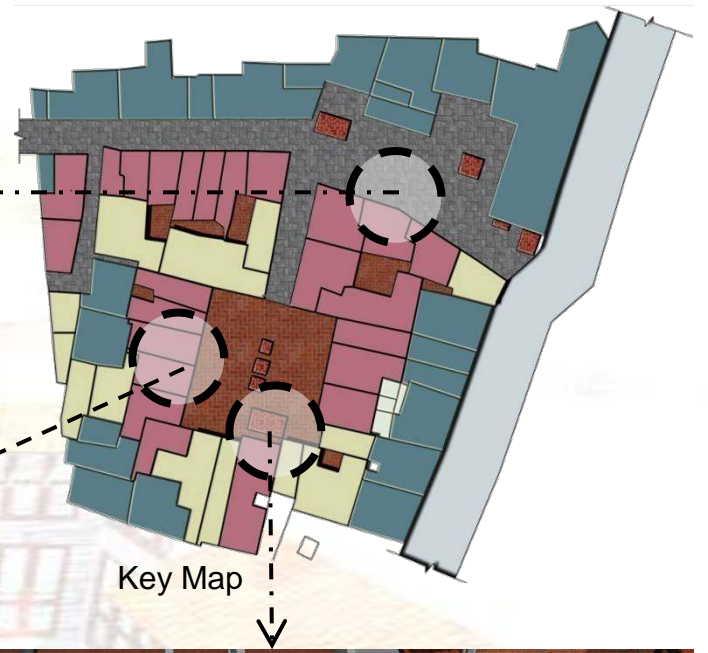
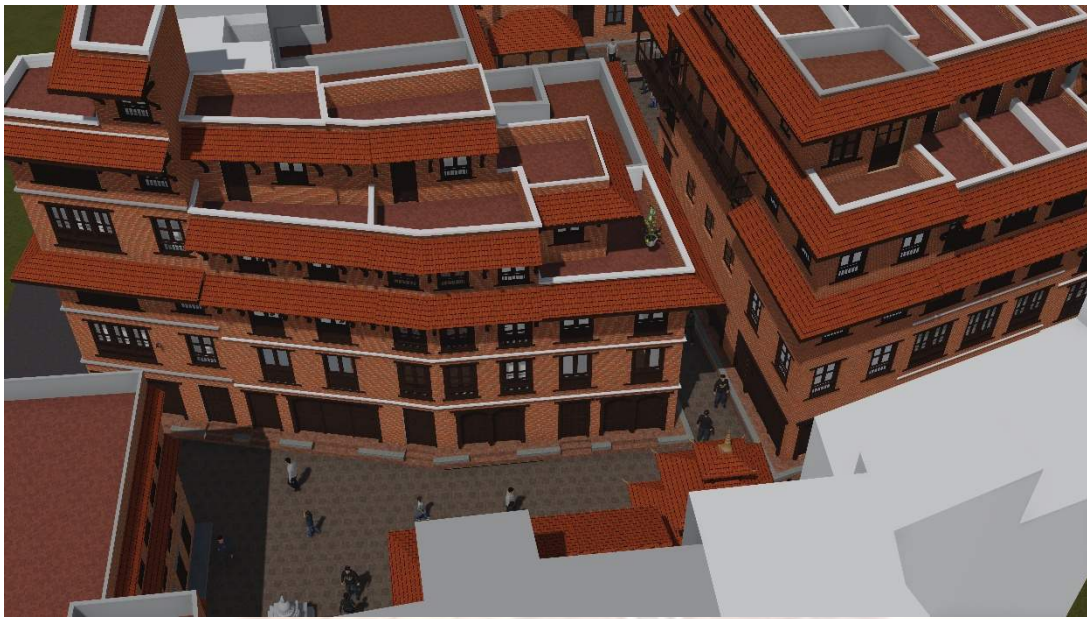


PILACHHEN CONSERVATION

Houses inside courtyard








Key Map



CONCUSION

Pilachhen, being one of the ancient town of Patan durbar square, is highly valued for its rich socio- cultural heritages. It has been dilapidated due to the earthquake and its aftershocks of 2072 Baishakh. It is very necessary to preserve the area as it reflects traditional culture of Patan which is losing its originality.

Therefore, by preservation of traditional architecture and socio-cultural activities, the area can be revitalized for healthy living environment and promoting tourists oriented business for economic growth and social welfare.

The background image is a faded, low-angle shot of a multi-story brick building. The building's facade is made of reddish-brown bricks. Several windows are visible, some with dark frames and others with white grilles. A complex network of white pipes and electrical wires crisscrosses the scene, particularly on the right side. Scaffolding is visible on the left side of the building. The overall image has a soft, hazy quality, with the text 'Thank You.....' overlaid in the center in a bold, black, sans-serif font.

Thank You.....



Complexities in Recovery and Reconstruction: Experience from Kathmandu valley

SUPPORT TO COMMUNITIES IN EARTHQUAKE AFFECTED AREAS

LUMANTI SUPPORT GROUP FOR SHELTER

23RD SEPTEMBER 2015

Characteristics of urban destruction



- Destruction of the heritage settlements / heritage
- Debris removal ! An expensive challenge
- Cracked houses standing in the support of shoring and props
- Low income rental families faced hike in the rent
- Influx of families to relatives having safer house

Contd.



- Life continues in 'not so safe buildings' including apartments
- Insecurity among the families living in the close periphery of tall apartment buildings
- Questions on building code, zoning and monitoring mechanisms







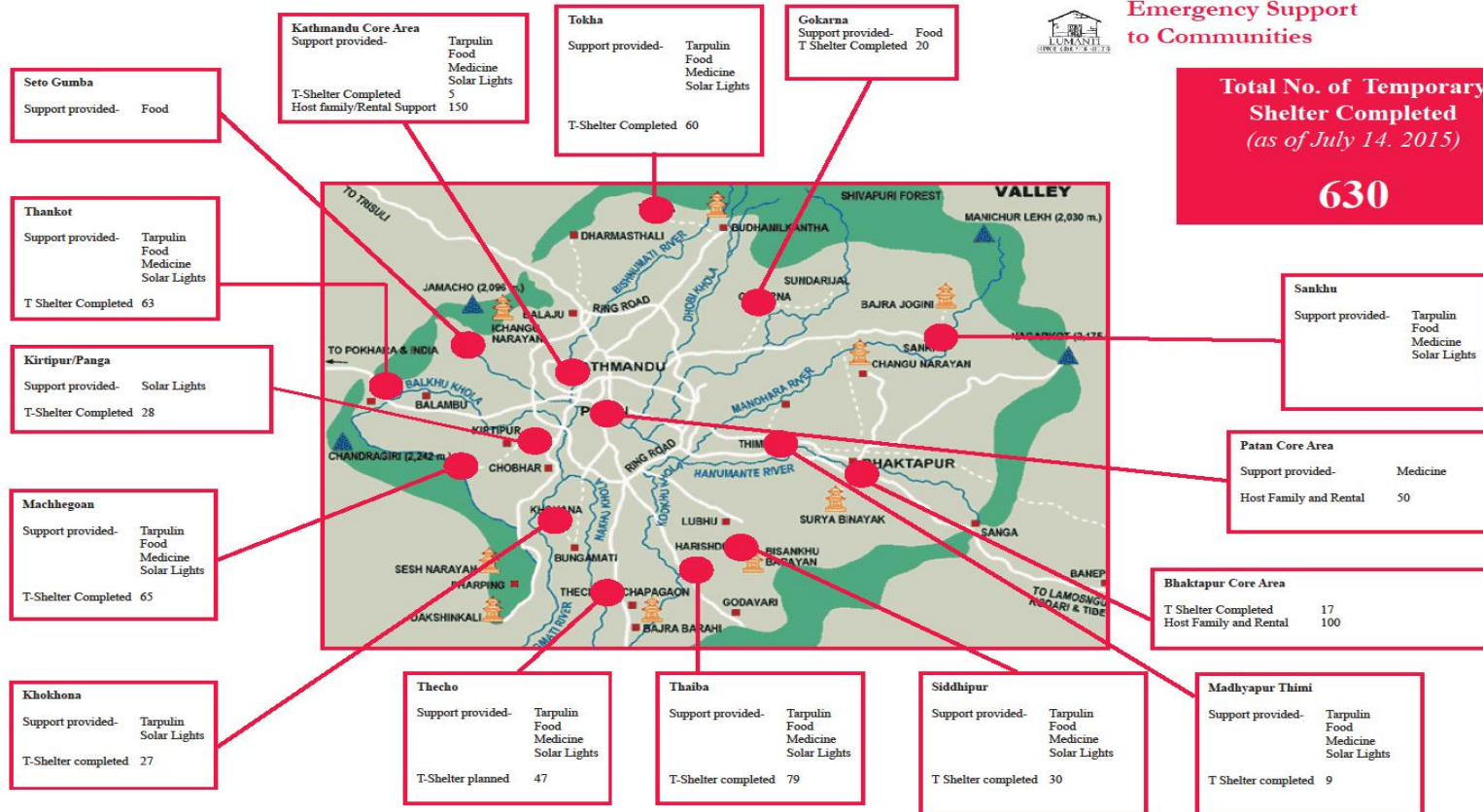
Support to the Communities



Emergency Support to Communities

Total No. of Temporary Shelter Completed
(as of July 14, 2015)

630



Emergency Support Beyond the Kathmandu Valley

Community	Support provided	T Shelter Completed
Rasuwa	Temporary Toilet in IDP camp	67
Dhading		119

How we worked?



- Community led approach – mobilisation of DMCs, CBOs and saving and credit cooperatives
- Mobilization of technical volunteers and setting up information centres
- Coordination with local governments

Community led approach



- Community assess the shelter needs / host families / families living on rent
- Identify the most vulnerable families
- Flexibility in using the fund as needed
- Serving maximum families with limited fund
- Procurement of the materials
- Supervision of the temporary shelter construction
- Arranging WASH facilities
- Conflict management

Temporary Shelter Support



- Basic Design of 10'x12' shelter
- Flexibility to use salvaged material to complete the structures.
- Construction in their own lands
- In case land is not available, negotiate with other land owners or local government
- Shelter shared if land not available













A way forward: Building Resilient Communities



- Planning of the settlement / risk mapping
- Land survey
- Organising the community/ Institutionalization of CBOs / Cooperatives
- Technical assistance
- Access to financial resources
- Support for legal assistance
- Support for debris removal
- Orientation on build back safer
- Integrated approach
- Ensuring sustainability







EACH SQUARE REPRESENTS (5X5) METERS
हरेक वर्ग (५ X ५) मीटरको छ ।

निरुज, अप्सरा गण्ड N



कतिताहरू
PLOTS

कतिताहरू
PLOTS

45'
13.7'

45'
13.7'

0.1
30'

0.1
30'

PLOT 1
1350 SQ.FT.
0-3-3-11 RAPD
कतिता 1
1350 वर्गफीट
3 आना 3 पैसा 3.11 दाम

PLOT 1
1350 SQ.FT.
0-3-3-11 RAPD
कतिता 1
1350 वर्गफीट
3 आना 3 पैसा 3.11 दाम

42'
12.8'

42'
12.8'

0.5
28'

0.5
28'

PLOT 2
1176 SQ.FT.
0-3-1-13 RAPD
कतिता 2
1176 वर्गफीट
3 आना 1 पैसा 2.92 दाम

PLOT 2
1176 SQ.FT.
0-3-1-13 RAPD
कतिता 2
1176 वर्गफीट
3 आना 1 पैसा 2.92 दाम

35'
10.4'

35'
10.4'

0.5
28'

0.5
28'

PLOT 3
970 SQ.FT.
0-2-3-15 RAPD
कतिता 3
970 वर्गफीट
3 आना 3 पैसा 3.11 दाम

PLOT 3
970 SQ.FT.
0-2-3-15 RAPD
कतिता 3
970 वर्गफीट
3 आना 3 पैसा 3.11 दाम

जम्मा क्षेत्रफल: २८६२९.१७ वर्गमीटर
५६ रोपनी ४ आना १ पैसा २.४० दाम
TAUKHEL RE-PLANNING EXERCISE FOR COMMUNITY
डेगाउ, टौखेल समुदाय पुनरनिर्माणको लागि सामुदायिक अभ्यास









EVERY HOUSE CONNECT DIRECTLY TO STREET
,ELECTRICITY,SANITARY SYSTEM



Challenges



- Limitation of Fund-Huge Demand-unable to reach all the affected families.
- Lack of local skilled builders
- Revised building code vs. land cost vs. land availability
- Construction of low/medium rise high density settlements. Maintaining heritage values.
- Issues of rental families and informal settlements
- Life of camp ! Support in the camp !
- Compensation fund !
- Building a resilient community, not a single house!



• **THANK YOU**