



Amidst immense resources and constraints of nature, the state of Himachal Pradesh in India boasts of a fantastic diversity of cultural and ethnic characteristics nurtured through ages along prominent river basins and valleys strung across the entire length and breadth of this Himalayan setting.



**A new order and connected aspirations have no doubt begun to influence and manifest themselves through expressional routes be it in customs, habits, dress, visual and performing arts and craft as also living spaces – dwellings, abodes and institutions.**



It is in the components of the changing vernacular of these regions that the new idioms of language have started to play a redefining and significant role.

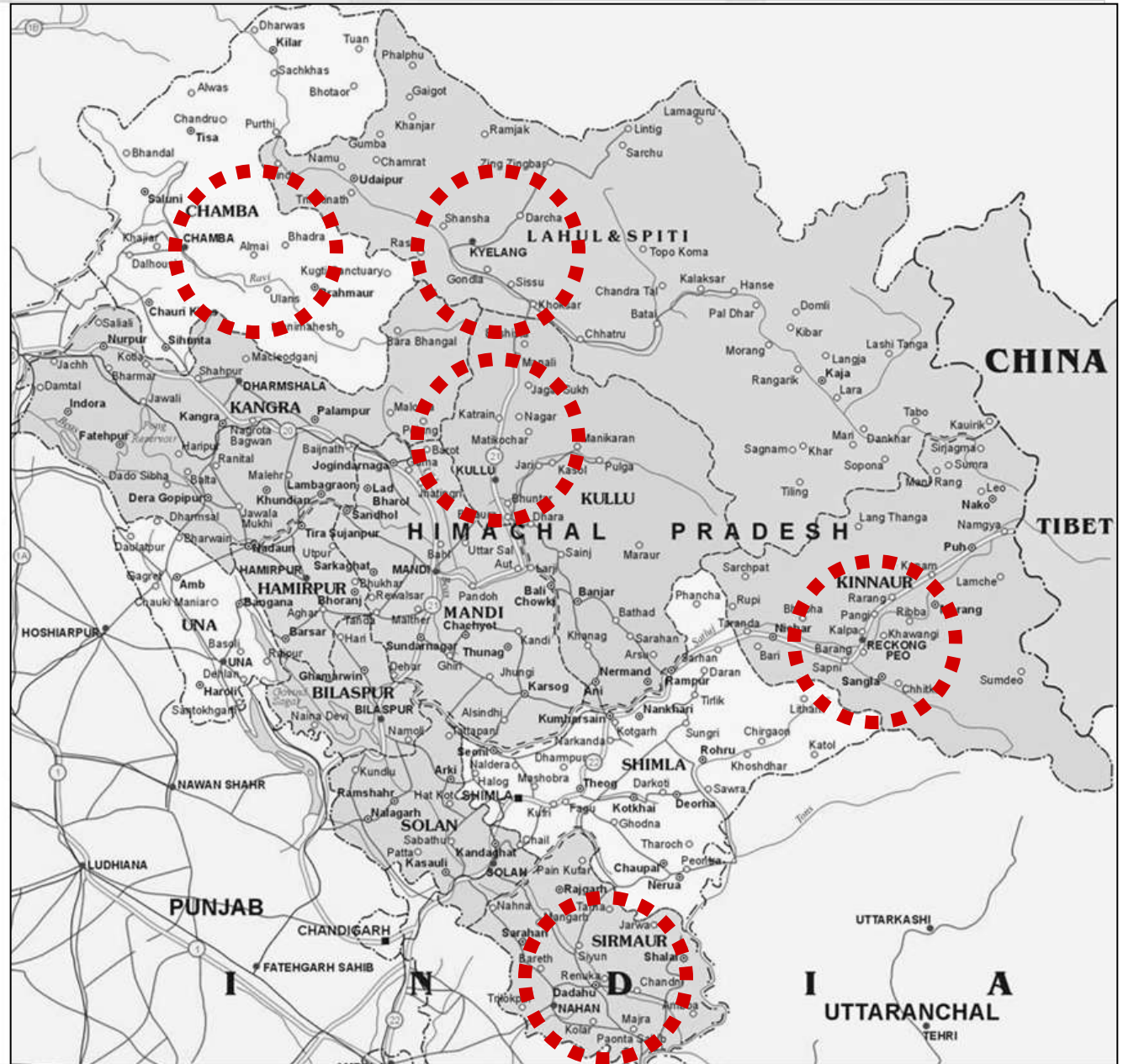


# The city is the immediate dream for the rural.....

Most of the rural habitations here have already, or are rapidly getting connected to the world outside through the immense strides and inroads made by communication technologies into these areas. Satellite television, mobile cell phones, STD/ISD connectivity, increasing road networks have contributed together to bring the interior world of rural Himachal in continuous interface with the larger world outside it. Individual expectations of income from work-based engagements have altered and along with steadily ascending literacy levels especially among the youth, indications of a new social order seem to be an emergent reality.



This presentation is based on our engagement in various parts of Himachal Pradesh over the last two decades. It encompasses various levels of exploration, enquiry, assessment and design application in mainly three tribal villages in the Kinnaur district of the state.



# **Manali Vision Document**

for

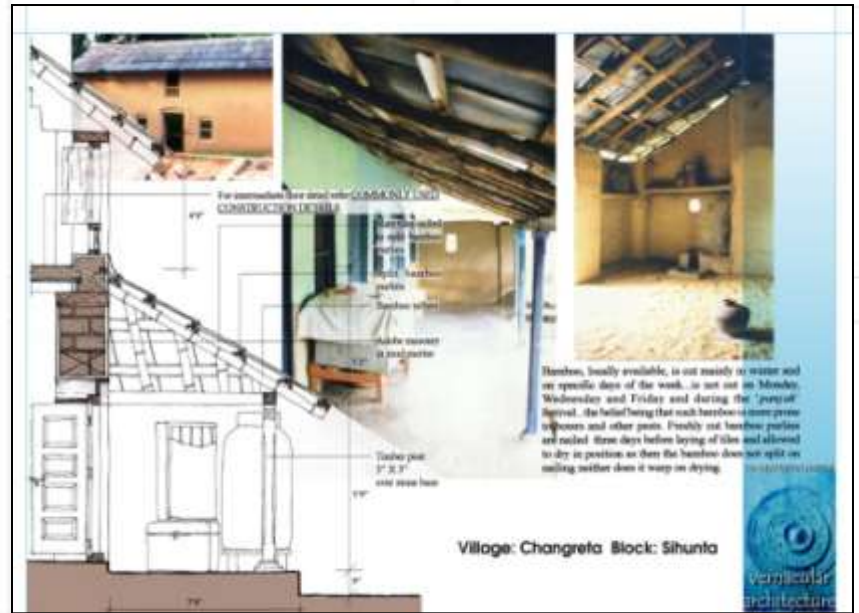
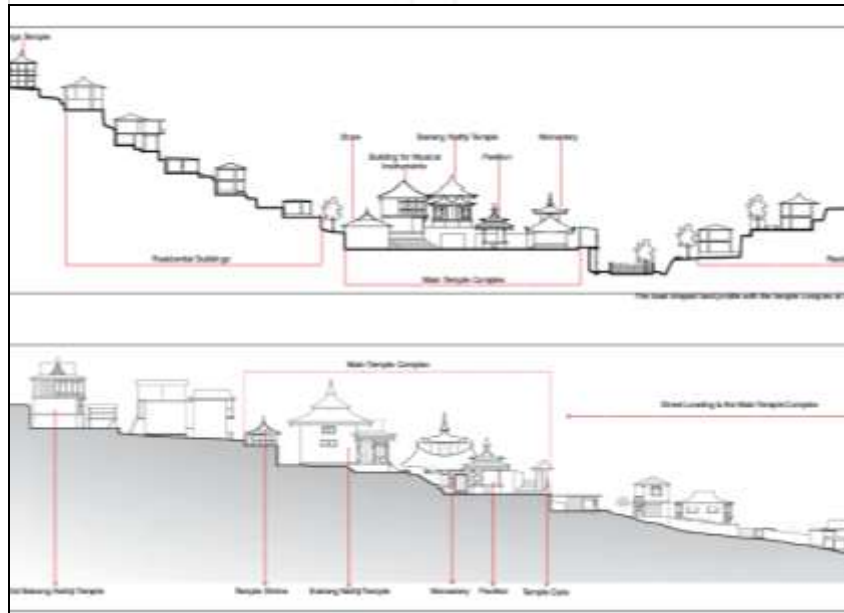
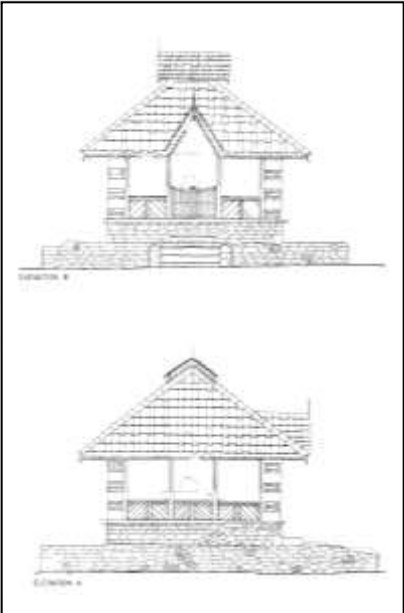
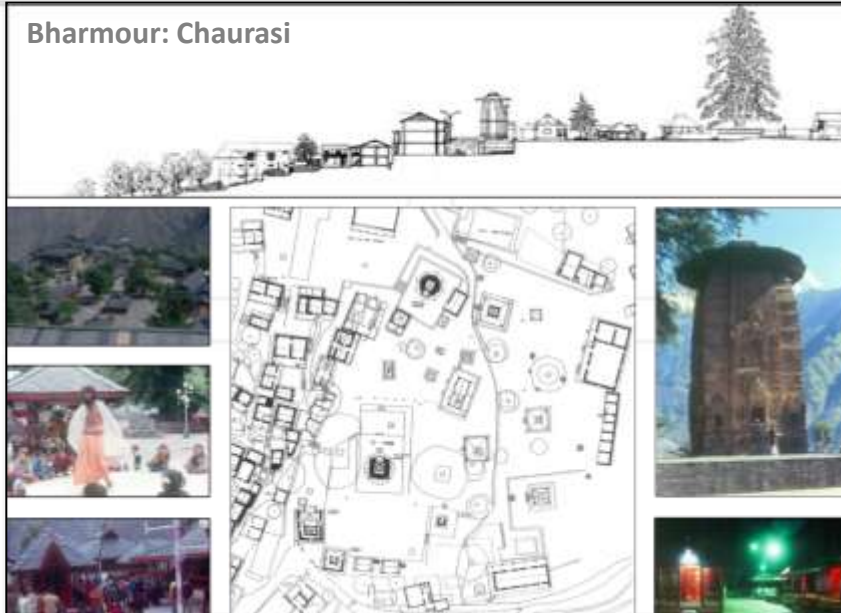
Department of Town and Country Planning  
Government of Himachal Pradesh



**School of Planning and Architecture**  
New Delhi

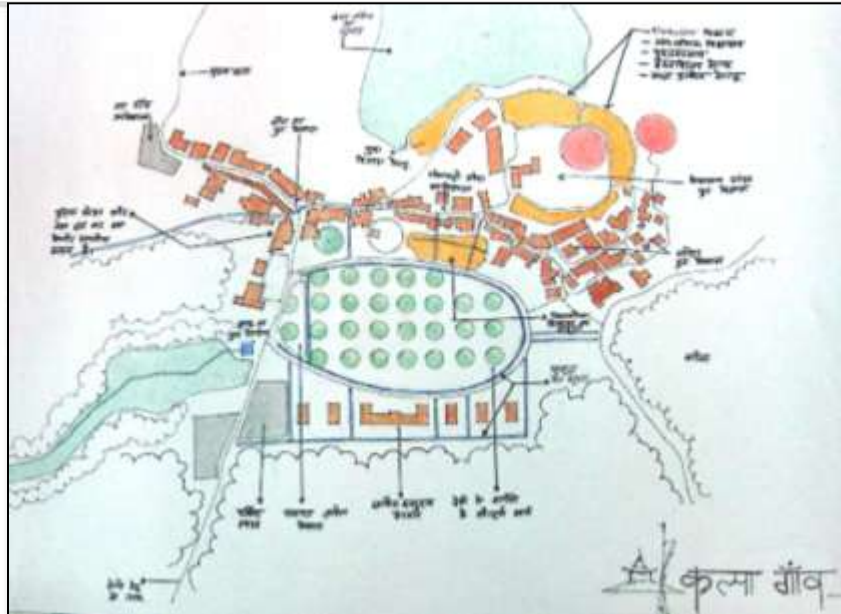
# Phase I

## Bharmour: Chaurasi





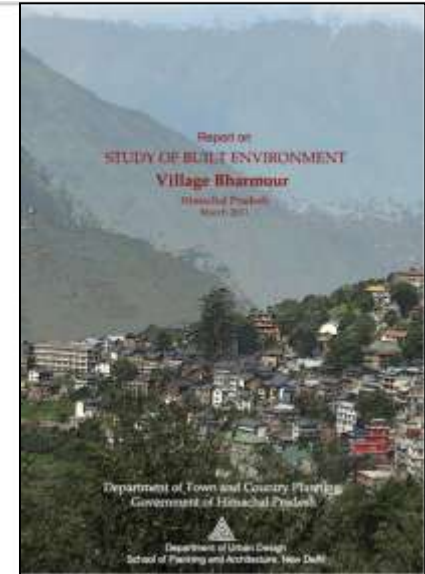
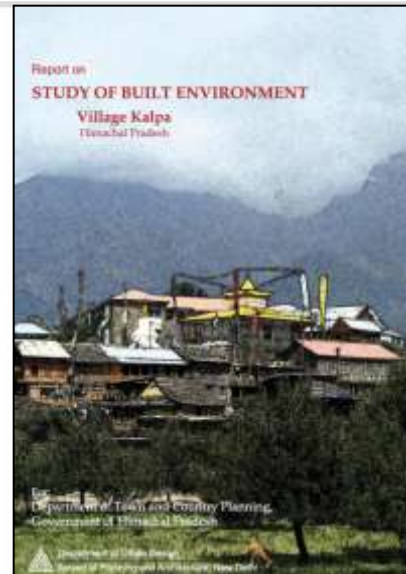
# Phase II



# Phase III



Stage I



Stage II



## Tourism

The variety of tourist facilities offered today by the village is a resultant of conditions of access, location, scale of activity and target categories of tourists. These types are distinguished from each other in their formal assembly but follow a similar aesthetic expression system to highlight their individual presence in the landscape.

Bangla Tower



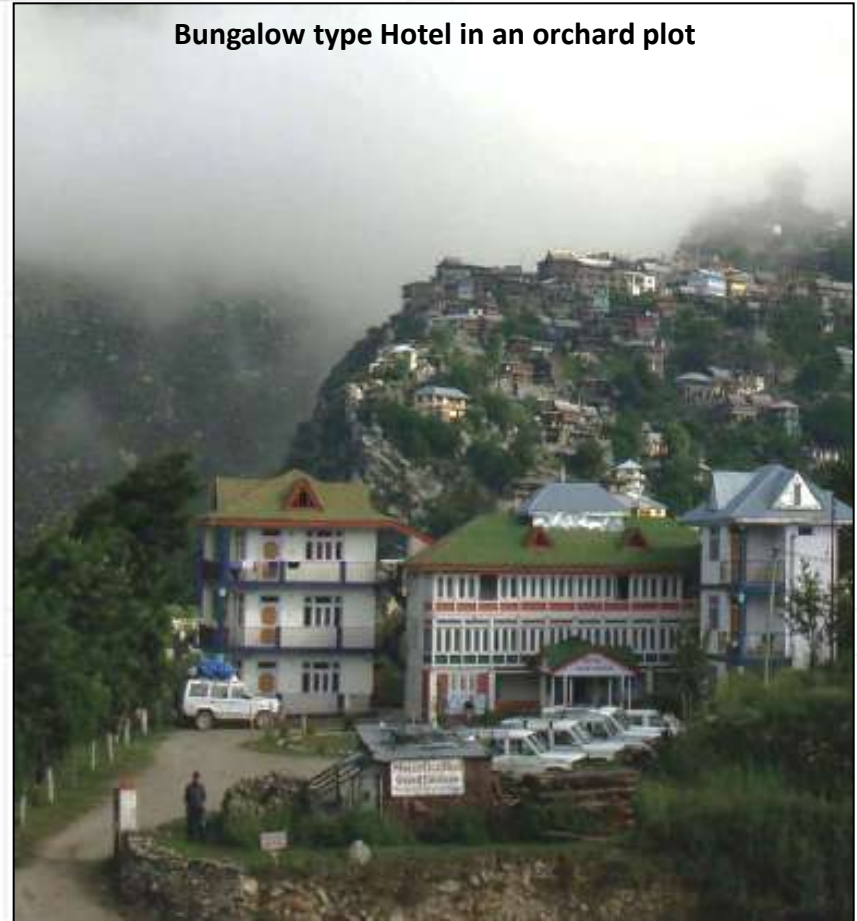
Hotel in an orchard plot



Guest House along main vehicular spine



Bungalow type Hotel in an orchard plot



HP Tourism Hotel



Guest House along pedestrian spine in core



**Home-stay Policy** : The essence of “home stay” accommodation is in the continuity and strengthening of local socio-cultural norms and expressions, allowing guests to appreciate a lifestyle that is markedly different from theirs. Discussion of “home stay” becomes crucial with respect to Sangla because of the presence of an active institutional system already with NGO organizations like Sangla Valley Sustainable Development Society, which is aggressively promoting it in the village.



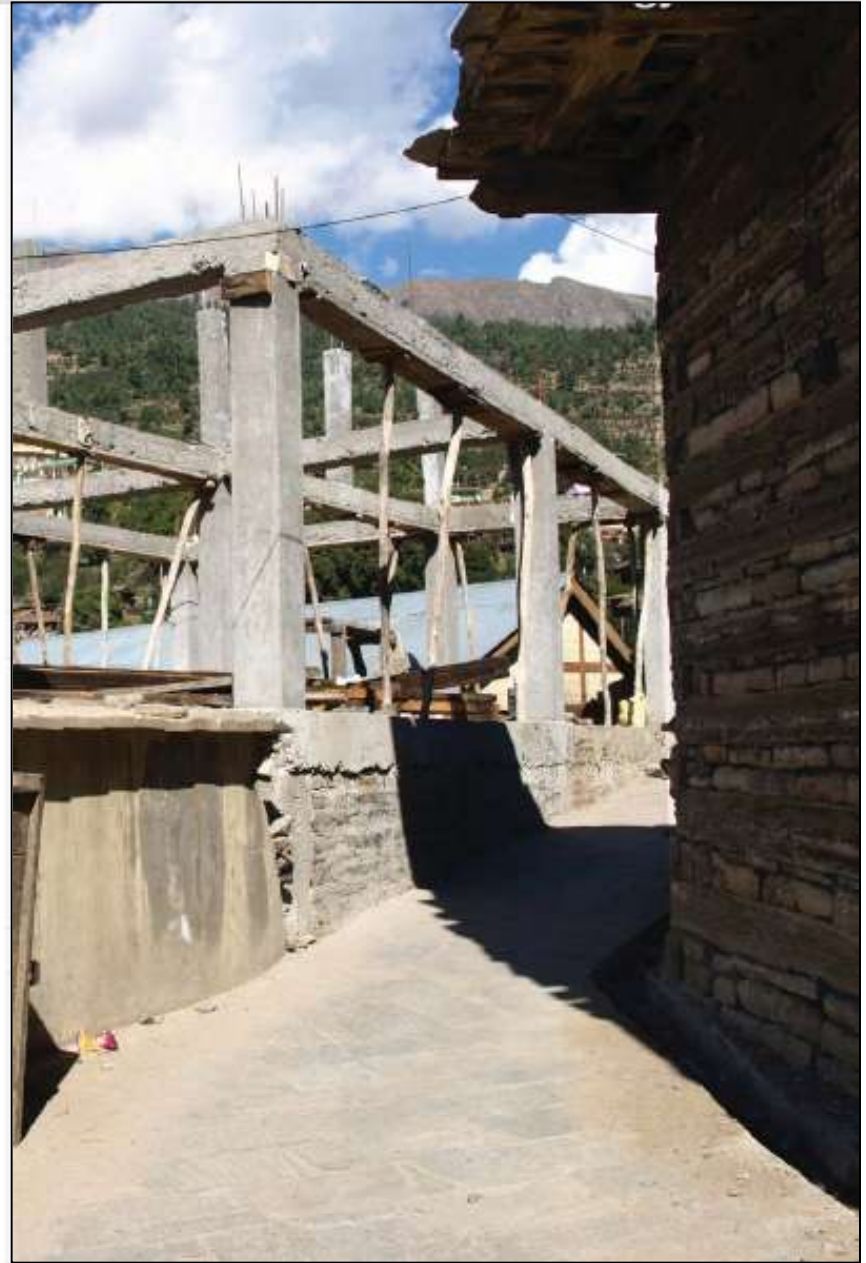
Vertically stacked hotels along the core periphery

**Model Home-stays  
Existing Appropriate  
Examples**



## Technology

A paradigm shift in the availability and use of locally procured building materials and technology towards modern urban materials and systems is generating a sweeping transformation of built characteristics in Kalpa - Sangla and the state in general. This is giving way to energy intensive, conventional urban technologies using brick and cement masonry in RCC framed structures and roofing system. Modern materials like cement, glass, brick, etc. are fast replacing the use of traditional materials like timber, stone, mud, etc. in construction of new buildings in the villages.



# Appendix 1

	Transformation of Building Types				Functional Attributes
<b>Residential Units</b>	 <p>A traditional timber house with a flat roof</p>	 <p>A timber-stone house with sloping slate roof</p>	 <p>Hybrid unit using concrete columns galvanized</p>	 <p>A 'pucca' modern concrete house</p>	<p>Residential unit as a type has undergone complete transformation. The modest two story timber-stone structure is gradually being replaced by three to four story high concrete building.</p>
<b>Tourist Facilities</b>	 <p>Traditional building converted into a home stay</p>	 <p>Bungalow type hotel building</p>	 <p>Horizontally spread hotel in an orchard plot</p>	 <p>Vertically stacked hotels along the core periphery</p>	<p>The modern type of tourist facilities emerging frequently within the settlement seem to be imitating hotels or guest houses in nearby towns and cities. Only with respect to Home Stay traditional buildings are being explored.</p>
<b>Commercial Buildings</b>	 <p>Shop - House within the core</p>	 <p>Shop - House along the main link road</p>	 <p>Contiguous retail edge along the market stretch</p>	 <p>Commercial buildings along the market stretch</p>	<p>Retail activity is accommodated through shop house typology. In case of market stretch the buildings are either couple of storeys high creating a contiguous edge or are vertically stacked serving different functions.</p>
<b>Public Buildings</b>	 <p>Storage and Distribution Center</p>	 <p>School</p>	 <p>PWD Complex</p>	 <p>Hospital</p>	<p>Public buildings primarily government owned continue to be minor variations of same building type across the entire spectrum of use the serve.</p>

The above matrix displays the transformation of building types for diverse functions as a result of emerging technologies and the range of materials available for building construction.

The traditional settlement core is gradually being interspersed with new types of residential unit types, displaying a transformed architectural vocabulary.

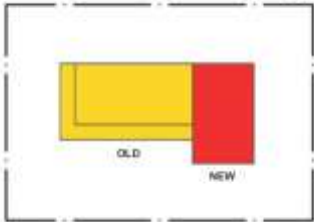


There is sporadic modernization of the buildings within the core whereas the market stretch comprises of modern construction completely.

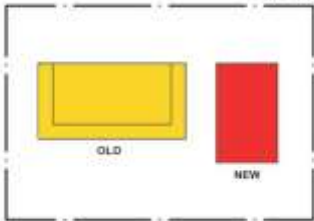
- Modern Buildings
- Hybrid Buildings
- Traditional Buildings

Building Transformation trends in Sangla

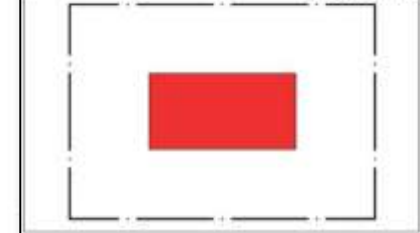
Addition



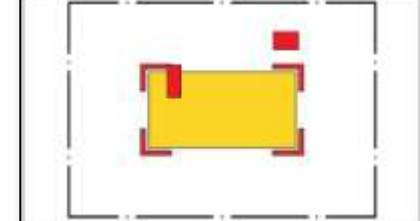
Modification



Replacement



Renovation



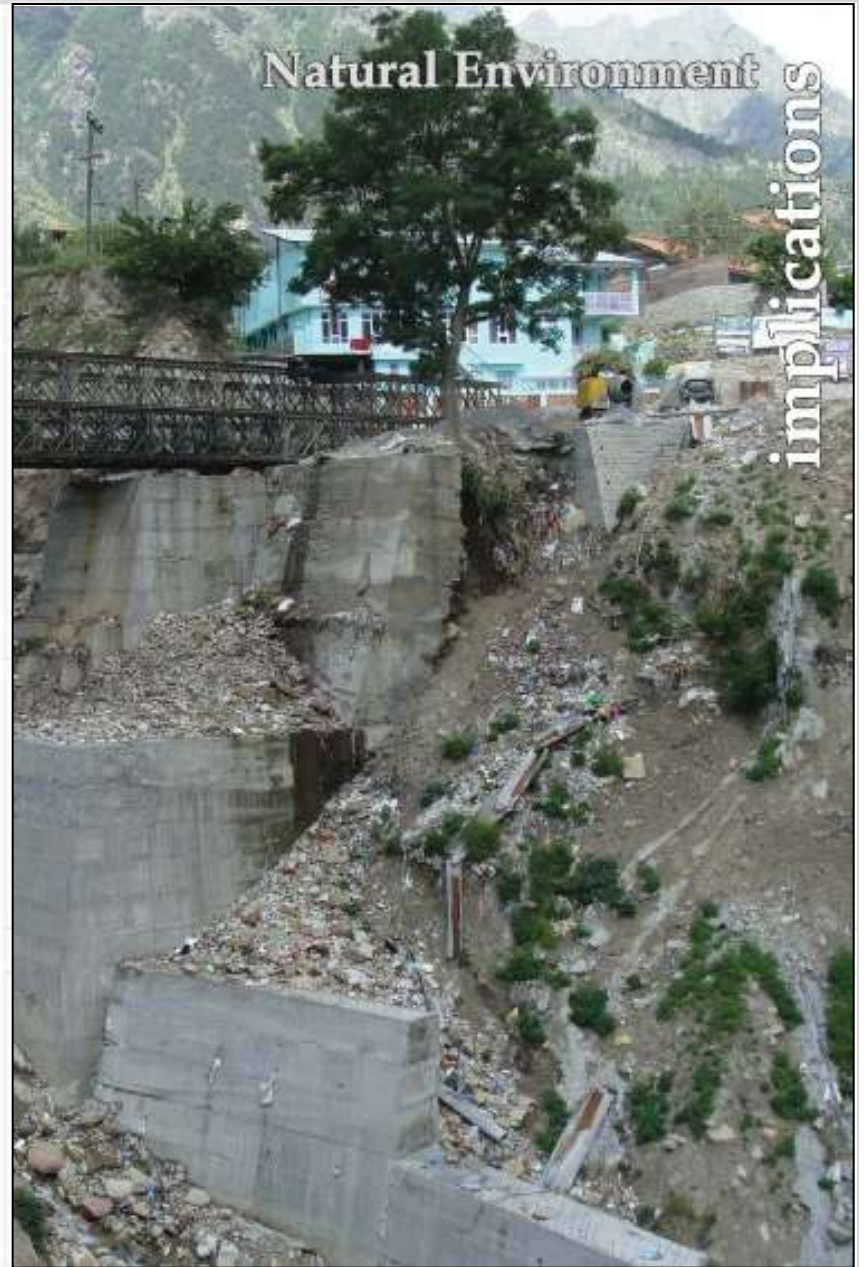
## Aspirations

The last decade has witnessed considerable changes in the villages with respect to lifestyle and livelihood pattern of the rural population. Increased connectivity and economic prosperity has altered the way of living, particularly with strong influences from the urban world.





# Implications





Ten years later, as we re-visit Bharmour again, the story so far seems to have moved into another realm of discussion. **The new emerging scenario is much beyond the quiet, remote, tribal village of the past. Cumulative affect of internal factors and external influences has contributed to the acceleration in transformation in Bharmour.**



## Directions of Change

The set of transformation trends listed below in the domain of the built environment suggests at one level an unsustainable trajectory of building in these regions, while offering the potential for technological and scientific interface appropriate for such locations.

	PAST		PRESENT
From	Use of local materials and construction technologies	To	Urban (imported) materials with corresponding technologies.
From	Passive methods of climate response and life style needs	To	Active methods of climate response and consumer durables
From	Indigenous spaces and volumes corresponding to traditional living patterns and life cycle	To	Urban building types and spatial volumes in response to imbibed or aspiring life-styles
From	Rich craft heritage and accessory production from within the community	To	Diluted applications and manufactured products imported into the settlement
From	Contextually rooted expression and aesthetic vocabulary	To	Borrowed imagery and hybrid building characteristics

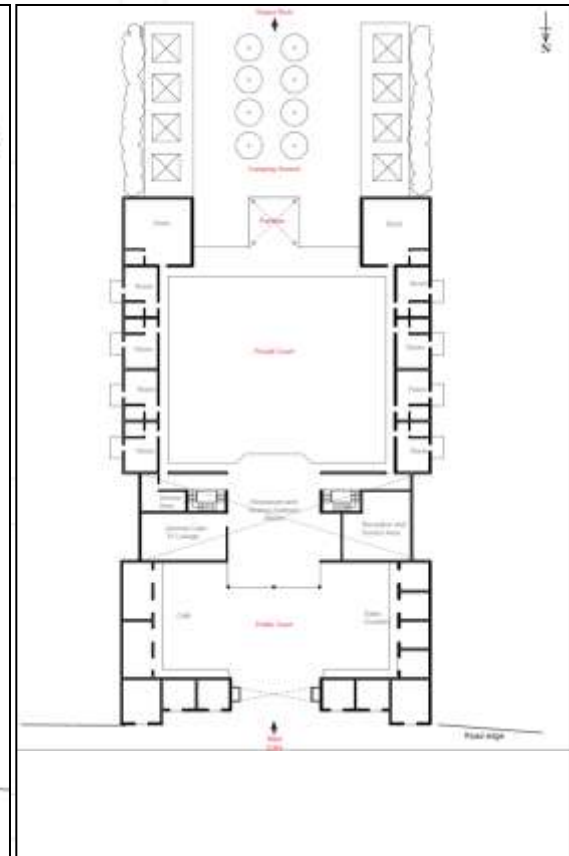
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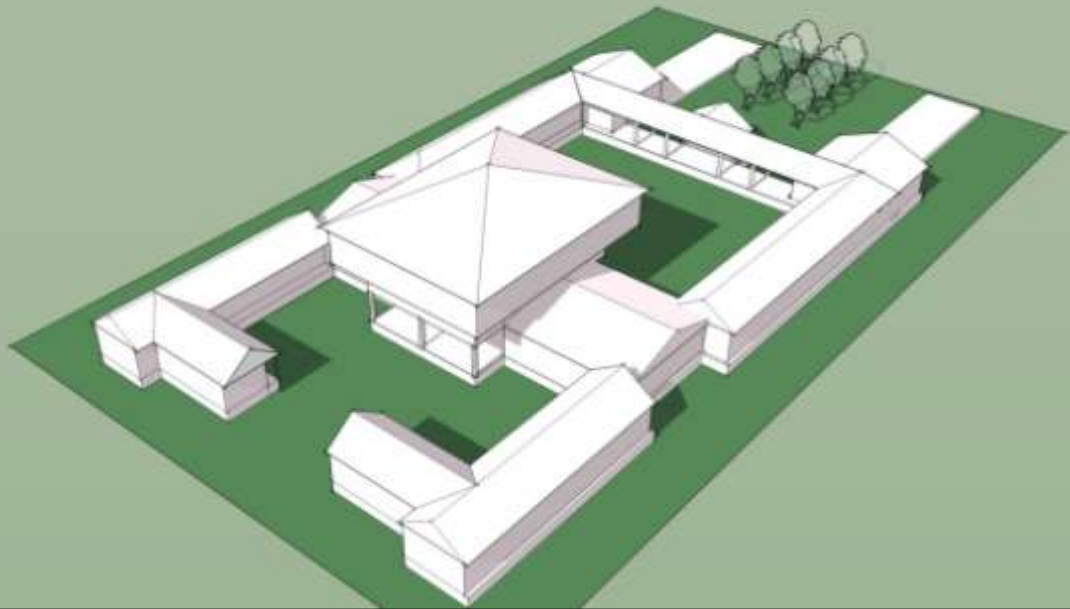
**Courtyard type (Variation 1)  
within orchards or valley  
locations along the river**

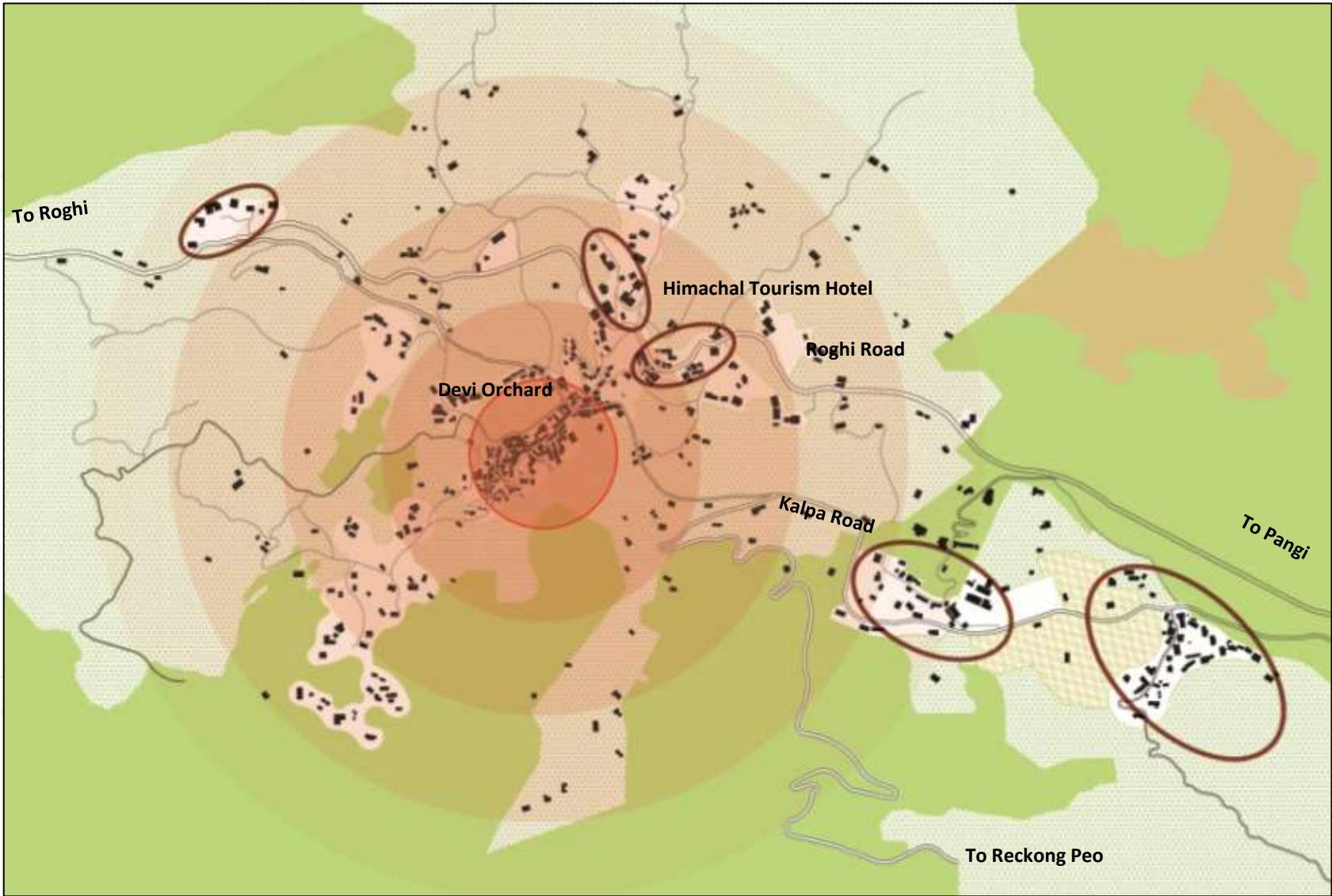


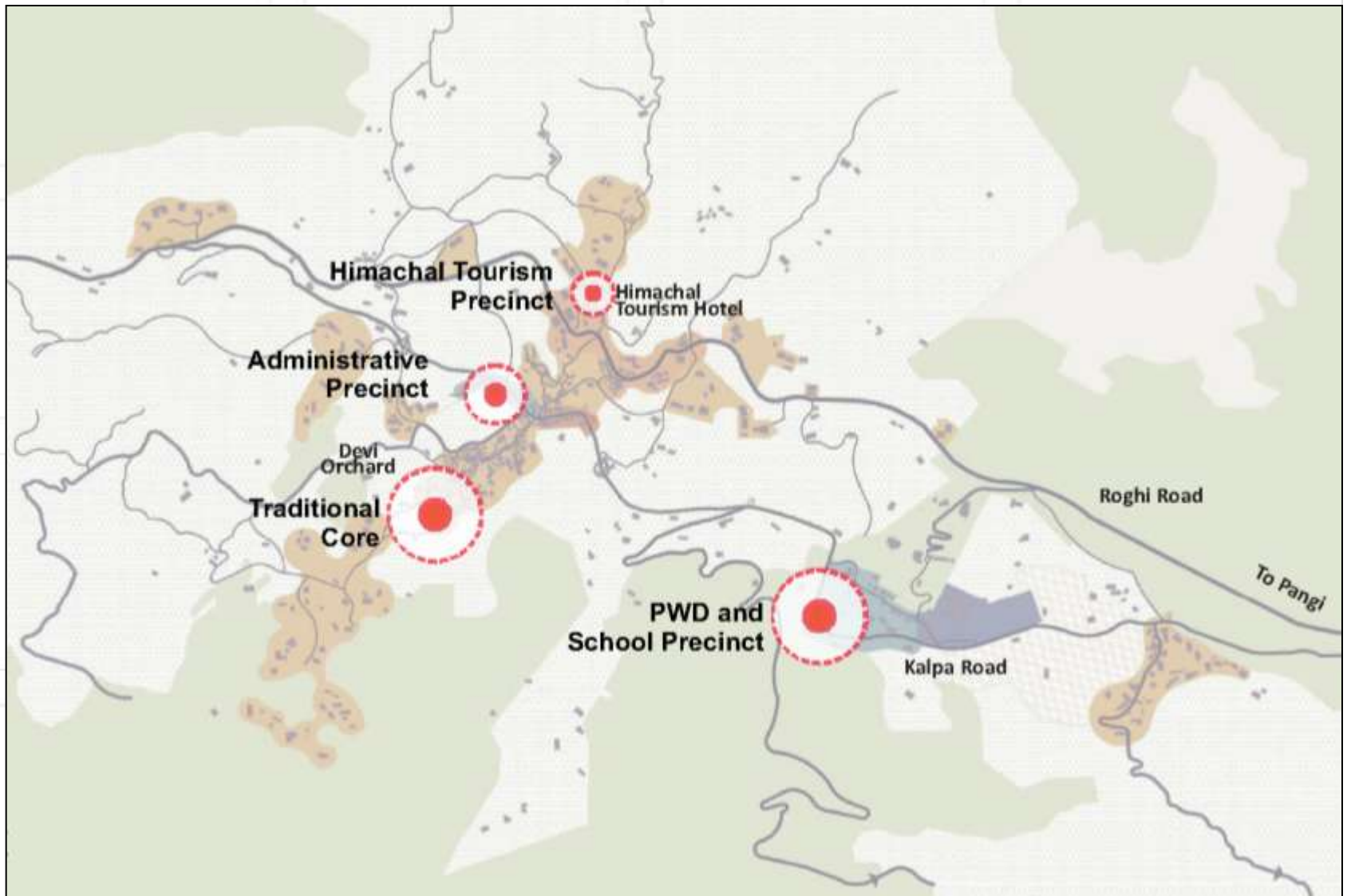
**Courtyard type (Variation 2) as  
valley based river edge  
development**



**Courtyard type (Variation 3)  
as valley based river edge  
development with a  
combination of tourist facilities**

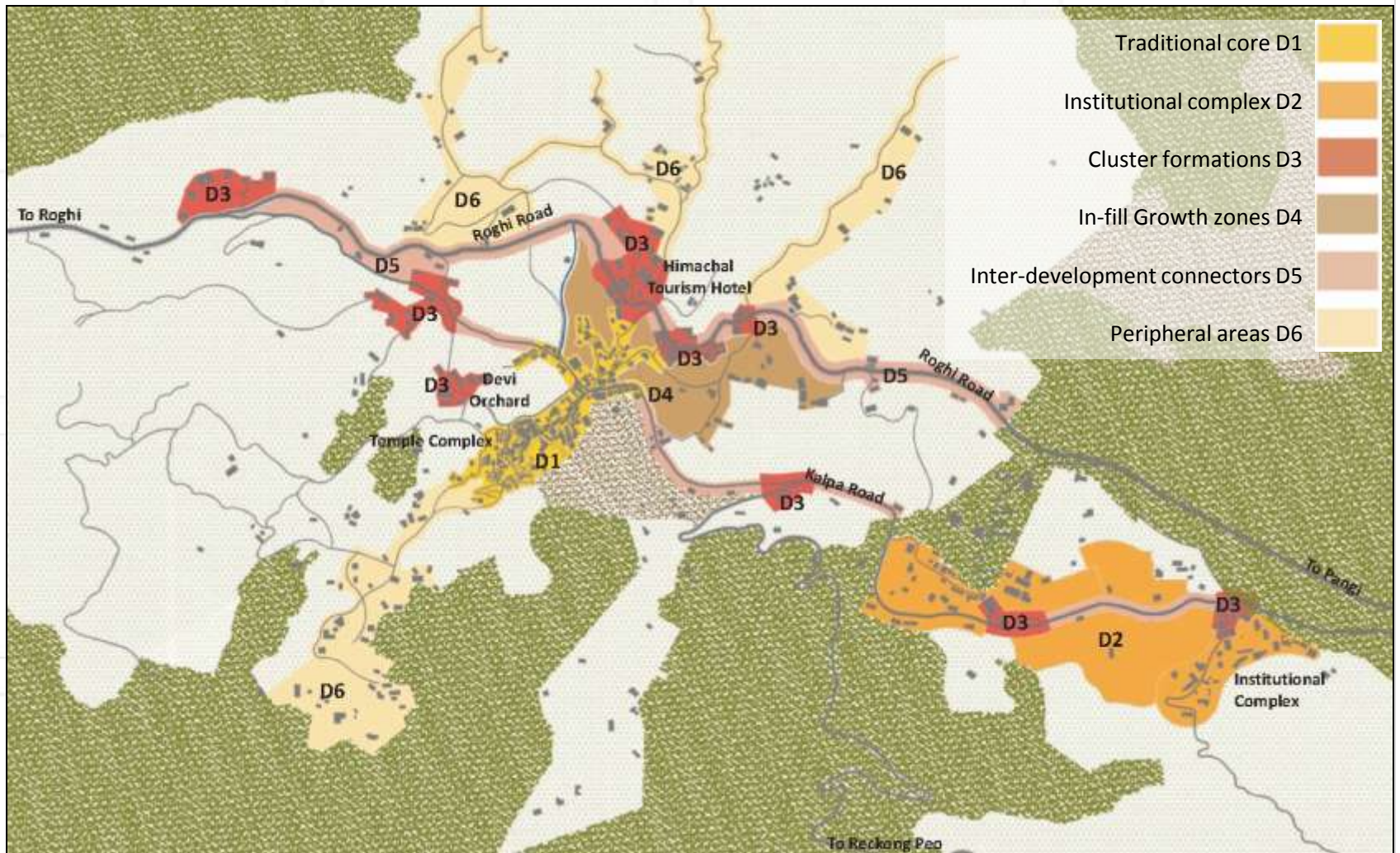




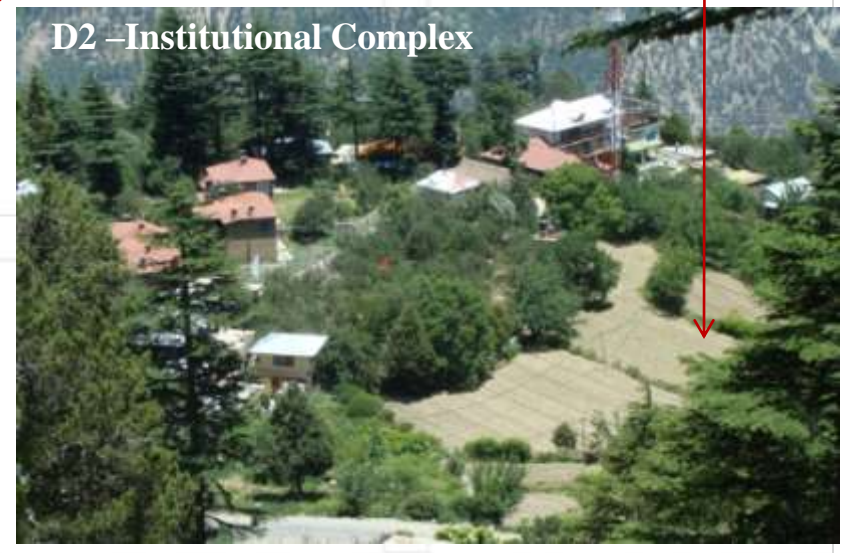
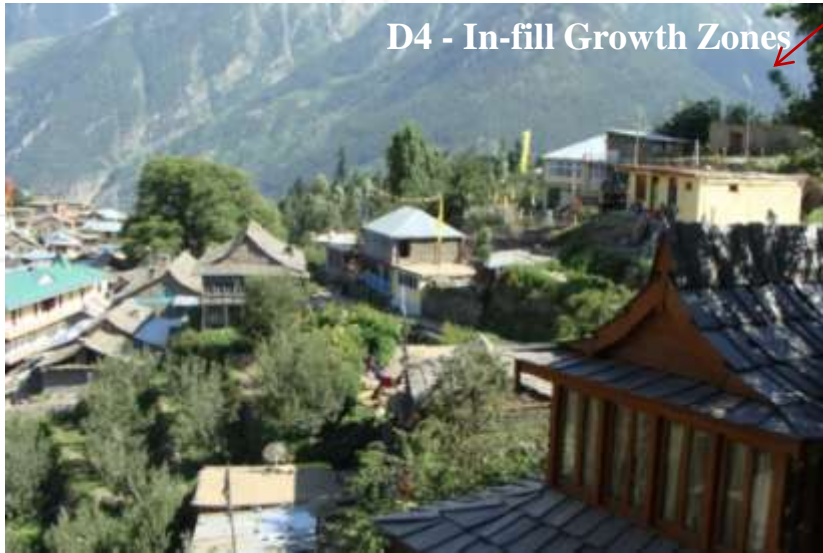




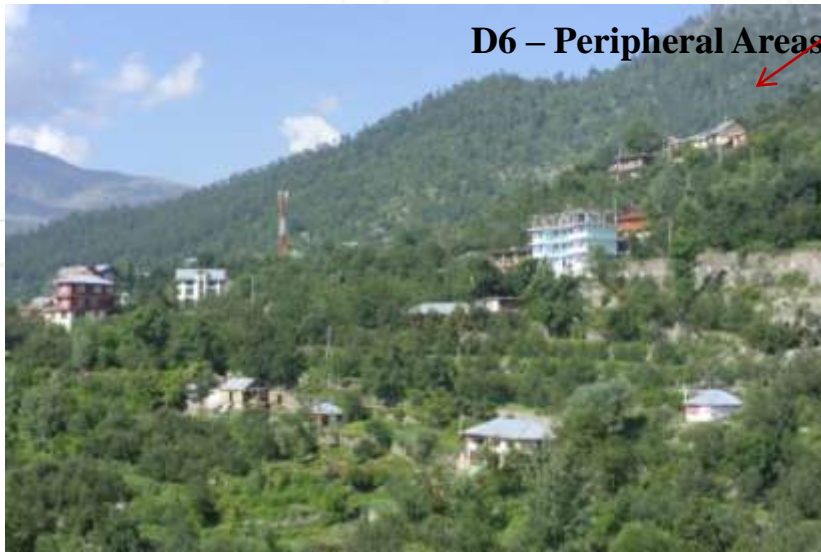
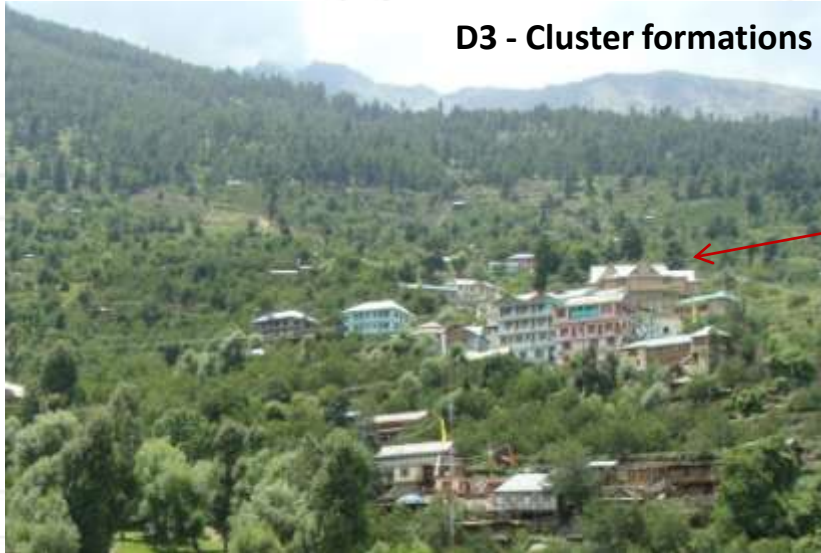
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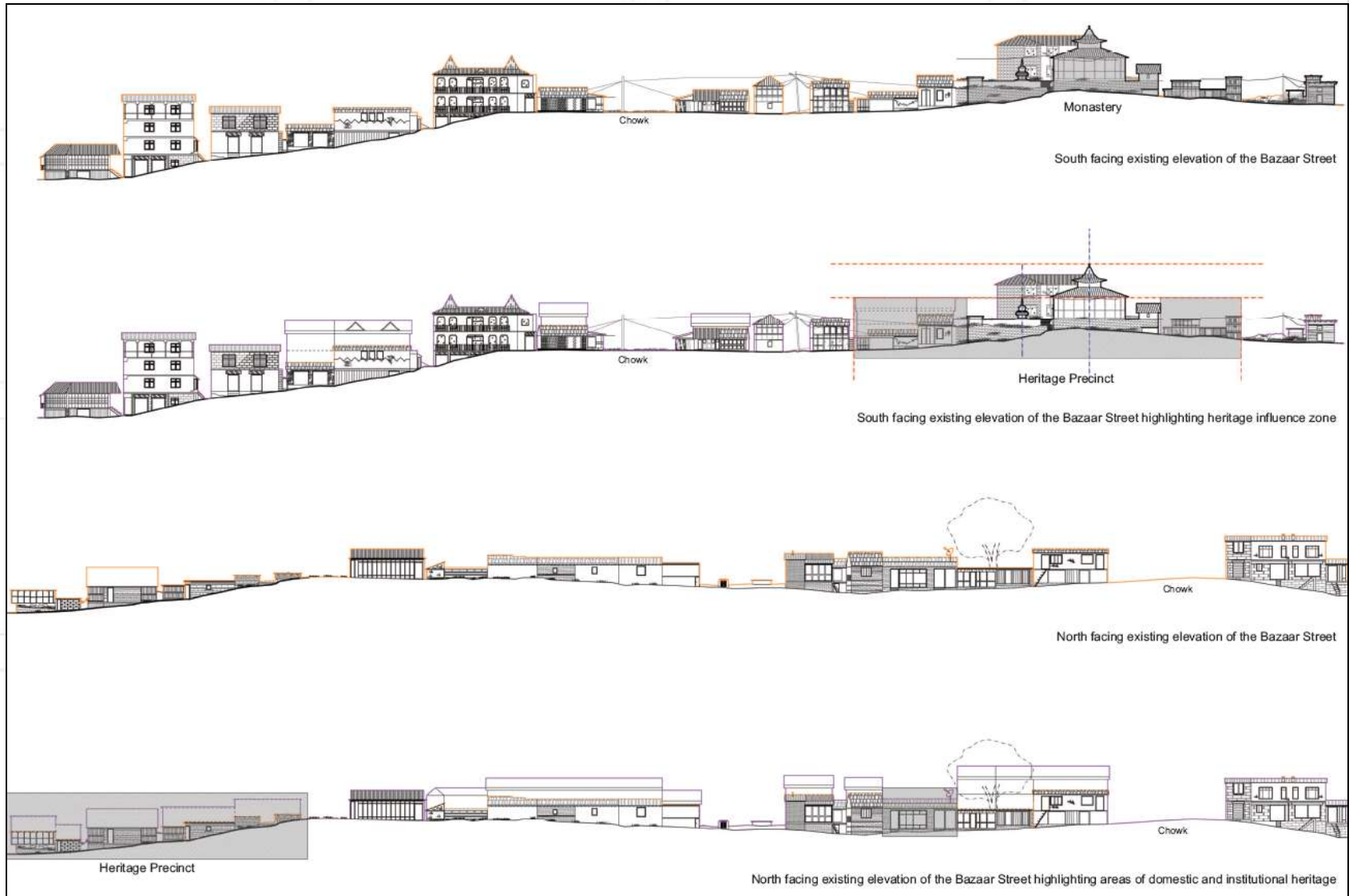
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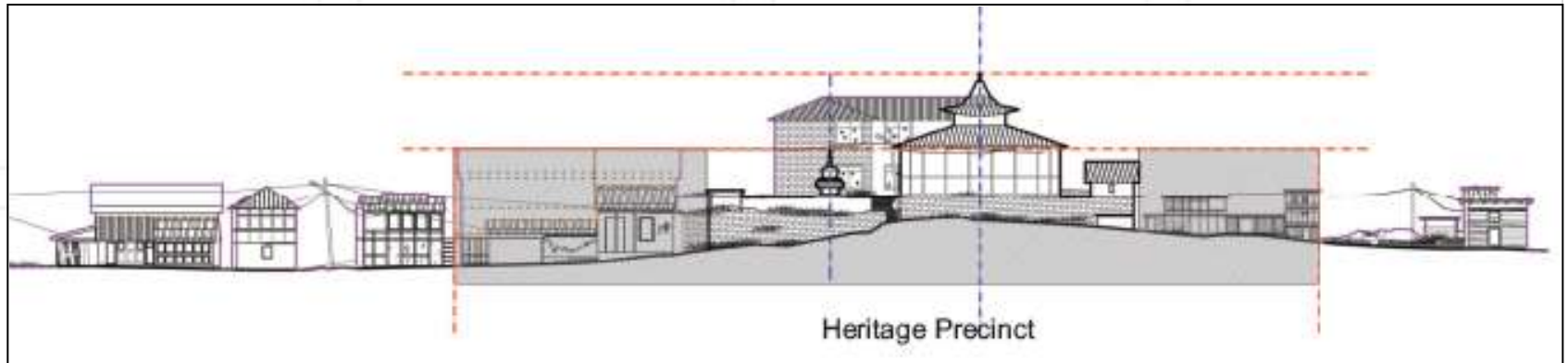
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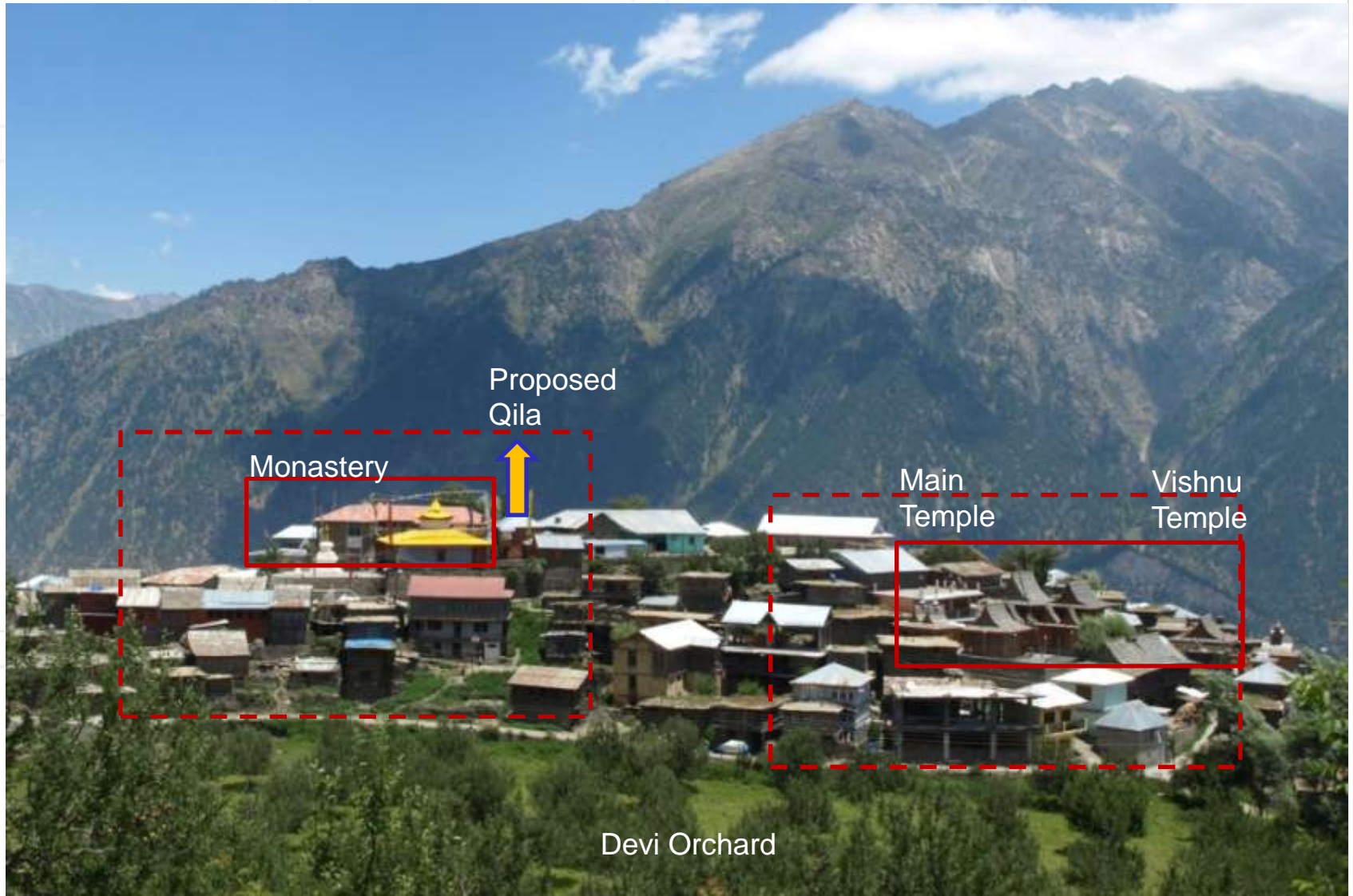
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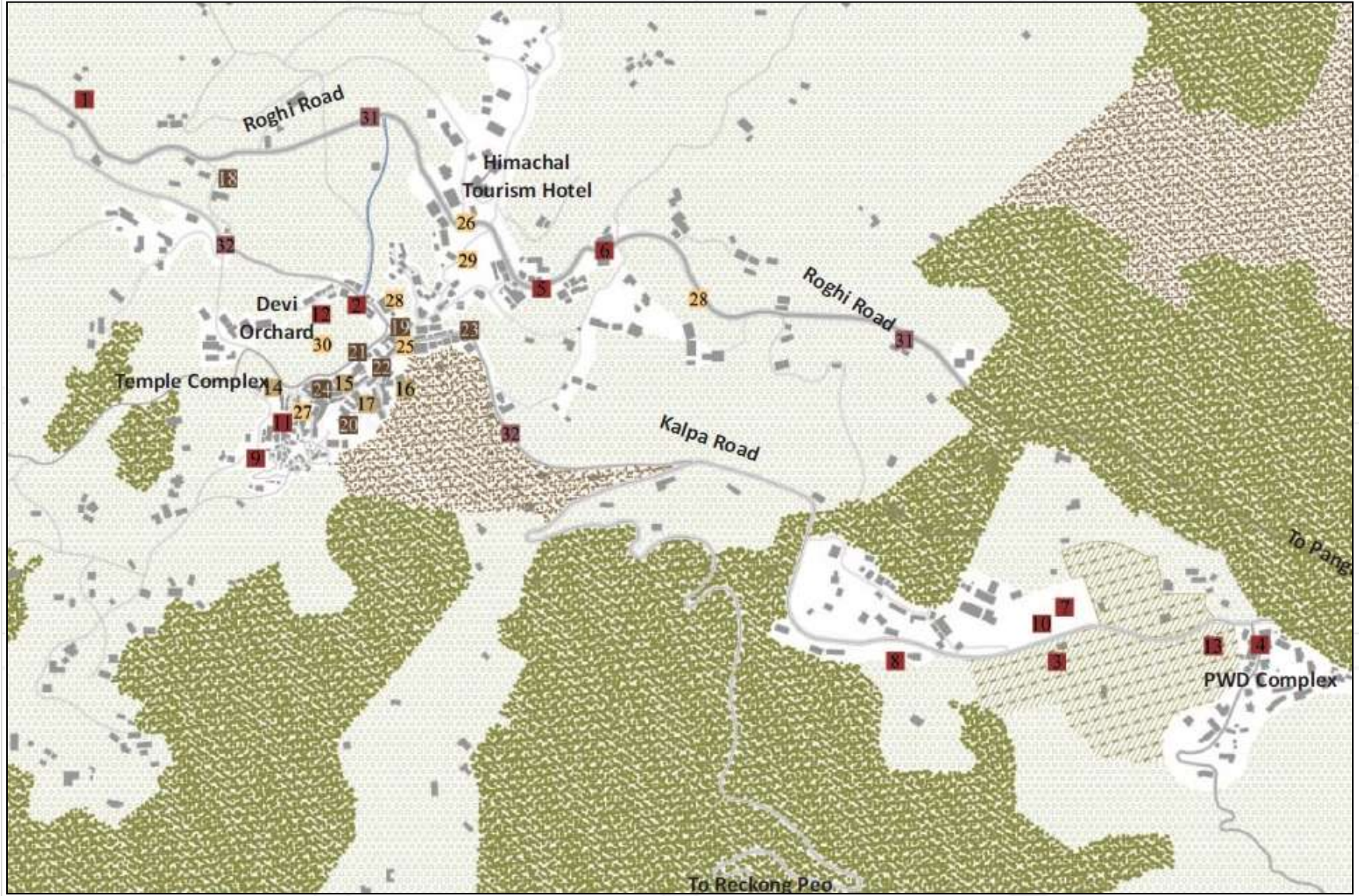
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## Mission Projects



S.no	Project Name	Type of Project	Expected Target Group	Suggested Location	Proposed Mode	Salient Features
<b>New Building Projects</b>						
1	Centre for Astronomy	Civic and Tourism	Tourist, Local Experts	Rogi Road	Public	
2	Craft Centre	Civic and Tourism	Tourists, Local Craftsmen	Main Entry Road	Public and Private	Exhibition space, sale counters, storage space, design centre, sitting space, outdoor landscape, street lighting, F&B
3	Centre for Tribal Arts and Culture	Civic and Tourism	Tourists	PWD	Public	Centre for performing arts, fine arts, herbology, oral traditions, studios, hostels, auditorium, lecture rooms, teacher accomodation, library, amphitheatre & open space
4	Training Centre	Civic and Tourism	Local youth	PWD, School	Public	Multipurpose lecture rooms, video and still photgrapy room, building centre, entrepreneurship support
5	Computer/Gaming Centre	Civic and Tourism	Local youth	Rogi Road	Private	Computer education, recreation
6	Women Vocational Classes	Civic and Tourism	Local Women	Rogi Road	Public and Private	Stitching, knitting, food processing, beauty culture
7	Sports Centre	Civic and Tourism	Local youth	PWD/ Stadium Complex	Public	field related sports, badminton, tennis etc
8	Library	Civic and Tourism	Local youth	PWD	Public	Books-magazine, video library, hobby classes
9	Vehicular Movement Network	Landscape and Connectivity	Tourist and locals	Traditional Core	Public	Parking, dropoff point, street lighting, bus stand, signages
10	Skating Rink Development	Spatial Design and Landscape	Tourist	PWD/ Stadium Complex	Public	F&B development, Ticket counter, Reception and ancillary functions, retail
11	Pedestrian Movement Network	Landscape and Connectivity	Tourist and locals	Traditional Core	Public	Paving, street lighting, signages, seaters, information board
12	Village Centre	Civic	Locals	Devi Orchard	Public and Community	Multipurpose hall, panchayat ghar, mahila mandal, parking, retail
13	Relocation of Orphanage	Civic	Locals	PWD	Public and Community	Dorms, Common rooms, rooms, matron living quarters, office, stores, mess



# Proposed Development for Samuday Bhawan & Panchayat Ghar Area



UPPER GROUND FLOOR PLAN



LOWER GROUND FLOOR PLAN



The design scheme being discussed with the village panchayat during a meeting with the community.



SECTION AA'



SECTION BB'

## STATEMENT OF INTENT

1. To generate possible design alternatives for a new addition to the existing heritage structure.
2. To demonstrate the possibilities of integrating new functions like tourist accommodation to the prevailing set of domestic functions.
3. To create design possibilities for incorporating sensitive and cost-effective solutions to the existing constructional system.



ORCHARD SIDE ELEVATION

# Proposed Guest House Design



SECOND FLOOR PLAN



FIRST FLOOR PLAN



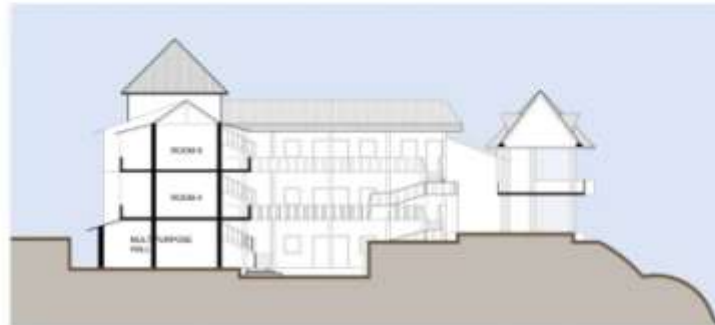
GROUND FLOOR PLAN



The model of the proposed guest house being discussed with Shri Bhagwan Das Ji(right corner) and village community.

## STATEMENT OF INTENT

1. To demonstrate the possibilities of recycling buildings materials elements and constructional features of the existing building
2. To highlight the methods for developing an appropriate architectural vocabulary for the new insertion w. r. t. both, the immediate physical contact as well as the village at large.
3. To maximize through design, the potential revenue generating possibilities using available land and material resources to the optimum.



## Community Participation



Split bamboo structure covered with 'maljan' - creeper leaves, and finally covered with thatch... tied down to the support frame... curvature varies.

Section AA'

Wood logs padded on top to rest the bamboo frame.

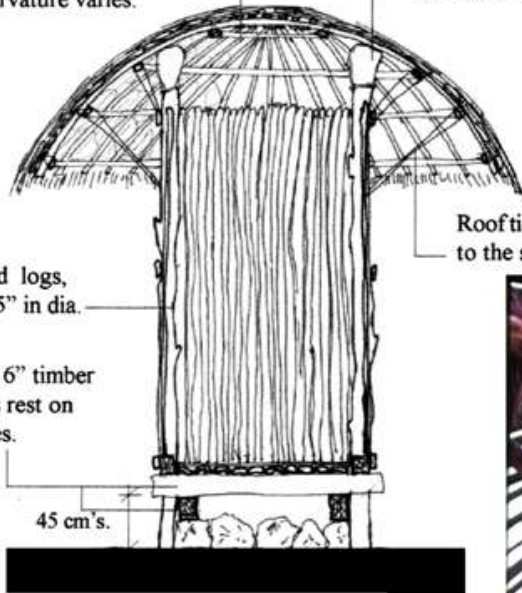
Roof tied down with ropes to the support below.

Wood logs, 4" - 5" in dia.

250 cm's

7" X 6" timber joists rest on stones.

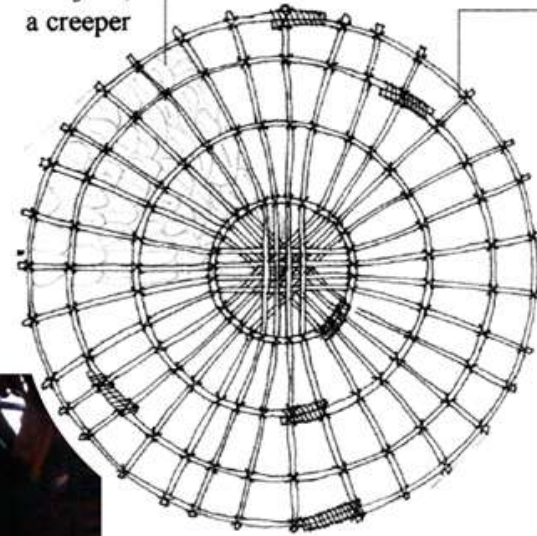
45 cm's.



Leaves of 'maljan', a creeper

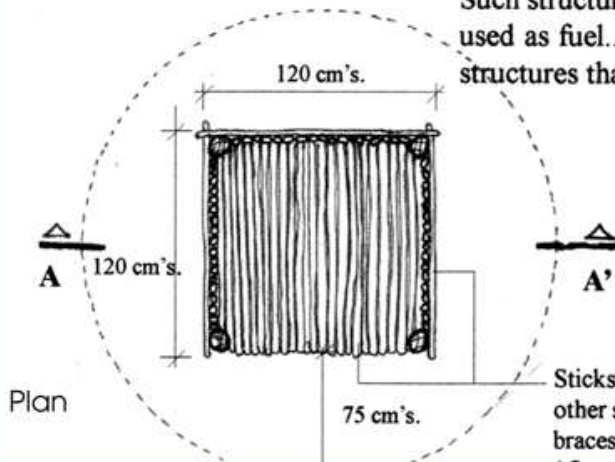
Reflected Ceiling Plan

Split bamboo tied together to profile and curvature indicated.



Such structures witnessed adjacent to houses are used predominantly to store corn and the timber that is used as fuel...these are prime examples of the use of locally available material to generate cost effective structures that are usable and yet aesthetic.

Village: Ambon Block: Sataun

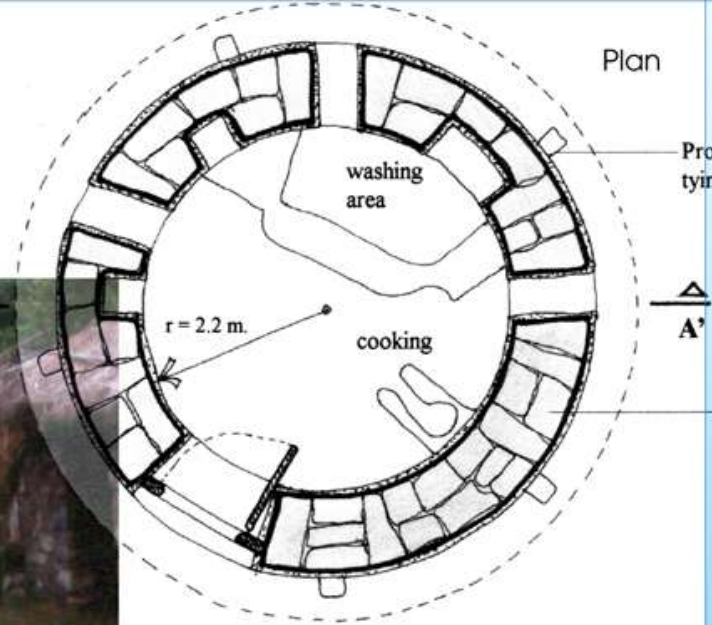


Sticks tied together with other sticks / split bamboo braces to generate walling



ANCILLARY STRUCTURES



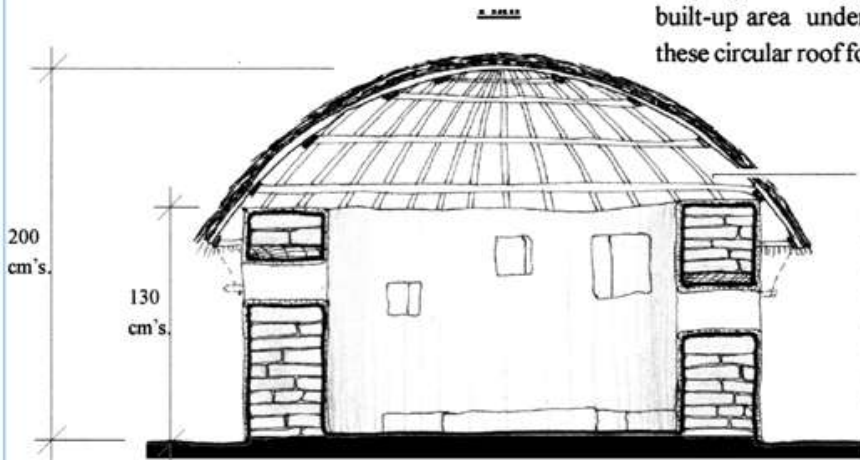


Projecting stones for tying down the roof.

Stacked stone masonry wall 450 thk. with mud plaster both inside and outside.

A distinct deviation in plan form from the regular orthogonal plan typologies of the region...an outcome of adapting an existing roofing system in an unconventional fashion...the circular plan resulting in more possible built-up area under a roof of a particular diameter as opposed to the square timber structures on which these circular roof forms are normally superimposed...refer STRUCTURE FOR STORING CORN / WOOD.

### Village: Ambon Block: Sataun

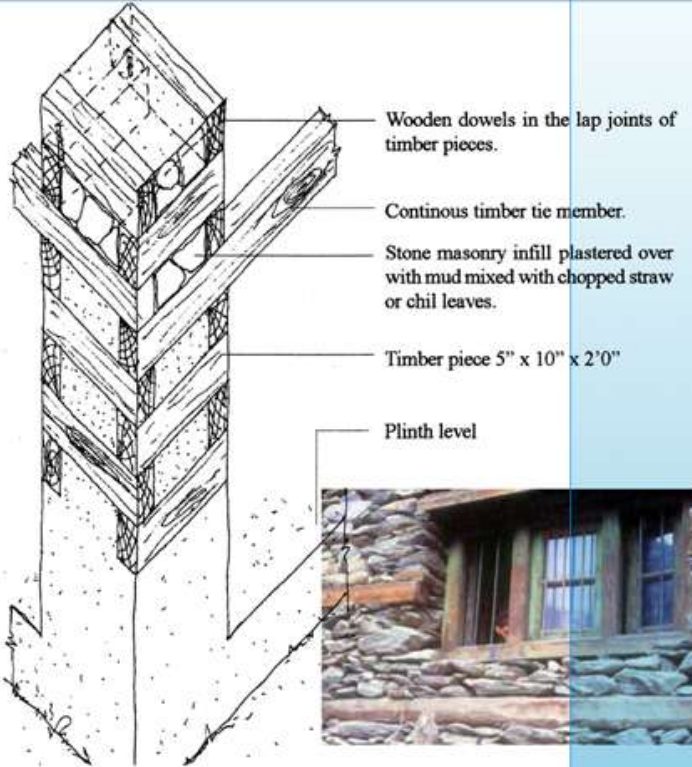
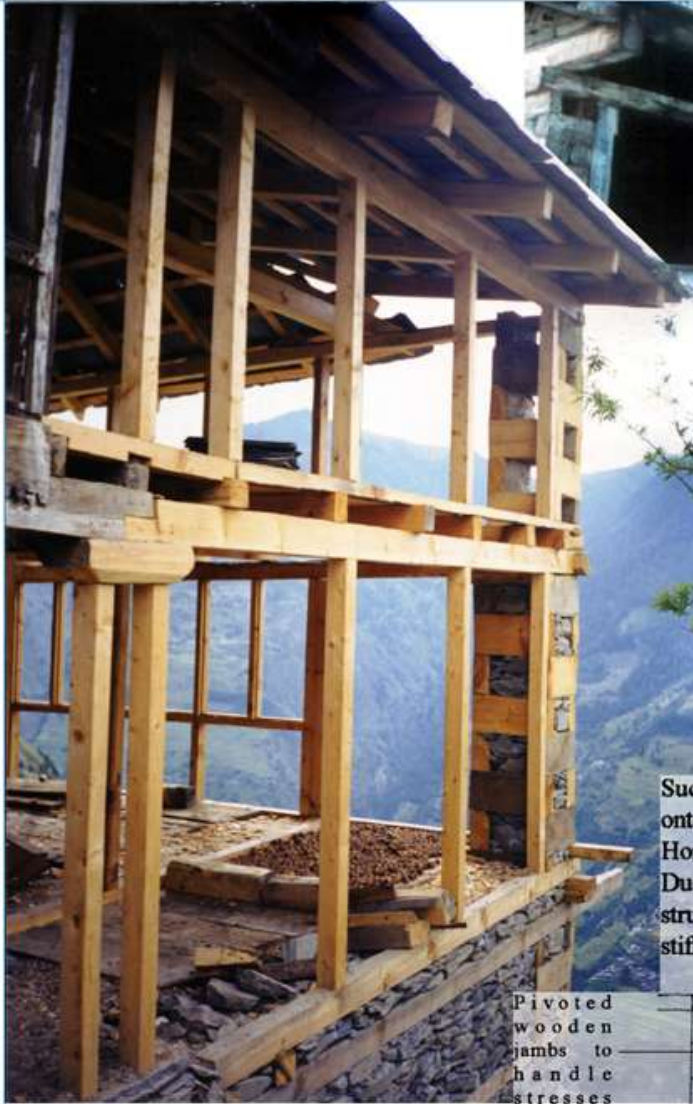


Split bamboo structure covered with 'maljan' - creeper leaves, and finally covered with thatch...tied down with rope to stones projecting from the wall below.

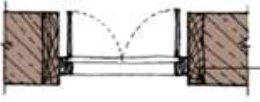


ANGILIARY STRUCTURES

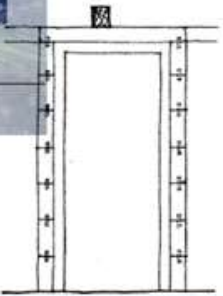




Such details were observed in various areas that are prone to seismic tremors. The structural load is distributed onto a frame that has leeway to vibrate during a tremor...the flexibility being achieved by pivoting the joints. Horizontal bands in timber have also been provided to break up the overall wall height into smaller panels. Due to the unavailability of timber nowadays, it was noticed that little or no importance was being given to structural safety against seismic tremors...though horizontal bands in R.C.C. have been noticed at places but stiffening of corners and jambs is most often neglected.



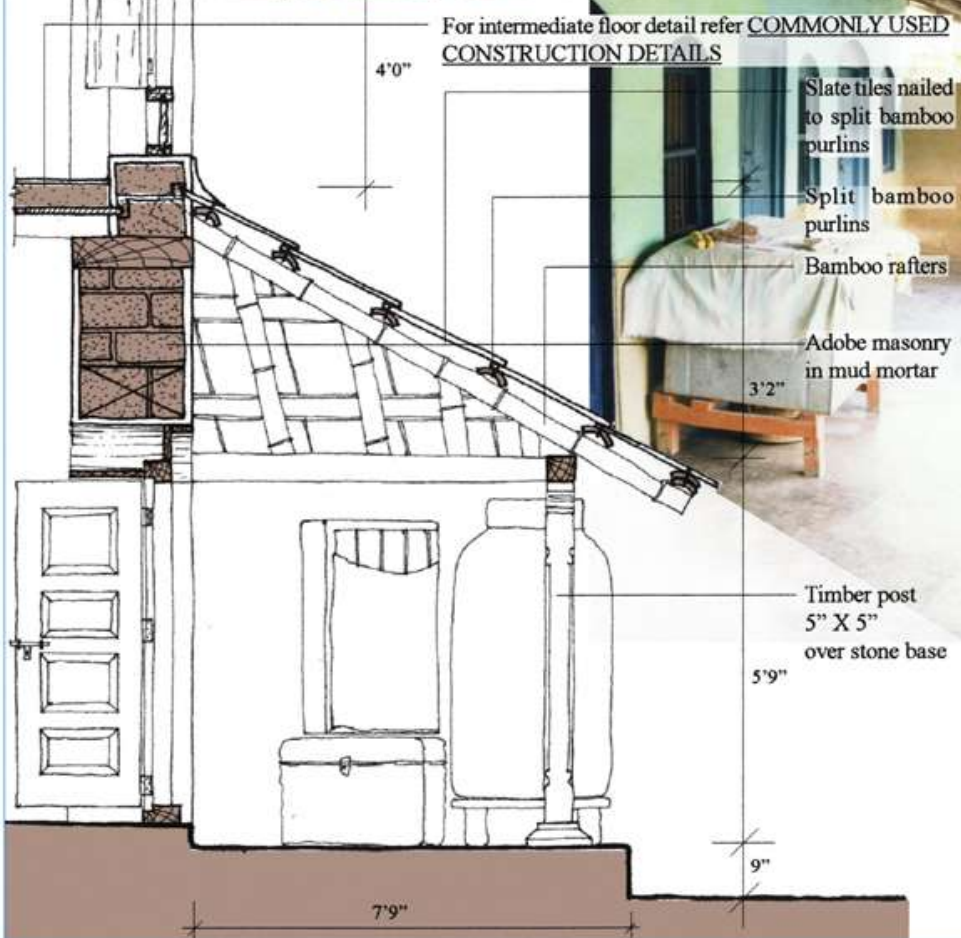
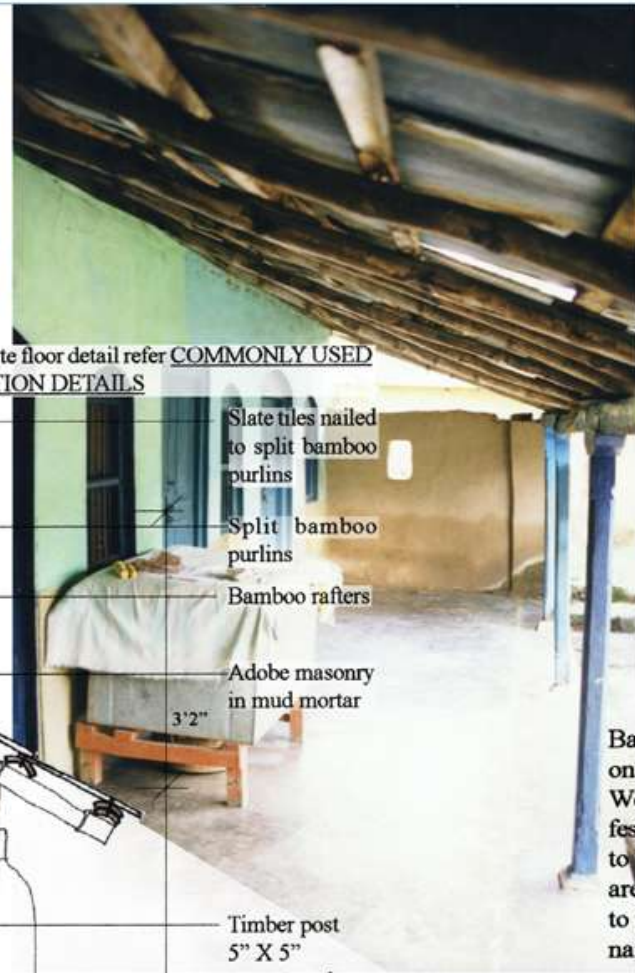
Pivoted wooden jambs to handle stresses induced at openings during seismic tremors.



CONSTRUCTION SYSTEMS



Villages: Nanali/Lamnota Block: Bharmour



Bamboo, locally available, is cut mainly in winter and on specific days of the week...is not cut on Monday, Wednesday and Friday and during the 'panjak' festival...the belief being that such bamboo is more prone to borers and other pests. Freshly cut bamboo purlins are nailed three days before laying of tiles and allowed to dry in position as then the bamboo does not split on nailing neither does it warp on drying.

CONSTRUCTION SYSTEMS

Village: Changreta Block: Sihunta



## TECHNOLOGY OPTIONS

Item of work	Option explored	Criteria for selection	Evaluation
Foundation	1. Dry stone masonry	A,B,C,D,E,H	1
	2. Random rubble in mud mortar	A,B,C,D,E,F,H	1
	3. Stabilized mud block	A,C,D,E,H	2
	4. Brick masonry in cement mortar	A,B,D,E,F,K	3
Walls	1. Dry stone masonry.	A,B,C,D,E,G,H,I	1
	2. Random rubble in mud mortar.	A,B,C,D,E,G,H,I	1
	3. Dressed stone in cement mortar.	A,B,D,E,F,G,I,K	3
	4. Dressed stone in mud mortar.	A,B,D,E,F,G,H,I	2
	5. Brick work in cement mortar.	A,B,D,F,F,G,H,I,K	4
	6. Rat-trap bond exposed brick work in cement mortar.	A,C,D,E,F,G,H,I	2
	7. Split bamboo mat with timber/ ferrocement bracing as partition walls.	A,C,E,F,G,H,I	2
	8. Local mud walls with mud plaster.	A,B,C,F,G,H,I	4
	9. / DOBE walls in cement/ mud mortar with water proof mud plaster.	A,B,C,D,E,F,G,H,I	1
Ground Floor	1. Neat cement plastered flooring on brickbat / coarse stone aggregate under floor.	A,B,D,E	2
	2. Cement spread reinforced mud flooring on local wooden planks/ structural bamboo under structure.	A,B,C,D,E,G,I	1
	3. Marble chips/ Terrazo flooring over brick bats under floor.	D,E,I,K	4
	4. Local slate/stone tile flooring on stone under floor.	A,B,D,E,G,H,I,K	3
Intermediate floor	1. Local stone/ stone tile flooring over RCC / Filler slabs.	D,E,G,I,K	3
	2. Marble chips/ Terrazo flooring over slabs.	D,E,I,K	5
	3. Neat cement plastered flooring over filler slabs.	C,D,E,G,H,I	2
	4. Neat cement plastered flooring over local thatch filled brick jack arch under floor.	C,D,E,G,H,I	2
	5. Neat cement finish over pre cast concrete tiles with steel joist under floor.	B,C,D,E,I	2

### \* CRITERIA FOR SELECTION

- |                                     |                                 |                                       |
|-------------------------------------|---------------------------------|---------------------------------------|
| <b>A</b> locally available          | <b>E</b> Durable                | <b>I</b> Aesthetically pleasing       |
| <b>B</b> acceptable level of skill. | <b>F</b> Earth quake resistant. | <b>J</b> Unavailable material at site |
| <b>C</b> Lowest/ affordable.        | <b>G</b> Climate friendly       | <b>K</b> Expensive                    |
| <b>D</b> Low maintenance            | <b>H</b> Eco- friendly          | <b>L</b> Environmental hazard         |

### # EVALUATION

1. Highly acceptable
2. Acceptable
3. Acceptable but expensive
4. Not desirable
5. Avoid

## TECHNOLOGY OPTIONS

Roof	a. Slate tile roofing on bamboo under structure.	A,B,E,G,H,I	2
	b. Slate roofing tile fixed on timber understructure.	A,B,E,G,H,I,K	3
	c. Improved local thatch roofing over bamboo under structure.	A,B,C,G,H,I	2
	d. RC filler slab roofing ( bamboo as filler).	C,D,E,G,H,I	1
	e. GI corrugated sheet roofing on timber/ steel angle under structure.	A, C,D	2
	f. Asbestos cement sheet roofing on bamboo/steel/timber under structure.	C,D,G,I,L	5
	g. Micro concrete roofing tile over bamboo understructure.	C,D,E,G,H,I,J	1
Openings	a. Arched opening.	A,B,C,D,E,I	1
	b. Reinforced concrete lintel opening.	A,B,D,E,I,K	4
	c. Brick/ stone Jali opening.	A,C,D,E,I	2
	d. Stone Patti/ Ferro-cement/ R.B lintel 3'-4' wide openings.	C,D,E,I	2
Window	e. Open with reinforcing bars as security grill.	A,B,C,D,E,H,I	2
	f. Frame less pivoted steel glazed/ local timber plank single shutter.	A,B,C,D,E,G,H,I	1
	g. Steel angle arched window with multiple glazed shutters for large openings.	D,E,G,I	3
	h. Moderate size window with timber frame & partially glazed timber shutters.	A,B,D,E,G,I,K	4
	i. Ferro-cement frame & shutter window .	C,D,E,G,I	2
	Door	a. Ferro-cement frame & shutter door.	C,D,E,G,I
b. Pressed steel frame with painted block board shutter.		D,E,G,I,J	4
c. Mild steel grill door.		A,B,D,E,I,K	3
d. Local timber frame & plank shutter door.		A,B,D,E,G,I,K	4
e. Split bamboo panels with steel angle frame.		C,D,E,G,H,I	2

### \* CRITERIA FOR SELECTION

- |                                     |                                 |                                       |
|-------------------------------------|---------------------------------|---------------------------------------|
| <b>A</b> locally available          | <b>E</b> Durable                | <b>I</b> Aesthetically pleasing       |
| <b>B</b> acceptable level of skill. | <b>F</b> Earth quake resistant. | <b>J</b> Unavailable material at site |
| <b>C</b> Lowest/ affordable.        | <b>G</b> Climate friendly       | <b>K</b> Expensive                    |
| <b>D</b> Low maintenance            | <b>H</b> Eco- friendly          | <b>L</b> Environmental hazard         |

### # EVALUATION

1. Highly acceptable
2. Acceptable
3. Acceptable but expensive
4. Not desirable
5. Avoid



आप के अनुभव

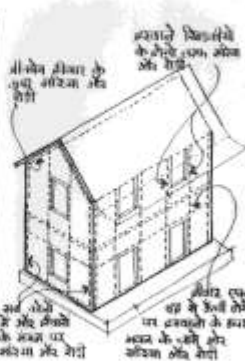
## भूकंप और भवन निर्माण

हमारे सुझाव

कहने लगते हैं कि भवन के नीचे पर भूकंप से बचाने के लिए भूकंप प्रतिरोधी भवन का निर्माण करना चाहिए। भूकंप प्रतिरोधी भवन का निर्माण करने के लिए भूकंप प्रतिरोधी भवन का निर्माण करना चाहिए। भूकंप प्रतिरोधी भवन का निर्माण करने के लिए भूकंप प्रतिरोधी भवन का निर्माण करना चाहिए।



कल का मकान



आज का मकान

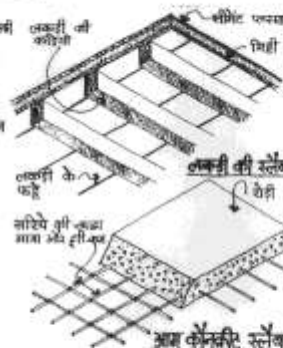
जिनकी कीमत बढ़ती है कि रोटी और सिरिया मिल कर भूकंप से भवन को उताने की प्रवृत्ति रखती है। जिनकी कीमत बढ़ती है कि रोटी और सिरिया मिल कर भूकंप से भवन को उताने की प्रवृत्ति रखती है। जिनकी कीमत बढ़ती है कि रोटी और सिरिया मिल कर भूकंप से भवन को उताने की प्रवृत्ति रखती है।

आप के अनुभव

## स्लैब का आकार ... किस प्रकार ?

हमारे सुझाव

लकड़ी की खंभों और खंभों के बीच बंधन को उतारने के लिए स्लैब का निर्माण करना चाहिए।



रोटी के खंभों के बीच स्लैब का निर्माण करना चाहिए।

भवन के खंभों पर स्लैब का निर्माण करना चाहिए।



लकड़ी की खंभों पर स्लैब का निर्माण करना चाहिए।

लकड़ी की खंभों पर स्लैब का निर्माण करना चाहिए।

लकड़ी की खंभों पर स्लैब का निर्माण करना चाहिए।

आप के अनुभव

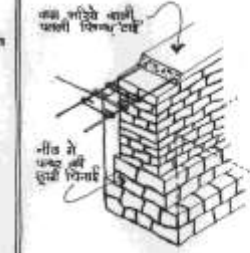
## लिन्य बीस कैसे...?

हमारे सुझाव

हम ने यह देखा है कि पत्थर के बीच में लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए।



लिन्य बीस का उपयोग करना चाहिए



लिन्य बीस का उपयोग करना चाहिए

लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए। लिन्य बीस का उपयोग करना चाहिए।

आप के अनुभव

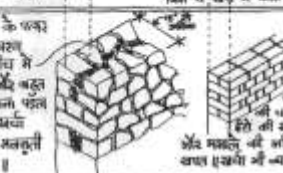
## दीवार की परिभाषा

हमारे सुझाव

दीवार की परिभाषा



दीवार की परिभाषा



दीवार की परिभाषा

दीवार की परिभाषा



दीवार की परिभाषा

दीवार की परिभाषा

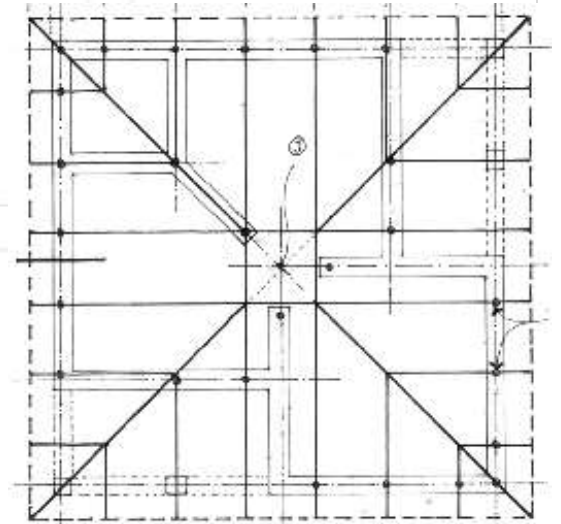
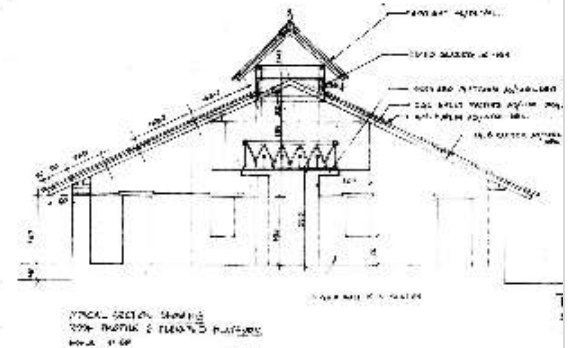
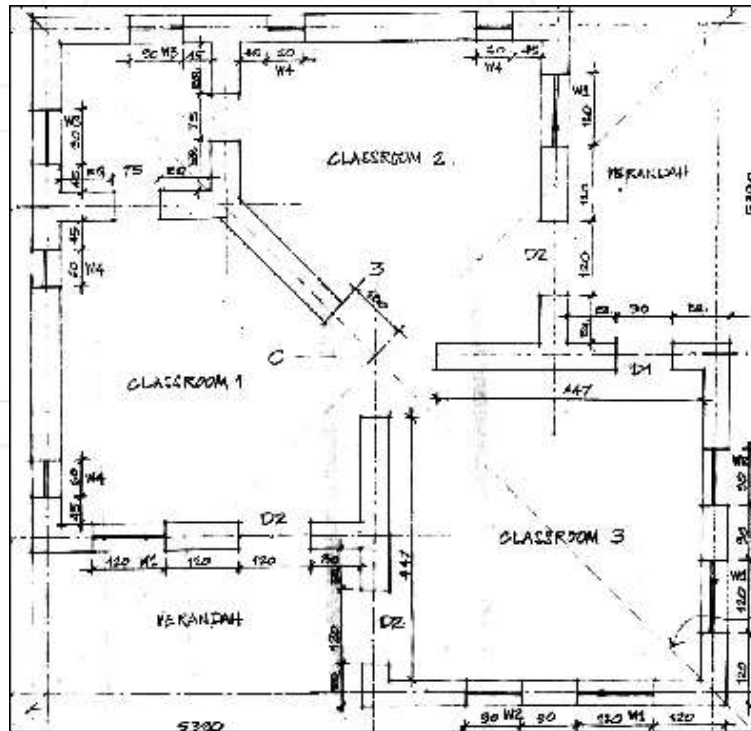
दीवार की परिभाषा

दीवार की परिभाषा



## KAMAND

The design for Kamand school was inspired by the temple in the village







## Building Systems



# Building Systems



## Community Interface

The community is involved at all levels of decision making from the initial design scheme to layout at site, specifications and construction systems. Valuable expertise, ideas and suggestions are shared and mutually agreed upon. In most cases the success of the project depends on the degree of community motivation for the project. Galiyana and Kamand in Kullu, Ambon and Behral in Sirmour, Balana in Chamba are shining examples of community in the forefront of active participation



DEVELOPMENT OF TRADITIONAL CORE

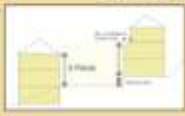
Maximum permissible height



Building strategy & steps



Relationship with the street



Greater connectivity, aspirations for a 'pukka' house and tourist demands of luxury and comfort is rapidly transforming the traditional vernacular unique to Kalpa to the generic universality of the urban/ cities



How development with Kalpa differs from the...



While the spectacular natural setting in which Kalpa is situated, the architectural richness presented by the village contributes to the experiential variety and attraction that are cherished by every visitor to Kalpa. However, greater connectivity of the place, increased tourist activity and the differential functional role played by the village, is rapidly transforming the look and feel of Kalpa. The traditional vernacular buildings unique to this region are being replaced by buildings in 'modern' urban materials akin to the plain. This pattern of change, as one head reflects the new economic dynamism of the place and its inhabitants, while at the other corner interconnected concerns related to environmental threats and pressure on scarce infrastructures, erosion of heritage, and alteration of the scenic quality of the setting.

Under the current forces of change and development trend the future development path for Kalpa needs to be formulated that is at once sustainable as well as rooted to the identity and spirit of Kalpa within the wider region of Kinnaur in order to achieve this, the development guidelines should address three key issues: a) conservation and preservation of vernacular heritage b) appropriate direction to current travelling period of modernisation as seen in new buildings as well as renewal of existing buildings, and c) controlled development of new growth areas.

Connection with a 'pukka' house: the demand for a more 'pukka' house

There is a growing desire to own a 'pukka' building in a town. The non-availability of local building materials like stone, timber, etc. did not deter the relatively cheaper and readily available 'modern' urban materials like CGI sheets, steel, cement, glass, brick, etc. have triggered the shift. Changing aspirations towards urban lifestyles, tourist demands of luxury and comfort, lesser time available for direct engagement in construction, rising labour cost for vernacular construction and other such factors have accelerated the push towards change.



Significant growth in construction of 'pukka' houses of local building cost and collective wisdom, and increasingly towards local climate and nature have of started raising their uncomfortable presence in this spectrum of transformations in Kalpa. Larger contemporary materials, unlike the renewed traditional building both readily empower the natural environment as well as cause greater visual impact thereby altering the experience of both the settlement as well as the natural environment. The transformation in experience is more pronounced with respect to a) Building volume and b) Character or locale inherent.

It may not be possible to regenerate the vernacular in its totality but it is imperative to develop some continuity. Through a connection between the local and the contemporary a distinctness of expression at the settlement and the unit level can be

New vernacular building development: the shift



The physical disposition of the built form of Kalpa at present exhibits an emerging poly-modal structure. While the traditional core along with the traditional core have the two significant axes of the settlement, subsequent cluster based development within the growing corridor in the peripheral areas are forming smaller nodes of varying densities. The trend of spatial spread, that marks a shift from the traditional pattern of compact development reflected in the older village core area, poses a significant concern for unsustainable future growth in ecologically sensitive areas.

Revised role of traditional tower in built form: the tower

The identity of Kalpa, apart of the whole of Kinnaur, lies in its unique characteristics of built and cultural heritage within the mesmerizing setting of the mid Himalayan region. The highly refined and evolved heritage of built form, construction principles, architectural vocabulary and embellishments, that signify the place is now under change due to current forces of modernisation. This is resulting, seriously in erosion of traditional vernacular architectural heritage that Kalpa signifies. But also in the increasing loss of legibility through the splintering of the efficacy of landmarks and focal points diminishes and the entire settlement becomes unrecognizable of which, new construction alien to the place.



The question then arises, how can the built heritage of Kalpa be repaired and strengthened?

- Buildings of institutional heritage (temple complex, monastery etc.) and domestic heritage (old residential buildings with traditional flat roofs and sloping stone roof) should be identified. Detailed inventory should be carried out to establish the historic damage of the settlement through historical field findings, excavations, fittings etc.
- Heritage precincts - the temple complex and monastery should be identified as special areas of controlled development areas with detailed guidelines for its conservation.
- New development in the heritage precinct should incorporate related stylistic components as per the existing vocabulary of building elements and architectural details.

DEVELOPMENT ALONG ROADSIDE



One of the most visible signs of change in rural areas across the state, if HP has been the domination of local/region specific vernacular architecture of the Himalayas to the 'Pukka' construction of RCC walls, bricks and cement based on urban models of the plains. Kalpa also epitomizes this shift in almost all its new development as well as in the renewal of existing building stock. The non-availability of local building materials like stone, timber, slate and mud against the relatively cheaper and readily available 'modern' urban materials like CGI sheets, steel, cement, glass, brick, etc. have triggered the shift. Changing aspirations towards urban lifestyles, tourist demands of luxury and comfort, lesser time available for direct engagement in construction and other such factors have accelerated the push towards change. Connected issues of the loss of identity and continuity, significant



Through participative dialogues with modern communities, seasonal tourists, governing bodies, professional experts and others, a shared understanding of the prevailing status of built environment and heritage of Kalpa needs to be formulated. Such an understanding could then provide the collective platform of envisioning a future development path for Kalpa that is at once sustainable as well as rooted to the identity and spirit of Kalpa within

Feedback





The settlement layout today exhibits centres of differentiated functions - be it religious, administrative, institutional or mixed. These centres become focal areas or magnets around which the social, cultural economic and recreational life of the villagers and visitors revolve. While some of the centres like the core and the administrative complex have stabilized over time, other emerging centres like tourism and educational nodes, signify new patterns of concentration. The distributions of old and new centres along with their linkages form the potential structure of the future development pattern of Kalpa as it grows over time.

**Tourism based nodes**  
 presently located along Right Road edge from a discontinuous road edge adding new urban visuals to the erstwhile rural landscape. There is an increasing tendency for such development pattern to grow half continuous wall like development if not controlled. Therefore, development along both sides of the road should be intermittent with no buildings or structures other to ensure natural lighting, views of the natural landscape, etc for each property.

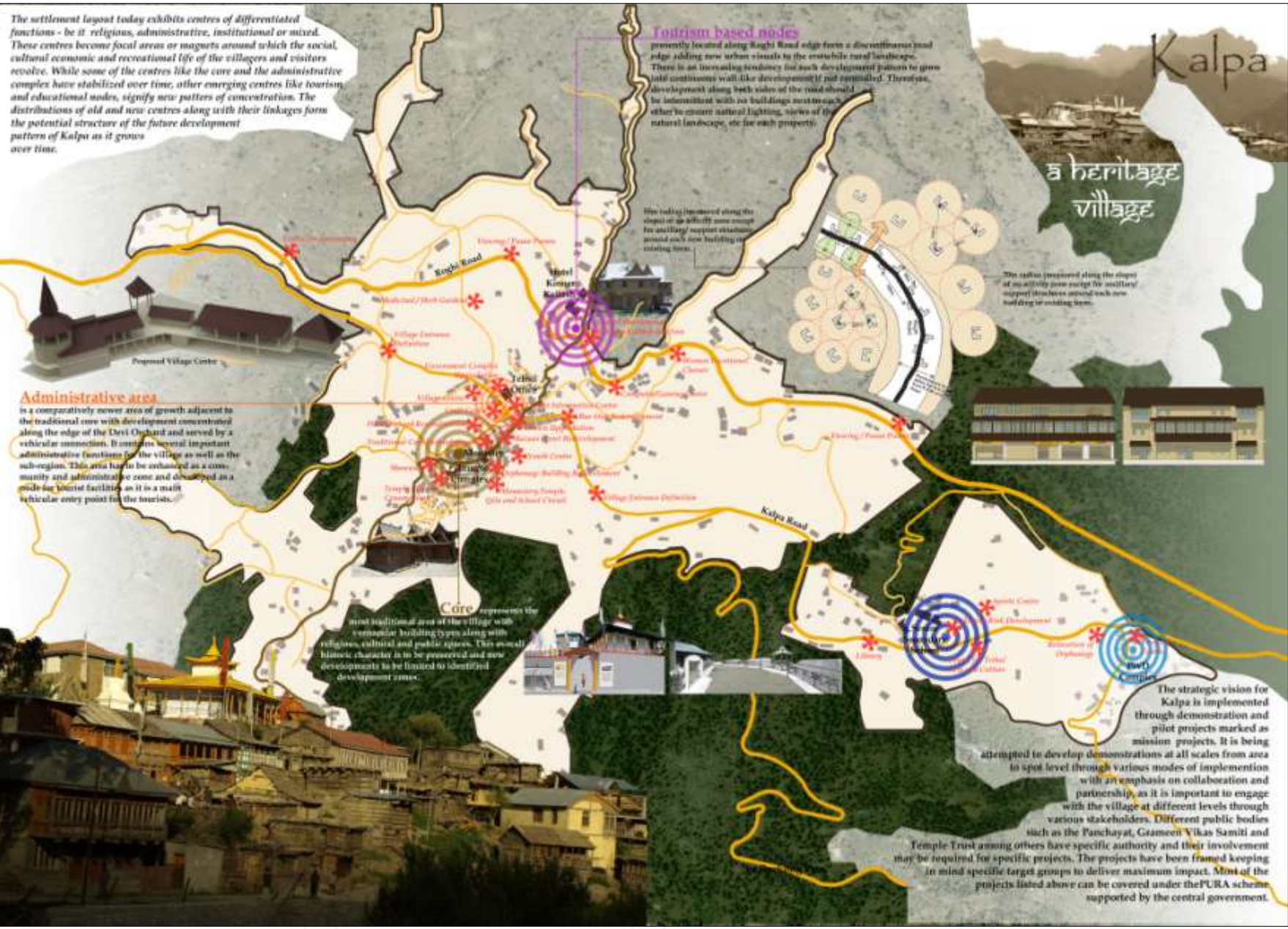
The building measured along the slope of an activity zone except for auxiliary support structures around each new building the existing form.

The pattern measured along the slope of an activity zone except for auxiliary support structures around each new building along to existing form.

**Administrative area**  
 is a comparatively newer area of growth adjacent to the traditional core with development concentrated along the edge of the Devi Orchard and served by a vehicular connection. It contains several important administrative functions for the village as well as the sub-region. This area has to be enhanced as a community and administrative zone and developed as a node for tourist facilities as it is a main vehicular entry point for the tourists.

**Core** represents the most traditional area of the village with vernacular building types along with religious, cultural and public spaces. This small historic character is to be preserved and new developments to be limited to identified development zones.

The strategic vision for Kalpa is implemented through demonstration and pilot projects marked as mission projects. It is being attempted to develop demonstrations at all scales from area to spot level through various modes of implementation with an emphasis on collaboration and partnership, as it is important to engage with the village at different levels through various stakeholders. Different public bodies such as the Panchayat, Gramteen Vikas Samiti and Temple Trust among others have specific authority and their involvement may be required for specific projects. The projects have been framed keeping in mind specific target groups to deliver maximum impact. Most of the projects listed above can be covered under the PURA scheme supported by the central government.



Kalpa

अ हरीनाथ  
 वीलाथ



## Arenas of collaboration for building technology sharing and co-development – ongoing and proposed

Remote Himalayan villages existing in fragile ecological settings undergoing rapid forces of transformation need an interdisciplinary set of inputs to the range of attributes inherent in these settlements.

ASPECTS	TECHNICAL INPUTS	PROJECTED OUTPUTS
Resource mapping	Survey and documentation	Capturing ground reality, resources and heritage
Design response	Architectural design	Contextual and functional response, identity and continuity
Building Safety	Structural engineering	Addressing hill area constraints, earthquake and disaster mitigation
Infrastructure	Building services	Alternative systems and site specific retrofitting strategies
Resource optimization	Energy Management	Appropriate building – energy synergies
Nature response	Landscaping & Environmental design	Nature-sensitive development models, environmental management plan, codes and guidelines
Craft Base	Product design	Strengthening craft base and integration with design and industry
Policy formulation	Planning and policy	Formulating strategies, regulatory framework, incentives and sanctions

**Government of Himachal Pradesh**  
Departments of:  
Environment  
Urban development  
Town and country planning  
Language, art and culture  
Tourism  
Tribal Welfare  
Rural development  
Transport

Collaborative partnership

Urban Resource Group

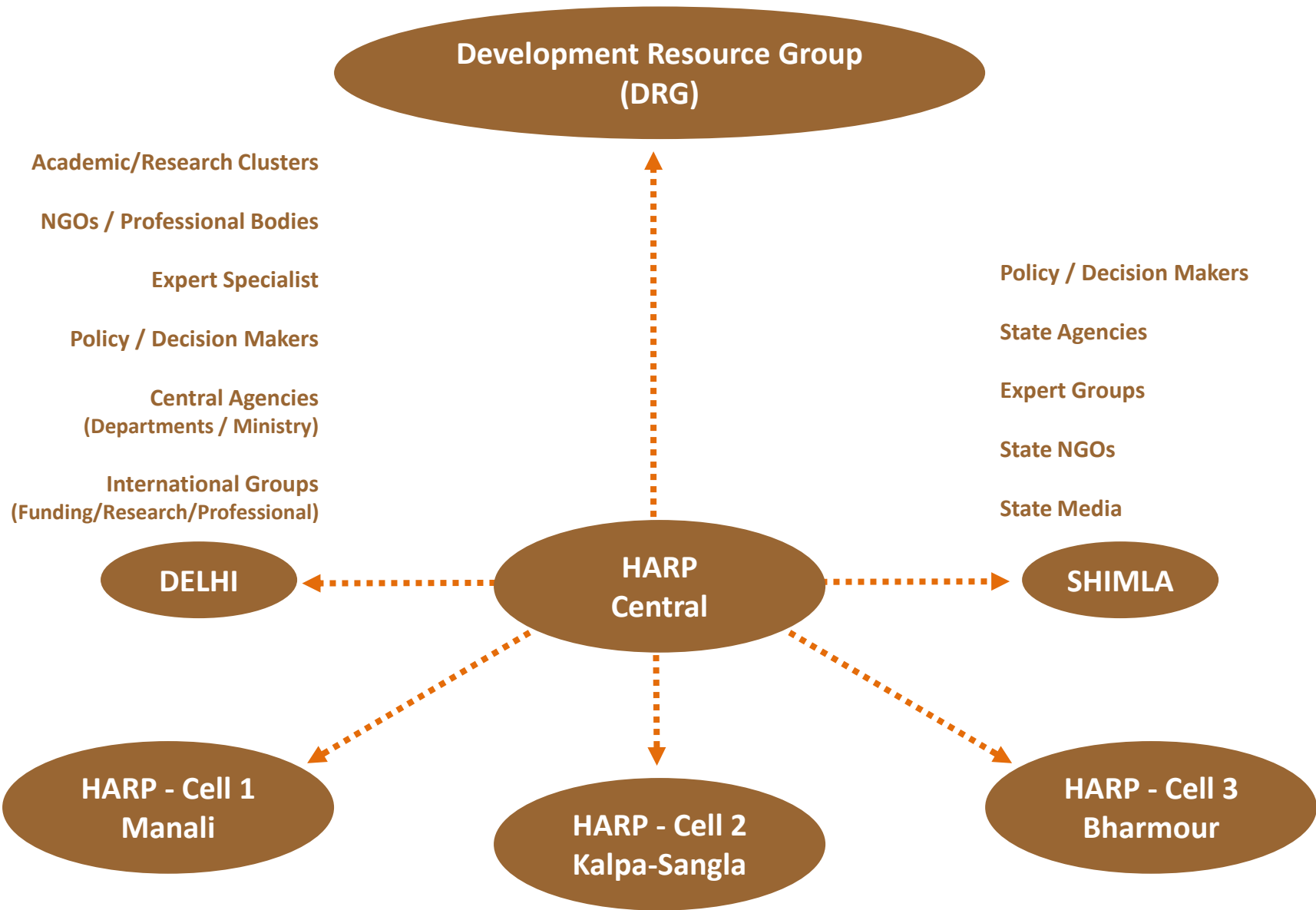
- Resource mapping and management
- Developing Vernacular Options
- Community Interface and Outreach
- Capacity Building

School of Planning and Architecture

- Regional tourism, environmental and infrastructure plan
- Integrated Hill town Development Models
- Conservation Strategies
- Capacity Building

Institute of Urban Designers India

- 3-dimensional Urban design inputs at all planning levels
- Sectoral Schemes and Demonstration projects
- Sustainable built form typologies
- Capacity Building



Thank you

