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**Hierarchy of Open Space and Social change in Traditional
Town: *A Case of Chapagaon***

by:

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DEGREE OF
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The under signed certify that they have read, and recommended to the Institute of Engineering for acceptance, a thesis entitled “**Hierarchy of Open Spaces and Social Change in Traditional Town, A Case of Chapagaon**” submitted by **Sanjaya Maharjan** (074/MsUrP/016) in partial fulfillment of academic requirement towards the completion of **Master of Science in Urban Planning**.

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Abstract

The cities are planned with interplay of mass and space. Mass represents the built structures like Palaces, Temples, Buildings and other Social Built infrastructures whereas the space represents the open spaces like streets, community, religious and cultural nodes. Cities have been in a continuous transitional state since their evolution. Open spaces are a basic type of land use along with residential, commercial, industrial, transportation etc. The open space is interspersed with the built environment and assumes different shapes and sizes. Open spaces have always formed an integral part of the settlement planning of Kathmandu Valley in Nepal. These have been inbuilt in the form of public and private Courtyards, *Chowks*, *Pati's* and Water ponds in core settlement area.

Here, the research topic entitled “Hierarchy of open spaces and social change in Traditional Town, *A Case of Chapagaon*” has studied different hierarchy of open spaces and social change within passage of time within the study area, Chapagaon. It has further studied traditional town planning principles, existing situations and problems and review government policy for the public open spaces and develop recommendations that promotes, protects and inclusion of such spaces in city planning.

The literature review has been done regarding the topics related to research title. The physical structure, social aspects and culture aspects has been studied regarding the urban morphology of traditional town. The literature study has been conducted on different public open spaces like residential squares, community squares and palace squares for insight understanding of research topic along with the new planning policies and basic activities performed in public open spaces.

As the research topic is assumed to be interpretivist/ constructivist paradigm, the research has been done using qualitative methodology for data collection and analysis. The data collection tools like, semi-structured interview, direct on-site observation, Focus Group Discussions with stakeholders and review of available policy documents, has been adopted to explore the condition of social transformation happening in Chapagaon.

The findings are discussed among the stakeholders for their opinion and are reviewed so as to answer the research question developed during the research to enhance the usage of community spaces particularly in traditional town.

Key words: Social Transformation, Traditional Town, Urban Morphology, Open Spaces.

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CHAPTER ONE: INTRODUCTION

1.1 Background

The cities are planned with interplay of mass and space. Mass represents the built structures like Palaces, Temples, Buildings and other Social Built infrastructures whereas the space represents the open spaces like streets, community, religious and cultural nodes. Cities have been in a continuous transitional state since their evolution. Over past century, urban environment around the globe have witness significant level of transformation. Kathmandu Valley, the cultural, economic and political center of Nepal has not been immune to the global force of urban change (Chitrakar R. , 2016). It can be observed that; the contemporary urban growth has had a considerable impact on residential environment of new neighborhoods in Kathmandu Valley. The new neighborhoods exhibit a low-density urban sprawl in their physical form, which is in a sharp contrast with the compact and dense settlements of the traditional towns. In addition to the morphological changes, a host of socio - demographic changes can also be observed in the valley's new neighborhoods.

The changing provision and use of community space or neighborhood public space is another important feature of the present transformation of urban environment in Kathmandu Valley, which has its root in the morphological and social changes of the new neighborhoods. Scholars argue that the rapid and uncontrolled urban growth over the past decades has led to the loss of neighborhood public space, resulting in a low provision of communal meeting areas (Chitrakar R. , 2016). However, the case is not different to traditional cities, that are densely settled. The use of open community spaces in traditional cities are in transition too.

Open spaces are a basic type of land use along with residential, commercial, industrial, transportation etc. Other than open space, the rest are given due importance for progress and it is neglected because it caters to natural, recreational and cultural needs that are intangible. However, planning may help in conserving open space, while in existing towns or settlements effective management of open spaces, as it offers places for the social, cultural, religious and recreational activities for the community.

Open space is too precious ingredient for healthy urban living which are to be sacrificed at present context so as to satisfy the greed of real estate promoters or any other hijackers of public property. The significance of open space is not only its extent but how it is arranged in relation to built-environment. The open space is interspersed with the built environment and assumes different shapes and sizes. It depends on two factors. On the one hand, we have spiraling land values, increasing economic activities and population density that compel the community to limit open space and on the other with increasing densities the communities also need more open space. The benefits from, and the value of urban open space differs with different economic classes of urban population. For example, the high-income residents who generally live-in low-density areas, where the need for large open public space is less and for the low-income group that lives in high density areas, their requirements for such common open space are more.

The quality of life expressively depends on degree of open spaces available. They facilitate wide provision for social interactions among people of different age, gender, ethnicity, culture, status and social background. Open spaces have always formed an integral part of the settlement planning of Kathmandu Valley in Nepal. These have been inbuilt in the form of public and private Courtyards, *Chowks*, *Pati's* and Water ponds in core settlement area. These open spaces have been used not only for performing the personal daily activities but are also commonly used as an area for celebrations and festivals as well as other social events year-round. Open spaces played a significant role in the traditional planning practices where housing was densely planned for security purposes and preserving the agricultural land, the basis of subsistence in the agriculture-based society. Thus, open spaces have been and still are important elements in the traditional settlements of the Kathmandu Valley. Additionally, the open spaces were important from a disaster risk reduction point of view: the locals use them for shelter during earthquakes.

As we know, social change is an inevitable factor. Every society tends to change with time from demographic, economic, cultural, environmental and political aspects. Social transformation refers to the process of the change in institutionalized relationship, norms, values and hierarchies over time. It is the manner in which society change due to economic growth, science, technological innovation and war or political upheavals (Worldatlas,

2019). However, in case of traditional towns, economic growth/ shift seems to be primary aspect for the social transformation. The primary economic activities, agrarian culture has been shifted to trade and commerce due to overwhelming concept of forces of urbanization, understanding as an economic development, hence deteriorating the traditional urban morphology and fabrics in traditional towns. Urbanization has created a market of non-farm job opportunities which has attracted agricultural labor to move from agrarian employment into urban employment.

1.2 Need and Importance of Research

The research area *Chapagaon* lies in *Godawori* Municipality ward number 11, of Lalitpur district. It is located at a distance of about 9 kms south from *Lagankhel*, connected by *Kantilok* path. It is a traditional town believed to have been founded in 6th century according to the inscriptions available.

Availability of open space, distribution and accessibility are major concerns for cities. Open spaces are a necessity and not a luxury. The conscious provision of open space is an integral part of modern town planning. Although most town and cities have occupied the same location for centuries, (i.e. traditional towns) the buildings and other infrastructure which comprise the built environment are not fixed but affected continuously by the dynamic forces of change. Public open space is necessary to retain urban quality. Open space planners seek to ensure this through open space type and its distribution pattern that have assigned use for recreation. However, the variations between the actual and intended use of open space and imbalances in their distribution, suggests need for evaluating the ground realities that influence open space distribution and use. Today, the rapidity of urban development and increase in the population of cities puts open space under tremendous pressure. Therefore, the anticipation and identification of the basic principles of change that open space undergo is essential for professionals to intervene effectively (Rao, 2003). Both policy and science now emphasize the critical necessity of green areas within urban social-ecological systems.

Now these open spaces are deteriorating and lack proper management. The influence of modern culture i.e. change in social behavior has brought considerable change in the usage

pattern of public space. Activities that were once performed in public have been confined into the residences, with people focused on more individualistic activities than communal. The public spaces that in the past were well taken care off, have slowly started collapsing. Maintenance of such spaces were earlier carried by the community or *Guthis*. At present maintenance of such infrastructure on a municipal level is ineffective and lacking. The public spaces are rapidly deteriorating and are encroached by infrastructure development activities like road extension and other uses (such as vehicle parking for nearby commercial purpose, local vending) are encroaching on their space.

Chapagaon is the market center for southern Lalitpur and it has been since long decade. The primary occupation of people has changed to trade and commerce from agriculture. Most people are engaged in trade and commerce. The *Chapagaon* serves as market center for most of the settlements from southern districts like, *Bulu*, *Pyanggaun*, *Jharawarasi*, *Tahakhel*, *Chhampi*, *Tika-Bhairav*, *Dalchowki*, *Lele*, *Bhardev* etc. Due to which, this traditional town is economically active. Such social status can be seen in existing built morphology. Most of the traditional buildings are replaced by modern structures.

In comparison to other nearby similar traditional towns, like *Thecho*, *Sunakothi*, *Lubhu*, *Khokana*, *Bulu* etc. *Chapagaon* has undergone much more changes in built environment. In most of other traditional towns homogeneous caste composition of people is found but here in *Chapagaon*, heterogeneous caste composition of people can be seen with different social and economic group. Hence, different hierarchical open spaces can be found with different purposes. And within the passage of time, the use of such spaces has been changed as the traditional towns are also not immune to global forces of change due to urbanization. The impact of social change due urbanization, in this particular town, *Chapagaon* is vibrant as compared to other traditional towns. And the implication of such vibrancy has direct effect on the usage of open community spaces due to change in social behavior. Hence, this research is necessary and important for identification of various changes in the use of different hierarchical open spaces and to develop recommendations that conserves and promotes the protection and inclusion of such public open spaces.

1.3 Problem Statement

The traditional settlements of the Kathmandu are planned with well-organized public open spaces where people interact, conduct daily activities and also functions as cultural space. But at present these spaces are diminishing. The amount of neighborhood open spaces in traditional towns of the Kathmandu Valley averages about 12% of the total housing area (Adhikari, 1998). The loss of public space is hindering the quality of urban life and social well-being. The contemporary public spaces also, appear to be remarkably different from traditional counterpart, as their provision and use are changing acquiring a different meaning. People are deprived of places where, they can meet and interact with neighbors, children's also do not find places to play, the level of social interaction has reduced dramatically, and a sense of the community is deteriorating (Chitrakar R. B., 2014)

The existing or present use of open spaces of traditional town are observed to be used as parking spaces for modern amenities, spaces for local vendor market and some have been abandoned. The transformation of society to vehicular life style have resulted to expansion of roads, hence, leading to the demolition of nearby Temples, Chaityas, Ponds, Pati structures. Traditionally used water spouts and wells for drinking water purpose are in abandoned condition due to pipeline connection for drinking water supply in every household. But initially, these spaces were used as for neighborhood interaction, cultural celebration, feast and festivals, social activities (like teaching and learning to new generation) and so on. These were the civilized urban life of those times.

1.4 Rationale of Study

The urban space such as street, open space, water resources are important component for the healthy city. The traditional towns of Kathmandu Valley are composed of such components. The prosperity and success of these traditional towns is the proof of their existence at present days also. However, these urban components have gone under certain change due to global forces of modernization in developing countries like ours. The sustainable development goals have included sustainable cities and the communities as global goal to achieve by 2030 of the quality of life of residents are determined by the convenience, liveability and safety of the people. As the global community is moving

towards achieving the goal of making cities and human settlements inclusive, safe and resilient and sustainable, the research carried out will be relevant to present context. The research data will be helpful to make policies and programs for providing basic services to the communities, make the society inclusive, and preserve and promote cultural, religious and natural open space and also reducing the vulnerable communities by recommending appropriate planning interventions.

1.5 Purpose of Research

The primary purpose of this research study is to understand the hierarchical distribution of open spaces and social change in traditional town, *Chapagaon* and develop recommendations based on the study that promotes conservation of such spaces as well as protection and inclusion of public open spaces in city planning.

1.5.1 Objectives

The specific objectives of the research are

- a) To study the urban form of traditional town, *Chapagaon*
- b) To study the traditional town planning principles and approaches.
- c) To study traditional town planning bye laws.
- d) To study the existing situation and problems of the public open spaces of *Chapagaon*.
- e) To review existing government policy for the public open spaces.

1.5.2 Research Question

What was the hierarchical structure of open spaces in traditional town and how did it undergo social change with passage of time?

1.6 Validity of Research

Due to increasing in the number of populations, there is an increasing demand for the settlement and the open spaces. However, due to limited supply of land, the settlements are increasing in the outer periphery of traditional towns, but the open spaces are

diminishing. The use value of open spaces is also changing. There has been no such research performed in the such context. And it is also evident that the urban open spaces play important role in achieving sustainable future. Therefore, this research will be helpful for decision making and planning process.

1.7 Scope and Limitation of the study

The scope of study is to understand the urban form of traditional town Chapagaon and identify the hierarchical distribution of open spaces within traditional town Chapagaon. The study shall focus on how these open spaces are changing through time and its changing role due to change in social aspects.

The study has been carried out in traditional city core area of Chapagaon. The study is limited to the open spaces like courtyards, neighbourhood squares, religious, cultural and social nodes accessible to everyone and the change in socio-cultural activities within these squares and nodes. The research is based on the site study, literature review on different documents associated to ancient town planning principles and doctrines, articles and inscription of and regarding the Chapagaon.

CHAPTER TWO: CONCEPTUAL FRAMEWORK OF RESEARCH AND METHODOLOGY

2.1. Conceptual Framework of Research

Today, the characteristic feature of transformation is not only limiting social interaction but also eroding traditional morphology and spatial system. Talking about the urban morphology (physical dimension) seems to be positivist paradigm that is primarily based on the observation. That has been definitely transforming due urbanization trend. However, the research topic, **(Hierarchy of open spaces and social change in Traditional Town, “A Case of Chapagaon”)** to be discussed is within social dimension. The transformation of spatial system, socially constructed reality, is **interpretivist/constructivist** paradigm, the transforming social use/ behavior of different open spaces in traditional town. To make a contrast, the existing/ present use of open spaces of traditional town are observed to be used as parking spaces for modern amenities, spaces for local vendor market and some have been abandoned. Similarly, the traditional fabrics of residential buildings have been changed with modern fabrics. In the pace of urbanization focused on economic and infrastructures development the traditional monuments and infrastructures have been abandoned. The transformation of society to vehicular life style have resulted to expansion of roads, hence, leading to the encroachments of squares or open spaces resulting demolition of nearby Temples, Chaityas, Ponds, Pati structures. Traditionally used water spouts and wells for drinking water purpose are in abandoned condition due to pipeline connection for drinking water supply in every household. This is a socially constructed reality at present, due influence of modern/urban lifestyle. But initially, these spaces were used as for neighborhood interaction, cultural celebration, feast and festivals, social activities (teaching/ learning to new generation) and so on. These were the civilized urban life of those times, socially constructed reality of then. “Constructivists do not generally begin with a theory as with post- positivists, rather they generate or inductively develop a theory of meaning” (Creswell, 2003). So, the research topic makes an **ontological** claim that, **“the traditional towns lost the social dimension of traditional urban life, deteriorating traditional built environment at present”**

Tiwari (2001), Aranha (1991), Levi (1992), Gutschow (2013) agree, Kathmandu has been one of the few cities in the world to retain its medieval urban culture up till 20th century. Religious practices shaped the urban morphology, (like arrangement of houses, temples, stupas and urban spaces) giving city a unique / originality/ nativeness in its physical form and character. Tiwari (2008), Muller (1981) mention that traditional towns exhibit an organic growth over centuries. Certainly, they are not unplanned settlements because, despite absence of wide roads, they are common trait of planned settlements, exhibiting their socio-economic characteristics due to dominant caste-based stratification. The trend of urbanization, transforming the traditional towns have limited the social interaction in their character gives epistemology in research topic.

2.2. Methodology

The relationship between the buildings (public and private), streets and open spaces in traditional towns exhibit functional and social need of population along with an understanding of visual requirements (small houses, large streets and courtyard). Hence, stated paradigm and research question suggest the use of qualitative methodology. So, the research has used quantitative methodology. The data collection tools like, semi-structured and open-ended interview, direct on-site observation, Focus Group Discussions with stakeholders and review of available documents and inscription of and regarding the monuments of Chapagaon has been adopted to explore the condition of social transformation happening in *Chapagaon*.

The following perspective of methodology has been used in this research

a) Phenomenology

The focus of phenomenological inquiry is what people experience in regard to some phenomenon or other and how they interpret those experiences. A phenomenological research study is a study that attempts to understand people's perceptions, perspectives and understandings of a particular situation (or phenomenon).

b) Qualitative Research Approach:

The study approach has been inductive thinking method in which methodology make an observation in the direction of research question. Research epistemological findings hope to lead to a pattern, tentative hypothesis and ultimate to a theory. This theory can be used in similar cases in other satellite cities of Patan, Kathmandu and Bhaktapur.

The methods:

Being a qualitative research, the methods which the research has used are the following:

a. Focal Group Discussions:

There are various groups in terms of gender, age, profession, education, economy and many more. This research design has arranged focal group discussions with the necessary groups.

b. Semi- structured and open-ended interviews

This research has conducted semi- structured interviews with a few key informants. There is a group of youth and the institutions working in the sector of conservation and rehabilitation of traditional monuments and community spaces (water spout, open spaces, pond) in Chapagaon like Lumanti. Some of them has been key informant in semi structured interviews along with the architects and engineers working in the conservation and rehabilitation of community spaces Chapagaon area.

c. Interviews and opinion survey of the stakeholders

This research has conducted interviews and opinion surveys of the corresponding stakeholders from municipality, local bodies, local club and organizations, government offices and NGOs working in the Study area, Chapagaon.

d. Review of policy documents regarding reconstruction/ rehabilitation/ conservation.

The research has reviewed the available policy documents (national or local) as per availability regarding the traditional core settlement area conservation and management, reconstruction/ rehabilitation.

e. Case study:

Case studies proved to be a very supportive methodology in research process. Hence, relevant national and international cases have been identified and a thorough study shall have been made. Inductive thinking logic have been used upon the inferences drawn from the case studies which lead to the confirmation of the research output.

The results so found has been discussed among stakeholders for their opinion and endorsement. The findings will be reviewed and updated according to the feedback and finally the detailed research report will be prepared.

CHAPTER THREE: LITERATURE REVIEW

3.1 The Growth of Urban Form in Kathmandu Valley

The urban form of Kathmandu Valley is result of gradual accretion over different period of cultural and political history from Lichchhavi, Malla or early Shah rather than a product of an isolated planned effort in a particular historical period (Tiwari S. , 1989). Despite the changes in ruling history and their cultural and religious affiliations, Kathmandu Valley Towns developed these remarkable urban forms and spaces over a period lasting more than thousands of years. These towns are characterized by their cultural continuity. The ethnic group responsible for this urbanization are Newars, local residents from long period. The accommodative religious mix of Shivities, Vaisnavities and Buddhist cultural shows the social context in urban growth form. Apart from the human reasons, the tenacity and dynamism of the architectural style and space concepts in themselves results the formation of these wonderful urban spaces.

The psychological result of modern urbanization has often been impersonal, that lack neighborhood social attachment, whereas the traditionally urban ethnic groups demonstrate considerable ease among neighbors and communal life philosophy (Tiwari S. , 1989). According to the Tiwari (1989), in Kathmandu, the extended family also played major role in the development of characteristic urban spaces like private family squares or courts and the neighborhood of the public squares. He also mentions, predominantly agricultural economy with limited crafts and industrial specialization of some outlying villages accentuated the market squares, which with the passages of time also played the role of congregational point for the neighborhood festivities.

The central urban space, the place environ, the Durbar squares has playing the role of the city nation's main festivity square, administrative center and religious center, from very early times. They were the center for political, religious and cultural superiority. These hierarchy set of squares, the palace square, the market square, the public residential square and the private residential square, and their palaces, temples, stone waterspout and the residences together with the streetscape form the total urban essence of the Kathmandu valley (Tiwari S. , 1989).

3.1.1 Contribution of Lichchhavi's

There is very limited archaeological excavation made so far in Kathmandu Valley. Tiwari (1989) also mentions that Lichchhavi township have not yet been found and there can be little doubt that, sizable settlement did exist. Some of these settlement may have taken current shape of township, others may be in ruins in area of current habitation (Tiwari S. , 1989) because most of the stone stele inscriptions of Lichchhavi period (C. 460 AD- 1050 AD) are found in current habitation areas.

King Nimish was the first Lichchhavi king and Lichchhavi is believed to have built his palace in Godavari or Lele (Bhandari, p. 36). However, recorded history starts with Lichchhavi King Mandev (464-491 AD). During that time, there is mention of existing temples or tirthas (Changunarayan). Building activities included many temples (at Lazimpat and Pashupatinath area), royal palace (Mangriha) and some Buddhist Viharas. Though many viharas, palaces (Kailaskut and Bhadradhivas) and temples were built during the later Lichchhavi rule, many of the locations remained a matter of dispute due to lack built archaeological evidences. Tiwari (1989) mentions, according to the stone inscriptions about Kailaskut palace and another one at Narayanchour the palace was built within a major settlement. Even Handigaon inscription indicate, kailaskut palace precinct may have had more than four temples, its enclosure had four gates and the courtyard had a covered walk from the main gate (Mishra, 1973, p. 6) leading up to main building. Even though temples became a major elements of the urban space in the capital city, like in Malla period later, it was not the case of all other villages panchalis and dranga (Tiwari S. , 1989).

The central space of these outlying settlements was occupied by Rajkulas or the buildings used as royal residences periodically (e.g. Dakshin Rajkula somewhere near current Basantapur Durbar) or tax offices (e.g. Bhansar Tole of Chapagaon). Tiwari (1989) mentions there were many settlements where the temples was the central element, which can also be observed in settlements like Bungamati, Deupatan, Bhringara-grama (current Sunakothe), Narashimha grama near Budhanilkantha etc. As time went on, temples gained prime importance in the central spaces of capital city whereas, the outlying settlements continued to polarize around temples and government offices (Tiwari S. , 1989).

Stone water spout system have been the another major Lichchhavi's contribution to the urban form of the Kathmandu Valley. The location of important buildings like palaces, tax office building or settlements are aligned within the periphery of these water spout. Indeed, inscriptions show that these water structures were built outside the palace gates or secretariat tax offices (Tiwari S. , 1989).

Tiwari (1989) further mentions that, very few of these water systems could use river source. So, these elements required construction of ponds as reservoir which in turn look an urban image. The elaborate storage, distribution, filtration and drainage system built for these water systems are marvel technology that they sometimes dwarf the imagination of our trained engineers (cf. the Ratna Park Water Spout and the subway).

Unlike in later Malla period, the ponds and tanks do not appear to be urban elements of urban space as mentioned in inscriptions. Bathing ghats also do not seem to have been built, though some development of confluences of rivers for religious activities did take place (eg. Sankhamul) in Lichchhavi period (Tiwari S. , 1989). As Kirat and early Lichchhavi settlements were mostly limited in lower slopes of outlying mountains of valley, supply of water was not much of a problem. But by the recorded Lichchhavi period starts, most urban settlements had moved to ridges or other higher lands. They not only moved away from water sources but also had towns located at places with very low subsurface water level, which led to 'the creation of Dhara,' the stone water conduit. These dharas are depressed rectilinear pit with a flat floor with more or more stone water spout. The system of water supply to urban area is the major contribution in those periods. Tiwari (1989) also mentions the use of Kupanjaladrawantika (a well and water conduit) system in which a well was dug for reservoir function, mostly in areas where the water table has been depressed.

The nature of urban services available for public in Lichchhavi period had been studied in inscription at Lele, dating back to 604 A.D, just preceding the time of Kaliaskut Palace (Regmi, p. 65). The stele mentions about the land grants provided for the various organization in the village and these are Arogyashala (Home for recovery Health), Paniyasala (probably body for water supply), Pradeepa Gosthikas (body for lighting maintenance), Malla Yuddha Gausthika (troupe of wrestlers) and Pranali Gausthika (body

looking for canals). By the time of rule of King Gunakamadeva, late 9th century A.D. the city of Kathmandu had grown into 1800 houses, many festivities had started including those linked with Machhendranath, Lakhe Jatra, Krishna Jatra etc. Many shakti temples such as Raktakali, kankeswori and Lumadi waere also established (Tiwari S. , 1989).

3.1.2 Contributions of Malla's

By 1200 AD the Malla had firmly established itself in the Kathmandu Valley. They consolidated the cultural gains of the Lichchhavi and greatly developed the urban centers for next 560 years.

The City Plan

In 1260 AD, Ananda Malla reconstructed the city of Bhadgaon in form of a geometric mandala of Astamatrika (Munangkarmi, p. 2&6) and had as many as 1200 houses and one palace. The analysis of existing towns and outlying settlements does show that the positions of the certain temples such as Vishnu, Siva and Bhairav images and also the location of cremation grounds confirming with religious texts in many cases (Tiwari S. , 1989). Some type of plan must have been required for such 'large towns' as Bhaktapur (1200 houses in 1260 AD) or patan (24000 hoses in 1655 AD) of Malla period as they seemed to have preferred larger towns to satellite towns (cf. Kirtipur).

The Temples in the Durbar Square

As discussed above, temples do not appear as major element of the central urban space until Mallas. The construction of State Temple of Taleju Bhawani (1300 AD) palace precincts in Bhaktapur followed by the temples of other gods in the palace foreground ultimately led to the formation of the durbar Square dominated by temples rather than the palace. Tiwari (1989) mentions, starting from the Kailaskut Palace where even the royal Chapel of 'Sasthidevi' appears to have been insignificant in building form, this is a great conceptual change. The temple building activity was so extensive that many little squares of the city eventually dominated by the temple, Kumbeshwor Temple area (1390) in Patan, Dattatraya Math square (1450) and Nyatapola Square (1704 AD) in Bhaktapur. Even street ends ad corner took imposing look as can be seen at Bhimsenthan, Kathmandu, Til Madhav, Bhaktapur and Umamahesswor temple, Patan.

In early Malla days, festivals of various gods and goddesses were started or made more elaborate. Other important festivals took the form of chariot festivals. The chariot festivals with their starting, finishing and stopping points enroute gave new social/ cultural meaning to the existing religious sites, squares and street. So many of the gods came out in chariots big or small that the street often appeared as if they were designed to link two or more temples and were the passage for the gods rather than for people and their everyday acts. The Durbar Squares developed and additional socio-cultural role as major festivals focuses around the palace and moved into it (Tiwari S. , 1989).

The City's Sectorization by Crafts Specialization

King Jayasthi Malla enforced the social code that regularized the social order of four caste and sixty-four trades based on the occupation by end of 14th century AD. Among them, a few economically weak trades groups had been pushed to the fringes of the city by the end of Malla rule. Thus, the core of these cities displays apparently similar artistic affluence. Tiwari (1989) mentions, the rigid adherence to family trades and consequent highly specialized crafts development also led to the standardization of décor, buildings and urban spaces as well. Tiwari (1989) further mentions that the specialization of crafts was such that, the wood was cut by one, carved by other and fixed in building by still other specialization family. The specialization was in such extent that, the eyes of the carved imagery could only be put by ordained families (i.e. able to withstand the fierce state of fiercest godly images) from among the carvers.

3.1.3 Conclusion

From the various elements and aspects of urban form and how they originated and function performed through historical timeline, it seems like most of the elements of the urban form were originated in Lichchhavi era. And the group of elements forming the urban space were more of a Malla urban thought which may have been a matter of necessity due to preference of larger palace cities in Malla era compared to Lichchhavi towns. Tiwari (1989) also mentions the example of early Malla city of Bhadgaon which was almost 10 times larger than the Kantipur in late Lichchhavi period.

The Durbar Squares and its geometrical proportion and the variety of compatible forms and elements make it a rare urban phenomenon. The central building, their positive and negative volumes, their positions in overall space bounded by the Palace, Residences, Dhara and the judiciously placed entry paths and the element of surprise, varied bounding elevations along with their proportion and unifying components are some distinct characteristics of these squares. Tiwari (1989) also explains, the expanding, contracting and irregular street spaces bounded by a strict geometry of residential buildings with brief interlude of Temples and Bahals are the basic physical characteristics of these streets. These squares and the streets, both come alive with gods and their festival play. At the very least the leisurely quality of urban life perceived in the Market squares or the Domestic squares recommend a pristine tranquility of older periods.

3.2 The Urban Spaces of the Malla Towns

The Kathmandu Valley has been in habitation for a long time through different ruling period. The towns of Valley do not exhibit any strict urban form at present. Due to long history of their expansion, the urban form and their elements appear haphazard at first observation. But if they are closely observed and analyzed, these towns did obey the principles of the cosmic and phenomenal laws of structure as the canonization of the form has always been uppermost in a Hindu mind. Tiwari (1989) also mentions, either the priest architect was designing a temple or a settlement, it would have been sacrilegious to tamper with basic cosmic form.

The Vastupurusha mandala as the form to bring about order in the phenomenal worlds followed religious exercise to hypothesize square as a perfect form to contain as well as represent the absolute (Tiwari S. , 1989). It further mentions, this square mandala with its cardinality was seen as a manifestation of the supreme principle as well as an image of the laws governing the cosmos. Kramrisch S. (The Hindu temple) also explain all the walled habitations like hamlets, villages, market towns, citadels, cities capital and suburbs, as the *Prasada* itself are laid out on the Vastupurusha mandala. The temples of the villages or

city have also their places assigned on it. Many old settlements Changunarayan, Hadigaon, Deupatan, Kirtipur, possible Lichchhavi origin and to some extent even Kathmandu still exhibit adherence to such principles in terms of location of the main temples as of Shiva, Vishnu, Durga or the location of funeral burning ghats to their north.

In 1260 AD, Ananda Malla used Astamatrika mandala as shown in figure while reconstructing the settlement of Bhadgaon. At present also, the astamatrika (eight mother goddesses) have same cardinal

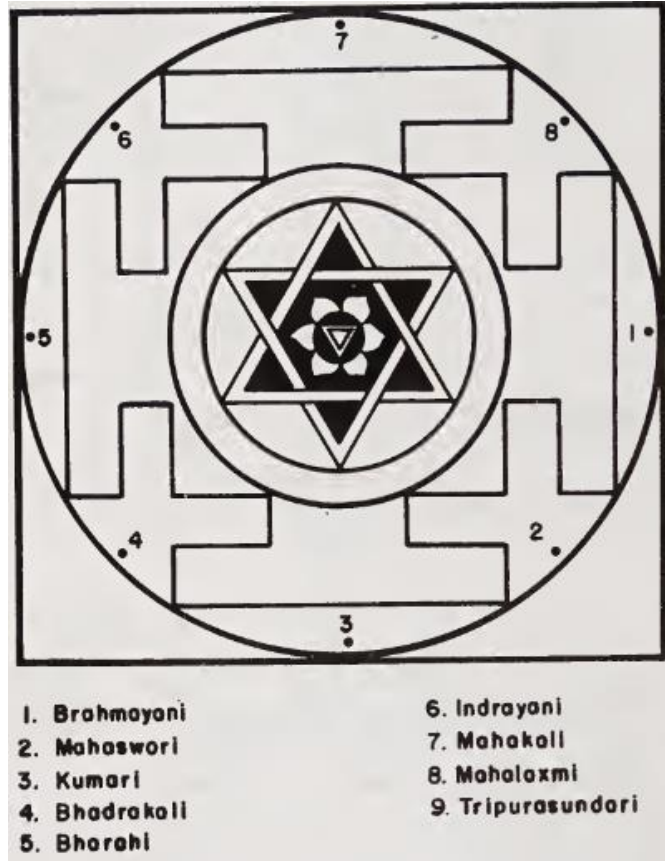


Figure 1 Mandal of the city of Bhaktapur (Tiwari, 1989)

orientations in relation to the city center of Bhadgaon but the physical form they enclose is so far from this purported geometry (Tiwari S. , 1989). The mandala is of Shaktic cult and the whole city plan is conceived in terms of bathing and worshiping sequence of the Navratri rituals festival.

3.2.1 Spread of the Town and Movements within/ without It

A series of polarization nodes distanced by space as well as time results the spread of any town. The idea of any plan put up an ordered framework for these kinds of nodes such that the town will be in order in given time or perceived future time. In Malla towns of Kathmandu Gods not only take residence in different places at different time of the year, they also visit other gods and temples to live out legends of heavenly obligations as it were (Tiwari S. , 1989). The daughters visit their mothers or the arch enemies fight over area for supremacy, others in some particular cosmic conditions must come together to feast. These routes generate movement patterns within or about a town that has been constant for all

Malla towns, which cannot be changed even though they expanded greatly beyond originally set physical limits of Vastupurusha mandala over long time.

The functional requirement of city also generates equally but distinct set of movement pattern. The movements both in life and in death act as important generators of planning determinants. The performance of daily religious rituals (bathing in the river or sacred pond, offering daily pujas), going to farms and coming back, market activities etc. generate patterns linking rivers, ponds, temples, farms and market to residences. Malla towns were sited on non-agricultural ridges and the farm lands all-round the settlement across the river causing growth of radial streets to rivers and farms. Two or more of these streets would then join together as they reach into the town and such nodal points developed into squares with increasing social importance as they got closer to the city center. All such streets converge to Durbar Square, central nodal point of city, where all social activities also converged. But the funeral route never takes the routes taken by chariots of gods, and never over the bridges and only in physical impossible contexts take the routes of lesser godly festivals. These generated the still narrower back-lanes, service street as it were. The funeral Ghats located along the river at either one end of settlement and funeral route avoids the temples as no Gods would welcome the mourners for the next thirteen days (Tiwari S. , 1989).

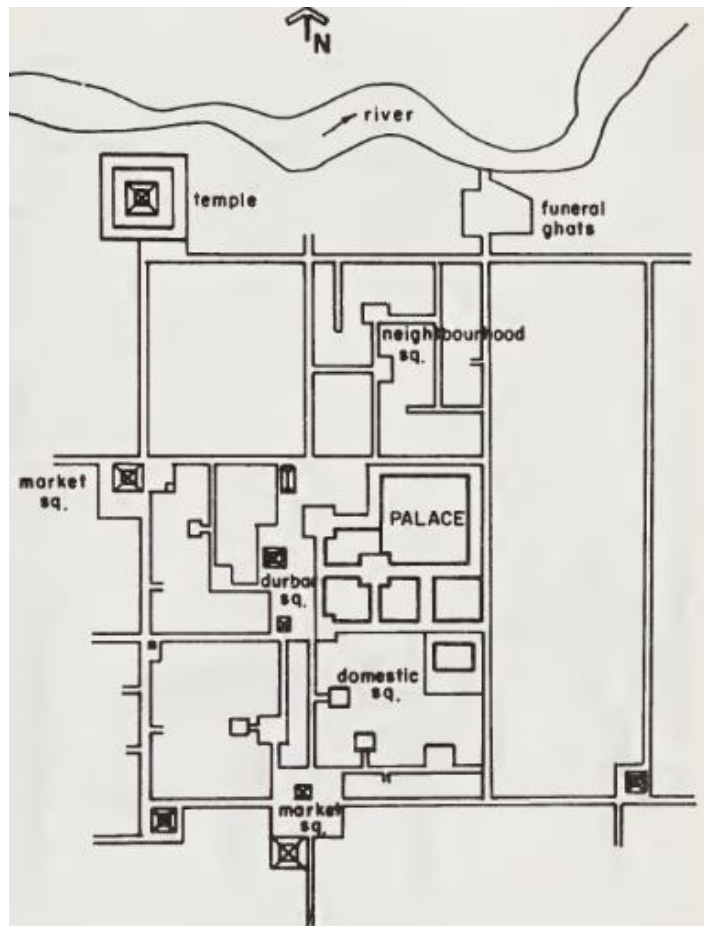


Figure 2 Diagrammatic Malla Town (Tiwari, 1989)

The functional need to stop along a route is recognized only for the living and the gods and as such all squares would lie in these routes. There are to be no nodes, or squares, along the funeral route. To conclude the functional requirement to stop, congregate and move further along a street created square and their underlying concepts. A street could be considered as a self-justifying urban element but the square has been considered only in relation to a street.

3.2.2 The Main Street

The streets in the Malla towns of the Kathmandu have been laid out to respond to various uses as mentioned above. These streets can be classified into functional groups. The main street links the durbar square to various market squares. It is major place for social and religious functions that form a chain of temples along the way. The secondary streets link the market squares with neighborhood squares. These streets meet some temples along the river on the edge of town or some other potent spaces and also would continue to the open farmlands. The lesser streets to the farmland originate from the residential areas if the main and secondary streets are no serving the purpose. Tiwari (1989) mentions, these lesser streets and the funeral alleys form a network of the services street behind the festive streets of the town. However, it is the main street that embodies all the urban space concept of the Malla street. Tiwari (1989) explains, it is effectively a long chain of straight-line segment, where each segment joints two temples or potent spaces. No line is curvilinear and even when very short street segment turns, the node is always visually defined by the temple or a religious landmark which is a major conceptual framework of Malla street space. Each street segment is visually contained along its length by the religious landmark and /or temples and in the traverse direction by the residential/ commercial buildings of the uniform character in terms of materials, design and the height of the building. The point of intersection of these segments are usually developed into a small square where the widening transverse dimension at once bring about sufficient light and sky into visual play. The Patis and public houses, image pit on street, alcove gods are directly related to one or more of the festivals that take place here.

3.2.3 The Main Squares

The Malla towns shows a distinct set of squares with a clear hierarchy of social cultural activity. These are the Durbar square or the Central Palace square, the Market square, the Residential Neighborhood square and the Private Residential square (Tiwari S. , 1989). The Private Residential square is almost a large courtyard house designed for communal life style of an extended family. It can be conceived as an autonomous space largely independent of the street space whereas the other squares are dependent on the street for their visual and spatial appeal. As shown in the conceptual town diagram, these squares are laid out at nodal points. These are spaces where street directions change and two or more streets lead in or out of it. They are always marked by some temples or religious landmark of other nature or sometimes just a stone water conduit.

The square of the first order, **Private Residential square**, is a simple rectangle. It is a square defined by bounding elevations similar in characteristics to the main street façade of row building. This is completely bounded. The entry being taken through a passage on the ground floor of the building side along the street. Some of these squares may also have votive miniatures temple or well but no trees or grass areas (Tiwari S. , 1989).

The Residential Neighborhood square houses a large number of extended families, often belonging to same clan. Apart from the size of the square, it differs from the Private Residential square visually as more than two streets come to meet this space. This square shows nodal properties of the basic order and also houses some public religious edifices like temples or a large water spout. As this square is basically a residential, the temple volumes do not dominate these squares and the element of surprise, changing visual axis, is barely there. Sometimes the larger of these squares do not even form an enclosed space basically as the height and treatment of bounding elevations retain the scale and configuration of the square of the first order (Tiwari S. , 1989).

The Market Square as third order square has many elements of urban interest. It is remarkable for its heightened urban space sense. Some of these squares may be smaller than second order squares. They play great role in the socio-cultural scene of the town. These squares have attained such importance by the virtue of the main temple in the square that even the Durbar square is culturally dominated (cf. The Nyatapola square in Bhaktapur

and Bhaktapur Durbar square). The Market square is the archetypal nodal square located at a street intersection. The functional aspect of exchanging produces was met through constructing low platforms within the square. But these squares come to life with cultural activities rather than with commercial activities.

The Durbar Square, the apex in the hierarchy of open spaces is the central urban area where the palace is located. All the streets lead to this space, whether as independent routes or as feeders to the main street. The main street crosses it along its length with the palace on one side and the temples on the other. Indeed, all the major God and temples of the city are presented here and have their temples located along this space. Like in the Market square, the changing focal temples as one move along the main street and the interspersed open spaces exhibit similar elements of surprise and optical interplay. Again, as in Market square, the festivals with the gods with or without their chariots bring life to the whole space. By royal decree all festivals either start, pass through or culminate in this Durbar square.

3.2.4 Conclusion

Hence, the complete urban form of Malla town can be analyzed as a combination of house form and the temple form, tied up in a coherent visual order through the use of streets and squares. Instead, both forms use the same materials and external architectural finishes but arrive at different forms because of conceptual differences in volumes and technologies. Tiwari (1989) also mentions, the placing of these forms in a variety of combinations along the street or in the cubic space of a square have created an endless series of geometric spaces with exciting foci.

3.3 Chaknakya's Town Planning Principles

The Kautilya's Arthashastra is one treatise among various scriptures of developed India in ancient time around 350 BC. It is a comprehensive compilation of various other Hindu Treaties relating to social, economic and spiritual growth of human kind that elaborates the elemental features of the sovereign society (Deshkar, 2010). Arthashastra literally means 'Scripture of wealth'. According to Chanakya, the wealth is the source of livelihood of man and that for the nation it is in form of both the territory of the state and its inhabitants with

variety of occupations. This literature review is an attempt towards developing some understanding regarding the policies for the growth of urban locations during the historic times in India.

From the perspective of understanding the principles of design, development and management of settlement, Kautilya prescribed that it is important to know the kind of urbanization he conceptualized. He mentions a well-defined hierarchy of urban centers and the administrative divisions. The interesting extract composed by Chanakya in Maurya period relating to Town and country planning can be discussed as below:

- a) Town, which is congested, should be freed of surplus population, which should then be housed in a new location. The towns should be so located as they would be in a position to help each other.
- b) There should be a ‘Sangrahan’ among ten villages, a ‘Sarvatik’ among two hundred, a ‘Dronamukh’ among four hundred and a ‘Sthaniya’ among eight hundred villages.

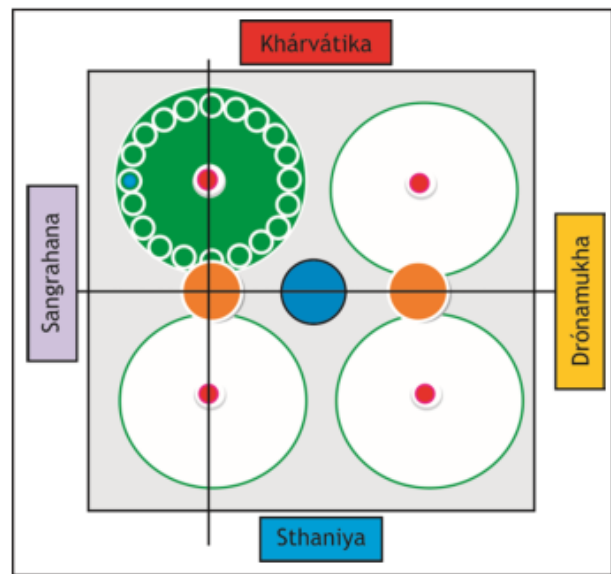


Figure 3 Administrative Division based on the size of Population (Deshkar, 2010).

- c) People who come to stay at the time of a new settlement or those who come to reside later in this new settlement should be exempted from payment of taxes for some years. In the new village, there should be higher proportion of agriculturists and Shudras. There should be a market provided for the sale of goods received from traders on highways.
- d) Dams should be built over rivers and Nalas. Temples and gardens should be provided.
- e) Arrangements should be made for looking after the aged, the children and informal persons.

- f) Cereals and wealth will grow if the agriculturists are kept busy. Attempts should be made to protect and increase quarries, forests and canals.

According to Chanakya's Arthashastra, a location of city should be in the central part of the country so as to facilitate trade and commerce. The site selected for city should be quite large in area and on the banks of the river, or by the side of an artificial or natural lake, that never goes dry. The shape of city should be circular, rectangular or square as would suit the topography. There should be water on all sides. Separate areas should be provided for marketing different goods. There should be a wall around the town, which should be at least six Dandas high and twelve Dandas wide (Faridi, 2014).

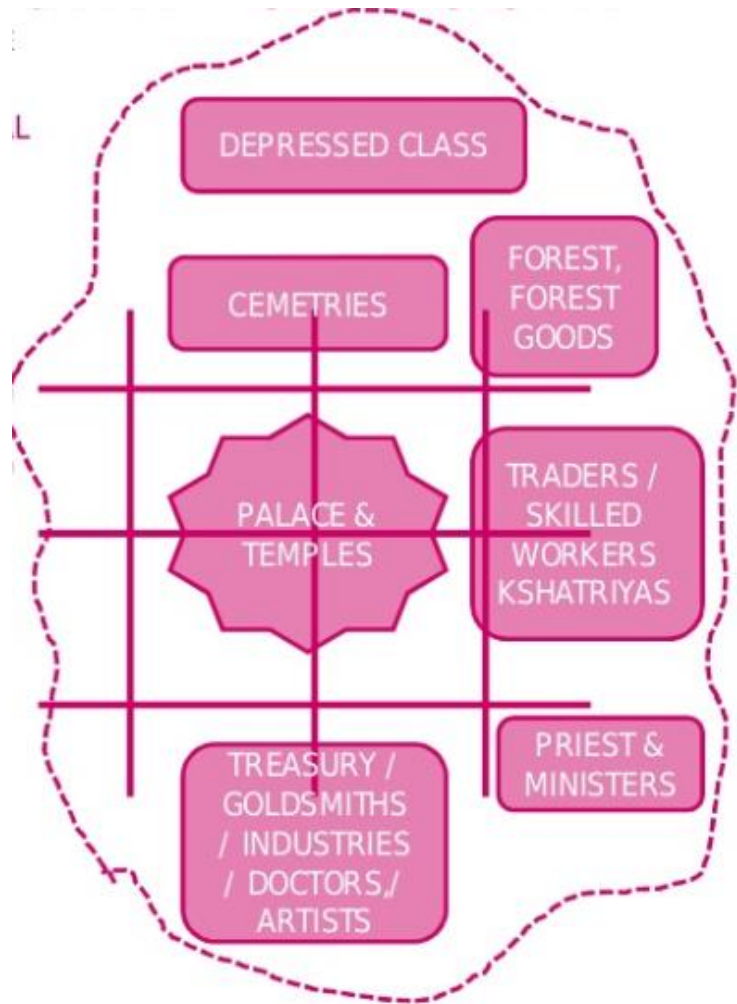


Figure 4 Town Planning Model, Chanakya's Arthashastra (Source: <https://www.slideshare.net/ctlachu/ancient-system-of-town-planning-in-india>)

The blog of Faridi (2014) also mentions, beyond this wall, there should be three moats of 14 feet, 12 feet and 10 feet wide to be built four arm-lengths apart. The depth should be three-fourth of width. Three-east west and three North – south roads should divide the town. The main roads should be eight Dandas wide and other roads four Dandas wide.

The Palace should be in the central part of the city. It should face either north or east. The houses of priests and ministers should be on the south-east, traders, skilled workers, and kshatriyas on the east, the treasury, goldsmiths and industries on the south, forest produce

on the northeast and doctor's city fathers, the army commander, artists, on the south. Temples should be located in the center of the town. Cemeteries should be located on the north and east of the town that for the higher caste to be located on the south. The depressed classes should be housed beyond the cemetery. There should be one well for every group of ten houses (Faridi, 2014).

We alter the policies and planning for growth and development of the human settlement. However, the basic principles are bound to continue so long as they ensure a healthy development of human kind. The above discussed principles may seem very general but they are proposed for making a cohesive society that need to be implemented according to Chanakya.

3.4 Urban Morphology

3.4.1 Physical Structure

Traditional architecture and settlement patterns of the Kathmandu valley have been heavily influenced by "Mandala." Mandala is a traditional way of spatial organization, which organizes space ritually and socially based on the three principles of boundary, hierarchy, and center (Geller, 1992, p. 5). In a traditional town, the "Palace" is the center of the town boundary, which was articulated with entry gates and various temples to protect the city from any evil.

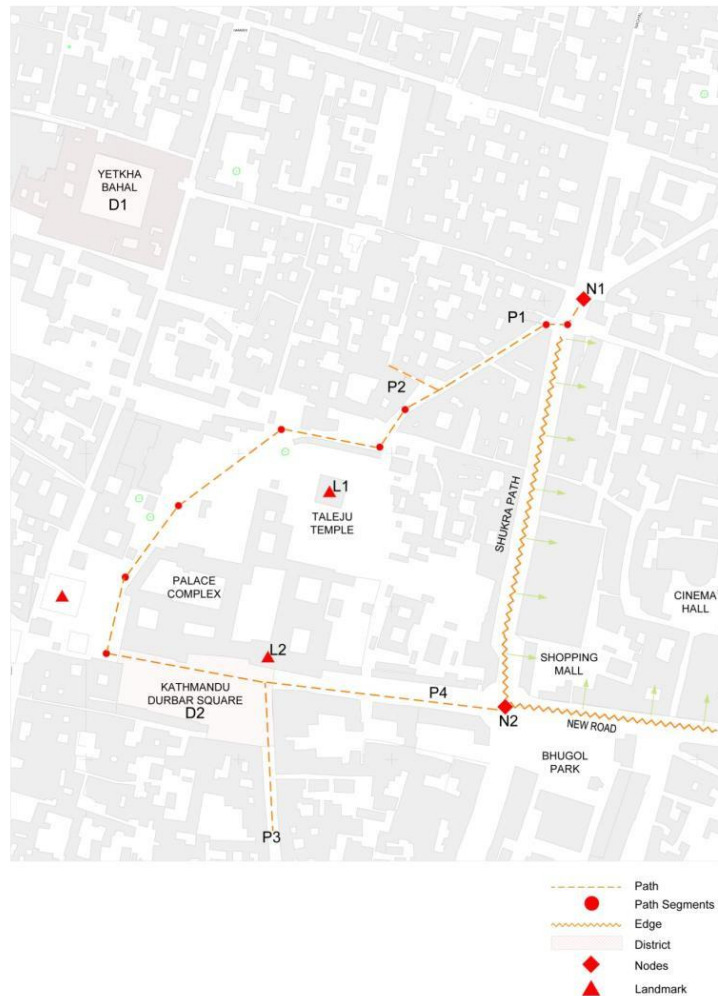


Figure 5 Path, Edge, District, Node, and Landmark in Historic Core of Kathmandu

Agricultural farmlands were beyond this boundary in low-lying lands. This pattern of settlement lasted in Kathmandu until the end of the Malla period in 1768 A.D. Later, with the beginning of urbanization in Kathmandu in 1960 A.D., the historic city structure of Kathmandu transformed drastically.

The city, that no longer follows the planning principles of Mandala, has transformed well beyond the three principles propounded by Mandala. This section of the literature review uses Kevin Lynch's theory from his book "The Image of City and its Elements," to dissect and develop an understanding of Kathmandu's urban morphology. Kevin Lynch uses five elements to define the physical constituent of the image or perception that an urban dweller has of a city. These elements are Path, Edges, Districts, Nodes, and Landmarks.

These five elements are further illustrated in a section of the historic core, which is Kathmandu durbar square as shown in Figure 5 above. These five elements of Path, Edge, District, Node, and Landmark will be discussed in more detail in the following chapters using the map and reference images.

Path

Kevin Lynch states "Paths are the channels along which the observer customarily, occasionally, or potentially moves (Kevin, 1960)." These paths connect diverse elements and environmental conditions of a city, giving a sequence of imagery to the observer. Such imagery forms the essential part of the observer's visual memory.

Beautifully carved streets are the paths in a dense urban settlement of Kathmandu's historic core. These streets are for circulation and conglomeration and provide a unique character to the urban form. The historic towns have non-axial streets, which rarely meet at right angles (Chitrakar R. M., 2011), as shown in Figure 1 above. However, the streets are never curvilinear; instead, short segment of streets join at nodal spaces and take an angular turn. Such continuous segmentation of streets provides changing views and vistas to pedestrians, which makes walking in these streets enjoyable.

Streets also act as a connector of various public spaces and residential neighborhoods. Like blood vessels that branch to supply blood to each cell, streets in the historic core of Kathmandu branch from the main street to reach each residential neighborhood and further

to each house. The main street in the historic core can be as wide as 20 feet, while those connecting individual houses can be as narrow as a 3-foot underpass through another building.

Edge

Lynch defines edges as linear elements other than paths such as building facade and street elevation that define the boundaries between two visually disparate regions of the city (Kevin, 1960). In the context of Kathmandu, the edge, as shown in Figure 1 above, indicates the boundary between the palace complex, which is a Preserved Monument Zone, and the commercial district that developed after the introduction of new planning policies. This demarcation of preserved zone and commercial zone is characterized by a street facade that depicts bustling commercial activities. The road that aligns this edge is filled with parked motorcycles, as shown in Figure 7 below, and the vehicular road itself is filled with pedestrians. The commercial buildings on this edge are filled with signage and they do not follow the vocabulary of traditional architecture, as shown in figure 6 below.



Figure 7 Parked motorcycles on the edge of Preserved Monument Zone



Figure 6 Street facade along the edge of new development

District

Kevin Lynch states "districts are the medium-to-large sections of the city, conceived of as having two dimensional extents, which the observer mentally enters "inside of," and which are recognizable as having some common, identifying character" (Kevin, 1960). In the context of Kathmandu's historic core, the palace complex and durbar square that adjoin it hold a central position. This section of the palace complex creates a prominent visual

impact on the observer with its scale and grandeur, as shown in Figure 8 below. While, there are residential neighborhoods like Yetkha Bahal that are smaller in scale but have distinct visual and spatial qualities, as shown in Figure 9 below. The two districts, palace complex, and Yetkha Bahal are different in terms of their scale, use, and status as heritage. The palace complex is in a Protected Monument Zone, which is used as a museum to display heritage from the monarchial times of Nepal. People no longer live in these courtyards. On the other hand, communities still live in Yetkha Bahal, which has buildings used mostly for residential purpose. It has a limited cultural infrastructure with one central stupa, unlike the palace complex which has numerous temples.



Figure 8 Palace complex and Durbar Square



Figure 9 Yetkha Bahal

Node

Lynch defines "nodes are points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is travelling" (Kevin, 1960). Nodes can be anything from an intersection of two paths, a hangout place, or a place where the physical nature of the district change. Figure 1 above shows the location of two nodes, which, in the case of the historic city, are the intersection of paths. In the context of the historic core of Kathmandu, the intersections of major streets develop into public open spaces with important cultural elements like temples, statues, etc. making the space more legible. Figure 10 below depicts the temple as a cultural element in the intersection of paths to form a node, while, Figure 11 below shows the vehicular roundabout with the statue of a former king. Other than these examples, cultural elements like Pati (public rest house), Chaitya (miniature Buddhist shrines in the form of stupa), Dabali (open elevated platforms)

or Dhunge Dhara (waterspouts) can also add legibility to a node (Tiwari S. , 1989). Streets as paths and open spaces as nodes define the streetscape in the historic core of Kathmandu.



Figure 10 Node N1 - Indra Chowk



Figure 11 Node N2 - Juddha Shalik

Landmark

Lynch states "landmarks are another type of point-reference, but in this case the observer does not enter within them, they are external (Kevin, 1960)." They can be anything, from an important building, a tower, or a temple, that stands out from its setting. Such urban elements provide a visual reference to the observer, establishing a pattern to navigate through the city and recall the "Path."



Figure 13 Landmark L1 - Taleju Temple



Figure 12 Landmark L2 - Nine Storey Palace Tower

In the case of the historic core of Kathmandu, cultural infrastructures like temples, the palace building, large iron bells, etc. constitute the landmarks. The temples stand out from their physical context due to their form, architectural feature, scale, and materiality. Temples are laid on a stepped platform with a circumambulatory around it. People use temples as place to meet, hangout, and enjoy activities in public spaces. Some of the

temples can be very high, like Taleju (Goddess of Power), which is 115 feet high, as shown in Figure 13 above. The palace complex also has multiple towers overlooking the durbar square. The nine-storey tower is the highest tower in the palace complex and dominates the entire public space with its towering effect, as shown in Figure 12 above.

3.4.2 Social Aspects

Community living in Kathmandu is called "Newar," and the community was organized on the basis of caste system during the traditional times. King Jayasthiti Malla introduced the caste system in the 15th century. The occupation of people is the basis for caste system, which attributes people to fixed social strata. Zoning assigned people a fixed place in the urban structure depending upon their occupation (Rayamajhi, 2012), as shown in Figure 14 below. People were allowed to live closer to the palace depending upon the importance of their occupation, which was judged based on the frequency of consultation by palace or the state. Hence, zoning by caste had socio-cultural, political, and economic connotations. While such a system developed strong neighborhoods, it was also the cause for social discrimination within the "Newar" society.

Social structure forms the basic principles that drove the development and articulation of urban morphology in Kathmandu. Hierarchy in society is also evident through the location of important urban elements like the palace, temples, waterspouts, and squares in the city. Important temples, like the temple of Durga (goddess of power), and large water

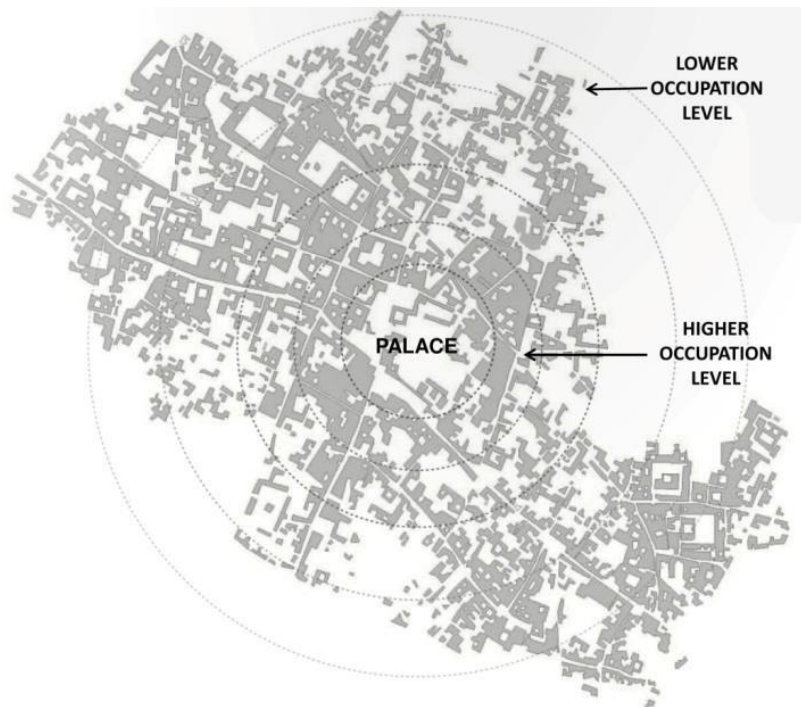


Figure 14 Zoning of historic city based on occupation (Pradhananga, 2013)

spouts were located close to the palace. The cremation grounds were located on the city outskirts, where people of lower occupation levels lived. The royal palace, locally known as "Durbar" with its series of courtyards, big open spaces and temples, occupied a central position in the city. The immediate areas surrounding the palace were allocated for the priests, nobleman, and people belonging to high occupation level or "Caste" (Gutschow, 1993, pp. 163-183).

Newars are communal people with a strong belief in social norms and values. Social institutions like Guthi are a testament to this. The meaning of the word "Guthi" is derived from the Sanskrit word "Gosthi" meaning an "association" or an "assembly" (Muller-Boker, 1988, p. 28). Guthi refers to a communal institution, which played a huge role in maintaining the physical structure of the city and socio-cultural life of the community. Guthi is composed of the members of the community itself and is based on the socio-cultural values of the community. Newars lived in extended families in closed quarters around a courtyard. The idea of looking after each other and being together drove their social values. It is this value that has made public life and the public realm very important to the community. Guthi looked after each member of the community, regardless of their social strata, as long as they abided by the social norms. However, a community member or a family who did not abide such norms would be declared an outcast and would be deprived from benefits provided by the Guthi.

Public spaces were celebrated through various festivals and through monuments that added to its grandeur. Guthi took care of public buildings like Pati (rest house), Chappas or Digis (public party venue), and Ashram (place of refuge for homeless), providing a great service to society. However, Guthi was not all-inclusive, as it did not allow people from other ethnicities to be part of it. As more people migrated into the city after the political transition, the role of Guthi started being questioned. As Guthi was not able to transform itself with changing demographics, its roles and responsibilities were curtailed by the state government. Today, Guthi is limited only to the preservation of temples and few public buildings. However, it still plays an important role in organizing major religious festivals and social celebrations. As Guthi no longer plays a role in the larger part of urban management, communal interests protected by it in the city have also been neglected in the

process. This in turn has led to massive degradation in urban structures (Selter Elke, 2007). It would have been very fruitful if the new planning policies could have reflected upon these old practices and incorporated value for communal gain in their approach.

3.4.3 Cultural Aspects

Cultural activities are an essential part of the annual life-cycle in Kathmandu. These cultural activities have deep social and cultural meanings that had a huge impact on urban morphology of traditional towns. For instance, there is a chariot procession of "Machhendranath" as shown in Figure 15, which travels through the historic town boundary and plays a vital role in controlling urban sprawl.



Figure 15 Chariot Procession of Machhendranath

Ancient settlements relied heavily on local agriculture to feed its population. In order to protect agricultural land, the historic town created a city boundary defined by nature protectors, which are numbered from 1 to 8 in Figure 16

below. It was religiously established that anyone who lived beyond the city boundary would not be protected from evil powers. It was given a religious imagery and was mediated through rituals so that it could be easily followed by a religiously devout community. This had profound social implications, as residents were forced to live close to each other. Consequently, the dependency of the city on its surrounding natural ecology was protected, which added greatly to the sustainability of these historic towns (Tiwari S. R., "Sustainable Urban Development: Lesson from Historic Asian Cities.", 2000, p. 4)

The urban structure of the historic town was articulated so that it was able to host various kinds of cultural activities. Some of these cultural activities are Jatra (chariot procession), ritual dances, and public feasts. The streets were designed to allow for public processions, and they had important stopping points at various public open spaces to allow inhabitants

of specific neighborhoods to do their ritual prayers. As the procession moved through open spaces of various neighborhoods along the path, as shown in Figure 12 below, it collected and brought people together, adding mass to the procession.

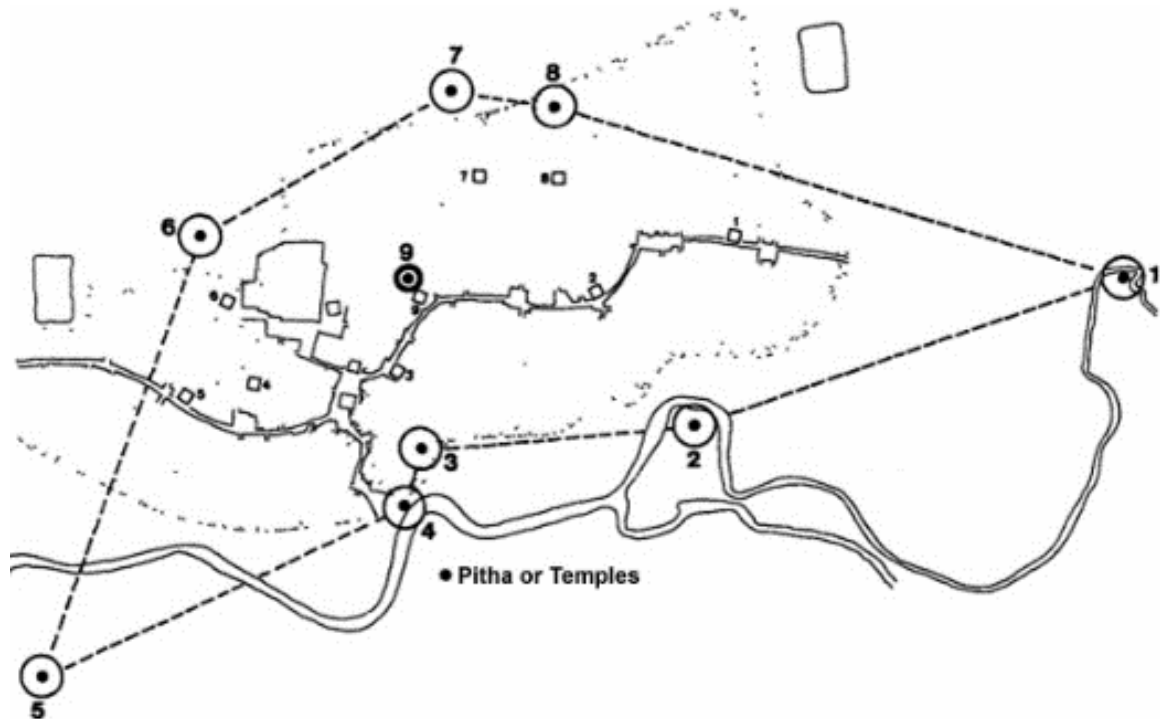


Figure 16 Traditional city boundary defined by nature protector

Numerous cultural activities were devised to improve social life and were given religious connotation, so that they were readily followed by the community. In addition, these cultural activities brought communities of all castes together, which helped in maintaining communal integrity.

Knowledge and building practices adopted by traditional towns were also consciously built in cultural practices. They were not universal and were instead specific to the region, developed slowly over time. For example, an important temple in a neighborhood was often used as a reference to control building height. The roof overhang was designed precisely to deal with the environmental condition of Kathmandu, which was sufficient to protect the facade from monsoon rain and summer sun, but allow winter sun into the rooms (Shrestha B. K., 2011). In addition, interior courtyards, locally known as "Saghas" formed by groups of houses, were used to compost organic wastes, which were later used in kitchen gardens. Cleaning of "Saghas" was built into cultural practice, so that voluntary labor from

society was readily available whenever required. These practices were developed by people responsible for directing urban development. "Cultural mediation ensconced indigenous knowledge transmission mode, and was able to forestall negative individual action likely to damage the community life, the city and its ecological dependencies (Tiwari S. R., "Kathmandu Valley Urban Capital Region and Historical Urbanism.", 2000, p. 6)

The traditional town followed this culturally mediated development approach until 1960. Then, western mode of cultural practice gained prominence, especially in urban centers like Kathmandu. When Nepal adopted democracy in 1960, new planning policies replaced the old cultural practices. These planning policies were driven by economic opportunities, and adopted generic bylaws without considering the local context and variations. The physical structure of the traditional town represented the hierarchical arrangement of society. The typology of residential buildings remained consistent throughout the traditional city, while the public realm consisted of spaces that ranged widely in terms of its shape, size, and orientation. The development pattern that followed after the introduction of generic bylaws destroyed the intricate variations of the public realm.

With rapid in-migration, local people and local culture were reduced to a minority. Soon, "local culture was considered old and irrelevant, not understanding that it had resulted from hundreds of years of interaction with natural ecology, local economy and social relationship" (Tiwari S. R., "Kathmandu Valley Urban Capital Region and Historical Urbanism.", 2000, p. 2). Place specificity and place relevance were neglected by new urban managers in order to take ownership of the place from locals. All the communal properties owned by Guthi which funded its operation were taken over by the government. This consequently rendered Guthi powerless over the course of time. Besides, the right to develop property was solely provided to individual homeowners, provided that they complied with generic building bylaws. In this process, traditional norms of building practice that encapsulated socio-cultural values were largely abandoned. In the context of Kathmandu, safeguarding indigenous cultural values would have simultaneously protected the natural and urban ecological balance of the place. Unfortunately, the contemporary urban management practice has neglected existing cultural practices and physical built

environment, which has diminished the inherent environmental responsiveness of the traditional city.

3.5 Public Open Space

Public spaces in historic towns have a strong hierarchy ranging in scale and function. Such hierarchy corresponds to the hierarchy built into the social structure. Broadly, there are three types of public spaces in the historic core: Chowk (small and private residential courts), Baha or Bahal (community squares), and Durbar Square (larger palatial squares) (Tiwari S. , 1989, pp. 95-98) as shown in Figures 20, 18, and 19 below. These different scales of public spaces form a network of public realm in the traditional city, as diagrammatically shown in Figure 17 below, allowing for social and cultural exchange within and amongst different neighborhoods.



Figure 20 Residential Square (Kumari Ghar)



Figure 18 Community Square (Yetkha Bahal)



Figure 19 Patan Durbar Square

The traditional town of Kathmandu developed from small hamlets surrounded by farmlands. It was part of the daily livelihood of people to walk from their village to the farmland in the morning and return back in the evening. City inhabitants used numerous routes radiating from the center of settlement, which took them from their residential neighborhoods to their respective farms. These routes later developed into streets, which all converged into the durbar square. At some instances these streets intersected each other to



Figure 17 Diagrammatic layout of traditional town showing interconnection of different type of public open spaces (Tiwari S., 1988)

form nodal points that later developed into public spaces. The social importance of these public spaces was higher as it got closer to the durbar square, establishing a strong hierarchy amongst these open spaces (Tiwari S. , 1989). These public spaces, along with private residential quarters, were interconnected by narrow streets to form a dense urban fabric, as shown in Figure 21 below.



Figure 21 Typologies of public open spaces in Kathmandu (Pradhananga, 2013)

3.5.1 Residential Squares

Residential squares are small scaled private quarter bounded by two to three storey sloped roof buildings, as shown in Figure 22 below. The traditional city comprises numerous residential squares, which are known as "Chowks" in the local language. These residential squares are densely compacted to form the larger neighborhood. These residential squares are small and private in nature, historically catering to an extended family or people of the

same caste. Residents use these courts for social interactions, marriage and personal celebrations, and recreational activities. Built structures around these courts are mostly residential in nature, while the structures having direct access to roads sometimes have commercial shops. Narrow alleys that interconnect these small courts eventually lead to a major street or a larger community square. These squares are independent and are a complete social entity in themselves, as they have their own central open space with public amenities like temples, rest houses, water spouts, etc. (Gutschow, 1993, pp. 163-183).



Figure 22 Residential court in traditional town (source: Shrestha House, Kathmandu)

3.2.2 Community Squares

Community squares are larger open spaces, as shown in Figure 24 below. A Community square is inhabited by multiple families and allows inhabitants of a particular neighborhood to congregate on a daily basis. These spaces are also used by residents from surrounding neighborhoods as they have important temples and public infrastructures like wells, and rest houses. Communities use this space to celebrate various festivals and rituals from life to death. It also encourages social interaction amongst neighbors on a daily basis. The daily livelihoods of people living around these squares extend out to these spaces in the form of buying vegetables, cleaning clothes, and so on. A community space is the stage for interaction between different age groups at different periods of time and seasons. It is a place to worship for old people in the early morning, a place to dry grain and clothes in the afternoon, a playing area for children and conversation place for adults in the evening. In fact, these public spaces were extension of private houses, merging private and public realm. "Such social system had communal integrity, diversification and security all contributing towards town sustainability (Shrestha B. K., 2011, p. 10)." Community

squares are mostly comprised of residential buildings but often have one or more temples within the space or as a part of the built structure defining its perimeter. These squares also have other social amenities such as wells, ponds, rest houses, and cultural infrastructures such as stupa and temples as part of its content. Figure 23 below indicates the distribution of various temples within Te Baha (Chitrakar R. M., 2011, pp. 57-70).



Figure 23 Te Baha, a community square in Kathmandu

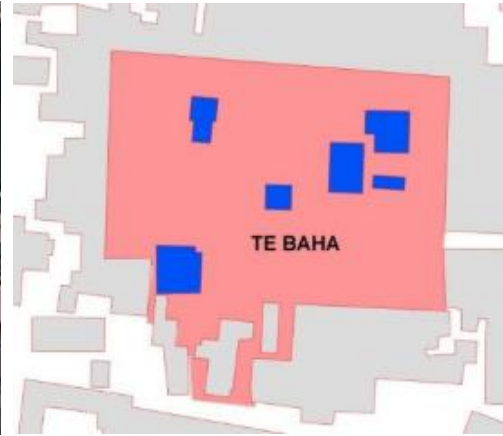


Figure 24 Temples within Te Baha (Pradhananga, 2013)

3.2.3 Palace Squares

Palace squares are the largest of all squares. The palace buildings characterize these squares, as they dominate the entire public space through their scale, geometry, and grandeur as shown in Figure 25. The palace complex comprises multiple courtyards and larger built forms as compared to community squares, as shown in Figure 26. The built forms are rectilinear in plan with a strong symmetry in plan and elevation (Chitrakar R. M., 2011, p. 65).



Figure 25 Palace complex at Kathmandu Durbar Square



Figure 27 Kathmandu Durbar Square (Source: Google Map)

Today, the palace complex has been converted into a museum that is heavily guarded for security purposes. However, the public space that surrounds the palace complex is bustling with socio-cultural and economic activities. The palace complex has a central public square highlighted in red on

Figure 26 below. The palace square has numerous temples, platforms, and rest

houses, creating informal spaces within and around them. These informal spaces function as a place where people meet and hang out enjoying the sun, especially during winter.

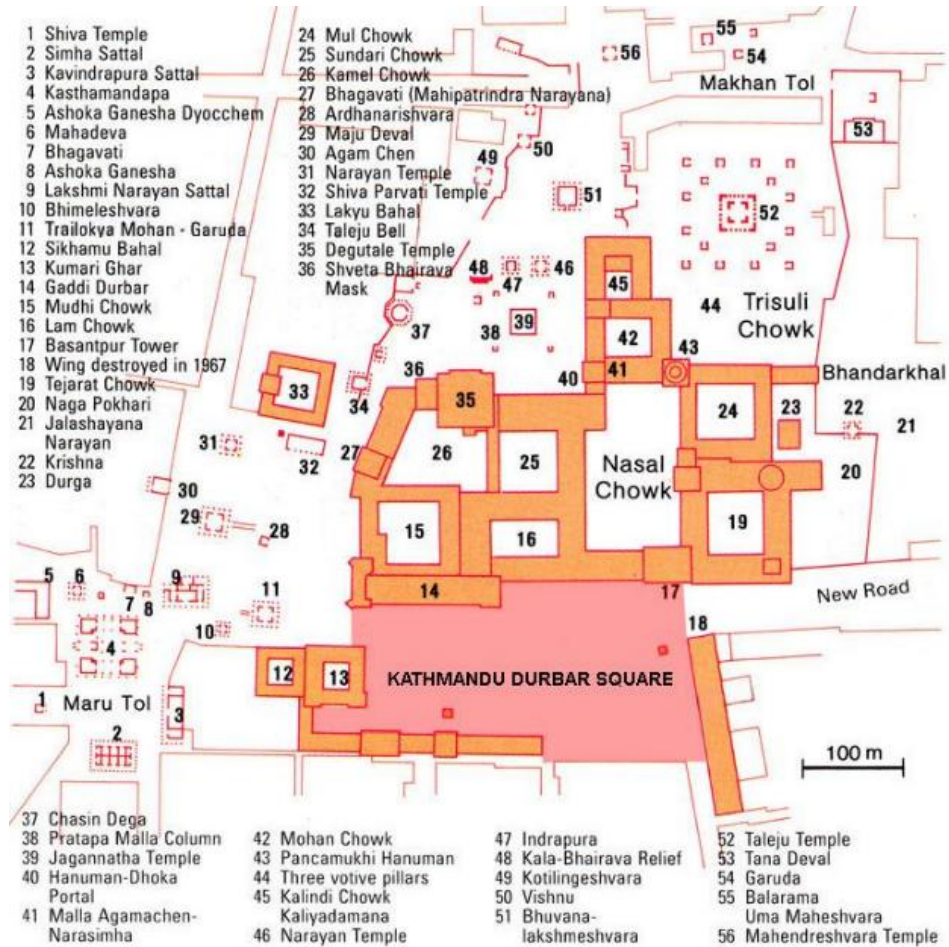


Figure 26 Cultural Infrastructures in Kathmandu Durbar Square (Pradhananga, 2013)

3.6 Traditional Urban Management Practice

The traditional towns of Kathmandu gained full maturity during the Malla period. After the Malla period, two more dynasties, Rana and Shah, ruled Nepal until Nepal adopted a democratic form of governance. The urban history of Nepal consists of three periods: the Malla period (1200 to 1768 AD), the Shah period (1768 to 1867 AD), and the Rana period (1867 to 1934 AD), before the new planning policies were adopted by the democratic government. Built forms in the historic town included low-rise buildings of no more than four stories in a dense mosaic that made the scale very anthropometric. All built structures in the traditional town had sloped roofs covered with clay roof tiles. These slopes ended into eaves that protected the building's walls from rain, shaded windows, or provided shelter to the people on streets below. However, stone structures like Chaitya (Buddhist shrine) did not have sloped roofs. All other buildings, including the palace, common residences, and community buildings, were made up of brick walls. These walls were two and half bricks wide comprising of outer sun-dried brick, and inner adobe brick with mud plaster. The inner adobe wall helped in absorbing moisture, which is extremely beneficial in the humid environment of Kathmandu. The composite wall also has good insulation properties, which stores heat from sun during daytime and dissipates it into interior environment during night. In addition, the sloped roof had clay tiles over a thick layer of mud, which also increased the thermal lag of the roof (Shrestha B. K., 2011, p. 7). While, the windows were made up of wood and were latticed to allow sunlight to enter into the rooms, maintaining privacy as well (Korn, 1979).

3.7 New Planning Policies

The planning bylaws of 1976 zoned Kathmandu not based on social structure, but based on economic opportunities (Tiwari S. R., "Kathmandu Valley Urban Capital Region and Historical Urbanism.", 2000). These bylaws divided the entire city into zones, such as the Old Settlement Zone, the New Residential Zone, the Industrial Zone, the Institutional Zone, the City Extension Zone, etc. The planning bylaws of 1976 demarked the historic core as the Mixed-Old Settlement Sub-Zone in Kathmandu's zoning map as shown in Figure 28 below. The economic opportunities and development pressures were highest in this zone,

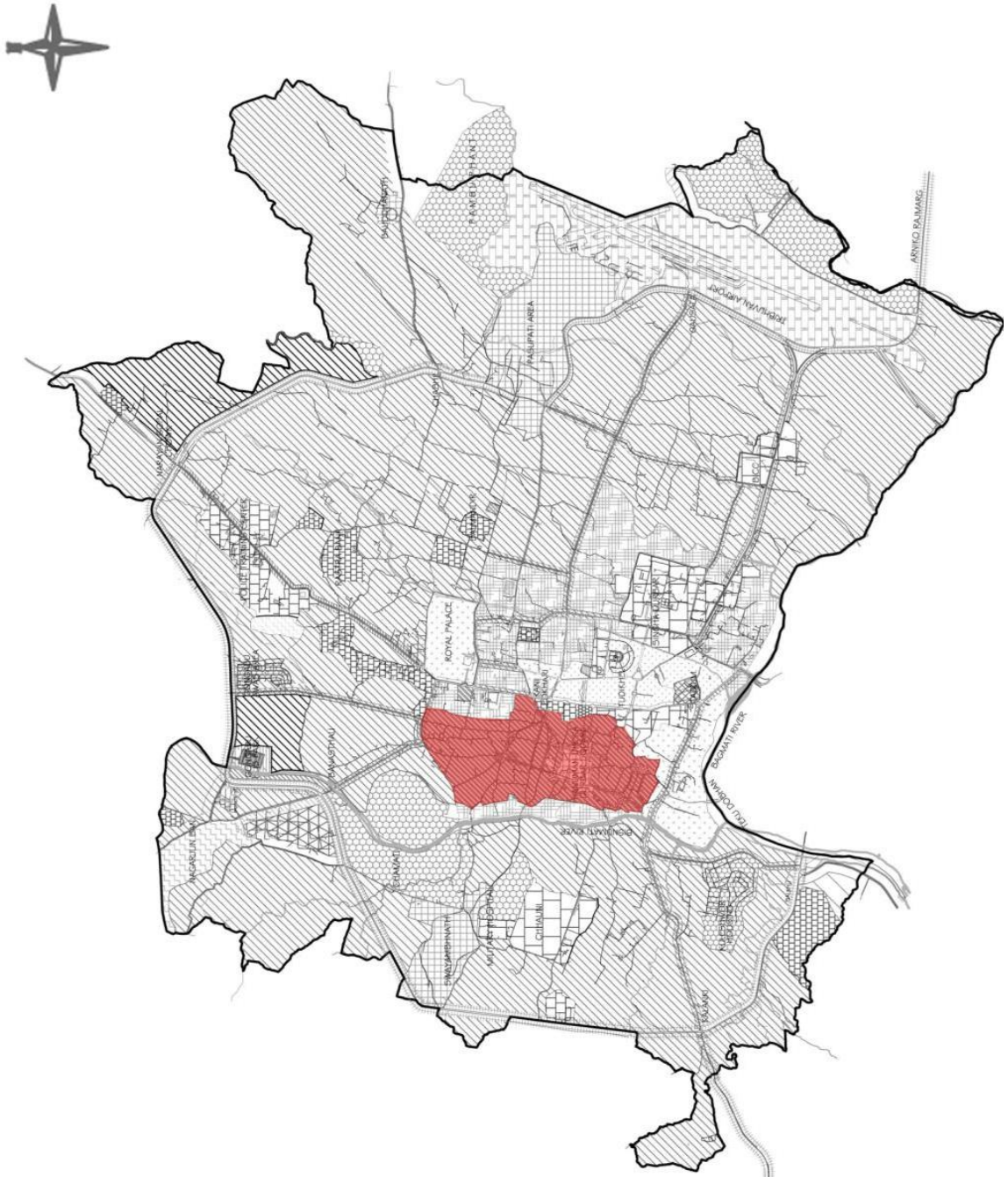


Figure 28 Mixed Residential Sub-Zone in Kathmandu Municipality's Zoning Map (Source: Kathmandu Municipality)

and, subsequently, the municipality treated this sub-zone as a commercial zone to allow for maximum building flexibility. The total amount of area allowed to build per square foot of land in this zone is the highest anywhere in Kathmandu as shown in Table 1 below (F.A.R. is 4.5 for this zone). The height restriction applied in the Mixed Old Residential Sub-Zone is also highest for any zone in Kathmandu. People could build as high as 18

meters (59 feet including the staircase cover) as long as the F.A.R. allowed them, covering as much as 100 percent of their land. Compared to new residential zones, where the F.A.R. is as low as 1.75, the transformation brought by this new bylaw is unprecedented anywhere in Nepal.

	Zone	F.A.R.	Height (H Meter)	Height With Staircase Cover (Meter)	No. of Floors	Ground Coverage
1	Old Settlement Zone					
1.1	Protected Monument Sub-Zone	3.5	12	15	5	100
1.2	Protected (Non-Monument) Sub-Zone	4.5	15	18	6	100
1.3	Mixed Old Residential Sub-Zone	4.5	15	18	6	100
2	New Residential Zone					
2.1	Commercial Sub-Zone	3	Light Plane	H+3	Light Plane	70
2.2	Mixed Dense Residential Sub-Zone	2.5	Light Plane	H+3	Light Plane	80
2.3	Other Residential Sub-Zone	1.75	Light Plane	H+3	Light Plane	80
2.4	Planned Residential Sub-Zone	2	Light Plane	H+3	Light Plane	60

Table 1. Building bylaw for various zones (Source: Kathmandu municipality bylaws)

Disregard for shared identity and individual gain replaced the idea of communal identity and building as socio-cultural practice with the adoption of new planning policies (Selter Elke, 2007, p. 4). The planning policies adopted by the state government allowed property owners to build freely without considering the physical character of the surrounding built environment. In the town, where buildings were three to four stories high, people were allowed to build as tall as six and seven storey, as they adopted higher height restrictions as shown in Table 1 above. Considering that the original built fabric was comprised of houses only as high as four stories or 12 meters (39.3 feet) as shown in Figure 29 below, it affected the town in many ways. Not only there was a severe overuse of the public infrastructure, but public open spaces also lost their original character. As one homeowner added floors, it shaded adjacent buildings and blocked views for others, forcing adjacent building to add floors as well. Soon, it was a race to build taller. As the size and scale of public spaces was a constant in the historic core and the buildings surrounding it got taller, there was a loss in the proportion between the size of open space and the building enclosure.

Taller building allowed inhabitants to capitalize their land ownership to the maximum, but in the process, it destroyed the Kathmandu's traditional built fabric. Taller buildings violated the scale and proportion of the open spaces. As open spaces were an intricate part of socio-cultural life, changes in the built fabric had adverse effects in these activities.

Access to sun in these spaces was very important, but new planning policies neglected this requirement. In turn, it relied on generic height restriction regardless of the size, scale and shape of the open space.

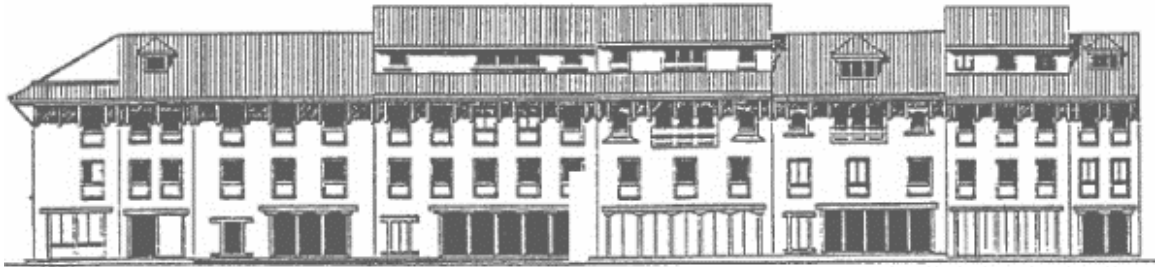


Figure 29 Traditional Street Elevation

People were not only building taller, but they were also building haphazardly and very dangerously. They were building as and when they wanted in an incremental fashion. This destroyed the skyline and harmonious nature of the traditional street façade, as shown in Figure 30 below. In some cases, homeowner added up to three floors more upon the old foundation originally designed to take only the load of a three to four storey building. This is very problematic, since Kathmandu lies in Zone V for earthquake vulnerability.

The skyline is an integral part of the built character of traditional towns. The residential buildings in Kathmandu's historic core are three to four stories high with a sloped roof structure, creating a harmonious built fabric and uniform skyline. In a traditional town, residential buildings were never taller than temples, which was one of the measures of height restriction. Even though there were no written bylaws, people abided by such building practices, as it was established as a social norm. As all buildings had similar height, they created a uniform skyline and a built fabric that was homogeneous, appearing as a single entity as shown in Figure 29 above (UNESCO, 2006). Uniformity in skyline also represented unanimous adoption of singular building practice by all community members and common lifestyle of all city dwellers. It reflected the strong communal identity of the town, where each building was an integral part of the larger urban fabric, and each household was an integral part of the larger social fabric (Shrestha B. K., 2011, p. 8).



Figure 30 Impact of planning bylaw on street elevation (source: *The P.U.S.H Effect, People, Urban, Society and Heritage*, Rakshya Rayamajhi)

With new planning policies, municipality adopted the Light plane concept, as shown in Figure 31 below, to control the building height at open space in new residential zones and other zones except in the historic core. This concept was not applied to the historic core, as it would have significantly reduced the development potential in the historic core. With the Light Plane Concept, the municipality would not have been able to achieve a floor-area-ratio of 4.5 in the historic core. The Light plane concept provides the possibility of defining the proportion between building height and width of the street, but it too has a major drawback. The Light plane concept only considers diffused daylighting and neglects thermal gain associated with solar access. Hence, it does not take into account the dynamic nature of the sun and applies it for all orientations (KVTDC, 1993). In the context of Kathmandu, it uses an obstruction angle (angle made by top of one building to the base of opposite building) of 63.5 degrees.

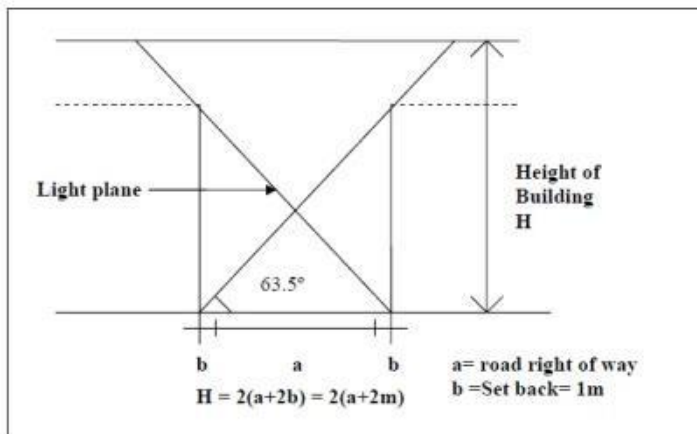


Figure 31 Light plane to restrict height of buildings (source: *Kathmandu municipality building bylaws*)

A study of solar altitude angle during summer and winter solstice through 9 am, 12 pm, and 3 pm, as shown in Table 2 below, indicates that the solar altitude angles through winter period is less than the obstruction angle of 63.5 degrees. This shows that the

building height that follows light plane concept would not have been able to ensure solar access at public open space during winter, when solar access is required the most.

		9:00 AM	12:00 PM	3:00 PM
Winter Solstice	Dec. 21	24.97	38.74	20.79
Summer Solstice	21-Jun	51.55	85.22	47.27

Table 2 Solar altitude angle for summer and winter solstice (Source: <http://www.susdesign.com/sunangle/>)

3.8 Sun-Based Activities in Public Open Spaces

There are many activities in public open spaces that rely completely on the sun. Some of these activities range from drying clothes, grains, vegetables, making clay utensils, etc. (Chitrakar R. M., 2011, p. 80). People enjoy sitting on building steps to bask in the sun and socialize during winter. Even during summer, it is not too hot to sit outside and there is presence of summer breeze. Besides, the buildings on southern end of community space provide shaded area to avoid sun during hottest days of summer. Cottage industries, like pottery, rely on the sun to complete an essential part of its production process, as shown in Figure 32. After skillfully carving out a beautiful vessel from a lump of clay, the potter leaves it in the openness of the square to dry in sun for days. If the clay pot does not receive adequate sunlight, it cracks while baking in the kiln. Besides pots, many building materials like roof and roof tiles, decorative terracotta, and coal-based space heaters are made using a similar process. Hence, it is very essential for the pottery industry to have sun access (Harvey, 2003).

Kathmandu Valley has very fertile land, which is considered one of the reasons why settlement first started in Kathmandu. Rice is one of the staple foods in the valley and is prepared either in the form of beaten rice or normal rice.



Figure 32 Potter carrying sun-dried pots to brick kiln (Pradhananga, 2013)

Preparation of both types of rice requires drying the sheave in the sun. When monsoon season ends in October, the harvesting season begins. After the rice is harvested, the sheaves are left to dry in sun for several days, as shown in Figure 33. Then the rice grain is separated from sheave by beating it onto the ground. Drying grains, beating sheaves, and winnowing is a regular sight in open spaces during October, which creates a festive atmosphere in these open spaces. Hence for the production of rice, which is a staple diet in Nepal, sun is necessary.



Figure 33 Woman drying rice grains in Sun

Nepal relies on hydropower for its source of electricity. During the winter season, the water levels of rivers drop, and there is an acute shortage of power. However, in the winter season, people require more electricity for heating purposes. With a lack of electricity, people have to rely on the sun for heating more than ever. As a result, people often sit outside in the sun in public spaces during winter. Sitting in sun also gives people increased opportunities to meet and interact, as shown in Figure 34 below.



Figure 34 People basking in Sun

"As sunlight appeared in the roughly 50 by 50 meter (164 feet by 164 feet) public square, elders and children came out of their houses with rectangular hay mattresses to sit in the sun (Khanal, 2013)" - Excerpt from an interview with Surya Kumar, who works his living by making clay utensils.

CHAPTER FOUR: CASE STUDIES

4.1 Te-Bahal Sankata

The Sankata Tebahal is situated in ward number 22 of Kathmandu Metropolitan City. It has several significant sites in its environs like tundikhel in the east, New road gate in the north, Dharahara in the south, Khichapokhari in the south west etc. It has many financial institutions, banks, corporate offices, residences, commercial centers etc.

4.1.1 History

Te Bahal (also called Raja Kirti Mahavihar) is the largest bahal in Kathmandu, Nepal. It is home to the renowned deity Sankata, worshiped by both Hindus and Buddhists. Unlike other Bahals of Kathmandu, Te Bahal has two Dyochhes (house for gods) representing the existence of two bahals which were later merged into one. Wright's chronicle acclaims the Lichchhavi king Narendra Dev with the construction of a baha here for his guru, and setting up the shrine of Sankata.

Sankata Temple is one of the holy temples situated at Te Bahal, The Goddess Sankata is taken to be a form of Durga in Hindu culture. Sankata is a popular divinity who is worshipped, especially on Saturdays, to ward off bad luck and sickness. Legend has it that during the rule of the Malla King Narendra Dev, a Gubhaju, a Buddhist sorcerer skilled in Tantrik practices, called Bandhu Ratna Bajracharya, with the permission from the king, used his Tantrik powers and brought Sankata and Yogini into two different holy pitchers and worshipped them. Later, a temple for the goddess was established during the reign of King Gunakama Dev. The deity is worshipped by Bajracharya priest. The temple complex and the bahal is very crowded during Saturdays and Dashain festival.

4.1.2 Existing Scenario

The Te-Bahal is spread over an area of around nine ropanis and has two entrances one in the eastern side and another in the south west side to Khichapokhari. Besides Sankata temple it also houses Bhadrakali temple, Heart clinic, ward office, school and Sankata club. Apart from normal activities of bahal and temple complex, highly commercial activity is prominent in this bahal. The open space is occupied by the street vendors and vegetable

markets as well. It also serves as a pay parking area. Various activities are observed in the area like playing, commercial, religious activity, recreational, resting, chatting, walking, parking, awareness/ blood donation programs etc. There are no dust bins for collection of the garbage. Ward office is responsible for the solid waste management and club has provided lights in the area. Further the storage of construction materials on the open area is blocking the activities. It has public toilet facility.



Figure 35 Te- Bahal with Sankata Temple



Figure 36 The Pay Parking Area

The entire area of te-bahal is surrounded by three to eleven storey buildings with shops in the ground floor. The building typology ranges from traditional to modern. The floorings are a mix of brick and stone tiles. The flooring tiles have worn out and slipped out of the place and there is problem of water depositing in the floors during rainy seasons. The haphazard wires from the electrical poles are making the area unsafe. The area constitutes only hard surface without greeneries.



Figure 37 Buildings of various Height



Figure 38 Unmanaged Parking and Bolckade of Access

4.1.3 Social Issues, Environmental and Economic Issues

The Te Bahal serves as a space for socialization where different activities like playing, walking, recreation can take place. However, there are issues of theft during the peak hours of worshipping in the temple like on Saturdays and festivals. The trend of building houses taller is making the area unsafe during the disasters like earthquake. Further the garbage disposals in the open area are polluting the space. The haphazard parking in the entire area is blocking the access and creating insecurity for pedestrians and open space users. There are issues of encroachment of the open space by the projections made from the surrounding buildings. The presence of large open space in such highly commercial area is accelerating the land value of the area. Further the open space has created economic opportunities for the locals.

4.1.4 Management

The Sankata club is entirely responsible for the management of the bahal area. The management of the crowd in the temple area, pay parking, permission for the conduction of different activities like various types of programs, feasts are organized by the club. However, the ward office is responsible for solid waste management of the area. There is a good co-ordination between the locals and the club so the management is not difficult. The management receives budget from the ward budget and the funds collected from the pay parking, programs and parties. The management feels they are unexperienced and seeks guidance for the planned development of the area. They are in a phase of preparing the master plan of the area for the sake of developing the area in planned manner.

4.2 Revitalization of Open Spaces in Kirtipur

Open spaces have always formed an integral part of the settlement planning in the traditional settlements of Kathmandu Valley in Nepal. These have been inbuilt in the form of public and private courtyards, chowks, Pati's and water ponds in the core settlement areas. The open spaces have been used not only for performing the personal daily activities but are also commonly used as an area for celebrations and festivals as well as other social events year-round. Open spaces played a significant role in the traditional planning

practices where housing was densely planned for security purposes and preserving the agricultural land, the basis of subsistence in the agriculture-based society. Thus, open spaces have been and still are important elements in the traditional settlements of the Kathmandu Valley. Additionally, the open spaces were important from a disaster risk reduction point of view: the locals use them for shelter during earthquakes.



Figure 39 Dey Pukhu, Kirtipur (old Situation)

4.2.1 Challenge for Revitalization

Now these open spaces are deteriorating and lack proper management. The influence of modern culture has brought considerable change in the usage pattern of public space. Activities that were once performed in public have been coined into the residences, with people focused on more individualistic activities than communal. The public spaces that in the past were well taken care off, have slowly started collapsing. Maintenance on a municipal level is ineffective and lacking. The public spaces are rapidly deteriorating and other uses (such as car parking) are encroaching on their space.

The solution is to revitalize Kirtipur through promoting a people centric pond and public space improvement and establishing a management structure to maintain the public spaces. The project is tri-fold: to improve the traditional water management system, to conserve and enhance existing public spaces for the better utilization by communities, and to build capacity of local community and local government in public space management.

4.2.2 Pilot Project in the Dey Pukhu area

One of the key open spaces in the historic core area of Kirtipur is the Bagh Bhairav temple and its surroundings. This area was chosen as the pilot project for demonstrating people-centric open space management. The traditional pond (Deupukhusi) and rest places (pati) are some of the significant traditional elements existing in the area.

The pond was in a neglected state, despite its sociocultural importance. The land where the rest places (pati) were located had been encroached for private car parking use. With joint efforts between the municipality and the local community, the rest places were returned into their original style and public use, during the renovation of the pond. The renovation aimed to create a more people-friendly space for social gatherings and interactions.

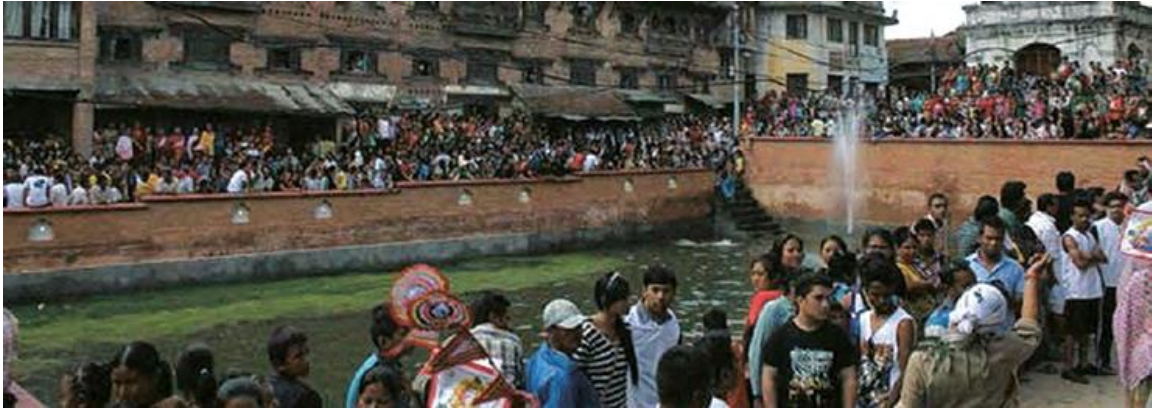


Figure 40 Dey Pukhu, Kirtipur (After Revitalization during Gai Jatra festival)

From November 2013 to March 2014, UN-Habitat, Mojang and the Centre for Integrated Urban Development (CIUD), the local implementing partner, worked together to conserve and enhance Dey Pukhu and the surrounding areas. Through community participation and stakeholder engagement, plans for up-grading the public space was prepared. Since the Dey Pukhu public space project in Kirtipur has been completed, the municipality has been inspired to also embark on developing a Public Space Revitalization Plan for the whole of Kirtipur. This plan includes an analysis of all the existing public and open spaces, strategies for their revitalization, embracing a participatory design process and allocating resources from the municipal budget.

The experience from Dey Pukhu also inspired the same team to start a second project in Kirtipur together with the community. The site is a large green open space (park), which includes a school, a temple and important water points.

4.2.3 A Participatory Process

The design phase of the project as well as the implementation was done in a participatory manner involving the different stakeholders associated with the area. The people-centered approach was at the core of the project and engaged the elderly, youth and women's group

towards the design, implementation, and the management of open spaces. It also involved capacity building at the local community and municipality levels.

The construction work was carried out with the help of different stakeholders: implementation team, municipality and community representatives, and local workmanship. The coordination of different stakeholders provides for more sustainable and manageable future. Different trainings were organized in order to raise the awareness of the project. These trainings built local capacity in community led planning and management, pond conservation, public space management, and sustainable urban drainage.

The general strategies adopted for the improvement of the open space included:

- Improvement of the physical environment (lighting, seating, etc.)
- Renovation of the courtyards in the vicinity
- Improving the linkages between the open space, streets, and squares
- Enforcement of rules and regulations on encroachment of public spaces
- Adding recreational activities for all age groups to make the space more lively
- Setting up a framework for the maintenance of the pond walls, waterspouts, etc.

4.2.4 Lessons

The Pilot project at Dey Pukhu and the lessons learnt have been significant in giving direction to formulation of the revitalization plan. Community consultations were an integral part of the design and implementation for the Dey Pukhu public space site, but also in the formulation of the plan.

Revitalization of the traditional inner core was important to improve the image of city, enhance the quality of life, and boost the city at eye level. It is also being increasingly acknowledged that investing in public space brings measurable economic benefits by stimulating growth in visitor economy (tourism), raising property values, and increasing commerce for local business.

To improve the image of the city as a live able, traditional and historic city, it is essential to create a network of quality streets and spaces for transformation. The revitalization plan

of Kirtipur aims at the development of the traditional city core in a holistic approach, making it more economically and environmentally sustainable by welcoming tourists, encouraging pedestrian routes and enhancing the use of the open space. Important aspects of the program are community planning, sustainability, local fundraising, program ownership, and the operation and maintenance. Overall, the program is directed to create a vibrant, dynamic and inclusive city that encourages the use of its assets.

4.3 Case study of Dhaka

This study aims to determine the physical characteristics, perceptions, and usage patterns associated with parks. The study consists of (a) selection of a sample of parks, and (b) use four types of surveys to better understand their characteristics. Therefore, the survey findings were used to recommend design improvements for one of the parks i.e: Boishakhi Khelar Math, a sports field in the Rayer Bazar neighborhood.

The selection of parks was undertaken in an ad-hoc manner, but nonetheless features a variety of spaces: city parks, neighborhood parks, and sports fields. City parks are often larger, and generally boast organized outdoor recreational facilities. They are used by city residents more broadly speaking. By contrast, neighborhood parks are often smaller than city parks, and typically serve the local community more than city residents as a whole. Sports fields, also known as "khelar math" are parks primarily used for sports—in particular, football, cricket, and badminton. In order to better understand the 12 parks, four types of surveys were done:

- General Public Survey,
- Park User Survey,
- Direct Observation Park Survey, and
- An Activity Survey.

General Public Survey was done

- To understand whether and why people visit parks.
- To understand what changes would encourage them to visit (or more frequently visit) parks.

Park User Survey was done

- To ascertain which activities are undertaken by users of parks,
- To know benefits they gain from doing so, their perceptions of current conditions, and their suggestions for improvements.

Direct Observation Park Survey was done

- To gather direct observation information about the characteristics of the parks and available facilities.
- This survey focuses on the physical environment, in terms of what facilities are offered.

Activity Survey was done

- To understand the location and type of activities that takes place throughout the day in the parks.

Parks are of vital importance to urban dwellers, yet they are too often neglected. Priority must be given to the improvement of these spaces, so that they can fill their role as places of relaxation, interaction, and active recreation for people of all ages, genders, and activity limitations. This study is part of a larger initiative to enhance and expand the network of such spaces in Dhaka. The study has the major findings and recommendations as follows:

- 1) **Prioritize walking over other transport modes:** The study recommends the use of traffic calming and parking restrictions to simultaneously:
 - Increase safety for pedestrians, cyclists (including rickshaws), and transit-riders,
 - Provide more convenient access for these same people, and
 - Reduce noise pollution.
- 2) **Provide ample furniture, shelter, and shade:** The study recommends providing ample furniture, shelter from rain, and shade from sun in all parks.
 - Furniture should include both benches and tables.
 - Shade may come in the form of trees, but shelter from rain should be less permeable, e.g. large umbrellas, gazebos, etc.

- 3) **Explicitly cater to all ages, genders, and activity limitations:** The study recommends catering park infrastructure and activities to all ages, genders, and activity limitations. Such as:
- Organizing women-only activities, e.g. women's bike rides, or
 - Providing infrastructure better-suited to elderly and disabled people, e.g. flat, well-maintained walking paths.
- 4) **Engage the community:** The study recommends incorporating community engagement into all planning and implementation stages of park design and maintenance.
- 5) **Plan for maintenance:** It is important to plan for maintenance.
- Furniture, playground and sports equipment, toilets, and water taps need to be checked and repaired regularly. Secondly,
 - The sports field, green spaces, and landscaping (including groundwater recharge points) need to be maintained. Third,
 - The grounds, toilets, and waste bins need to be cleaned continually.

These tasks ensure that parks retain their enhancements after initial interventions are made.

CHAPTER FIVE: AN OVERVIEW OF STUDY AREA, CHAPAGAON

Chapagaon, (previously known as “Shtharudranga during Lichchhavi period and Champapur during Malla period) presently located in Godawari Municipality, ward 11, is traditional Lichchhavi town established in 6th century and developed considerably during the Malla period. The town is located about 10 kilometers south of Patan Durbar Square and is spread across 68 square kilometers (Shuchana Bibhag, 2031 B.S.). Ancient name of Chapagaun is “Champapur” as it is believed to have been established by clearing a “Chanp” forest. Its name in Nepal bhasa is “wa: dey”, “wa:” meaning rice and “dey” meaning country hence “waa:dey” meaning country with very good rice production.

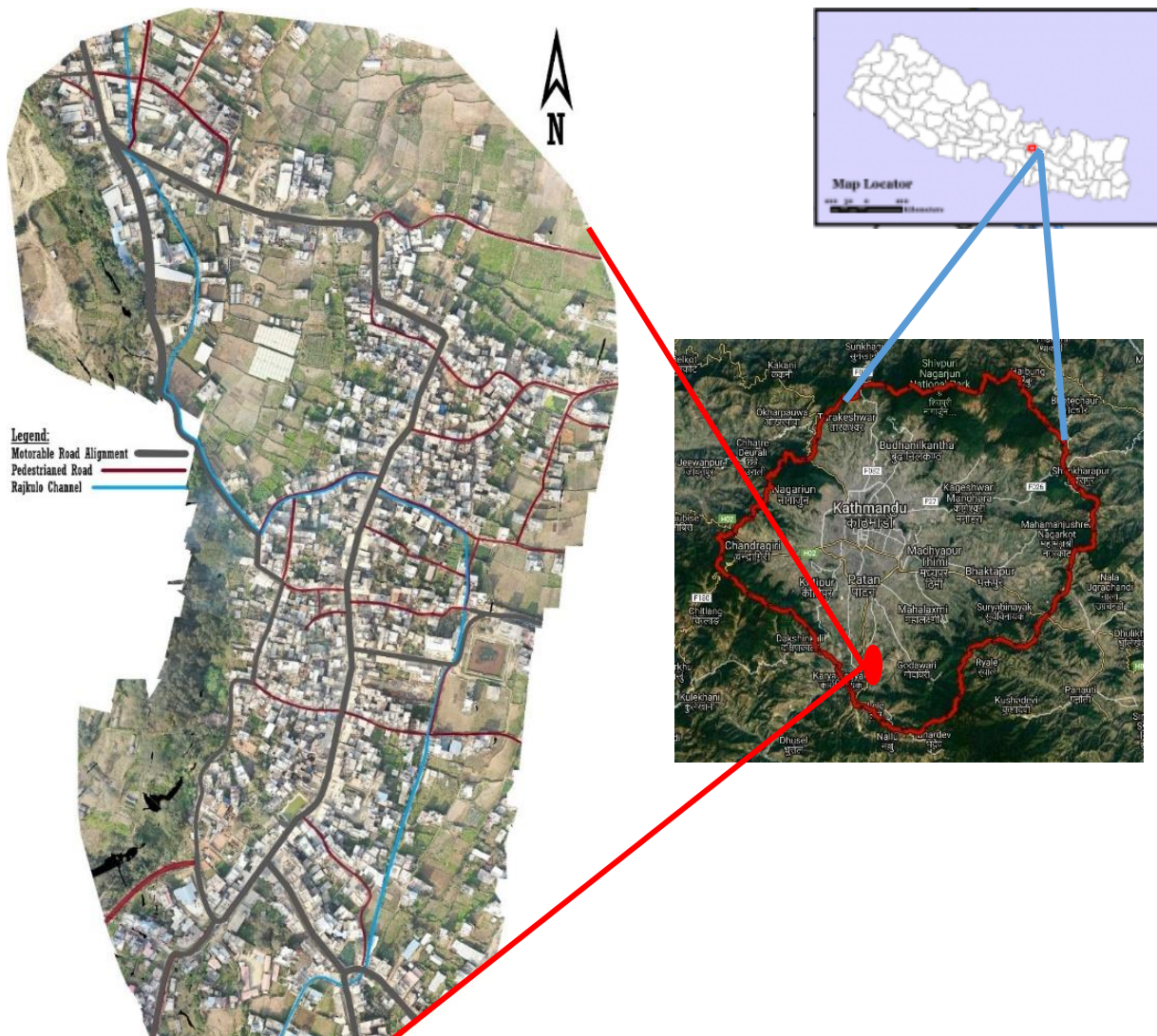


Figure 41 Location Map of Chapagaon

Chapagaon is also known as the southern gate of Kathmandu valley and served as a main taxing point for various goods brought from Terai for centuries. Having two settlements Bulu and Pyangaun in neighborhood also adds to its importance. Bulu and Pyangaun however have its own historical and cultural importance.

In different inscriptions, this town has been mentioned as ‘Chapagaon’, ‘Champapur’, ‘Wa:Dey’ and ‘Wawa:’. However, the local Newar residents and Newar people from neighborhood use Wa:Dey in local dialect and in official or administrative language the town is known as Chapagaon. From the local myths and stories about the establishment of this town, it is clear that this place was forest. The settlement was established by clearing the forest and with time, it has developed as organized town.

As defined by Carl Purucha (1975), Chapagaon, a linear settlement south of Patan, is laid out along a north-south main road. Approaching the village from the north to the road coming from Thecho, they first pass an open space where four Patis, an open well, two chaityas and an open Bhagwati shrine are located (Pruscha, 1975).

5.1 Historical Background

The Chapagaon refers to Conch Shell (Sankha:akar in Nepali) territory shown in Annex-2. But the territory of Champapur or Wa:dey is limited to main market center and its peripheral area (c.f. Chapagaon ko Shanskritik Sampada) of earlier Chapagaon VDC (i.e. ward number 1,2,3 and 4). At present, the Champapur territory is defined by the ward number 11 of Godawari municipality, where the Malla period, Bajrabarahi Jatra is celebrated. The Chapagaon is well known for the Bajrabarahi Temple without pinnacle on its top. It is one of the four most important Barahi temple within a Valley. Champapur can be considered as a cultural unit and its boundary is surrounded by other cultural unit settlements like Bulu, Pyangaon and Thecho.

Chapagaon is also a modern administrative unit. During Panchayat regime, it was Village Panchyat under Aadarsha Gaun Panchyat of Patan district having 9 wards (Manandhar, 2059 B.S.). And after the restoration of multiparty democracy in 2046 BS, Champapur was defined as Chapagaon VDC ward number 1,2,3 and 4. In 2072 BS. Ashwin, it was declared

under the Bajrabarahi municipality and at present the Champapur is in Godawari Municipality ward number 11 as declared by Nepal government in 2073 BS, 27th of Falgun.

5.1.1 Lichchhavi Period

As mentioned earlier, Chapagaon was believed to be established in 6th century AD during Lichchhavi period due referencing to the Tashwa:Lho (in local dialect), an inscription available in Bhansar Tole of Chapagaon. The inscription is an upright stone at the time of Shivadev (ruling period 590-604 AD) which mentions about the reduction of tax in fish trade happened in this region. It further mentions about the tax variation in variety of fish trade. The inscription clearly mentions the town as “Stharudranga”. The dranga represents the developed and organized settlement during Lichchhavi period. Tiwari (1989) also mention the presence of Bhansar Adda in Chapagaon during Lichchhavi era as taxing point on the goods supplied from southern region,

Terai to Kathmandu Valley. Hence, it can be concluded that the town was settled before Shivdev inscribed this inscription. The inscription clearly gives an idea that, there was existence of developed settlement and is a trade center, as tax on trade activities were imposed in this region in those times.



Figure 42 Bhansa Cheen, tax offices in Bhansa Tole of Chapagaon

There is another inscription at Yaku Tole of Chapagaon, that has been inscribed under the lotus part of Dev-Murti. The inscription mentions only “Kuber-Gupta” and “Anik-Gupta” nothing else. The inscription date is also not there however, the Jalahari script used in the inscription is predicted from the period of Basanta Dev (506-538 AD) (Bajracharya, 2030 BS). Hence, it can be predicted that, this town was organized settlement before the 4th generation of Shivdev. The Dev-Murti form Bananta Dev era is remarkable stone sculpture. It is often considered as Dattatreya or locals considered it as Mahadev whereas the

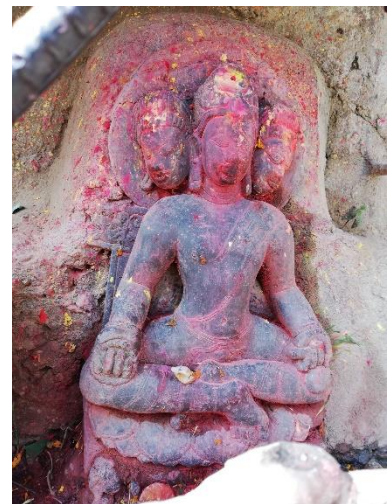


Figure 43 Brahma Murti dated back to Lichchhavi Period

posture of murti reflect it as of Brahma, the creator, as per the description available in Lichchhavikaalka Abhilekh by Dhanbajra Bajracharya. The Murti is only one statue of Brahma, the god of creator, found in Nepal.

After the end of Lichchhavi era and before the establishment of Malla era, in about late 10th century i.e. Nepal Sambat 111 (991 AD), Wright (1990: 113) mentions, the two Malla Mukhiya or Chieftans, Raj Malla Dev and Kathayaa Malla established this town and named as “Champapur” (Manandhar, 2059 B.S.). Whereas, Karmacharya (2018), local resident, town priest (engaged in ritual activities in every cultural occasion) and local researcher mentions, the town was ruled by the Rajdev Malla from Bhaktapur in N.S. 711 on the day of falgun sukla astami. When the eldest son of King Manigraraadhipati, Rajdev Malla was born, the astrologer warned, the king should never look upon the face of son so, king brought Rajdev Malla, and Bhashami Mallas, Karmacharya and Desar to Chapagaon (Karmacharya, 2018). The king established a Palace with a settlement around it at the southernmost end of the valley and this place became the residence of the prince. The people, however, called Chapagaon “wa”, the place of exile – in Newari, “wawadesha” from the word “wayegu” meaning “to throw”. The successors of the prince who was thus banished by his father were known as Babus. Even today there are people of the Babu caste living in Chapagaon. (Carl Pruscha: Kathmandu I; pg. 102). Because of the planned settlement, from the establishment period, it was inhabited by skilled manpower from all sector of trade necessary for livelihood.

In historical development of Kathmandu Valley, the chronological history mentions that the Mallas ruled Kathmandu and Lalitpur during mid-13th century. According to famous historian, Sarad Chandra Sharma, also, King Dharma Malla ruled Chapagaon before Malla dynasty ruled over Kathmandu Valley. Hence, from above mentioned facts however the variation in ruling timeline, it seems like the Malla Kings ruled Chapagaon before they rule over Kathmandu Valley.

5.1.2 Malla Period

During Malla period there was “Chauki”, a check-post that was confirmed with reference to written document from N.S. 442 (1322 AD) where “Champagulla” has been mentioned

(Panta, 2037 BS). It seems like there was good arrangement for provision of peace and security from that period.

During 1382- 1395 A.D. King Jayasthiti Malla introduced caste division system on the basis of their work as social reform. According to their occupation, different caste people had been resident of this town. There was provision of “Mukhiya or Deshwar”, head man of town, for the improvement and development of town, which latter become “Desar”, currently the dominant/ highest population, in Chapagaon. This also address that, once the Chapagaon was planned settlement and is also an independent social unit.

Throughout the history, this town had been ruled under different administrative unit. In terms of geographical distance, the city was in close proximity to the state of Patan. This town was under state of Kathmandu also at the time when the ruler of Patan is inactive (Manandhar, 2059 B.S.). This town was devastated by the attack of Mukunda Sen, King of Palpa also. In such situation, the Malla rulers contributed from their own for the development of this town. (Panta, 2037 BS). Amar Malla occupied Chapagaon along with Patan and its neighboring villages. As stated in the joint correspondence of Narasimha, Purandar Singh and Uddhav Singh of 1572 AD, it is clear that Champapur was within the boundary of the Patan state at that time (Panta, 2037 BS). And Chapagaon was under administrative unit of Patan, however, Shivsimha Malla ruled Patan and Kathmandu independently in 1581 AD.

According to the inscription in the Jhyalpati, Durkhyo Mahavihar, during the regime of Shiv Simha, Shakyamuni Buddha statue has been established in Hemkarna Mahabihar in N.S. 736 (1616 AD) as religion deity of Shakya clan. The inscription of N.S. 739 mentions Chapagaon as victory kingdom of Siddhi Narsimha Malla. And, the inscription of Bahal from Ikhatole, Chapagaon mentions Siddhi Narsimha Malla established Bajrashan Shakyamuni, Mahankal Maheshwori Shree Chakrasambar Bajrabarahi in Champapur Bihar through local Bajracharya priest in N.S. 774 (1654 AD). Similarly, King Srinivas Malla in N.S. 786 (1666 AD) started a Bajrabarahi Jatra offering worship and gold statue of Bajrabarahi goddess in the temple.

From above it is clear that the Chapagaon is Lichchhavi settlement that developed during Malla period as town with social, cultural and religious significance. The history of

Chapagaun being used as a taxing point is also verified because of one of the tole is called 'Bhansar tole' which itself means taxing point. All the goods that came from the southern side were taxed here before it was taken to Patan.

Beside the historical and commercial importance of Chapagaon, the town is also an important cultural unit. There are many community groups living in Chapagaon which is a unique feature in such satellite towns along with many temples, chaityas and bahil. The temple of Bajrabarahi is one among the four Barahis of the Kathmandu valley which establishes its religious importance. In medieval times this used to be a walled city, the wall surrounding the city was known as 'De Pakha:' and there were in total 8 gates to enter the town. Among those 8 gates the ruins of 3 of the gates could be found until 30 years ago. The eastern boundary of this traditional town is determined by a 'Rajkulo' which is a traditional water system to bring water from the water shed area to the town. This Rajkulo at present is in a depleting state but is still functioning. This Raj kulo used to fill the 9 ponds that are around the traditional town and at present since the Rajkulo is in a depleting state some of the ponds have also dried up.

In most of the traditional town, almost all were resident by homogeneous caste people. In nearby traditional town, Bulu, Thecho, Lubhu, Sunakothi, Khokana, Maharjan are dominant, and in Machhegau, Manandhar are dominant. But in Chapagaon, different caste people reside in mixed ratio. As mentioned above, Desar are highest in population, following Shrestha, Maharjan, Bajracharya, Shahi, Kapali, Napit etc.

5.2 The Urban Form of Chapagaon

As mentioned above, the Chapagaon settlement was established in 6th century AD, during Lichchaavi period. During that period the settlement had been mentioned as "Stharudranga" due referencing to the "Tashwa:Lho," an inscription (at the time of Shivdev) available in Bhansar Tole of Chapagaon, translated by Dhanbajra Bajracharya in Lichchhavi kalin Abhilekh. The "Dranga" represents settlement with temples as a central element of the town (Tiwari S. R., 2003). Whereas, in "Stharudranga" there is a tax office as central place. The settlement has been developed around tax office. From these findings indicate that the current chapagaon was established during Lichchaavi period.

As of other Lichchhavi town, “Stharudranga”, current Chapagaon is also located in ridges or high lands of the Valley floor (i.e. southern hill of Lalitpur at an altitude of 1400m to 1700m above the sea level), away from hill source with very low subsurface ground water. This led to the development of pond with deep wells as reservoirs and depressed pit conduit for water supply. At present there are 9 ponds around the vicinity of the town and one depressed water conduit in Bhansar Tole. According to the local resident Krishna Shrestha (aged 70 yrs.), there were two more depressed water conduit, one at Ikhatole, east of Ikha Bhairab temple another at Bhailene Tole, (current taxi station). They were covered during Panchyat regime however, the exact origin date of these water conduit and reason behind covering of them is not known. The one depressed water conduit at Bhansar tole is being restored by Lumanti, Support Group for Shelter, for heritage recovery in Chapagaon. Tiwari (1989) mentions very few of these water systems could have river source hence they require construction of ponds as reservoir. The similar urban characteristics can be seen in Chapagaon at present. The location of 9 ponds around the vicinity of town and are recharged by the Rajkulo, eastern boundary of town, managed the requirement of water in settlement in ancient time. However, at present the ponds are not maintained well as they used to be in earlier days, says Rajaram Shrestha, local resident. He further mentions, the water from Bhansar Pukhu was used for drinking purpose during his childhood. The Rajkulo is a traditional water system to bring water from the perennial source to the town.



Figure 44 North- South Cross-section of Chapagan (Source: Google Earth)

In Chapagaon, the source is Lele khola channeled from Tikabhairab and at present it is in depleting state but is still functioning.



Figure 45 West -East Cross-section of Chapagaon(Source: Google Earth)

The total area of Chapagaon covers 6.79 sq. km. of which 80% of land is plain area and 20% is slope (Shrestha R. , 2071 BS). As it is located in ridges or high land of Valley, the settlement is slope towards northern direction from south and western direction from east simultaneously. Carl Purucha (1975), also mentions, “the village is built on terraced land which slopes slightly from south to north”. It clearly mentions, to the west, the land rises to the Bajrabarahi forest and to the east, it descends to the river. The settlement is covered by agricultural lands, forest and rivers on its periphery. To eastern boundary, the settlement is covered by agricultural land, which seems to tend towards new residential expansion area at present (also shown in cross-section of Chapagaon in above figure 44 and 45). To the north-east of this settlement, there is an important forest, Bajrabarahi forest covering an area of 19.05 ha, that houses the most important temple of goddesses Bajrabarahi. Bajrabarahi is the main deity of the town and local people believed that the goddess is guardian deity of town. To the east of this forest “Narkate Khola” flows towards northern direction that originates from Muldol, south-eastern part of the settlement. And to the western boundary of this settlement there is “Pagale Ban” (forest) following lowland agricultural area. There is also a “Tikabhairab khola”, often called “Nakhhu” river on west of the settlement that again flows towards northern direction and mix with holy river Bagmati in Chobar area. According to the Karmacharya (2018), the ancient name of river is “Prabhawati” river. During the “Dwapar era”, the princess Prabhawati, sister of Banaashur, king of Thankot (Sonitpur), came to take holy bath in this river every morning and the river between Chapagaon and Chhampi territory got its name Prabhawati river from that period. He further mentions the Chhampi Ganesh of Chapagaon is taken to this Prabhawati river, after offering Yagya (homage ritual) at the day of Mangsir Chaturdasi every year. And on very next day, Purnima, (on the day of Yamari Purnima) the Chhampi

Ganesh is taken back to Chapagaon with chariot procession and jatra by devotees (Karmacharya, 2018). The southern boundary is covered by agricultural land (Sheraphant area) and to south-eastern part of the town, there is historically and culturally important settlements, Bulu and Pyangaon. Similarly, to the northern boundary, there is agricultural land and to south-western part there is Malla town, Thecho.

The streets have been the main elements to define the urban form of ancient settlement creating the square geometry as explained in Chanakya's Town planning principles by Kautilya. Lichchhavi and Malla towns did follow similar principles as Malla town planning used Vastupurusha mandala from the fact that the Ananda Malla used Astamatrika mandala in 1260 AD while restructuring the settlement of Bhadgaon. The exact square geometry is not seen in study of urban form of Chapagaon similar to many other outlying towns of Kathmandu Valley. It does not exhibit any strict urban form at present probably due to long history of different ruling period and gradual development in time frame. It seems like it did try to follow similar town planning principles somehow from the location of natural element, "Bajrabarahi forest" and "Narkate" river on its north-eastern direction and "Prabhawati" river in western side of settlement as Chanakya mentioned there should be water/ water bodies in all sides of settlement and Dams should be built over rivers and Nalas. Dam construction in Tikabhairav, southern part of settlement, to channel the water to Chapagaon settlement from Lele river as Rajkulo is still in function at present but in depleting condition as mentioned earlier. However, the construction period of dam is yet not known while many researchers believe dam construction in Malla period.

The shape of settlement is also in rectangular geometry as suited to land topography, as mentioned in Chanakya's Town planning principles. The rectangular shape is defined by the streets that surround the settlement in outer periphery. The main street runs across the middle part of town approaching the Bhansar Adda. There are three streets across the north south direction and three streets across the east west direction intersecting each-other creating the grid geometry. The central part of the grid geometry housed a Bhansar office/ Adda and central urban open space for the social and cultural activities or occasion of the settlement. The central space holds prime importance regarding the social, cultural and

economic activities of the settlement and was considered the actual Bhansar Tole of then “Stharaudranga” as per the local resident and researcher, Rajaram Shrestha.

After the Lichchhavi period and before the establishment of Malla period, the settlement was bounded by “De-Pakha” (boundary wall) from all side. The Rajdev Malla, from Bhaktapur established the town in NS 111 (991 AD) and named the town “Champapur.” The Palace was established on the eastern side of Bhansar Tole, and constructed the entry gates to different entry locations of the town. According the Buddhi Bahadur Shrestha, (aged 76 years) local resident of Barkha Tole, the Champapur was surrounded by “De-Pakha” from all sides and there were six “Dwar” or “Dhokha,” entry gates to access entry and exit to town. Among the six gates, he himself had witnessed the remains of 3 gates till B.S. 2045/46 (1963/64 AD). The gates were located nearby the location of ponds, Ikha Pukhu, Barkha Pukhu, Bhansar Pukhu, Nhyakan-Dah Pukhu, Wokha Pukhu and Shiv Pukhu simultaneously, to exact cross section of streets to access entry to the town. Whereas, according to Rajaram Shrestha (aged 44 years), of Bhansar Tole, as told by his great grandfather, there were eight entry gates to the town, the location of six gates were exact as told by the Buddhi Bahadur Shrestha and among the two remaining gates, one is at the entry point to Jhocheen, near Jyoti Bihar and another at the cross-section of street near Champapur Temple. The location of ponds and Dwar/ gates were shown in figure.

As Tiwari (1989) mentions, the analysis of existing towns and outlying settlement shows the position of certain temples such as with Vishnu, Siva and Bhairav images and also the location of cremation grounds confirming with religious text in many cases. In Chapagaon, as mentioned above, there is a Bajrabarahi Temple in north eastern side of settlement constructed in NS 786 (1666 AD) by King Srinivas Malla and later it was renovated by Bishnu Malla in NS 852 (1731 AD). It is one of the most important piths of tantric origin in Valley located in small forest on the plateau east of Chapagaon (Purscha, 1975). Before King Srinivas Malla constructed Temples, there was only some stones and small pond (Wopi in local dilect) which is still present inside the temple, and was worshipped as Bajrabarabi goddesses. In mythological story of Bajrabarahi, the Varaha incarnation of goddesses used to play in that small pond as told by local ancestors. They further mentioned, on the fringe of forest there are eight cremation grounds and one is just in-front

the temple which has been shifted to about 100m west from the original location (which can be seen outside temple premise). These cremation sites belong to the people of Bulu. However, 3 cremation sites for the people of Chapagaon is on the western side of the settlement near the bank of Nakkhu river and one cremation ground on southern side of settlement on its outer periphery belongs to Kushle caste people of Chapagaon as the cremation ritual of Kushle caste people is different from other.

As temples were the important urban elements of Malla towns, different Hindu temples and Buddhist bahi were also constructed in Malla period in Chapagaon. According to the Basudev Karmachrya (aged 75 years) the Agam Chhen of Bajrabarahi goddesses Bhansar tole was constructed in NS 719 (1598 AD). He mentions, the Agam Chhen was constructed 67 years before King Sriniwas Malla constructed Bajrabarahi temple within the forest referring to the inscription available in Jaru at Paucha tole and the hand bell at Agam Cheen where date NS 719 has been mentioned clearly. There is an inscription of establishment of Shakyamuni Buddha in Hemkarna Mahabihar in NS 739 (1618 AD) by Amrit Simha and his family of Bhansar tole. Similarly, in NS 739 (1619) Shivdev and His family established Shakyamuni bhagwan in Chapagaon. Likewise, many temples and bahi were constructed within the date. The Narayan temple at Bhansar tole was constructed in 16th century and renovated in NS 772 (1651 AD) similarly Krishna Mandir was constructed establishing Balgopal statue in it. Ikhava Bahi or Kalyan Mahabihar (Ko-Baha in local dialect) at Ikha tole was established in NS 774 (1653 AD) and in NS 779 (1654 AD) silver tympanum (Toron) was offered to Shakyamuni Dharmadhatu and Mahankal Maheshwori Chakrasambar Bajrabarahi was established in bahi. In NS 789 (1668 AD) the Bhairab temple at Ikha Tole often called Yarkha Bhairab or Ikha Bhairab was constructed at the southern edge of town. According to the inscription available in Narayan temple, in NS 801 (1681 AD), local resident Ramman Bharo and his family constructed Laxmi Narayan temple and established guthi offering 12 ropanies of land for the regular worship and butter lighting in Narayan, Indra and Bung: Dyo (Rato Matshyendranath) temple. Similarly, Ganesh mandir in Ambargal was established in NS 830 (1709 AD) and another mandir (Agam Dyo) at Bhansar tole in NS 832 (1701 AD). During that period, many Hindu temples and Buddhist monuments were constructed within and around the settlement,

which resemble the harmony relation between two religion. Both the religions were given equal importance and celebrated.

As mentioned earlier, unlike other outlying settlement, Chapagaon is settled by heterogeneous caste composition of people. The king Rajdev Malla brought Bhashami Mallas, Karmacharyas and Desar from Bhaktapur to Champapur to run the state (Karmacharya, 2018) during its establishment period. Desar are the majority in number at present also. Apart from these group of people, Shakya, Bajracharya, Chitrakar, Shrestha, Maharjan, Shahi, Kushle and Poda also reside here in chapagaon. The hierarchy of social strata is not seen depending upon the importance of their occupation like high caste people reside closer to the palace however, caste and clan community is there in Chapagaon. Desar people has their own community so as Shakya and Bajracharya, Chitrakar, Shahi, kushle and Poda. The Shahi, Kushle and Poda people reside by the outer periphery of town. Whereas, Shrestha and Maharjan are mixed and scattered in social composition within settlement. The craft specialization as per Jayasthiti Malla can be seen in social composition of town.

As of the cultural aspect, various festivals and jatra are celebrated in chapagaon. These cultural activities unite the people of chapagaon. The main festival of the Chapagaon fall in month of Chaitra on the day of Chaitra Purnima. On that day the Bajrabarahi jatra is conducted started by Narendra Dev Malla (Karmacharya, 2018). On that day, chariot procession of Bajrabarahi temple is performed. The jatra is performed for two days. On the first day, the goddesses from Agam Cheen is brought to chariot and taken to Bajrabarahi temple with celebration and musical procession. On the next day local people and visitor visit temple and worship goddesses. On the day at evening, the goddess is brought to city area from temple and jatra is performed within the settlement. The path of jatra celebration demarcate the old territory of chapagaon settlement. apart from this jatra, other important jatra are Kartik Astami (Marasthi) jatra, Chhampi Ganesh jatra, Tika bhairab jatra Dashain, Khadga Jatra, Lakhe jatra, Krishna Janmastami and Buddha Jayanti are prime festivals of Chapagaon. Kartik Astami (Marasthi) jatra, Chhampi, Ganesh jatra and Khagda Jatra is not conducted at present because of the stolen image of idols.

5.3 The Urban Open Space of Chapagaon

A series of polarization nodes distanced by space as well as time results the spread of any town. The idea of any plan put up an ordered framework for these kinds of nodes such that the town will be in order in given time or perceived future time. The functional requirement of city also generates equally but distinct set of movement pattern. The functional need to stop along a route is recognized only for the living and the gods and as such all squares would lie in these routes. There are to be no nodes, or squares, along the funeral route (Tiwari S. , 1989). To conclude the functional requirement to stop, congregate and move further along a street created square and their underlying concepts. A street could be considered as a self-justifying urban element but the square has been considered only in relation to a street. The Malla towns show a distinct set of squares with a clear hierarchy of social cultural activity. These are the Durbar square or the Central Palace square (apex in hierarchy of Square), the Market square (third order of square), the Residential Neighborhood square (second order of Square) and the Private Residential square (first order of square) (Tiwari S. , 1989). Same case could be identified in case of Chapagaon also which is shown in Annex-6.

The main street where all the major social cultural functions take place is north to south oriented central street. It links the neighborhood squares and market square in Chapagaon as similar to the other Malla towns. The secondary street connects market square with Palace square and private residential square going further to meet temples along the way and other elements of urban squares like Pati, water spout, ponds etc. Some of these streets continue to the farmlands in the open area. The lesser streets or service street also connects secondary streets with private residential squares. Talking to the funeral route, service street, there are 3 funeral sites in western slope of the settlement near the Nakkhu river as mentioned above. The funeral routes do not pass through the inner core settlement thus avoiding the godly paths. There are no nodes or squares along the funeral route similar to the other Malla towns.

5.3.1 The Private Residential Square (Kalyan Baha or Ko- Baha), First Order of Square

It was established in NS 774 (1653 AD) belongs to the Bajracharya clan. It housed Bajrashan Shakyamuni shrine, Maheshwori Chakrasanbar Bajrabarahi and Mahankal goddesss in Bahal. There is one votive chaitya and Shakyamuni Dharmadhatu in its courtyard. The objective of this Baha was to perform religious function dedicated to Buddhism. In early days it



Figure 46 Ko-Baha, Votive Chaitya

performed daily rituals from birth to death, religious worship, Desana (religious teaching). At present it performed communal Bratabanda and Ihi to Bajracharya people. Nitya puja is not performed at present because associate priest is not there as their clan had been totally destroyed in past.

5.3.2 The Neighborhood Square: (Yaku Chowk), Second Order of Square

It is a square divided by main street located at Yaku Tole that houses extended families. Two streets intersect in this square, one main street and another secondary street that runs to Wakha Tole. The religious edifice, two Narayan temple, two Ganesh temple, Brahma statue of Lichchhavi period, Chaitya, well and Pati (rest house) is present here. Local resident, Krishna Shrestha (aged years) says during early days, people came to oil Narayan temple if any member of the family have difficulty in delivery of child during labor pain. Doing so, the child delivery becomes easy. At now such practices have not been performed or seen as people prefer to hospital services in such scenario.



Figure 47 Social, Cultural and Religious edifice of Yaku Chowk (Brahma Murti, Ganesh temple and Pati in left, Ganesh temple and Narayan temple in middle, and Well and Chaitya in Right)

5.3.3 The Neighborhood Square: (Ikha Chowk), Second Order of Square

This chowk is located to the southern edge of the traditional town, on the eastern side of Ikha Bhairab temple. The religious edifices Ikha Bhairab temple, Chaitya, Ganesh temple,



Figure 48 Panoramic View of Ikha Square showing Wa: Bahi, Open Space and Chaitya, Ganesh Temple and Ikha Bhairab temple (from left to right)

Wa: Bahi (Ba Bahi) and public water tank is here. It is a large open courtyard beside main street that serve neighboring community. The local resident says, in early days there was a depressed water spout nearby the water tank which was buried during Panchyat regime however, they don't know the reason. At present this chowk or courtyard is used by local people, for sun bathing, crops drying, feast during occasions. Some local vendor sells their goods like pottery products, vegetables, tambakhu, sakkhar etc in this square.

5.3.4 The Market/Community Square: (Bhansar Chowk), Third Order of Square

It is the central space of the traditional town. It is the major social, cultural, religious and economic node of the settlement as the main street and the secondary street to durbar square intersect here. Tax Adda (Bhansa Chhen) is located in this square along with Malla period Chauki (security post), Narayan temple, Krishna temple, Bhui Narayan temple, depressed water conduit, Bhimsen temple dabali square, pati, and the inscription of shivdev. The depressed water spout, pati and chauki were probably for the public purpose as it used to



Figure 49 Panoramic View of Bhansa Square Showing Ganesh Temple, Narayan Temple, Krishna Temple, Bhansa Chhen, Dabali, Bhin-Dyo and Bhui Narayan Temple (from left to right)

be more crowded space during cultural, religious, social occasion and economic practices. It is the square, where the chariot of goddesses Bajrabarahi is prepared and the jatra started.

5.3.5 The Palace Sqaure: (Bhansa Chowk), Apex in Hierarchy of Sqaure.

This square is located to the east of Bhansa chowk, community square. There is highly decorated traditional building. The local people believed that, it used to be the palace of Rajdev Malla from where Rajdev Malla rule this town. It has small courtyard in-front of it. At its periphery, there is Agam Chhen of Bajrabarahi goddesses constructed in NS 719 (1598 AD), currently being restored, Nasa: Dyo and small chiba. The half portion of building has been totally collapsed during earthquake 2015. Due to presence of main deity, this square tried to dominate others squares, the palace building is also vacant at present as maintenance work is being carried out. At present, the square seems like the residential square. The division of property deteriorate the use value of this building and square.

There are also many other private residential squares like Wokha chowk, Baku Nani, Jhochhen. These squares are owned by the family clan. There is no such religious edifice within the square. They are used by their own family clan. at present, due to vertical expansion of buildings these square acts like light well.

Apart from the squares within the settlement, there is an open space outside the settlement which has been used as the funeral site for the Kushle caste people. It is culturally important space as along with the funeral ritual for Kushle caste people, the Tika Bhairav jatra is conducted in this open space also. A ritual of Jal offering is done during this jatra and *Samay-Baji* is distributed among the visitors in this space. Later the jatra is performed within the settlement. At present the burial space has been specified in northern part of space. In southern part there is a building that houses the ward office for the municipality after local body election. Due to which, the Jal offering corner within the space is not specified at present as it used to be in north western corner in early days.

CHAPTER SIX: Analysis and Findings

Community Square- Bhansa Square is the oldest square of Chapagaon. Tax was collected on the goods from the southern part of the Valley during Lichchhavi Period. During Malla Period, this Square become major social and cultural node of town. Most of the Jatras and festivals were conducted in this Square. At present it is main market square of Chapagaon that serves as Market center for the southern part of Valley. It is socio- culturally and economically active square at present. Every house has shop in their ground floor and many of them have been used for commercial purpose.

Palace Square- Bhansa Tole was major administrative and cultural node due to presence of Palace, Garden, Bajrabarahi Agam Chhen and Nasa Dyo in early days. At present, the Square seems like private residential square due to division of property and change in ownership. The part of Palace is owned by Kayastha family at present. The square is also encroached by residential buildings.

Local resident Bir Krishna Shrestha (aged 76 years) says there was depressed water spout in Ikha Square. People come to fetch water in conduit. In Panchyat regime, the conduit was buried and it is large courtyard at present. He says neighborhood people used to organize feast during different occasions. People used to dry crops from their farmland, children used to play in courtyard and people enjoy sun basking during winter. At present feast are organized in Bajrabarahi Sattal or in Party palaces. Vending shops like pottery shops and tobacco shops and vehicle parking occupy this square at present.

Local resident Krishna Shrestha (aged 70 years) says children used to play in these neighboring squares and courtyard. Mostly aged people enjoy gossips and sun basking. At present they enjoy sun basking in their own terrace. The tall buildings also block sun in these squares also.

Many social cultural activities, festivals like Khadga jatra, Chhampi Ganesh jatra Bajrabarahi jatra during Kartik Astami are not celebrated at present. The rituals associated with Bajrabarahi festivals are not performed due to stolen of godly images and land encroachment by Guthi members. The revenue collected for celebration of jatra and rituals is difficult to manage due to encroachment of guthi property by guthi members.

6.1 Problems and Issues

After the enforcement of Land Reform Act 2021 B.S. and as per the Article 25 of GUTHI Corporation Act 2033, Guthi land can be changed into the private land paying mentioned amount, many lands have turned into private land. This led declining the traditional GUTHI system in Nepal so as in Chapagaon also.

There was 8 ropanies of land in Kirtipur allocated for the celebration of Bajrabarahi goddess birthday ritual on the day of Jestha Krishnapakshya Dasami every year. The land was encroached by the land bearer (guthi member) and registered it on his own. After that the land owner died within a year says Mr. Basu Dev Karmacharya (aged 75 years). Due to encroachment of Guthi land by individual, the birthday ritual of Bajrabarahi goddess is not celebrated at present.

Mr. Karmacharya further says, there was 6 ropanies of land allocated as flower garden to offer daily worship of Bajrabarahi goddess. At present the land is converted as playground for the Bajrabarahi Secondary School.

Similarly, the Khagda Jatra is also no longer celebrated due to land encroachment by the Thakali (senior most member) of Guthi. The Khadga Jatra was celebrated on the Dasami of Bada-Dashain. The Jatra was started from Bhagwati-sthan and concluded in Bhansa Tole Dabali on same day. The guthi member from Chapa-Cheen, Bhansa-Chhen and Baku-Nani becomes the Thakali of the guthi. During the jatra, the members from above mentioned places carry Khadga (weapon) on their hands from Bhagwati-sthan after puja rituals to Bhansa Tole Dabali and cut the Kubhindo (wax gourd vegetable) by every member in ranking.

On the day, Panchami (Chare) of every month, there was a tradition to ward off ghost in every node in Chapagaon. People worship every node with cocked rice and musical procession to ward off ghost. This tradition is also not conducted at present day as one of the members, land bearer of guthi registered the allocated land for this tradition, on his own.

Bajrabarahi jatra was celebrated twice a year, one in Kartik Sulka Astami and another in Chaitra Sukla Purnima. To conduct the jatra, 6 members of Guthi (Khumnayo in local

dilect) take all responsibility. At present Bajrabarahi goddess jatra celebrated in Kartik Sukla Astami is also not conducted since the year when godly image was stolen. After that six members of Guthi registered the land of guthi on their own. Five member (guthiyar) occupied 2 and half ropanies and main guthiyar (Thakali) occupied 5 ropanies of land. Due to which the Bajrabarahi goddess jatra celebrated in Kartik Sukla Astami is difficult to revive at present because of resources problem at present.

Stolen of godly images is also serious problem as many festivals at present are not conducted because they don't have godly images. Because of stolen godly image of Bajrabarahi goddess the rituals performed during Kartik Sukla Astami like homage ritual in Bajrabarahi temple, Cheena Darshan of Bajrabarahi goddess to local people and Samayebaji or prasad distribution is not done at present.

According to Krishna Shrestha (aged 70 years), several attempts had been made to steal Brahma Murti from the period of Basanta Dev at Yaku Tole. At present the murti is caged in iron bars for its security from local initiation. The image of Narayan Temple at Yaku tole was stone 2 years ago says Krishna Shrestha. People from local community still come to worship the temple without idols every morning.

Chhampi Ganesh Jatra celebrated in Mangsir Chaturdashi is also not conducted at present after the image is stolen says Basu Dev Karmacharya.

During Dashain, Phyo guthi offered animal sacrifice to Bhagwati god. The Khagu family was offered feast in Swarkhel, south of Bajrabarahi temple and samaya-baji was distributed to people of Bhagwati-sthan. To conduct this tradition, people from Thecho, neighborhood town, paid 7 muri rice. At present this tradition is no in continue after the construction of Health post building Swarkhel. The meat from sacrifice of animal was distributed to every household of Chapagaon which has also stopped after stolen of Bajrabarahi image says Buddhi Bahadur Shrestha.

During Chaitra jatra, 4 days prior to jatra, there was a tradition to notify all the people of Chapagaon not to lift debt during jatra if any individual had granted any form of debt. So that people could celebrate jatra with great joy and gusto. On the same day Cholechaa Jatra was also conducted. At present this tradition and jatra is not conducted. During this jatra,

before the Bajrabarahi goddess is taken out to the chariot, there was a tradition of animal sacrifice at main places of chapagaon (at Bhagwatisthan on day of Nawami, in front of Champapur temple on the day of Dasami and at Bhansar tole on day of Ekadasi) by Kanphatta priest. As the priest were not paid as they used to be, this tradition has also stopped says Mr. Karmacharya.

Once in 12 years, during 12 years festivals of Thecho, the Navadurga goddesses from Thecho visit Wokha Tole and Take bath in well of Wokha Tole. This tradition is also not conducted at present says Buddhi Bahadur Shrestha.

On the day of Baisakh Aunsi, the Tika bhairab jatra is conducted in Kushle Chaur. Due to construction of Ward office in that space, the space for jatra is encroached.

Sangaratna Bajracharya (aged 47 years) says, the daily rituals performed in Ko-Bahal is not performed at present, due to demise of the caretaker/ owner family of bahal. However, local residents maintain cleanliness and offer puja at present and during cultural occasions. Similarly, Agam Dyo of Agam Nani also does not have caretaker due to demise of owner family. None of the rituals and worship is conducted in Agam Nani says Mr. Rajaram Shrestha (aged 44 years).

Conclusion

From the above discussion and findings, it is clear that the town was established during Lichchhavi period. The location of settlement on ridges, ecological site Bajrabarahi forest, Narkate river and temple as pith on north-eastern part, Pagale Ban (forest) and Nakkhu river in western part, Bhansar Adda in central location of settlement, division of tole as districts by alignment of roads, presence of 9 ponds on the outer periphery of town resemble the urban character of lichchhavi town. However, many cultural manifestations have occurred during Malla periods like establishment and reconstruction of different Hindu and Buddhist temples, Pati, depressed water spout in major location of town, festivals and jatra along with guthis. The cultural landmarks like Narayan temple, Ikha Bhairab temple and Wa: Bahi were constructed. They build Dey: Pakha (boundary wall) demarcating the town boundaries and established 8 gates to the town. Both the Hindu and Buddhist religion are given equal importance during Malla period and crelebarted with great gusto.

Thus, chapagaon has its historical importance due to its origin and along with its socio-cultural value. The settlement was well planned along with social composition and cultural manifestation. Along with time, several changes happened primarily in its physical aspect due to urbanization. Due to such physical structural encroachment of spaces, vertical expansion of buildings, stolen of godly images, change in urban life style, economic activities, the social and cultural aspect of this town and open spaces are slowly diminishing. Many festivals are not celebrated like Khagda Jatra, Chhampi Ganesh Jatra, Marasthi (Kartik Astami Bajrabarahi) jatra are not celebrated due to stolen of images of gods. Hence this settlement needs plans and policies for its conservation due historical value along with its social and cultural importance.

The hierarchical structure of open spaces in Chapagaon shows distinct set of squares with clear hierarchy of Social and Cultural activity as of Malla Town. However, at present economic activities are also primary activity within these squares mainly in Bhansar Tole and Ikha Square. These Open Spaces have created economic opportunities for the people as they are easily accessible for them. These Open Spaces are serving as Social, Cultural and Economic nodes of town. Due to various Problems and issues like Decline in Guthi system, Stolen of Godly images, lack of caretaker and owner. The social and Cultural

activities are slowly changing the intended use of these squares. Hence, these lost social cultural activities should be revived.

Recommendations

Local Administration Act, 2028 is also very important for the conservation and management of heritages in Nepal. The act in its article 9(6) mentions that the Chief District officer (CDO) must maintain the records of their territorial public water spouts, springs, ponds, lakes, rest houses, pilgrims houses, temples, caves monasteries and mosque etc. and must maintain those monuments through municipality and Guthi corporation if the monuments are going to be collapsed or destroyed in absence of their owner. The act has given full power to the CDO for maintaining monuments within their territory and keeping record of those monuments as well, which is actually the primary work for the conservation and management of the heritage. Hence, **Ko- Bahal** and **Agam Nani** can be conserved and maintained through this act.

Guthi Corporation Act, 2033 was specially executed for the management of Guthi (trust) land and the management of corporation as well. The continuation of one's tradition for rituals, income management of those guthis and many other provisions are there in the act. Management of Guthi land is one of the important responsibilities of the corporation according to the act. Hence, through this Act. The local government should revive the Guthi's of Chapagaon for the continuation of the lost jatras and associated rituals in Chapagaon.

The encroached Guthi land and property should be backed from the guthi members as they are the revenue source for the conduction of festivals and rituals. The local government and local people of Chapagaon can play participatory approach to do so for revival of lost festivals and rituals for their conservation and continuation.

The **Ancient Monument Preservation Act** is major legislation for the conservation, preservation and management of heritages in Nepal. The act defined clearly about the ancient monuments, archaeological objects and remains and the classification of heritage as well. The act has provision for the declaration of protected monument zone (article 3),

conservation and management of heritages and the different punishment for the crimes regarding to the heritage. Hence through this act conservation and management of heritages can be enforced.

The statue of Brahma, god of creator, that is found in Chapagaon is only statue available in Nepal. It is remarkable ancient monument from the period of before the Basanta Dev. The Statue can be relocated as it was as per mentioned in inscription and needs to be protected from possibility of theft as multiple attempt has been made to steal the image.

As per the Article 96, of **Local Self Governance Act, 2055** each municipality must maintain the records of their territorial cultural and religious places and has to preserve and conserve them. On the same way, they have to preserve and conserve the archaeological objects, languages, religions, arts and culture as well. So, the role of local government would be very important for their conservation, preservation and management. Hence, record keeping, conservations, preservations of these things are recommended as per the Act.

Local government can prepare master plan for heritage recovery for the stolen godly images, declare monuments zones as the protected zone and enforce law for security of those monuments as per the national legislation. It can create **Monument Maintenance Office (MMO)** as in Bhaktapur during Bhaktapur Development Project for proper maintenance and conservation of these heritages of Chapagaon.

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Annex-1- Inscriptions of Chapagaon

The following inscriptions are studied from the Lichchhavi period inscriptions and Malla period inscriptions by Dhanabajra Bajracharya.

Lichchhavi Inscription

1. S.N. 33

Inscription of Chapagaon

Chapagaon Yaku: Tole ma Ganeshko Dewal Vanda Dakshin Patti Euta Jal-Dhroni Chha. Tes Jal-Dhroni mathi euta Dev-Murti Raheko Chha. Tesko Kamalakar Aasanko kamal Dathoma Dubai-teera gari Yo Abhilekh Kudiyeko Chha. Yaha Sambat Chhaina.

“Abhilekh- Sangraha” Nawau bhagma Samsodhanmandal dwara Yo Chhapiyeko Chha

Mul-Path

Kuber-Gupta

Anik-Gupta

Description

Yo Abhilekh Kudiyeko Dev-Murti Murtikalako Drishtile Mahattwopurna Chha. Yas Murtilai Kohi Dattatreyako, Kohi Mahadevko Bhanera Pani Tehaka Manisharu Bhandra Rahechhan. Parantu Yes Murtiko Dhyanko Bichar Garda Brahmako Murti Jasto Yo Dekhinxa. Devta Kamalma Baseka Chhan; Yinka Teen Mukh, Dui Haat Chhan. Ek Haatma Japmala ra Arko Haatma Jal-Patra (Kamandalu) Liyiyeko Chha. Chhatiko Bhangma Mrig-charma Latkiyeko Chha.

Yes Abhilekhma “Kuber-Gupta” “Anik-Gupta” Yie Dui Naam-sibaye aru kehi kudiyeko chhaina. Yaha Sambhat Pani Diyeiyeko Chhaina. Ei Kuber-Gupta Anik-Guptako Ullekh anta aayeko pani Chhaina. Yas Karan Yes Abhilekh ko Thik Samaya Patta launa ali Garho Chha. Yesko Lipidwara Aasanna Samayesamma anuman Garna Sakinchha. Yesko Lipi Basanta Devko Taakaako Chha. Gupta Aabhirharu Chaltapurja

2. S.N 55

Chapagaonko Shiv-Devko Abhilekh

“Chapagaon” Namak Prashiddha Bastiko Bich Bhagma Bhansar Tolema Yo Abhilek Kudiyeko Silapatra Raheko Chha. Yesko Abhilek Kudiyeko Bhag 40 Angool Lamba, 17 Angool Chauda Chha. Yesko Sirobhag Khandit Chha. Yaha Sambat. Pani Ahile Dekhidaina; Futisakeko Chha.

Mul-Path

1. Swasti Mangrihaadparimitayasaa: (Paadaanudhyaato Lichchhavikul)
2. Keturbhattarka-Maharaj-Shree- Shivadev: (Kusali..... Ni)
3. Bashin: Pradhan-Purassarankutumbini: Kusalmabhasya Shamagyap-
4. Yeti Beditambhawatu Bhawata: Yatheha Stharudrangre....1
5. Matshyopankrayankritwaa Pratinibarttamana-Namekasya Pu....
6. Sulkaaparhasen Kaasthikamatsyabharak Ekasmischa Ta... (Tamtri)
7. Kapantrayanacha Bhikkundikamatsya-Bhaarake Das Bhikku...
8. Tripanaa: Rajagriwake Das Rajgriwatsyabha: Pana:Trayan..
9. Rimatsya-Bharake.... Tripanaa: Muktaamatshyabhaa (rake)..
10. Yam.... (Pa)nchasattama-Suklantadasya....2
11. Ketu.....kalya Pran:Nhripatibhi..
12.Byapiyasa...
13. ...Masminprasade

14. Kobekai.....
15. (Chirakaala) Sthitaye Chaasya Pra (Shaa)
16. (Dashya) (Silapattasaasha) Namidandattam
17. Bharbibhischaayan
18. (Prashaada:) (Bhup) Tibhirddharmmagu-
19. Rubhigururu (Kritaprashadaanuwartibhiriyamaagya Shamyakpaalaniye) Ti Shamaagyapanaa
20. Dutakaschaatta Baisakhasuklapanchamyam

Translation:

Kalyan Hos. Mangriha (Durbar) Bata Thulo Kirti Phailiyekaa, Buba (Ko Pauko Anugraha Payeka, Lichchhavikulka) Jhandasworup Bhayeka (Gaathamaa Aaram Raheka) Bhattarak Maharaj Shree-Shivdevbata... (Grama) Ma Basne Mukhiyalagayat Grihashthiharulai Kusal Mangal Sodhera Aagya Bhayeko Chaa. Timiharulai Thaaha Hos.

Yaha Stharudrangama.... Machha Bikri Garera Farkeraharuko Eutako Sulka (Bhansardar) Ma Kami Gari Ek Bhaari Kashthika Machhama... Teen Tamaka Pan, Ek Bhari Bhukkundika Machhaama Dasota Ti Machha Ta Teen Pan, (Ek Bhaari) Raajgrib Machhama .. Teen Pan. Ek Bhari Muktaa Machhaama.. Teen Pan ... Pachashaun Bhaag Sulka, Tyash Karan Yasko.... Banayera... Pahileka Rajaharule Phailiyeko Kirti... Yas Nigahamaa...

Yo Nigaha Dherai Kaalsamma Kayam Hos Bhani Shanad Silapatra Gari Dieyeko Chha. Pachhi Hune... Rajaharule Pani Niyam Kanunlai Thulo Samjhi, Aafna Manya Janle Garidieyeko Nigahako Khyal Rakhi Yo Aagyako Ramrari Palana Garnuparchha Bhanne Aagya Chha.

Yaha Dutak..... Chhan. Baisakh Sukla Panchami

Description-

33 Barsabhanda Badhi Kalsamma Ek Tankarsanga Saashanko Bagdor Aafno Hatma Rakhna Safal Bhayeka 'Aghoshit' raja Rupka Bhaumguptako Patanko Lakshyan Dekhparishakeko Thiyo Bhanne Charchaa Yobhanda Aghiko Abhilekhma Gareko Thiye. Huna Pani Tyasko Lagattai Bhaumguptako Patan Bhayeko Kura Yo Abhilekhle Dekhayeko Chaa. Yas Abhilekhma Ra Yaspachhikaa Aru Abhilekhma Pani Bhaumguptako Ullekh Aayeko Chhaina. Yas Bela Bhaumguptalai Panchaune Kaam Bhaisakeko Chha. Kalgatile Nai Bhaumguptako Mrityu Bhayo Ki Unlai Balaile Sadako Lagi Panchhaieyo; Yo Kura Shpashta Rupma Dekhaune Praman Ta Prakasma Aayeko Chhaina. Tara Purwapar Prasanga Bichar Garda Balaile Bhaumguptalai Panchhayeko Ho Bhanne Bujhinxa. Bishnupadukako Phediko Abhilekhma Unko Raajochit 'Shree' Khosera Unlai Nistej Paarishakeko Thiyo. Yesari Unlai Panchhaune Yojana Bhita-Bhitra Tayar Bhaieraheko Tyasbata Jhalkinchha. Ani Lagattai Pachhi Unlai Balaile Sadako Lagi Panchhaiyo. Unipachhi Unkaa Bansajharule Unko Sthan Lina Nashakeko Kurale Ukta Kurako Pushti Garchha. Bhaumguptalai Panchhaune Yojanako Sanchaalan Bhitra Basi Amshuvermale Gareka Thiye. Surukaa Amshuvermakaa Abhilekhma 'Prithushamarsampaatnirjayaadhigatsauryyaprataapopahatshakalasalattupakshyaprabhaben' Jasta Biseshan Lageka Hunale Bhaumguptaharu Lai Panchhaunda Sangharsha Pani Bhayeko Anuman Hunchha.

J Hos; Chapagaonko Yas Abhilekhma Bhaumguptako Ullekh Pareko Chhaina. Yasbata Yas Bela Bhaumguptalai Panchhaune Kaam Bhaieshakeko Shpashta Chha. Yasma Sivdev Eklaiko Matra Ullekh Pareko Chha. Yas Belashamma Amshuverma Pani Agadi Nadekhapareko Bujhinchha.

Yas Abhilekhma Sambat Naphuteko Bhaye Euta Mahattwapurna Ghatana Kahili Ghatyo Bhanne Kurako Nirnaya Hune Thiyo. Tara Durbhagyale Sambatka Aanka Phuteka Hunale Tyasho Huna Shakena. Prashanga Bichar Garda Yasko Sambat 514 Tirako Ho Bhanne Anuman Garna Shakinxa. Kinabhane Yasko Lagattai Pachhi Ta Amshuverma Agaadi Dekhaaparishakekaa Chhan.

Stharu-Dranga-

'Karwat' Bhandali Tallo Tahako 'Pattan' Bhandali Mathillo Tahako Bikashit Basti 'Dranga' Ho Bhanne Kura Mathi Lekhishakeko Chha. Chaaraitirakaa Bashtibata Kinbech Garnakaa Lagi Aaine Byaapar-Kendra Rupko Bashti 'Karwat' Bhaninthyho Bhanne Kura Pani Baachshpatyako Aadhaarma Mathi Lekhishakeko

Chha. 'Dranga' Pani Yashtai Ho. Waraparaka Bashtibaata Manisharu Kin-Bech Garna Yahaan Aaunthe; Banda Byaapar Chaleko Hunale Yaha 'Bhansar Addaa' Raheko Hunthyo Bhanne Kura Chapagaonko Yas Abhilekhbata Thaha Paieyeko Chha. Yaha 'Stharu-Dranga' Ma Aru Bashtibata Maachha Bechna Aaune Haruko Lagi Bhansar- Dar Ghataieyeko Kura Pareko Chha. Yo Abhilekh Kundiyekeo Dhungaalai Ahilesamma Sthaniya Budhapakaharu 'Stharo Dhunga' Bhandachhan. Jo 'Stharu-Dranga' Ko Aprabhamsa Ho Bhanne Kurama Kunai Sanka Chhaina*. Sathai Yo Abhilekh Bhayeko Thau Ahilesamma 'Bhansartol' Bhaninchha. Yahako Krishnamandirma Raheko N.S. 772 Ko Abhilekhma Pani Yo Thaulai 'Bhansargriha' Bhaniyekeo Chaa. Yahako Dranga-Bhittra Bhansar Addhaa Rahanthyo Bhanne Kurako Pushti Yasbata Bhayeko Chha. Yaha Matra Hoina; Anta Pani Lichchhavikaalma Jaha Jaha Dranga Thiyo; Tyaha Tyaha Ahilesamma Pani 'Bhansar' Ko Naam Jodiyekeo Painchha. Udaharanaartha Patan- Durbarko Narendradevko Abhilekh Bhayeko 'Bhansaychowk' Lai Dekhauna Sakinx. Malla Rajaharuko Palama Durbarbhitra Bhansar Bhayera Yo Chowkko Naam 'Bhansar-Chowk' Raheko Hoina; Yupagramdrangako Purano Bhansar Yas Thama Raheko Hunale Pachhisamma Pani Yo Bhansarchowk Kahalaayekeo Ho. Yasai Gari Kantipurma Dakshinkoligram-Drangabhittra Parne Bhansarko Samjhana 'Purano Bhansar' Naamak Sthhanle Dilaudaichha. Nakxalbhekeo Dranga-Bhittrako Bhansarko Sanket Nakxal Gairidharako Naam 'Bhansar-Hiti' Rahekobata Painxa. Yashta Udaharan Anta Pani Paienchhan.

*Nepali Bhasama Rajyalai Kahane Thet Sabdako Rupma Raheko 'Dhunga' Sabdako Sambandha 'Dranga' Sabdasanga Chaa Ki Bhanne Aabhash Pareko Chha. 'Sgtharu-Dranga' Ko Apabhamsa Sthharu Dhunga Bhayeko Yo Udaharanle Ukta Kurako Pushti Gareko Chha.

Yasbata Charaitirakaa Bashtibata Kin-Bech Aadi Garna Aaine, Banda Byaapar Chaleko Bikashit Bashti 'Dranga' Hunale Yaskoek Abhinna Anga Bhanshar-Addaa Baneko Thiyo Bhanne Thaha Painchha. Shaathai Lichchhavikaalma Chapagaonma 'Stharu-Dranga' Naamak Bikashit Basti Thiyo Bhanne Kura Pani Yatabata Thaha Painchha.

Matshyakar- Lichchhavikaalma 'Karprayaa' Kati Byawashthit Thiyo Bhanne Kura Yas Abhilekhle Dekhayeko Chha. Yaha Nepalma Paine Maachhaka Bibhinna Jaat-Anusar Bhansar-Dar Tokiyekeo Chha. Pahiledexhi Chalera Aayekeo Darma Kehi Ghataiediee Yo Bhansardar Tokiyekeo Ho Bhanne Kura Yaha Ullikhit 'Sulkaapanhrashen' Padle Dekhaunchha. Yaha 'Pachchaasattamsulka' Padko Pani Ullekh Aayekeo Chha. Yasle Manushmriti Aadi - Dharmasashtrako Bachanlai Samjhayekeo Dekhinchha. Praachin Dharmasashtrama-

'Panchaasadbhaag Aadeyo Ragya Pasuhirannyayo:'

Bhanne Bachan Painchha. Yaha Bhane Tyaso Nagari Kehi Nagad Ra Kehi Jinishko Rupma Bhansar- Dar Tokiyekeo Dekhinchha. Yas Abhilekhko Bichko Bhag Kehi Khandit Huda Jammai Kura Shpashta Huna Shakeko Ta Chhaina. Teipani Mukhya Mukhya Kura Kehi Bujhinchha.

Yaha 'Kaasthikamatshya' Bhani Shinka Jastoma Unera Bikri Garine Sano Jaatko Maachhaalai Bhaniyekeo Bujhinx. Jo Ahilesamma Pani Yasari Nai Bikri Garinchha. 'Bhikkundikaa Matshya' Bhanera Thailo Jasto Ekthari Maachhaa Halne Bhadoma Rakhi Bikri Garine Sano Jaatko Maachhaa Lai Bhanieko Bujhinchha. Jo Ahilesamma Pani Keho Prachalit Chha. 'Rajgrib' Bhaneko Thulo Jaatko Maachhaa Ho. 'Muktaamatshya' Bhaneko Ahileko 'Achhalaa' Bhanne Maachhaa Ho.

Krishi, Paasupaalya, Banijya Aarthik Unnatika Pramukh Kura Huda Machhaa Palne Byawashaayalai Protshaahan Dina Machhako Bikri Bhansar-Dar Ghataieyeko Dekhinx. Amshuvermale Matshyapalanko Briddhima Chakh Rakheko Kura Bungamatiko Abhilekhbata Pani Thaha Painchha.

Malla Inscriptions

1. S.N 28

Patan Chapagaon Ikhatole Babahil Bhitra Chibahalko Sidhiko Silalekh

Mul-Path

1. Om Namu Buddhaya, namo Dharmmaya, Namu Sa:

2. Dhaya, Shreemat Shree Shree Shree Shakyamunaye
3. Preeti... Para...
4. ---Sagar... Bishnuju
5. ---Chandra... .. .
6. Sukrayoge Cha Sange... Chandrabasare..
7. Prastistha Karaya...
8. 16 Re // Shreyostu Sambat 739 Baisakh
9. Masya Krishnapakshya Saptamya: Tithau Shrawankshetre
10. Sukrayoge Sombasare // Thwa Kunhu Shee Shree shi
11. Ddhinarsimha-Malla Prabhuthakulasa, Bijayara-
12. Jya..... Ghus ra Yang Ta-
13. YaShree Shree Shree
14. Shakyamuni Patistha Yanga Din Juro, Shaa-
15.Shree-Kitasingdev Bharya Chhekanma..
16. Jestha Putra Babudev, Jibdev, Jitradev,...
17. ...Dev, Jayadev, Thwate Nhyasahma Samuha
18. Shen Dayaka Juro // Subha //

Translation

Buddhalai Namskar, Dharmalai Namaskar, Sanghalai Namaskar. Shree-Shree-Shree-Shakyamunilai Prasanna Parna..... Sukarmayog Sombarko Din Pratistha Gariyo.

Kalyan Hos. N.S. 739 (1676 B.S.) Baisakh Krishma Saptami Sombar Shrawankshetra Yas Din Shree-Shree-Siddhinarsimha-Mall Prabhu Thakurko Bijaya Rajyama... Shree-Shree-Shree-Shakyamuniko Prastitha Gariyo.

...Shree-Kisidev, Patni Chhekanma – Jetha, Chhora Basidev, Chhora Jibdev, Jitradev... Jayadev, Yei Saat Janako Samuhale Banaieko Ho. Subha.

2. S.N 51

Patan Chapagaon Thapachhe: Bhansa: Toleko Chaityako Silalekh

Mul-Path

1. Shreyostu // Sambat 766 Margasir Krishnapakshya Panchamya-
2. Yantithau // Pushyankshetre Indrayoge Brihaspatibashare
3. Thwa Kunhu Phare Dayakaa // Diwangat Wawu Nu;Ghu Bhawo Putra Kaya
4. Drandaraj Chhaya Bisjwaraj Maam Harkhan Mayi Thwa Pa-
5. Ni Pemhasta Namna Naaya Magulanyantaa Phare Dayakaa
6. Thwa Sha Yawa Pharesa Bimana Indraraja Mha: 2 Woya Thwa
7. Sha Yata Phare ShelhoBharanasha Hathwa Guthin Lhone Ma-
8. Ra Thwagya Yawa Bimana Lhyayaa Hathwaguthi Sha Du Phashya: Chi
9. Nakaa Thwap Hare Shelho Mayaataashaa Gwahathwa Wamha: Harthyaa
10. Panchamaahaapaataka Raakaa Thwa Chowshya: Tako Nishatrapanya-
11. Kare Anegraha Utotra Juro, Jajamaanashya Jato
12. Shastra Tato Phar Sampraptamashtu // Thwap Hare Bikhaali
13. Bhawoshan Suhastena Sobirdimaanena Dayakaa Juro
14. Thwayaa Punvena Lakshmi Shanti Santana Bridhirashtu //

Translation

Kalyan Hos. N. S. 766 Margha Krishna Panchami Brihaspatibar Pushyanakshyatra Indrayog, Yas Din Pati Banaiyo. Diwangat Babu Nhu:Gu Bhawo, Chhora Dandaraj. Nati Bishwaraj, Aama Harshan Mayi, Yei Char Janako Naamle Naayamagulanyanta Pati Banaiyo.

Yahi Patima Biman Indra Raja 2 Pradarshan Garnu. Yas Pati Ko Jirnodhwar Garnu Paryo Bhane Hathwa Guthile Jirnidhwar Garnu. Yo Bimana Pahile Hathwa Guthi Bhitra Pati Banaiyeko Ho.

Yas Patiko Jirnodhwar Garena Bhane Gohatya Brahmahatya Aadi Panchamahapaap Lagos. Yaha Lekhiye Anusar Chalaye Bhane Anigraha Hos, Uttarotar Asal Hos. Jajamanlai Sastrama Bataye Anusar Phal Prapta Hos.

Yo Pati Bikhali Bhable Aafnai Haatle Aafu Agadi Rahi Banayeka Hunn. Yasko Punyale Lakshmi, Santanko Briddhi Hos.

3. S.N 59

La. Pu. Ie. Chapagaon Bhansa: Tole Narayan Mandirko Silalekh

Mul-Path

1. Om Namō Narayānaaya // Yannaabhijaataabjabo Bidhata Shrijatyamu: Loka Shamuchwaya Ya: // Ya-
2. Tkrodhajo Rudra Eidan: Shamatti Tamadidebam Pranatosmi Bishwa: // Dhritajaaljasharojabyaaja Waa --- Dha-
3. Rtri Kamalnayancharu Shreeyuta Shreyadaataa // Dhwanilalitwenupid Gopishameto Rachayatu Ha-
4. Ta Sutremmangal Washtwakhanda: // Ashti Champapuri Naam Nagari Lokraajitaa // Tatraashti Sachibo-
5. Ragyo Wawucheti Prakrititaa: / Tatshunurjitarajoshyaa: Dharmakirtti Shamaashrit: // Ta-
6. Shyaatmajō Buddhirajō Buddhaya: Buddhimtaambar: // Tannandano Mahadhiro Bir: Shuro Bichakshya-
7. Na: // Bishnuraj Eti Khyato Bishnuprasaadnirmit: // Karmuningachinhe Magh Suklendu-
8. Purnne Ditishuta Gurubare Pushyanakshtrayukte / Atishurmagrihepu Sthapitn Tena Bi-
9. Shnurnnutashur- Padayugmo Yogshaubhagyake Cha // Ata: Par Desbhāsa Likhyate // Shre-
10. Yoshti // Sambat 772 Magh Mase Suklapakshye Purnnamashyaa Tithau Pushyanakshtre
11. Aayushmanpar Shaubhagyayoge Brihashpatibashare Thwa Kunhi Uwadessa Bhanshar-
12. Grihanibasi Bishnuraj Bharo Bharyyaa Mangararakshmi Chandikarakshmi Thawasha
13. Katshomha Parmukhan // Hakuraj Bharo // Nhya Waya Dewal Jirnnya Juwasha Punarbba
14. Ra Jirnodhwar Yang Dewal Dayank Nhya Waya Bisnuyaa Murtisthapan Yanana Tha
15. Watan Naamana Bansagopalmurti Dayaka: Sthapana Yanana Partistha Yanaa Ju-
16. Ro // Subhamastu Sharbwadaa // Om Bansagopaalaaya Nama: //

4. S.N. 72

Patan Chapagaon Kwakotol Chaityako Silalekh

Mul-Path

1. ? Shratu Sambat 779 Anashunimaasha Sukrapashe Punamaashyaayaatithwa
2. Rewatintare // Harasanajogya // Budhabashare // Shreedhammadhatu
3. Bageswarshake yawoho Totana-Ahorat Dharman Dayakaa
4. Kiji Wajagi Shinchitaayaaka: // Wekhashinga // Gwamishinga //
5. Waawuchaa // Kinharam // Wushinga // Dharmashimha 57 Subha

Translation

Kalyan Hos. N.S. 779 (1716 B.S.) Aashwin Sukla Purnima Budhabar Rewateenkshytra Harshanyogma, Shree-Dharmadhatu Bagiswarlai Chadiko Toran Ahoratra Dharma Khalakle Banai Chadhaieyeko Ho. Kiji Wajgisinha Herchaha Garne. Bekhasingha Gomisingha, Babucha, Kinharam Busingha Dharmasimha Aadi 57 Janale Banaieyo. Subha Hos.

5. S.N 88

Patan Chapagaon Ikhatoleko Silalekh

Mul-Path

1. Shreyoshtu Mbat 783 Jestha Sukra-
2. Chatuthyaayaa Tithau Shree-Champapu-
3. Risthane Yarkhataushyaa Cho-
4. Cheen Hawadashyan Chon: Phare Jinne
5. Juwasha Rithya Jinnaudhaar Yaa-
6. Na Thwap Hare Datakaa Juro : Haa-
7. Ku Pramokhan, Marshinasha
8. Mayi Hariram Parushin
9. Na Lutesin Jirana Thwate
10. Shamuchayasa Phare Lhonaa Ju
11. Ro // Sukrabaraju Kinha

Translation

Kalyan Hos. N.S. 789 (1720 B.S.) Jestha Sulka Chaturthi, Shree Champapuri Yarkhaatole Chocheenma Aghiko Pati Jirna Bhayeko Hunale Jirnodhwaar Gari Yo Pati Banaieyeko Ho.

Haku Pramukh Bhayeko Marsinga Mayi Hariram, Parusinha Lutashin Jirana Sukrabaraju, Kinhasimha Aadiko Ahamuchchayale Patiko Jirnodhwaar Gariyeko Ho.

6. S.N 116

Patan Chapagaon Sawatole Tikabhairab Mandirko Silalekh

Mul-Path

1. Shreyoshtu Sambat 789 Chaitra Sukra Purnnama-
2. Baashya / Tithauu // Hastanakshyatra // Harsan
3. Jogya // Somabashare .. Thwa Kunhu // //
4. Shree-Shree Shree Yarkhamahabhailawa Para-
5. Meswarashake // Shree-Wawaa / Yarkha Twaara Naa-
6. Yamagulan Paakha Chocheen // Dharmasimha Bhaa
7. Wo Promokhana // // Wahadipadharmma Sha-
8. Murchayana // Shinga Thapana Yaana
9. Taya Juro // Subha // Kalyan Gu-
10. Ru Krishnasinha Bhaawa Basuraj Bhawa
11. Nakaraaj Dhamlamakita
12. Subha

Translation:

Kalyan Hos. N.S. 789 (1726 B.S.) Chaitra Sukla Purnima Somber Hasta Nakshyatra Harsanayoga, Yas Din Shree-Shree-Shree-Yarkhaamahabhairab Parmeswaralai Shree-Wawaa (Chapagaon) Yarkhaatole Naayamugulan Paakhachaachenkaa Dharmasimha Bhawo Pramukh Bhayeko – Deepdharma Shamuchchayale Simha Sthapana Gariyo.

Subha Kalyan Hos. Guru Krishnasimha Bhawo, Amiram Bhawo, Basu Bhawa, Buraraaj Bhawa, Nakaraaj, Dhamlamakita (?). Subha.

7. S.N 233

Patan Chapagaon Jhaapalapati Tutedhara Muni Raheko Patiko Abhilekh

Mul-Path

1. Om Nama: Shree-Madhushudanaaya // Sankhanachakradaapaddyadhaarinammadhu-
2. Sudan / Namaani Shatatabhaktyaashanshaaraarnabataarana // Yaatedabde Gaja-
3. Chandranaagan Ganitabhaarggadashitechaadanaletithyaa Bhemrigasirshake Bhugu-
4. Dine Yoge Cha Shadhyayute / Pitrartha Ti Diwangatasyalalitan Mokshyaayatanmada
5. Pan Teschaakaari Mukundanaamashwatiturlewaadibhi: Putrakai: // // Shwashti //
6. 818 Margasira Krishna Patipadi Tithau // Mrigasirranakshre // Shaadhyayoga
7. Washare // Thwa Kunhu Waa Waadesha Chanpaala Lipachhenyaa Lhpanwa Bharo Wasimha Bhaaro
8. Pabharam Bharo, Devram Bharo, Thwate Pyamha Phukijan Thwakwu Mukanda Bho-
9. Ro Walanaamana Thwa Kale Dayakan Wawuyaa Naamana Shree-Madhushedanadev Maam
10. Pani Nhatu, Sharashwati Mayi Bhari Lithu: Manikarnnikaayami Mari Thwa Nimha-
11. Sta Naamana Patima Deva Debi Swamha Tashya Phale Pratistha Waana Barsadin Juro
12. Thwa Phale Yaata Aaya Pratyaa Dunta Daanapatrasa Chonthyan Pansar Wuyaa Barsha-
13. Prati Warashaanan Baisakh Krishna Dasami Sha Ewa Mukuda Bharo Diwangat Juwa
14. Kunhu Shradda Yaanaawa Brahmana Jumha 2 Brahmadhijumha 2 Joshi Mhan 1 Aachaa-
15. Ryya Mhan 1 Thwate Pujan Yaana Dakshina Wishyan Bhakshya Bhojan Taatake Mara Ju-
16. Ro Sakha Praakhaahin Jukale Gograsha Puja Yaaya Juro // // Chaitra
17. Sukla Chaturdasi Kunhu, Indrayaatraa Shwaan Chhaa Kunhu Thwa Nidhatashan, Thwa Pha-
18. Lesa Deba Devi Puja Uaashya Daabpatrasa Chona Thyan Nipolan Utidhor
19. Daan Pite Maar Juro // // Bhuya: Sha Eba Maam Wawuyaata Naamala Jala-
20. Dhena Dayakan. Etako Wu Rowa Pitaya 4 Duntaa Juro, Lankha Thana Mhayaa-
21. Ta Jaake Phan 67 Barshapatri Biya Maar Parsesha Guthibharo Panishta
22. Bhakshya Bhojan Yaata Juro Phale, Jal Dhene Shyalho Yaaya Maara Juro //
23. Thwateyaa Chinta Yaaka Sha Eba, Daataamha 4 Shwadagaata Ananta Raaj Bha-
24. Ro Yankutwaar Pandu Bharo, Thwate Gumhashana Abichhinna Yaana Barsha Pra-
25. Ti Nistarpemaar Juro // Swadattan Paradataan Waa Yoharensura Wiprayo-
26. :Aa Shasti Barsha Shahastraani Bistaayaan Jaayate Krimi: // Choshyan Takwayaakaale Uu-
27. Ttarottar Dharmma Laaka Juro: Durgaram Bharo, Gangaram Bharo Shtiri Maheswari
28. Bhari Naayani Mayi, Dutiya Bhari, Rameswari Mayi Tittiya Bhari Bisheswa-
29. Ri Mayi // Thuti Shamohan Juro Subhamashtu // //

8. S.N 276

Chapagaonko Abhilekh

Mul-Path

1. Om Nama Buddhaya: Sheyoshtu Sambat 825 Bhadrapa
2. Da Krishna Shaptamyantithau Rohini Nakshtra
3. Bridhiyoge Budhabaashale Thwa Kunhu-
4. Waadedha Bhansaasha Griha Nibashi
5. Shankra Waashataa Bhaaroshan Shree3 Chaitrawaahaara Dev
6. Pratistha Yaana Din Juro
7. Punabhaakhaa Ro-
8. Wa-Wu Dunaa, Thwatinmaarko Hane Ju
9. Ro // Subha //

Translation:

Buddhalai Namskar. Kalyan Hos. N.S. 825 (1762 B.S.) Bhadra Krishna Shaptami, Budhabar, Rohini Nakshatra, Buddhiyoga, Yas Din // Des (Champapuri) Ko Bhanshar Gharma Basne Sankar...

Bharole Shree 3 Chaityabahal Devtako Pratistha Gariyo. Arko Behora..... Ropani Khet Chadhaieyo. Yasbata Chaahine Jati Kaam Chalaunu. Subha Hos.

9. S.N 278

Chapagaonko Abhilekh

Mul-Path

1. Shreekaapesaaya Nama: // Kshirabdhou Madhyamaane Shurdanujaganai Rmandaraghatajaata-
2. Jwaalaamaalakaraal Kuwalaya..... Kaalakutashyakuta / Trahi Trahiti Devi
3. Saranamupagataa Yashya Sha Shyamkantha: Yaapaadwiswan Shamantaadamritamapadrisaa Ji-
4. Wayan Jiwajaatan// Yatkirtti: Sardindushundar..... Murti: Siwashyaakritirbbishyaa
5. Yashya Shamashtasaasthanigama Byaakhyatibhumi Gataa // Shidhdiryashya Dinepi Chandrakarane
6. Ratrau Cha Shooryodagame Shoyan Shadrabidaanwayodbhawantanu: Shree-Bhattanaarayana: // Yen Shree-
7. Shivasimha Naamannripaternnapaaladesaakhilaa Dhisatwan Parikalya Bhutirtulaa Swashyaa-
8. Pi Sampaditaa / Tashmaatpradurbhutsharojashadrisa: Kaanayaa Cha Kirtyaa Bidhoshtarlyo-
9. Tulyabibhisha Bhushitmahadewaakhya Bhatta: Kriti // Lakshminarayana Eti Tato Bhatta-
10. Chudamani: Shatsunurjjaata: Sasadhar Ewodanwata: Purnnabimba: / Daan Dari-
11. Drayadaari Drabidakulamaneryyashya Kirtirbisalaa, Nepalesaarchhitapadayuga-
12. Shyagshya Bhajirathi Shtree // Lakshminarayanashuto, Bhatta: Shree-Harisankar: / Siwaa-
13. Layan Tatprashaadaachchakre Chakresiturgguru: // Gyane Basistha: Shujane Garistha: Saa-
14. Shtre Pratistha:Sukritaikanistha: Shrestha: Shataamesha Babbhuba Bhumo, Bidhdadganaanaa Gana-
15. Naagraauri // Yashyochchai: Kalasaayate Dinkarswandropi Chhatraayate Kashturi Ti-
16. Lakaayate Jaldharo Malayate Shwardhduni / Tara Shidhdabadhubikirinna Bikasallajaayate Raja-
17. Te Praashaadoyan Maho.... Maaloka Prad: / Nepale Shammateshminnishu-
18. Yugalgajairillakshite Raadhamashe Pakshye Susle Shulagne Dinakardiwashe Dwitiya-
19. Tithau Cha / Dhritwaa Praashaadashringe Kalasamabhilashatshwarnna Bharogramaaashan.... Sambho-
20. Rmmathamatulataran Yatnatoshau Chakaar //

Translation

Mahadevlai Namaskar. Debata Ra Danabharule Kshyeersamudra Mandaraachalko Thakkarle Bhayankar Jwaalaako Mushlo Utheko... Kalkut Bish Nishkyo. Bachau Bachau Bhani Devi Parbati Jasko Saranma Pugin, Ti Shyamkantha Mahadevle Amritmaya Drishtidwara Charaitirakaa Sara Praniharulai Jibit Pardai Bishwako Rakshya Garun.

Jashko Sarad Rhituko Chandramajasto Safa Kriti Phailiyeko Chaa, Jashko Sarir Mahadevkojashto Chaa, Jo Niyama Agama Aadi Sara Bidhyama Parangat Chaan, Dinma Chandrodya Ra Rati Suryodaya Garna Siddha Jashma Chaa, Drawid Kulma Janmeka Tyashta Shree-Bhhattanarayan Hunu Bhayo. Jashle Shree-Shivsimha Rajalal Sara Nepal Desko Adhipatittwa Dilaie Diyera Aafno Lagi Pani Ashankhya Shampatti Kamaunu Bhayo.

Uhanbata Sobhadwara Kamaljashta, Kirtidwara Chandramaajashta... Shingariyeka, Shipalu Mahadev Bhatta Hunu Bhayo. Uhanbata Bhattaharumaa Siromanijashta, Lakshmi Narayana Bhanne Chhora Shamudrabata Purna Chandrama Jashtai Paida Hunu Bhayo, Drawid Kulma Manijashta Jashko Daanle Dwaridraya Hardathyo, Jashko Thulo Kirti Phailiyeko Thiyo; Nepalka Rajale Khutta Dhogiyeka Jashka Bhagirathi Bhanne Patni Hunu Bhayo.

Lakshminarayanakaa Chhora Shree-Harisankar Bhatta Hunu Bhayo. Babuko Nigaahale Jashle Mahadevko Mandir Banaunu Bhayo.

Gyanma Basisthajashta, Asal Manishharuma Agraganya Bhayeka, Sashtama Shipalu Bhayekaa, Dharmamaa Khupsanga Lagne, Sajjanaharuma Shrestha Bhayeka Uhan Harisankat Bidhdwanharumaa Agraganya Hunuhunxa.

Soorya Jun Mandirko Aglo Majurjashtai Hunchaa, Chandramaa Chattrajashto Hunxa, Baadal Kashturiko Tikajashto Hunxa, Aakasganga Malajashto Hunxa. Taraharu Shidhdabadhuharule Chhareka Labajasta Hunchhan, Teshto Sho Mandir.. Shuhaie Raheko Chaa.

N.S. 825 (1762) Baisakh Sukla Dwitiyaa Aadityabarko Din Uhaanle Mandirko Tuppoma Sauko Gajur Chadhaiekana Bhaktipurba Mahadevko Thulo Mandir Kososashath Banauna Launu Bhayo.

10. S.N 302

Patan Chapagaon Ambergaalma Ganesdevatako Abhilekh

Mul-Path

1. Sambat 830 Chaitra Maase Sukrapakshya
2. Chaturdasi Kunhu Waadesayaa Thaanaha-
3. Ti Shree Shree-Ganeshake Deaarchaa Dayakaa
4. Mashin Duya Pramushna: Racheera:
5. Maan: Aadira: Yadushin: Kakuu:
6. Biswashi: Maanashin: Krishan:
7. Shacharaaya: Bhaagishin: Thuti
8. Shamohan Dayakaa Din Ju-
9. Lo // Subhamatu Shawadan //

11. S.N 312

Patah Chapagaon Bhaishaaltol Ganeska Dewalko Bhittama Raheko Abhilekh

Mul-Path

1. Sambat 832 Fagurnna Sukra, Aa-
2. Rachaadhya Harihar Bharo Pramukh-
3. Na Dayakaa // Manohoraa Bharisha
4. Ramkrishnaju // Shachara Shinga
5. Shachana Shin Ju // Buyaram
6. Rannaram // Maan Shinga //
7. Chandraram // Subha //

Translation:

N.S. 832 (1768 B.S.) Falgun Sukla... Hariharbhaaro Pramukh Bhaie Banaieyeko Ho. Manaharabhari, Ramkrishna Shachanashiju. Buyaram, Ratnaram, Maansimha, Chandraram. Subha.

12. 353

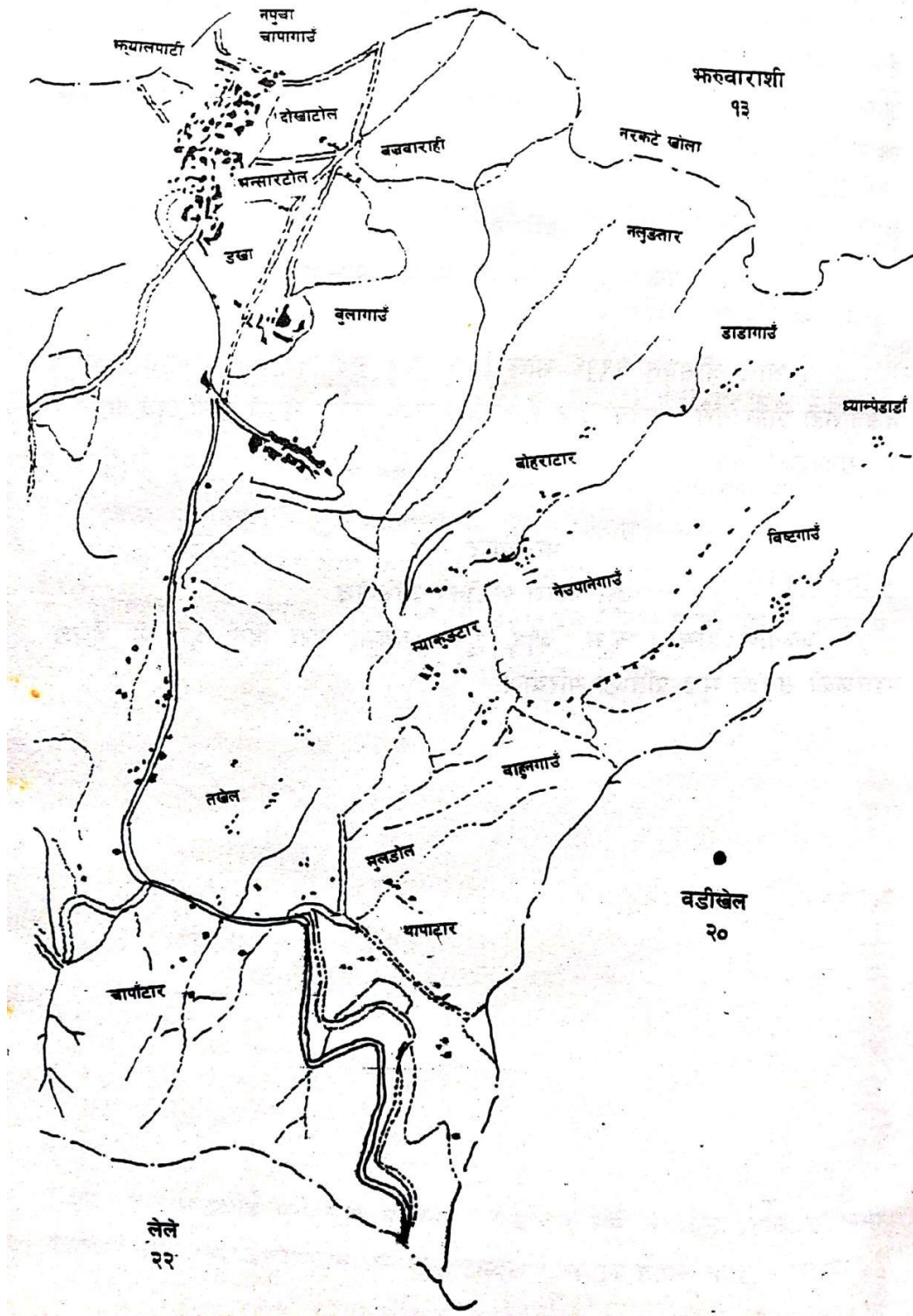
La. Pu. Ie. Chapagaon Ambardurukhelbhitra Kwapaal Dewatakaa Shindhimaa Raheko Silalekh

Mul-Path

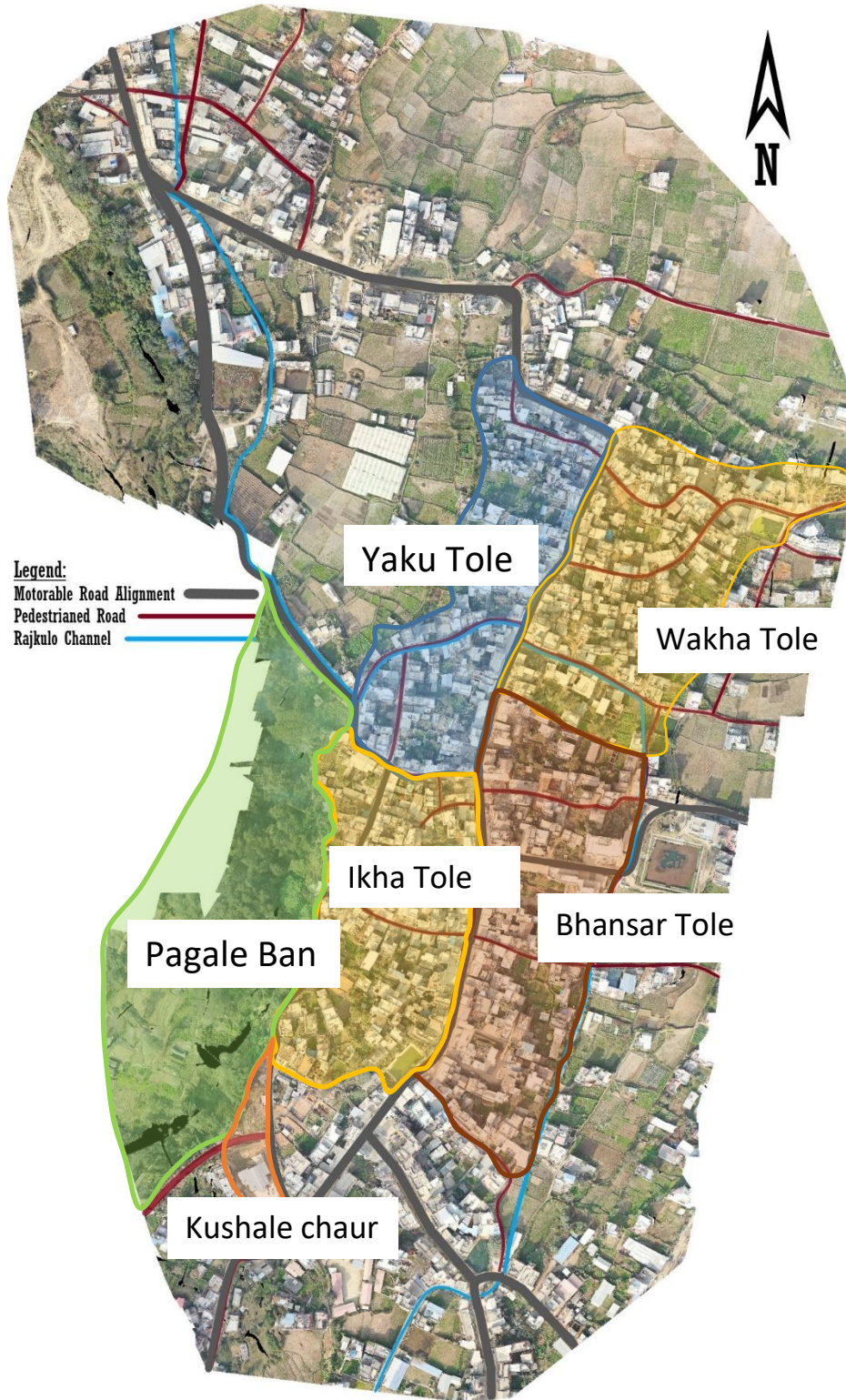
1. Om Namu Bhagawate Shree-Shakyamunaye // Om Namu Budhdaya/ Om Namu Dharmmaya / Om Nama: Shanghaya //

2. Yaawanta: Puramyawo Bhagawatshtupesu Biswesu Cha / Talkaryu Dibitutre Cha Niyatan,
3. Taawanti Rajyaanyapi Rupaupaya Shamadi Shampradekhinaa Bhuktwa Cha Sharbba Shukhan Praante Janmajara
4. Bipattirhitan Praptoti, Baoudhan Padan // Neparkabde Rashawanhisale Tapashya Suklatithi Bishnu
5. Yukte Gubbardakshye Noo Bharkka Hito Bhirame Shree-Shakyasimha: Shupratisthitoyan // Atha // Shawashti // Shree-Yo
6. Shtu // Sambat 726 Falgunamashya Suklapakshye Ekadasi Pra Dhdashyaantitahu; Punarbbashu Pra
7. Pushyanakshyatre Sobhagyapra Shaubhanayoge Aaditabaashare Kumbha Rasigate Shabitari Kakka-
8. Tarasigate Chandramashi // Ashmindibashe Shree-Shree-Rajadhirajaparambhattarik, Shree-Shree-Jayasi-
9. Basimha Dewashya Bijayarajyesha / Gurumadaada Bajaachaaryya Shree-Debachandraju Upadhyaaya Buba
10. Haar Bajaachaaryya Shree-Rupsimha Wodhijutwan // Daanpati Shree-Champapuri Dakshinashya, Nhurachhe
11. Shakyabasodarbbhab Shree-Amritsimha Bhadrashya Bhaaryyaa Nukari Maatraajusha Jestaputra Shakyabhikshu Shree-
12. Jibraj Bhadrashya, Dwitiya Putra Shree-Lakshman Bhadrashya Kanyashtu Putra Shree-Dharmma Simhadababhadrashya Aete
13. Shamohashana Dundukshya Ra Purbbashtha Hemabarnnamahabiharmandare, Utrabhimukha Shree-Shree-Shree-Shakya
14. Muni Bajrashan Bhattarikattwan Pratistha Yana Tat Agre Shree-Shree-Shree-Dharmmadhatu Bageswaratwan-
15. Urdwat Shree-Shree-Shree-Chakrashambarbhattarakatwan Shree 3 Ganeshmaahaakaar Kanamanta Shahitana Thaa-
16. Pana Yaana Din Juro Thwayaa Punyaphalana Putra Pautra Buddhi Juyamaar // Shampraptamashtu // Subha
17. Thwatanlithawan Shree-Dipankar Pratistha Dhawajaarohana Aadinan Yana Juro Nepaarahaayanayotaka
18. Sarsailapausha Sukladwadasi Pra Tradasigurudine, Taaraa-Raahini Pra Mrigasir Bramhayo-
19. Ge Makrashankraantau Twawi Utraayanashankramanaa Shree3 Dipankar Pramukh Sharbbashangha Bhojyapra-
20. Modita, Shree-Hemabarnnamahabiharashubashita, Shree-Amritsimha Bhadrashya Jeshta-
21. Putra Shree-Lakshman Bhadrashya Maatra Manoharaajusha Bhraate Shree-Dharmmasimhadaba Mahabho-
22. Jya Yaanaana Juro // Sambat 757 Paush Sukla Dwadasi Pra Trayodasi Brihashpatidine // //
23. Thwanalithyan Sambat 759 Aswini Sukla Shaptami Suklabaar Thwa Kunhu, Shree-Dum-
24. Dukshyar Purbbastha Bande Puridesa Chhunshyan Puskirinimandapashahitana Dayakaa Ju-
25. Ro Shree Lakshman Bhadrashya Bhaaryyaa Ramuni Matra Shahitana Aanandana Chogwan Juro Subha.

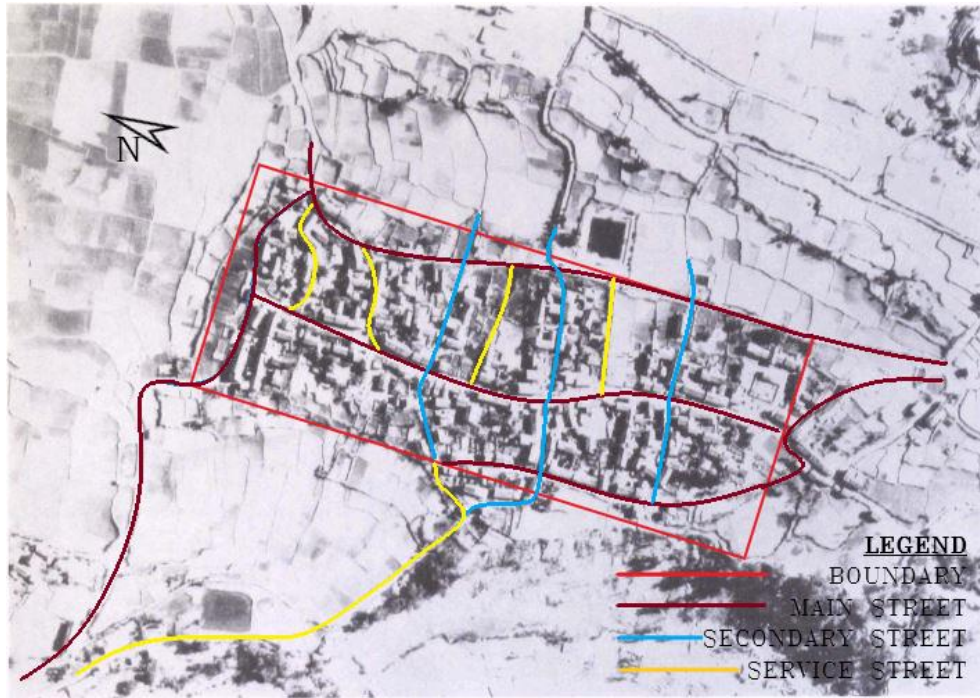
Annex-2 Conch Shell (Sankha:akar) Chapagaon Territory



Annex-3 Map showing Tole Boundary of Chapagaon



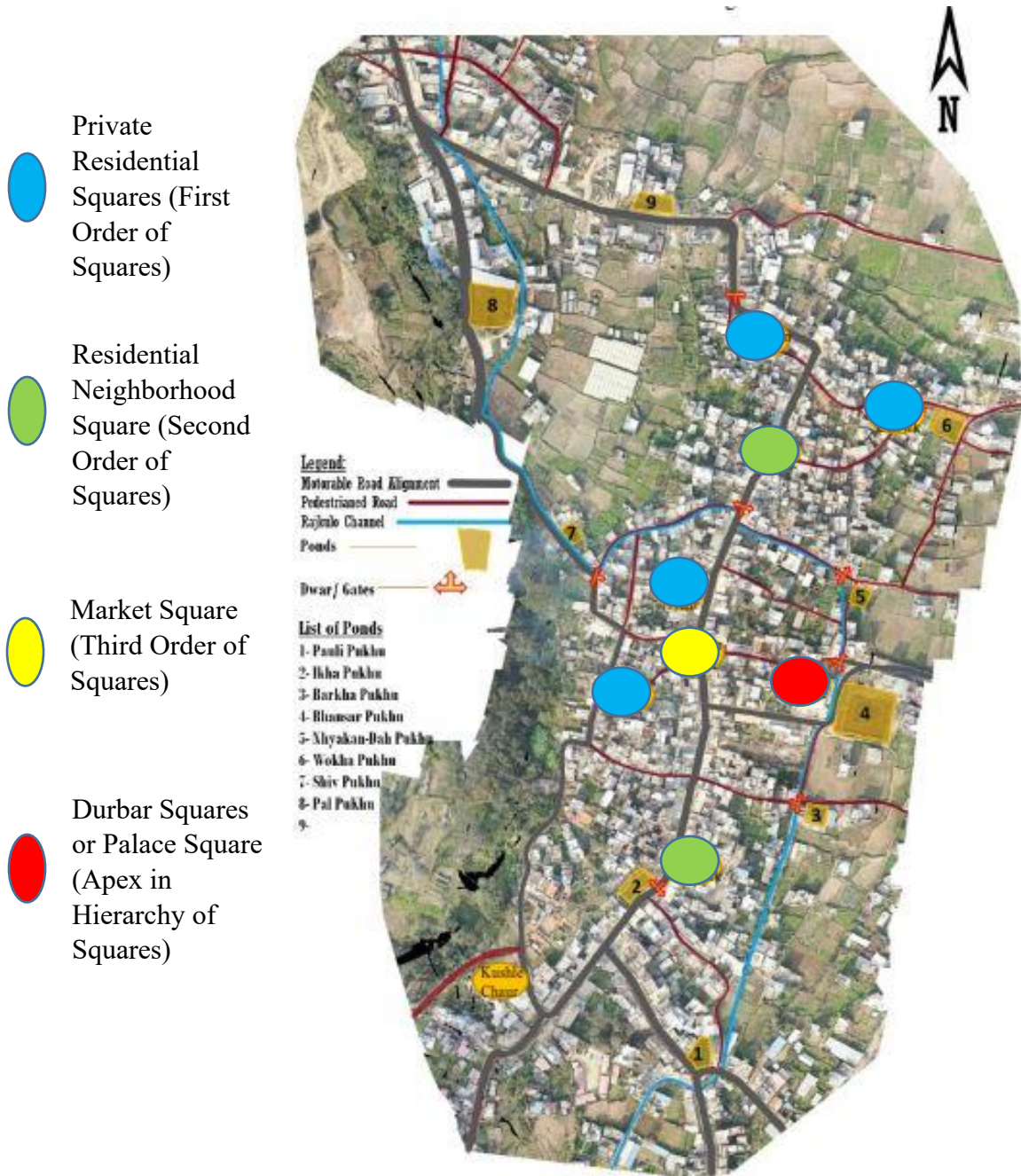
Annex-4 Urban Form Geometry and streets of Chapagaon



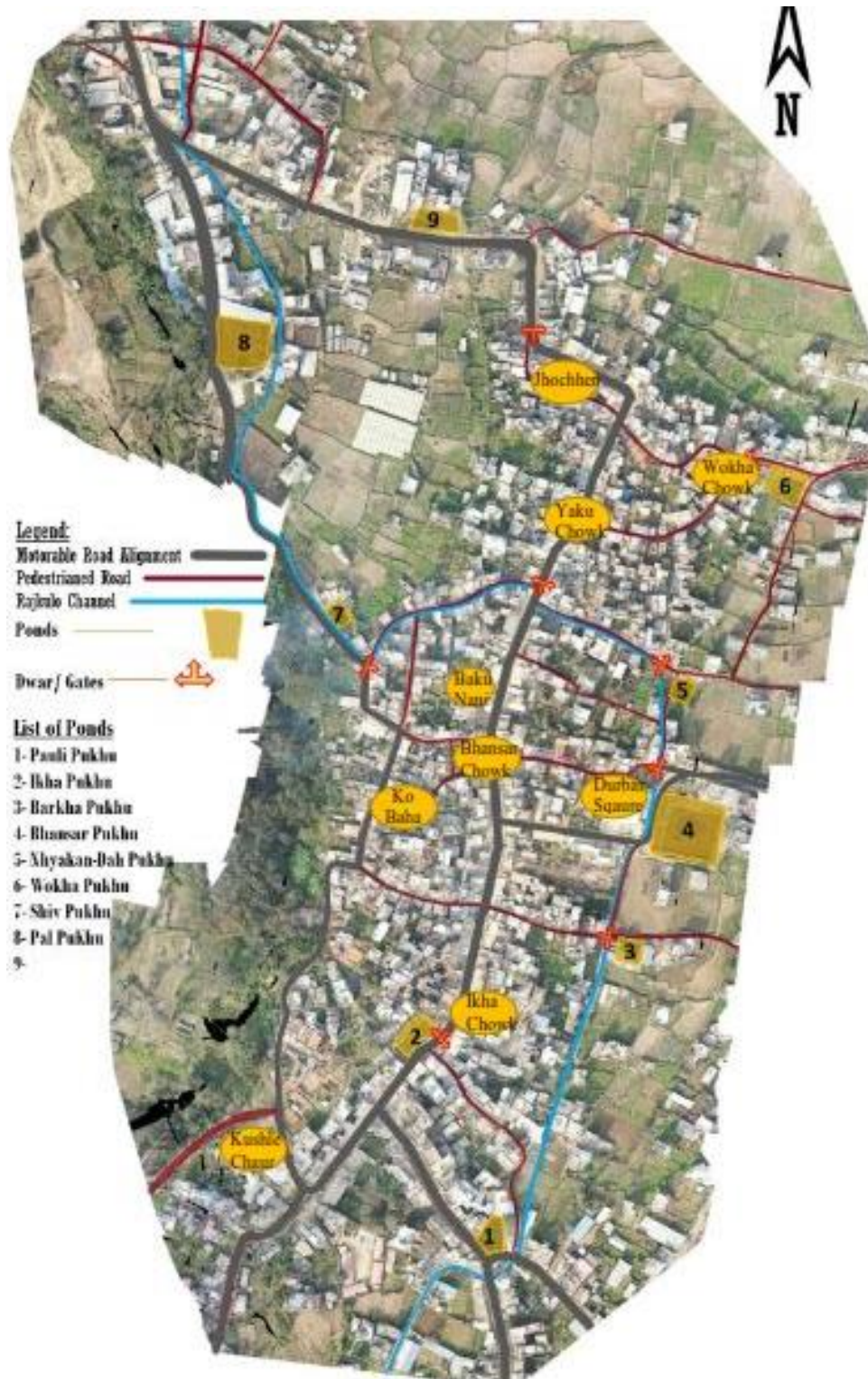
Annex-5 Funeral Route, Bajrabarahi Forest and Nakkhu River



Annex-6 Hierarchy Order of Open Spaces of Chapagaon



Annex-7 Mapping of Open Spaces, location of 9 Ponds and 8 Traditional gates



Annex-8 Temples of Chapagaon (Urban Elements of Malla Town)



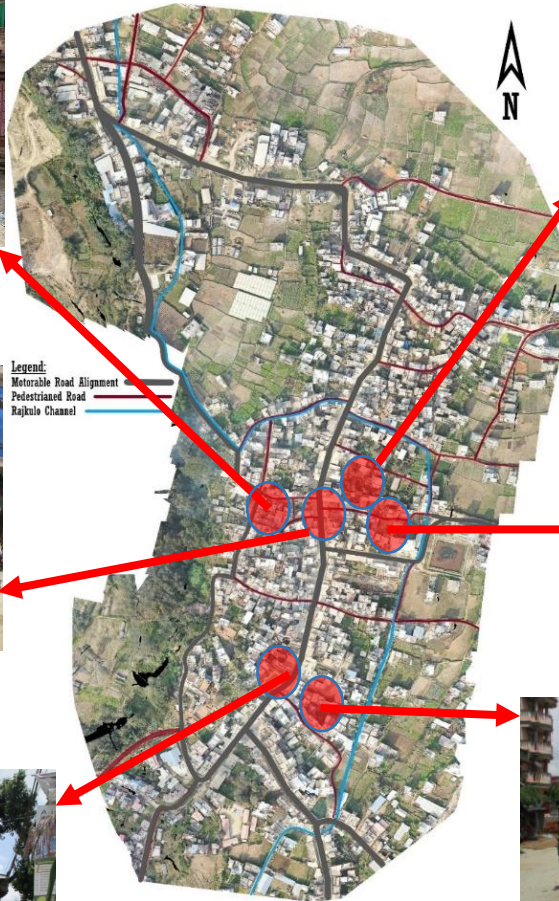
Ikhava Bahi, Ko baha (Kalyan Mahavihar), 1653



Krishna Mandir, 1651 (Left)
Narayan mandir, 16th century (Right)



Yarkha Bhairab/
Chandra Bhairab, 17th Century, 1668



Bajra Barahi Agam Chhen constructed about 1598 AD.

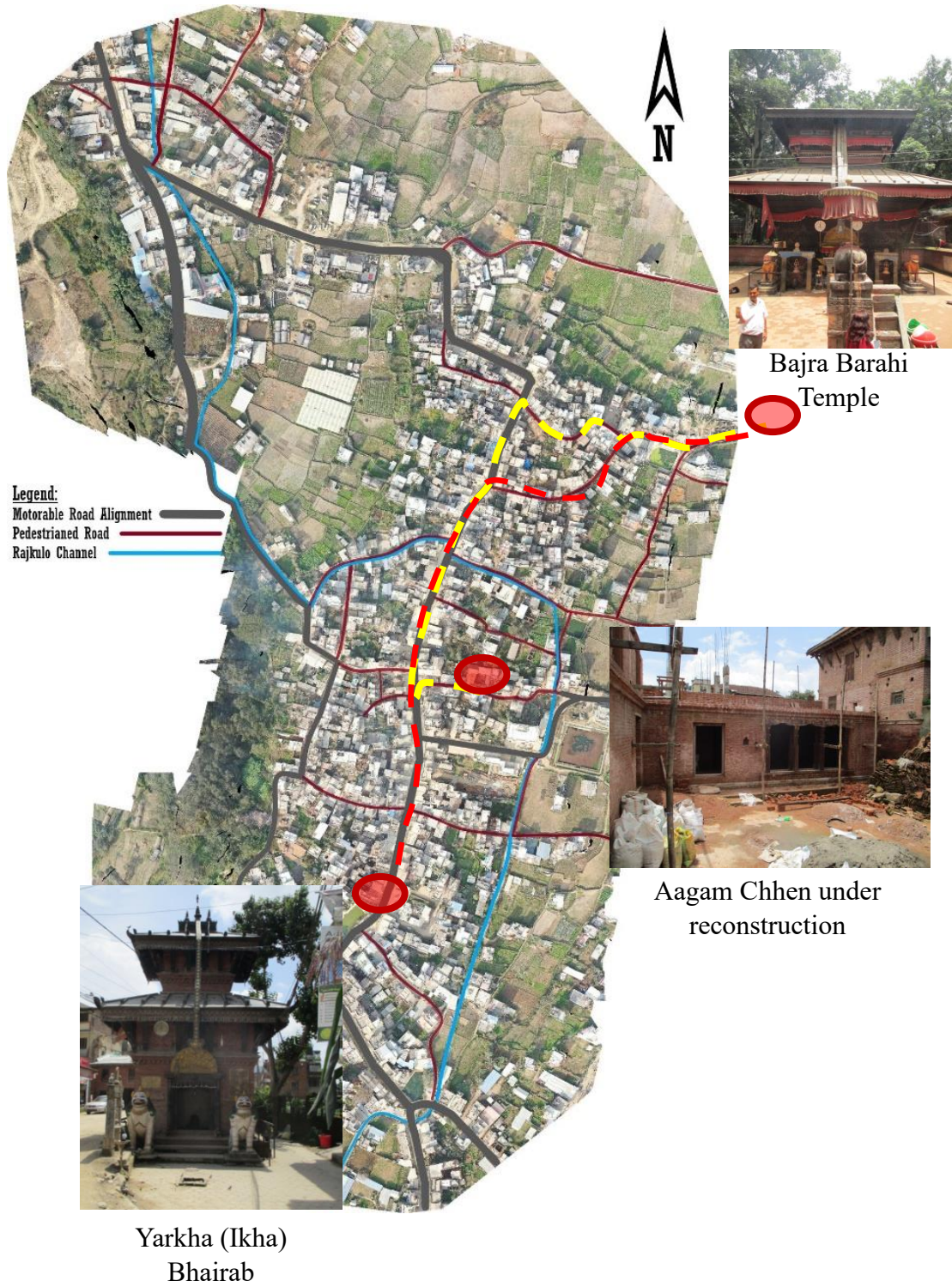


Raj Dev Malla ruled from this Palace in about 1590 AD.

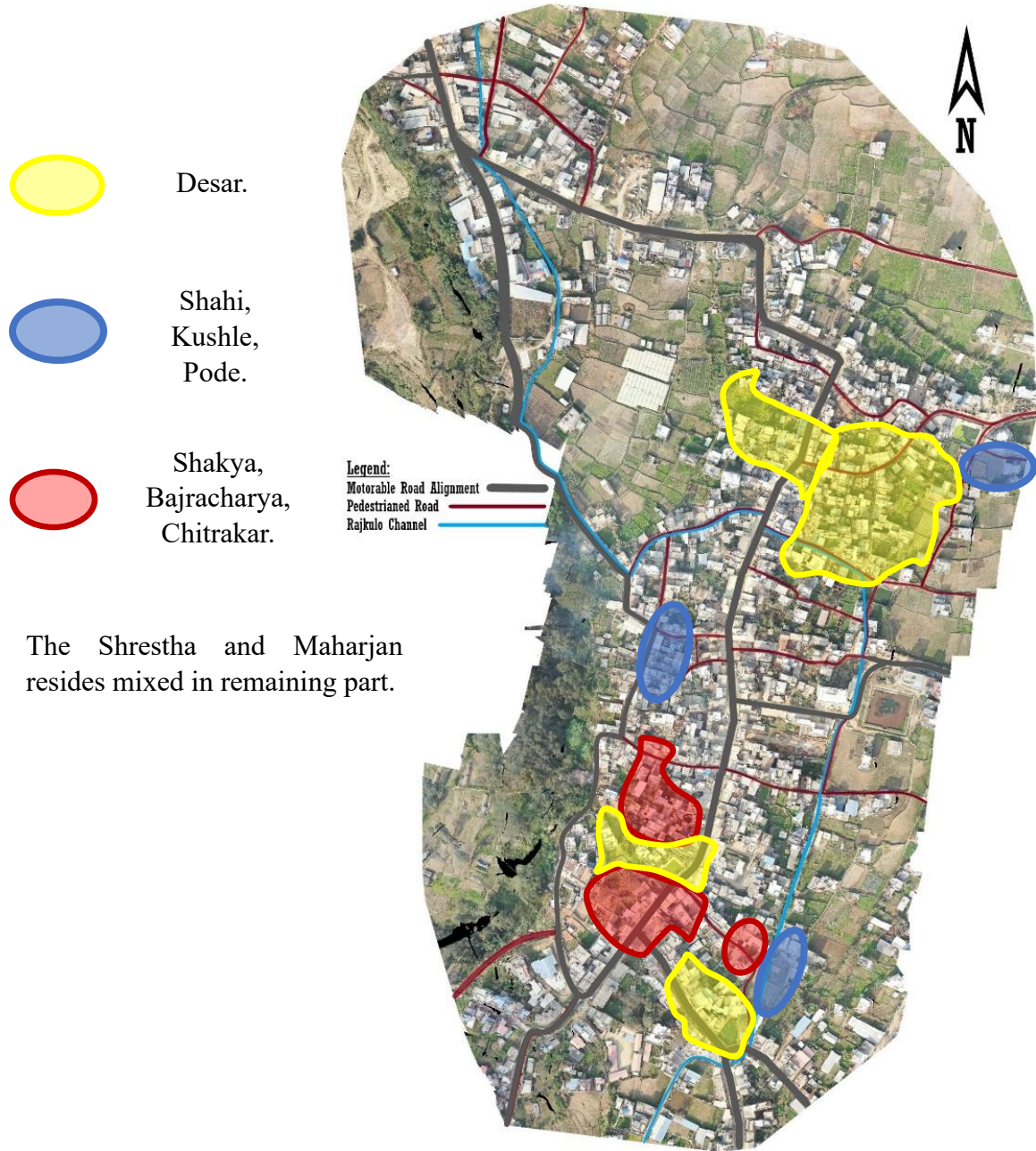


Wa: Bahi, Bhansar Tole, 20th Century

Annex-9 Jatra Route of Chapagaon



Annex-10 Map Showing the Caste based Distribution in Chapagaon



Annex-11 Final Presentation Comments

S.N.	Professors/ Jurrors	Suggestions/ Comments	Addressed Comments
1.	Kumar Pd. Lohani	Mention Guthi land encroached should be backed in recommendation	✓
2.	Umesh Bd. Malla	Research Methodology in Chapter-2 of TOC	✓
3.	Jagadish Chandra Pokharel	Edit thesis title (Remove the word “Their” from the title). Address “How” can be done in recommendations also	✓
4.	Ajay Chandra Lal	Link analysis and findings with recommendations	✓
5.	Jiba Raj Pokharel (Thesis Supervisor)	Mention the Statue of Brahma clearly as it is the only statue of Brahma available in Nepal. Address Clearly the Hierarchy of Open Spaces in Map also.	✓

**Annex-12 IOE Graduate Conference 2020-summer
Paper**

Urban Form and Hierarchy of Open Spaces of Traditional Town, Chapagaon.

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Abstract

Cities are planned with the interplay of mass and space. Mass represents the built structures like palaces, temples, buildings and other social infrastructures whereas the space represents open spaces like streets, community, religious and cultural nodes. These elements of mass and spaces in open, their alignment with each other and orientation define urban form of cities. Open spaces are basic type of land use along with residential, commercial, industrial transportation etc. This research paper discusses the different hierarchy of open spaces that were designed in ancient period in context of traditional town Chapagaon as Malla towns have different hierarchy of open spaces within their town. The research aims to study urban form and different hierarchy of open spaces within the study area, Chapagaon. The research work has been studied under interpretivist/ constructivist paradigm. Different tools regarding qualitative methodology has been applied in the research. Key informants are identified and surveyed using open ended interviews. The study area has been visited multiple time to perceive the traditional form of settlement along with photographic survey. Phenomenological research approach has been used to understand people's perception, perspectives and understanding of current and past situation. Different articles and publications have been studied, along with the inscriptions regarding the monuments of Chapagaon. Thus, the traditional urban form and hierarchy of open spaces of ancient Chapagaon has been discussed in findings.

Keywords

Urban form, Open Spaces, Stharudranga, Bajrabarahi temple, Bhansar tole.

1. Introduction

Urban form is characterized by the five elements of cities as defined by Kevin Lynch. The five elements are edges, pathways, nodes, districts and landmarks of the cities. The edges define the boundary of the cities or town. Paths connect diverse elements and environmental conditions of a city, giving a sequence of imagery to the observer. Districts are the medium-to-large sections of the city, conceived of as having two dimensional extents, which the observer mentally enters "inside of," and which are recognizable as having some common, identifying character" [1]. "Nodes are points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is travelling" [1]. "Landmarks are another type of point-reference, but in this case the observer does not enter within them, they are external [1]." But in ancient period, different principles were used to settle

the town and such principles define the urban form as defined by Chanakya's Arthashastra. The principles set by Chanakya was base line for the development of cities in early day in eastern part of world. The Vastupurusha mandala widely used in ancient period for planning cities is outcome of Chanakya. Lichchhavi and Malla settlements of Kathmandu Valley are found to follow these planning norms. In 1260 AD, Ananda Malla reconstructed the city of Bhadgaon, current Bhaktapur in form of geometric mandala of Astamatrika [2] and similarly, the open spaces were designed accordingly.

The research paper, here discuss the different hierarchy of urban open spaces that were designed in ancient period in case of traditional town Chapagaon. Malla towns had hierarchies of open spaces during their ruling period which still exists. The spaces like Durbar square with royal chapel, market or community square, residential neighborhood square and private residential square like Nani and Chowks.

These squares are differentiated accordingly with the social cultural activities practices along with the presence of urban elements like temples, bahi, depressed water stone spout, dabali space, well, pati (rest house) etc. These urban elements probably developed in lichchhavi period however, they become the popular element of urban square in Malla period [3].

2. Objectives

The traditional settlements of the Kathmandu are planned with well-organized public open spaces where people interact, conduct daily activities and perform cultural and religious activities. But at present these spaces are diminishing. The objective of this research is to study the traditional urban form of Traditional town Chapagaon, that was established during 6th century, Lichchhavi period and gradually developed in Malla period. Along with the study of traditional urban form, this research also studies the hierarchy of open space, their distribution, elements of urban form within these spaces and existing situation and problems of the open spaces of Chapagaon.

3. Methodology

The transformation ongoing in the traditional towns is not only limiting social interaction but also eroding traditional morphology and spatial system. Discussing about the urban form (physical dimension) seems to be positivist paradigm that is primarily based on the observation. However, due to gradual development during the different ruling period and time, the observation don't give actual traditional urban image. Hence different traditional town planning principles, paper related to urban form of traditional urban form of Kathmandu Valley has been reviewed, Key persons and elderly people (aged above 65 years), were interviewed, various publications were studied to induce the output as far as possible. Hence the research has been studied under interpretivist or constructivist paradigm.

As stated paradigm suggests use of qualitative methodology, different tools regarding qualitative methodology has been applied in research work. Key informants are identified and surveyed using open ended interviews. The site has been visited multiple times to perceive the traditional form of settlement along with photographic survey. The

phenomenological research approach has been used to understand people's perception, perspectives and understanding of current and past situation. Different articles and publications from different source have been studied, along with the inscriptions of and regarding the monuments of Chapagaon.

4. Overview of Study area, Chapagaon

Chapagaon, (previously known as "Stharudranga" during Lichchhavi period and Champapur during Malla period) presently located in Godawari Municipality, ward 11. It is traditional Lichchhavi town established in 6th century and developed considerably during the Malla period. The town is located about 10 km south of Patan Durbar Square and is spread across 68 km² [4]. Ancient name of Chapagaon is "Champapur" as it is believed to have been established by clearing a "Chanp" forest. Its name in Nepal bhasa is "wa: dey", "wa:" meaning rice and "dey" meaning country hence "waa:dey" meaning country with very good rice production.

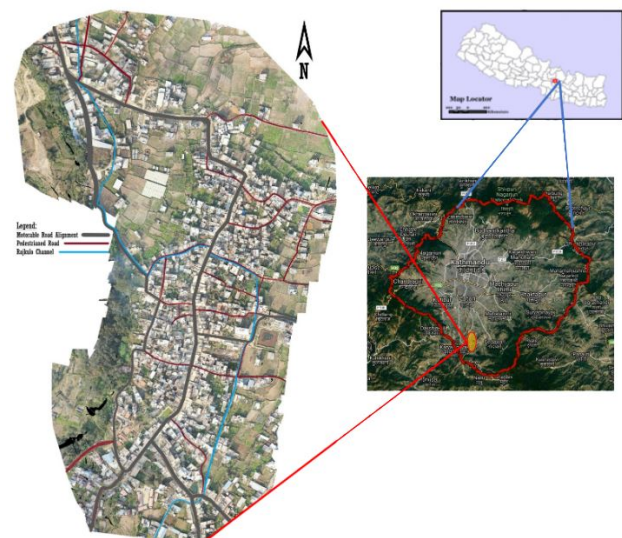


Figure 1: Location Map of Chapagaon (Image Source: Drone shot image by Lumanti Support Group)

Chapagaon is also known as the southern gate of Kathmandu valley and had served as a main taxing point for various goods brought from Terai for centuries. Having two settlements Bulu and Pyangaun in neighborhood also adds to its importance. Bulu and Pyangaun however have its own historical and cultural importance.

In different inscriptions, this town has been mentioned as 'Chapagaon', 'Champapur', 'Wa:Dey' and

‘Wawa:’. However, the local Newar residents and Newar people from neighborhood use Wa:Dey in local dialect and in official or administrative language the town is known as Chapagaon. From the local myths and stories about the establishment of this town, it is clear that this place was a forest. The settlement was established by clearing the forest and with time, it has developed as an organized town.

As defined by Carl Purucha (1975), Chapagaon, a linear settlement south of Patan, is laid out along a north-south main road. Approaching the village from the north to the road coming from Thecho, they first pass an open space where four Patis, an open well, two chaityas and an open Bhagwati shrine are located [5].

4.1 Historical Background

The Chapagaon refers to Conch Shell (Sankha:akar in Nepali) territory shown in Annex-1. But the territory of Champapur or Wa:dey is limited to main market center and its peripheral area (c.f. Chapagaon ko Shanskritik Sampada) of earlier Chapagaon VDC (i.e. ward number 1,2,3 and 4). At present, the Champapur territory is defined by the ward number 11 of Godawari municipality, where Bajrabarahi Jatra is celebrated since Malla period.. The Chapagaon is well known for the Bajrabarahi Temple without pinnacle on its top. It is one of the four most important Barahi temple within a Valley. Champapur can be considered as a cultural unit and its boundary is surrounded by other cultural unit settlements like Bulu, Pyangaon and Thecho.

Chapagaon is also a modern administrative unit. During Panchayat regime, it was Village Panchyat under Aadarsha Gaun Panchyat of Patan district having 9 wards [6]. And after the restoration of multiparty democracy in 2046 BS, Champapur was defined as Chapagaon VDC ward number 1,2,3 and 4. In 2072 BS. Ashwin, it was declared under the Bajrabarahi municipality and at present the Champapur is in Godawari Municipality ward number 11 as declared by Nepal government in 2073 BS, 27th of Falgun.

4.1.1 Lichchhavi Period

As mentioned earlier, Chapagaon was believed to be established in 6th century AD during Lichchhavi period due referencing to the Tashwa:Lho (in local dialect), an inscription available in Bhansar Tole of Chapagaon. The inscription is an upright stone at the

time of Shivadev (ruling period 590-604 AD) which mentions about the reduction of tax in fish trade happened in this region. It further mentions about the tax variation in variety of fish trade. The inscription clearly mentions the town as “Sththarudranga”. The dranga represents the developed and organized settlement during Lichchhavi period. Tiwari (1989) also mention the presence of Bhansar Adda in Chapagaon during Lichchhavi era as taxing point on the goods supplied from southern region, Terai to Kathmandu Valley. Hence, it can be concluded that the town was settled before Shivdev inscribed this inscription. The inscription clearly gives an idea that, there was existence of developed settlement and is a trade center, as tax on trade activities were imposed in this region in those times.

There is another inscription at Yaku Tole of Chapagaon, that has been inscribed under the lotus part of Dev-Murti. The inscription mentions only “Kuber-Gupta” and “Anik-Gupta” nothing else. The inscription date is also not there however, the Jalahari script used in the inscription is predicted from the period of Basanta Dev (506-538 AD) [7]. Hence, it can be predicted that, this town was organized settlement before the 4th generation of Shivdev. The Dev-Murti form Bananta Dev era is remarkable stone sculpture. It is often considered as Dattatreya or locals considered it as Mahadev whereas the posture of murti (idol) reflect it as of Brahma, the creator, as per the description available in Lichchhavikaalka Abhilekh by Dhanbajra Bajracharya.

After the end of Lichchhavi era and before the establishment of Malla era, in about late 10th century i.e. Nepal Sambat 111 (991 AD), Wright (1990: 113) mentions, the two Malla Mukhiya or Chieftans, Raj Malla Dev and Kathayaa Malla established this town and named as “Champapur” [6]. Whereas, Karmacharya (2018), local resident, town priest (engaged in ritual activities in every cultural occasion) and local researcher mentions, the town was ruled by the Rajdev Malla from Bhaktapur in N.S. 711 on the day of falgun sukla astami. When the eldest son of King Manigraraadhipati, Rajdev Malla was born, the astrologer warned, the king should never look upon the face of son so, king brought Rajdev Malla, and Bhashami Mallas, Karmacharya and Desari to Chapagaon [8]. The king established a Palace with a settlement around it at the southernmost end of the valley and this place became the residence of the prince. The people, however, called Chapagaon “wa”,

the place of exile – in Newari, “wawadesha” from the word “wayegu” meaning “to throw”. The successors of the prince who was thus banished by his father were known as Babus. Even today there are people of the Babu caste living in Chapagaon. [5](pg. 102). Because of the planned settlement, from the establishment period, it was inhabited by skilled manpower from all sector of trade necessary for livelihood.

4.1.2 Malla Period

During Malla period there was “Chauki”, a check-post that was confirmed with reference to written document from N.S. 442 (1322 AD) where “Champagulla” has been mentioned [9]. It seems like there was good arrangement for provision of peace and security from that period.

During 1382- 1395 A.D. King Jayasthiti Malla introduced caste division system on the basis of their work as social reform. According to their occupation, different caste people had been resident of this town. There was provision of “Mukhiya or Deshwar”, head man of town, for the improvement and development of town, which latter become “Desar”, currently the dominant/ highest population, in Chapagaon. This also address that, once the Chapagaon was not only a planned settlement but also an independent soial unit.

Throughout the history, this town had been ruled under different administrative unit. In terms of geographical distance, the city was in close proximity to the state of Patan. This town was under state of Kathmandu also at the time when the ruler of Patan is inactive [6]. This town was devastated by the attack of Mukunda Sen, King of Palpa also. In such situation, the Malla rulers contributed from their own for the development of this town. [9]. Amar Malla occupied Chapagaon along with Patan and its neighboring villages. As stated in the joint correspondence of Narasimha, Purandar Singh and Uddhav Singh of 1572 AD, it is clear that Champapur was within the boundary of the Patan state at that time [9]. And Chapagaon was under administrative unit of Patan, however, Shivsimha Malla ruled Patan and Kathmandu independently in 1581 AD.

According to the inscription in the Jhyalpati, Durkhyo Mahavihar, during the regime of Shiv Simha, Shakyamuni Buddha statue has been established in Hemkarna Mahabihar in N.S. 736 (1616 AD) as religion deity of Shakya clan [10]. The inscription of

N.S. 739 mentions Chapagaon as victory kingdom of Siddhi Narsimha Malla. And, the inscription of Bahal from Ikhatole, Chapagaon mentions Siddhi Narsimha Malla established Bajrashan Shakyamuni, Mahankal Maheshwori Shree Chakrasambar Bajrabarahi in Champapur Bihar through local Bajracharya priest in N.S. 774 (1654 AD). Similarly, King Srinivas Malla in N.S. 786 (1666 AD) started a Bajrabarahi Jatra offering worship and gold statue of Bajrabarahi goddess in the temple.

From above it is clear that the Chapagaon is Lichchhavi settlement that developed during Malla period as town with social, cultural and religious significance. The history of Chapagaon being used as a taxing point is also verified because of one of the tole is called ‘Bhansar tole’ which itself means taxing point. All the goods that came from the southern side were taxed here before it was taken to Patan.

Beside the historical and commercial importance of Chapagaon, the town is also an important cultural unit. There are diverse communities living in Chapagaon which is a unique feature in such satellite towns along with many temples, chaityas and bahil. The temple of Bajrabarahi is one among the four Barahis of the Kathmandu valley which establishes its religious importance. In medieval times this used to be a walled city, the wall surrounding the city was known as ‘De Pakha:’ and there were in total 8 gates to enter the town. Among those 8 gates the ruins of 3 of the gates could be found until 30 years ago. The eastern boundary of this traditional town is determined by a ‘Rajkulo’ which is a traditional water system to bring water from the water shed area to the town. This Rajkulo at present is in a depleting state but is still functioning. This Raj kulo used to fill the 9 ponds (8 ponds around the vicinity of traditional town and 1 pond, Pala Pukhu at the edge of settlement near neighboring town thecho). At present due to depleting condition of the Rajkulo some of the ponds have also dried up.

In most of the traditional towns, almost all residents used to be homogeneous cast people. In nearby traditional town, Bulu, Thecho, Lubhu, Sunakothi, Khokana, Maharjan are dominant. But in Chapagaon, different caste people reside in mixed ratio. As mentioned above, Desari are highest in population, following Shrestha, Maharjan, Bajracharya, Shahi, Kapali, Napit etc.

4.2 The Urban Form of Chapagaon

As mentioned above, the Chapagaon settlement was established in 6th century AD, during Lichchaavi period. During that period the settlement had been mentioned as “Stharudranga” due referencing to the “Tashwa:Lho,” an inscription (at the time of Shivdev) available in Bhansar Tole of Chapagaon, translated by Dhanbajra Bajracharya in Lichchhavi kalin Abhilekh. The “Dranga” represents settlement with temples as a central element of the town [11]. Whereas, in “Stharudranga” there is a tax office as central place. The settlement has been developed around tax office. From these findings indicate that the current chapagaon was established during Lichchaavi period.

As of other Lichchhavi town, “Stharudranga”, current Chapagaon is also located in ridges or high lands of the Valley floor (i.e. southern hill of Lalitpur at an altitude of 1400m to 1700m above the sea level), away from hill source with very low subsurface ground water. This led to the development of pond with deep wells as reservoirs and depressed pit conduit for water supply. At present there are 9 ponds around the vicinity of the town and one depressed water conduit in Bhansar Tole. According to the local resident Krishna Shrestha (aged 70 yrs.), there were two more depressed water conduit, one at Ikhatole, east of Ikha Bhairab temple another at Bhailene Tole, (current taxi station). They were covered during Panchyat regime however, the exact origin date of these water conduit and reason behind covering of them is not known. The one depressed water conduit at Bhansar tole is being restored by Lumanti, Support Group for Shelter, for heritage recovery plan project. Tiwari (1989) mentions very few of these water systems could have river source hence they require construction of ponds as reservoir. The similar urban characteristics can be seen in Chapagaon at present. The location of 9 ponds around the vicinity of town and are recharged by the Rajkulo, eastern boundary of town, managed the requirement of water in settlement in ancient time. However, at present the ponds are not maintained well as they used to be in earlier days, says Rajaram Shrestha, local resident. He further mentions, the water from Bhansar Pukhu was used for drinking purpose during his childhood. The Rajkulo is a traditional water system to bring water from the perennial source to the town. In Chapagaon, the source is Lele khola channeled from Tikabhairab and at present it is in depleting state but is still functioning.

The total area of Chapagaon is 6.79 km² of which 80 percent of land is plain area and 20 percent is slope [12]. As it is located in ridges or high land of Valley, the settlement is slope towards northern direction from south and western direction from east simultaneously. Carl Purucha (1975), also mentions, “the village is built on terraced land which slopes slightly from south to north”. It clearly mentions, to the west, the land rises to the Bajrabarahi forest and to the east, it descends to the river. The settlement is covered by agricultural lands, forest and rivers on its periphery. To eastern boundary, the settlement is covered by agricultural land, which seems to tend towards new residential expansion area at present. And to the north-east of this settlement, there is an important forest, Bajrabarahi forest covering an area of 19.05 ha, that houses the most important temple of goddesses Bajrabarahi. Bajrabarahi is the main deity of the town and local people believed that the goddess is guardian deity of town. To the east of this forest “Narkate Khola” flows towards northern direction that originates from Muldol, south-eastern part of the settlement. And to the western boundary of this settlement there is “Pagale Ban” (forest) following lowland agricultural area. There is also a “Tikabhairab khola”, often called “Nakhhu” river on west of the settlement that again flows towards northern direction and mix with holy river Bagmati in Chobar area. According to the Karmacharya (2018), the ancient name of river is “Prabhawati” river. During the “Dwapar era”, the princess Prabhawati, sister of Banaashur, king of Thankot (Sonitpur), came to take holy bath in this river every morning and the river between Chapagaon and Chhampi territory got its name Prabhawati river from that period. He further mentions the Chhampi Ganesh of Chapagaon is taken to this Prabhawati river, after offering Yagya (homage ritual) at the day of Mangsir Chaturdasi every year. And on very next day, Purnima, (on the day of Yamari Purnima) the Chhampi Ganesh is taken back to Chapagaon with chariot procession and jatra by devotees [8]. The southern boundary is covered by agricultural land (Sheraphant area) and to south-eastern part of the town, there is historically and culturally important settlements, Bulu and Pyangaon. Similarly, to the northern boundary, there is agricultural land and to south-western part there is Malla town, Thecho.

The streets have been the main elements to define the urban form of ancient settlement creating the square geometry as explained in Chanakya’s Town planning

principles by Kautilya. Lichchhavi and Malla towns did follow similar principles as Malla town planning used Vastupurusha mandala from the fact that the Ananda Malla used Astamatrika mandala in 1260 AD while restructuring the settlement of Bhadgaon. The exact square geometry is not seen in study of urban form of Chapagaon similar to many other outlying towns of Kathmandu Valley. It does not exhibit any strict urban form at present probably due to long history of different ruling period and gradual development in time frame. It seems like it did try to follow similar town planning principles somehow from the location of natural element, “Bajrabarahi forest” and “Narkate” river on its north-eastern direction and “Prabhawati” river in western side of settlement as Chanakya mentioned there should be water/ water bodies in all sides of settlement and Dams should be built over rivers and Nalas. Dam construction in Tikabhairav, southern part of settlement, to channel the water to Chapagaon settlement from Lele river as Rajkulo is still in function at present but in depleting condition as mentioned earlier. However, the construction period of dam is yet not known while many researchers believe dam construction in Malla period.

The shape of settlement is also in rectangular geometry as suited to land topography, as mentioned in Chanakya’s Town planning principles. The rectangular shape is defined by the streets that surround the settlement in outer periphery. The main street runs across the middle part of town approaching the Bhansar Adda. There are three streets across the north south direction and three streets across the east west direction intersecting each-other creating the grid geometry. The central part of the grid geometry housed a Bhansar office/ Adda and central urban open space for the social and cultural activities or occasion of the settlement. The central space holds prime importance regarding the social, cultural and economic activities of the settlement and was considered the actual Bhansar Tole of then “Stharaudranga” as per the local resident and researcher, Rajaram Shrestha.

After the Lichchhavi period and before the establishment of Malla period, the settlement was bounded by “De-Pakha” (boundary wall) from all side. The Rajdev Malla, from Bhaktapur established the town in NS 111 (991 AD) and named the town “Champapur.”[8] The Palace was established on the eastern side of Bhansar Tole, and constructed the

entry gates to different entry locations of the town. According the Buddhi Bahadur Shrestha, (aged 76 years) local resident of Barkha Tole, the Champapur was surrounded by “De-Pakha” from all sides and there were six “Dwar” or “Dhokha,” entry gates to access entry and exit to town. Among the six gates, he himself had witnessed the remains of 3 gates till B.S. 2045/46 (1963/64 AD). The gates were located nearby the location of ponds, Ikha Pukhu, Barkha Pukhu, Bhansar Pukhu, Nhyakan-Dah Pukhu, Wokha Pukhu and Shiv Pukhu simultaneously, to exact cross section of streets to access entry to the town. Whereas, according to Rajaram Shrestha (aged 44 years), of Bhansar Tole, as told by his great grandfather, there were eight entry gates to the town, the location of six gates were exact as told by the Buddhi Bahadur Shrestha and among the two remaining gates, one is at the entry point to Jhocheen, near Jyoti Bihar and another at the cross-section of street near Champapur Temple. The location of ponds and Dwar/ gates were shown in Annex-4.

As Tiwari (1989) mentions, the analysis of existing towns and outlying settlement shows the position of certain temples such as with Vishnu, Siva and Bhairav images and also the location of cremation grounds confirming with religious text in many cases. In Chapagaon, as mentioned above, there is a Bajrabarahi Temple in north eastern side of settlement constructed in NS 786 (1665 AD) by King Srinivas Malla and later it was renovated by Bishnu Malla in NS 852 (1731 AD). It is one of the most important piths of tantric origin in Valley located in small forest on the plateau east of Chapagaon [5]. Before King Srinivas Malla constructed Temples, there was only some stones and small pond (Wopi in local dialect) which is still present inside the temple, and was worshipped as Bajrabarabi goddesses. In mythological story of Bajrabarahi, the Varaha incarnation of goddesses used to play in that small pond as told by local ancestors. They further mentioned, on the fringe of forest there are eight cremation grounds and one is just in front the temple which has been shifted to about 100m west from the original location (which can be seen outside temple premise). These cremation sites belong to the people of Bulu. However, 3 cremation sites for the people of chapagaon is on the western side of the settlement near the bank of Nakkhu river and one cremation ground on southern side of settlement on its outer periphery belongs to Kushle caste people of Chapagaon as the cremation ritual of Kushle caste

people is different from other.

As temples were the important urban elements of Malla towns, different Hindu temples and Buddhist bahi were also constructed in Malla period in Chapagaon. According to the Basudev Karmachrya (aged 75 years) the Agam Chhen of Bajrabarahi goddesses Bhansar tole was constructed in NS 719 (1598 AD). He mentions, the Agam Chhen was constructed 67 years before King Srinivas Malla constructed Bajrabarahi temple within the forest referring to the inscription available in Jaru at Paucha tole and the hand bell at Agam Cheen where date NS 719 has been mentioned clearly. There is an inscription of establishment of Shakyamuni Buddha in Hemkarna Mahabihar in NS 739 (1618 AD) by Amrit Simha and his family of Bhansar tole. Similarly, in NS 739 (1619) Shivdev and His family established Shakyamuni bhagwan in Chapagaon. Likewise, many temples and bahi were constructed within the date. The Narayan temple at Bhansar tole was constructed in 16th century and renovated in NS 772 (1651 AD) similarly Krishna Mandir was constructed establishing Balgopal statue in it. Ikhava Bahi or Kalyan Mahabihar (Ko-Baha in local dialect) at Ikha tole was established in NS 774 (1653 AD) and in NS 779 (1654 AD) silver tympanum (Toron) was offered to Shakyamuni Dharmadhatu and Mahankal Maheshwori Chakrasambar Bajrabarahi was established in bahi. In NS 789 (1668 AD) the Bhairab temple at Ikha Tole often called Yarkha Bhairab or Ikha Bhairab was constructed at the southern edge of town. According to the inscription available in Narayan temple, in NS 801 (1681 AD), local resident Ramman Bharo and his family constructed Laxmi Narayan temple and established guthi offering 12 ropanies of land for the regular worship and butter lighting in Narayan, Indra and Bung: Dyo (Rato Matshyendranath) temple. Similarly, Ganesh mandir in Ambargal was established in NS 830 (1709 AD) and another mandir (Agam Dyo) at Bhansar tole in NS 832 (1701 AD). During that period, many Hindu temples and Buddhist monuments were constructed within and around the settlement, which resemble the harmony relation between two religion. Both the religions were given equal importance and celebrated.

As mentioned earlier, unlike other outlying settlement, Chapagaon is settled by heterogeneous caste composition of people. The king Rajdev Malla brought Bhashami Mallas, Karmacharyas and Desar from Bhaktapur to Champapur to run the state [8]

during its establishment period. Desar are the majority in number at present also. Apart from these group of people, Shakya, Bajracharya, Chitrakar, Shrestha, Maharjan, Shahi, Kushle and Pode also reside here in chapagaon. The hierarchy of social strata is not seen depending upon the importance of their occupation like high caste people reside closer to the palace however, caste and clan community is there in Chapagaon. Desar people have their own community and so do Shakya and Bajracharya, Chitrakar, Shahi, kushle and Pode. The Shahi, Kushle and Pode people reside by the outer periphery of town. Whereas, Shrestha and Maharjan are mixed and scattered in social composition within settlement. The craft specialization as per Jayasthiti Malla can be seen in social composition of town.

As of the cultural aspect, various festivals and jatra are celebrated in chapagaon. These cultural activities unite the people of chapagaon. The main festival of the Chapagaon fall in month of Chaitra on the day of Chaitra Purnima. On that day the Bajrabarahi jatra is conducted started by Narendra Dev Malla [8]. On that day, chariot procession of Bajrabarahi temple is performed. The jatra is performed for two days. On the first day, the goddesses from Agam Cheen is brought to chariot and taken to Bajrabarahi temple with celebration and musical procession. On the next day, local people and visitor visit temple and worship goddesses. On the day at evening, the goddess is brought to city area from temple and jatra is performed within the settlement. The path of jatra celebration demarcate the old territory of chapagaon settlement. apart from this jatra, other important jatra are Kartik Astami (Marasthi) jatraof Bajrabarahi goddess, Chhampi Ganesh jatra, Tika bhairab jatra Dashain, Khadga Jatra, Lakhe jatra, Krishna Janmastami and Buddha Jayanti are prime festivals of Chapagaon. Kartik Astami (Marasthi) jatra, Chhampi, Ganesh jatra and Khagda Jatra is not conducted at present because of the stolen image of idols.

4.3 The Urban Open Space of Chapagaon

A series of polarization nodes distanced by space as well as time results the spread of any town. The idea of any plan put up an ordered framework for these kinds of nodes such that the town will be in order in given time or perceived future time. The functional requirement of city also generates equally but distinct set of movement pattern. The functional need to stop along a route is recognized only for the living and the

gods and as such all squares would lie in these routes. There are to be no nodes, or squares, along the funeral route [3]. To conclude the functional requirement to stop, congregate and move further along a street created square and their underlying concepts. A street could be considered as a self-justifying urban element but the square has been considered only in relation to a street. The Malla towns show a distinct set of squares with a clear hierarchy of social cultural activity. These are the Durbar square or the Central Palace square, the Market square, the Residential Neighborhood square and the Private Residential square [3]. Same case could be identified in case of Chapagaon also.

The main street where all the major socio-cultural functions take place is north to south oriented central street. It links the neighborhood squares and market square in Chapagaon as similar to the other Malla towns. The secondary street connects market square with Palace square and private residential square going further to meet temples along the way and other elements of urban squares like Pati, water spout, ponds etc. Some of these streets continue to the farmlands in the open area. The lesser streets or service street also connect secondary streets with private residential squares. Talking about the funeral route (service street), there are 3 funeral sites in western slope of the settlement near the Nakkhu river as mentioned above. The funeral routes do not pass through the inner core settlement thus avoiding the godly paths. There are no nodes or squares along the funeral route similar to the other Malla towns.

4.3.1 The Private Residential Square (Kalyan Baha or Ko- Baha)

It was established in NS 774 (1653 AD) belongs to the Bajracharya clan. It housed Bajrashan Shakyamuni shrine, Maheshwori Chakrasanbar Bajrabarahi and Mahankal goddesss in bahal. There is one votive chaitya and Shakyamuni dharmadhatu in its courtyard. The objective of this baha was to perform religious function dedicated to Buddhism. In early days, daily rituals from birth to death, religious worships, Deshana (religious teachings) were performed here. At present it performed communal Bratabanda and Ihi to Bajracharya people. Nitya puja is not performed at present because associate priest is not there as their clan had been totally destroyed in past.

4.3.2 The Neighborhood Square: (Yaku Chowk)

It is a square divided by main street located at Yaku Tole that houses extended families. Two streets intersect in this square, one main street and another secondary street that runs to Wakha Tole. The religious edifice, two Narayan temple, two Ganesh temple, Brahma statue of Lichchhavi period, Chaitya, well and Pati (rest house) are present here. Local resident, Krishna Shrestha (aged years) says during early days, people came to oil Narayan temple if any member of the family have difficulty in delivery of child during labor pain. Doing so, the child delivery becomes easy. At now such practices have not been performed or seen as people prefer to hospital services in such scenario.



Figure 2: Social, Cultural and Religious edifice of Yaku Chowk (Brahma Murti, Ganesh temple and Pati in left, Ganesh temple and Narayan temple in middle, and Well and Chaitya in Right)

4.3.3 The Neighborhood Square: (Ikha Chowk)

This chowk is located to the southern edge of the traditional town, on the eastern side of Ikha Bhairab temple. The religious edifices Ikha Bhairab temple, Chaitya, Ganesh temple, Wa: Bahi (Ba Bahi) and public water tank is here. It is a large open courtyard beside main street that serve neighboring community. Local residents say, in early days there was a depressed water spout nearby the water tank which was buried during Panchyat regime however, they don't know the reason. At present this chowk or courtyard is used by local people, for sun bathing, crops drying, feast during occasions. Some local vendors sell their goods like pottery products, vegetables, tambakhu (tobacco), sakkhar (molases) etc in this square.



Figure 3: Panoromic View of Ikha Square showing Wa: Bahi, Open Space and Chaitya, Ganesh Temple and Ikha Bhairab (from left to right)

4.3.4 The Market/Community Square: (Bhansar Chowk)

It is the central space of the traditional town. It is the major social, cultural, religious and economic node of the settlement as the main street and the secondary street to durbar square intersect here. Tax Adda (Bhansa Chhen) is located in this square along with Malla period Chauki (security post), Narayan temple, Krishna temple, Bhui Narayan temple, depressed water conduit, Bhimsen temple dabali square, pati, and the inscription of shivdev. The depressed water spout, pati and chauki were probably for the public purpose as it used to be more crowded space during cultural, religious, social occasion and economic practices. It is the square, where the chariot of goddesses Bajrabarahi is prepared and the jatra started.



Figure 4: Panaromic View of Bhansa Square showing Ganesh Temple, Narayan Temple, Krishna Temple, Bhansa Chhen, Dabali, Bhin-Dyo and Bhui Narayan Temple (from left to right)

4.3.5 The Palace Square: (Bhansa Chowk)

This square is located to the east of Bhansa chowk, community square. There is highly decorated traditional building. The local people believe that, it used to be the palace of Rajdev Malla from where Rajdev Malla rule this town. It has small courtyard in-front of it. At its periphery, there is Agam Chhen of Bajrabarahi goddesses constructed in NS 719 (1598 AD), currently being restored, Nasa: Dyo and small chiba. The half portion of building has been totally collapsed during earthquake 2015. Due to presence of main deity, this square tried to dominate others squares. The palace building is also vacant at present as maintenance work is being carried out. At present, the square seems like the residential square. The division of property deteriorate the use value of this building and square.

There are also many other private residential squares like Wokha chowk, Baku nani, Jhochhen. These squares are owned by the family clan. There is no such religious edifice within the square. They are used by their own family clan. at present, due to vertical expansion of buildings these square acts like light

well.

Apart from the squares within the settlement, there is an open space outside the settlement which has been used as the funeral site for the Kushle caste people. It is culturally important space as along with the funeral ritual for Kushle caste people, the Tika Bhairav jatra is conducted in this open space also. A ritual of Jal offering is done during this jatra and samay baji is distributed among the visitors in this space. Later the jatra is performed within the settlement. At present the burial space has been specified in northern part of space. In southern part there is a building that houses the ward office for the municipality after local body election. Due to which, the Jal offering corner within the space is not specified at present as it used to be in north western corner in early days.

5. Discussion and Findings

Above descriptions clear that, the town was established during Lichchhavi period. The location of settlement on ridges, ecological site Bajrabarahi forest, Narkate river and temple as pith on north-eastern part, Pagale Ban (forest) and Nakkhu river in western part, Bhansar Adda in central location of settlement, division of tole as districts by alignment of roads, presence of ponds on the outer periphery of town resemble the urban character of lichchhavi town. However, many cultural manifestations have occurred during Malla periods like establishment and reconstruction of different Hindu and Buddhist temples, Pati, depressed water spout in major location of town, festivals and jatra along with guthis. The cultural landmarks like Narayan temple, Ikha Bhairab temple and Wa: Bahi were constructed. They build Dey: Pakha (boundary wall) demarcating the town boundaries and established 8 gates to the town. Both the Hindu and Buddhist religion are given equal importance during Malla period and celebrated with great gusto.

At present, Urban form has changed due to organic growth of settlement. After 2015 major earthquake urban settlement is expanding on its periphery. Similarly, the expansion of road (Kantilok Path) within the settlement make people to migrate in peripheral area. However, the traditional town at present can be observed by modern definition of cities by Kevin Lynch.

The use of open spaces are also transforming with modern influence of lifestyle due to global force of urbanization. Economic activities like shops, vending

market, parking etc. occupy open spaces along with recreational and social activities. The influence of modernization can be seen in built structures also. Many traditional buildings have been replaced by modern buildings. The expansion of road will deteriorate the different structural heritages like temples, rest house (Pati), water spout, dabali, ponds, open spaces and traditional buildings along side the roads.

The stolen of godly images have been another prime issue of this traditional town. Due to stolen of godly images and decline of Guthi system many festivals and rituals are not celebrated at present. Main festival, Bajrabarahi goddess jatra is celebrated only once in Chaitra Purnima. In early times, Bajrabarahi goddess jatra is celebrated twice a year. The jatra of goddess during Kartik Astami is not celebrated due to stolen of image and decline of Guthi system. Apart from this, Chhampi Ganesh jatra, Khadgi jatra and different rituals during Dashain festival are not celebrated at present. Hence, Chapagaon is slowly losing its urban character.

6. Conclusion

Chapagaon has its historical importance due to its origin and along with its socio-cultural value. The settlement was well planned along with social composition and cultural manifestation. Along with time, several changes happened primarily in its physical aspect due to urbanization. Due to such physical encroachment of spaces, vertical expansion of buildings, stolen of godly images, change in urban life style, economic activities, the social and cultural aspects of this town and open spaces are slowly diminishing. Hence this settlement needs intervention plans and policies for its conservation due historical value along with its social and cultural importance.

The traditional urban form of 6th century town established before the period of Shiv Dev should be conserved at its best condition. The traditional Rajkulo should be restored, along with ponds, water spout, and deteriorating temples and patis. These are the urban elements developed during Lichchhavi period that become popular in Malla period and became the essential elements of urban form. Though, Chapagaon is small town as compared to Patan, it exhibit different hierarchy of open space, sectorization of different caste people and various socio cultural activities and rituals. The stolen godly images and

declined guthis must be restored and revived for conservation and continuation of socio-cultural activities to conserve the identity of historical town.

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Annex-4

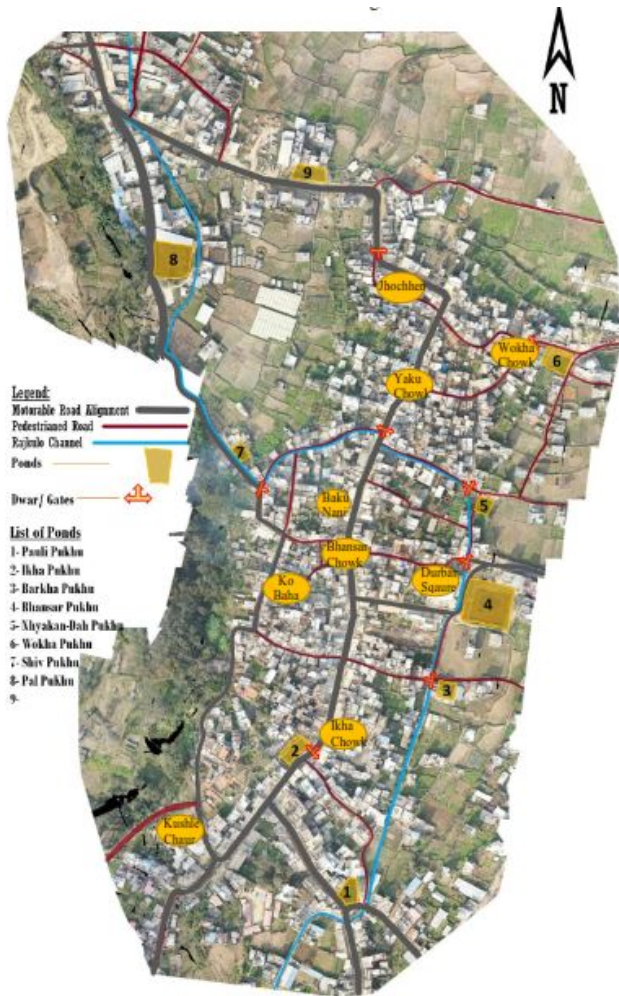


Figure 9: Location of Open Spaces, 9 Ponds and 8 Traditional Gates of Chapagaon (Image Source: Drone shot image by Lumanti Support Image)