

accommodate the future needs. What can be learnt from this review is that such ad-hoc plans and projects must be part of the Structure Plan. The “fabric of these projects” must fit within the fabric of the overall city.

New proposals of development within the Samtse Municipal Limit, according to the Ninth Five Year Plan, are elaborated in a later part of the report.

3.2 RELIGIOUS AND HERITAGE ASSETS

Religious and heritage assets provide the inhabitants with both passive, as well as spiritual, forms of recreation. They are special as they offer peace and a serene ambience.

Every culture and every society has its iconography, its signs and symbols. Bhutan has a unique style of architecture, which is reflected in the various structures, be it monumental or a simple residence. To study the Bhutanese culture and way of life, it becomes important to assess the present scenario of the heritage structures, which are an integral part of this religious and traditional society.

Samtse, although not blessed with exceptional heritage sites, as Thimphu or Paro, has a few religious structures which add meaning to the daily life of the citizens. Heritage sites are not built overnight, but it is a constant effort of centuries together that make them. Perhaps Samtse, being too young a town, needs some period to ripen and gleam. The existing religious and heritage sites and in the town are identified and classified on the basis of their religious or secular character.

(Dz 1) : Samtse Dzongkhag Office

(D 1) : Samtse Rabdey Dratshang

(L 1) : Army Lhakhang

(C 1) : Doduel Chorten

(C 2) : Jangchup Chorten (near Royal Guest House)



Samtse Dzongkhag Administration



Doduel Chorten

The existing Dzong structure is a witness to the development of Samtse town, being one of the first few structures constructed. It was previously built as a school building which was later on handed over to the Dzongkhag administration.

The Gyem Chamdrel Sum (Prayer Wheel) in the parking area acts as a meeting point for the town core dwellers. The prayer flags at specific locations add to the essence of the space, making it more dynamic. There also exists a Shiva Temple near the Doduel chorten.

3.3 ENVIRONMENTAL ASSETS

Nature functions in its own organized system. The sustainability of any development depends on the degree to which the development is in harmony with nature. The ecological balance has to be maintained at all costs. Any step towards development which disturbs the balance and harmony of nature could lead to devastating consequences like landslides, soil erosion, pollution of natural water bodies and atmosphere, silting of rivers, floods and earthquakes. Environment should be understood as an asset to mankind rather than a mere element.

All human development should consider and understand the determinants of the natural system. Topography, vegetation, geology, and hydrology are the primary determinants of the natural system and they are the prime factors for the healthy planning of a town.

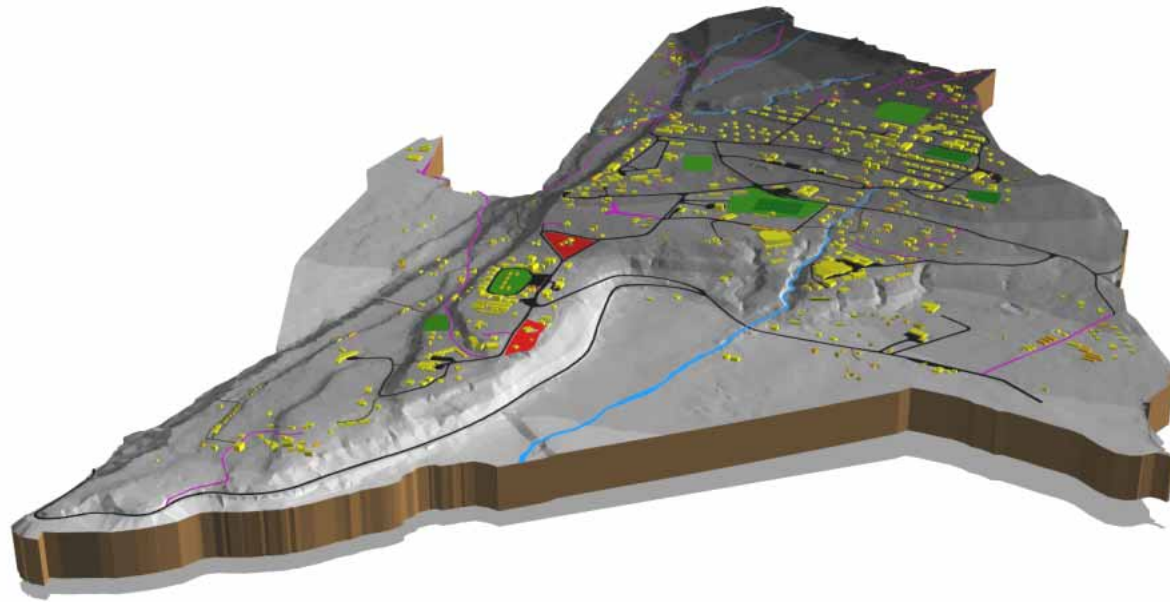
Cities that have ignored natural determinants while undertaking developmental measures are today facing a severe environmental crisis. Apart from understanding the determinants and functioning of the natural systems, utilization and management of the natural resources is another factor to be addressed in planning a town. The uncontrolled utilization of natural resources like water and forests resources at a rate at which the natural system cannot regenerate them will lead to depletion of these resources. This would leave the future generations with little natural wealth and major crises management problems.

Thus, understanding the determinants of the natural system and efficient management of these environmental assets are two essential components of the Samtse Structure Plan.

3.3.1 Environmental Determinants of Samtse Town

Natural determinants viz, the climate, topography and geology were explained in detail in the earlier part of this chapter. An understanding about the relationship between these determinants aids in understanding the basic physiographical zones of the region. These natural determinants support a specific ecology, flora, fauna and surface hydrology which determine the degree of interrelationship between these natural determinants and the ecological features of the place. These which we call as the environmental assets of the town are explained in the following chapter.





Samtse Town

3.3.2 Surface Hydrology and Water Sheds

Hydrological networks are the spinal cord of the entire natural system. Rivers, streams, springs, aquifers, lakes, ponds and ground water are interlinked to each other, and though the links are not prominently seen, they function in close association. If we discern the different determinants of natural systems, especially geology, climate and vegetation, these links will be revealed to us. Understanding these links and the functioning of these hydrological units is an important factor in planning and resource management.

As was discussed earlier, water is the prime resource for any habitable place. The entire world has only 3% of its hydrological wealth as potable water, out of which major volumes are in the form of frozen ice, or as ground water. So it is very important for us to manage and protect the available water resources efficiently.

The Damdhum Chhu, its tributaries and the Sukrety Chhu comprise the basic hydrological system of the town. These rivers have past histories of flooding, and the Sukrety Chhu specially possess a high risk of flooding in the town. The river has its watershed higher in the mountains to the north of Samtse. These major streams are fed by their own network of numerous minor streams and rivulets through the gullies running down the hill slopes. These streams originate from natural springs, lakes and surface runoffs at higher altitudes.

Apart, from these major rivers, there also exists a specific pattern of storm water drainage within the town. These are evident from the continuous strips of relief and the topographical character of the town. These features form a natural interconnected network of storm water drainage in the town. Past developmental activities in the town, like construction of new roads

have already disturbed this natural system to a considerable extent. Another important issue that needs to be addressed is the man made surface hydrological systems which include the irrigation canals and catchment ponds. These irrigation canals penetrating into the paddy fields provide potential opportunities for creating pedestrian connectors for the future development.

Very sadly, most of these surface water drains have now become carriers of sewerage from the town. The natural storm water drain running behind the Bhutan Food Products (BFPL) compound is a good example of such kind where the importance of the natural storm water drain in the ecological system of the town is totally neglected. Though not mentioned individually most of the natural surface drains of the town are in the same situation.

The river and streams support a variety of plant species within their Riparian Zone (the ecosystem in the immediate surrounding of the watercourse, which is influenced by it). In turn this eco-system protects the environment of streams and rivers.

3.3.3 Flora, Fauna and Avifauna Reserves

The flora of a region is the vegetation typology of the region. As plants are very specific to the concerned environment, the presence, pattern and distribution of plants can infer more accurate information about their environment than the generally available information from the climate, soil, water regimen and other factors.

Most of the forest vegetation and major floras of the town are those of planted species, carried out during early 1770's. The major vegetation types found in Samtse are mixed hard wood forests, paddy fields, riparian vegetation along the stream course and some amount of marsh land vegetation.

Forest Vegetation

Forests are the heart of the mountain ecology and are the prime natural resource of the country, supporting a variety of flora and fauna. Forest vegetation protects the hill slopes from erosion, landslides and also plays a major role in protecting the watersheds of the rivulets and streams. Forests play a prime role in maintaining the climatic conditions. Their annual foliage droppings add compost nutrition to the soil and enrich the country silently. Forests are the dominant land cover of the country occupying about 70% of the total area of Bhutan.

The forest cover in the Samtse region could be classified as tropical forest with some amount of temperate vegetation. Due to high rainfall the region is dominated by hard wood trees and cash crops like cardamom and arcanut. The thick forest vegetation on the slopes of the town along the Sipsu road forms the basic ecology of the town and plays a major role in protecting the steep and very steep slope ranges of the mountains adjoining the town.



Some of the principal flora found in and around the Samtse municipality limits are Shorea-robusta, Tectona-grandis, Michelia-champaca, Acacia-catechu, Delonex-regia, Jacaranda-mimosifolia, Santalum-album, Bombax-ceiba, Lagerstromia species, Ficus species, Clerodendron-viscosum, Eupatorium-odoratum, Cofia-bengalensis and Mikenia.

Paddy fields

Paddy wet lands are irrigated agriculture lands. Paddy fields are the dominant landscape of Samtse region. The environmental significance of these lands beyond their fertile nature is that they protect and manage the lower river terraces, which are potential ground water resources. One of the fine concentrations of these paddy field wetlands of the region can be seen in the Gurung Basti, Machetrar and Chengmari areas.

Marshland Vegetation

Marshlands are wetlands which act as water severs. Marshlands are the prime natural ecosystem that supports a variety of plants and birds. They play a major role in maintenance of ground water and surface water supplies, sediment trapping, erosion control and pollution abatement. The river bed wetlands in Samtse Dzongkhag are one of the largest such areas in Bhutan. In the Samtse region marshlands are found along the river courses, especially at places where the tributaries meet the Damdhum Chhu. Some marshlands could also be identified along the Sukretey Chhu course, beyond the municipal limits. Some of the marshlands near the Indo-Bhutan border have already been converted into paddy fields. Most of these marshlands act as habitats for winter migrant birds of the region.

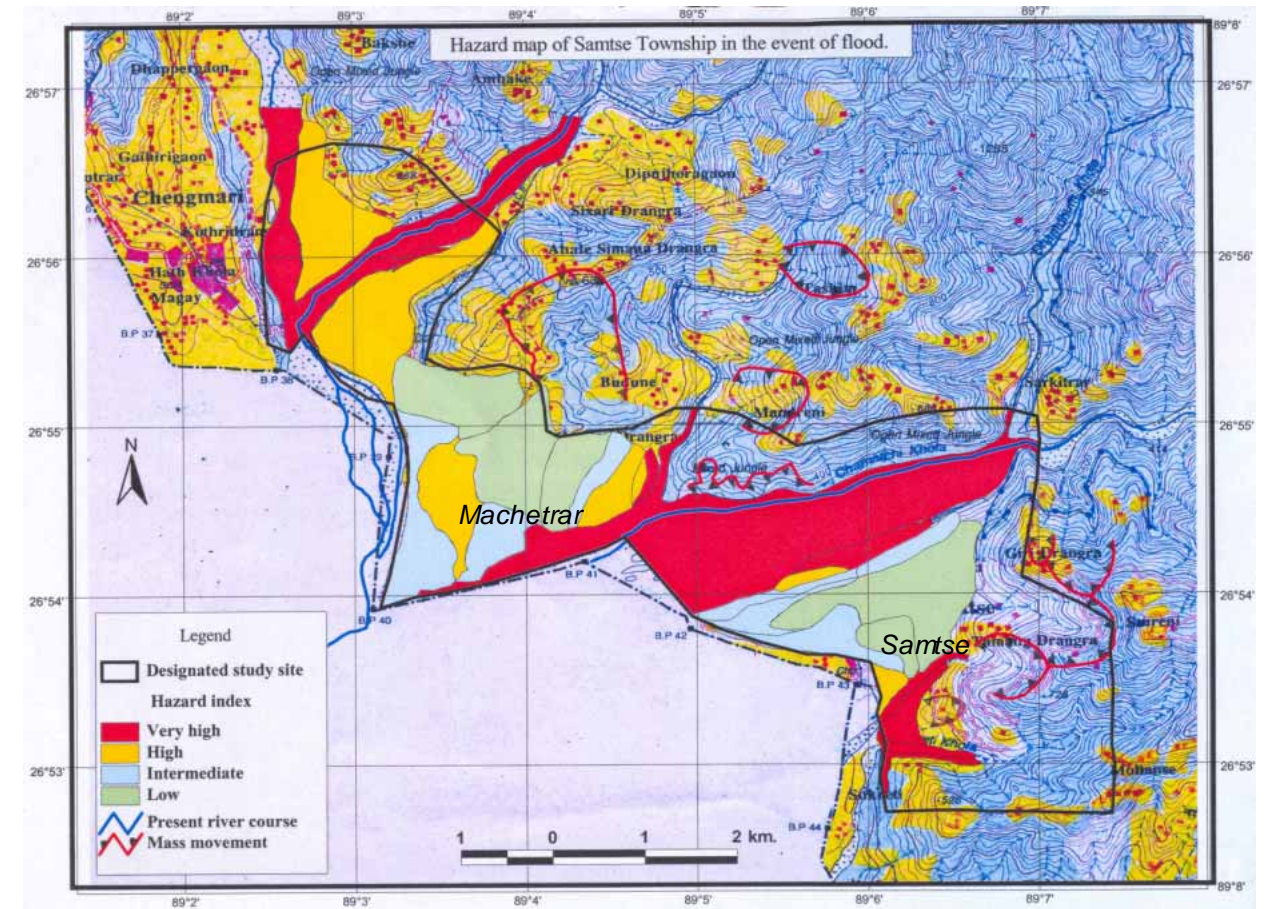
Fauna and Avifauna Reserves

Animals are specific to the environment and like flora their survival is an indication of a healthy environment. If we can discern different environments, and know the linkages between creatures and their natural habitat, it will be possible to establish the pattern and distribution of wildlife in the region. Animals like snakes, frogs, crabs, magpie, wild boar and monkeys are common fauna found in the region. The history of Samtse provides references to the existence of these animals in the region. The process of urbanization and conversion of forest lands to agricultural purposes and intense human interference has resulted in the extradition of these animals from the town and its immediate vicinity. There also exist a few bird habitats in the region. Dove, parrot, sparrow and hornbill are some of the commonly seen birds of the region.

3.3.4 Flood Prone Areas

Flooding in the terai region of Himalayas is one of the worst known calamities of the world. Samtse, a part of this terai region, is no exception to this phenomenon. Though, the town by virtue of its location and with its inbuilt topographical advantages, faces very less risk of

flooding, one cannot overlook the risks which the surrounding areas of Samtse face because of possible flooding. The area adjoining the Sukretey Chhu is one such area which needs immediate attention for protection against flash floods. Soil erosion in the higher hill slopes, a result of careless mining and indiscriminate tree cutting, and the resultant siltation in the river beds, are the main causes for the risks Samtse town faces today because of flash flooding in the river.



Plan Showing Various Flood Hazard Levels of the areas in Samtse and its Surroundings

Source: Department of Geology and Mines, Ministry of Trade and Industries

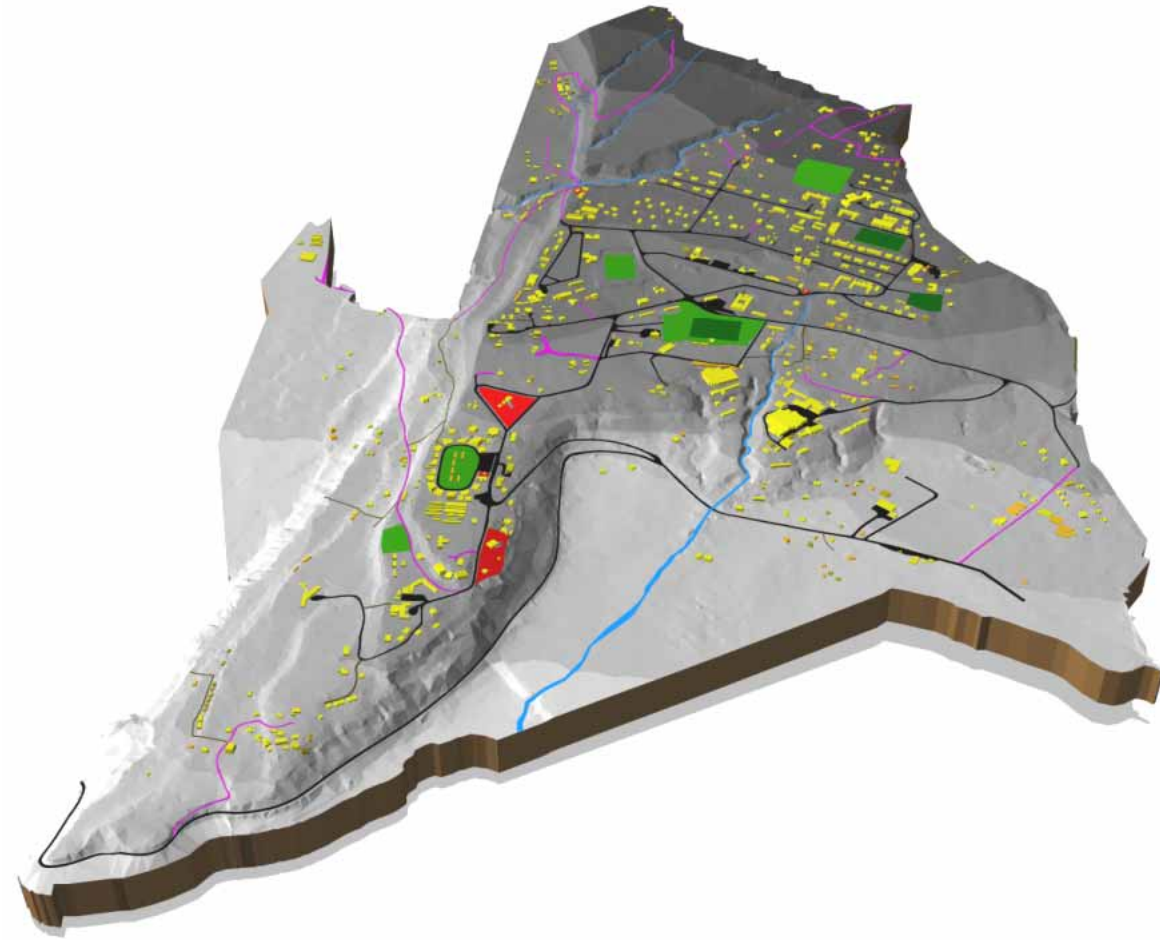
Since no scientific study or established data, to assess the risk of flooding, and the flood prone areas of the Samtse town is available; a desktop study was conducted for the Samtse town and its immediate surroundings with the help of the Department of Geology and Mines, and Ministry of Trade and Industries. The details of the study are attached as Annexure-I at the end of this document. The study identified various zones within the town and its immediate surroundings with respect to the risk of flooding. As per the study, the areas adjoining the Damdhum Chhu are classified as a high flood risk zone.

As a planning principle, zones with potential high risk of flooding should not be considered for intense urbanization. Very low density development with recreation oriented activities would be envisioned in these areas.



3.3.5 Slope Analysis

Slope and aspect analysis helps in understanding the topography of the region. Slope analysis provides the slope ranges available in the region using the contour data thus determining the compatible and incompatible slopes for urban development. Slope analysis, along with surface geology and soil data, will determine the most appropriate sites for various land uses.



Samtse Town

The slope of an area is the ratio of the difference between the highest and lowest altitude points of the place (rise) to the horizontal distance measured between the points (run). The larger the rise and the shorter the run, the steeper is the slope. Normally slope is represented in terms of the slope angle (θ), or in terms of the slope percentage (%).

The slope angle, or degree of slope θ , is determined by $\tan \theta = \text{rise} / \text{run}$.

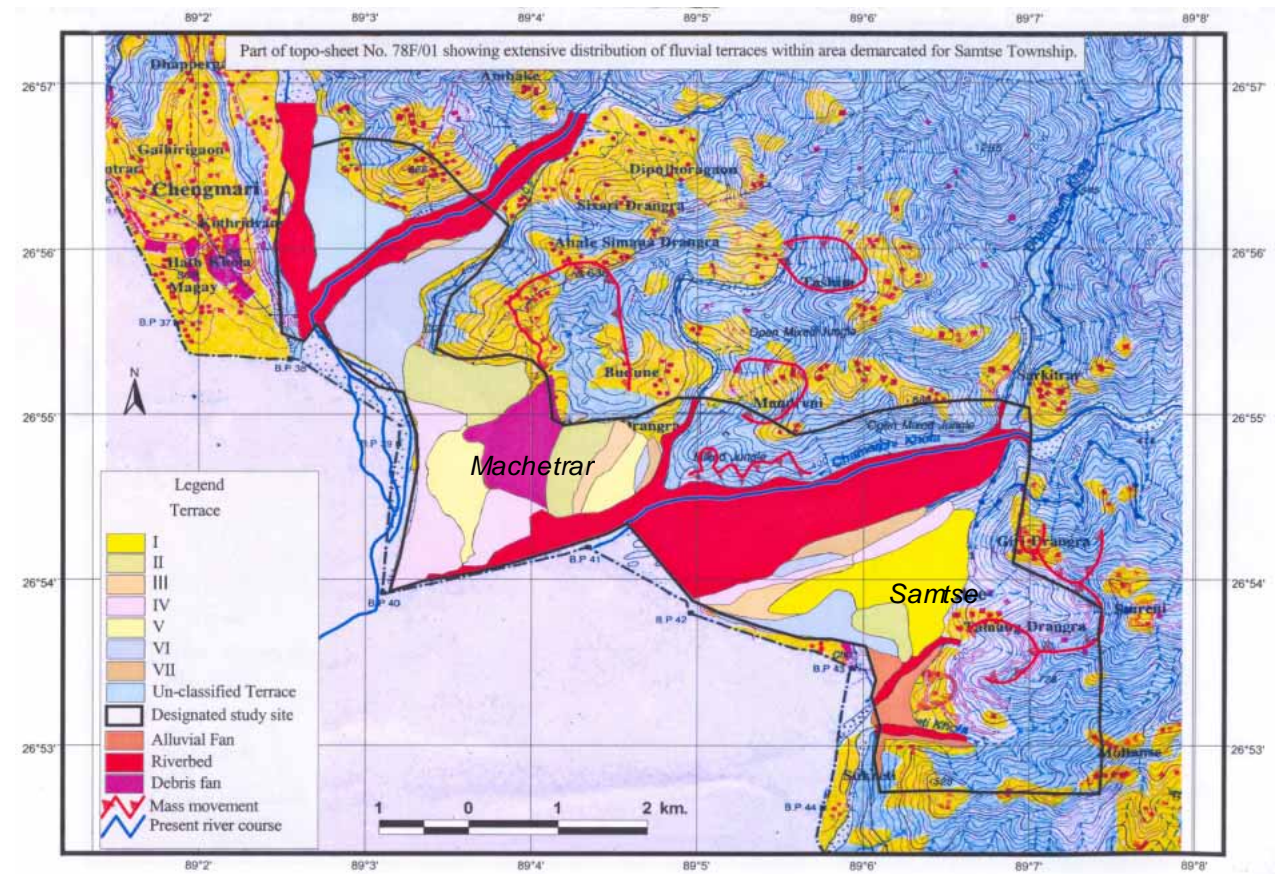
The slope percentage is determined by the formula $\text{slope \%} = (\text{rise/run}) \times 100$.

The slopes are classified into five categories based on the steepness of the slope.

They are:

1. Flat terrains (0 – 5%)
2. Gradual slopes (5 – 10%)
3. Moderate slopes (10 – 20%)
4. Steep slopes (20 – 30%)
5. Very Steep slopes (30% and above)

The slope analysis map provides the range of slope percentage for the town. The colors ranging from light yellow to yellow ochre represent the flat, gradual and moderate slopes. Steeper slopes are represented by shades of orange, red and brown.



Quaternary Deposits of Samtse and its Surroundings

Source: Department of Geology and Mines, Ministry of Trade and Industries

The analysis illustrates that most of the areas within the Municipal limit, and the Damdhum Chhu belt, fall under the first three categories of slope ranges and are most suitable for urban development. But when we overlay the slope analysis map with the geological data it reveals that most of the flat terrains (0–10% slopes) on the Damdhum Chhu side, are in high flood prone areas since they form the flood plains of the river, and are composed of gravel stone beds, which are considered not suitable for intense urban development because of their geological conditions. Hence ideally these areas should not be developed for any urban use.



The areas which are in the range of 10%-30% slope can support light to medium density development / construction activities. However towards slope of 20%-30% land development work should be carried out with great care and necessary precautions.

The areas above 30% slope are not suitable for development due to the following reasons,

- These slopes are prone to soil erosion and landslides.
- Development on these slopes involves cutting of slopes, and clearing of vegetation, thus damaging the slope characteristics, affecting the stability of the soil and slopes. This in turn accelerates the rate of soil erosion and increases surface runoff. Larger parts of this 30%, and above, slopes are within forest areas except a few areas in the town.

3.3.6 Eco-Fragile Areas

Development is inevitable and must be integrated within the existing eco-system. Uncontrolled growth is destructive. Conservation principles can avert destruction and can ensure enhancement of the town's life and environment.

A study and analysis of various environmental determinants, including the surface drainage system, vegetation, fauna and avifauna reserves, watershed regions, and the physiographical character of the town have revealed various sensitive environmental zones of the town. By the process of overlaying all the maps and analyzing the related information, one can identify the natural resources and areas that need to be preserved during future developmental processes. These constitute the eco-fragile areas of the town. These must be preserved and even revitalized! The map showing the ecologically fragile zones of the town identifies the most sensitive environments, which have to be protected, conserved and managed.

The zones identified as eco-fragile areas of Samtse include the forest vegetations, paddy fields, marshlands, flood prone areas and areas with slope gradients more than 30%.

The above identified areas in the municipal limit are facing a severe threat from uncontrolled growth. The existing surface water channels are used as sewerage drains. Stream beds are either garbage disposal sites, or are taken up for urban activities. Forest lands are cleared for urban areas.

Flood protection, controlling soil erosion, and conserving surface water drainage channels within the town are some of the steps needed to be taken with immediate effect. These zones are truly the functional centers of the natural system. Suitable land uses for these zones are to be identified toward the conservation of these zones in the municipal limit.

3.3.7 Existing Open Spaces

Open space systems have become an integral part of city planning as a result of the intense demand for outdoor recreation and a growing concern for conservation. Open spaces have always been breathing spaces for the dense urban fabric, or a place for recreation and retreat for the urban population.

Open space systems not only act as recreation space but also vitalize the social and cultural activities of the city. They play a major role in controlling and managing the urban environment, health and climate. Trekking, picnicking, camping, fishing and pleasure driving are amongst the most popular recreational activities in addition to regular sports. Providing the space needed for these activities in close proximity to urban communities has become an urgent necessity in all urban centers.

Samtse, though being a settlement embedded within a forest landscape, lacks an organized system of defined open spaces. Most of the existing open spaces in Samtse are incidental, disjointed and rather loosely organized in the fabric. There is no plan for open spaces and recreation, and there are no green links between them.

The most impressive of all is the central market open space, in an oval shape located at the heart of the Samtse commercial core. This space apart from providing instant relief for the nearby urban development also forms the central ceremonial space of focus and gives identity to Samtse town. The weekly vegetable market is located at the centre of this open space which functions on Sundays.

The football ground of Samtse is the focus of all kinds of sporting activities of the town. The ground provides opportunity for various outdoor sporting activities including archery and its location in front of the Dzong makes it more special. Other sports grounds associated with the school and National Institute of Education campus also provides opportunities for various sporting activities. The forest plantation near the Department of Forest consists of tall, impressive flora, and acts as the central green space of the town. With proper planning this space can be well agglomerated with the urban open space system.

The Doduel Chorten and its premises is another set of passive open spaces, which has a close association with the life of the Samtse residents.



3.4 VISUAL ASSETS

Physical Characters

Planning of towns will not be complete unless the process creates a spatial organization and provides a sense of orientation and enclosure in the development. While the western tradition of landscape architecture and urban design emphasizes the creation of enclosed spaces and preserves of mankind, the Bhutanese tradition is to built upon and accentuate nature's grand plan of things. Points in space take on more significance than deliberate attempts towards creation of enclosed spaces. It is nature that is supreme, not man.

The planning process for Samtse should create a matching platform between these varied attitudes of designing spaces for mankind. Understanding the existing physical character of the town becomes crucially important for this reason and in the process of planning. The physical character of the town is studied under three topics:

- The physical structure and the boundaries demarcating elements of the town;
- The visual experience the location of the town creates; and
- The visual scale of the town.

Physical Structure and Boundaries Demarcating Elements of the Town

The location of the town at the foot of the great Himalayas and the resulting visual dominance of the mountains, provide a distinct visual character and spatial extent to the region. The mountains with their lush green forest cover form a fitting backdrop for the town and act as a dominant physical boundary demarcating the town. These mountains practically stop any visual (or) physical continuity beyond the ridge forming a natural enclosure for the town both in terms of physical character and visual perception. Apart from the mountain there are the rivers which cross over the plains creating micro water-shed boundaries within the natural landscape.

Visual Experiences in the Town Location

What makes the visual experience offered by a place interesting is the variety of visual possibilities and sequences it offers. Samtse by virtue of its location offers two distinct visual experiences at any given point. A restricted, enclosed vista created by the mountains towards the north and an open far-ending view line created by the open plains towards the south. These contrasting experiences, apart from creating a distinct character, act as orientational and directional elements of the region. Certain key locations on the northern slopes offer panoramic views of the Damdhum Chhu bed. These are significant as they locate the town within the natural setting and represent the whole situation.

The physical construct of the town and its underlying urban pattern form certain view lines and vistas. These get established both naturally and through designed directives. The parking area and the Gyem Chamdrel Sum (Prayer Wheel) work as a notional entrance to the town, while the two chortens on the way to NIE act as excellent pause points. Certain sections of the town, particularly the forest area, offer more spectacular views of the surrounding landscape and the vast extent of the Indian plains.



View of Damdhum Chhu bed from Devithan area

Visual Scale of the Town

The mountain ranges which can be seen from most parts of the town make the visual scale of the town comprehensible to a great extent. Nevertheless, the structure of the town with its linear streets, series of distinct visual corridors, the building masses and the open grounds generate a distinct set of visual scales to the town itself. Thus, the visual scale operates at two levels; the immediate urban landscape and the "borrowed" distant landscape.

3.5 AMENITIES AND SERVICES

Social amenities, primarily in the form of educational, health and community facilities are essential services that a town government is obliged to extend to its residents, for the facilitation of a basic standard of living. Apart from government agencies, private and non-governmental agencies also play a critical role in the provision of services and amenities. Though they are not many, one should not neglect the presence of the private sector in Samtse.

The success of these amenities depends on the factor of serviceability, in proportion to the population of the town and the proportion of population of the town that is served adequately by these amenities. It is also essential that there be a hierarchical structure of the facilities, which would be provided as per the scale of the settlement, starting from neighborhood facilities, to town level facilities and on upto regional facilities. For instance, in the case of educational facilities, the provisions will be made for nurseries at each Urban Village level, Junior High schools at a higher level, followed by High Schools and Colleges at the levels of the town, and of the country. The hierarchy, or the grade, of any service is established as per the quantum of population it is expected to serve. This leads to a pyramidal structure where,



the highest order facilities are fewer in number and serve the largest quantum of population. Accordingly, the number and scale of component facilities and infrastructure that go into the making of each one of the different hierarchies of facilities vary significantly.

The provision of these facilities is done by the competent departments in the required hierarchies, to encourage and facilitate the parent social function to permeate into the population. For instance, the establishment and acceptance of education as an important component of the social process, necessitates the provision of different hierarchies of educational facilities, to cater to all the component age groups of the concerned population. Montessori schools, primary schools, secondary schools, junior colleges and colleges are all inter-linked and are part of the national strategy for human resources development. Similarly, the other factors affecting the “social existence” of any population are the factors governing its health (physical and mental) and the facilities for managing the law and order of society.

The existing scenario of Social Amenities and Services in Samtse town could be broadly classified under the following sub-heads, as per the nature of these facilities. Though the amenities and services listed below include the ones provided by private and non-government agencies, it shall be understood that government plays the pivotal role in providing facilities for the town residents.

The details about each sector and department are an outcome of the discussions of the planning team with the various sector-heads and the questionnaires circulated amongst the concerned departments.

3.5.1 Health Amenities

Samtse General Hospital

Samtse General Hospital is a sixty bedded hospital with facilities like OPD, eye section, dental section, X-ray unit, maternal child health unit (MCH), operation facilities and testing laboratories. The staffing pattern includes doctors, technicians, nurses and support staff, which put together include about 64 persons. The future proposals for strengthening of hospital facilities include renovation of existing hospital buildings, construction of staff quarters, one unit surgical wards, six cabins for serious patients, mortuary unit, incinerator for disposal of hospital waste, an ambulance and office equipments.

Veterinary Hospital (Department of Livestock)

The Veterinary Hospital is located near the Doduel chorten. The existing landholding is about 1.9 acres with facilities like office building and veterinary laboratory. The staffing pattern includes laboratory technicians and support staff which put together include about 19 persons.

Future proposals include expanding the existing hospital to Grade II and construction of staff quarters.

3.5.2 Educational Amenities

Samtse Middle Secondary School

Samtse Middle Secondary School is located near the Royal Guest House with schooling facilities from class VII till class X. There are 205 male students and 223 female students occupying 6 classrooms with 50 staff members, including teaching and non-teaching staff. The future proposals include expanding the existing school into a higher secondary school and construction of facilities like extra classrooms, multipurpose hall, science laboratory, play field, basketball court, dormitories for girls and boys, toilet facilities and staff quarters.

Samtse Primary School

The Samtse primary school is located near the Royal Guest House with schooling facilities from pre-primary till class VI. There are 923 students, with 26 staff members, including teaching and non-teaching staff. The old school premises in Samtse has been currently occupied by the army. Though there are no future proposals the school staff and parents, express their fear about the location of a road leading to NIE just below the school, as it becomes dangerous for the kids walking down along the road.

National Institute of Education (NIE)

The National Institute of Education is one of the prime educational institutes in Bhutan offering training programs for teachers. The institute holds 40.52 acres of land and the campus is located just above the Samtse middle secondary school. There are 327 male students and 162 female students enrolled in a variety of courses like PGCE, B.ED., etc.

The various campus facilities include boys and girls hostels, library, multi-purpose hall, computer laboratories, canteen, basketball and tennis courts and play field. Though NIE has a separate water supply line it is still inadequate and faces the problem of water shortage. On an annual basis a ten to fifteen percent of enrolment increase is anticipated. Hence, NIE's future proposals include construction of additional hostel facilities. Other proposals include construction of an Information Technology building and additional staff quarters.

3.5.3 Recreational Amenities

Football Ground

The existing football ground below the Dzong measures 3.94 acres and is close to the heart of every resident of Samtse. People of all age groups enjoy playing different games like archery,



football, etc. The existing pavilion on the ground is utilized as a dais during special events like National Day celebrations and organized sporting events.



Football ground in Samtse

Samphel Cinema Hall

Located at the entrance of the town core, the Cinema hall is a landmark for the commercial precinct of existing Samtse town. The cinema hall operates three shows per day, and the people of Samtse regard it as one of the important entertainment centers in the town.

3.5.4 Administrative Services

Dzongkhag Administration

Dzongkhag administration in Samtse was established in early 1960's when Samtse was declared as the headquarters of Samtse dzongkhag. The existing Dzong serves the geogs under its administrative jurisdiction which include Samtse, Pagli, Tading, Dorokha, Denchukha, Mayona, Dungle, Chengmari, Nainital, Chargharey, Lahireni, Sipsu, Biru, Tendu and Bara. The dzongkhag administration is headed by the Dzongda and has various departments which include Administration, Planning, RNR, Immigration, Land Records, Finance, Education, Health, BDFC and Engineering.

The Dzongkhag Administration campus is located below the Royal Guest House. Future proposals include relocation and construction of a new Dzong as the existing Dzong is not large enough to house the various departments. It was originally designed as a school.

Samtse Thrimkhang

The Samtse Thrimkhang serves as the court for the entire dzongkhag and is presently attached to the Dzong campus. The total staff strength is about seventeen and the registered cases in last five years are about 275. The existing court rooms are insufficient. The future proposals include construction of a separate court building in the already available land with the Thrimkhang admeasuring 2.74 acres.

Samtse Municipal Corporation

The Samtse Municipal Corporation is responsible for the administration of Samtse town. In absence of a separate office the Samtse Municipal Corporation is a part of the Engineering Cell within the Dzong premises. The functions and administrative set-up of the Samtse Municipal Corporation are explained in detail later in this chapter.

Regional Revenue and Customs Office

The Regional Revenue and Customs office is located near the football ground adjacent to the BFPL campus. The future proposals include construction of a customs godown, expansion of existing customs check post and construction of three storied staff quarters.

Office of the Divisional Forest Office, Samtse Territorial Division

The present office is located near the forest plantation next to the international boundary. The staff strength is about 30 persons, while the department is primarily responsible for the protection and marking of forest areas and the issuance of permits. The new office for the department is under construction at Lichibari just above the Doduel chorten. Future proposals include construction of staff quarters near the new office building.

Department of Geology and Mines

The previous Geological Survey of India office at Samtse has been taken over by the Department of Geology and Mines, RGoB. A part of the GSI colony has been allotted for the department which comprise of a few residential structures.

Bhutan Agriculture and Food Regulatory Authority (BAFRA)

This department is primarily responsible for regulating the quality of products that are locally produced for the domestic market and for export purposes, imported for local use and imported for further processing of exports. It also ensures that the food commodities in the market are safe for human consumption. The existing office is located in a rented space near the town core. The existing staff strength is about five persons while there is an anticipated increase of staff to ten persons. Future proposals include setting up of a quarantine station for which about 1.5 acres of land shall be required.

3.5.5 Security Services



Urban areas, by definition, are places with higher security levels for the property and life of their inhabitants. Security becomes an issue of prime concern in an urban area when thousands of people with varied social, economic, ethnic and cultural backgrounds come to live together. There are certain public codes of conduct, which unless respected the integrity of the urban life could not be achieved. Broadly security needs could be divided into two; one pertaining to the internal security aspects of the settlement; and the other pertaining to the external security threats created to the settlement.

The security aspects of Samtse are taken care of mainly by the Royal Bhutan Police, and also by Royal Bhutan Army. The police station of Samtse, with lock-up facilities, is located behind the town core which is a part of the police residential campus. The Central Jail is located to the north in the Damdhum Chhubed.

Apart from the police establishment, the town also houses a considerable army force. Due to the non-availability of defined places for these establishments in the town, currently they occupy parts of spaces available within various institutional campuses. There is a considerable army establishment near the Bhutan-India border, which takes care of the security aspects along the border.

3.5.6 Other Amenities and Services

Bhutan Power Corporation (Supply and Maintenance Division)

The Bhutan Power Corporation's maintenance and supply division is located near the GSI colony. The total staff including technical, clerical and support staff is about 40 persons. There are 2037 domestic, 182 commercial, 16 industrial and 15 agricultural-purpose electric connections in Samtse. Future proposals include laying of underground cables inside the municipal limits. There is a proposal for 3 MVA, 33/11 KV sub station and construction of additional staff quarters.

Bhutan Telecom

The Bhutan Telecom office is located along the way to Dzong from town core. The total staff including technical, clerical and support staff is 12 persons. Apart from regular telephone service it provides internet and wireless phone service in Samtse. Future proposals include changing from microwave technology to optical fiber and providing Mobile Phone service in the region.

Bhutan Post

The Bhutan Post Office is located at the road junction near the Dzong. The total staff strength is 4 persons, while the various services offered are letter mail, money orders, PCO, parcel,

internet, vending of stamps and money transfers. The coverage area of the post office is Samtse dzongkhag.

Vegetable Market

Located in the center of the oval town core, the weekly market takes place in vegetable market sheds. There are about six vegetable open sheds in the market yard. The Samtse Municipal Corporation is responsible for the construction while the maintenance and cleaning of the market is taken care by the bazaar committee.



Vegetable Market



Parking Area

Food Corporation of Bhutan

The Food Corporation of Bhutan has its office cum grain godown located adjacent to the town core. The auction yard of the Food Corporation of Bhutan is located near the check post at international boundary. The total staff strength of the department is about ten persons. The Food Corporation of Bhutan in Samtse serves the entire Dzongkhag.

Fair Price Shop

A fair price shop is located in the oval town core. The supplies for the shop are received from the Food Corporation of Bhutan.

National Jersey Breeding Center (NJBC)

One of the major stake-holders in Samtse town with a land holding of about 300 acres, is the National Jersey Breeding Center. It is primarily responsible for serving as a nucleus farm for the Jersey breed of cattle in the country. It also ensures delivery of better breeds of cattle to the farmers. The existing office is located in the middle terrace of the NJBC land. The existing staff strength is about thirty persons. Future proposals include setting up of a breeding unit, food production unit, milk processing unit, laboratory and introduction of automated milking machines.

