

PHUENTSHOLING DEVELOPMENT CONTROL REGULATIONS - 2013
PHUENTSHOLING STRUCTURE PLAN 2013 – 2028

FOREWORD

The **Development Control Regulations** have been formulated as part of the Phuentsholing Structure Plan: 2013-2028. They support the aims of the Plan through the introduction of regulations and procedures. The jurisdiction of these Regulations includes the area under the Phuentsholing Thromde (PT) and the 'Urban Peripheral Control Zone' (UPCZ) as defined in the Phuentsholing Structure Plan. While the PT shall be the 'Implementing Authority', implementing these Regulations within the PT area, the DHS shall be the 'Implementing Authority' for the area outside the PT, which falls under the jurisdiction of these Regulations. The DHS may delegate the power of building approval in the UPCZ, only in the case of residential buildings up to two floors high and on plots up to 400sqm to the Dzongkhag.

MAJOR PARTS

The Phuentsholing Thromde Development Control Regulations have been divided into four major parts:

Section-1: Administration- contains the applicability of these Regulations, the definitions of terms and expressions used in the Regulations, and the provisions related to interpretation, discretionary powers, delegation of powers, etc.

Section-2: Procedures- is divided into two major sections. The First Section deals with the procedures for obtaining development / building permissions. The Second Section deals with procedures during development/ building construction.

The First Section is in turn divided into two sub-sections one concerning the layout and sub-division of **land** and the other concerning **buildings**. These sections contain the respective documents and particulars to be furnished along with the application, the fees to be paid, the validity of the approvals, liabilities and responsibilities of the applicant, and certain provisions for special cases.

The Second Section that deals with the procedure during development/ construction contains provisions for the issue of various certificates, service connections, documents to be kept on the site, mandatory inspections, etc.

Section-3: Precincts Sanction- contains the permissibility of various uses and activities in the designated Precincts and the permissible plot coverage, and building height in the specified Precincts. This part also contains sections relating to the special provisions regarding existing non-confirming uses.

Section-4: Land Development and Subdivision Regulations- This part contains requirements of access of the site to be developed, the standards for internal street widths, minimum plot sizes, required common areas, on-site physical infrastructure requirements and regulations related to tree plantation.

TWO-TIERED MODEL

A two-tiered model is envisaged for the building permission procedure based on the following two contexts:

- a) Residential structures not more than two floors (ground plus one floor) on sites up to 1,000sq.m. This shall include all type of developments that fall upon steep slopes having slopes between 30% and 50%.
- b) More than two floors (ground plus two floors) on site more than 1,000sq.m of land and/ more than two floors/ buildings for non-residential uses.

A mechanism for speedier approvals in the case of tier “a” as above is proposed through a Green Channel of accredited architects. All building applications shall enclose an “ultimate structural capability of the structure” statement from the architect/ structural engineer, in terms of total number of floors.

The **Investment Plan** for Phuentsholing is prepared as a part of the Phuentsholing Structure Plan, with the prime objective of the long-term wellbeing of the people of Phuentsholing and their environment, through an innovative approach and the provision of cost-effective services. To ensure sustainable communities and bring about lasting improvements to quality of life of individuals, families and neighborhoods, we need integrated policies, investment and action across a range of economic, social, physical and environmental issues.

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URBAN DEVELOPMENT MANAGEMENT SYSTEM**Urban Development Management System:**

Urban areas are living organisms and a structure plan could be appropriately described as a skeleton, on which the parts of the town can be hung, much as a human body. In a vibrant settlement, there will be a myriad of new developmental projects continuously under execution by various sectors. There are many other social services and amenities which will come up in the town over the next decade. There will be an elaborate shelter system to accommodate the future population of the town. Though, each of these urban development's has its own rationale, regarding its networking and phasing, integrating with each other to form an organized system has manifold advantages including easing of the implementation process. It is important that these networks are planned as a system of main corridors, limbs and fingers in terms of hierarchical organization. In this given context management and planned development of these systems becomes crucial for the proper functioning of urban areas. The success and effective functioning of the urban development lies as much in the physical plans we prepare as it does in the effectiveness of the Development Management Systems we evolve for the town.

Such a management system should guide the development not just confined within the town boundaries, but also in its immediate surroundings. For the effectiveness of such a mechanism, the proposed Development Management System for Phuentsholing could be elaborated and would have its influence in three varied tiers, viz., the Development Management System for Phuentsholing Region, Development Control Regulations and the Local Area Plans, pertaining to various scales ranging from the regional to plot level. The ease and success of implementation specifically depends on the effectiveness in breaking down the scales at various levels supported by competitive administrative set-ups.

1.0.1 DEVELOPMENT MANAGEMENT SYSTEM FOR PHUENTSHOLING REGION

The first tier of Development Management System proposed essentially governs the area around the Phuentsholing town and its region. The Dzongkhag administration is responsible to see any development within this zone is in accordance with the plan.

The present Phuentsholing town lies in its own dense setting concentrated along the core area. The areas along the Indian border are relatively flat and have a high potential to accommodate higher densities while the areas towards the North (north-eastern and north-western belt) have steep slopes and hazardous soil conditions not suitable for higher density development. Given the present development opportunities of the region, in the future, unless the development is rationally distributed along the region, the carrying capacity of the present town will be exhausted and the entire surrounding landscape will become a victim of uncontrolled urban sprawl. We should not wait for this to happen. There must be a well detailed and elaborate development management mechanism to guide the development in the entire region. This will include an Urban Peripheral Control Zone, which controls the

development in the immediate surroundings of the town and a Special Economic Development Zone (Pasakha- within the Thromde), which guides the future economic development activities of the region.

A. Urban Peripheral Control Zone

As an influence of the development in the town area, there is a great deal of slow, but nevertheless continual development in the periphery of the town. Hence, municipal/ Thromde boundaries are major issues in planning. Generally the bye-laws for construction within the municipal/ Thromde area are very strict and move through difficult procedures, while just across this magic line clearing plans is rather easy. Land taxes within the boundaries, of course, are comparatively higher than agricultural revenues in rural areas. The latter lands may be only a few meters from the former.

Generally, developments starts taking place outside the Municipal/ Thromde boundaries as there are low taxes and very few building restriction. Land is undeveloped across the boundary and therefore cheaper. This causes inefficient urban sprawl. When the fringe areas are absorbed into the municipality/ Thromde service networks, they are then over extended, to accommodate low density, spread out and even inaccessible plots. This leads to “patchy developments” in the fringe areas. This is a situation where suddenly a cluster of structures have developed, surrounded by hectares of empty lands. These small patchy clusters must provide their own storm drainage, water supply and sewerage management. Yet, there will be a pressure on the town governing authorities to provide electricity, telephone and road connections to these patchy developments. It also leads to “strip development” along the roads, as these uncontrolled, cheap parcels have both access and potential commercial use facing the roads. This causes congestion along the roads as well as accidents from vehicles pulling on and off the roads.

These fringe or peri-urban areas eventually come under the jurisdiction of the local authority, and eventually these areas need to be provided with infrastructure facilities and services as similar to the urban areas. The existing “strip” and “patchy development” becomes a hindrance during this process, which results in mismatches between the demand and the provision.

A peripheral control zone of one kilometer radius is proposed around the Phuentsholing town. This needs to be further reinforced in the structure plan both in terms of legal and implementation aspects. Thus, an extended area around Phuentsholing’s present boundary has to be declared as within an Urban Peripheral Control Zone. This zone will employ one of the ‘Environmental Precinct’ systems of regulation.

B. Special Economic Development Zone

The planned Industrial Estate at Pasakha forms a part of the Special Economic Development Zone that was set up with a high priority with Phuentsholing having advantages of being the commercial capital of the Kingdom and is well connected to various eastern states of India.

This Industrial Estate follows a special set of guidelines as per the Special Economic Development Zone within their own confined administrative boundaries. This Zone facilitates higher level economic generation activities, governed by special polices and incentives initiated by the Royal Government of Bhutan.

C. Dry Port and Goods Storage Facilities

The proposed Dry Port is strategically located along the Indian border and along the proposed third Gateway to the Kingdom. A four-lane road access is been provided for easy movement of light and heavy vehicles within this zone. This is because Dry Ports require an immense number of delivery trucks to service them. Given the opportunity of Phuentsholing being the south western entrance gateway to the Royal Kingdom of Bhutan, the Dry Port of Phuentsholing could be conceptualized as a multimodal cargo handling unit integrating the goods movement catalyzed through road and rail traffic. The Dry Port of Phuentsholing would also serve the adjoining Dzongkhag of Samtse, which would require direct and easy access for the vehicles in to the Dry Port without disturbing the Phuentsholing town.

D. Army and Police Base

As towns grow from minuscule to large scales, the special institutional uses such as the army and the police that used to be located towards the periphery of the town in the past fall into the heart of the town, thus occupying a major share of the prime developable land. In growing towns these important institutions need to be very strategically located so that they are not required to be moved time and again depending on the growth of the town. In case of Phuentsholing, being a very important border town, such institutions should have a few set-ups along the Indo-Bhutan border. It is hence proposed that, in consultation with these institutional heads, over the period of next 15-20 years these institutions should be permanently relocated towards the urban periphery and the area thus made available from their existing setups should be utilized for government housing and other institutions. The border areas (international buffer zones) should also be designated for such important institutions that provide security to the residents of the town and to the Kingdom and their present locations should be reserved for other town and national level purposes.

1.0.2 STRENGTHENING OF PHUENTSHOLING THROMDE:

As the smaller village turns into towns and develop into larger urban areas, town management becomes of utmost importance. In absence of a management institution growth inside the urban area goes beyond control. Similarly, in case of Phuentsholing, to implement the Structure Plan it requires a management institution, a municipal corporation or an

approving authority that has sufficient staff at different hierarchies and organized departments for various approvals and sanctions. Presently, Phuentsholing has a well established Thromde office that functions efficiently in providing the required approvals and sanctions for developments that take place within the Phuentsholing Thromde. Now, with a Structure Plan in place, for the extended areas, it becomes important to strengthen the Thromde staff to govern and implement the Structure Plan efficiently. Setting up of Thromde's branch offices in extended areas should be prioritized in order to efficiently monitor the successful implementation of the Structure Plan.

DEVELOPMENT CONTROL REGULATIONS-2013

The Bhutan Building Rules 2002, which follow, are basic guidelines applicable across the entire nation in a variety of settlements. On the other hand the Bhutan Municipal Act of 1999 enables Municipal Authorities to prepare plans for their respective urban settlements and adopt relevant development control regulations to direct development within their jurisdictions. The new Development Control Regulations 2013 for Phuentsholing supersedes the Bhutan Building Rules. The notes below explain the relationship between The Bhutan Building Rules 2002, and such development control regulations, which accompany Structure Plans for urban areas.

- The Bhutan Building Rules, 2002 (BBR, 2002) are applicable to urban areas across the country, in the absence of any structure plan for the urban areas in question. The operation of the Bhutan Building Rules 2002 is thus imperative, in urban areas where no structure plan exists.
- Wherever a structure plan is sanctioned, the provisions of the accompanying Development Control Regulations, which are an intrinsic part of the concerned structure plan, will be applicable in that urban area. The provisions in the Bhutan Building Rules itself enable this. This is also enabled by Section 67 of the Bhutan Municipal Act, 1999, which specifically states that a “Municipal Corporation may adopt rules to carry out its functions specified in Sections 48 and 49 “ (which includes Planning and Precincts).
- Wherever a local area plan has been notified, its specific regulations, if any, shall be applicable within that local area alone. Generally, local area plans conform to the Development Control Regulations of the urban jurisdiction in which they fall.

Thus in the absence of Local Area Plans, the provisions of the Structure Plan for that urban settlement shall prevail. In the absence of a Structure Plan for any given settlement, the Bhutan Building Rules, 2002 shall prevail.

This tiered set of Regulations reflects the fundamental policy of the Royal Government of Bhutan to decentralize governance, administration and development, enabling and facilitating strong responses to local conditions and aspirations. It may be noted that the new Development Control Regulations 2013 for Phuentsholing supersedes the Bhutan Building Rules, 2002 in the city of Phuentsholing, by providing some additional directives needed in a larger urban context. These same provisions may be extended to the other settlements as plans are prepared and conditions warrant.

Section-1: Administration**Title, Commencement and Jurisdiction**

These Regulations may be called the Phuentsholing Thromde Development Control Regulations, 2013 (PT-DCR-2013). These Regulations shall come into force with effect from the date of their notification by the Royal Government of Bhutan. These Regulations shall apply to the whole of the area within the Phuentsholing Thromde (PT) as defined by the Phuentsholing Structure Plan-2013-2028. The provision in the BBR-2002 shall supplement the PT-DCR. This PT-DCR shall supersede the BBR-2002 and all other local rules and regulations.

Applicability

- 1.0.3 These Regulations shall be applicable from the date of their notification by the Royal Government of Bhutan. The Regulations shall be applicable to all development except those specifically mentioned in clause 3.2.2.
- 1.0.4 Except, as herein after otherwise provided, these Regulations shall apply to all development, redevelopment, erection or re-erection of a building, change of use, etc., as well as to the design, construction, reconstruction of, and making material additions and alterations to a building. However, where a part of a building layout or group-housing scheme is demolished, or altered, or reconstructed, these Regulations shall apply only to the extent of the new work involved.
- 1.0.5 Any action taken, or developments permitted, under the Regulations or Building Rules, existing prior to these Regulations coming into force, shall be deemed to be valid and continue to be so valid, unless otherwise specified.
- 1.0.6 In case of the development, for which the Commencement Certificate has been obtained prior to these Regulations coming into force, and where amendments to the sanctioned plan is proposed, these Regulations shall apply.
- 1.0.7 'Commencement Certificate' granted in the past shall be revalidated in conformity to these Regulations.
- 1.0.8 If there is a conflict between the requirements of these Regulations and those of any other rules or byelaws, these Regulations shall prevail.

Interpretation

Unless the context otherwise requires, the terms and expressions not defined herein shall have the same meaning as indicated in the following legislations:

- 1) The Bhutan Municipal Act 1999

- 2) The Land Act 1979
- 3) Urban Area and Property Regulations 2003
- 4) National Housing Policy 2002
- 5) Building Code of Bhutan 2003
- 6) Bhutan Building Rules- 2002

Delegation of Power

The Implementing Authority may delegate any of the powers, duties or functions conferred or imposed upon or vested in the Implementing Authority to its officers, or designated committee of officers, generally or specially in writing and may impose certain conditions and limitations on the exercise of such powers as it may deem fit.

Discretionary Powers

- 1.0.9 The Implementing Authority may exercise its discretion in conformity with the intent and spirit of these Regulations, in order to mitigate any demonstrable hardship or to sub serve public interest in the following ways:
- a) Decide on matters where it is alleged that there is an error in any order, requirement, decision and determination, interpretation made by it under delegation of powers, while applying these Regulations.
 - b) Interpret these regulations in various contexts or in situations where more clarity is required under such circumstances the Implementing Authority's decision shall be final and binding.
 - c) Decide upon the nature and the extent of concessions in respect of marginal distances, room heights, etc. that can be granted in cases of proven hardship for reasons which are to be recorded in writing. However, such relaxation shall not affect the health, safety and hygiene of the inhabitants of the building and the neighborhood and the structural stability of the building. Provided further that while granting such relaxation, as above, the authority may impose conditions as may be necessary. These may include a payment of deposit and its forfeiture for non-compliance, payment of a premium amount and other obligations, etc.
 - d) No concessions in respect of the additional floors shall be given.
 - e) Decide on the fine or compounding charges to be made applicable in cases of developments where non-adherence to these Regulations is detected.
 - f) Modify the limit of a precinct where the boundary of a Precinct divides a parcel of land or where a layout street or a thram or a plot number actually on the ground varies from its location shown on the Structure Plan.

- g) Authorize the erection of a building or the use of premises for a public services undertaking or a public utility purpose where such an authorization is reasonably necessary for the convenience and the welfare of the public, even if such erection or use is not permitted as per these Regulations.
- h) Determine and establish the location of precinct boundaries in cases of doubts or controversies.
- 1.0.10 As regards the delegation of powers to exercise the discretion, all matters stated above shall be decided by a committee designated and authorized by the Implementing Authority.
- 1.0.11 When issues arise that are not covered within these Regulations, the Implementing Authority shall refer the matter to the Competent Authority.

Enforcement of Regulations through Involvement of Accredited Architects

Enforcement of these Regulations may also be ensured through a mechanism of speedier approval of development proposals through Green Channel of accredited Architects as detailed out in these Regulations.

Power to Change the Appendices and Proformas

The Implementing Authority shall have the powers to make amendments to the contents of appendices 2 and 4, the proformas and the procedures for grant of development permission from time to time.

Definitions

These Regulations, unless the context otherwise requires, the terms and expressions defined as follows shall have the meaning indicated against each of them.

The terms and expressions not defined in these Regulations shall have the same meanings as in the Bhutan Municipal Act, 1999 and the rules framed there under or as mentioned in the Bhutan Building Rules, 2002 and the Building Code of Bhutan, 2003 as the case may be unless the context otherwise requires.

ACT

Shall mean the Bhutan Municipal Act, 1999

ADDITIONS AND/ OR ALTERATIONS

Shall mean any change in an existing authorized building or approved plans of a building, or a change from one use to another use, or a structural change such as additions to the area or height, or the removal of part of a building, or a change to the structure, such as the construction or cutting into or removal of any wall or part of a wall, partition, column, beam, joist, or re-roofing, or re-construction of any kind, alterations to a floor, including a

mezzanine floor, or any support, or a change to, or closing of any required means of ingress, or egress, or a change to fixtures, or equipment, as provided in these Regulations.

ADVERTISING SIGN/HOARDING

Shall mean any surface or a structure with any character, letter or illustration, applied there to and displayed in any manner whatsoever out of doors for the purpose of advertising, giving information regarding, or to attract the people to any place, cause, person, public performance, article or merchandise, and which surface or structure is attached to, forms part of, or is connected with any building, or is fixed to a tree or to the ground, or to any pole, screen, hoarding or displayed in any space, or in or over any water body included in the limits of the notified area of the Implementing Authority.

AIR-CONDITIONING

Shall mean the process of treating air to control simultaneously, or singly, its temperature, humidity, cleanliness and distribution to meet the requirement of an enclosed space.

AMENITIES

Shall mean roads, streets, open spaces, parks, recreational grounds, play-grounds, gardens, water supply, electric supply, street lighting, drainage, sewerage, public works and other utilities, communication network, etc. for the citizens' use and convenience.

APARTMENT/FLATS

Shall mean residential buildings constructed in a detached or semidetached manner being designed as ground floor plus one or more upper floors and constructed as separate dwelling units with common staircase and other building services.

APPLICANT

Shall mean the registered owner(s) of a property who applies in the prescribed form to construct/ alter/ extend a building.

ARCHITECT

Shall mean a person with degree or diploma in architecture from an Institute, College or University accredited by the respective country's accreditation board to impart professional degrees in architecture.

ATTIC

Shall mean the space within the confines of the roof structure, above the ceiling of the top floor which is constructed and adopted for storage purpose, lift machine room, water tanks etc.

BASEMENT OR CELLAR

Shall mean the lowest storey of a building more than 75% below the lowest ground level. Permitted only for vehicular parking and other building services.

BUILDING LINE

Shall mean the plinth of the building running in line with the adjoining plinth of the building parallel to the road.

BUILDING SERVICES

Building Services shall mean HVAC plant, power generator, underground sumps, pumps, boilers, sub-station, lift pits and related services, chutes, storages, laundry and other services related to building maintenance

BETTERMENT CHARGE

Means a charge levied by the Implementing Authority for ensuring off-site services and amenities to the area by the Implementing Authority.

BUILDING

Meaning any structure for whatsoever purpose, and of whatsoever materials constructed and every part thereof, whether used as human habitation or not including foundations, plinths, walls, columns, floors, roofs, chimneys, plumbing and building services, fixed platforms, verandas, balconies, cornices or projections, part of a building or anything affixed thereto. However, structures of a temporary nature like tents, hutments, etc. erected for temporary purposes or for ceremonial occasions, with the permission of the Implementing Authority, shall not be considered to be "buildings".

- a) **"Assembly building"** shall mean a building or part thereof where groups of people congregate or gather for amusement, recreation, social, religious, patriotic, civil, travel and similar purposes. Assembly buildings shall include theatres for drama and cinema, city halls, town halls, auditoria, exhibition halls, museums, "marriage halls", "skating rinks", gymnasias, stadia, restaurants, eating or boarding houses, places of worship, dance halls, clubs, road, air, or other public transportation stations.
- b) **"Business building"** shall mean any building or part thereof used for transaction or record thereof. Offices, banks and all professional establishments are classified as business buildings if their principal function is transaction of business and/or keeping of books and records thereof.
- c) **"Detached building"** shall mean a building with walls and roofs independent of any other building and with open spaces on all sides.
- d) **"Semi Detached Building"** shall mean a building detached on three sides with open spaces as specified in these Regulations. A superficial connection via a beam, wall, balcony, corridor, Sky Bridge, or any other trivial connection will not qualify a building to be defined as "semi-detached"

- e) "**Educational building**" shall mean a building exclusively used for a school or college, recognized by the appropriate Board or University, or any other Implementing Authority involving assembly for instruction, education or recreation incidental to educational use, and including a building for such other uses incidental thereto such as a library, laboratory, fine arts facility, or a research institution. It shall also include quarters for essential staff required to reside in the premises, and buildings used as hostels and boarding solely captive to an educational institution whether situated in its campus or not.
- f) "**Hazardous building**" shall mean a building or part thereof used for:
- (i) Storage, handling, manufacture or processing of radio- active substances or of highly combustible or explosive materials or products which are liable to burn with extreme rapidity and/or producing poisonous fumes or explosive emanations.
 - (ii) Storage, handling, manufacture or processing which involves highly corrosive, toxic obnoxious alkalis, acids, or other liquids, gases or chemicals producing flame, fumes, and explosive mixtures or which result in division of matter into fine particles capable of spontaneous ignition.
 - (iii) Storage, handling, manufacture, experimentation, research, or processing which could cause any danger to the public health, hygiene or safety, as certified by the competent health and safety officials of the Royal Government of Bhutan
- g) "**Industrial building**" shall mean a building or part thereof wherein products or materials are fabricated, assembled or processed, such as assembly plants, laboratories, power plants, refineries, gas plants, mills, dairies and factories.
- h) "**Institutional or public building**" shall mean a building constructed by the Royal Government, Semi-Government organizations, public sector undertakings, registered Charitable Trusts for their public activities, such as administration, education, medical, recreational and cultural, hostel for working women or men, or for an auditorium or complex for cultural and allied activities, or for an hospice, care of orphans, abandoned women, children and infants, convalescents, destitute or aged persons and for penal or correctional detention with restricted liberty of the inmates ordinarily providing sleeping accommodation, and includes dharamshalas, hospitals, sanatoria, custodian and penal institutions such as jails, prisons, mental hospitals, houses of correction, detention and reformatories, clubs, golf course, sports stadium, buildings and facilities constructed by the Royal Government for the promotion of tourism, such as inns, resorts, lodges, etc..
- i) "**Commercial/ Mercantile building**" shall mean a building or part thereof primarily used for commercial purposes such as shops, stores, departmental stores or markets, for display and sale of goods or merchandise, including office, storage and service facilities incidental thereto located in the same building. Mixed use buildings with commercial

areas on the ground floor and residential above shall be construed as Commercial building for the purposes of this document.

- j) **"Office building (premises)"**, shall mean a building or premises or part thereof whose sole or principal use is for an office or for office purposes or clerical work. "Office purposes" includes the purpose of administration, clerical work, handling money, telephone, telegraph and computer operation; and "clerical work" including writing, book-keeping, sorting papers, typing, filing, duplicating, punching cards, tapes or machines, calculations, drawing, of matter for publication and editorial preparation of matter of publication.
- k) **"Residential Building"** shall mean a building in which sleeping accommodation is provided for normal residential purposes, with or without cooking or dining facilities, and includes one or more family dwellings, lodging or boarding houses, hostels, dormitories, apartment houses, flats and private garages of such buildings.
- l) **"Special Building"** shall mean
 - (i) a building solely used for the purpose of a drama or cinema theater, motion picture, drive-in-theatre, an assembly hall or auditorium, town hall, lecture hall, an exhibition hall, theatre, museum, a stadium, a "community hall, marriage hall;
 - (ii) a hazardous building;
 - (iii) a building of a wholesale establishment;
 - (iv) centrally air-conditioned building which is more than three floors,
 - (v) a building of more than two floors constructed on stilts,
 - (vi) a building of more than four floors.
- m) **"Storage Building"** shall mean a building or part thereof used primarily for storage or shelter of goods, merchandise and includes a building used as a warehouse, cold storage, freight depot, transit shed, store house, public garage, hangar, truck terminal, grain elevator, barn and stable.
- n) **"Unsafe Building"** shall mean a building which,
 - (i) is structurally unsafe,
 - (ii) is unsanitary,
 - (iii) is not provided with adequate means of egress,
 - (iv) constitutes a fire hazard,
 - (v) is dangerous to human life,

(vi) in relation to its existing use constitutes a hazard to safety or health or public welfare by reasons of inadequate maintenance, dilapidation or abandonment.

- o) **"Wholesale establishment"** shall mean an establishment wholly or partly engaged in wholesale trade and manufacture, wholesale outlets, including related storage facilities, warehouses and establishments engaged in truck transport, including truck transport booking, warehouses.

BUILDING LAND PARCEL

Shall mean a land/plot or part of a land/plot or combination of more than one land/plot over which a building is to be constructed as approved by the Implementing Authority.

BUILT-UP AREA

Shall mean the area covered by a building on all floors including cantilevered portions, if any, but except the areas excluded specifically under these Regulations.

BUILDING INSPECTOR

Shall mean a technical person authorized by the Implementing Authority to inspect buildings and their premises during construction / renovation / addition / alteration.

CARPET AREA

(Otherwise called "Net Internal Floor Area") shall mean the covered area on all floors, excluding the area of the walls.

COMPETENT AUTHORITY

Shall mean the authority as defined in the Municipal Act, 1999.

IMPLEMENTING AUTHORITY

Shall mean the Phuentsholing Thromde to perform such functions as may be specified in these Regulations.

CHIMNEY

Shall mean a construction by means of which a flue is formed for the purpose of carrying products of combustion to the open air and includes a chimneystack and the flue pipe.

COMMON WALL

Shall mean a structure joining two or more properties.

COMBUSTIBLE MATERIAL

Shall mean that material which when burnt adds heat to a fire when tested for combustibility in accordance with the IS: 3808-1966 Method of Test for Combustibility of Building Material, National Building Code, India.

CONVENIENCE SHOP

Shall mean shops each with a carpet area not exceeding 20 sq.m and comprising those dealing with day-to-day requirements, as distinguished from wholesale trade or retail shopping. It includes:

- (i) Food grain or ration shops
- (ii) Doma shops/kiosks
- (iii) Shops for collecting and distribution of clothes and other materials for cleaning and dyeing establishments
- (iv) Tailor or darning shops
- (v) Groceries, confectioneries, general provision shops
- (vi) Hair dressing saloons and beauty parlours
- (vii) Bicycle / scooter/ motorcycle hire shops
- (viii) Motorcar hire shops
- (ix) Vegetable and fruits shops
- (x) Milk and milk products shops
- (xi) Medical and dental practitioners' dispensaries or clinics, pathological or diagnostic clinics and pharmacies
- (xii) Florists.
- (xiii) Shops dealing in ladies ornaments such as bangles, cosmetics, etc.
- (xiv) Shops selling bakery products
- (xv) Newspaper, magazine stalls and circulating libraries
- (xvi) Wood, coal and fuel shops
- (xvii) Books and stationery shops or stores
- (xviii) Cloth and garment shops
- (xix) Plumbers, electricians, radio, television and video equipment repair shops and video libraries

(xx) Restaurants and eating houses

(xxi) Shoes and sports shops

(xxii) Hardware shops

(xxiii) Taxi stand office

With the approval of the Implementing Authority, this list may be added to, or altered, or amended from time to time.

CORRIDOR

Shall mean a common passage or circulation space including a common entrance hall.

COURTYARD

Shall mean a space permanently open to the sky within the site around a structure or surrounded either partially or completely by a structure.

COMMON PLOT / LAND

Shall mean a common open to sky space exclusive of setbacks, margins, parking spaces and approaches, at the ground level of the building unit to be used collectively by the joint owners.

COVERED AREA

Shall mean the area covered by a building on the ground floor.

DEVELOPER

Shall mean the person, who is legally empowered to construct or to execute work on a plot of land, building unit, building or structure, or where no person is empowered, the owner of the building unit, building or structure.

DEVELOPMENT

Means the carrying out of building construction, engineering, mining, or other operations, in, over, or under land or water or the making of any material or structural change including demolition of building or reclamation of land or any change in use of the premises and includes redevelopment and layout and sub-division of any land.

Plotted Development: Means the carrying out of development leading to the subdivision of land into plots.

Flatted Development: Means the carrying out of development on a site leading to the construction of flats.

DEVELOPMENT CHARGE

Means a charge levied by the Implementing Authority as per the provisions of the Bhutan Municipal Act, 1999 clause 95.

DEVELOPMENT PERMISSION

Means a valid permission, or authorization, in writing by the 'Implementing Authority' to carry out development, issued to a legally empowered developer, with due regard to the prevailing Act/ Regulations in force at the time of issue.

DEVELOPMENT RIGHT

Means the right to carry out development of a building or land, and shall include the transferable development right in the form of right to utilize the permissible built-up area of land utilizable either on the remainder of the land partially reserved/ directed to be reserved for a public purpose within the site of the reserved, or elsewhere.

DEVIATION

Shall mean carrying out or undertaking a building construction or land development activity in departure from the sanctioned/ approved plans, permissions or orders, irrespective of the degree of change.

DRAIN

Shall mean a system or a line of pipes, with their fittings and accessories such as manholes, inspection chambers, traps, gullies, floor traps, used for drainage of buildings or yards appurtenant to the buildings within the same catchments. A drain includes an open channel for conveying surface water or a system for the removal of any liquid.

DWELLING UNIT

Shall mean a shelter consisting of residential accommodation for one household. Provided that the minimum accommodation in a dwelling unit shall be one habitable room of minimum carpet area of 9sqm with a minimum side dimension of 2.5m and a water closet (WC). It may not have more than one kitchen or cooking space.

ENCLOSED STAIRCASE

Shall mean a staircase separated by walls and doors from the rest of the building.

ENGINEER

Shall mean a person with a degree or diploma in civil and /or structural engineering from any recognized Institute, College, or University of Engineering accredited by the respective country's accreditation board to impart professional degrees in engineering.

EXISTING BUILDING

Shall mean a building or a structure existing before the commencement of these Regulations.

EXISTING USE

Shall mean use of a plot of land, a building, or a structure existing before the commencement of these Regulations.

EXIT

Shall mean a passage, channel of means of egress from any building, storey or floor area to a street or other open space of safety; horizontal exit, outside exit and vertical exit having meanings at (i), (ii) and (iii) respectively as under:

- (i) "HORIZONTAL EXIT": shall mean an exit which is a protected opening through or around at firewall or bridge connecting two or more buildings.
- (ii) "OUTSIDE EXIT": shall mean an exit from a building to a public way, to an open area leading to a public way, or to an enclosed fire resistant passage leading to a public way.
- (iii) "VERTICAL EXIT": shall mean an exit used for ascending or descending between two or more levels, including stairways, smoke-proof towers, ramps, escalators and fire escapes.

EXTERNAL WALL

Shall mean an outer wall of a building not being a party wall even though adjoining a wall of another building and also shall mean a wall abutting on an interior open space of any building.

ESCAPE ROUTE

Shall mean any well-ventilated corridor, staircase or other circulation space, or any combination of the same, by means of which a safe place in the open air at ground level can be reached.

FIRE AND/ OR EMERGENCY ALARM SYSTEM

Shall mean an arrangement of call points or detectors, or sensors, or sounders, and other equipment for the transmission and indication of alarm signals working automatically or manually in the event of fire.

FIRE PROOF DOOR

Shall mean a door or shutter fitted to a wall opening, and constructed and erected with the requirement to check the transmission of heat and fire for a specified period. Fireproof doors for various purposes must conform to the specifications and performance standards

as laid out in the Bhutan Building Code of Bhutan 2003, (BTS-015-2003, Part 2 Section 6 Fire Protection).

FIRE PUMP

Shall mean a machine, driven by external power for transmitting energy to fluids by coupling the pump to a suitable engine or motor, which may have varying outputs/capacity but shall be capable of having a pressure of 3.2kg/cm² at the topmost level of a multi-storied building.

FIRE RESISTANCE

Shall mean the time during which a fire resistant material, i.e. material having a certain degree of fire resistance, fulfils its function of contributing to the fire safety of a building when subjected to prescribed conditions of heat and load or restraint. The fire resistance test of structures shall be done in accordance with IS: 3809-1966 Fire Resistance Test of Structure.

FIRE SEPARATION

Shall mean the distance in meters measured from any other building on the site or from another site, or from the opposite side of a street or other public space to the building.

FIRE SERVICE INLET/ HYDRANT

Shall mean a connection provided at the base of a building for pumping up water through-in-built fire-fighting arrangements by fire service pumps in accordance with the recommendation of the Chief Fire Officer.

FIRE TOWER

Shall mean an enclosed staircase, which can only be approached from the various floors through landings or lobbies separated from both the floor area and the staircase by fire resisting doors. The specifications and performance standards of the enclosing walls, materials and doors shall be as per those stated in I.S3809-1966 Fire Resistance Test of Structure.

FLOOR

Shall mean the lower surface in a storey on which one normally walks in a building, and does not include a mezzanine floor. The floor at ground level with a direct access to a street or open ground/ land shall be called the ground floor; the ground floor shall also be counted as a floor in defining the number of floors. (In the estimation of floors, the actual areas or extent of the floors shall have no consideration) The nomenclature of the other floors shall be as follows: the floor above the ground floor shall be termed as floor 1, with the next higher floor being termed as floor 2, and so on upwards.

FLOOR AREA

Shall mean the total area of the floor including the area of walls.

“FAR” OR FLOOR AREA RATIO

Shall mean the quotient obtained by dividing the sum of the floor areas on all floors excluding areas specifically exempted under these Regulations, by the total area of the plot.

$$\text{Floor Area Ratio} = \frac{\text{Total floor area}}{\text{Total plot area}}$$

The following shall not be counted towards computation of F.A.R.

- a) Areas covered by porches, canopies, weather shields, arcades, atria, passages connecting two streets, balconies and verandahs etc.
- b) Parking spaces
- c) Basements if used for parking, services and utilities

FRONT

Front as applied to a plot; shall mean the portion facing the road and in case of plot abutting on more than one road the plot shall be deemed to front on all such roads / means of access.

FOOTING

Shall mean a foundation unit constructed in brickwork, stone masonry or concrete under the base of a wall or column for the purpose of distributing the load over a large area.

FOUNDATION

Shall mean that part of the structure, which is in direct contact with and transmitting loads to the ground.

GARAGE/ PARKING – PRIVATE

Shall mean a building or a portion thereof designed and used for the parking of vehicles.

GARAGE/ PARKING – PUBLIC

Shall mean a building or portion thereof, designed other than as a private garage, operated for gain, designed and/or used for parking motor-driven or other vehicles.

GROUND LEVEL

Shall mean the lowest ground level within the plot.

GROUP HOUSING

Shall mean a housing scheme wherein two or more independent dwelling units or buildings are constructed in an undivided parcel of land.

HARDSHIP

Shall relate to the hardship arising due to the internal operation of the rules and not to the economic, social or personal condition of the applicant.

HOME OCCUPATION

Shall mean customary home occupation other than the conduct of an eating or a drinking place offering services to the general public, customarily carried out by a member of the family residing on the premises without employing hired labour, and for which there is no display to indicate from the exterior of the building that it is being utilized in whole or in part for any purpose other than a residential or dwelling use and in connection with which no article or service is sold or exhibited for sale except that which is produced therein, which shall be non-hazardous and not affecting the hygiene or safety of the inhabitants of the building and the neighborhood, and provided that no mechanical equipment is used except that as is customarily used for purely domestic or household purposes and /or employing licensable goods. If motive power is used, the total electricity load should not exceed 0.75 KW. "Home Occupation" may also include such similar occupations as may be specified by the Implementing Authority and subject to such terms and conditions as may be prescribed. Under no case should an economic activity, deemed as a "Home Occupation" if it generates nuisance by way of sound, water, or air pollution.

HABITABLE ROOM

Shall mean a room occupied or designed for occupancy for human habitation and uses incidental thereto, including a kitchen if used as a living room, but excluding a bath-room, water closet compartment, laundry, serving and storing, pantry, corridor, cellar, attic, store-room and spaces not frequently used.

HAZARDOUS MATERIAL

Shall mean: radioactive substances and material which is highly combustible or explosive and/or which may produce poisonous fumes, explosive emanations, or storage, handling, processing or manufacturing of which may involve highly corrosive, toxic, obnoxious alkalis or acids or other liquids; other liquids or chemicals producing flame, fumes, explosive, poisonous, irritant or corrosive gases or which may produce explosive mixtures of dust or fine particles capable of spontaneous ignition.

Biological substances causing viruses, infections or which could cause uncontrolled bacterial growth harmful to humans, livestock, or plant life.

HEIGHT OF BUILDING

Shall mean the vertical distance measured from the level of the lowest natural ground level, up to the top of the finished level of the top most floor slab in case of flat roofs and up to the midpoint of the height of the sloping roof. The height of the sloping roof shall be taken as an average height of the relevant floor. The number of floors specification includes the ground floor. However the maximum height of the attic shall be limited to that given in the Critical Dimensions (see Concerned Section).

In addition to the Precinct regulations, the height of buildings shall be governed by the “Guidelines on Traditional Architecture of Bhutan” and by the overall allowable building heights.

HEIGHT OF A ROOM

Shall mean the vertical distance measured from the finished floor surface to the finished ceiling/slab surface. The height of a room with a pitched roof shall mean the average height between the finished floor surface and the bottom of the eaves and the bottom of the ridge.

KIOSK

Shall mean any light open-fronted booth selling fast food, newspapers, tickets, telephone booth etc

LAYOUT

Shall mean laying out a parcel of land or lands into smaller plots for building on, with laying of roads / streets, including formation, leveling, metalling or blacktopping or paving of the roads and footpaths, etc. and laying of the services and amenities such as water supply, drainage, street lighting, open spaces, etc.

LIFT

Shall mean a mechanically guided car, platform or transport for persons and materials between two or more levels in a vertical or substantially vertical direction.

LIGHT HOME WORKSHOP

Means a workshop wherein the work done or the machinery installed is such as could be done or installed in any residential area without detriment to the neighborhood by means of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit etc.

It will be subject to the following restrictions:

- a) Power used will be electrical.
- b) Maximum power used will be 1.5 KW.
- c) Maximum floor space occupied will be 20sqm.
- d) It will be worked by the members of the family.

- e) Any part of the machinery including pulley, belt shafts etc. shall be attached to the walls or other parts of the building except the floor at which the same machinery is supported.

Such home workshop may be gold smithy, milk or curd churning, pills making, stitching embroidery, tailoring, vulcanizing, sewing machine, folding machine, and milk-separation.

LIGHT INDUSTRY

Means an industry in which the processes are carried out without detriment to the neighboring residential areas by reason of noise, vibration, smell, fumes, smoke, soot, ash, dust or grit. It will be subject to the following restrictions:

- (i) Power used will be electrical
- (ii) Maximum power used will be 10 KW, which may be enhanced up to 25 KW by the Implementing Authority in special cases of genuine expansion of existing factory, which may have reached the maximum limit of power.
- (iii) Maximum floor space occupied shall not exceed 500sqm.
- (iv) It will be housed in a building suitable for the purpose. However, it shall not include the following industries:

Manufacturing or refining of ammonia, bleaching powder, chlorine, asphalt, brick, terracotta, gypsum, lime, plaster of Paris, coke, creosote, glucose, starch, dye, explosive or fireworks or storage thereof in excess of 50 Kg. fertilizers, gas (fuel or illuminating) in excess of three hundred cubic meters, gelatin or glue from fish or animal refuse, or offal, hydrochloric acid, nitric acid, sulphuric or sulphurous acid, lead black, linoleum or oil cloth, matches, pyrexilin or rubber or treatment thereof involving offensive odour, tar, turpentine or blast furnace, coal or junk yard, distillation of bores, coal weed or tar or manufacture of any of their distilled products, drop forages, fat grease lard of fallow manufactures, refining or rendering lout or grist mill, hot rolling mill, incineration, reduction, or dumping of dead animals, garbage or refuse except when accumulated and consumed on the same premises without the emission of odour, production or refining or storage above ground of petroleum or other inflammable liquids (except heating fuels), slaughtering of animals, tanning or curing or storage of raw hides and skins, tyre recapping.

LOFT

An Intermediary floor between two floors on a residual space in a pitched roof, above normal floor level with a maximum height of 1.5m and which is constructed or adopted for storage purpose.

MARGIN/ SETBACK

Shall mean space fully open to sky provided at the ground level from the edge of the building wherein built-up area shall not be permitted except specifically permitted projections under this regulation.

MEZZANINE FLOOR

Shall mean an intermediate floor with height not more than 2.3m, between two main floors overhanging or overlooking a floor beneath and accessible only from the lower floor. The total floor area of the Mezzanine floor should not exceed 1/3rd of the lower area. The floor area of the mezzanine floor shall be considered for calculating the total built up area of the building.

MUNICIPAL/THROMDE BOUNDARY

Shall mean the boundary of Phuentsholing City as defined by the Royal Government / Competent Authority.

NEIGHBORHOOD CENTRE AND CIVIC CENTRE

Neighborhood Centre and Civic Centre shall include activities such as community shopping centre, market, office building, cinema, small hospital, playground, swimming pool, town hall, open air theatre, civic and cultural facilities, library, higher secondary school, parking plots, public utility and service buildings such as post office, fire station, police station, religious building and building of public uses.

NON-COMBUSTIBLE

Shall mean not liable to burn or add heat to a fire when tested for combustibility in accordance with the IS: 3808-1966 Method of Test for Combustibility of Building Materials.

OBNOXIOUS and HAZARDOUS INDUSTRY

Means industry, which will create nuisance to the surrounding development in the form of smell, smoke, gas, dust, noise pollution, air pollution, water pollution and other unhygienic conditions.

OCCUPANCY OR USE

Shall mean the principal occupancy or use for which a building, or a part of it, is used or intended to be used, including contingent subsidiary occupancies; mixed occupancy building being those in which more than one occupancy are present in different portions of the building.

OCCUPANCY CERTIFICATE

Shall mean an official document issued by the Implementing Authority certifying that the building is safe and fit for occupation.

OPEN SPACE

Shall mean an area forming an integral part of the plot or an independent plot, left permanently open to sky.

OWNER

Shall mean person in whose name the land or property is registered as per the Land Records with the Phuentsholing Thromde (PT) and who receives rent for the use of the land or building or would be entitled to do so if it were let.

PARAPET

Shall mean a low wall or railing built along the edge of roof or a floor.

PARKING SPACE

Shall mean an area, enclosed or unenclosed, covered or uncovered, sufficient in size to park vehicles with space for movement. Parking spaces shall be served by a driveway connecting them with a street or alley and permitting ingress or egress of vehicles.

PARTITION

Shall mean an interior non-load bearing divider wall not more than one storey or part thereof in height.

PERMANENT OPEN AIR SPACE

Shall mean air space permanently open if its freedom from encroachment is protected by any law or contract ensuring that the ground below it is either a street or is permanently and irrevocably appropriated as an open space.

PERMISSION

Shall mean a valid permission or authorization in writing by the Implementing Authority to carry out development or a work regulated by the Regulations.

PLINTH

Shall mean a portion of a building between the surface of the surrounding ground level and the finished floor surface immediately above the ground.

PLINTH HEIGHT

Shall mean the height of the finished floor of the lowest floor level above the natural ground level.

PLINTH AREA

Shall mean the built-up covered area measured at the floor level of the basement or of any storey, including the walls.

PLOT

Shall mean a piece of land enclosed by definite boundaries fixed by the Implementing Authority.

PORCH

Shall mean a covered surface supported on pillars or otherwise for the purpose of a pedestrian or vehicular approach to a building.

PRECINCT PLAN

Shall mean a geographical area designated in the approved Urban Development Plan/ Structure Plan for the purpose of regulating Precincts within the approved municipal/ Thromde boundary.

PUBLIC PURPOSE

The expression “Public Purpose” includes:

- a) The provision of village sites, or the extension, planned development or improvement of existing village sites;
- b) The provision of land for town or rural planning;
- c) The provision of land for planned development of land from public funds in pursuance of any scheme or policy of Royal Government and subsequent disposal thereof in whole or in part by lease, assignment or outright sale with the object of securing further development as planned;
- d) The provision of land for a corporation owned or controlled by the Royal Government;
- e) The provision of land for residential purposes to the poor or landless or to persons residing in areas affected by natural calamities, or to persons displaced or affected by reason of the implementation of any scheme undertaken by the Royal Government, any Local Authority or a corporation owned or controlled by the Royal Government;
- f) The provision of land for carrying out any educational, housing, health or slum/ bagos improvement and/or clearance scheme sponsored by the Royal Government or by any Authority established by the Royal Government for carrying out any such scheme or with the prior approval of the Royal Government,
- g) The provision of land for any other scheme of development sponsored by the Royal Government or with the prior approval of the Royal Government, by a Local Authority;
- h) The provision of any premises or building for locating a public office, but does not include acquisition of land for Companies.

PUBLIC UTILITY NOTE, PUBLIC FACILITY, SERVICES BUILDINGS shall include buildings or works developed or undertaken by the Govt./ Semi-Govt. or Public Undertaking only, such as sub-station, and receiving station of the Electricity Dept., Building for infrastructural facilities like bus service, water supply, drainage, sanitation, domestic garbage disposal, pumping station, electricity, purification plant, police building, post and telegraph and telecommunication, public urinals, milk supply, and public telephone booth, fire brigade station, ward and zonal offices of Implementing Authority, taxies, scooter and cycle stand and parking lot, garden, nursery, playground and open spaces, canal, communication network, first aid medical centre, primary health centre, dispensary, library, reading room and religious buildings/ places of public worship.

PROPERTY

Shall mean either a business or industrial premise; a single domestic dwelling, e.g. a house or an apartment; or a building with multiple domestic dwellings, businesses or industries or empty lot.

REGISTERED ARCHITECT/ ENGINEER/ STRUCTURAL DESIGNER/ URBAN PLANNER/ DESIGNER/ DEVELOPER

Shall mean respectively a person registered by the Implementing Authority or any other recognized institutions/ organizations for the purpose of these Regulations as an Architect, Engineer, Structural Designer, Urban Designer, Urban Planner or Developer, under these Regulations or any other Rules prevailing for the area.

RECREATION and OPEN SPACES

Shall mean an area primarily intended for active and passive recreational purposes.

REFERRAL AUTHORITY

Shall mean an Authority created by the RGoB to which certain aspects of a proposed development may be required to be referred to, and a “no objection certificate’ obtained from, before the Implementing Authority scrutinizes/examines the proposal for giving approval.

RESIDENTIAL BUILDING

Shall mean a building used for human habitation including garages and out houses.

RESIDENTIAL USE

Shall mean a use of any building unit for the purpose of human habitation and includes similar activities like hotels, lodges, inns, guesthouses, and hostels.

RIGHT OF WAY

(ROW) shall mean an area reserved for road carriageway, central verge, footpath, roadside drains, avenue plantations and utilities.

ROAD/ STREET

Shall mean any public expressway, highway, boulevard, street, lane, pathway, alley, stairway, passageway, carriageway, footway, square place or bridge, whether a thoroughfare or not, over which the public have a right of passage or access or have passed and had access uninterruptedly for a specified period, whether existing or proposed in any scheme, and includes all bunds, channels, ditches, storm-water drains, culverts, sidewalks, traffic islands, road-side trees and, hedges retaining walls, fences, barriers and railings within the street lines.

ROW HOUSES

Shall mean a row of houses with only front and rear open spaces.

STREET-LEVEL OR GRADE

Shall mean the officially established elevation or grade of the centre line of the street upon which a plot fronts, and if there is no officially established grade, the existing grade of the street at its midpoint.

SUB-DIVISION

Shall mean the division of a single plot or building unit into two or more legal parts.

SANITARY INSPECTOR

Shall mean a technical person authorized by the Implementing Authority to inspect and regulate water supply, drainage and sanitation.

SERVICE ESTABLISHMENT

Is wherein the work done or the machinery installed in such as would render service to the local residents and would satisfy their day-to-day residential needs and which does not create nuisance to the surrounding development in terms of noise, dust, water and air pollution. It will be subject to the following restrictions:

- (i) Power used will be electrical.
- (ii) Maximum power used to be 10 KW for residential zone and not more than 25 KW in commercial zone.
- (iii) Maximum floor space occupied will be 50sqm.
- (iv) It shall be detached and housed in a shop or a building specially designed for the purpose. Such establishment may be a fuel filling and/or service station, flour mill, bakery, laundry, air compressor unit, electrical motor, optical repair and watch repair shop, repair of musical instrument, carpentry, book-binding, printing press, paper-cutting, water cooling, and juice extracting unit, black-smithy, vulcanizing, motor winding, cutting and nut cutting unit etc.

SERVICE ROAD

Shall mean a road/ lane provided at the front, rear or side of a plot for service purposes and includes a road/ lane provided along a major road or expressway to cater to local traffic.

SHOPPING CENTERE OR COMMERCIAL CENTER

Shall mean group of shops, offices and/ or stalls designed to form market/office complex.

SITE DEVELOPMENT

Means the carrying out of engineering, mining, or other operations, in, over, or under land or water or the making of any material or structural change including demolition of building or reclamation of land or any change in use of the premises and includes redevelopment and layout and subdivision of any land.

STAIR COVER

Shall mean a structure with a covering roof over a staircase and it's landing built to enclose only the stairs for the purpose of providing protection from the weather, and not to be used for human habitation.

STOREY

Shall mean the portion of a building included between the surface of any floor and the surface of the floor next above it, or if there be no floor above it, then the space between any floor and the ceiling next above it.

TENEMENT

Shall mean an independent dwelling unit with a kitchen, or a cooking space.

TENEMENT BUILDING / OWNERSHIP FLATS

Shall mean a residential building constructed in a detached manner, or in a semi-detached manner, or as ownership flats in a building unit, each being designed and constructed for separate occupation with independent provision of bath and WC.

TRAVEL DISTANCE

Shall mean the distance from the remotest point of a building to a place of safety, be it a vertical exit or a horizontal exit or an outside exit, measured along the line of travel.

URBAN CONTROL ZONE

Shall mean a defined peripheral area immediately outside the municipal/ Thromde boundary as fixed by the Competent Authority and restricted for development activities.

URBAN PLANNER/DESIGNER

Shall mean a person with degree or diploma in Urban Planning/ Designing from an Institute, College or University accredited by the respective country's accreditation board to impart professional degrees in Urban Planning/ Designing.

UNAUTHORIZED BUILDING

Shall mean a building or structure which was constructed without sanction from the Implementing Authority empowered to control building pattern and form, at the time the concerned construction took place.

VENTILATOR

Shall mean an appliance or an aperture which is usually used for the purpose of ventilating a room or space.

WATER CLOSET (WC)

Shall mean a privy with an arrangement for flushing the pan with water, but does not include a bathroom. It shall not be smaller in floor area than one square meter.

WATER COURSE

Shall mean a natural channel or an artificial channel formed by draining or diversion of a natural channel meant for carrying storm and wastewater.

WAREHOUSE OR GODOWN

Shall mean a public or private building, the whole or a substantial part of which is used or intended to be used for the storage of goods whether for storing or for sale or for any similar purpose.

WHOLESALE TRADE

Shall mean a business or enterprise, which operates on the basis of buying, receiving, transiting or taking goods from the producers and selling, trading, distributing such goods and products to retailers, convenience shops, etc., but not to the end users. Any trade where ninety percent of the premises used is for the storage of bulk goods, cartons and crates of goods, dissembled goods or goods to be passed on to retail units or direct sales outlets shall be deemed to be a Wholesale Trade use/ activity.

WINDOW

Shall mean an opening, other than a door, to the outside of a building, which provides all or part of the required ventilation.

INTERPRETATION AND MEANING OF EXPRESSION

The use of present tense includes future tense, the masculine gender includes feminine gender and singular includes plural or vice versa.

Section 2a: Land Development/ Subdivision/ Consolidation and Building Permission**Procedure for Obtaining Development Permission**

No person shall change the use of a land or carry out development without the written permission of the Implementing Authority.

Provided that no such development permission shall be necessary for the following:

- (i) Carrying out works for the maintenance, improvement or alteration of a building, being works which affect only the interior of the building without altering the structural members of the building or which do not materially affect the external appearance thereof – such as providing or closing of a window or a door or ventilator not opening towards other's property, providing intercommunication door, white washing/ painting, retiling, plastering and patch work, re-flooring and replacement of flooring. Provided further that no built up area shall be added to the existing work without seeking the Implementing Authority's permission. Provided however that no such exemption shall be available in the case of heritage buildings/ structures in heritage Precinct.
- (ii) Carrying out the following works by/ in compliance with an order or direction made by an authority under a law for the time being in force:
 - a) required for the maintenance or improvement of highway, road or public street, being works carried out on land within the boundaries of such highway, road or public street including repairs, extensions, modifications to existing service installations, culverts, bridges, tunnels, drains, foot over bridges, subways, pavements, pedestrian railings along pavements, medians, etc,
 - b) for the purpose of constructing, laying, inspecting, repairing or renewing drains, sewers, mains, pipes, cable, telephone or other apparatus including breaking open of a street or other land for that purpose,
 - c) falling in the purview of the operational constructions by Government departments/ bodies, such as water tanks – over head or underground, pumping stations, sub-stations, traffic signals, bus stop shelters, overhead electrical equipment for electrification, etc.
- (iii) excavation (including) wells made in the ordinary course of agricultural operation; (for the construction of a road intended to give access to land solely for agricultural purposes),
- (iv) for an occasional use of land such as exhibitions, fairs, etc., but shall obtain temporary permission from the Implementing Authority.

Procedure for Land Development/ Subdivision/ Consolidation Permission**1.0.12 APPLICATION FOR LAND DEVELOPMENT/ SUBDIVISION/ CONSOLIDATION PERMISSION**

A person or body intending to carry out layout development as defined in these Regulations in or over a land and /or subdivide and /or consolidate land or a building within the limits of the Phuentsholing Thromde shall obtain prior permission for the same from the Implementing Authority by applying in a standard format and furnishing all information in forms, formats and plans prescribed under these regulations and as may be amended from time to time by the Implementing Authority.

The application shall be signed by the legal owner of the plot or authorized signatory. The applicant shall submit signed plans and drawings along with the application as per clause 2.11.2 and pay the requisite scrutiny fees, development charges, betterment charges, and other charges and dues if any to be leviable under the Regulations.

1.0.13 DOCUMENTS AND PARTICULARS TO BE FURNISHED WITH THE APPLICATION

The following particulars and documents shall be submitted along with the application.

- 1) Copy of the Land Ownership Certificate issued by the PT.
- 2) Copy of the latest Site Plan certified/ issued by the PT.
- 3) Copy of Precinct Certificate substantiating "Use Conformity"
- 4) Three copies of proposed layout plan drawn to a scale of not less than 1:500 showing the details as listed in Appendix I, wherever applicable (in the case where plot is more than ten hectares, scale shall not be less than 1:1000)

Note: Drawings shall be prepared in S.I. system only.

Certificate of undertaking in the standard form by the registered Architect/ Urban Planner/ Designer.

- 5) Full information should be furnished in the Form along with the plan.

The applicant shall also submit a copy of N.O.C/ clearance from relevant Authority as per wherever applicable.

1.0.14 PLANS/ DRAWINGS AND SPECIFICATIONS TO BE PREPARED BY REGISTERED ARCHITECT/ URBAN PLANNER/ URBAN DESIGNER

The plans and particulars prescribed under clause No. 2.11.2 above shall be prepared by a registered **Architect, Urban Planner and/ or Urban Designer**

1.0.15 COLOR CODES FOR PLANS/ DRAWINGS

The Color code to be used for plans/ drawings referred to in 2.11.2 shall be as laid down in Appendix 4

1.0.16 SCRUTINY FEE

A person or body applying for permission for carrying out development shall with his/ its application pay to the Implementing Authority the scrutiny fees as mentioned in Appendix-5 or as decided by the Town Committee from time to time.

1.0.17 APPROVAL OF LAYOUT FOR PLOT SUBDIVISION

The approval of layout proposed to be developed and /or subdivided and /or consolidated will be given upon furnishing the required information in a standard format and fulfillment of the requirements as described in the following sections. Intermediary scrutiny and checks shall be conducted by the concerned authorities without prior notice. In case of any change in the approved layout plan the proposal has to be revalidated by the PT. If it is noted during the scrutiny or site visits of the concerned authorities that no prior approvals for the changes in the approved layouts have been procured by the person/ body and/ or failure in producing valid documents for such changes, the development approval/ permission shall be cancelled.

1.0.18 REJECTION OF APPLICATION

If the plans and information given do not contain all the particulars necessary to deal satisfactorily with the development permission application, the application shall be rejected.

1.0.19 CANCELLATION/ REVOCATION OF APPROVAL

The development permission if secured by a person/body by misrepresentation or by producing invalid documents, such development permission will be cancelled.

Procedure for Obtaining Building and Occupancy Permission

A person/ firm/ body or developer shall not erect a building or carry out additions and alterations or carry out civil construction activity without obtaining a building permit from the Implementing Authority. A building permit shall be issued only to the legal owner of the land/ plot.

However applications for temporary permission involving erection/ construction of temporary structures shall be permitted only in specific locations which would have to be approved beforehand upon the payment of fees specified in appendix 5 by the PT. The procedures for obtaining building permission and also those procedures that are to be followed during construction are different for the two classes of buildings/ construction:

- a) Residential structures not more than two floors (ground plus one floor) on sites up to 1,000sqm. This shall exclude all type of developments that fall upon steep slopes having slopes higher than 30%.
- b) More than two floors (ground + two floors) on site more than 1,000sqm of land and/ more than two floors/ buildings for non-residential uses.

A mechanism for speedier approvals in the case of tier "a" as above is proposed through a Green Channel of accredited architects/ engineers. All building applications shall enclose an

“ultimate structural capability of the structure” statement from the architect/ structural engineer, in terms of total number of floors.

For details of temporary permission refer to clause no. 2.15

The procedures for the different classes of buildings/ constructions are described in the following charts:

Figure 1: procedure for obtaining building permissions and also the procedure that is to be followed during construction of residential structures not exceeding two dwelling units and / or not more than two floors (ground plus one floor) in plots up to 1,000 square meters.

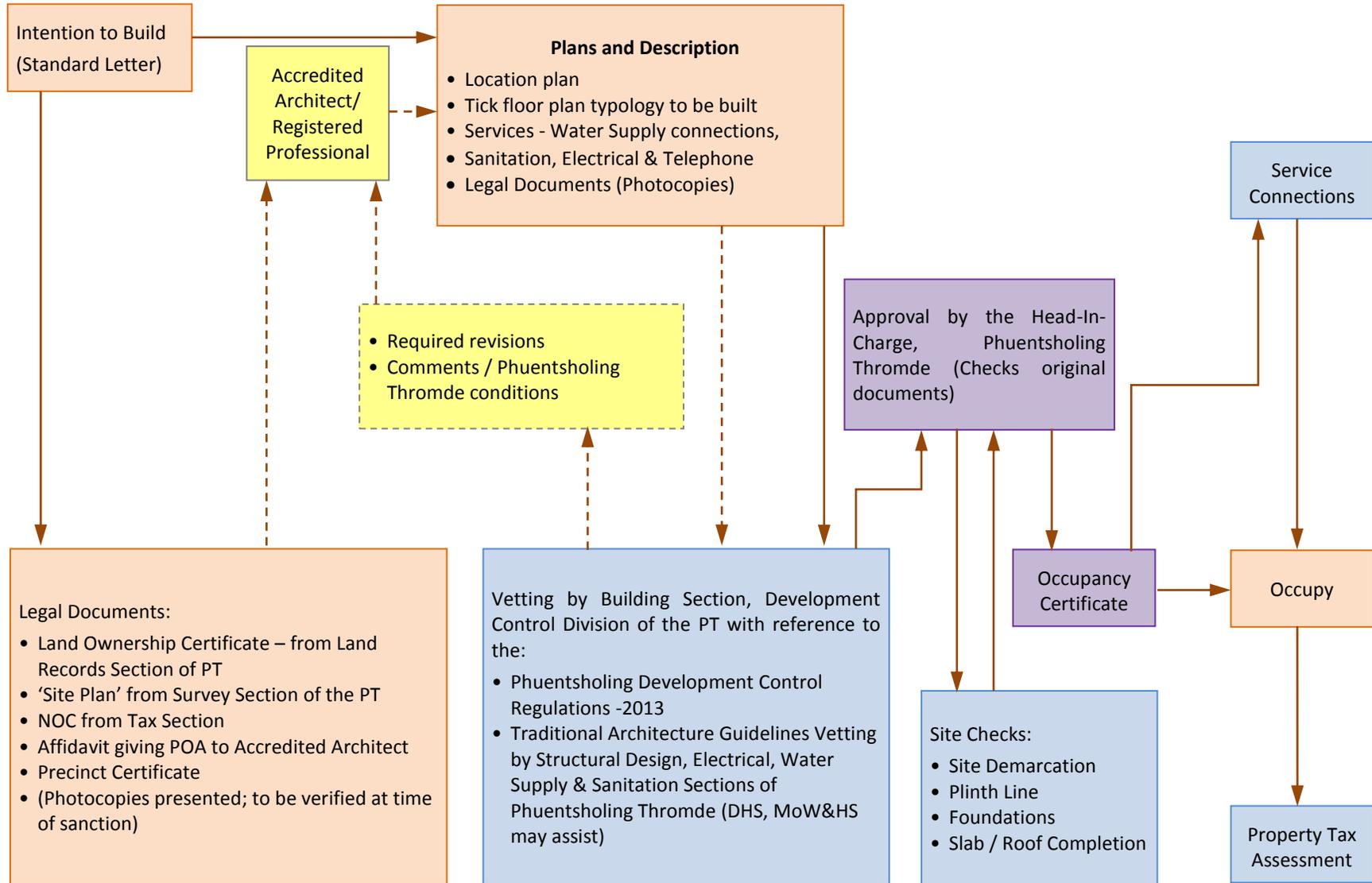
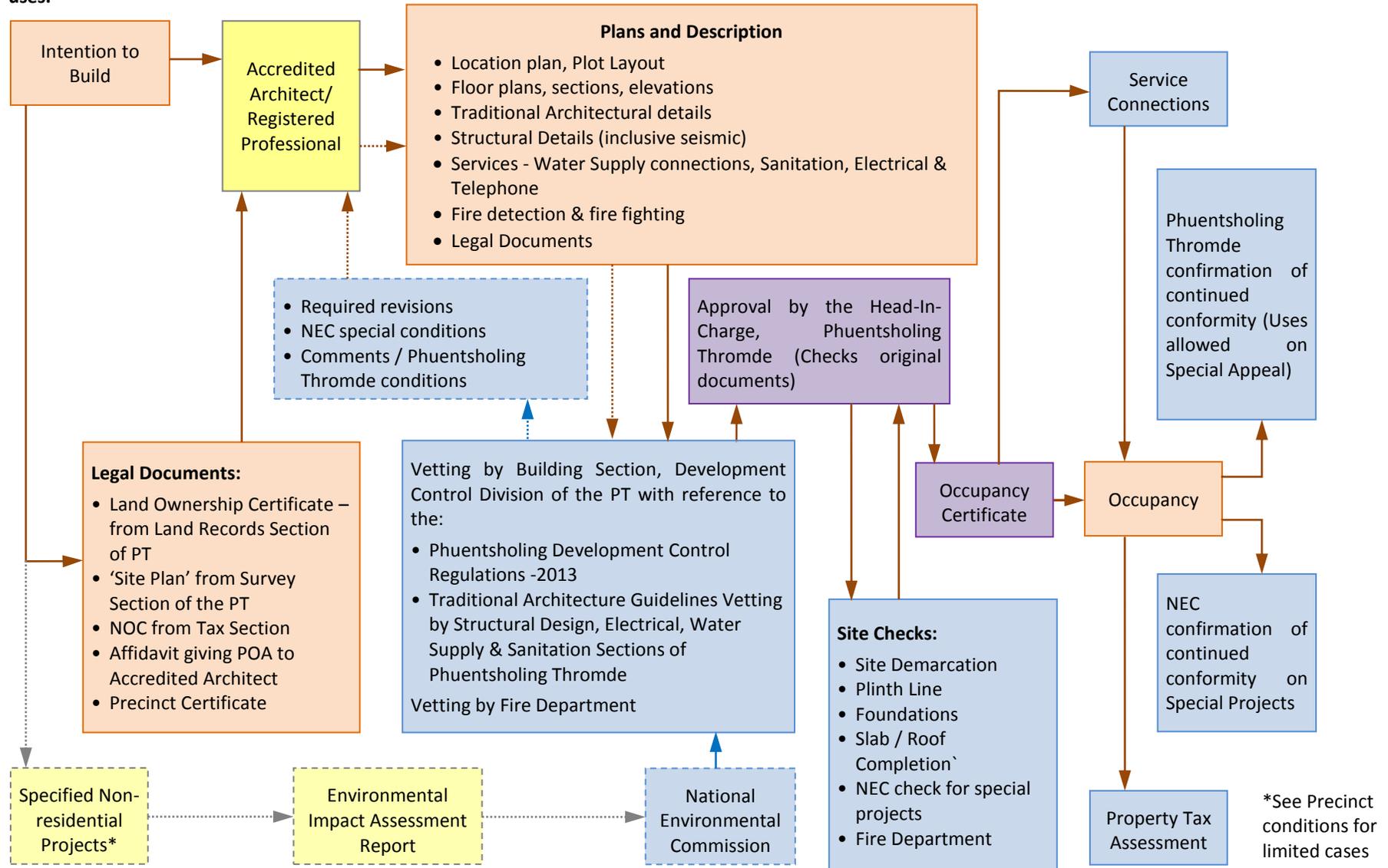


Figure 2: Procedure for obtaining building permission and also the procedures that are to be followed during construction of three or more residential units, or any building on a plot of more than 1,000 square meters of land/ or more than two floors (Ground plus two and more) or buildings for non-residential uses.



1.0.20 APPLICATION FOR BUILDING PERMISSION

A person or body intending to erect a building or carry out additions and alterations to a building or to carry out development as defined in these Regulations in or over land owned by him/ it within the limits of the PT shall obtain prior permission for the same from the Implementing Authority by applying on the prescribed form and furnishing all information in the forms and format prescribed under these regulations and as may be amended from time to time by the Implementing Authority. The application shall be signed only by the legal owner of the plot or authorized signatory. The applicant shall submit signed drawings along with the application as per the clause 2.12.2 below and pay the requisite scrutiny fees, development charges, betterment charges, and other charges and dues if any to be leviable under the Regulations.

1.0.21 DOCUMENTS AND PARTICULARS TO BE FURNISHED WITH THE APPLICATION

- a) The applicant shall sign all forms, plans, sections or written particulars or cause them to be signed by him and his duly authorized registered Architect, Engineer, Developer etc. as the case may be. Such person or authorized registered Architect, Engineer, developer shall furnish documentary evidence of his authority. If such notice or other document is signed by such authorized registered Architect, Engineer, Developer it shall state the name and address of the person on whose behalf it has been furnished.
- b) The forms, plans, sections and descriptions to be furnished under these Regulations shall all be signed by each of the following persons:
 1. A person making application for development permission.
 2. A person who has prepared the plans and sections with descriptions, and must be a registered Architect.
 3. A person who is responsible for the structural design and supervision of the construction i.e. a registered structural designer or civil engineer.
 4. A developer
- c) A person who is engaged either to prepare plan or to prepare a structural design and structural report or to supervise the building shall give an undertaking (accepting full responsibility for all of the above and liability in case of direct or indirect damage or loss) in the prescribed form.
- d) A person/body who under the provisions of the relevant sections of these regulations is required to furnish to the Implementing Authority, plans or other documents, shall furnish THREE copies of such plans and other documents. One copy of each plan and document shall be returned, on approval, to the applicant duly signed by the Implementing Authority or authorized officer.
- e) It shall be incumbent on the person/ body whose plans have been approved, to submit amended plans for deviation leading to increase in built-up area, building height or change in

plans, he proposes to take during the course of construction of his building work, and the procedure laid down for plans or other documents hereto before, shall be applicable to all such amended plans.

- f) Approval of drawings and acceptance of statements, documents, structural report, structural drawings, progress certificate, or building completion certificates shall not discharge the Owner, Engineer, Architect, Structural Designer, Developer, from their responsibilities, imposed under these Regulations and other local laws.
- g) A certificate of structural capability of the building in terms of ultimate number of floors it is designed for, and the soundness of the structural design from the licensed structural designer in regard to the proposed building shall be submitted in the format prescribed under these Regulations. He shall also submit the detailed design and plans for office record.
- h) Three copies of the proposed layout plan of the area proposed to be developed shall be submitted to a readable scale, as the case may be showing the details as listed in the Appendix-1 wherever applicable.
- i) Three copies of the detailed drawings showing the plans, sections and elevations of the proposed building work to a scale of 1:100 showing the details as listed in Appendix-2, wherever applicable, shall be submitted.

1.0.22 PLANS/ BUILDING DRAWINGS AND SPECIFICATIONS TO BE PREPARED BY REGISTERED PROFESSIONALS

The plans/ building drawings and particulars prescribed under these Regulations shall be prepared by a registered Architect.

1.0.23 COLOR CODE FOR PLANS/ DRAWINGS

The Color code to be used for plans shall be as laid down in Appendix-4

1.0.24 SCRUTINY FEE

The scrutiny fee payable at the time of application shall be as per the rates indicated in clause 3.4 of Appendix-A or as decided by the Town Committee from time to time.

1.0.25 SERVICES AND AMENITY FEES

Permission for carrying out development shall be granted by the Implementing Authority only on payment of service and amenities fees as may be decided by the City Committee from time to time. These fees and maintenance charges shall be revised on review by Implementing Authority from time to time.

1.0.26 GRANT OF DEVELOPMENT PERMISSION

Grant of Development Permission shall mean acceptance by the Implementing Authority of all the requirements of these Regulations excluding the following

- a) Easement rights.
- b) Variation in area from recorded areas of a plot or a building.
- c) Structural reports and structural drawings.
- d) Soundness of material specifications used in construction of the building.

1.0.27 VALIDITY OF APPROVALS

The validity of the approved building plan shall be for two years from the date of approval. The construction should start within two years from issue of building permission

1.0.28 REVALIDATION/ RENEWAL

Building permission granted under these regulations shall be deemed to have lapsed, if such development work has not commenced till the expiry of two Gregorian calendar year from the date of development permission, provided that, the Implementing Authority may on application made to it before the expiry of above period (two Gregorian calendar year) extend such period by a further period of one Gregorian calendar year at a time by charging an amount to be fixed by the Town Committee from time to time for renewal of the building permission.

1.0.29 PROCESS FOR REVALIDATION IN THE EVENT THAT THE DEVELOPER EXCEEDS THE VALIDITY PERIOD OF THE APPROVAL NEEDED:

APPROVAL OF LAYOUT

The approval of building permission will be given in two stages:

- i. Preliminary approval, and
- ii. Final approval

PRELIMINARY APPROVAL

The approval of the layout plan is the stage which approves the proposed layout plan enabling the commencement of work on the site to facilitate activity related to subdivision and transfer of land as per the relevant standards and as proposed in the layout plan submitted by the applicant.

FINAL APPROVAL

The final approval of the building permission shall be given only on the completion of all the requisite development on the site and after inspection and verification of the performance of the services and other common facilities provided as per the relevant standards. In case of any changes in the approved layout plan the proposal has to be revalidated by the PT.

1.0.30 LIABILITIES AND RESPONSIBILITIES OF APPLICANT**Liabilities of the Applicant**

Notwithstanding the development permission granted under these Regulations, a person/body undertaking any development work shall continue to be wholly and solely liable for any injury or damage (direct or indirect) or loss whatsoever that may be caused to anyone in or around the area during such construction and no liability whatsoever in this regard shall be cast on the Implementing Authority.

Responsibilities of the Applicant

Neither the grant of development permission nor the approval of the plans, drawings and specifications shall in any way absolve the applicant of the responsibility for carrying out the development in accordance with requirement of these regulations.

1.0.31 REJECTION OF APPLICATION

If the plans and information given as per these Regulations do not give all the particulars necessary to deal satisfactorily with the Building permission application, the application shall be rejected.

On receipt of the application for Building Permission, the Implementing Authority after making such inquiry as it thinks fit may communicate its decisions granting or refusing permission to the applicant as per the provisions of the Act.

The Building permission shall be in the prescribed form and it should be issued by the Implementing Authority. Every order granting permission subject to conditions or refusing permission shall state the grounds for imposing such conditions or for such refusal.

1.0.32 CANCELLATION/ REVOCATION OF APPROVAL

The building permission if secured by a person/body by a misrepresentation or by producing false documents is not valid and such development permission will be treated as cancelled/revoked.

1.0.33 CHANGE OF OWNERSHIP

Building permission granted under these Regulations shall be deemed to be suspended/ cancelled/ revoked, in cases of change of ownership, unless the 'original' owner who applied for, and obtained the development approval submits a letter to the Implementing Authority about the change in ownership giving details of the transaction and the new owner submits an application duly attaching copies of all the official records of such a transaction and an undertaking that he accepts the transfer to himself, of all the responsibilities and liabilities of the previous owner that relate to the development on the site.

No Objection Clearance (NOC) from Referral Authorities for Certain Projects

The proposal submitted shall be in conformity with other Acts/ Regulations and shall, wherever applicable submit the NOC, from the respective authorities for conformity with:

- a) The Department of Power's Electricity Grid Lines and the horizontal and vertical clear distances to be kept open to sky
- b) The provisions of Environmental Assessment Act, 2000.
- c) The provisions of NEC Secretariat's, 'Regulations for the Environmental Clearance of Projects, 2001'.
- d) The conservation/ preservation of monuments and cultural heritage.
- e) The Department of Industry, Ministry of Trade and Industry, RGoB for the establishment of industries.
- f) The Department of Trade, Ministry of Trade and Industry, RGoB for the setting up and operation of fuel stations
- g) The Department of Geology and Mines, Ministry of Trade and Industry, RGoB for the setting up and operation of:
 - a. Quarrying and mining activities on less than 3 hectares
 - b. Mineral exploration for verifying mineral deposits
 - c. Emergency responses to natural disasters/ hazards.
- h) The Department of Forestry Services, Ministry of Agriculture, RGoB for:
 - a. Surface collection of sand and boulders,
 - b. All other activities governed by the Forest and Nature Conservation Act, 1995 and Rules, 2000, except sections that require NEC's clearance
- i) The Department of Research and Development Services, Ministry of Agriculture, for:
 - a. Farm roads,
 - b. Irrigation channels,
 - c. Activities related to agriculture research and development

Demolition and/ or Reconstruction of Dangerous/ Unsafe/ Dilapidated Buildings

Wherever it is necessary to demolish a dilapidated/ unsafe structure in the interest of public safety, such demolition shall be carried out by the owner wherever so directed by the Implementing Authority. However if the same is to be reconstructed, it shall be done in conformity with these Regulations with due approval from the Implementing Authority.

Temporary Permission

Applications for temporary permissions need not be submitted through the registered professional. A scrutiny fee shall be paid as specified in the Appendix-5. These temporary permissions shall be permitted only for:

1. in the case of private premises - temporary sheds to be used for storing construction material/ as watchmen's cabin during construction phase.

Green Channel for Building Approvals

- 1.0.34 This provision is devised to simplify and expedite the procedure of getting building permission for proposals of a modest scale through accredited architects. If all compliances as laid down in these Regulations are made permission shall be granted within 2 weeks, failing which construction may be commenced
- 1.0.35 The accredited architects themselves shall scrutinize and submit such proposals to the Implementing Authority.
- 1.0.36 The procedure will be applicable only for getting sanction of plan. The site inspections and subsequent certificates such as plinth completion, etc up to the occupancy certificate shall be obtained as a matter of routine followed in other cases.
- 1.0.37 Proposals for residential construction up to 2 floors, on plots upto 1,000 sq.m, can be submitted to/ through an accredited architect. The accredited architect will examine the proposal in light of these Regulations and obtain the necessary permission.
- 1.0.38 The owner shall remain fully liable for the work done by the professional selected by him/her.
- 1.0.39 The accreditation of professionals shall be done by the Implementing Authority or any other recognized institutions/ organizations on the basis of certain criteria laid down by it. Such professionals shall have to get their registration done with the Implementing Authority
- 1.0.40 Any development of parcels falling under steep slopes (above 30%) shall not qualify for Green Channel Building Approvals. Regular approval procedures consisting of thorough scrutiny shall be strictly followed for developments above 30% slopes.

Development Undertaken on Behalf of the Government

The Office-in-Charge of a Government Department shall inform in writing to the Implementing Authority of the intention to carry out development for its purpose along with the plans of proposed development or construction.

- 1) All the development undertaken on behalf of the Government shall strictly conform to these regulations.

- 2) Any Government proposal which is not in conformity with Phuentsholing Structure Plan (its related Local Area Plans and Urban Design Proposals) and these regulations should have prior approval from the Competent Authority.

Section-2b: Procedure during Development/ Building

Procedure during Development/ Construction

- a) No applicant shall carry out any further work after any of the inspection stages (clause 2.19.6) without an inspection and clearance by the Implementing Authority.
- b) The progress certificate shall not be necessary in the following cases:
 - (i) Alteration in Building not involving the structural part of the building.
 - (ii) Extension of existing residential building on the ground floor up to maximum 15sq.m in area provided it conforms to the set back rules and plot coverage.
- c) On receipt of the progress report certifying that the work has been executed as per the approved plan, it shall be the duty of the Implementing Authority to inspect, verify and endorse the report.

1.0.41 TEMPORARY SERVICE CONNECTIONS

An applicant with a certified copy of building permit may apply to the respective agencies for temporary connection of services like electricity, water and sewerage.

1.0.42 LOADING AND UNLOADING AND STACKING OF MATERIALS AND EQUIPMENT

The use of a public street/ road or a public place for loading and unloading and stacking of materials of construction and construction equipment and excavated materials shall not be allowed, unless permitted by the Implementing Authority.

Material or equipment found on public street/ road or public land without prior approval is liable to be confiscated and the owner shall be liable for penal charges.

1.0.43 DOCUMENTS AT SITE

The person to whom development permission is issued shall during construction, keep:

- a. Posted in a conspicuous place, at the site for which permission has been issued a copy of the development permission and
- b. A copy of the approved drawings and specification on the site for which the permit was issued.

1.0.44 CHILD LABOUR

It is incumbent that the architect/engineer/site supervisor sees that no underage workers, or children, are present on the construction site, either as employees, guests, or as dependents of legal employees.

A construction activity of a built-up area of 5,000sq.m or more shall provide a crèche or day care centre for the laborer's children, where one, or more, women are employed on site.

1.0.45 SAFETY ON SITE

All construction sites must be organized in a manner that the safety of all persons (particularly laborers) on the site, at all times is assured. Every person on the construction site should be well equipped with helmet, boots, gloves, safety belts, first aid kit etc. On such sites safety barriers will be erected around all chutes, shafts, floor openings and slab edges, etc. All the workers at site should be insured.

1.0.46 INSPECTIONS

Building constructions shall be subject to routine/ periodic inspections by the Implementing Authority or persons/ bodies authorized by the Implementing Authority. In the event of deviation(s) from the approved plan and drawings or any of the conditions noted in this section, the Implementing Authority shall have the full authority to stop construction.

The Implementing Authority may, at any time during erection of a building or the execution of work or development, make an inspection thereof without giving prior notice of his intention to do so.

1) Inspection at various stages:

Following shall be the recognized stages for progress verification and checking in the erection of a building or the execution of a work:

- (i) Site layout shall be verified and approved by the authorized Engineer/ Building Inspector from the Implementing Authority,
- (ii) Foundation; before casting of footings
- (iii) Plinth; in case of basement before the casting of basement slab,
- (iv) Each storey shall be inspected before any casting,
- (v) Before roofing

2) A person/ body who is empowered/ responsible under these Regulations shall give to the designated officer of the Implementing Authority at least four working days notice in writing of the time at which the work will be ready for inspection.

This shall be called the progress certificate. This progress certificate shall be duly filled-in and kept with the owner/ architect and produced at the time of each inspection to be scrutinized and signed/ endorsed by the building inspector, before the commencement of the next stage of construction.

3) The applicant/ developer/ owner shall permit authorized officers of the Implementing Authority to enter the plot for which the development permission has been sought/ granted for carrying out development, at any time for the purpose of enforcing these regulations.

- 4) The applicant shall keep a board at site of development mentioning the survey no., city survey no, block no, final plot no, final thram no., sub plot no, etc name of owner, and name of architect/ engineer/ developer/ owner, building permit no.
- 5) The building shall also be inspected for fire safety norms as per the fire safety regulations.

1.0.47 DEVIATION DURING CONSTRUCTION

Deviations during construction from the approved building plan shall require prior approval from the Implementing Authority and would be approved only if it is in conformity to these regulations. The procedure laid down for plans or other documents here to before shall apply to all such revised (amended) plans.

In case the approval for deviation (which is in conformity to these Regulations) is not sought from the Implementing Authority prior to deviation, penalty shall be paid to the Implementing Authority as per the following formula:

Amount= Excess area deviated x 1*(prevailing unit area cost of construction, based on current BSR)

Note:

1. Internal deviations which does not have structural implications and which are within the set back rules may be approved after resubmission of as-built drawings and upon payment of a lump sum penalty as may be fixed by the City Committee from time to time.
2. Any deviations which are not in conformity to these Regulations shall be demolished at the owner's own risks/ costs.

1.0.48 ILLEGAL OCCUPATION OF BUILDING

- a) Notwithstanding the provision of other laws to the contrary the Implementing Authority may by written notice, order the whole building or part thereof to be vacated forthwith, or within the time specified in such notice:
 - (i) if such building or part thereof has been unlawfully occupied in contravention of these Regulations.
 - (ii) if a notice has been issued in respect of such building, or part thereof, requiring the alteration or reconstruction of works specified in such notice have not been commenced or completed.
 - (iii) if the building or part thereof is in a ruinous or dangerous condition, which are likely to fall and cause damage to persons occupying, restoring to or passing by such building/ structures or any other structure or place in the neighborhood thereof.
 - (iv) If the site is in danger of collapsing, due to land slide, or erosion, or flood, or if the site is in danger of stones, boulders, debris, earth falling on it from areas at a higher elevation

- b) The reasons for requiring such building or portion thereof to be vacated shall be clearly specified in the notice.
- c) The affixing of the written notice on the premises shall be deemed a sufficient intimation to the occupiers of the building or portion thereof.
- d) On the issue of notice, a person occupying the building or portion thereof to which the notice relates shall vacate the building or portion as directed in the notice and no person shall so long as the notice is withdrawn, enter the building or portion thereof, except for the purpose of carrying out a work of reinstatement which be lawfully permitted to be carried out.
- e) A person who acts in contravention of the above provisions or who obstructs the action taken under these regulations shall be removed from such building or part thereof by the police, which may also use such force as is reasonably necessary to affect entry in the said premises.
- f) The cost of measures taken under this provision shall be recovered from the owners.

1.0.49 OCCUPANCY CERTIFICATE

The applicant shall obtain occupancy certificate from the Implementing Authority prior to occupancy or use of development so completed.

The application for Occupancy Certificate shall include:

- (i) In case of any change from the approved plans, (which is permissible within these regulations), a completion report in the prescribed form along with two copies of the 'as built' drawings endorsed by the Architect/ Engineer. It shall also be incumbent on every person who is engaged under these Development Control Regulations to supervise the erection or re-erection of the building, to endorse this completion report. One copy of the 'as built' drawings shall be stamped and returned to the applicant after inspection and approval by the Implementing Authority.
- (ii) A copy of the progress certificate containing all the comments and endorsements of the building inspector at every stage of inspection.

In case of occupying the building or part thereof without obtaining occupancy certificate, all service connections shall be disconnected.

On receipt of the application, the building and its premises shall be inspected within 2 weeks by the Implementing Authority to verify that the work has been completed as per the approved building drawings, or if there is a change, permissible within the Regulations, approve and endorse the 'as built' drawings submitted along with the completion report. The inspection team shall consist of authorized Architect and Engineer from the Implementing Authority. Based on this inspection report the Occupancy Certificate shall be issued.

The Implementing Authority issuing occupancy certificate before doing so shall also inspect the building for the fire safety provisions (as per the norms) and issue a certificate that necessary requirements for the fire protection (wherever applicable) under these regulations

have been fulfilled and if not, the applicant shall be asked to carry out necessary additions, alterations or rectifications to the satisfaction of the Implementing Authority before issuing occupancy certificate.

Issue of Occupancy Certificate

The Authority issuing occupancy certificate shall ensure that

- a) Septic tank and soak-pit have been constructed as per standards and are located as per approved plan.
- b) Domestic drains (to collect the rainwater) have been constructed as per standards and are connected and as directed by the Thromde.
- c) The completed portion of the building/ dwelling unit applied for occupation is fit and safe for occupancy.
- d) Construction debris around the building, and/ or on the abutting road, and/ or adjoining property is cleared by the applicant.
- e) The applicants have permanently displayed the full postal address (house number, street name and precinct) outside the main entrance to the building and where appropriate, each dwelling unit, with unit number.
- f) The planned trees as per the section 2.45 are planted on site or ensure this by taking suitable deposits as decided from time to time for specific period by the Implementing Authority.
- g) Parking space is properly paved and the layout of parking space is provided as per the approved plans. Signboards indicating the entrance, exit and location of parking spaces for different types of vehicles shall be permanently erected and maintained at a prominent place of a building unit.
- h) Certificate of lift Inspector has been procured and submitted by the owner, regarding satisfactory erection of Lift.
- i) Proper arrangements are made for regular maintenance of lift as provided in Building Code of Bhutan 2003 and in these regulations
- j) The completion report endorsed by the Implementing Authority and certificate of fire safety for the building (as per the fire safety norms) has been procured and submitted by the owner.
- k) Proper arrangements are made for regular maintenance of fire protection services as provided in Building Code of Bhutan 2003 and in these regulations
- l) There shall be a percolating well at the lowest corner of the site in a building land parcel having area more than 1,500sq.m.

m) In the case of buildings with three storeys or more, public gathering places, cinemas, auditoria, schools, colleges, government building and hospitals, a Certificate of Structural Stability shall be obtained from the site engineer.

The occupancy certificate shall not be issued unless the required information is furnished by the owner and the site engineer/ Architect concerned, in the schedule as prescribed by the Implementing Authority from time to time. The occupancy certificate shall be issued within one week after the receipt of all the required information.

Permanent connection to services like water, sewerage, electricity and telephone to the building shall be given by the respective agencies after issue of occupancy certificate only.

Revocation/ Cancellation of Approval

If the construction is not as per the approved building drawings, the Implementing Authority shall, by written notice, direct the owner to stop further construction. The construction shall be resumed only after approved rectification is carried out to the satisfaction of the Implementing Authority. In case the owner fails to rectify the deviations which are not acceptable, the Implementing Authority shall cancel the building permit and disconnect the services.

Development without prior Written Approval

1.0.50 If the work requiring the written permission of the Implementing Authority under the provision of these Regulations or other rules, regulation or by-law is done by a person without obtaining written permission and not conforming to the provisions of these regulations it shall be deemed to be unauthorized. The Implementing Authority shall at any time, by written notice, order the same to be removed, pulled down or undone.

The Owner of an unauthorized structure shall be served at least three notices by the Implementing Authority before the demolition of an unauthorized building:

1. First notice of 15 calendar days failing which
 - a. Reminder notice of 10 calendar days failing which
 - b. Final notice of 5 calendar days failing which the illegal/unauthorized building shall be demolished by the demolition squad.

If the person carrying out such work is not the owner at the time of giving such notice, he shall be liable for carrying out the order of the Implementing Authority.

A demolition squad shall consist of representatives from the Implementing Authority, Division of Power and Royal Bhutan Police or any other agencies as directed by the Competent Authority.

2. If such erection or execution is not stopped forthwith, the Implementing Authority shall remove the person who is directing or carrying on the erection or execution from the

premises by the police and shall take necessary steps to prevent the reentry of such person on the premises without permission.

3. If the requisitions contained in the order are not carried out by the person or owner within the given period, the Implementing Authority shall remove or alter such work and the expenses thereof shall be paid by the person or owner as the case may be.
4. Take suitable action against the registered architect/ engineer, developer and others as specified in the Regulations.

1.0.51 In cases where development has already started/ commenced on site for which development permission in writing is not obtained from the Implementing Authority, but where this development on site is in conformity to the provisions of these Regulations, the development permission for such work on site without the prior permission may be granted by the Implementing Authority on the merits of each individual case. For such development works the development shall be regularized by paying the penalty addition to the Scrutiny Fee and Service and Amenities Fees.

RATES OF REGULARIZATION FEE FOR DEVELOPMENT PRIOR TO WRITTEN PERMISSION

1. For Construction/ development of Buildings without approval but in conformity to these Regulations.

The penalty shall be paid to the Implementing Authority as per the following formula:

Amount= Total Built-up Area x 1*(prevailing unit area cost of construction, based on current BSR)

2. **For all other “open uses” including layout and sub-division of land for which development approval has not been obtained, 2 times of the regular fees/ charges will be applicable.**

The above table is applicable only if the development without prior written approval is in conformity to these regulations.

Change of Building or Premises Use

The applicant shall apply in writing to the Implementing Authority for conversion of building or premises to other uses or activity. Permission for change of use shall be given only if the building use conforms to Precinct schedule, structural safety of the building and other relevant clauses of these regulations. Change of building use without written permission of the implementing authority shall be regularized on payment of fines only if it conforms to the Precinct schedule and safety standards. If the building use does not conform to the Precinct and safety standards it will revert to the original use and the defaulter shall still pay a fine. The fine shall be 20% of the cost of construction of misused floor area.

Confirmation Inspections by NEC and PT Regarding Special Projects Sanctioned/ Appeals

Developments sanctioned through special conditions/ appeals as listed in the Precincts Sanction (refer Section 2.34) shall be liable for inspections by the NEC or the Implementing Authority for revalidation of the development permission.

Parking Requirements

Table 1: Parking Requirements

No.	Description	Number of Vehicle Parking Spaces Required			
		Minimum Space	Sizes of Apartment	Sizes of Single/ Detached Independent Houses	Parking
A	Residential:	Sitting/ Dining, 3 bedrooms, 2 toilets/ baths, kitchen/ store	above 1,260sq.ft	above 1,500sq.ft	2 car park space per unit
		Sitting/ Dining, 2 bedrooms, 1 toilet/ bath, kitchen/ store	875-1,259sq.ft	1,200-1,499sq.ft	1 car park space and 0.50 two-wheeler parking space per unit
		Sitting/ Dining, 1 bedroom, 1 toilet/ bath, kitchen/ store	less than 875sq.ft	less than 1,200sq.ft	1 two wheeler parking per unit
B	Commercial:				
1	Shops (up to 40 Sq.m or 400 Sq.ft of Clear Retail Floor Space)	1 Car Parking Space for every 5 shops with each shop size not exceeding 40 Sq.m or 430 Sq.ft			
2	Shops (Over 50 Sq.m or 550 Sq.ft of Clear Retail Floor Space)	1 Car Parking Space for every 50 Sq.m or 540 Sq.ft of Clear Retail Floor Space			
3	Department Store or Shopping Centers (over 450Sq.m or 5,000 Sq.ft of Clear Retail Floor Space)	1 Car Parking Space for every 30 Sq.m or 320 Sq.ft of Clear Retail Floor Space			
4	Offices	1 Car Parking Space for every 30 Sq.m or 320 Sq.ft of net-usable Office Floor area with a Minimum of 5 car parks per office			
5	Public Halls, Community Centers, Non-Residential Clubs, Restaurants and Cafes	1 Car Parking Space for Every 30 Sq.m or 320 Sq.ft of net-usable Floor area			
6	Theatres and Cinemas	1 Car Park and 1 two wheeler for every 10 fixed seats of public accommodation			
7	Hotels and Guest Houses	1 Car Park for every hotel room or 30 Sq.m or 320 Sq.ft of Net-Usable Floor area			
C	Industrial:				
1	Industry and Workshops	1 Car park for every 80 Sq.m or 860 Sq.ft of Net-Usable Floor area			
2	Warehouses	1 Car Park for every 100 Sq.m or 1,075 Sq.ft of net-Usable Floor Area			

No.	Description	Number of Vehicle Parking Spaces Required			
		Minimum Space	Sizes of	Sizes of Single/	Parking
3	Vehicle Services and Repair workshops	5 Car Park for every service or repair bay			

Note:

- 1 No on-street parking will be allowed for streets identified by the Implementing Authority. Conversion of garages for other uses will not be allowed unless otherwise approved by the Implementing Authority in conformity to these regulations.
- 2 For the general Public Use the Thromde or private developers shall provide paid parking spaces according to local area plan for commercial zones. General parking spaces shall be charged as designated by the Thromde and according to the charges fixed by the management.

Painting

Same as BBR 2002

Maximum Number of Storeys

The maximum number of storeys of the building shall be as per the Precinct Regulations mentioned in table no. 2 and 3. In case of areas for which Local Area Plans are in place the maximum number of storeys will be governed by the respective Local Area Plans. The number of storeys shall be counted from the lowest natural ground level.

Architectural Control

Same as BBR 2002

MINIMUM FLOOR SPACE OF ROOMS IN RESIDENTIAL BUILDINGS

Same as BBR 2002

CIRCULATION SPACE REQUIREMENTS

Same as BBR 2002

LIGHT AND VENTILATION REQUIREMENTS

Same as BBR 2002

ARTIFICIAL LIGHTING AND MECHANICAL VENTILATION

Same as BBR 2002

VENTILATION SHAFT

Same as BBR 2002

PLINTH HEIGHT

Same as BBR 2002

FIRE SAFETY

Same as BBR 2002

ELEVATORS

Same as BBR 2002

GARAGE CUM SERVANTS QUARTERS

Same as BBR 2002

PORCH

Same as BBR 2002

SEPTIC TANK & SOAK PIT

Same as BBR 2002

ROOF AND SITE DRAINAGE

Same as BBR 2002

Access for the Disabled

Same as BBR 2002

Structural Control

Same as BBR 2002

Water Supply and Sanitation Control

Same as BBR 2002

Electrical Installations Control

Same as BBR 2002

Telephone

Same as BBR 2002

Section-3: Precinct Sanctity (Regulations on Use, Building Bulk and Height)

List of Precincts Designated in the Phuentsholing Structure Plan

The Phuentsholing Structure Plan is ordered into several Precincts. The outline below lays out how these Precincts will be defined, and what activities are sanctioned in each. These are treated as one of the sets of rules and regulations.

List of Precincts Designated in the Phuentsholing Structure Plan

The following is a list of Precincts designated in the Phuentsholing Structure Plan:

1. Urban Village Precinct:

UV-1 **Urban Village Core**

High density, mixed use precinct

UV-2 (HD) **Urban Village Periphery**

High density, mixed use precinct

UV-2 (LD) **Low Density**

Low density residential precinct

2. Urban Hub and Neighborhood Node Precinct:

UC **Urban Core**

The present Phuentsholing Town Centre, a precinct of trade and commerce

NN **Neighbourhood Nodes**

Convenience shopping, basic services and amenities precincts for the urban villages

3. Institutional Precinct:

I **Institutional**

Local, National and International Institutions

4. Heritage Precinct:

H **Heritage Precincts**

Precincts for sacred activities and places of historical importance

5. Environmental Precincts:

E-1 **Environmental Conservation Precinct**

Precincts with 50% and above slopes for Enhancement and protection of Phuentsholing's fragile ecological legacy

E-4 Agri-based Environments

Precincts with slopes between 30% and 50% characterized by orchards, green houses, on-farm food processing and research

6. Green Open Spaces Precincts:**G-1 National Open Green Spaces**

Precincts of national importance such as a national sports complex, archery ranges, and exhibition areas, etc.

G-2 Green Space System

Precincts of public assets like parks, gardens, sport facilities and recreation areas

7. Special Economic Zone Precincts:**SE-2 Multi-Modal Transit Hub**

Precincts characterized by Multi-Modal transit Terminus location.

SE-3 Dry Port

Precincts characterized by warehousing and transportation of heavy cargo.

SE-4 Service Centers and Industries (Polluting)

Precincts characterized by industrial, heavy maintenance, wholesaling and warehousing.

SE-4 Service Centers and Industries (Non-polluting)

Precincts characterized by non-polluting industrial, heavy maintenance, wholesaling and warehousing.

8. Royal Precinct:**R Royal Uses**

Precincts related to Royal uses

It is to be understood that every Precinct has a dominant activity and the other activities are supportive to it. So the supportive activities are governed by the main activity and within a Precinct only a limited number of supportive activities are allowed. Thus, if an activity though secondary in nature is not compatible to the main activity they should not be allowed. The proposed Precincts have been marked and defined with a scientific temperament and rational logistics with due consideration to the Bhutanese lifestyle, however if need arises in future to change the Precinct definition the local authority after consultation with Town Committee, and the DHS, MOW&HS, can make the necessary modifications.

1.0.52 THE PRECINCTS SCHEDULE SHOWING USES PERMISSIBLE IN DESIGNATED PRECINCTS**Table 2: Precincts Schedule Showing Uses Permissible in Designated Precincts**

SI. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
01	URBAN VILLAGE PRECINCT This Precinct takes into cognizance the residential use and its immediate needs		
1.1	UV-1 Urban Village Core	<p>High Density, Mixed use Precinct Apartments and group housing are permitted. Residential, local level retail shops and services, household economic activity and cottage industries not involving use of, or installation of, a machinery driven by more than 10 KW power and which do not create noise, vibrations, fumes, dust, etc. only in independent dwelling units (not in tenement dwellings or flats). Bagos Improvement Schemes All types of residential dwellings including apartments and group housing, professional services, commercial, Institutions etc</p> <p>a. Household economic activity, light home workshops, and cottage industries not involving use of, or installation of, any machinery driven by more than 10 KW power and which do not create noise, vibrations, fumes, dust, etc., only in independent dwelling units (not in tenement dwellings or flats).</p> <p>b. Play fields, gardens, gymnasium, swimming pool, public facilities and utilities, club house, local community hall, etc.</p> <p>c. L.P.G., Cylinder delivery center for the domestic consumption only if on a separate plot of at least 1,000sq.m. with no other use on the premises</p> <p>d. All uses permitted in neighborhood nodes precinct shall be permitted; recreational uses like bars, discothèque, pool rooms, karaoke and any other night time recreational centers shall not</p>	The Petrol Pumps should be along the main/secondary roads.

SI. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
		be permitted in buildings accommodating any residential uses.	
1.2	UV – 2 (HD) High Density Urban Village Periphery	High Density Mixed Use Precinct Apartments and group housing are permitted. Residential, local level retail shops and services, household economic activity and cottage industries not involving use of, or installation of, a machinery driven by more than 1 KW power and which do not create noise, vibrations, fumes, dust, etc. only in independent dwelling units (not in tenement dwellings or flats). Bagos Improvement Schemes. Commercial uses like local level retail shops with floor area less than 40sq.m or internet browsing centre, fast food outlets, canteens, snack bars not exceeding floor area of 30sq.m area will be permitted only on the ground floor per plot. Educational institutional buildings, day-care centers, dispensaries, clinics, public facilities and utilities, local community halls are allowed. Bars, discotheque, pool rooms, karaoke and any other night time recreational centers and activities contradicting with residential uses would not be permitted.	Institutional uses in a minimum of 1,000sq.m plot may be permitted. Resorts, Hotels with boarding and lodging facilities in a minimum of 2,000sq.m plot may be permitted.
1.3	UV – 2 (LD) Low Density Urban Village Periphery	Low Density Residential Precinct Maximum plot coverage should be 45%. Only residential uses, resorts, professional services, office spaces, and educational institutes shall be permitted. Any commercial use including retail outlets, shops, ware house and recreational centers shall not be permitted.	a. Minimum plot size for uses like, educational institutions and office buildings shall be 1,000sq.m. b. Resorts, Hotels with boarding and lodging facilities in a minimum of 2,000sq.m plot may be permitted.
2.0	URBAN CORE & NEIGHBORHOOD NODE PRECINCT This Precinct takes into cognizance the commercial, institutional and recreational uses and their immediate needs at town and neighborhood level		
2.1	UC Urban Core	Town Center All uses allowed in NN Large commercial uses such as shopping complexes and centers,	Small printing press, Residential, incidental to and limited to 20% of the area occupied by the educational/ training/ research

Sl. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
		<p>retail shops, departmental stores, restaurants, cinema halls, multiplexes, shopping centers, food courts, bowling alleys, pool and billiard halls, lodging and boarding houses, hotels, tourism and recreation based facilities are allowed. Commercial centers, public buildings, auditoria, petrol pumps, transport terminals, nursing homes, hospitals, office buildings, public facilities, public utilities, banks, professional offices, schools, colleges, educational buildings, training institutes, government and semi-government buildings and their activities, autonomous bodies and public sector undertaking buildings and activities, non-governmental organization buildings, registered charitable trust buildings and educational, medical, health, religious and public welfare activities, tourist units as recommended by the tourism corporation, and bars, will be allowed.</p> <p>Other permitted activities include Institutions, hostels, boarding houses, staff quarters, canteens, sports complexes, gymnasium, libraries, assembly buildings including swimming pools, club, stadium, theatre, and open spaces proposed for party and marriage ceremonies and amusement and recreation activities, art galleries, exhibition halls, discotheques, karaoke and bars.</p>	<p>institutions permissible in this precinct shall be permitted only on plots > 4,000 sq.m.</p>
2.2	<p>NN Neighborhood Node</p>	<p>Convenience Shopping / Basic Amenities Retail commercial use such as Retail shops, Restaurants, Hostels, Hotels, Clinics, Convenience Shopping, professional offices and establishments (of less than 15 employees), ATMs, Crèche / Children's day care center, pre-primary educational facilities, dispensaries, clinics, Public facilities, Public Utilities, Public Transportation Stops, Gardens, etc, bakeries/confectioneries, local libraries, club houses, community halls , service stations with or without petrol pumps, Kiosks, taxi stands, vegetable vendors, display areas, Neighborhood Pub, bars, Discotheques, Pool rooms,</p>	<p>LPG delivery centers and Fuel station can be permitted under the fulfillment of all relevant safety norms.</p>

Sl. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
		karaoke, Outdoor cafes and Indoor games parlor.	
3.0	INSTITUTIONAL PRECINCT This Precinct takes into cognizance the institutional use and its immediate needs		
3.1	I Institutional	Local, National and International Institutions Educational, training, cultural and government institutions, public libraries, Museums, Art galleries, Diplomatic Enclave, government offices including the RBP, RBG, RBA, GREF and DANTAK	Residential and other activities incidental to the main institutional use, provided not more than 10% of the site shall be used for such activities.
4.0	HERITAGE PRECINCT This Precinct takes into cognizance the historic, religious and spiritual uses and their immediate needs		
4.1	H Heritage Precincts	Cultural and Religious Heritage Spiritual and religious artifacts and places, Chortens, Mani Walls, Lhakhangs, prayer wheels, statues, monasteries and activities related to enhancement / protection / conservation of the heritage structures and/or precincts and permitted/ undertaken by or on behalf of the National Commission for Cultural Affairs.	NOC to be obtained from the National Commission for Cultural Affairs, RGoB
5.0	ENVIRONMENTAL PRECINCT This Precinct takes into cognizance the environmental aspects related to a town at various levels and related concerns		
5.1	E-1 Environmental Conservation Precincts	Natural reserve and sanctuary, the River Basin, Streams, Rivulets, avi-fauna, fauna breeding places, unique flora and bio-mass preserves. Activities related to environmental enhancement / protection and permitted / undertaken by or on behalf of the National Environment Commission Existing structures with an approval may be retained, but new development and extension to the old structure (except the above mentioned) is not permissible. Footpaths and cycle tracks, footbridges, vegetable and flower gardens, nurseries, landscape elements like lamp posts, benches,	NOC to be obtained from the NEC 1. No development or construction shall be permitted within thirty meters of the edge of the watercourse or the edge of the gullies of Ammo Chhu and major stream or such distance as may be prescribed under any other general or specific orders of Royal government or any other authority. 2. No development or building construction shall be permitted within fifteen meters of the edge of all natural rivulets and natural

Sl. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
		<p>gazebos, children's play equipments and litter bins, shall be permitted only beyond fifteen meters of the edge of the Ammo Chhu and major streams. Footpaths shall be permitted along the fifteen meters boundary of the rivulets and other streams protection zone.</p> <p>Edge/Bank protection works for river and major streams shall be permitted under the clearance from the National Environment Commission and the Nature Conservation Division. Certain stretches, which are identified, as not ecologically sensitive will have recreational open spaces like parks, sports facilities and riverfronts, under the clearance from the National Environment Commission and the Nature Conservation Division.</p>	<p>drainage channels or such distance as may be prescribed under any other general or specific orders of Royal Government or any other authority.</p> <p>3. Natural landscape features of the river, major streams and rivulets, which includes the natural course of the water feature, banks/ edges, soil, vegetation (Trees, shrubs and ground covers), rocky outcrops, boulders and any feature or element which is part of the ecosystem or which is considered to be of scenic value should not be damaged or disturbed from its natural state of being.</p> <p>4. Construction of roads, laying of underground cables and other service networks, other structures like high - tension cable pylons, transmission towers and installations of electric substations shall be permitted upon proper geological study and environmental clearance.</p> <p>5. Dumping of solid wastes, sewage disposal, washing of vehicles/automobiles or any action considered being as an action of polluting this zone shall not be permitted</p> <p>6. Existing structure can be retained and further development shall not be permitted</p> <p>7. Existing land use, which is considered not to cause impact on the ecosystem, can be retained under the clearance/No Objection Certificate from National Environment Commission.</p>

Sl. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
5.2	E-4 Agri-based Environments	<p>Allied Agricultural Activities Activities related to and permitted / undertaken by or on behalf of the Forest Department. Agriculture, Horticulture and Forestry Agriculture, Horticulture, Orchards, Floriculture, Vegetable Gardens, Facilities for Plant Tissue-culture, Mushroom Culture, Green Houses, Cold Storage incidental to Agriculture and related uses, Agro- based research Labs, Herbal Extraction Units, Dairy Farms, Poultry Farms, Herbal based health centers, afforestation. Light home workshops, workshops related to agricultural activity, repair of tools and implements of agricultural use, timber depots, uses pertaining to processing of agro/farm/milk products, institutional uses, vocational training center, ice factory and cold storage, go-downs and warehouses subject to N.O.C./approval and conditions laid down by warehousing corporation/ FCB/ Appropriate Govt./ Semi Govt. Department, Studio, cemetery and burial ground, jail, hospital for infectious and contiguous diseases, mental hospital and sanatorium (subject to NOC/Approval and conditions laid down by Civil Surgeon)</p> <p>A detailed soil stability report shall be accompanied with the submission for development proposals on slopes ranging from 30% to 50%. No development shall be allowed on slopes greater than 50%.</p>	<p>(1) Agro based Industry, garage and workshop, (2) Abattoir, drive-in-cinema, storage of inflammable materials and explosive goods subject to NOC/ Approval and conditions laid down by concerned department/ authority dealing with such work.</p> <p>a) Percentage of ground coverage shall not exceed 25% of the land area. b) Height shall be allowed up to ground plus one floor only.</p>
6.0	GREEN OPEN SPACES		
6.1	G- 1 National Open Green Spaces	<p>Precincts of National Importance Open Space Precincts of national importance such as National Sports Complexes, Archery Ranges, National Botanical Gardens, national Zoological Parks, Memorial Parks/Gardens, and National</p>	

Sl. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
		Level Open Exhibition Areas etc.	
6.2	G-2 Green Space System	Public Assets Open Space Precincts of Public assets like Parks, gardens, Community Level/ Local Recreational and Sports Facilities etc.	
7.0	SPECIAL ECONOMIC PRECINCT This Precinct takes into cognizance the various aspects related to the economy generation at regional and national level		
7.1	SE-2: Multi-Mode Transit Hub	Zones characterized by Multi-Modal transit Terminus location Multi Mode Transit Terminus, Transit Stops, Visitor Centre, Parks, Gardens, Passengers Stay area, Hospitality Hub, Tourist Information Centre, ATM, Cafes, Phone Kiosks, Convenience and Souvenir shops, Toilets and Showers, Luggage Storage, Petrol pump with minor repairs shop, Transit Hotel, Rest areas, Taxi Parking, Visitors Parking, Security Post, Check Posts, Pedestrian cross-overs.	Any road (public or private) entering this precinct must first be approved by the GMC elected Members and then sent to the DHS for final approval. Could be read as CP (Urban Corridor) as in Thimphu Structure Plan.
7.2	SE-3: Dry Port and Warehousing	Precincts characterized by warehousing and transportation of heavy cargo Ware houses, Transshipment yards, Cold Storage, Go-downs, Transport terminals for Goods, Stock Yard, Storage Yards, Amenities for Workers, Check Posts, Security Posts, Packing Units.	Residential dwelling only for Dry Port workers and other public utility service staff, working within the Dry Port premises, Storage of inflammable goods, Dumping of solid industrial wastes (subject to N.O.C. from authorities such as the National Environment Commission (NEC) / Dept. of Trade and Industry).
7.3	SE-4: Service Centers and Industry (Polluting)	Service Centers, Industries and Workshops All uses permitted in SE-4 (non-polluting) except UV-2 (LD) precinct uses All polluting Industries based on the norms with respect to minimum plot sizes, setbacks, building height, permissible pollution levels, etc set by National Environment Commission and	

SI. No	DESIGNATED URBAN PRECINCT	USES PERMISSIBLE	SPECIAL CONDITIONS AND RESTRICTIONS
		the Department of Trade and Industry.	
7.4	SE-4: Service Centers and Industry (Non-polluting)	Service Centers, Industries and Workshops Wholesale markets and their ancillary uses, Ice factory and Cold storage, Ware Houses, Go-downs, Transport terminal for goods and passengers, Restaurants, Lodges, Hospitality centers, Dormitory, Oil depot, Steel stock yard, Timber stock yard, Junk yard, Saw mill, LPG Cylinder storage depot, Storage of permissible goods, Vehicle workshops. Service industries – to serve residential activities, Commercial and Industrial establishments, as also the daily needs of the people. Pasteurizing and Milk processing, Printing press, Binding, Packaging, Sealing, Paper box manufacturing, Battery charging, Bakeries and Confectionaries, Cleaning and pressing establishments for clothes, Small cold storage units, etc. Light industry, Non-polluting industrial activity, Waste recycling plant. Banks, canteens, etc. Amenities for workers. All uses allowed in UV-2 (LD) precincts.	Storage of inflammable goods, Dumping of solid industrial wastes (Subject to N.O.C. from authorities such as the National Environment Commission (NEC)/ Dept. of Trade and Industry). Could be read as SSIC (Service Centers and Industries) as in Thimphu Structure Plan. UV-2 (LD) precinct regulations to be followed in the event of residential constructions/development.
8.0	ROYAL PRECINCT		
8.1	R Royal Uses	Precincts related to Royal uses Royal Uses	

Notes:

- The proposed Precinct Schedule should be read in comparison with the Development Control Regulations proposed for the respective precinct, which will be primary determinant and will rule the entire development dynamics in the town.
- Public utility, public facility, services buildings shall include buildings or works developed or undertaken by the Government / Semi-Government or Public Undertaking only, such as sub-station, and receiving station of the Electricity Department, building for infrastructural facilities like bus service, water supply, drainage, sanitation, domestic garbage disposal, pumping station, electricity, purification plant, police building, post and telegraph and telecommunication, public urinals, milk supply, and public telephone booth, fire brigade station, ward and zonal offices of Competent Authority, taxis, scooter and cycle stand and parking lot, garden, nursery, playground

and open spaces, canal, communication network, first aid medical center, primary health center, dispensary, library, reading room and religious buildings / places of public worship.

- Shops, commercial establishments and professional uses (up to fifteen employees) shall be permitted in all Land uses (except environmental precinct) by charging license for these value added uses, which are not detrimental to development in the surrounding zone, with specific conditions. This value added license shall be a one-time fee and shall be decided by the Competent Authority from time to time. The Competent Authority shall regularize existing shops and commercial establishments not approved earlier by charging additional fees, as per the above stated provision. The shortfall of parking and other requirements shall not be condoned, but the Competent Authority may consider the case if equivalent facility in any manner is offered by the owner /occupants of the premises. In no case, regularization of built-up area shall be considered by the Competent Authority.
- In case of the 'Uses permissible on appeal to the Competent Authority' it shall be mandatory to apply for and revalidate the permission after five years. The Competent Authority shall revalidate the permission only based on an Environmental Assessment Report submitted by the National Environment Commission (NEC) and accepted by Town Committee after inspection of the site and the activities on the site. If so deemed, the National Environment Commission (NEC) may require further revalidation after a period it deems necessary.
- Where uses are permitted in Environmental Land use and under special conditions based on appeal to the competent authorities, it is mandatory that the Phuentsholing Thromde certify to the Town Committee Members, after every three years, and not later than five years, that the uses in fact conform to the application and the sanction, and conditions of successful spatial appeals for uses.
- In any case, no development shall be allowed in the form of a single leveled block, which involves cutting the natural terrain of the plot by more than 1.5 meters (one and half meters) height, resulting in forming the ground level of the proposed development at any given point.

Table 3: Precinct Schedule Showing Plot Coverage, Setbacks and Maximum Number of Allowable Floors in each Precinct

Sr. No.	Precinct	Plot Area (size range)				Max. Plot Coverage	Max. permissible F. A. R	Max. Height (Floors)	Min. Setbacks (m)			Compound Wall (Ht. in m)
		Decimal		Sq.ft					Front	Sides	Rear	
		Min.	Max.	Min.	Max.	(%)						
1	UC: Urban Core (<i>Old Commercial Core</i>)	5.5	above	2,400	above	60%	2.50	6	1.5	2	3	0.00
2	NN: Neighborhood Node	13	above	5,663	above	40%	1.00	3	3	3 / 5*	3	0.00
3	UV1: Urban Village Core	13	above	5,663	above	50%	2.25	6	3	3 / 5*	3	1.50
4	UV2: Urban Village Periphery (<i>High Density</i>)	13	above	5,663	above	50%	2.00	5	3	3 / 5*	3	1.50
5	UV2: Urban Village Periphery (<i>Low Density</i>)	13	above	5,663	above	40%	1.75	4	3	3 / 5*	3	1.50
6	I: Institutional	13	above	5,663	above	30%	1.50	5	3	3 / 5*	3	1.50
7	H: Heritage	As per Department of Culture, MoHCA										
8	R: Royal (<i>Old Municipal Limit</i>)	13	above	5,663	above	30%	0.75	3	3	3 / 5*	3	2.10
9	E1: Environmental Conservation Precincts	-	-	-	-	-	-	-	-	-	-	-
10	E4: Agri-based Environments	13	above	5,663	above	25%	0.50	2	3	3 / 5*	3	1.50
11	G1: National Importance Open Space (<i>Recreational</i>)	25	above	10,890	above	10%	0.25	3	6	6	6	1.50
12a	G2: Local Green Space System (<i>Parks & Playgrounds</i>)	25	above	10,890	above	10%	0.25	3	6	6	6	1.50
12b	G2: Local Green Space System (<i>Sports Complex</i>)	25	above	10,890	above	30%	0.75	3	3	3 / 5*	3	1.50
13	SE2: Multi-modal Transit Hub (<i>Old Municipal Limit</i>)	50	above	21,780	above	30%	0.75	3	6	6	6	1.50

Sr. No.	Precinct	Plot Area (size range)				Max. Plot Coverage (%)	Max. permissible F. A. R	Max. Height (Floors)	Min. Setbacks (m)			Compound Wall (Ht. in m)
		Decimal		Sq.ft					Front	Sides	Rear	
		Min.	Max.	Min.	Max.							
14	SE3: Dry Port & Warehousing	13	above	5,663	above	60%	0.75	3	3	3 / 5*	3	1.50
15	SE4: Service Centers & Industries	13	above	5,663	above	60%	0.75	3	3	3 / 5*	3	1.50
16	SE4: Service Centers & Industries (<i>non-polluting</i>)	13	above	5,663	above	60%	0.75	3	3	3 / 5*	3	1.50

Notes:

- 13 decimals of plot size requirement are before land pooling.
- * 5m meter Setback to be maintained on the side having the Septic Tank. Only 3m meters setback to be maintained if there is a sewerage network.
- Plot Coverage: The maximum permissible plot coverage shall be within the set back rules as prescribed in this regulations, and balconies (not enclosed or roofed) projecting up to 1.2 m from the ground floor external wall face shall be permitted. Such projections/ structures shall not cover the septic tanks. In case of commercial buildings cantilevered balconies shall be allowed only at the rear side. Corner plots, with roads on two sides, shall not be permitted with balconies or similar projections.
- Compound wall: Precincts where compound walls are permitted, the corner plots shall not have masonry walls more than 1.2m in height followed by fencing at top.
- The above-mentioned Precinct Schedule is framed for the overall Phuentsholing Structure Plan.
- All permitted proposals within the respective Precincts should provide plot level parking spaces as per the parking standard mentioned in Section 2.24 of the DCR "Parking Requirements".
- UV-2 (LD) precinct regulations to be followed in the event of residential constructions/development in the SE-4 precinct (Non-polluting).

Tree Plantation

Tree plantation at the rate of one tree for every 50sq.m of land, shall have to be undertaken and maintained in all sites (not compulsorily in Neighborhood Node only).

Collection and Discharge of Storm Water

Every site development should include:

- A) Channels at the lower elevation/ level of the site which discharges rainwater runoff into public storm water drains.
- B) There shall be an underground water collection cistern at the lower portion of the site to store rainwater. It shall have the capacity for every 50sq.m of land coverage of the site, a volume which can store 150litres of water, collected from the site run-off. This water shall be used for landscaping, car washing and other non-potable uses.

Vertical Extension:

Vertical Extension (addition of floors to an existing structure) of the existing building would be permitted only upon satisfying the following requirements.

1. The application for the vertical extension should include the Building Permit and the approved drawings of the existing building, submitted along with the proposed drawings for the vertical extension.
2. The application for vertical extension shall be processed only if the existing building was strictly constructed as per the approved drawings. If the attic of the existing building is currently being used as a habitable floor, the application shall be rejected.
3. The Total Built-up area (Plinth Area x Number of floors) of the building should be within the maximum permissible built-up area achieved by multiplying the maximum Plot Coverage and maximum number of floors permitted under the respective Precincts mentioned for the respective plot sizes as per the 'Phuentsholing DCR'.
4. The parking requirements for the proposed additional built-up area should be fulfilled as per the parking standard mentioned in Section 2.24 "Parking Requirements".
5. Structural Stability of the existing structural system should be proven to be adequate to accommodate the proposed vertical extension or additional floors (while complying with the current Building Code of Bhutan).

Cash Compensation in lieu of Land Pooling

Cash compensation would be collected for areas within the local area planning under land pooling but where physical pooling is not feasible totally. The charges would be equivalent to the land that would be contributed in correspondence to percentage of pooling of that particular LAP and if that particular area/ plot does not have any direct vehicular access then

the percentage of land contributed to access road shall be deducted from the overall pooling percentage. These charges would be applicable for areas within LAP which are partially pooled and the cash compensation shall be levied based on the remainder percentage of pooling.

The rate considered for calculating cash compensation in lieu of land pooling would be as per latest PAVA (Property Assessment & Valuation Agency) rate.

Existing Non-Conforming Uses

A lawful use of land existing prior to the notification of the Phuentsholing Structure Plan 2013-2028 of which these Precincts Sanction forms a part and which do not conform to the designated Precincts Sanction, shall be permitted to continue, subject to the condition that no extension, modification of the buildings, nor extension, or intensification of the non-conforming use shall be permitted. The existing use (structures) will continue but once the structure is demolished no further development/ redevelopment shall be allowed.

Uses like workshops, sawmills etc shall be allowed to continue operations for a minimum of five calendar years from the date these Precincts Sanction become operational.

Redevelopment/ Reconstruction of Dilapidated/ Unsafe Buildings

In the case of proposals involving redevelopment/ reconstruction of dilapidated/ unsafe buildings, the maximum allowable Total Built-up Area shall be equal to the Total Built-up Area legitimately consumed or the base Total Built-up Area allowable under these Regulations, whichever is more. Buildings with uses that do not conform to those permissible in the Precinct shall be permitted to be reconstructed only if their intended future use is permitted by the Implementing Authority, according to the regulations of the Precinct in which they fall.

If the structures are found to be unsafe, or not fit for habitation the Implementing authority shall pull down the structure as per the BBR, at the cost of the owner.

Section-4 Land Development and Subdivision Regulations

(GENERAL PLANNING REQUIREMENTS)

Development of Land

For undertaking land development that includes layout/subdivision/ consolidation of land/ plots, and/ or building activity, the application (refer Section 2.11 of these Regulations) shall comply with the following planning requirements of these Regulations.

Requirements of Site

1.0.53 MEANS OF ACCESS

Subdivision of a land into smaller parcels for developing a layout or for construction of building/s shall not be permitted unless it derives access from an authorized and developed street/ means of access prescribed in these Regulations (Section 2.43.3, and 2.44.1). This implies that land locked/ trapped sites shall not be sub-divided.

1.0.54 ACCESS FROM HIGHWAYS/ IMPORTANT ROADS

In case the land proposed to be developed abuts a highway or an important primary road, the access to the land shall be regulated such that:

- (i) it is located on the farthest point of the frontage from any junction,
- (ii) it is combined with an adjoining access way leading to the adjoining land,
- (iii) if possible, access the main road through a service road,
- (iv) provide the access in such a way that it is clearly visible from at least 60m away on the highway/ road, from both directions, and
- (v) When the access to the site has a gradient of more than 1 in 10, there shall be a minimum of six meters buffer space between the edge of the road and the gate to the site.

1.0.55 APPROACH TO BUILDINGS

For residential development with buildings up to two floors:

The width of the approach from the public street or means of access to a building shall not be less than:

- d) 1.8m wide provided its length is not more than 3m. and/ or the floor area of the building served does not exceed 100sq.m and/ or the building consists of only one housing unit.
- e) 2.5m wide if its length is more than 3.0m and/ or the floor area of the building served does not exceed 100sq.m and/ or the building consists of only one housing unit.
- f) 3.5m wide in all other cases.

Such approach way shall be paved and shall always be kept open to sky and no projection or overhang shall be permitted over such pathways. Subdivision of property where buildings with more than two floors exist, or are proposed, (residential or non-residential buildings), shall be permissible only if the following additional provisions of means of access are ensured:

1. The width of the main street on which the building abuts shall not be less than 4.5 m. and one end of this street shall join another street not less than 6m in width
2. Provision shall be made for one entrance to the plot, of adequate width to allow easy access to the fire engine.
3. The entrance gate shall fold back in the plot against the compound wall of the premises, thus leaving the exterior access to the plot free for movement of fire service vehicle.

1.0.56 NO OBJECTION CERTIFICATE FROM REFERRAL AUTHORITIES

- **In the Case of Use for Industrial Activity**

If the land is to be used for general industrial use, other than a service industry, the application has to be accompanied by a No Objection Certificate from the Department of Industry

- **In the Case of Development in Royal Precincts**

The application has to be accompanied by a No Objection Certificate from the Royal Secretariat.

- **In the Case of Development in Heritage Precincts**

The application has to be accompanied by a No Objection Certificate from the National Commission for Cultural Affairs (MH&CA)

- **In the Case of Development in E-1 (Environmental) Precinct and on Steep Slopes (30% to 50%) within E-4 (Agri-based) Precinct**

The application has to be accompanied by a No Objection Certificate from the National Environment Commission and from the Department of Geology and mines in case of developments on slopes in between 30% and 50% that fall under the E-4 Precinct. No development shall be allowed on land parcels that have slope more than 50%.

1.0.57 DISTANCE FROM RIVERS AND STREAMS

1.0.57.1 Rivers and Major Streams

No development or building construction shall be permitted within 30m of the edge of the water course/ edge of Ammo Chhu and 13m of the edge of other rivers within the Thromde Boundary.

1.0.57.2 Rivulets / Minor Streams

No development or building construction shall be permitted within 9m of the edge of major streams and 5m of the edge of rivulets and/ or natural drainage channels or such distance as may be prescribed under other general or specific orders of royal government or other Authority.

1.0.57.3 Development Permissible on Environmental Clearance from the Relevant Authority

1. Beyond 20m from the edge of the river (Am Mo Chhu), 10m from the edge of other rivers, 5m from the edges of major streams and beyond 3m from the edge of the rivulets/ minor streams: Foot paths and cycle tracks, foot bridges, edge/bank protection works for river, vegetable and flower gardens, nurseries, street furniture like lamp posts, benches, gazebos/ pavilions, basic children's play equipment and plot level litter bins,
2. Actions related to conservation of the Precinct and enhancement of the environment under the guidance of Nature Conservation Division and the NEC.

Addendum:

- a) Natural landscape features of the rivers, major streams and rivulets, which includes the natural course of the water, banks/ edges, soil, vegetation (trees, shrubs and ground covers), rocky outcrops, boulders and other features or elements which are considered as part of the ecosystem or which are considered to be of scenic value shall not be damaged or disturbed from their natural state of being.
- b) Construction of roads, laying of underground cables and other service networks, structures like high-tension cable pylons, transmission towers and installations of electric substations shall not be permitted within the 10m zone of the river and within the 5m zone of the streams. Underground cables and service network shall be permitted within this buffer under special considerations with NOC from NEC.
- c) Dumping of solid wastes, sewage disposal, cleaning and servicing of vehicles/ automobiles or other action considered as polluting shall not be permitted.

1.0.58 GENERAL REQUIREMENT

The proposed development shall not have a detrimental impact on the ecology or be against the aesthetic sensibility within the environmental setting or be against public interest.

Sub-Division/ Layout Of Land**1.0.59 LAND UTILIZATION**

In case of land development for the purpose of plotted development, or for group housing in the form of flatted development, the following land utilization indices shall be achieved.

Table 4: Land Utilization as Percentage of the Residential Layout Area

Sr. No.	Land Utilization	For Layouts of above 1 Hectare Area	For Layouts of less than 1 Hectare of Area
		% of total land	% of total land
1	Residential*	60 to 65	65 to 70
2	Roads and Footpaths	Up to 27	20 to 25
3	Open Space **	10	10
4	Public Amenities (day care, school, health center, etc.)	2 to 4	-
5	Public Utilities (over head tank, septic tank, electric sub-station, water supply reservoir/pumping station, etc.	1	

* Within this, plots for commercial use (permissible on ground floor only) shall be limited to 5 percent of the total layout area. Such plots where commercial use is limited to the ground floor shall be allowed only along main roads within the layout and the building shall have a minimum setback of three meters.

** The area under open spaces should be planned in such a way that at least half of such an area is provided at a central location.

1.0.60 INTERNAL ROAD LAYOUT**1.0.60.1 Minimum Width of Road**

The width of internal road right of ways in a layout for different purposes and the width of the internal approaches for tenements and ownership tenement flats shall be regulated as outlined in the LAP or as per Urban Road Standards.

1.0.60.2 PLOT CONSOLIDATION

In the case of a site/ plot with existing buildings, its sub-division or consolidation shall not be approved unless it fulfils all the requirements under these regulations.

APPROACH ROAD

Consolidation of plots shall be allowed only if:

- a. The minimum width of the roads within the layout shall be a minimum of 6meters for Development of Plots, Development of Flats/ other non-residential development in residential, mixed and Neighborhood Node Precincts and should not be less than 4.5meters in Residential (Terrace) and Steep Slopes Precincts.
- b. The minimum specified road widths shall be developed completely up to the plot boundaries by providing all the required infrastructure networks viz., sidewalks, street lighting, trees, etc.

FOOTPATHS

Where there is no motorable road access to individual plots, but only footpaths, the following shall apply for the Temporary Settlements.

Table 5: Maximum Number of Plots to be served with respect to Width and Length of Footpath

Width of Footpath (m)	Maximum Length (m)	Maximum No. of plots to be served
1.5	20	5
2	32	8
3	52	12

1.0.60.3 Internal Arrangement of a Layout

1. The arrangement of tenements, shopping centres, ownership tenements/ flats in a plot, shall be approved by the Implementing Authority with due regard to internal approach roads, marginal open spaces/setbacks, common plot, water supply, drainage, and internal road lighting.
2. In the case of shopping centres and commercial or industrial development the minimum width of road/ access to shops, stall/ complex entrance, or industrial factory shed shall be 7.5 m.

3. In the case of tenement type buildings such as ownership flats, row type, cluster type, group housing, semidetached buildings, 1.5m margin/ setback will be necessary from internal approach roads, wherein no steps shall be permitted in the margin/ setback.
4. The minimum clear distances between two detached structures shall be 6meters. However, staircase open to sky shall be permitted.

1.0.61 MINIMUM PLOT SIZES

1.0.61.1 Minimum Plot Sizes for Different Uses

Unless otherwise stated specifically in these Regulations, the minimum building plot/ unit shall be as follows:

Table 6: Minimum Plot Sizes for Different Uses

Category of Use/ Occupancy	Minimum Plot Size (sq.m)
Educational Buildings	1,000
Community/ Multi-purpose Hall	2,000
Petrol Pump	500

1.0.62 COMMON AREAS

COMMON PLOT

Common Plot for the development of tenements, flats, group housing, and subdivision of land for industrial uses shall be required as under:

1. For Residential use:
 - a. In a building land parcel of 1,500sq.m or more in area, a common plot shall be mandatory.
 - b. The minimum area of the common plot shall be 10% of the total site area and shall be provided preferably in a central place.
2. For Industrial use:
 - a. No common plot need to be provided for site area up to 5,000sq.m
 - b. In a building unit of more than 5,000sq.m in area, the common plot shall be provided at the rate of 8% of the area of the site layout.
3. The common plot area shall be exclusive of approaches, margins/ setbacks and parking area. No projection shall be permitted in common plot.
4. Minimum size of the common plot shall be 300sq.m, with no side less than 12m.

5. 20% of area of the common plot may be permitted for the construction of community building on ground floor only, for the common use of residents with required margins; rest of the common plot shall be kept open to sky.
6. No construction except an electric sub-station shall be permitted on the roadside of the common plot.
7. The area of the common plot may be permitted to be sub-divided provided that the common plot has a minimum area of 300sq.m with no sides less than 12m.
8. For group housing, or for a building with ground floor plus two upper floors, further sub-divisions of the common plot shall be allowed by the Implementing Authority.

CONSOLIDATED OPEN PLOT (COP) (Excepting in the Neighborhood Node)

- A minimum consolidated open plot (COP) of 30% of the area of the site shall be provided for commercial and mixed development.
- The said consolidated open plot may be inclusive of the margins and approaches to be provided on such a site in so far as margins/ setbacks are contiguous and approaches are passing through the COP. The area of this COP shall not be deducted for the consideration of the Total Built-up Area of a building unit.
- The minimum width of the consolidated open plot shall be 15m.
- COP shall be provided compulsorily covering the full frontage of the site. In case of buildings with four and above floors, the minimum width of such COP shall be 5.5m plus required margins and in the case of low-rise building the minimum width of such COP shall be 2.5m plus required margins/ setbacks provided that such COP shall be used for visitor's parking only.
- Except in the case of Cinema, or Theatre, 50% of the total COP shall be allowed to be used as parking space including the driveway and parking aisles.
- No construction shall be allowed in the COP except the electric sub-station, subject to minimum roadside margin.
- In the case of mixed development the COP shall be provided as above subject to the following conditions:
 - a. Separate area of 300sq.m or 10% of the required COP, whichever is more shall be provided exclusively for the use of residents, provided no parking shall be allowed in such common area.
 - b. Separate access shall be provided for the residents and the common area exclusively.

Ancillary structures such as underground water-tank, overhead tank, electric substations, common garages for scooters and cars, etc. shall be permitted on the corner of the common open space of 500 square meters or more area, only up to 10 percent of the open space area, and up to maximum of 200 square meters.

SPECIAL REQUIREMENTS FOR OPEN SPACES

- Community open space in plotted development for Neighborhoods/ temporary settlements shall be spread as extended street areas with the standard of 0.1 hectare per 100 plots.
- In the case of layouts above one hectare area and having more than 50 plots, an open space of at least 700 square meters shall be provided at one place, adjoining community facilities such as a nursery school, community welfare centre etc.
- In the case of layouts with more than 100 plots, an open space of a minimum of 1,000 square meters should be provided at one place.

Tree Plantation

Tree plantation at the rate of one tree for every 50sq.m of land, shall have to be undertaken and maintained in all layouts. These trees shall preferably be planted at a spacing of between four to eight meters along the roads and streets, and along the edge of the common open spaces.

On-Site Physical Infrastructure

In all layouts larger than two hectares, or containing forty or more plots, an area of at least one percent of the site shall be provided for garbage collection arrangement, electric substation, water supply storage reservoir/ pumping station, etc. This space shall be provided such that it is located on a major internal road of the layout and as per the directions of the PT and the Department of Power.

Collection and Discharge of Water

Every site development shall provide channels at the lower elevation/ level of the site which collects rainwater runoff over the site and discharges this runoff into public storm water drains. The lower plot shall provide an easement or allow/ provide a right of way or channel for the discharge of storm water runoff from natural sources or adjacent plots of higher elevation into the public storm water drains.

APPENDIX A

List of Details to be shown on Proposed Land Development Plan/ Subdivision Plan (wherever applicable)

- (i) The boundaries of the plot and plot level in relation to neighboring road level.
- (ii) The highest and lowest levels of the plot and average slope with direction thereof.
- (iii) The position of the plot in relation to neighboring streets and name of the streets
- (iv) Width of the proposed streets and internal roads.
- (v) Sub-division of the land or plot or building unit with dimension and area of each of the proposed sub-divisions and their use in conformity with these regulations.
- (vi) Dimensions and areas of open space and common amenities plots provided for under these regulations.
- (vii) All the existing buildings and other development standing on or under the site.
- (viii) The position of buildings and of all other buildings and construction which the applicant intends to erect.
- (ix) The means of access from the street to the buildings or the site and all other building and constructions which the applicant intends to subdivide.
- (x) Yards and open spaces to be left around the subdivided buildings to secure free circulation of air, admission of light and access.
- (xi) The width of street in front and of the street at the side or rear of the subdivided building.
- (xii) The direction of north point relative to the plan of the site or the buildings.
- (xiii) Any physical feature such as trees, wells, drains, pipelines, high-tension lines etc.
- (xiv) Existing streets on all sides indicating clearly the regular line for streets if any prescribed under the Structure Plan and passing through the building units
- (xv) The location of the building in the plot with complete dimensions.
- (xvi) A plan indicating parking spaces, with egress and ingress if required under these regulations
- (xvii) The positions of the building units immediately adjoining the proposed development.
- (xviii) The position of every water closet, privy, urinal, bathrooms, cess pool, well or cistern in connection with the building other than those shown in the detailed plan.
- (xix) The lines of sewers on the site and/or building, the size, depth and inclination of every sewer and the means to be provided for the ventilation of the sewers.
- (xx) The position and level of the outfall of the sewer.

- (xxi) The position of sewer, where the sewerage is intended to be connected to sewer.
- (xxii) Tree plantation required under regulation No.3.3.

List of Details to be shown in Drawings/ Plans for Obtaining Building Permission

DRAWING GUIDELINES

Drawings with complete design information and details, but not limited to the following, shall be submitted to the Implementing Authority for scrutiny and approval.

A) ARCHITECTURAL DRAWINGS

- a) Site plan shall be drawn to scale and shall include the position of the proposed building in the plot showing the dimensions of the plot boundaries, set back lines and showing the approach road, location of septic tanks, soak pit, roof drainage, and drainage plan. The site plan shall clearly show any proposed widening right of way, no build line where a 30m or a 15m or a 9m or a 5m clearance is required from rivers, major streams, minor streams, cliffs, ledges, etc. are required as indicate by the latest official site plan issued by PT (for safety and environmental protection)
- b) Site plan shall include a schematic drawing showing information on adjacent plot like building line, permanent features, drainage, access road, septic tank and soak pit location.
- c) Layout plan of each floor, elevations of all sides of the building, sections through toilets and staircases, details of doors, windows, traditional cornices, railing/parapet, opening and other methods of ventilation, details of toilet and kitchen.
- d) Proposed parking layout as prescribed under this regulation
- e) A digital copy of the drawings for reference, if available.
- f) Drawings shall have proper title block indicating name and signature of owner, Architect, type and number of storey, location, date, revision number and date, scale, and north direction.
- g) The following minimum scales shall be followed:
 - Site Plan 1:500
 - Elevation/plan/section 1:100
 - Stair case/toilet/kitchen details 1:50
 - Door/windows/cornice details 1:25

B) STRUCTURAL DRAWINGS

- a) A copy of design calculation notes.
- b) Design codes used shall be listed on the drawing.

- c) Loads (assumed or actual) shall be listed on the drawing.
- d) Material properties shall be listed on the drawing.
- e) Assumed soil bearing capacity or soil investigation report shall be attached.
- f) Foundation plan, truss layout plan showing truss and purlin spacing, beam and slab layout plan for each floor showing clearly the staircase opening, shaft opening and any other openings and depressions.
- g) Concrete and reinforcement details for foundation, beams, slab, staircase, lintel, cornice, projections, zhu and rabsey, wall, etc.
- h) Truss elevations and connection details showing the holding down details.
- i) Details of separation gap indicating the location of such gap on the plan wherever required
- j) Details of splice locations and splice length for beams, columns, slab and staircase.
- k) For Load bearing walls, details of plinth band, lintel band, roof band including vertical bars at corners, opening jambs, wall junctions to be shown.
- l) Foundation details indicating depth of foundation and plinth level.
- m) Dimensions shall be clearly indicated for all structural members
 - Anchorage of beam bars in an external beam – column junction
 - Column ties and Beam stirrups details
 - Retaining details in case of foundation founded on different levels
- n) Drawings shall bear proper title block indicating name and signature of owner, Structural Engineer, type and number of storey, location, drawing title, date, revision number.

C) ELECTRICAL CONNECTIONS

- a) Single line diagram of total electrical system showing incoming terminal point and distribution network.
- b) Electrical layout plan showing positions of light points, power points, any other outlets, switches and wiring diagram.
- c) Tapping off junctions, switchboards, and distribution circuits for power and lighting from SDB and phase distribution (in the case of multiphase installations) shall be indicated clearly on the wiring layout plan.
- d) Sub distribution boards showing circuits and respective loads and protection devices.

- e) Power distribution boards for large multi-storey buildings showing floor- wise distribution from main control board and incoming power line.
- f) For multi-storied / complex buildings, design calculations shall be submitted.
- g) Drawings shall bear proper title block indicating name and signature of owner, Electrical Engineer, type and number of storey, location, drawing title, date, and revision number.

ADDITIONS AND/ OR ALTERATIONS TO EXISTING INSTALLATIONS

The following information shall be submitted for additions and/or alterations to existing Installation:

- a) Polarity test results
- b) Insulation test results
- c) Earth continuity test results
- d) Earthing test results
- e) Capacity, condition and specification of existing spare circuits
- f) Rating, specification and condition of existing incoming mains control gear
- g) Composite (existing and proposed) layout plans for all floors

Note: For factories, relevant by laws shall be followed as per Bhutan factory, electricity rules or relevant international standards.

LEGEND SHALL SHOW

- a) Type and wattage of fixtures
- b) Type of SDBs
- c) Type of PCBs and connected load
- d) Type of MCBs
- e) Switches and Switchboards
- f) Junction boards

COMPOUND ELECTRIFICATION WORK

- a) Fixture and fitting specification
- b) Foundation details for support poles etc.
- c) Terminal box details.
- d) Size and type of cable proposed to be used.

- e) Single line diagram showing
 - (i) Connections
 - (ii) Phase distribution
 - (iii) Circuitry

TELEPHONE CONNECTIONS

Submitted drawings shall indicate symbols and legend. All points, junctions, routes ducts, telephone terminal cabinet are to be clearly indicated.

Drawings shall bear proper title block indicating name and signature of owner, Concerned Engineer, type and number of storey, location, drawing title, date, and revision number.

D) DRAINAGE AND SANITATION

- a) Plan showing Kitchen, bathroom and WC outlets.
- b) Plan showing location of septic tank and soak-pit or sanitary pipe lay out to the nearest sewer line, including manholes, wherever it exists.
- c) Drainage layout plan connecting to the nearest storm water drain.
- d) Sewer design shall be in accordance with plumbing code of practice.
- e) Materials and sizes of pipeline.

E) WATER SUPPLY

- a) Layout plan of internal plumbing system of each floor with details of pipe sizes and material.
- b) Water meters shall be provided for each dwelling unit.
- c) Plumbing design shall be in accordance with plumbing code of practice.
- d) Materials and sizes of pipe line
- F) Drawings shall bear proper title block indicating name and signature of owner, Engineer, type and number of storey, location, drawing title, date, and revision number.

Registration of Architect, Engineer, Structural Designer, Developer

APPLICATION FOR REGISTRATION

The Implementing Authority shall register Architect, Engineer, Structural Designer, and Developer.

The registration may also be done by an Institute/Organization recognized by the Royal Government of Bhutan. Application for registration as Architect, Engineer, Structural Designer, Developer, shall be in the prescribed form. Registration shall be valid for the period of five years or part thereof and shall be renewable or part thereof.

REVOCAION OF REGISTRATION

A registration shall be liable to be revoked temporarily or permanently by the Implementing Authority or the recognized Institute/Organization. If the registered person is found guilty of negligence or default in discharge of his responsibilities and duties or of any breach of any of these Regulations, it would lead to cancellation of his/her registration unless the Implementing Authority is satisfied with the justification/show cause.

GENERAL DUTIES AND RESPONSIBILITIES APPLICABLE TO ALL:

- I. They shall study and be conversant with the provisions of the Bhutan Municipal Act, 1999, the rules made there under, the Phuentsholing Development Control Regulations - 2013, and the other instructions circulated by the Implementing Authority and the provisions in force from time to time along with the instructions printed/mentioned on prescribed application forms and permission letter.
- II. They shall inform the Implementing Authority of their employment/assignment / resignation for any work within 7 days of the date of such employment / assignment / resignation.
- III. They shall prepare and submit all plans either new or revised when necessary, required documents and other details they are required to do so in a neat, clean and legible manner and on a durable paper properly arranged and folded in accordance with the provisions prevailing time to time.
- IV. They shall submit plans, documents and details without any scratches or corrections. Minor corrections will be permitted with proper initials. They shall correctly represent all the site conditions including grown up trees.
- V. They shall personally comply with all requisitions/ queries received from the Implementing Authority in connection with the work under their charge, promptly expeditiously and fully at one-time. Where they do not agree with requisitions/ queries, they shall state objections in writing; otherwise for non-compliance of any requisition/query within stipulated time, the plans and applications shall be filed forthwith, and shall not be re-opened.
- VI. They shall immediately intimate to the owners the corrections and other changes they make on the plans, documents and details as per requisitions/queries from the Implementing Authority.
- VII. They shall clearly indicate on every plan, document and submission, the details of their designation such as registered Architect, registered Engineer, registered Structural Designer, etc. with registration number, date, full name and their address below the signature for identification.
- VIII. They or their authorized agent or employee, shall not accept the employment for preparation and submission of plans-documents and supervision of any work if the same is intended or proposed to be or being executed or already executed in contravention of these Regulations and any orders made there under and any Regulations or rules for the time being in force.
- IX. The registered person shall apply for undertaking the responsibility for the particular work in the forms prescribed by the Implementing Authority.

- X. The registered person shall provide the information and undertaking for the work undertaken by him in the forms prescribed by the Implementing Authority from time to time.

ARCHITECT

(A) QUALIFICATION AND EXPERIENCE

A person holding a Bachelors Degree in Architecture/Diploma in Architecture (Equivalent to Bachelors of Architecture) with 2 years of work experience.

(B) SCOPE WORK and COMPETENCE

- I. Preparation and planning of all types of layouts and submission drawings and to submit certificate of supervision and completion for all types of buildings.
- II. Supervision and execution of construction work as per specifications and drawings prepared by authorized registered structural designer and engineer.

(C) DUTIES AND RESPONSIBILITIES

- a) He/she shall be responsible for making adequate arrangements to ensure not only that the work is executed as per the approved plans but also in confirmation with the stipulations of the National Building Code (Building Code of Bhutan 2003) standards for safe and sound construction and non-hazardous, functioning of the services incorporated in the building and for making adequate provisions for services and equipment for protection from fire hazards as per the stipulations of the Building Code of Bhutan 2003 in the buildings and shall obtain N.O.C from the Chief Fire Officer (in case of special buildings) or concerned designated Authority/consultant before applying for occupation certificate.
- b) He or she shall, on behalf of the owner, apply for the progress certificates, completion certificates and the occupation certificate and obtain the same as required under the regulations.
- c) If the services of the registered architect are terminated, he shall immediately inform the Implementing Authority about his termination and the stage of work at which his services have been terminated. The registered architect appointed as replacement of the preceding architect shall inform about his appointment on the job, and inform the Implementing Authority of any deviation that might have occurred on the site with reference to the approved drawings and the stage at which he is taking over the charge. After Implementing Authority has inspected the site for his report, the newly appointed architect shall allow the work to proceed under his direction.
- d) The registered architect appointed on the work shall inform the Implementing Authority immediately on discontinuation of the services of the registered/structural designer, construction contractor, clerk of works, site supervisor, plumber or electrician and shall not allow the work to continue till the vacancy is filled by appointment of another person and the certificate of appointment of such person is submitted in the office of the Implementing Authority.
- e) He or she shall instruct the relevant agency that adequate provisions are made for ensuring the safety of workers and others during excavation, construction and erection.

(D) REGISTRATION:

- a) The registration fee if any shall be payable as prescribed by the Implementing Authority or the recognized Institute/ Organization from time to time.
- b) The Implementing Authority may black-list an architect in case of serious defaults or repeated defaults and shall inform The Royal Institute of Bhutanese Architects (RBIA) to take suitable action against such person under the provisions of The Royal Civil Service Commission. The registration shall be liable to be revoked temporarily or permanently by the Implementing Authority in such cases of negligence or default.

ENGINEER**(A) QUALIFICATION AND EXPERIENCE**

A degree in Civil Engineering or any equivalent qualification, recognized by The Royal Civil Service Commission. In addition to the qualifications stated above, the applicant should have at least five years experience in professional work if he is a holder of a Diploma in Civil Engineering/or equivalent.

(B) SCOPE OF WORK and COMPETENCE

- a) Preparation and planning of all types of layouts and submission drawings and to submit certificate of supervision and completion for all types of buildings.
- b) Supervision and excavation of construction work as per specifications and drawings prepared by authorized registered structural designer.
- c) He/she can prepare and submit structural details and calculations for buildings of load bearing structures.

(C) DUTIES AND RESPONSIBILITIES

As per the duties and responsibilities as specified for architect, with reference to engineer in place of Architect.

(D) REGISTRATION

- I. The registration fees if any shall be payable as prescribed by the Implementing Authority or the recognized institute or organization from time to time.
- II. If he/she is found negligent in his/her duties and responsibilities. The Implementing Authority may black-list an Engineer in case of serious defaults or repeated defaults and shall inform The Royal Institute of Bhutanese Engineers, to take suitable action against such person. The registration shall be liable to be revoked temporarily or permanently by the Implementing Authority in such cases of negligence or default.

STRUCTURAL DESIGNER**(A) QUALIFICATION AND EXPERIENCE**

A Degree in Civil Engineering or any equivalent recognized by The Royal Civil Service Commission. In addition to above qualification, the applicant should have at least five years experience in structural design, two years of which must be in a responsible capacity in form of structural designer.

OR

A Master's degree in structural engineering from a recognized institute and at least two years experience in structural design work.

OR

A Doctor's degree in structural design from a recognized institute and at least one year experience in structural design work.

(B) SCOPE OF WORK and COMPETENCE

To prepare and submit structural details for -

- (i) All types of Buildings.
- (ii) Special structures.

(C) DUTIES AND RESPONSIBILITIES

- a) To prepare a report of the structural design
- b) To prepare detailed structural design and to prescribe the method and technique of its execution strictly on the basis of the Building Code of Bhutan 2003 or relevant international standards.
- c) To prepare detailed structural drawings and specifications for execution indicating thereon, design live loads, safe soil bearing capacity, specifications of material, assumptions made in design, special precautions to be taken by contractor to suit the design assumptions etc. whatever applicable.
- d) To supply two copies of structural drawings to the site supervisor.
- e) To inspect the works at all-important stages and certify that the work being executed is up to the satisfaction of the Architect/Engineer.
- f) To certify the structural safety and overall structural soundness of the building to the Architect/Engineer.
- g) To advise the Owner/ Architect/ Engineer for arranging for tests and their reports for soil, building material etc. for his evaluation and design consideration.
- h) S/he shall prepare the revised calculations and drawings in case of any revision with reference to the earlier submission of drawing and design in a particular case.

- i) To submit the certificate of structural safety and over all structural soundness of building to Implementing Authority.

(D) REGISTRATION

As specified for architect, with reference to structural designer place of Architect.

DEVELOPER

(A) QUALIFICATION AND EXPERIENCE: -

The person/ firm acting as Developer shall be of proven merits and experience.

(B) DUTIES AND RESPONSIBILITIES.

- I. Any person acting, in the capacity of the owner shall be the bonafide owner or authorized agent of the owner for developmental work proposed. S/he shall satisfy the Implementing Authority that s/he is the actual owner of the property of the authorized agent of the actual owner to undertake total responsibility as the owner, employer and manager of the property and its development and of all the assets and liabilities of the property and the project.
- II. S/he shall appoint a registered Architect/ Engineer to plan, design, prepare drawings and specifications and to direct the execution of the work in accordance with the requirements of these regulations.
- III. The appointment of the registered Architect/ Engineer shall mean that he has authorized the Architect/ Engineer to do all things necessary and to take all adequate measures for preparing the design, drawings and specifications for the project and to appoint on his behalf appropriate persons to act as registered, clerk of works site supervisor, required for the proper execution of the project and to retain on behalf of the owner any other specialist or expert required on the work of the project.
- IV. S/he/ Architect/ Engineer shall give written information to the Implementing Authority about the commencement of the execution work. He shall see that the registered Architect/ Engineer fulfill all requirements of Implementing Authority.
- V. S/he shall not cause or allow any deviations from the approved drawings in the course of the execution of the project against the instruction the instruction of Architect/ Engineer/ Site Supervisor/ Clerk of Works/ Structural Designer and shall bear all responsibility for any irregularity committed in the use and function of the building or its parts for which the approval has been obtained.
- VI. S/he shall inform the Implementing Authority immediately if the services of the Architect/ Engineer appointed on the project are terminated or has ceased to function due to any reason and shall not allow any work to proceed till another Architect/Engineer is appointed on the project.

- VII. When no registered construction contractor or site supervisor is required to be appointed and not appointed he shall be responsible for their duties and responsibilities under the Regulations.
- VIII. S/he shall not commence the use of building or shall not give the possession to occupy the building to any one before pertaining to the occupancy certificate from the Implementing Authority.
- IX. S/he shall provide adequate safety measures for structural stability and protection against fire hazards likely from installation of services like electrical installation, plumbing, drainage, sanitation, water supply etc. wherever required under the regulations.
- X. S/he shall exhibit the names of registered persons only, on site and no additional names will be exhibited/ displayed.
- XI. S/he shall explain the construction design and its intended use as per approved plan only, to the prospective purchaser of the premises under construction.

Color Codes to be used in Plans/ Drawings

Table 7: Color Codes to be used in Plans/ Drawings

Sr. No.	Item	Site Plan	Building Plan
01	Plot Line	Thick Black	Thick Black
02	Existing Street	Green	-
03	Future Street if any	Green Dotted	-
04	Permissible Lines	Thick Black Dotted	-
05	Open Space	No Color	No Color
06	Existing Work	Blue	Blue
07	Work proposed to be demolished	Yellow Hatched	Yellow Hatched
08	Proposed Work	Red	Red
09	Work without permission, if started at site	Gray	Gray
10	Drainage and Sewerage works	Red Dotted	Red Dotted
11	Water Supply works	Black Dotted	Black Dotted

Scrutiny Fees and Service and Amenity Fee Payable at the time of Application for Land Development/ Building Permission

Table 8: Service and Amenity Fee

Sr. No.	Category	Service and Amenity Fees (Nu. Per Sq.m of Built-up Area)
01	Residential/ Institutional Building Use	Nu. 30/sq.m
02	Commercial/ Industrial Uses	Nu. 50/sq.m

75% concession for land pooled areas and areas with Betterment Charges.

Scrutiny Fee: The minimum scrutiny fee for land development / building permission shall be Nu. 3,000.00 or Nu. 16.14/sq.m whichever is more. Fee for renewal of development / building permission shall be Nu. 500.00.

Sr. No.	Category	Fee
01	Issuance of Official Site Plan	As approved by City Committee

Summary of Critical Dimensions

MAXIMUM CARPET AREA (sq.m) OF SHOPS IN CONVENIENCE SHOPPING CENTRES

General	: 20
Food grain or ration shops	: 50
Groceries, confectioneries, general provision shops	: 50
Medical and dental practitioners' dispensaries or Clinics, pathological or diagnostic clinics and pharmacies	: 50
Wood, coal and fuel shops	: 30
Cloth and garment shops	: 50
Restaurants and eating houses	: 50
Shoes and sports shops	: 75
Taxi stand office	: 10

DWELLING UNIT

At least one room of minimum carpet area of 9sq.m with a minimum side dimension of 2.5m and a WC

HABITABLE ROOM

Minimum height	: 2.7m measured from finished floor to finished ceiling.
Minimum width	: 2.5m.

LIGHT HOME WORKSHOP

Maximum floor space	: 20sq.m.
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LIGHT INDUSTRY

Maximum floor space	: 500sq.m.
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LOFT/ ATTIC

Maximum height	: 1.2m.
Maximum area	: 30% of the floor area of the room.

MEZZANINE FLOOR

Maximum height	: 2.3 m.
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SERVICE ESTABLISHMENT

Maximum floor space : 50sq.m.

WATER CLOSET (WC)

Minimum floor area : one square metre.

TEMPORARY KIOSKS

Maximum dimensions for “temporary” public telephone booths, milk booths, and newspaper stalls:
2mx2.5m

NO DEVELOPMENT ZONES

All areas within 30m from the edge of the river (Am Mo Chhu), within 15m from the edge of other rivers within Thromde boundary, 9m from the edge of major streams and 5m from the edge of minor streams or gully more than 3m in depth, or on within 30m of the edge of a cliff, or under a cliff or precipice (within 30m).

CRÈCHE

Any construction site with minimum built-up area 5,000sq.m (shall provide a crèche or day care centre for the laborer’s children, should even one, or more, women be employed on site.

Application for Occupancy Certificate

To:

The Thrompon/Chairman,
Thromde/City/Municipal Corporation,
.....

Sir,

I hereby certify that the addition/ alteration/ construction of building on Plot/ Thram No. in Lam, intown has been completed on, according to the approved building plan/ drawings, vide permit No. dated.....

The work has been completed to our best satisfaction. Workmanship and all the materials (type and grade) have been used strictly in accordance with the approved documents/drawings and relevant standards, codes of practice and specifications. Provisions of the Bhutan Building Rules, conditions or orders issued there under have not been transgressed/ violated in the course of the work. The building is fit for use for which it has been added/ altered/ constructed. The necessary 'Occupancy Certificate' may be issued.

Signature of the Owner:

Name & Address:

Telephone No. (Residence):

Telephone No. (Office):

Fax No.:

E-mail address:

Dated:

Occupancy Certificate

To,

.....
.....
.....
.....

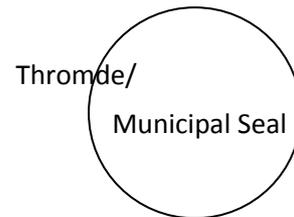
Sir/Madam,

With reference to the application dated regarding the addition/ alteration/ construction of building on plot/Thram No. in street/ Lam..... ,intown has been inspected on date and found that the building is fit / not fit for occupation.

Instruction / Remarks (if any):

Thrompon/Chairman
Thromde/City/Municipality

Dated:



Local Area Plan

The third tier of the proposed Development Management System pertains to the specifics of a given area towards translating the Development Control Regulations proposed in the structure plan at town level to plot level. For implementation and working reasons, these are called as Local Area Plans. At any situation, it is the structure plan which rules over the local area plan of an Urban Village and the link between them extends at various levels. All the nonnegotiable elements and components like roads, various environmental protection areas, population accommodation needs, noted in the structure plan must be conserved in the local area plans. On the other hand, it is the basic necessity of the local area plan to rationalize the proposals of the structure plan.

These local areas will form basic units of planning and could be perceived as a tool to translate the broader goals that are outlined in Phuentsholing Structure Plan in to a practical setting. On one hand it will facilitate the implementation of the specific objectives of the structure plan and on the other the plan will illustrate the implementation of Precincts Sanction within the local area and at individual plot level. It will also address local issues like provision of amenities at comfortable walking distance and restructuring of land parcels into a rational urban system.

The local areas generally, but not necessarily, will cover an Urban Village identified in the structure plan. Normally these are areas bounded by major roads, rivers, surface drains or other natural boundaries. At places where there is no established natural boundary they follow the existing cadastral boundaries. Within these defined areas, the urban systems are laid out completely respecting the guidelines provided by the Development Control Regulations in a workable and implementable manner. The distribution of various Precincts proposed in the Phuentsholing Structure Plan will also be rationalized in the Local Area Plans.

At places, where the Local Area Plan covers the entire Urban Village, a high-density housing zone with a neighborhood node in centre will be identified. These local areas will be developed as a self-sustainable unit in terms of infrastructure, services and amenities needs. The Neighborhood Node with the basic amenities for the Urban Village will be generally located along a public transport movement corridor, so that the Neighborhood Node becomes the central focus of the Local Area Plan. The idea is to provide compact, walkable communities, surrounded by medium-density residential plots, which in turn is surrounded by low-density development. All the plots falling in a local area plan will be rationalized. Roads and other infrastructure services including water supply networks, sewerage networks, storm water drains, street lighting and solid waste management will be laid out in a hierarchical manner so that all the plots in the local area are well served.

APPENDIX B

Investment Plan**Brief Introduction**

The preparation of the Phuentsholing Structure Plan is the primary task of the Phuentsholing Thromde and Department of Human Settlement (DHS) under the Ministry of Works and Human Settlement (MoW&HS), Royal Government of Bhutan (RGoB). This Investment Plan Report presents and discusses projects which are proposed as a part of the Phuentsholing Thromde Structure Plan. Based on the proposed structural plan, the Population of the Phuentsholing Thromde would reach a figure of about 47,500 (about 42,500 from the extended area & 5000 from existing municipal area).

The Investment Plan proposal can act as a reference to plan carefully, to take care of the infrastructure needs of this growing population. This Plan deals in detail with infrastructure projects. It aims to help various departments to work together more efficiently and to execute the project in a coordinated way and to provide greater transparency for the community on the infrastructure strategies and projects. Along with this process the implementing authority should also stress on the issues of maintenance and of implication for the provision of new infrastructure; on the possibilities for multi-year budgeting for infrastructure projects, and on new technologies and their implications for infrastructure.

While making the proposals for action three major criteria are used to assess the merits of an infrastructure project. They should: (i) meet a clear social need; (ii) be consistent with existing government policies and requirements; and (iii) produce more benefits than costs.

The community's need for an infrastructure project may emerge from a number of factors. The report takes into consideration population factor such as population growth, population movements and the characteristics of new population distribution. The community's need for infrastructure may also stem from the demands of economic change over and above that required simply to sustain a growing population.

The Structure Plan is prepared considering four key policy points within which strategies, plans, initiatives and individual infrastructure projects would fit. These are:

- (i) Integrating environment protection into all activities;
- (ii) Encouraging economic development and employment growth;
- (iii) Achieving greater social justice for all members of the community and creating livable towns and;
- (iv) Delivering more financially responsible programs that reduce public debt and unfunded liabilities.

Some of the most important initiatives aimed at helping, meet these commitments are:

- a. Reducing pollution from storm water and sewage;
- b. Integrating Precinct and transport planning;
- c. Investing in information technology infrastructure;
- d. Improving access to affordable housing; and
- e. Enhancing recreational and cultural infrastructure.

The Investment Plan specifies the proposed projects and recommendations that will deliver these initiatives.

As per the analysis of the proposed projects mentioned in the 'Proposals for Action', the Investment for the Phuentsholing Thromde (within the proposed municipal boundary limits) will be about Nu. 6,273.04 Million.

Objective

This Investment Plan is prepared as a part of the Phuentsholing Structure Plan, with the prime objective of the long-term wellbeing of the people of Phuentsholing Thromde and their environment, through an innovative approach and the provision of cost-effective services. To ensure sustainable communities and bring about lasting improvements to quality of life of individuals, families and neighborhoods, we need integrated policies, investment and action across a range of economic, social, physical and environmental issues.

This coordinated approach aims to deliver:

- Access to economic opportunities (e.g. through new businesses and improved transport) along with the skills and support (e.g. training, child care and other support services) to take advantage of these opportunities;
- Improvements to the local environment, open spaces and facilities;
- Good quality and responsive public services (e.g. education, health and neighborhood services such as street cleaning, roads and lighting, and safety);
- Safer communities; and,
- Genuine community engagement in shaping the place they live.

This leads to an approach of making a balanced infrastructure investment programme. The Programme will:

- Invest in environmental, transportation and social infrastructure; and,

- Maximize economic efficiency through innovative investment mechanisms like revolving and securitization funds and grants (where necessary).

The main goal is to achieve improved quality of life, increased environmental and health protection, reduced levels of homelessness and improved community well-being.

The main sectors of investment would be:

1.0.63 ENVIRONMENTAL INFRASTRUCTURE:

- a. Solid-waste management systems, including programs for reducing, reusing and recycling, waste diversion such as composting, upgrades of existing landfill sites;
- b. Water and wastewater systems, including water and wastewater treatment plants, distribution and collection systems (covering potable water, sanitary and other effluents and storm waters), and water conservation; and,
- c. Protection of ecologically sensitive lands and natural heritage.

1.0.64 TRANSPORTATION INFRASTRUCTURE:

- a. Repair and upgrade of roads and bridges;
- b. Construct new roads as proposed in the transportation plan; and,
- c. Mass public transport system.

1.0.65 SOCIAL INFRASTRUCTURE:

- a. New affordable housing;
- b. Improved health services;
- c. Recreational facilities for children and youth; and,
- d. Revitalization, including housing intensification; and heritage preservation.

The investment will benefit in the form of:

- Improved productivity and competitiveness;
- Local job creation and training;
- Community economic development;
- Increased community safety; and,
- Reduced levels of homelessness and the related costs of emergency shelters, health and social services.

1.0.66 PROPOSED PROJECTS: ESTIMATED COST OF THE INFRASTRUCTURES

Phuentsholing Thromde Structure Plan proposes various projects under the following SECTOR heads. The cost estimates are carried out for the same projects.

1.0.67 UTILITIES AND INFRASTRUCTURE

1. Water Supply Scheme and Network System
2. Sewerage Management and Network System
3. Storm Water Management and Watershed Development
4. Soil Waste Management System
5. Electrical Distribution System
6. Street Lighting System
7. Telecommunication System
8. Transportation System and;
9. Local Area Plan Implementation and landscape designing.

The Implementation schedule of the above Utilities and Infrastructure is not provided here with this proposal to avoid mismatch between this proposal and the actual execution by PT. The actual implementation should be spread out (phase wise) for a period from 2013 to 2028 based on the actual requirement basis and availability of adequate fund.

Water Supply System and Network System

The main objective of the proposed Water Supply System is to:

- To ensure an efficient and regular supply of potable treated water for the entire area under the present and proposed extended municipal boundary.
- To ensure adequate tapping of the available water sources and after treatment, to utilize them as a part of the town water supply network.
- To enable a decentralized network of sources and supply networks to reduce and distribute the anticipated load on the central network in the future on to other subsidiary ones.
- To establish a cost efficient network, this would maximize the use of the gravity flow mechanism, thus efficiently utilizing the local terrain characteristics, reducing the need for expensive pumping facilities limited to the raw water pumping from dam.

Considering this framework, the following system of supply is proposed:

- Proposed Water Supply system is temporary. Therefore, most of the water sources identified are ground water sources.
- Water to the neighborhood adjoining the banks of Ammo Chhu shall be connected the PT water supply system as this would be a temporary water supply.
- Water to the neighborhood in between Kabreytar & Pipaldara shall be supplied from existing water reservoir that feeds the areas of Dhamdara, Pipaldara & Kabreytar.
- Water to the neighborhood of Dokhiya, Khareyphu, Kharaley shall be supplied from existing water reservoir along Thimphu-Phuentsholing highway.
- Water to the neighborhood of Lower Rinchending, Ahlay, Pekarshing (Toribari) and Khogla shall be supplied from proposed water reservoir on the higher terraces of Pekarshing (Toribari).
- Water to the neighborhood of Chengmari, Gurungdangra and Malbase shall be supplied from the proposed water reservoir on the higher terraces of Gurungdangra.

As per the information from PT, the permanent water supply system would be as follows:

- A dam is proposed to be constructed on Am Mo Chhu to support the future HP Project.
- Water would be pumped from the dam and supplied to the proposed storage reservoirs at various locations in the structural plan.

Flow Diagram of the Proposed Future Permanent Water Supply Network System

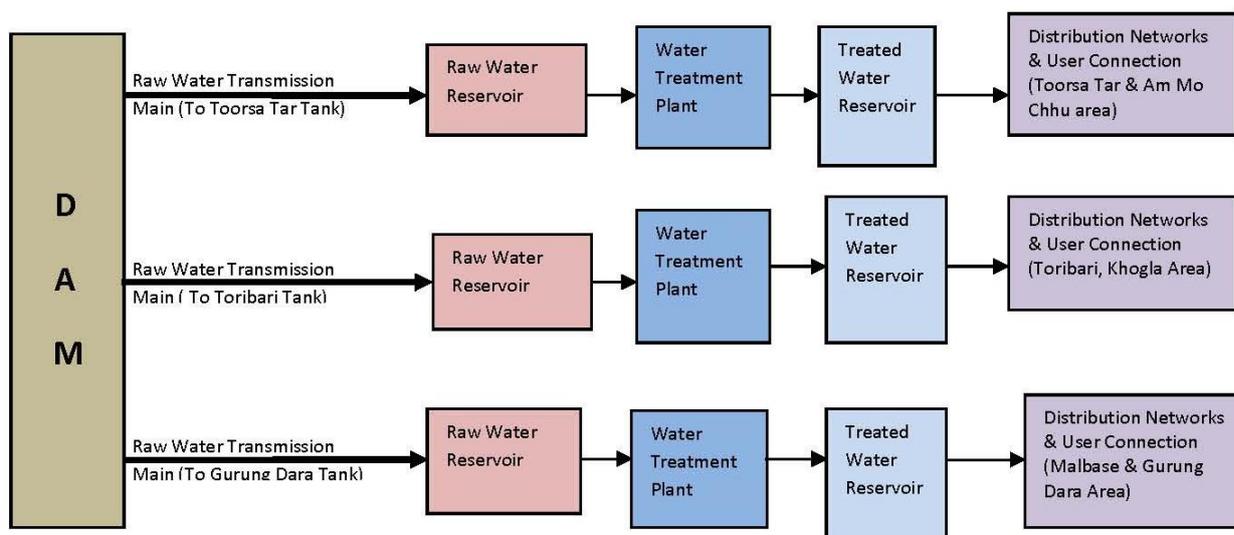


Table 9: Summary of Cost Estimate of the Proposed Projects for Water Supply System and its Network

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	

Water Supply System and Network System	844.94	Refer Annexure for details of calculation
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Pricing of the water supply consumption should be as per the metered consumption for each unit based on the volume of consumption i.e. higher consumer would pay proportionately higher water charges. A rationale /detailed pricing mechanism should be worked out depending upon the cost of management / maintenance of the water supply system and in the mean time to control lavish consumption. Looking at the proposed systems, there would be a phase-wise expansion of the current manpower capacities engaged in the management and maintenance of the urban water supply network, to cover and manage the other recommended treatment plants and other facilities in the outlying areas.

Conclusion

The estimated cost for the entire water supply network system for Phuentsholing Thromde is Nu. 844.94 million. This is a huge expenditure, but it is a necessity looking at the overall progress of the town. The entire scheme of implementation of the water supply system should be worked-out taking into consideration the amount to be invested and amount to be recovered from the consumers. At the same time the manpower and maintenance tasks have to be considered, as the system would have different control points. The implementing authority must establish this mechanism.

Sewerage System

The main objective of the proposed Sewerage System is to:

- To ensure an efficient sewerage and waste water disposal system with respect to maintaining high standards of health and hygiene in the Thromde and adjoining areas of Phuentsholing Thromde.
- To lay the sewer network mainly along the natural drains and off the road networks. This will have a major advantage of not blocking the vehicular traffic during sewer repairing operations, which is a chronic problem on several main roads today.
- To enable a decentralized sewer network and to reduce and distribute the anticipated load on the central network.
- To establish a cost efficient network, by installing sewerage treatment plant.

Considering this framework, the following sewage treatment system is proposed:

- Sewage collected along the Am Mo Chhu river bed area can be diverted through sewer lines to the existing Sewage Treatment Plant. An optional location for an independent STP can also be looked into upon carrying out river reclamation works.
- For the area above Kabreytar, it is proposed to have Septic Tank system due to a very low density development. In future this area could be connected to the sewer networks that will serve Dhamdara and Kabreytar neighborhoods.

- In other areas as shown in the drawings, it is proposed to provide Sewage Treatment Plant of required capacity. The Type of STP to be adopted could be decided by the experts in sewerage system depending upon the availability of area, fund availability, cost of operation and maintenance, etc.

For the purpose of facilitating an efficient sewerage System, the network lines which come from the territories to come at a point where pathways are proposed and then the lines follow the pathway running along the rivulets/ Stream to the treatment plants. This pathway alignment will enable to locate the lines for maintenance and would also provide an access to the manholes.

Table 10: Summary of Cost Estimates of the Proposed Project for Sewerage Management System

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Sewerage System	803.42	Refer Annexure for details of calculation

The costing for the Sewerage System is arrived at considering the various projects mentioned and the mechanism proposed for the same.

Conclusion

The estimated cost for the entire sewerage network system for Municipal Area is Nu. 803.42 million. It is a large expenditure over the years but it is a necessity looking the overall progress of the town. The entire scheme of implementation of the sewer network system should be worked-out taking into consideration the amount to be invested, and the amount to be recovered from the consumers. At the same time enough manpower and maintenance tasks have to be considered as the system would have different control points. An appropriate mechanism for implementation must be established by the implementing authority.

Storm Water Drainage system, Flood Protection and River Training work

The main objective of the proposed Storm Water Drainage System is to:

- To ensure an efficient storm water disposal system with respect to maintaining high standards of health and hygiene in Phuentsholing Thromde.
- To lay the network of the storm water drainage mainly along the off the road networks.
- To establish a cost efficient network, by constructing storm water drainage channels wherever possible with loads according to areas of collection, thereby reducing on the exposed networks and the possibility of causing serious hygienic problems.

Considering this framework, the following Protection and Drainage infrastructures are proposed:

- Except for protection works along Am Mo Chhu (where DHI is involved), adequate provision has been kept in the structural plan for protection works such as retaining walls, river training works, storm water drains, channelize streams.

Table 11: Summary of Cost Estimates of the Proposed Projects for Storm Water Drainage System, Flood Protection and River Training Works

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Storm Water Drainage system, Flood Protection and River Training Work	1,611.63	Refer Annexure for details of calculation

The costing for the Storm Water Drainage System and flood protection and River Training work is arrived considering the various projects mentioned in the Structure Plan Report.

Conclusion

The estimated amount for the entire storm water drainage system for Phuentsholing Thromde Area is Nu. 1,611.63 million. It is a large expenditure over the years but it is a necessity looking to the overall progress of the town.

Solid Waste Collection and Disposal System

The proposed Solid Waste Collection and Disposal System aim at:

- Managing the Solid waste at source level by segregating the wastes into recyclable and reusable wastes, organic wastes and other rubbish.
- The main objective of the proposed Solid Waste Collection and Disposal System is to
 - a) To manage and minimize the volume of solid waste carried to the landfill site.
 - b) To alter the methodology of solid waste collection and disposal system.
 - c) To manage the solid waste at the source level.
 - d) To extend the services of the solid waste collection network to all the proposed precincts.
 - e) To decentralized the solid waste management system to other institutions and organizations. Large institutions should have their own facilities.
 - f) To promote awareness among the public in managing the solid wastes.

Table 12: Summary of Cost Estimates of the Proposed Solid Waste Collection and Disposal System

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Solid Waste Collection and Disposal System	43.65	Refer Annexure for details of calculation

Conclusion

The estimated amount for the entire solid waste management system for Phuentsholing Thromde Area is Nu. 43.65 million. It is a large expenditure over the years but it is a necessity looking to the overall progress of the town. All the projects mentioned aim to minimize and manage the volume of the solid waste collected at the landfill site. Introduction of strict monitoring system, introduction of public participation and privatization of the solid waste management, will minimize the responsibilities and ease the management process for Phuentsholing Thromde. These systems will also induce awareness among the public.

Electrical (Power) Distribution System

The main objective of the proposed Electrical Power Distribution System is to:

- To provide sufficient electricity requirements to maximum consumption areas.
- To establish a proper mechanism by establishing maintenance centers at key locations.
- To convert the overhead lines network to underground network wherever necessary and feasible.

Pricing of the electrical distribution system should be worked-out as per the number of connections (by strict monitoring) and the investment to be done for the systems.

Table 13: Summary of Cost Estimates of the Proposed Electrical (Power) Distribution System

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Electrical (Power) Distribution System	327.00	Refer Annexure for details of calculation

Conclusion

The estimated amount for the entire electrical distribution system for Phuentsholing Thromde Area is Nu. 327.00 million. It is a large expenditure over the years, but it is a necessity looking at the overall progress of the town. The entire scheme of implementation of the electrical distribution system should be worked-out taking into consideration the amount to be invested and amount to be recovered from the consumers. Separate facilities to be established by the implementing authority.

Street Lighting

The main objective of the proposed Street Lighting System is to:

- To add a character to the streets of different types by providing various types of illumination characteristics.
- To add greater visibility to the vehicular traffic thus reducing the number of accidents.
- The costing for the Street Lighting System is arrived considering the various transportation projects proposed.

Table 14: Summary of Cost Estimates of the Proposed Project for Street Lighting System

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Street Lighting	57.03	Refer Annexure for details of calculation

Conclusions

The estimated amount for the entire street lighting system for the Phuentsholing Thromde Area is Nu. 57.03 million. It is a large expenditure over the years but it is a necessity looking the overall traffic condition of the town. The entire scheme of implementation of the street lighting system should be worked-out taking into consideration the immediate requirements.

Telecommunication System

The main objective of the proposed Telecommunication System is to:

- To upgrade the network system in areas of high demand.
- To increase the capacity of the existing and newly built stations in a phased manner considering the population and the number of connections.

The costing for the Telecommunication System is arrived considering the various proposed tasks. Accordingly, the entire planning network would have to be done from each of the proposed Urban Village roads after executing a detailed survey.

Table 15: Summary of Cost Estimate of the Proposed Telecommunication System

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Telecommunication System	177.13	Refer Annexure for details of calculation

Conclusion

The estimated amount for the entire telecommunication system for Phuentsholing Thromde Area is Nu. 177.13 million. It is a large expenditure over the years but it is a necessity looking the overall demand of the town and its extended limits. The entire scheme of implementation of the telecommunication system should be worked-out taking into consideration a detailed survey of the immediate requirements and also the future demand.

Transportation System

The main objective of the proposed transportation system is to:

- To strengthen the inter-town linkages.
- To reduce the emission levels in the town by promoting the Public Transit System and by discouraging the use of private vehicles.
- To encourage a pedestrian oriented transportation system by enhancing safety and convenience
- To complement the proposed Precinct pattern with appropriate transportation and pedestrian linkages.
- To create opportunities for the general public/ citizens to meet new people and make new friends, which they meet sitting next to them in public transport.

Considering this framework, the following road network system is proposed:

- Upgradation of existing Primary and Secondary Roads (about 26 km);
- New Primary and Secondary Roads (about 35 km) width ranging from 10 to 18m including side footpath and road divider, road side drain, etc.
- A total of about 19 bridges and 33 Culverts are proposed for smooth flow of traffic.

The costing for the Transportation System is arrived taking into consideration the town's present situation. A detailed survey has to be executed on the proposed roads and further make a study on its implication on the surrounding areas of the roads.

Table 16: Summary of Cost Estimate of the Proposed Transportation System

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Transportation System	2,350.99	Refer Annexure for details of calculation

Conclusion

The estimated amount for the entire transportation system for the Phuentsholing Thromde Area is Nu. 2350.99 million. It is a large expenditure over the years but it is a necessity looking the overall traffic movements of the Town, its extended limits and the safety of the public. The entire scheme of implementation of the transportation system should be worked-out taking into consideration a detailed survey of the immediate requirements and also of the future demand.

Local Area Plan Implementation and Landscaping

The main objectives of the proposed Local Area Plan implementation and Landscape design is:

- To establish permanently the boundary limits of Phuentsholing Thromde
- To demarcate the local area plan as per the final approved plan with permanent bench markings
- To implement a beautiful landscape design on both sides of the reclaimed river bank and the important road junctions.

Table 17: Summary of Cost Estimates of the Proposed Local Area implementation and Landscaping:

Utilities and Infrastructure	Estimated Cost	Remark
	Nu in Million	
Local Area Plan Implementation and Landscaping	57.25	Refer Annexure for details of calculation

The costing of the system is arrived taking into consideration the town's present situation, future growing prospects and importance. A detailed survey has to be executed on the proposed reclaimed area and further make a study on its implication on the total township.

Conclusion

The estimated amount of the entire system for within Phuentsholing Thromde Area is Nu. 57.25 million. It is a large expenditure over the years but it is a necessity looking to the overall location and importance of the town. The entire scheme of implementation of the landscape design should be worked out taking into consideration a detailed survey of the immediate and future prospects of the town.

Table 18: Abstract of Cost Estimate

Sl. No.	Utilities and Infrastructure	Estimated Cost
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		Nu in Million
1	Water Supply System and Network System	844.94
2	Sewerage System	803.42
3	Storm Water Drainage system, Flood Protection and River Training Work	1,611.63
4	Solid Waste Collection and Disposal System	43.65
5	Electrical (Power) Distribution System	327.00
6	Street Lighting	57.03
7	Telecommunication System	177.13
8	Transportation System	2,350.99
9	Local Area Plan Implementation and Landscaping	57.25
	Total	6,273.04

ANNEXURE

TABLE 19: COST ESTIMATE OF THE PROPOSED PROJECTS FOR WATER SUPPLY SYSTEM AND ITS NETWORK

								1 USD = Nu. 55
Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost			Remarks
					(Nu.)	Nu. In Million	USD in Million)	
A	Raw Water Transmission & Raw Water Reservoir							
	Raw Water Sump	2	Nos	400,000	800,000.00	0.8	0.015	
	Raw Water Pumps	4	Nos	1,000,000	4,000,000.00	4	0.073	
	Raw Water Transmission main	25,000	m	3,945	98,625,000.00	98.625	1.793	
	Raw Water Reservoirs at Toorsa Tar	80	m3	12,000	960,000.00	0.96	0.017	
	Raw Water Reservoirs at Gurungdara	50	m3	12,000	600,000.00	0.6	0.011	
	Raw Water Reservoirs at Pekarshing (Toribari)	50	m3	12,000	600,000.00	0.6	0.011	
B	Water Treatment Plant & Treated Water Reservoirs							
	Water Treatment Plant at Toorsa Tar	8	MLD	17,800,000	133,500,000.00	133.5	2.427	
	Water Treatment Plant at Pekarshing (Toribari)	5	MLD	17,800,000	80,100,000.00	80.1	1.456	
	Water Treatment Plant at Gurung Dara	4	MLD	17,800,000	66,750,000.00	66.75	1.214	

								1 USD = Nu. 55
Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost			Remarks
					(Nu.)	Nu. In Million	USD in Million)	
	Treated Water Reservoir at Toorsa Tar	270	m3	12,000	3,240,000.00	3.24	0.059	
	Treated Water Reservoir at Pekarshing (Toribari)	270	m3	12,000	3,240,000.00	3.24	0.059	
	Treated Water Reservoir at Gurung Dara	270	m3	12,000	3,240,000.00	3.24	0.059	
C	Break Pressure Tanks							
	RCC Break Pressure Tanks	4	Nos	905,000	3,620,000.00	3.62	0.066	
D	Distribution Networks							
	Distribution Networks to Consumer Points	80,000	m	2,100	168,000,000.00	168	3.055	
	Fire Hydrant Networks	40,000	m	5,000	200,000,000.00	200	3.636	
	Water Meter Installation	1,755	Nos	4,500	7,897,500.00	7.8975	0.144	
	Total (A+B+C+D)					775.173	14.094	
E	Design & Supervision Cost							
	Design of the System	0				31.007	0.564	In % of construction cost

1 USD = Nu. 55								
Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		Remarks	
					(Nu.)	Nu. In Million		USD in Million)
	Supervision and Administrative Cost	0				38.759	0.705	In % of construction cost
	Total (A+B+C+D+E)					844.94	15.36	

Note: a) The item rate costs mentioned are inclusive of cost of material and labor.

b) The system proposed of treatment plants, reservoirs and water supply network is tentative based on the structure plan proposals and should be systemized by executing a proper survey for the source, for positioning of the reservoirs and further distribution network of pipelines with respect to its diameter, type of pipe and it's laying.

c) After the detailed survey the entire system should be designed by a Expert in Water Supply System.

Table 20: Cost Estimate for the Proposed Sewerage Scheme and Network System

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		USD in Million	Remarks
					(Nu.)	Nu. In Million		
A	Sewage Treatment Plant including desludging and sludge drying beds							
	Sewage Treatment Plant at Toorsa Tar	2	MLD	47,000,000	111,979,092.95	111.979	2.036	
	Sewage Treatment Plant at Aum Mo Chhu	3	MLD	47,000,000	134,850,808.43	134.851	2.452	
	Sewage Treatment Plant at above Kabreytar	0	MLD	47,000,000	707,097.97	0.707	0.013	
	Sewage Treatment Plant at Kharaley, Khareyphu, Dokhiya	0	MLD	47,000,000	13,949,772.06	13.950	0.254	
	Sewage Treatment Plant at Lower Rinchending	0	MLD	47,000,000	10,504,562.90	10.505	0.191	
	Sewage Treatment Plant at Ahlay	0	MLD	47,000,000	22,219,284.24	22.219	0.404	
	Sewage Treatment Plant at Pekarshing (Toribari)	2	MLD	47,000,000	95,056,266.46	95.056	1.728	
	Sewage Treatment Plant at Changmari and Gurung Dangra	2	MLD	47,000,000	73,190,206.95	73.190	1.331	
	Sewage Treatment Plant at Malbase	1	MLD	47,000,000	36,863,837.12	36.864	0.670	
	Pasakha (Industrial Area)	0	MLD	47,000,000	8,859,313.84	8.859	0.161	
B	Sewer Networks							

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		USD in Million)	Remarks
					(Nu.)	Nu. In Million		
	Sewer Networks Complete	60,000	m	3,815	228,900,000.00	228.9	4.162	
	Total (A+B)					737.080	13.401	
C	Design & Supervision Cost							
	Design of the System	0				29.483	0.536	In % of construction cost
	Supervision and Administrative Cost	0				36.854	0.670	In % of construction cost
	Total (A+B+C)					803.42	14.61	

Note

- :
- The item rate costs mentioned are inclusive of cost of material and labor including pipe lines, manholes, etc.
 - The system proposed of treatment plants, Sewer network is tentative based on the structure plan proposals and should be systemized by executing a proper survey.
 - After the detailed survey the entire system should be designed by a Expert in Sewerage System.

TABLE 21: COST ESTIMATE FOR STORM WATER DRAINAGE SYSTEM, FLOOD PROTECTION & RIVER TRAINING WORKS

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		Remarks	
					(Nu.)	Nu. In Million		USD in Million)
A	Protection & River Training Works							
	RCC Retaining Wall (Height 3 to 5 m)	1,760m		30,560	53,785,600.00	53.786	0.978	
	RRM Retaining Wall (Height up to 3m)	5,270m		8,660	45,638,200.00	45.638	0.830	
	River Training Works	31,240m		39,850	1,244,914,000.00	1,244.914	22.635	
B	Storm Water Drainage							
	Storm water drains	35,000m		3,835	134,225,000.00	134.225	2.440	
	Total (A+B)					1,478.563	26.883	
C	Design & Supervision Cost							
	Design of the System	0				59.143	1.075	In % of construction cost
	Supervision and Administrative Cost	0				73.928	1.344	In % of construction cost
	Total (A+B+C)					1,611.63	29.30	

Note: Note: a) The item rate costs mentioned are inclusive of cost of material and labor.

b) An expert should be employed to explore the Support System proposed.

TABLE 22: COST ESTIMATE FOR THE PROPOSED SOLID WASTE MANAGEMENT SYSTEM

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		USD in Million)	Remarks
					(Nu.)	Nu. In Million		
A	Collection Structures							
	Land Fill Site	2	Nos	8,800,000	17,600,000.00	17.600	0.320	
	Transfer Station	3	Nos	1,150,000	3,450,000.00	3.450	0.063	
	Waste Segregation Bins	500	Nos	3,000	1,500,000.00	1.500	0.027	
	Waste Compactor/ Collector	5	Nos	2,500,000	12,500,000.00	12.500	0.227	
	Back Hoe Loader	2	Nos	2,500,000	5,000,000.00	5.000	0.091	
	Total (A)					40.050	0.728	
B	Design & Supervision Cost							
	Design of the System	0				1.602	0.029	In % of construction cost
	Supervision and Administrative Cost	0				2.003	0.036	In % of construction cost
	Total (A+B)					43.65	0.79	

Note: a) The item rate costs mentioned are inclusive of cost of material and labor.

b) After the detailed survey the entire system should be designed by a Expert in Solid Waste System.

TABLE 23: COST ESTIMATE FOR ELECTRICAL DISTRIBUTION SYSTEM

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost			Remarks
					(Nu.)	Nu. In Million	USD in Million)	
A	Transformer							
	Transformers	16	Nos	4,600	73,600.00	0.074	0.001	
B	Electrical Distribution Lines							
	UG Cable	61,530	m	2,717	167,194,853.70	167.195	3.040	
	Electrical Cable duct	60,000	m	5,000	300,000,000.00	300.000	5.455	
	Total (A+B)					300.000	5.455	
C	Design & Supervision Cost							
	Design of the System	0				12.000	0.218	In % of construction cost
	Supervision and Administrative Cost	0				15.000	0.273	In % of construction cost
	Total (A+B+C)					327.00	5.95	

Note:

a) The item rate costs mentioned are inclusive of cost of material and labor.

b) The Support System is proposed and needs a very critical approach on the design of the system. An expert should be employed to explore the Support System proposed.

TABLE 24: COST ESTIMATE FOR THE PROPOSED STREET LIGHTING SYSTEM

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		USD in Million)	Remarks
					(Nu.)	Nu. In Million		
A	Street Lighting System							
	On proposed new roads	31,957	m	444	14,187,949.29	14.188	0.258	
	On existing roads	29,573	m	444	13,129,524.81	13.130	0.239	
	High Masts (in selective areas)	10	Nos	2,500,000	25,000,000.00	25.000	0.455	
	Total (A)					52.317	0.951	
B	Design & Supervision Cost							
	Design of the System	0				2.093	0.038	In % of construction cost
	Supervision and Administrative Cost	0				2.616	0.048	In % of construction cost
	Total (A+B)					57.03	1.04	

- Note:
- The item rate costs mentioned are inclusive of cost of material and labor.
 - The system proposed is tentative based on the structure plan proposals and should be systemized by executing a proper survey.
 - After the detailed survey the entire system should be designed by a Expert in Electrical System.
 - The high masts light are required in selective area like border area for security reasons.

TABLE 25: PROPOSED TELE-COMMUNICATION SYSTEM

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost			Remarks
					(Nu.)	Nu. In Million	USD in Million)	
A	Telecommunication System							
	Up-gradation of present exchange	1	m	7,500,000	7,500,000.00	7.500	0.136	
	Underground Network	32,500	m	2,000	65,000,000.00	65.000	1.182	
	Telecommunication duct	30,000	Nos	3,000	90,000,000.00	90.000	1.636	
	Total (A)					162.500	2.955	
B	Design & Supervision Cost							
	Design of the System	0				6.500	0.118	In % of construction cost
	Supervision and Administrative Cost	0				8.125	0.148	In % of construction cost
	Total (A+B)					177.13	3.22	

Note:

a) The item rate costs mentioned are inclusive of cost of material and labor.

TABLE 26: COST ESTIMATE OF THE PROPOSED TRANSPORTATION SYSTEM

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		USD in Million)	Remarks
					(Nu.)	Nu. In Million		
A	Upgradation of Existing Roads							
	Primary Roads, 18.60m	5,810	m	32,000	185,920,000.00	185.92	3.380	
	Primary Roads, 15.40m	473	m	26,000	12,298,000.00	12.298	0.224	
	Secondary Roads, 11.30m	9,153	m	19,000	173,907,000.00	173.907	3.162	
	Secondary Roads, 10.00m	11,377	m	17,000	193,409,000.00	193.409	3.517	
B	Proposed New Roads							
	Primary Roads, 18.60m	8,430	m	32,000	269,760,000.00	269.76	4.905	
	Primary Roads, 15.40m	2,760	m	31,000	85,560,000.00	85.56	1.556	
	Secondary Roads, 11.30m	12,138	m	19,000	230,622,000.00	230.622	4.193	
	Secondary Roads, 10.00m	11,389	m	17,000	193,613,000.00	193.613	3.520	
C	Bridge & Culverts							
	Bridges							
	Am Mo Chhu, 3 nos	350	m	910,000	318,500,000.00	318.5	5.791	
	Grid K, N, O, 3 nos	45	m	910,000	40,950,000.00	40.95	0.745	
	Lower Rinchending, 1 no.	60	m	910,000	54,600,000.00	54.6	0.993	
	Around Grid K,N &O, 3 nos	45	m	910,000	40,950,000.00	40.95	0.745	
	Near Grid P, 3 nos	60	m	910,000	54,600,000.00	54.6	0.993	
	Near Grid Q, 1 no.	30	m	910,000	27,300,000.00	27.3	0.496	
	Near Grid V, 1 no.	225	m	910,000	204,750,000.00	204.75	3.723	

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		Remarks	
					(Nu.)	Nu. In Million		USD in Million)
	Near Grids X & Y, 3 nos	70	m	910,000	63,700,000.00	63.7	1.158	
	Near Grid X (Short span), 1 no.	8	m	310,000	2,325,000.00	2.325	0.042	
	Culverts							
	RCC Box Culverts, 4m span	16	Nos	177,000	2,832,000.00	2.832	0.051	
	Hume Pipe Culverts, 3m span	17	Nos	75,000	1,275,000.00	1.275	0.023	
	Total (A+B+C)					2,156.871	39.216	
D	Design & Supervision Cost							
	Design of the System	0				86.275	1.569	In % of construction cost
	Supervision and Administrative Cost	0				107.844	1.961	In % of construction cost
	Total (A+B+C+D)					2,350.99	42.75	

Note: a) The item rate costs mentioned are inclusive of cost of material and labor.

b) After the detailed survey the road alignment and the cross-section to be finalized with a Road Designer/Expert.

TABLE 27: COST ESTIMATE FOR LOCAL AREA PLAN IMPLEMENTATION AND LANDSCAPING

Sl.No.	Utilities and Infrastructure	Quantity	Unit	Estimated Rate (Nu.)	Estimated Cost		USD in Million)	Remarks
					(Nu.)	Nu. In Million		
A	Preparation of Local Area Plan							
	For Extended Municipality Area including demarcation	8,079,985	m2	2	12,119,977.95	12.120	0.220	
B	Landscape Design							
	Landscape Implementation, 10% of the total area	807,999	m2	50	40,399,926.50	40.400	0.735	
	Total (A)					52.520	0.955	
B	Design & Supervision Cost							
	Design of the System	0				2.101	0.038	In % of construction cost
	Supervision and Administrative Cost	0				2.626	0.048	In % of construction cost
	Total (A+B)					57.25	1.04	

Note:

- a) The boundary limits of Phuentsholing Thromde needs to be established permanently.
- b) Local Area Plan needs to be demarcated as per the final approved plan with permanent bench marking.

Table 28: Project Phasing

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Old Municipal Area	1	Demarcation of the International Boundary Buffer Zone (15m wide no development zone)	●				
	2	Redevelopment of the Gol Building Complex	●				
	3	School Development in existing GREF premises		●			
Old Municipal Area	4	Expansion/ upgradation of Sewerage Tank			●		
	5	Warehouses Relocation & Workshop development	●				
	6	Implementation of Public Transport System		●		●	
Old Municipal Area	7	Development of Transit Node at the existing RSTA premises		●			
	8	4-laning of road from 1st Gate to junction below present Thomde Office	●				
	9	Relocation of the Petrol Pump near the 1st Gate	●				
Old Municipal Area	10	4-laning of road from junction below present Thomde Office and by-pass		●			
	11	Development of Government Housing projects within identified location	●		●		●
	12	Development of Wild Life Sanctuary		●			
Old Municipal Area	13	Relocation of the Crocodile Park to the Wild Life Sanctuary			●		

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Old Municipal Area	14	Upgradation of the existing hospital to a 100 bedded hospital				●	
Am Mo Chhu	1	Phuentsholing-Samtse Highway	●				
	2	River Training (Highway Side)	●				
Am Mo Chhu	3	01- Local Area Plan preparation (70 Acres)	●				
	4	02- Local Area Plan Preparation (Hydropower Colony at Toorsa Tar)				●	
Am Mo Chhu	5	LAP 01- Implementation	●	●			
	5a	Roads & Storm Water Drains		●			
	5b	Water, Sewer Lines, Street lighting and Telecommunication		●			
	5c	Sports Complex		●			
Am Mo Chhu	5d	Lower & Middle Secondary School (LAP-01)		●			
	5e	Off-street pedestrian pathways		●			
	5f	Open Spaces Development & Landscaping		●	●		
	5g	Implementation of Public Transport System			●		
Am Mo Chhu	5h	Construction of Bridges across Am Mo Chhu (2 nos.)			●		

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Am Mo Chhu	5i	Construction of Bridges across Am Mo Chhu (3 nos.)					●
	5j	Construction of Pedestrian Bridges across Am Mo Chhu (01 no.)		●			
	5k	Construction of Pedestrian Bridges across Am Mo Chhu (01 no.)			●		
Am Mo Chhu	5l	Construction of Pedestrian Bridges across Am Mo Chhu (01 no.)					●
	5m	Road network Development across the river			●		
	5n	Tourism Projects Implementation across Am Mo Chhu			●	●	
	6	LAP 02 (Toorsa Tar)- Implementation					●
Pocket between Dhamdara & Kabreytar	1	Roads & Storm Water Drains	●				
	2	Water, Sewer Lines, Street lighting and Telecommunication	●				
Kharaley, Khareyphu and Dokhiya	1	River Training Works along Om Chhu	●				
	2	Local Area Plan Preparation	●				
	3	Road Access from ongoing By-pass road		●			

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Kharaley, Khareyphu and Dokhiya	4	Local Area Plan Implementation					
	4a	Roads, Bridge connecting Kabreytar & Storm Water Drains		●			
	4b	Water Supply Network, Street lighting and Telecommunication		●			
Kharaley, Khareyphu and Dokhiya	4c	Laying of Sewer Lines & connecting to the existing system in the core area				●	
	4d	Open Spaces Development & Landscaping			●		
	4e	Off-street pedestrian pathways			●		
	4f	Implementation of Public Transport System				●	
Rinchending	1	Local Area Plan Preparation (ongoing)	●				
	2	Detailed Survey with 1m interval contours	●				
	3	Detailed demarcation of high hazard zones and zones with slopes above 30%	●				
Rinchending	4	Local Area Plan Implementation		●			
	4a	River Training works for stream between Rinchending and Ahlay		●			
	4b	Roads, Bridge connecting Ahlay & Storm Water Drains		●			
	4c	Water Supply Network, Street lighting and Telecommunication		●			

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Rinchending	4d	Laying of Sewer Lines					●
	4e	Implementation of mechanized Sewage Treatment Plant					●
	4f	Open Spaces Development & Landscaping			●		
Rinchending	4g	Off-street pedestrian pathways			●		
	4h	Implementation of Public Transport System				●	
Ahlay	1	Local Area Plan Preparation (ongoing)	●				
	2	Detailed Survey with 1m interval contours	●				
	3	Detailed demarcation of high hazard zones and zones with slopes above 30%	●				
Ahlay	4	Local Area Plan Implementation		●			
	4a	River Training works for stream between Ahlay and Pekarshing (Toribari)		●			
	4b	Roads, Bridge connecting Pekarshing (Toribari) & Storm Water Drains		●			
Ahlay	4c	Domestic Water Supply System (tapping at source, construction of reservoirs)		●			
	4d	Water Supply Network, Street lighting and Telecommunication		●			
	4e	Laying of Sewer Lines					●

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Ahlay	4f	Implementation of mechanized Sewage Treatment Plant					●
	4g	Open Spaces Development & Landscaping			●		
	4h	Off-street pedestrian pathways			●		
Ahlay	4i	Expansion of Solid Waste Disposal Site			●		●
	4j	Implementation of Public Transport System				●	
Pekarshing (Toribari) and Khogla	1	Local Area Plan Preparation	●				
	2	Detailed Survey with 1m interval contours	●				
	3	Detailed demarcation of high hazard zones and zones with slopes above 30%	●				
Pekarshing (Toribari) and Khogla	4	Local Area Plan Implementation		●			
	4a	River Training works for stream between Ahlay and Pekarshing (Toribari)		●			
	4b	Roads, Foot Bridge & Storm Water Drains		●			
Pekarshing (Toribari) and Khogla	4c	2-lanes road construction of the proposed 4-lane corridor to be implemented		●			
	4d	Establishment & Development of 3rd Gate, truck parking and bridge along the 3rd Gate	●				
	4e	Construction of Middle Secondary School			●		

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Pekarshing (Toribari) and Khogla	4f	Establishment of Thromde Office (local)		●			
	4g	Water Supply Network, Street lighting and Telecommunication		●			
	4h	Laying of Sewer Lines					●
Pekarshing (Toribari) and Khogla	4i	Implementation of mechanized Sewage Treatment Plant					●
	4j	Open Spaces Development & Landscaping			●		
	4k	Off-street pedestrian pathways			●		
Pekarshing (Toribari) and Khogla	4l	Implementation of Public Transport System			●		
	4m	Development of additional two lanes (as a part of 4-lane Corridor)					●
Malbase	1	Local Area Plan Preparation	●				
	2	Detailed Survey with 1m interval contours	●				
	3	Detailed demarcation of high hazard zones and zones with slopes above 30%	●				
Malbase	4	Local Area Plan Implementation		●			
	4a	River Training works for Bhalu Jhora Chhu		●			
	4b	Bridge across Bhalu Jhora Chhu	●				

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Malbase	4c	Roads, Foot Bridge & Storm Water Drains			●		
	4d	Development of Dry Port Estate	●				
	4e	Development of Railway Head				●	
Malbase	4f	Construction of Lower Secondary School				●	
	4g	Water Supply Network, Street lighting and Telecommunication			●		
	4h	Laying of Sewer Lines					●
	4i	Implementation of mechanized Sewage Treatment Plant					●
Malbase	4j	Open Spaces Development & Landscaping			●		
	4k	Off-street pedestrian pathways			●		
	4l	Implementation of Public Transport System			●		
	4m	Development of additional two lanes (as a part of 4-lane Corridor)					●
Chengmari & Gurungdangra	1	Local Area Plan Preparation	●				
	2	Detailed Survey with 1m interval contours	●				
	3	Detailed demarcation of high hazard zones and zones with slopes above 30%	●				

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Chengmari & Gurungdangra	4	Local Area Plan Implementation		●			
	4a	River Training works for Pasakha Chhu		●			
	4c	Roads, Foot Bridge & Storm Water Drains			●		
Chengmari & Gurungdangra	4d	Development of BHU	●				
	4e	Establishment of Thromde Office (local)		●			
	4f	Construction of Lower Secondary School				●	
Chengmari & Gurungdangra	4g	Water Supply Network, Street lighting and Telecommunication			●		
	4h	Laying of Sewer Lines					●
	4i	Implementation of mechanized Sewage Treatment Plant					●
Chengmari & Gurungdangra	4j	Open Spaces, Sports Complex Development & Landscaping			●		
	4k	Off-street pedestrian pathways			●		
	4l	Implementation of Public Transport System			●		
	4m	Development of additional two lanes (as a part of 4-lane Corridor)					●

Neighborhood	Sr. No.	Project	Project Phasing and Implementation Schedules				
			3 Years	3 Years	3 Years	3 Years	3 Years
			2013-2016	2016-2019	2019-2022	2022-2025	2025-2028
Pasakha		Development of Fire Station and Police Station		●			
		Development of additional two lanes (as a part of 4-lane Corridor)					●

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