

TRANS INDUS RESIDENTS ASSOCIATION



Trans Indus

Building Bye Laws

Version History

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PREFACE

The Trans Indus Residents Association was created and registered in October 2001 for the purpose of providing a forum for discussions and decisions on the creation and maintenance of the Trans Indus campus.

The initial residents of the campus had fanatically bought in into the concept of biodiversity, water and natural resource conservation, under the guidance of the promoters of the campus Bio-diversity Conservation India Limited (BCIL). It is envisaged that over time, this fervour would be diluted by more commercial considerations, the lack of time that BCIL would have to guide the new residents and the absence of the original members.

As the green belt shifts and more residences are created, the council will be hard pressed to monitor and guide the new residents and architects about the theme of this place.

Furthermore, the campus may come under the BDA/ BMP/BMRDA or any such authority authorised to supervise building of residences. The bye-laws given here are in conformance with the BMP guidelines of 2003 and in fact have been made more stringent, keeping in view that this is a campus with a conservation motive.

It is envisaged that this document is used as a guideline for all residents building houses in Trans Indus so that there is a commonality of style and purpose while keeping the originality and creativity inherent in each building. After all, it would be boring if all houses looked the same!

Thank you for choosing Trans Indus.

Sincerely

The Early residents
2005.

1 GENERAL

- 1.1 These Bye-Laws shall be called “The Trans Indus Residents Association Building Bye-laws” (TIRABB).
- 1.2 These bye-laws are derived from “The Bangalore City Corporation Building Bye – Laws 2003” and shall be applicable only to the residential building created by the members of Trans Indus campus. For all omissions, “The Bangalore City Corporation Building Bye – Laws 2003” or any subsequent versions thereof would be valid.
- 1.3 In case of a situation not covered under any of the bye-laws mentioned above, or if the Council determines a more stringent interpretation of “The Bangalore City Corporation Building Bye – Laws 2003”, the Council shall determine the appropriate bye-law and pass a resolution to that effect, adding it the extant bye-laws as a new version.
- 1.4 These bye-laws shall come into operation immediately after their acceptance and consequent publication at the at the Trans Indus website (www.transindus.net). All modifications shall be done as per the version control system specified on the cover page.

2 DEFINITIONS.¹

- 2.1 In these Bye-laws, unless the context otherwise requires, the expressions given below shall have the meaning indicated against each of them.
- 2.2 **‘Act’** means the Karnataka Municipal Corporations Act, 1976.
- 2.3 **‘Agriculture’** includes horticulture, farming, growing of crops, fruits, vegetables, flowers, grass, fodder, trees of any kind or cultivation of soil, breeding and keeping of live stock including cattle, horses, donkeys, mules, pigs, fish, poultry and bees, the use of land which is ancillary to the farming of land or any purpose aforesaid but shall not include the use of any land attached to a building for the purpose of garden to be used along with such building; and ‘agricultural’ shall be construed accordingly.
- 2.4 **‘Alteration’** means a change from one use to another, or a structural change such as an addition to the area or height, or the removal of part of building, or any change to the structure such as construction or, cutting into or removal of any wall, partition, column, beam, joint, floor or other support, or a change to or closing of any required means of ingress or egress.
- 2.5 **‘Apartment’** means a room or suite or rooms, which is occupied or which is intended or designed to be occupied by one family for living purpose.
- 2.6 **‘Applicant’** means any person who gives notice to the Authority with an intention to erect or re-erect or alter a building.
- 2.7 **‘Authority’** means the Trans Indus Residents Association (TIRA) or the Trans Indus Residents Association Council (TIRAC) to whom the powers of permission of building licences are delegated by the TIRA. This is synonymous with the term ‘Council’. This is different from ‘Government Authority’.
- 2.8 **‘Association’** means the Trans Indus Residents Association, formed and registered on October 3, 2001 with the Registrar of Societies, Bangalore Urban District.
- 2.9 **‘Balcony’** means a horizontal cantilever projection including a handrail or balustrade, to serve as passage or sit out place.
- 2.10 **‘Basement storey or cellar’** means any storey, which is partly/wholly below the ground level. The basement height should not project more than one metre above the average ground level.
- 2.11 **‘BCIL’** is an abbreviation of the promoters of the campus – Biodiversity Conservation India Limited.
- 2.12 **‘Building’** includes:
 - 2.12.1 a house, out-house, stable, privy, shed, well, veranda, fixed platform, plinth, door step and any other such structure whether of masonry, bricks, wood, mud, metal or any other material whatsoever;
 - 2.12.2 a structure on wheels simply resting on the ground without foundation;
 - 2.12.3 a ship, vessel, boat, tent and any other structure used for human habitation or used for keeping animals or storing any article or goods.

¹ The words and expressions not defined in these bye-laws shall have the same meaning as in the Karnataka Municipal Corporations Act, 1976 and the Karnataka Town and Country Planning Act, 1961.

- 2.13 **'Building line'** means the line up to which the plinth of buildings may lawfully extend on a street or an extension of a street and includes the line prescribed, if any, in any scheme.
- 2.14 **'Building plan'** covers all architecture and related plans pertaining to the construction of the building. This will include working drawings and versions thereof.
- 2.15 **'Chejja'** means a continuous sloping or horizontal cantilever projection provided over an opening or external wall to provide protection from sun and rain.
- 2.16 **'Chimney'** means a structure usually vertical containing a passage or flue by which the smoke, gas, etc., of a fire or furnace are carried off and by means of which a draught is created.
- 2.17 **'Commercial building'** means a building or part of a building, which is used as shops, and/or market for display and sale of merchandise either wholesale or retail, building used for transaction of business or the keeping of accounts, records for similar purpose; professional service facilities, petrol bunk, restaurants, lodges, nursing homes, cinema theatres, banks, clubs run on commercial basis. Storage and service facilities incidental to the sale of merchandise and located in the same building shall be included under this group, except where exempted.
- 2.18 **'Common wall'** means
- 2.18.1 a wall built on land belonging to two adjoining owners, the wall being the joint property of both owners.
- 2.18.2 if two adjoining owners build a dividing wall on their property they are not common walls and no part of the footings of either wall shall project on to the land of the adjoining owner, except by legal agreement between the owners. Any such 'common' or 'dividing' wall shall be considered for the purpose of these bye-laws, as being equivalent to an external wall as far as the thickness and height are concerned.
- 2.19 **'Corner plot'** means a plot facing two or more intersecting streets.
- 2.20 **'Corporation'** means the Bangalore City Corporation established under the Act, which is also called as the Bangalore Mahanagara Palike.
- 2.21 **'Court yard'** means a space open to the sky, enclosed or partially enclosed by buildings, boundary walls, or railings. It may be at the ground floor level, or at any other level within or adjacent to buildings.
- 2.22 **'Council'** refers to the elected office bearers of the Trans Indus Residents Association, as per the rules and regulations of the association.
- 2.23 **'Coverage'** or plot coverage shall be

$$\text{Coverage} = \frac{\text{Maximum covered area of the building at any floor level}}{\text{Plot Area}}$$

Coverage shall be represented in the form of a percentage.

- 2.24 **'Covered area'** means area covered by building /buildings immediately above the plinth level, but does not include the space covered by
- 2.24.1 garden, rocky area, well and well structures, plant, nursery, water pool, swimming pool (if uncovered) platform around a tree, tank, fountain, bench with open top and unenclosed sides by walls and the like;
- 2.24.2 drainage, culvert, conduit, catch-pit, gullypit, chamber gutter and the like;
- 2.24.3 compound or boundary wall, gate, un-storeyed porch and portico, chejja, slide, swing, uncovered staircase, watchman booth and pump-house. The area covered by watchman booth/pump-house shall not exceed three square metres; and
- 2.24.4 sump tank and electric transformer.
- 2.25 **'Cross wall'** - means an internal wall within the building up to the roof level or lintel level.
- 2.26 **'Density'** means concentration of population expressed in terms of number of persons per hectare in a particular area.
- 2.27 **'Detached building'** means a building, the walls and roof of which are independent of any other building with open spaces on all sides.
- 2.28 **'Development'** with its grammatical variations- means the carrying out of building, engineering, mining or other operations in, or over or under land or the making of any material change in any building or land or in the use of any building or land and includes sub-division of any land.
- 2.29 **'Development plan'** typically means Outline Development Plan or Comprehensive Development Plan or Revised Comprehensive Development Plan for the City of Bangalore

approved by the Government under the Karnataka Town and Country Planning Act, 1961. In case of TIRABB, the campus and the common area development plans will also fall under this definition.

- 2.30 **'Drain'** means any pipe or other construction emanating from a plumbing fixture unit, traps, gullies, floor traps, etc., which carries water, or waste water in a building and connects to the drainage system.
- 2.31 **'Drainage'** means the removal of any waste liquid by a system constructed for this purpose.
- 2.31.1 **'Black water'** means all sewage that emanates from commodes, bidets, WCs and other associated sanitary fittings
- 2.31.2 **'Grey water'** means all drain water that emanates from sinks and other outlets which does not have anything in common with 'black water'.
- 2.32 **'Dwelling unit/ tenement'** means an independent housing unit with separate facility for living, cooking and sanitary requirements.
- 2.33 **'Exit'** means a passage, channel or means of egress from any floor to a street or other open space of safety.
- 2.34 **'External wall'** means an outer wall of the building not being a partition wall even though adjoining a wall of another building and also a wall abutting on an interior open space of any building.
- 2.35 **'First floor'** means the floor immediately above the ground floor, on which second and other floors follow subsequently.
- 2.36 **'Floor'** means the lower surface in a storey on which one normally walks in a building. The general term 'floor' does not refer basement or cellar floor and mezzanine.
- 2.37 **'Floor area ratio'** (F.A.R. or FAR) means the quotient obtained by dividing the total covered area of all floors by the area of the plot. Floor area includes the mezzanine floor also.

$$FAR = \frac{\text{Total area covered of ALL floors}}{\text{Plot Area}}$$

- 2.38 **'Footing'** means the projecting courses at the base of a wall to spread the weight over a large area.
- 2.39 **'Foundation'** means that part of structure which is below the lowest floor and which provides support for the superstructure and which transmits the load of the superstructure to the bearing strata.
- 2.40 **'Frontage'** means the measurement of the side of any site abutting the road.
- 2.41 **'Garage'** means a structure designed or used for the parking of vehicles.
- 2.42 **'Government'** means the Government of Karnataka or the Government of India.
- 2.43 **'Government Authority'** means all departments of the government that are involved in any aspect of building construction. This would include, inter alia, the Banaglaore Mahanagara Palike, the Bangalore Development Authority, the Agara Panchayat, the BMRDA, the BWSSB and the KEB.
- 2.44 **'Ground floor'** means immediately above the level of the adjoining ground level on all sides, sides or above the basement floor.
- 2.45 **'Group housing'** means more than two buildings on a plot with one or more floors and with one or more dwelling units in each floor. They are connected by an access of not less than 3.5m in width, if they are not approachable directly from the road.
- 2.46 **'Habitable room'** means a room occupied or designed for occupancy by one or more persons for study, living, sleeping, cooking, eating, but does not include bath rooms, water closet compartments, laundries, serving and storage pantries, corridors, cellars, attics and spaces that are not used frequently or during extended periods.
- 2.47 **'Hazardous buildings'** means a building or part of a building which is used for the storage, handling, manufacture or processing of highly combustible or explosive material or products which are liable to burn with extreme rapidity or which may produce poisonous flames or explosives; building used for storage, handling, manufacturing or processing of highly combustible or explosive materials or products which are liable to burn with extreme rapidity and or which may produce poisonous fumes or explosives; buildings used for storage, handling, manufacturing or processing materials which involve highly corrosive, toxic or abnoxious alkalies, acids or other liquor or chemicals producing flame, fumes and explosives, poisonous, irritant or corrosive gasses and for the storage, handling or processing of any materials producing explosive mixtures of dust or which result in the division of matter into fine particles subject to spontaneous ignition.

- 2.48 **'Head room'** where a finished ceiling is not provided, the lower side of the joists or beams or tie-beams shall determine the clear head room.
- 2.49 **'Height of building'** means the vertical distance measured in the case of flat roofs from the average level of the site to the top of the roof and in the case of pitched roofs upto the point where the external surface of the outer wall intersects a finished surface of the sloping roof and in case of gable facing the street, the mid point between the eave-level and the ridge. Architectural features, serving no other function except that of decoration shall be excluded for the purpose of measuring height. Water tank, chimneys, lift room, stair case room, and parapet are also excluded for the purpose of measuring height.
- 2.50 **'High-rise building'** means a building with ground floor plus four or more floors above the ground floor. In case of Trans Indus, this will mean a building with ground floor plus two or more floors above the ground floor.
- 2.51 **'Land use'** includes the purpose to which the site or part of the site or the building or part of the building is in use or permitted to be used by the Authority. Land use includes zoning of land use as stipulated in the development plan and the Zoning Regulations.
- 2.52 **'Licence'** means a permission or authorisation in writing by the Authority to carry out work regulated by the bye-laws.
- 2.53 **'Lift'** means an appliance designed to transport persons or materials between two or more levels in a vertical or substantially vertical direction by means of a guided car platform.
- 2.54 **'Loft'** means a residual space above normal floor level, which may be constructed or adopted for storage purposes.
- 2.55 **'Mezzanine floor'** means an intermediate floor between the ground floor and first floor only. The area of mezzanine floor shall not exceed 1/3 of covered area of ground floor.
- 2.56 **'Non-combustible materials'** means a material which neither burns nor gives off inflammable vapours in sufficient quantity to ignite a pilot flame.
- 2.57 **'Occupancy or use group'** means the principal occupancy for which a building or a part of the building is used or intended to be used. For the purpose of classification of a building according to occupancy, occupancy shall be deemed to include subsidiary occupancies which are contingent upon it.²
- 2.58 **'Open space'** means an area forming an integral part of the plot, left open to sky.
- 2.59 **'Owner'** includes the person for the time being receiving or entitled to receive, whether on his own account or as an agent, power of attorney holder, trustee, guardian, manager or receiver for another person or for any religious or charitable purpose, the rent or profits of the property in connection with which the word is used.
- 2.60 **'Panchayat'** means the Agara Gram Panchayat which currently has the authority to levy taxes, provide basic amenities and approve the building drawings.
- 2.61 **'Parapet'** means a low wall or railing built along the edge of a roof.
- 2.62 **'Parking space'** means an area enclosed or unenclosed, covered or open sufficient in size to park vehicles together with a drive-way connecting the parking space with a street or any public area and permitting the ingress and egress of the vehicles.
- 2.63 **'Penthouse'** means a covered space not exceeding 10 square metres on the roof of a building which shall have at least one side completely open.
- 2.64 **'Person'** includes any body of persons corporate or incorporate.
- 2.65 **'Plinth'** means the portion of a structure between the surface of the surrounding ground and surface of the floor immediately above the ground.
- 2.66 **'Plinth area'** means the built up covered area of the building/buildings immediately above plinth level.
- 2.67 **'Plinth area ratio'** (PAR) is defined as
- $$PAR = \frac{\text{Total plinth area}}{\text{Plot Area}}$$
- 2.68 **'Plinth level'** means the level of the floor of a building immediately above the surrounding ground.
- 2.69 **'Plot or site'** means a continuous portion of land held in one ownership, which is sanctioned under the provisions of the Karnataka Town and Country Planning Act, 1961. A plot shall be

² The building use classification and definitions applicable for the purpose of building bye-laws and land use classification shall be based on the provisions of Zoning Regulations approved under the Karnataka Town and Country Planning Act, 1961 as illustrated in 0.

- demarcated by definite boundary including the land within the curtilage of the building and forming its appurtenance, such as out buildings, yard, court, open space, and garden attached thereto or intended to be occupied therein.
- 2.70 **'Porch or portico'** means a roof cover supported on pillars or cantilevered projection for the purpose of pedestrian or vehicular approach to a building.
- 2.71 **'Public Road'** means the roads in the common area of Trans Indus and the public road around the campus. Although the roads within a campus are private roads, for the purpose of this document, there is no reason to differentiate between the two. In case there is a reason to do so, the document will clearly mention the same. One such occasion is in case of preventing entry of undesirable persons into the campus, wherein the roads inside the campus are termed private and owned by TIRA.
- 2.72 **'Residential building'** means a building used or constructed or adopted to be used wholly for human habitation and includes garages, and other out-houses necessary for the normal use of the building as a residence.
- 2.73 **'Room height'** means the vertical distance measured between the finished floor surface and the finished ceiling surface. Where a finished ceiling is not provided, the under side of the joists or beams or tie-beams shall determine the upper point of measurement.
- 2.74 **'Registered architect/engineer/supervisor'** means a qualified Architect / Engineer / Supervisor registered by the Authority.
- 2.75 **'Row housing'** means row of houses attached to each other by a common wall with only front and rear open spaces.
- 2.76 **'Semi detached building'** means a building on two plots attached to each other by a common or adjacent wall with open spaces (set backs) on three sides.
- 2.77 **'Set back'** means the space between the building and the plot boundary.
- 2.78 **'Set back line'** means a line prescribed under these bye-laws beyond which nothing can be constructed towards the plot boundary.
- 2.79 **'Stair case room'** means a room accommodating the stair and for purpose of providing protection from weather and not used for human habitation.
- 2.80 **'Storey'** means the space between the surface of one floor and the surface of the other floor vertically above or below.
- 2.81 **'TIRA'** is an abbreviation of the Trans Indus Residents Association
- 2.82 **'TIRAC'** is an abbreviation of the Trans Indus Residents Association Council
- 2.83 **'TIRABB'** is an abbreviation of the Trans Indus Residents Association Building Bye-Laws.
- 2.84 **'To abut'** in relation to the building or any portion of it means to touch the road boundary or the adjoining plot or building.
- 2.85 **'To erect'** means to construct a whole or a part of a new building on any site whether previously built upon or not; including additions or alterations to an existing building.
- 2.86 **'Water closet'** means a privy with arrangements for flushing the pan with water but does not include a bathing room.
- 2.87 **'Water harvesting'** means any method of collecting and storing water that, in normal course, would have dissipated into the ground.
- 2.87.1 **Roof water harvesting** pertains to collection and storing of rain water either on the roof or elsewhere.
- 2.87.2 **Rain water harvesting** pertains to collection and storing of rain water that runs off on the ground
- 2.87.3 **Gray water harvesting** pertains to collection, acceptable purification and storing of grey water.
- 2.88 **'Zoning Regulations'** means Zoning of Land use and Regulations issued along with the development plan of Bangalore City prepared under the Karnataka Town and Country Planning Act, 1961 prescribing the uses permissible in different land use zones, the open spaces around buildings, plot coverage, floor area ratio, height of the building, building lines, parking etc.

3. GENERAL BUILDING REQUIREMENTS

REQUIREMENTS OF BUILDING SITES

- 3.1 The sites/plots in Trans Indus are categorised into the following categories based on plot size for the purpose of this document.

Table 1. Category of plot size

Category	Size in square feet	Size in square meters	Number of Plots
A	Less than 8,000	Less than 743	13
B	Approximately 8,000	Approximately 743	22
C	Greater than 8,000 and less than or equal to 20,000	Greater than 743 and less than or equal to 1,858	22
D	Greater than 20,000	Greater than 1,858	6

- 3.2 No piece of land shall be used as a site for the construction of buildings under the following circumstances:
- 3.2.1 if the site is not drained properly or is incapable of being well drained;
 - 3.2.2 if the site is within a distance of nine meters from the water spread area of a tank at full tank level;
 - 3.2.3 if the use of the said site is for the purpose of establishing a factory, warehousing, or work place which in the opinion of the Authority will be a source of annoyance to the health and comfort of the inhabitants of the neighbourhood;
 - 3.2.4 if it violates any provisions of the TIRA development plan and Zoning Regulations
- 3.3 No plan shall be sanctioned for a residential detached building on a plot measuring less than 4000 sqft or having width less than 50 feet.
- 3.4 The distance between any two buildings shall not be less than half of the height of the taller building.
- 3.5 No building shall be erected below an electrical line, as well as within the horizontal distance from the electrical line of 1.2 meters. The vertical distance below the level of the electrical line and the topmost surface of the building corresponding to the minimum horizontal distance, shall be 2.5 meters.
- 3.6 Means of access.
- 3.6.1 No building shall be erected so as to obstruct the means of access of any other building.
 - 3.6.2 No person shall erect a building so as to encroach upon the means of access.
 - 3.6.3 The means of access shall be clearly shown in the plans submitted indicating the width, length from the public road, width of the public road from which the access is taken etc.
 - 3.6.4 Every such means of access shall be drained and lighted to the satisfaction of the Authority. Manhole covers or other drainage, water or any other fittings, laid in such means of access shall be flush with the finished surface level so as not to obstruct the safe movement.
 - 3.6.5 The existing width of the means of access shall not be reduced in any case.

TYPE OF HOUSES

- 3.7 Trans Indus is a campus of independent houses. It does not permit any row houses.
- 3.8 Two or more buildings cannot be created on the same plot.
- 3.9 The earlier generation of houses were based on the Chettinad style with central courtyards, sloping tiled roofs and external cladding of natural material. Most of the roofs are made using Kadappa stone and Kota has been used extensively for flooring.
- 3.10 However, there is no restriction on the construction of houses as per the requirements of the owner subject to an aesthetic conformity with the overall style guidelines.
- 3.11 Semi-detached (back to back or side to side) houses would be permitted under special circumstances for example if immediate families have purchased plots next to each other and would like to construct two houses with a common wall. All such plans should be ratified by the Council and the owners should given a combined written undertaking that this does not violate any Government Authority norms prevailing at the time.

- 3.12 Setbacks, coverage, floor area ratio and road width in respect of semi-detached houses shall be as indicated in Table 2.

Table 2. Semi detached houses

Min. combined area of the neighbouring plots	1,000 sq. mtr.
Coverage	As applicable to Individual plots
Floor area ratio	
Maximum number of floors	
Front setbacks for back to back plots	Shall be equal to the sum of the front and the rear set backs of individual plots
Side set back for plots joined at the side	On a plot on which a semi detached building is proposed the left and the right side setbacks shall be the same as required for the total width of the combined plot treating it is an individual site

- 3.13 For buildings at intersection of streets, entry or exit for the buildings shall be provided away from the point of intersection.

HEIGHT RESTRICTIONS

- 3.14 There will be NO high rise buildings made on the Trans Indus campus above 9.50 meters above the ground. Any constructions on the roof for housing pumps, water softening equipment and solar heaters are not included in this measurement. It also does not include dish antennas, aerials and lightening conductors.
- 3.15 There will at most be a ground floor and 1 storey above the ground floor. There may be a basement underneath the ground floor. There may also be a floor at the mezzanine level. Refer to Bye Law 3.77.
- 3.16 Height exception for the structures on roof: The following appurtenant structures shall not be included in the height of the building.
- 3.16.1 Water tanks and their supports, equipments for ventilation and similar services, lift rooms, roof structures like; stair-case room, pent house, chimneys, parapet walls and other architectural features.
- 3.16.2 The height of parapet wall and architectural features shall not exceed 1.0 metre and the height of other structures shall not exceed three meters for claiming the height exemption.
- 3.16.3 The aggregate area of such structures shall be limited to the extent prescribed in the bye-law 3.50. If this limit is exceeded, the structures shall be considered for reckoning the height of the building.

EXTERIOR OPEN SPACES, COVERAGE AND FLOOR AREA RATIO

- 3.17 Open spaces – Every room intended for human habitation shall abut on an interior or exterior open space or open veranda open to such interior or exterior open space.
- 3.18 The minimum set back required on EACH side of the buildings is given as below. This is to be viewed in conjunction with the Coverage and FAR ratios given below.

Table 3. Exterior Open Spaces/Setbacks In Metres

Depth of plot (in m)	Front	Rear	Width of plot (in meters)	Left	Right
Up to 30	3.00	3.00	Up to 30	2.00	2.00
Between 30+ and 40	4.00	4.00	Between 30+ and 40	3.00	3.00
Between 40+ and 60	6.00	6.00	Between 40+ and 60	5.00	5.00
Over 60	10.0	10.0	Over 60	10.0	10.0

- 3.19 The front and rear set backs shall be with reference to the depth of the site. The depth will be measured at the narrowest place where the house foundation will be laid.
- 3.20 The left and right set backs shall be with reference to the width of the site. The width will be measured at the narrowest place where the house foundation will be laid.
- 3.21 The owner cannot shift the foundation after such a measurement.

- 3.22 The maximum plot coverage and maximum F.A.R. that are permissible for different dimensioned sites³ are set out in Table 4. Coverage And F.

Table 4. Coverage And F.A.R.

Plot Area category	Plot Coverage Max.	F.A.R. Max.
A	35 %	0.60
B	25 %	0.40
C	25 %	0.40
D	16 %	0.25

The following example will illustrate the above concepts

Table 5. Example of Coverage and FAR

Plot size in sqft	Plot category	Max Coverage (%)	Max Coverage (sqft)	Max FAR (%)	Max FAR (sqft)
4,000	A	35 %	1,400	0.60	2,400
8,000	B	25 %	2,000	0.40	3,200
10,000	C	25 %	2,500	0.40	4,000
16,000	C	25 %	4,000	0.40	5,600
24,000	D	16 %	3,840	0.25	6,000

- 3.23 The dimensions in British system if any, adopted for the dimensions of plots may be interpreted as follows in Metric system and set backs may be applied accordingly⁴.

20'-0"	6.0 m
30'-0"	9.0 m
40'-0"	12.0 m
50'-0"	15.0 m
60'-0"	18.0 m
80'-0"	24.0 m

- 3.24 In case where the plinth of the building is not parallel to the property line, the setbacks shall not be less than the specified setbacks at any given point on any side.
- 3.25 For plots with an area of more than 750 sqm. bell mouth entrance shall be provided.
- 3.26 The front set back mentioned above is the minimum. The building shall be shifted back to the building lines, if any declared by any competent authority.

EXEMPTIONS IN OPEN SPACE

- 3.27 Projections
- 3.27.1 Every open space provided either interior or exterior shall be kept free from any structure thereon and shall be open to sky and no cornice, roof or weather shade or chajja more than 0.75 metres wide or 1/3 of open space whichever is less shall over-hang or project over the said open space. These projections shall be permitted within one's own plot boundaries.
- 3.27.2 No projection shall over hang or project over the minimum setback area either in the cellar floor or at the lower level of the ground floor.
- 3.28 Cantilever Portico - A cantilever portico of 3 metres width (maximum) and 4.5 metres length (maximum) may be permitted in the ground floor within the side set back. No access is permitted to the top of the portico for using it as a sit out. Height of the portico shall be not less than 2 metres from the plinth level. The terrace of the portico shall be open to sky. The portico when allowed shall have a clear open space of one meter from the boundary of the property.
- 3.29 Balcony - The projection of the balcony shall be measured perpendicular to the building up to the outermost edge of the balcony. Cantilever projection of the balcony shall be permitted not

³ The BMP guidelines determine the coverage and set back based on the width of the road. We have relaxed this restriction as our coverage ratios are more stringent than BMP.

⁴ The actual conversion ratios are given in SCHEDULE IX. CONVERSION TABLES.

exceeding 1/3 of the setback subject to a maximum of 1.1 mtrs. in the first floor and 1.75 metres in and above the second floor. No balcony is allowed at the ground floor level. The length of the balcony shall be limited to 1/3 of the length of each side of the building.

- 3.30 Cross wall - A cross wall connecting the building and the boundary wall may be permitted limiting the height of such wall to 1.0 meters.

PROVISION OF RAMP IN SETBACK

- 3.31 A ramp provided from surface level of the site to the basement floor shall have a minimum width of 3.50 meters and slope of not more than 1 in 10. No ramp shall be provided within the minimum set back required for the building. However, the ramp which is open to sky is only permissible abutting the building in the set back, provided the minimum margin of two meters is kept free from the adjacent properties. The total length of a ramp in the set back shall not exceed 24 meters. The gradient of a ramp shall start after leaving a minimum distance of two meters from the front boundary of the plot.
- 3.32 The land will be used solely for the purpose of creating residential buildings, as per the rules and regulations of TIRA.

GARAGES

- 3.33 Permanent garages with walls and a roof are part of the main building with minimum setbacks applicable to such a building, provided such a garage is not located at the intersection of roads in the case of corner sites. The length of the garage shall not exceed one third of the length of the corresponding side of the site or 6.00 metres, whichever is less.
- 3.34 In case an open structure is created on pillars and without walls, solely for the purpose of a garage, such norms would be relaxed as under
- 3.34.1 height of the garage does not exceed 3.00 Metres from the ground level;
 - 3.34.2 no other structure can be proposed over the roof of the garage;
 - 3.34.3 the garage should be open on all sides;
 - 3.34.4 length of the garage does not exceed one third of the length of the site or 6 metres, whichever is less;
 - 3.34.5 width of the garage does not exceed 4 metres;
 - 3.34.6 the distance from the outer surface of the garage to the plot boundary is not less than 4.00 metres;
 - 3.34.7 in the case of corner plots, the garage is located at the rear corner diagonally opposite to the road intersection.

GARDENS

- 3.35 The common areas are for biodiversity conservation and therefore will not be manicured in the form of artificial gardens, lawns or parks. These will remain as controlled wilderness for the fauna.
- 3.36 Every house should plant at least 2 tap root based trees which have a long life, which prevents soil erosion and whose leaves contribute to soil nutrition.
- 3.37 At least 30 per cent of the garden area should be in the form of shrubs and other vegetation so that soil erosion and water run off is prevented.
- 3.38 Individual houses can have lawns. However, during times of water rationing, the owner may have to provide water from outside the campus.
- 3.39 The use of Urea, DDT, Metacid and other harmful pesticides is forbidden.

VERMICULTURE

- 3.40 Each house will have a vermiculture trench into which grass, other foliage and biodegradable kitchen waste shall be put.
- 3.41 Any vacant plot can be used by TIRA for vermiculture. This will allow the plot to become more fertile and will provide enough area for compost to be created for the common areas.

DISH TYPE AND OTHER ANTENNAE

- 3.42 It is envisaged that people will install VSAT antennas and other similar antennas for the purpose of communication and/or entertainment. The number of such antennae are not restricted provided they are bunched up in one location and do not cover more than 3 square meters of area. The purpose of this restriction is to ensure the aesthetics of the house.

- 3.43 It is suggested that an appropriate area is earmarked on the roof at the time of design so that there is an open cone of 60 degrees from the vertical in all directions. Wiring will need to be drawn from this area to inside the house such that water and insects do not come along the wire.
- 3.44 Over time, it is envisaged that these facilities will be made common to the entire campus. Give the state of wireless networking, it will become cost effective later to set up a common antenna at the site office and network the campus.

INTERIOR SPACES

- 3.45 The whole of one side of one or more rooms intended for human habitation and not abutting on any of the front, rear or side open spaces shall abut on an interior open space of minimum width of 3 m.

LIMITATIONS OF FLOOR AREA AND COVERED AREA

- 3.46 The coverage, and FAR, for different sizes of plots are given in the Table 4.
- 3.47 The floor area of a building shall be the aggregate area of the floors of all parts of the building including thickness of walls, parking area, staircase rooms, lift rooms, ramps, escalators, machine rooms, balconies, ducts including sanitary ducts, water tanks, lobbies, corridors, foyers and such other parts provided for common service.
- 3.48 The floor area ratio shall exempt the floor area used for the following purposes:
- 3.48.1 parking space
 - 3.48.2 staircase rooms
 - 3.48.3 lift rooms and escalators
 - 3.48.4 ramps
 - 3.48.5 balconies when covered only by roof
 - 3.48.6 ducts including sanitary ducts and
 - 3.48.7 Water tanks, water softening equipment and solar panels.
- 3.49 Except the floor area provided for parking purpose, total area of other exemptions shall not exceed 10 percent of the total floor area.
- 3.50 The area covered by the following structures on the roof are exempted from the floor area up to ten percent of the area of the roof over which they are erected:
- 3.50.1 staircase rooms
 - 3.50.2 water tanks
 - 3.50.3 equipment for ventilation, water softening, water heating and similar services.
- 3.51 Lobbies, corridors provided in the plan shall be considered for F.A.R. Entrance to the building shifted inside the building with covered roof shall be accounted for F.A.R.
- 3.52 Only one penthouse is permissible for a building.

PLINTH.

- 3.53 The height of the plinth at the ground floor level shall not be less than 0.45 m. The basement height should not project more than one metre above the average Ground Level. In case of sloping street reference shall be made with respect to the street level at the centre of the frontage of the plot. Where the level of the plot is different from the street level, the plinth height shall be determined by the Authority with respect to the surrounding average ground level so that adequate drainage from the site is assured.
- 3.54 In case of plots situated in low lying areas, the plinth level shall be such that sufficient gradient is created for sewerage, and to avoid any risk of surface drains flooding the building.
- 3.55 In case of access steps to the plinth, the construction shall be within the plot boundaries.

BASEMENT FLOOR

- 3.56 The basement floor can be put to any use such as living room, family room and study room⁵.
- 3.57 It cannot be used as a kitchen, bath, lavatory, etc. or as smoking areas.

⁵ This is contrary to the BMP guidelines which read as follows:
 Basement floors shall not be used for purposes other than parking and for locating machines used for service and utilities of buildings.
 The basement floor shall also not be put to any ancillary uses such as living room, study room, kitchen, bath, lavatory, etc. or storage of household goods except inflammable materials.

- 3.58 Basement floor is not permissible on sites where the setbacks prescribed in Table 3 are less than 4 metres. In such cases, basement floor may be permitted if setbacks are increased to at least 4 metres.
- 3.59 Every basement storey shall be at least 2.4 mtr. (approx 8 feet) in height from the floor to the bottom of the roof slab/ beam / ceiling (whichever is less) and this height of B.F shall not exceed 2.75 metres (9 feet).
- 3.60 Adequate ventilation shall be provided for the basement storey. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers and exhaust fans etc.
- 3.61 The minimum height of the ceiling of any basement storey, which is to be used for purposes other than storage, shall be 1.0 mtr. above the average surrounding ground level. The minimum height of the ceiling of a basement storey for the purpose of storage shall be 0.75 mtrs above the average surrounding ground level.
- 3.62 The basement storey should not project more than 1.00 mt. above the average Ground level.
- 3.63 Adequate arrangements shall be made to ensure that surface drainage does not enter into a basement storey
- 3.64 The basement floor shall not normally be partitioned. If the ventilation standards as laid down in bye-law 3.60 are met with, the partition of basement may be permitted.
- 3.65 Adequate protection against fire shall be provided to the basement storey. The roof separating the basement and the floor above shall be constructed of materials like RCC or such other material which can provide resistance against fire for at least two hours.
- 3.66 The walls and the floors of the basement shall be watertight and shall be so designed that the hydraulic pressure of the sub-soil water level is fully arrested.
- 3.67 Necessary arrangements shall be made to prevent moisture on walls.

HABITABLE ROOMS

- 3.68 No habitable room shall have a floor area of less than 8.0 sqm. (86 sqft) with a minimum width of 2.4 m (8 feet).
- 3.69 The minimum height of all rooms used for human habitation shall be 2.75 m measured from the surface of the floor to the lowest point of the ceiling (bottom slab). Where beams are provided the minimum head room shall be 2.4 m.

KITCHEN.

- 3.70 The area of the kitchen where a separate dining area is provided shall not be less than 5 sqm. with a minimum width of 1.8 m. Where there is a separate store area/ pantry, the size of the kitchen may be reduced to 4.5 sqm. A kitchen which is also intended for dining shall have a floor area of not less than 7.5 sqm. with a minimum width of 2.1 m.
- 3.71 The height of the kitchen shall not be less than 2.75 m. Where beams are provided the minimum head room shall be 2.4 m.
- 3.72 Every room to be used as a kitchen shall have the following conveniences:
- 3.72.1 provision should be made for washing of kitchen utensils with proper drainage.
 - 3.72.2 an impermeable floor.
 - 3.72.3 proper chimney and flue to be provided for the escape of gases.

BATH ROOM AND WATER CLOSETS.

- 3.73 The size of a bath room shall not be less than 1.8 sqm. with a minimum width of 1.2 m. If it is a combined bath and water closet, its floor area shall not be less than 2.0 sqm, with a minimum width of 1.2 m. The minimum floor area for water closets shall be 1.1 sqm. with a minimum width of 0.9 mtrs.
- 3.74 The height of a bath room or water closet measured from the surface of the floor to the lowest point of ceiling shall not be less than 2.2 m.
- 3.75 Every room used as bath room and water closet shall be:
- 3.75.1 so situated that at least one of its walls shall have opening to external air (see bye-law 3.110).
 - 3.75.2 have the platform or seat made of water-tight non-absorbent materials.
 - 3.75.3 enclosed by walls or partitions and the surface of every such wall or partition shall be furnished with a smooth impervious material to a height of not less than 1 m. above the floor of such a room.
 - 3.75.4 shall be provided with an impervious floor covering, sloping towards the drain with a suitable grade and not towards verandah or any other room.

3.75.5 shall not be used for any purpose except as a lavatory and no such room shall open directly into a kitchen or cooking space by a door, window or other openings. Every room containing water closets shall have a door completely closing the entrance to it.

3.75.6 shall have flush-out facility.

3.76 The use of bath tubs is not in the spirit of Trans Indus.

MEZZANINE FLOOR

3.77 Not more than one mezzanine floor shall be permissible in a building.

3.78 A Mezzanine floor shall be accessible only from its lower floor.

3.79 Minimum size of mezzanine floor if it is used as a living room shall be 9.5 sqm. The aggregate area of a mezzanine floor shall not exceed 1/3 (or 33.33%) of covered area of its lower floor.

3.80 The minimum height of mezzanine floor shall be 2.2 m.

3.81 A Mezzanine floor may be permitted over a room or a compartment.

3.82 It shall conform to the standards of the habitable room as regards lighting and ventilation.

3.83 It shall be constructed without interfering with the ventilation of the space over and under it.

3.84 A mezzanine floor shall not be sub-divided into smaller compartments unless adequate ventilation is provided.

3.85 A mezzanine floor or any part of it shall not be used as a kitchen.

3.86 In no case, a mezzanine floor shall be closed so as to make it liable to be converted into unventilated compartments.

LOFT

3.87 A Loft provided in a kitchen shall not exceed 25% of the area of the kitchen and when provided over a bath room, water closet and corridor, the loft can occupy up to 100% of the area.

3.88 The head room for the loft shall be not more than 1.5 m.

STAIR-CASE

Minimum width of stair cases	1.0 mtr.
minimum width of tread without nosing	25 cm.
Maximum riser	19 cm. limited to 15 per flight.
Minimum clear head room in a stair case	2.2 mtr.

LIFTS

3.89 Lifts are not required in Trans Indus as there is no building more than 2 storey high. It is however a possibility that for residents / guests with disabilities, some sort of support system is installed. The resident shall discuss the same with the Council and if the modification/ installation is acceptable, a resolution to that effect, amending these bye laws will be made.

3.90 The BMP guidelines for group housing will be used as a reference at the time, however, it may not be binding on the Council as the support system may be more modern than those laid down in the BMP guidelines.

BOUNDARY WALL

3.91 It is not the philosophy of Trans Indus to have boundary walls between houses. However, because of pets, a boundary enclosure may be permitted. In case the resident wants a boundary wall for any other reason, he shall take permission from the Council, which shall bring it up as an agenda for the next general body meeting.

3.92 Decorative boundary walls for the purpose of marking out boundaries or for aesthetic purposes and not more than 1.5 feet in height are permitted.

3.93 The maximum height of the boundary wall, if constructed as per bye law 3.91, shall be 1.2 mtrs. above the ground level.

3.94 The boundaries of the building sites shall not be provided with a brick wall, barbed wire fence, prickly hedge or other objectionable plants.

3.95 Only chain-link fencing, iron / wooden / bamboo bars with vertical pillars be used to create such a fence. This may be covered with creepers which are neither excessively thorny nor

uncontrollable in growth. The owner of the plot is responsible for trimming the hedge from time to time.

ROOFS

- 3.96 IN consonance with the overall style of Trans Indus, sloped roofs made of terracotta tiles need to be the motif. In case there are flat areas on the roof, the rest of the roof as well as window projections should be in this style.
- 3.97 The roof area should have adequate flat space for installing equipment.
- 3.98 The roof area should be accessible without any risk.
- 3.99 The roof should not provide uncontrolled access to the interior of the house.
- 3.100 Rainwater should either be collected and stored on the roof, or should be run off in such a way that it can be collected and stored at ground level.

DISPOSAL OF POLLUTED AND UNPOLLUTED WATER

- 3.101 Drains shall be provided for the disposal of polluted and unpolluted water separately from the buildings. Polluted water is the water coming out from lavatories, bathrooms, water closets, the kitchen and from other parts of the building which is used for domestic purposes. Unpolluted water shall include rain water and the unpolluted subsoil water, if any.
- 3.102 Roof of every building shall be constructed so as to permit effectual drainage of rain water by means of sufficient rain water pipes of adequate size wherever required, which shall be so arranged, jointed and fixed as to ensure that the rain water is carried away from the building without causing dampness in any part of the wall or foundation of the building or those of an adjacent building or causing annoyance or inconvenience to the neighbour or passer-by.
- 3.103 Subject to bye-law 4.17, rain water pipe shall be connected to the roadside drain or may be carried out in any other approved manner without causing damage to Trans Indus common property.
- 3.104 Subject to bye-law 4.17, rain water pipe shall be affixed to the outside of the external walls of the building or in recesses or chases cut or formed in such external walls or in such other manner as may be approved by the Authority.
- 3.105 TIRA does not provide any centralized sewage handling facility. Each plot has to create its own septic tank / sewage handling unit. This should be near the road to facilitate cleaning of the tank.

LIGHTING AND VENTILATION REQUIREMENTS.

- 3.106 Rooms shall have, for admission of light and air, one or more openings, such as windows and ventilators, opening directly to the external air or into an open verandah. Doors are not counted towards the area of openings in walls for lighting and ventilation purposes.
- 3.107 Where the light and ventilation requirements are not met through daylight and natural ventilation, the same shall be ensured through artificial lighting and mechanical ventilation.

AREA OF OPENINGS

- 3.108 Minimum aggregate area of openings, excluding doors, shall not be less than 1/6th of the floor area in the case of residential buildings. No portion of a room shall be assumed to be lighted if it is more than 7.5 m from the opening.
- 3.109 In case of bath rooms and water closets, minimum area of window or ventilator shall be 0.09 sq. mtrs. with one side being not less than 0.3 mtrs.
- 3.110 Ventilation shaft - For lighting and ventilating the space in water closets and bath rooms, when no opening is provided towards any open spaces, they shall open on to the ventilating shaft, the size of which shall not be less than 1.2 sqm with a minimum width of 0.9 meters.

ADDITIONS, ALTERATIONS AND MODIFICATIONS

- 3.111 Any additions, alterations & modifications to existing buildings shall be permitted in accordance with these bye-laws.
- 3.112 In case of the buildings which are existing prior to coming into force of these regulations, upper floors may be permitted according to the existing set-backs only, but limiting the F.A.R. and the number of floors according to the present bye-laws, subject to production of the foundation certificate as prescribed in the bye-law 5.3.6.

4. STRUCTURAL DESIGN AND OTHER REQUIREMENTS

STRUCTURAL DESIGN.

- 4.1 The loads and forces on buildings shall be in accordance with Part VI Structural Design Section on loads in the National Building Code of India⁶.
- 4.2 The structural design of foundations and elements of substructures and superstructures of wood, masonry, reinforced or pre-stressed concrete shall be in accordance with Part VI Structural Design, Section 1 - Loads, section 2 - Foundations, Sections 3 - Wood, Section 4 - Masonry, section 5 - Concrete, section 6 – Steel and section 7 – Prefabrication and Systems Building, of the National Building Code of India.

FIRE SAFETY REQUIREMENTS.

- 4.3 Buildings shall be planned, designed and constructed to ensure adequate fire safety to the property and inhabitants and this shall be carried out, in accordance with Part IV Fire Protection of the National Building Code of India. The fire fighting requirements, arrangements and installations required in building shall also conform to the provisions of Part IV Fire Protection of National Building Code of India.

PLUMBING SERVICE.

- 4.4 The planning, design and installation of water supply systems, drainage, sanitary installations and gas supply installations in buildings, shall be in accordance with Part IX Plumbing Services, section 1 – Water Supply, section 2 – Drainage and Sanitation and section 3 – Gas supply of the National Building Code of India.
- 4.5 The owner shall, at his own cost, tap and install a garden line from the common garden line to his garden. He will not connect a garden hose directly to the common garden line unless the tap is directly in front of and on the same side as his plot.
- 4.6 It is recommended that the owner provide for a pop-up sprinkler system before laying his garden. It is envisaged that in future, the common garden water lines will be connected to this system so that watering can be done in the night time for better absorption of water.

CONSTRUCTION PRACTICES AND SAFETY.

- 4.7 The various construction activities like; demolition, excavation, blasting, actual construction from foundation level up to completion shall be in accordance with Part VII Construction Practices and Safety of the National Building Code of India.
- 4.8 The safety measures to be adopted during the various construction operations, including storage of materials on the construction site and Corporation / public land shall be in accordance with Part VII Construction Practices and Safety of the National Building Code of India.

BUILDING MATERIALS.

- 4.9 The requirement of building materials to be used in construction shall conform to Part V Building Materials of the National Building Code of India.

ALTERNATE MATERIALS, METHODS OF DESIGN AND CONSTRUCTION.

- 4.10 The provisions of bye-laws 4.1 to 4.9 and other provisions of the bye-laws are not intended to prevent use of any material or method of construction not specifically prescribed in these bye-laws provided such a work has been approved by the Government Authority.
- 4.11 The Government Authority may approve any such alternative, provided it is found that the proposed alternative is satisfactory and conforms to the provisions of the relevant parts regarding materials, design and construction, method of work offered for the purpose intended, at least equivalent to that prescribed in the bye-law in quality, strength, compatibility, effectiveness, fire, water and sound resistance, durability and safety.
- 4.12 Whenever there is insufficient evidence of compliance with the provisions of these bye-laws or evidence that any material or method of design or construction, does not conform to the

⁶ All references of clauses of the National Building Code in these bye-laws is to the publication of the National Building Code of India 1983. If these numbers are changed in subsequent additions, corresponding numbers shall be substituted.

requirement of the bye-laws or in order to substantiate claim for alternative materials, design or methods of construction, the Authority may require tests sufficiently in advance as proof of compliance. These tests shall be made by an approved agency at the expense of the owner. This clause does not apply to materials with I.S.I. Certificate.

- 4.13 Test methods shall be as per the relevant I.S. Codes.
- 4.14 Copies of the results of all such tests shall be retained by the Authority for a period of not less than 2 years after the acceptance of the alternative materials.
- 4.15 Temporary lavatories shall be provided for the use of workers within the construction premises where the floor area is more than 250 sqm.
- 4.16 Solar water heaters of capacity 100 litres and above should be installed.

RAIN WATER HARVESTING.

- 4.17 Rain water harvesting in a building site includes storage or recharging into ground of rain water falling on the terrace or on any paved or unpaved surface within the building site.
- 4.18 Every building with a plinth area exceeding 100 sq mtrs and built on a site measuring not less than 400 sq mtrs should have one or more Rain Water Harvesting structures having a minimum total capacity as detailed in bye law 4.22.
- 4.19 Provided that the Authority may approve the Rain Water Harvesting structures of specifications different from those in bye law 4.22 subject to the minimum capacity of Rain Water Harvesting being ensured in each case.
- 4.20 The owner of every building mentioned in the bye-law 4.17 above shall ensure that the Rain Water Harvesting structure is maintained in good repair for storage of water for non potable purposes or recharge of groundwater at all times.
- 4.21 The Authority may impose a levy of not exceeding Rs. 1000/- per annum for every 100 sq. mtr of built up area for the failure of the owner of any building mentioned in the bye-law 4.17 above to provide or to maintain Rain Water Harvesting structures as required under these byelaws.
- 4.22 The following systems may be adopted for harvesting the rain water drawn from terrace and the paved surface.
 - 4.22.1 Open well of a minimum of 1.00 metre diameter and 2.0 metres in depth into which rain water may be channelled and allowed after filtration for removing silt and floating material. The well shall be provided with ventilating covers. The water from the open well may be used for non potable domestic purposes such as washing, flushing and for watering the garden etc.
 - 4.22.2 This well will have adequate security so that mishaps are prevented.
 - 4.22.3 Rain water harvesting for recharge of ground water may be done through a shallow bore-well around which a pit of one metre width may be excavated upto a depth of at least 3.00 metres and refilled with stone aggregate and sand. The filtered rain water may be channelled to the refilled pit for recharging the bore-well.
 - 4.22.4 Permission for creation of any type of bore-well will be needed from the Council.
 - 4.22.5 An impervious storage tank of required capacity may be constructed in the setback or other space and the rain water may be channelled to the storage tank. The storage tank may be raised to a convenient height above the surface and shall always be provided with ventilating the surface and shall always be provided with ventilating covers and shall have draw-off taps suitably placed so that the rain water may be drawn off for domestic, washing, gardening and such other purposes. The storage tanks shall be provided with an overflow.
 - 4.22.6 The surplus rain water after storage may be recharged into ground through percolation pits or trenches or combination of pits and trenches. Depending on the geo-morphological and topographical condition, the pits may be of the size of 1.20 m width x 1.20 m length x 2.00 m to 2.50 metre depth. The trenches can be 0.60 m. width x 2.00 to 6.00 metre length x 1.50 to 2.00 mtr depth. Terrace water shall be channelled to pits or trenches. Such pits or trenches shall be backfilled with filter media comprising the following materials.
 - 4.22.6.1 40 mm stone aggregate as bottom layer up to 50% of the depth;
 - 4.22.6.2 20 mm stone aggregate as lower middle layer up to 20% of the depth;
 - 4.22.6.3 Coarse sand as upper middle layer up to 20% of the depth;
 - 4.22.6.4 A thin layer of fine sand as top layer;

- 4.22.6.5 Top 10% of the pits/trenches will be empty and a splash is to be provided in this portion in such a way that roof top water falls on the splash pad.
- 4.22.6.6 Brick masonry wall is to be constructed on the exposed surface of pits/trenches and the cement mortar plastered.
- 4.22.6.7 The depth of wall below ground shall be such that the wall prevents loose soil entering into pits/trenches. The projection of the wall above ground shall at least be 15 cms;
- 4.22.6.8 Perforated concrete slabs shall be provided on the pits/trenches.
- 4.22.7 If the open space surrounding the building is not paved, the top layer up to a sufficient depth shall be removed and refilled with coarse sand to allow percolation of rain water into ground.
- 4.23 The terrace shall be connected to the open well/ bore-well/ storage tank/ recharge pit/ trench by means of H.D.P.E./P.V.C. pipes through filter media. A valve system shall be provided to enable the first washings from roof or terrace catchments, as they would contain undesirable dirt. The mouths of all pipes and opening shall be covered with mosquito (insect) proof wire net. For the efficient discharge of rain water, there shall be at least two rain water pipes of 100 mm dia mtr for a roof area of 100 sq mtrs.
- 4.24 Rain water harvesting structures shall be sited as not to endanger the stability of building or earthwork. The structures shall be designed such that no dampness is caused in any part of the walls or foundation of the building or those of an adjacent building.

5. ADMINISTRATION

BUILDING LICENCE

- 5.1 Every person who intends to erect or re-erect a building or make material alterations or cause the same to be done, is required to obtain a licence from the TIRA Authority.
- 5.2 This licence is NOT in lieu of the licence that is issued by the competent Government Authority. This licence is given to ensure
- 5.2.1 that the documentation, a copy of which is given to the TIRA council for records, is complete in all respects
- 5.2.2 that all dues have been paid to TIRA
- 5.2.3 that TIRA has control over the movement of labour and materials for the purpose of construction as well as minimize disruption to the peaceful atmosphere of the campus.
- 5.3 Every owner who intends to erect or re-erect or alter a building, including temporary structures for the purpose of execution any of the works other than repairs, shall give an application in writing to the Authority in the form set forth in "SCHEDULE II. FORM OF APPLICATION FOR BUILDING LICENCE" and such application shall be accompanied by plans, documents and information as required hereunder.
- 5.3.1 Title deed/possession certificate – A copy of the title deed or possession certificate of the property, issued by the Bangalore Development Authority if the site is a part of the Development Scheme formed by the Bangalore Development Authority or is a part of a private layout approved by the Bangalore Development Authority under section 32 of the Bangalore Development Authority Act, 1976.
- 5.3.2 Property card or latest assessment book / Khatha extract – A copy of the property card along with the sketch issued by the Department of Survey and Settlement, and Land Records (City Survey) and latest assessment book extract issued by the Corporation indicating the measurements of the property.
- 5.3.3 Up-to-date tax paid receipt – The receipt for having paid up to date property tax to the Corporation/Panchayat shall be enclosed.
- 5.3.4 Previously sanctioned plan - Attested copy of the previously sanctioned plan if the application is for addition/ alteration/modification to the existing building. If the applicant for any reason cannot produce the previously sanctioned plan of the existing building, then in such cases the plan of the existing building along with site plan, etc., will have to be submitted.
- 5.3.5 The following drawings in ammonia prints. One drawing on tracing cloth / polyester tracing film shall be enclosed in addition to the ammonia prints.
- 5.3.5.1 Key plan – A key plan drawn to a scale of not less than 1-in-10,000 showing the boundary locations of the site with respect to neighbourhood landmarks.
- 5.3.5.2 Site plan – Site plan drawn to a scale of 1:500 for sites of area up to one hectare and 1:1000 for sites of area more than one hectare. The site plan shall indicate the following, namely
- A. title of drawing consisting of the property number of the site name of the block, street or road in which the site is situated, number of the site if situated in an approved layout, and reference number of such approval with the use of the building;
 - B. the boundaries of the site and of any contiguous land belonging to the owner thereof;
 - C. the north direction relative to the plan of the building;
 - D. the name and description of the adjacent roads, street, or lanes, if any, with the width thereof;
 - E. the position of the adjacent plots whether vacant or built up;
 - F. the area to be occupied by the proposed building and the set backs proposed for proper air and ventilation;
 - G. the nature of the ground on which the proposed building is to be erected, whether natural like, rocky, gravelly, clayey, sandy etc., or made up ground. In the case of made up ground, the time when it was so made up and the materials used in making it up shall be indicated. In case of sloping ground where the gradient exceeds 5% (1:20) block levels have to be furnished in the site plan;

- H. any physical features such as wells, drains, transmission lines, etc.;
 - I. natural features like existing trees, ridges, valleys etc.,
 - J. block levels in cases where basement/cellar floors are proposed below ground level;
 - K. such other particulars, as may be specified by the Authority.
- 5.3.5.3 Building plan – Building plan drawn to a scale of not more than 1:100 showing the following particulars, namely:
- L. floor plans of all floors indicating north line and the various parts of the building, sizes of rooms, position of stair-cases and lifts, machine rooms, ramps etc., in detail along with street elevation;.
 - A. use or occupancy of all parts of the building;
 - B. exact location of essential services viz., water closets, baths, sinks, etc;
 - C. sectional drawing showing sizes of footing, thickness of walls, spacing of columns, thickness of roof slab, height of rooms, height of parapet, drainage and slope of the terrace roof details of staircase showing tread, rise and landing width, railing, etc;
 - D. details of ventilation of all rooms;
 - E. open spaces or yards inside or surrounding the buildings;
 - F. sewerage arrangements;
 - G. the schedule of all doors, windows, and ventilators showing sizes and numbers;
 - H. dimensions of projected portions beyond the walls like chajja, balcony, canopy, etc;
 - I. in case of basement floor, position of the ramp with respect to the entrance, ground level and building, with a slope not exceeding 1 to 10, the drainage arrangements in the basement floor, etc;
 - J. arrangements for vehicular parking as per standards laid down in bye-law 16.0 indicating the entry, exit of vehicles, drive way, etc;
 - K. such other particulars like, site area, plinth area of all buildings, areas of each floor and total floor area, building coverage, total height of building, etc.;
 - L. Electrical diagrams;
 - M. Plumbing arrangements;
 - N. Any other wiring e.g. for security and communication purposes shall be indicated;
- 5.3.6 Foundation certificate – Foundation certificate which certifies the fitness of foundation to bear the additional building load in respect of old buildings above which new floors are proposed to be added which is issued by a competent registered architect / engineer / supervisor.
- 5.3.7 Supervision certificate – A certificate in the form given in “SCHEDULE III. FORM OF SUPERVISION” by the Registered Architect / Engineer / Supervisor who shall be undertaking the supervision.
- 5.4 The owner or his legally authorised agent or attorney and also by the Registered Architect / Engineer / Supervisor shall also commit to the following:
- 5.4.1 That the occupancy of building is intended for personal and residential use
 - 5.4.2 that they have read and understood the TIRA building bye-laws and will abide by them, or be subject to any punitive action by the Council which may include, among others, withdrawal of the right to use the common roads and electricity as well expulsion of the workers working on the site. See Bye law 5.20.
 - 5.4.3 that the owner takes personal responsibility of the conduct of the workers staying on the site, failing which the punitive actions described above may be taken
 - 5.4.4 the water for the construction will be provided by the owner from external tankers
 - 5.4.5 the owner will install an electricity meter and pay the electrical charges when due. The electricity used for construction is charged at a different rate that for residential purposes.
 - 5.4.6 that the owner or his representative will give 24 hour notice for any heavy duty usage of electricity like welding. This will allow the campus supervisor time to organise the running of a heavy duty generator during load shedding, thus minimising the power fluctuations.
 - 5.4.7 that all past and demanded dues for the plot have been paid in full to the TIRA

- 5.4.8 that the period of construction is specified in advance so that the residents and the council are aware of the activity and can make suitable arrangements
- 5.4.9 that the duration of stocking of building materials is specified so that, if needed, additional security can be organised. This cost of this security will be borne by the owner
- 5.4.10 that the building material will not be dumped on any roads or common areas except with prior permission and ground rent paid in advance for a minimum period of 3 months. TIRA is not responsible for the security of this material. Any damage to the common areas due to transportation and storage of material will be repaired by the owner at his cost.
- 5.5 Preparation and signing of plans - All the plans shall be duly signed by the owner or his legally authorised agent or attorney and also by the Registered Architect / Engineer / Supervisor, and shall indicate their names and addresses, qualification and the registration number allotted by the Authority.
- 5.6 Size of drawing sheets – Any of the following sizes (Table 6) may be adopted for the drawings to be submitted considering the details to be shown.

Table 6. Sizes of Drawing Sheets

Sl. No.	Standard	Trimmed size (mm)	Untrimmed size (min) in mm
1	A0	841 x 1189	880 x 1230
2	A1	594 x 841	625 x 880
3	A2	420 x 594	450 x 625
4	A3	297 x 420	330 x 450
5	A4	210 x 297	240 x 330
6	A5	148 x 210	165 x 240

- 5.7 Colouring of plans – All the plans should be coloured as specified in Table 7.

Table 7. Colouring of Plans⁷

Sl. No.	Item	Site Plan			Building Plan		
		White Plan	Blue Print	Ammonia Print	White Plan	Blue Print	Ammonia Print
1	Plot lines	Thick Black	Thick Black	Thick Black	Thick Black	Thick Black	Thick Black
2	Extg. Street	Green	Green	Green	-	-	-
3	Future street if any	Green	Green	Green	-	-	-
		dotted	dotted	dotted			
4	Permissible building line	Thick dotted	Thick dotted	Thick dotted	-	-	-
5	Open Space	No Colour	No Colour	No Colour	No Colour	No Colour	No Colour
6	Exstg. Work	Black outline	White	Blue	Black	White	Blue
7	Work proposed to be demolished	Yellow hatched	Yellow hatched	Yellow hatched	Yellow hatched	Yellow hatched	Yellow hatched
8	Proposed work ⁸	Red filled in	Red filled in	Red	Red	Red	Red
9	Drainage & Sewerage work	Red dotted	Red dotted	Red dotted	Red dotted	Red dotted	Red dotted
10	Water Supply work	Black dotted thin	Black dotted thin	Black dotted thin	Black dotted thin	Black dotted thin	Black dotted thin

- 5.8 Building licence fee- The Association will not charge any member any building licence fee. However, licence fees due to the government agencies would be payable directly by the member. The association is not liable for the non payment/payment of the same but in case of any such an event or a complaint by the relevant authority, the association may prevent the construction/ alteration of the building in question.
- 5.9 Ground rent
- 5.9.1 The ground rent for stocking of building materials on common areas subject to the permission of the Authority shall be Rs 500 for every 10 sqmtrs per month.
- 5.9.2 The rent shall be paid in advance for a minimum of four months.
- 5.9.3 The rent is non refundable even if the site is not used for a part of the quarter.
- 5.10 Construction of temporary shed - Temporary shed to be used as construction shed may be permitted in any site along with the sanction to a building and may be put up not earlier than a

⁷ For land development, sub-division, layout, suitable colouring notations shall be used which shall be indexed

⁸ Item No.8 does not apply, in case of an entirely new construction on the site.

month before the commencement of the work and shall be removed immediately after the completion of the work. Occupation certificate for the building shall be issued only after the removal of the temporary shed as well as repair to any damaged common area.

- 5.11 Demand notice - The demand notice for the payment of ground rent, penalties, other fees and dues will be valid for a period of forty five days only from the date of issue of the notice. After the expiry of the above period, the owner will be denied any facilities provided by TIRA including right of access of building materials to the campus. The revalidation of such demand notices shall be subject to the punitive structure then in force at the time of such revalidation.
- 5.12 The ground rent and other fees are subject to revision from time to time by the Council without notice.

GRANT OF LICENCE

- 5.13 The Authority, after having examined the application for licence, may either grant the licence as per the proposal or with such modifications or conditions as it may deem necessary or refuse licence and thereupon shall communicate its decision to the applicant within 30 days.
- 5.14 The Authority may direct the owner to
- 5.14.1 change the location of the proposed building
 - 5.14.2 provide open space or ventilation
 - 5.14.3 limit the heights of buildings and
 - 5.14.4 use specified materials for construction, if such measures are considered necessary keeping in view the existing or proposed power lines, water and sewage lines passing through the site, or due to any proposed widening of the road or formation of new roads passing through the site; which shall not be inconsistent with the development plan.
- 5.15 While granting licence, the Authority imposes a condition that at least two trees shall be grown in the sites where the sital area exceeds 200 sqm or 2200 sqft, whichever ever is lower, in the interest of improving the environment of the area.
- 5.16 The Authority may require the owner, builder, or any other person responsible for construction of a building to erect and maintain during construction such barricading as considered necessary to prevent dust, debris and other materials endangering the safety of people/structures, etc., in and around the site.
- 5.17 The Authority is not responsible for the security and safety of building materials. If required, the authority can arrange for a security guard at extra cost, responsible solely for the security of the construction site. The instructions in terms of security will be the owners' responsibility.
- 5.18 A temporary shed may be constructed for housing the building material as mentioned earlier.
- 5.19 The Authority requires the owner, builder, or any other person responsible for construction of a building not to do any building related work before 9 am and after 6 pm on any given working day to ensure that residents in the campus are not affected. Moreover, permission should be sought 48 hours in advance for construction to be done during non-working hours / holidays.
- 5.20 The Authority requires that the employees (contractual or otherwise) and workers working on a owner's site follow the norms of conduct given below:
- 5.20.1 Not more than 1 person shall stay in the plot during construction. The rest of the labour has to leave the campus after normal working hours unless prior permission is taken from the Authority for extended stay.
 - 5.20.2 All workers will be given a temporary pass which is valid for no more than one week and only for normal working hours. The construction supervisor will need to renew these passes in the beginning of each week, failing which a fine of Rs 200 will be levied for each pass not renewed or lost.
 - 5.20.3 For workers staying overnight or for an extended period, a night pass has to be obtained from the security in-charge or the campus supervisor before the close of normal working hours. This pass is valid for one night only. The night pass has to be surrendered in the morning.
 - 5.20.4 All passes should be in public view and be produced on demand by the security personnel or any TIRA member / employee.
 - 5.20.5 The construction supervisor will be issued a monthly pass which will need to be renewed by the campus supervisor in the beginning of each month.
 - 5.20.6 The workers should not roam about the campus, use its facilities, enter another site or make a public nuisance by performing their ablutions in public view, indulging in anti social activities, drinking, smoking and making loud noises of any kind.

- 5.20.7 In case the owner or his representative is unable to control the workers and their behaviour, punitive action will be taken ranging from fines to withdrawal of facilities and expulsion from the campus.
- 5.21 The Owner is responsible for providing sanitary and / or cooking facilities to his workers. Such facilities should not be found objectionable by other residents of the campus.
- 5.22 Revised plans
- 5.22.1 Where plans have been scrutinised and modifications or objections have been pointed out by the Authority, the applicant shall modify the plans to comply with the modifications or objections raised and resubmit the plans. The plans submitted for approval shall not contain superimposed corrections.
- 5.22.2 A plan once sanctioned may be revised or modified by the Authority on payment of additional fee for scrutiny, and additional fee, if any, to be paid, due to the increase in the permissible floor area. If the modified plan is sanctioned after the commencement of work, penalty at the rates prescribed by the Corporation shall be paid by the applicant

PROCEDURE AFTER GRANT OF LICENCE

- 5.23 The granting of licence, approval of the plan and specifications, or inspections made by the Authority shall not in any way relieve the owner of a building from full responsibility for carrying out the work in accordance with the requirements of the sanctioned building plan along with such conditions as have been imposed while sanctioning the licence.
- 5.24 The construction or reconstruction of a building shall commence within a period of six months from the date of issue of licence. Before the expiry of six months, the owner shall give intimation to the Authority of the intention to start work in the form prescribed in SCHEDULE V. FORM OF NOTICE OF COMMENCEMENT OF WORK. Further, the owner shall give intimation to the Authority on completion of the foundation or footings before erection of walls/columns on the foundation.
- 5.25 After the expiry of six months from the date of licence, construction or reconstruction of a building shall not be commenced without obtaining a fresh licence from the Authority.
- 5.26 Generally all construction and work for which a licence is required shall be subject to inspection by the Authority and certain types of construction involving unusual hazards or requiring constant inspection, shall have continuous inspections by the Authority.
- 5.27 Within 15 days from the date of the receipt of intimation under bye-law 5.24, the Authority shall inspect the site to verify the line out marked for the building according to the sanctioned plan. The owner shall commence the work after the grant of commencement certificate in the form prescribed in SCHEDULE VI. FORM OF COMMENCEMENT CERTIFICATE.
- 5.28 If the commencement certificate is not issued within a period of 15 days from the date of intimation by the owner, the construction may proceed according to the sanctioned plan.
- 5.29 Occupation certificate
- 5.29.1 Every person shall before the expiry of two years from the date of issue of licence shall complete the construction or reconstruction of a building for which the licence was obtained and within one month after the completion of the erection of a building shall send intimation to the Council in writing of such completion accompanied by a certificate in SCHEDULE VII. FORM OF COMPLETION CERTIFICATE certified by a Registered Architect/Engineer/Supervisor and shall apply for permission to occupy the building.
- 5.29.2 The Authority shall decide after due physical inspection of the building after receipt of the intimation whether the application for occupation certificate is accepted or rejected. In case, the application is accepted, the occupation certificate shall be issued in the form given in SCHEDULE VIII. OCCUPATION CERTIFICATE provided the building is in accordance with the sanctioned plan.
- 5.29.3 Physical inspection means the Authority shall find out whether the building has been constructed in all respects as per the sanctioned plan and requirement of building bye-laws.
- 5.29.4 If the construction or reconstruction of a building is not completed within two years from the date of issue of licence for such a construction, the owner shall intimate the Authority, the stage of work at the expiry of two years. The work shall not be continued after the expiry of two years without obtaining prior permission from the Authority. Such continuation shall be permitted, if the construction or reconstruction is carried out according to the licenced plan and if the Authority is satisfied that at least

75 percent of the permitted floor area of the building is completed before the expiry of two years. If not, the work shall be continued according to a fresh licence to be obtained from the Authority.

- 5.30 Occupation or letting of the new buildings - No person shall occupy or allow any other person to occupy any new building or part of a new building for any purpose whatsoever until occupation certificate to such buildings or part thereof has been granted by an officer authorised to give such certificate if in his opinion in every respect the building is completed according to the sanctioned plans and fit for the use for which it is erected. The Authority may in exceptional cases (after recording reasons as minutes of a TIRA general body meeting) allow partial occupation for different floors of a building.
- 5.31 Deviations during Construction
- 5.31.1 Wherever any construction is in violation/deviation of the sanctioned plan, the Council may, if it considers that the violations/deviations are minor viz., only when violations/deviations are within 5% of (1) the set back to be provided around the building, (2) plot coverage (3) floor area ratio and (4) height of the building and that the demolition is not feasible without affecting structural stability, he may regularise such violations/deviations after recording detailed reasons for the same.
- 5.31.2 Any violation/deviation may be regularised only after sanctioning the modified plan recording thereon the violations/deviations and after the levy of fee prescribed by the Council and the Panchayat from time to time.
- 5.31.3 Regularisation of violations/deviations under this provision are not applicable to the buildings which are constructed without obtaining any sanctioned plan whatsoever and also the violations/deviations which are made in spite of the same being specifically deleted or rejected in the sanctioned plan.

6. MISCELLANEOUS

PROHIBITION OF CONSTRUCTION ON PUBLIC PROPERTY.

- 6.1 Construction over drains
 - 6.1.1 No building or part of a building shall be erected over drains, sewer lines, water mains or underground electric mains or on any such other public property.
 - 6.1.2 Projection of doors windows, etc.
 - 6.1.2.1 No one shall build any wall or erect any fence or other obstruction or projection or make any encroachment in or over any public street, foot path, drain or margin land.
 - 6.1.2.2 No door, gate, bar, windows or projections shall be hung, or placed so as to open outwards or project upon any street or public utility or into any public property.
- 6.2 Bricks and other building materials
 - 6.2.1 Although TIRA lauds the reuse of soil and other excavated material, it prohibits the installation up of brick moulding, baking and storage on any other location except the owner's site unless the owner has prior written permission from the Council for usage of common area or from another plot owner.
 - 6.2.2 The same clause applies to cutting of granite and other stones as well as to casting beams and rafters.

SUGGESTIONS ON CONSTRUCTION

- 6.3 The following guidelines have been suggested by the current residents. Owners who propose to build MAY take these into consideration, but are not compelled to do so.
- 6.4 Security
 - 6.4.1 Over time, the area around Trans Indus will become inhabited by similar residences. This will add to the security issues within and around the campus. Although TIRA provides security guards for patrolling of the campus, this can be viewed as a deterrent only, not as a fool-proof method.
 - 6.4.2 Owners are recommended to set up the wiring for burglar alarms during the construction phase. This will include door / window devices, proximity sensors, internal and external motion detectors, glass smash detectors, door video phones, smoke and gas detectors; alarm bells/horns both external and internal.
 - 6.4.3 Provision should also be made for a telephone connection from the central unit of the security system for calling the Central Monitoring Station of the security company.
- 6.5 Communication
 - 6.5.1 All communication, whether data or voice should be created in a star fashion, connecting to rooms. Each room should have at least 2 RJ45 type points with Cat 5 cabling.
- 6.6 Video cabling
 - 6.6.1 All video cabling should also be created in a star fashion with each cable capable of carrying at least 100 channels.
 - 6.6.2 Similar cabling (at least three – one each for TV, WorldSpace and Data communication) must be drawn from the roof to the central point of the 'star'.
- 6.7 Electrical
 - 6.7.1 At least 2 power points must be given on the roof. One will be used for the solar heater, with its alternate heating element for use during cloudy days. The other will be used by a water pump either for the purpose of pulling water into the overhead tank or for pushing water into the water softening equipment.
- 6.8 Water Softening equipment
 - 6.8.1 The water in the campus comes through bore wells and therefore is hard. It is a possibility that this water, when warned will create scaling in the pipes. Furthermore, they leave stains on utensils as hamper proper washing of clothes.
 - 6.8.2 A water softening equipment needs to be installed in the house. This can be on the roof or on the side of the building. In case it is installed at the side of the house, adequate security should be provided.
- 6.9 Access to roof
 - 6.9.1 There should be access to the roof for the purpose of maintenance. However, this access should be restricted either in the form of doors or removable ladders.

6.10 Overhead tanks

6.10.1 These tanks need to be periodically cleaned and maintained due to blockage of overflow controls. There should be adequate space around the tank for a person to stand comfortably and clean the tank.

Schedule I. Residential Zone Classification Of Land Use.

USE OF RESIDENTIAL PLOTS

- 6.11 The following uses of residential property is NOT permitted in Trans Indus –Hostels including working women's and gents hostels, Dharmashalas, places of public worship, schools offering general education course up to secondary education, public libraries, Post and Telegraph Offices, K.P.T.C.L. counters, B.W.S.S.B. counters, clubs, semi-public recreational uses, milk booths, neighborhood or convenience shops and any other commercial venture except ones listed below.
- 6.12 The following uses are permissible: dwelling for residential purposes, doctors and other professionals consulting rooms not exceeding 20.00 sq. mtrs. of floor area in a building.

USE OF COMMON AREAS OWNED BY TIRA.

- 6.13 Uses that are permissible – Sports facilities, playgrounds, parks, swimming pools, other recreational uses, generator room, club house and related activities, TIRA office, security, office manager, plumber/electrician residential quarters, garden and other equipment storage, nursery.
- 6.14 Uses that are permissible under special circumstances– Canteen, banking counter, clubs, indoor recreational use and other ancillary uses, the area of such ancillary use not exceeding 5% of the total area.
- 6.15 Utilities and services that are permissible – Water storage and supply installation, treatment plants, drainage and sanitary installations including treatment plants, electric power plants, high tension and low tension transmission lines, sub-station etc.

USES OF THE GREEN ZONE

- 6.16 The Memorandum and Articles of Association stresses on the conservation of biodiversity as a primary objective of TIRA. To that end, a large area of the campus has been kept as a common area growing various flora to support fauna like bees, migratory birds, and reptiles. This is termed as the green zone.
- 6.17 Uses that are permissible in the green zone – Agriculture, horticulture, and their accessory buildings and uses not exceeding 200 sq. mtrs. of plinth area for the plot area limitation of 1.20 hectare. Uses specifically shown as stated in the land use plan like gardens, orchards, nurseries and other stable crops, park and open spaces, forest lands, the service and repairs of farm machinery and agricultural supplies, barren land and water sheets.

Schedule II. Form Of Application For Building Licence

Form of application to erect, re-erect or to make alternations in any place in a building to obtain building licence.

To
 TIRA Council
 Trans Indus Residents Association,
 Basappanpalya, P.O. Tathaguni
 Bangalore- 560 062

Sir,

I hereby give notice that I intend to erect/re-erect/to make alterations in the building bearing Plot No....., in accordance with the Building Bye-laws of TIRA bye-law 5.3, I forward herewith the following plans and specifications in quadruplicate duly signed by me(name in block letters).

The registered architect / engineer / licensed supervisor Sri/Smt..... bearing the registration No. will supervise the construction.

The following documents are enclosed herewith.

1. Title deed / possession certificate.
2. Receipt for having remitted the licence fee.
3. Site plan, showing the existing features like trees, well etc., (Block levels to be furnished in cases where the gradient of the land exceeds 5% (1:20) or where basement / cellar floors are proposed below ground level).
4. Latest khatha certificate and assessment book (extract)
5. Up to date tax paid receipt (certified copies)
6. Property card and/or the sketch issued by the Department of Survey Settlement and Land Records
7. Previously sanctioned plan
8. Foundation certificate.
9. No objection certificate from agencies like, BDA, K.P.T.C.L., BWSSB, KSCB, Agara Panchayat or any other authority wherever applicable.
10. Building plan of all the floors along with elevations, sections and specification of the work.
11. Receipt for the payment of development charge.
12. Any other information.

I further certify that:

13. The occupancy of building is intended for personal and residential use
14. I have read the TIRA building bye-laws and will abide by them
15. The source of water for the construction will be provided by me
16. I will pay the electrical charges when due. I will install an electrical meter when I need electricity
17. All past and demanded dues for my plot to the TIRA have been paid in full
18. The period of construction is approximately months
19. The duration of stocking of building materials is

I request that the plans submitted are approved and permission is accorded to execute the work.

Signature of the owner

Name of the owner

(in block letters)

Address of owner

.....

.....

Date

Schedule III. Form Of Supervision

I hereby certify that the erection, re-erection material alternation in the building bearing property Plot No..... will be carried out under my supervision and I certify that all the materials (type and grade) and the workmanship of the work will be in accordance with the general and detailed specifications submitted along with this certificate and that the work will be carried out according to the sanctioned plans.

I hereby undertake to report to the authority within 3 days of any deviation from the sanctioned plan, or violation of Building Bye-laws / Zoning Regulations, observed during the construction of the aforesaid building.

Signature

Name of the registered Architect/Engineer/Supervisor.....
(in block letters)

Registration Number of the registered Architect/Engineer/Supervisor

Address of the registered Architect/Engineer/Supervisor
.....
.....
.....

Dated:

Schedule IV.A. Form Of Sanction Of Licence

From
TIRA Council
Trans Indus Residents Association,
Basappanpalya, P.O. Tathaguni
Bangalore- 560 062

To

Sir/Madam,

With reference to your application No dated for grant of licence for the erection/re-erection/making alteration / renewal of the building bearing property on plot No....., I have to inform you that sanction has been granted by the Association subject to the following conditions:

1. The building shall not be occupied without obtaining occupation certification after completion of the building under section 310 of KMC Act, 1976.
2. Other conditions.

Signature of the Authority

Schedule IV.B. Form Of Refusal Of Licence

From
TIRA Council
Trans Indus Residents Association,
Basappanpalya, P.O. Tathaguni
Bangalore- 560 062

To

Sir/Madam,

With reference to your application No..... dated for grant of licence for the erection/re-erection/making alteration / renewal of the building bearing property on plot No....., I have to inform you that sanction has been refused by the Association on the following grounds:

- 1.
- 2.
- 3.
- 4.
- 5.

Signature of the Authority

Schedule V. Form Of Notice Of Commencement Of Work

I hereby certify that the erection/re-erection/material alteration of the building bearing property plot No.....under the supervision ofregistered Architect/Engineer/ Supervisor bearing registration No..... in accordance with plans sanctioned as per your permission vide No..... LP..... dated is to commence on

Signature of the owner
Name of the owner
(in block letters)
Address of owner

Dated

Schedule VI. Form Of Commencement Certificate

To:

.....

Sir,

Subject: Issue of permission for the commencement of work of the building sanctioned in License No..... LP..... Dated.....

Ref: Your application dated

The property was inspected onand the foundation marked / laid / columns marked / fixed is verified with reference to the building plan sanctioned by the Bangalore Mahanagara Palike/Panchayat in LP No. and found that the same is as per the sanctioned plan and hence permission is hereby accorded to proceed with the work subject to the following conditions:

1. The work should be carried out strictly as per the sanctioned plan and Building Bye-Laws without any deviations, alterations or violations.
2. When the work has reached the completion of the foundation or footing or columns fixed, the Association and the Authority shall be intimated regarding the progress of work so as to facilitate them to inspect and verify as to whether the construction is being carried out as per the sanctioned plan and Building Bye-Laws.
3. Other conditions.

Office Stamp.....

Office Communication No.....

Dated:.....

Signature of Authority.....

Name, designation and Address of the Authority.....

.....

Schedule VII. Form Of Completion Certificate

I hereby certify that the erection/re-erection/material alteration of the building on plot No....., has been supervised by me and has been completed on according to the plans sanctioned vide LP No..... dated The work has been completed to my best satisfaction. The workmanship and all the materials (types and grade) have been used strictly in accordance with the general and detailed specifications. No provisions of the Building Bye-laws, sanctioned plan and conditions prescribed or orders issued thereunder have been transgressed in the course of the work. The building is fit for use for which it has been erected, re-erected, or altered with or without additions. I request that the occupancy certificate for the premises may be issued.

Signature of registered Architect/
 Engineer / Supervisor

Name of registered Architect/
 Engineer / Supervisor

(in block letters)

Reg. No. of registered Architect/
 Engineer / Supervisor

Dated.....

Schedule VIII. Occupation Certificate

A plan was sanctioned for construction of a residential building consisting of at Plot No.
Vide LP No..... /..... Dt: -

On receipt of the intimation of the completion of the building from the Registered Architect /Engineer / Supervisor, the building was inspected by the council and it was found that the applicant has built the building according to the sanctioned plan/effectuated certain changes from the sanctioned plan. The changes, if any, were regularized by the relevant authority in his note dated as recommended by the by levying a penalty of Rs..... after ensuring that the deviations are within the permissible limit of 5% from the sanctioned plan.

The applicant has also satisfied all other requirements pertaining to completion of the construction as specified in **Section**

Therefore, permission is granted to occupy the building for residential purpose at vide LP..... subject to the following condition:

He shall not add or alter materially, the structure or a part of the structure there off without specific permission of relevant government authorities and the TIRA Council. In the event of the applicant violating, either of the two has the right to demolish the deviated/altered/added portion without any prior notice.

On default of the above condition, the O.C. issued will be with drawn.

Office Stamp.....
Office communication No.....
Dated

Signature of Authority
Name, designation and Address of the Authority ...
.....
.....

Schedule IX. Conversion Tables

Table 8. Area Conversion

Sq ft	Sq m
0.97	0.09
9.00	0.84
9.69	0.90
10.76	1.00
11.84	1.10
19.38	1.80
21.53	2.00
53.82	5.00
80.73	7.50
86.11	8.00
102.26	9.50
1,076.39	100.00
4,000.00	371.61
6,000.00	557.42
8,000.00	743.22
20,000.0	1,858.06

Table 9. Length conversion

Feet	Meters
0.98	0.30
2.95	0.90
3.28	1.00
3.94	1.20
4.92	1.50
5.91	1.80
6.89	2.10
7.22	2.20
7.87	2.40
8.20	2.50
9.02	2.75
10.00	3.05
20.00	6.10
31.17	9.50
40.00	12.19
50.00	15.24
60.00	18.29
70.00	21.34
80.00	24.38