

HUBLI-DHARWAD 2030 DEVELOPMENT CONTROL REGULATIONS

PROJECT: PREPRATION OF A CITY PLAN FOR HUBLI-DHARWAD, KARNATAKA



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Prepared for Hubli Dharwad BRTS Co.
By IBI Consultancy India Pvt. Ltd.

REPORT 6

**Final City Plan / Urban Development Framework
& Final BRT Corridor Urban Design Guidelines**

DEVELOPMENT CONTROL REGULATIONS

Table of Contents

1	Background	1
2	DCR General Recommendations.....	2
2.1	Differential DCRs	3
2.2	Recommendations for Zone A and Zone B	5
2.2.1	FAR and Setback - Ground Coverage	5
2.2.2	Dwelling Units	6
2.2.3	Land Reservations	6
2.2.4	Land Amalgamation	11
2.2.5	Slum Upgradation	11
2.3	Recommendations for TOD Zone	12
2.3.1	Introduction.....	12
2.3.2	Regulations Applicable to TOD Zone.....	13
2.3.3	Transit Oriented Development Plan.....	24
2.4	DCR for Special Areas.....	26
2.4.1	Conservation / No Development Zone.....	26
2.4.2	Heritage Zone	29
	Annexures: Review of HDUDA Master Plan 2031	34
1	Annexure A: Inconsistencies between Land Use Plan and Zonal Regulations ...	35
1.1	Proposed Land Use	35
1.2	Lack of Spatial Demarcation of Zone A & B	35
1.3	Existing Land Use Plan does not show Forest Land	36
1.4	Gaps in Regulations for Areas of Special Control	37
1.5	Heritage Area Regulations.....	37
1.6	Environment Specific Regulations	38
1.7	Air Funnel Zone Regulations	39
1.8	Housing Regulations.....	39
2	Annexure B: Issues in TOD Zone Demarcation	41
3	Annexure C: Review of Urban Form Regulations.....	43
3.1	Residential DCR Evaluation.....	43
3.1.1	Plot Size Range: Up to 250sqm.....	43
3.1.2	Plot Size Range: 250sqm to 500sqm.....	47
3.1.3	Plot Size Range: 500sqm to 4000sqm.....	49
3.1.4	Observations for Residential DCR	52
3.2	Commercial DCR Evaluation	53

Table of Contents (continued)

3.2.1	Plot Size Range: Up to 250sqm	53
3.2.2	Plot Size Range: 250sqm to 500sqm.....	54
3.2.3	Plot Size Range: 500sqm to 4000sqm.....	56
3.2.4	Observations for Commercial DCR.....	59
3.3	TOD DCR Evaluation.....	60
3.3.1	Plot Size Range: Up to 250sqm	61
3.3.2	Plot Size Range: 250sqm to 500sqm.....	63
3.3.3	Plot Size Range: 500sqm to 1250sqm.....	66
3.3.4	Plot Size Range: 1250sqm to 2000sqm.....	68
3.3.5	Plot Size Range: 2000sqm to 4000sqm.....	69
3.3.6	Plot Size Range: 4000sqm and above.....	70
3.4	Conclusion	71

List of Maps

Map 1: Proposed Natural Structure of Hubli-Dharwad	3
Map 2: Proposed Density Framework in the LPA.....	4
Map 3: Revised TOD Zone Boundary.....	13

List of Figures

Figure 1: Map and List of Heritage Zones	29
Figure 2: Proposed Heritage Precinct in Dharwad	31
Figure 3: Proposed Heritage Precinct Area around ASI monuments	31
Figure 4: Proposed Heritage Precinct Area in Hubli	32
Figure 5: HDUDA Proposed Land Use Plan Legend.....	35
Figure 6: Forest Department Dharwad Division Forest Vegetation Map overlapped with LPA boundary.....	36
Figure 7: Recommendations to modify TOD Zone boundary	42

List of Tables

Table 1: Ancillary Uses Permitted in TOD Zone	14
Table 2: List of Prohibited Land Uses in TOD Zone	14
Table 3: Setback and Stepback Regulations for buildings with height more than 15.00 m ...	15
Table 4: FAR and Ground Coverage Regulations in TOD Zone	17
Table 5: Parking Space Standards within TOD Overlay Zone	18
Table 6: Proposed Composition of Heritage Committee	32
Table 7: Existing and Proposed FAR Regulations	71

1 Background

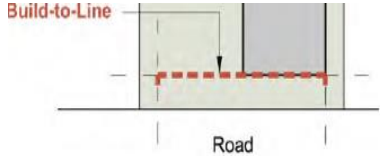
The Hubli Dharwad Master Plan- 2031 (Revision-II) envisages a compact, balanced and equitable, urban growth for the twin cities of Hubli and Dharwad. This growth pattern envisioned will partly be achieved through strategic densification along the proposed BRTS corridor between the two cities. At the same time, the peripheral urban areas of the two cities accommodate significant tracts of agricultural lands and rural villages, contributing to the overall economic health of the region. This report presents a review of the Master Plan 2031 – Land Use Plan and Zoning Regulations, including identification of gaps and suggested revisions. It presents suggests development control regulations for the Transit Oriented Development Zone identified along the BRTS Corridor, and other areas of special control such as heritage and environmental sensitive areas.

The report is structured as follows:

- Chapter 2 includes the recommendations for modifications in the Master Plan 2031. It provides recommended delineation of zones and proposed regulations for areas of special control, including TOD Zone Heritage Zone and Environmentally Sensitive Zone.
- Annexures include the review of the Zonal Regulations of Hubli Dharwad Master Plan- 2031 (Revision-II)
 - Annexure A – details out inconsistencies between the Land Use Plan and the Zonal Regulation and gaps in the regulations for Areas of Special Control
 - Annexure B – identifies issues in TOD Zone Demarcation
 - Annexure C – provides a detailed review of the Urban Form Regulations

2 DCR General Recommendations

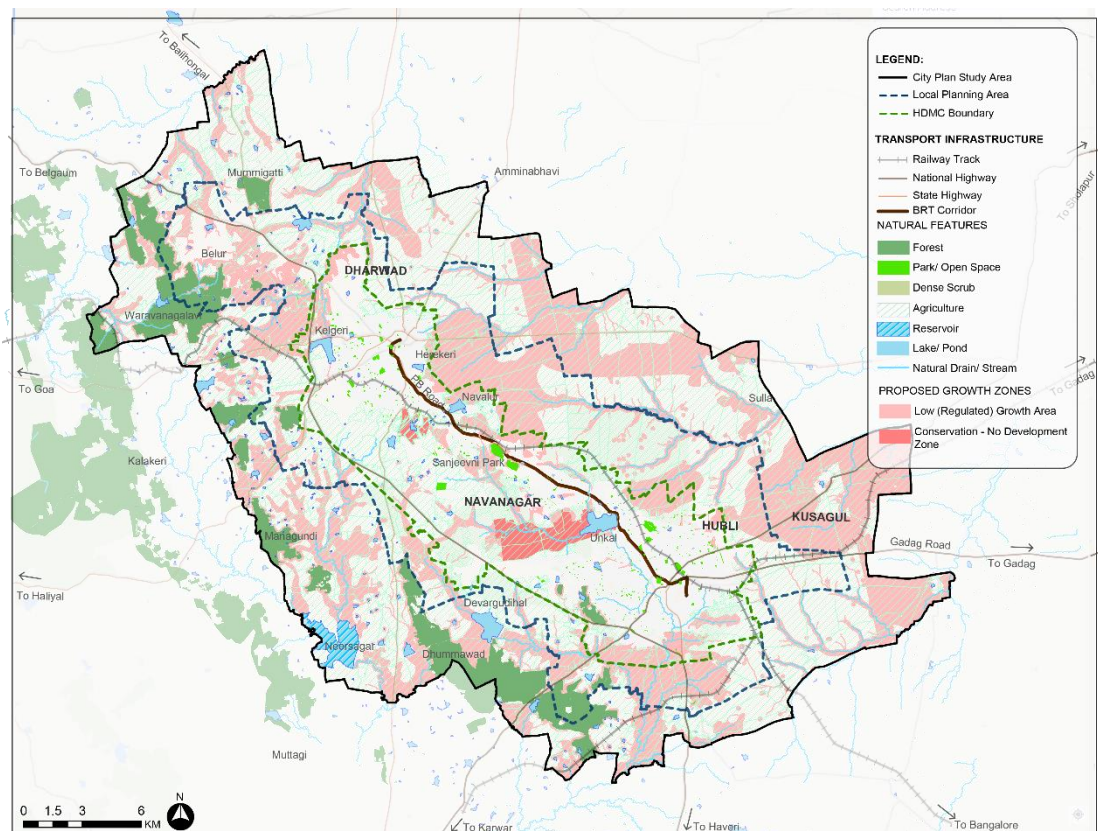
The **definitions of the following terms** are required to include in the Zoning Regulations:

- i. **Heritage Buildings** means those buildings which are deemed “protected monuments” as per the *Ancient and Historical Monument and Heritage Sites and Remains Act, 1961*, or are deemed “ancient monuments” as per the *Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 2010*.
- ii. **Build-to-Line** means a line with which the exterior wall of a building in a development is required to coincide. Some percent of the road side façade area of the ground or more floors in buildings with more than one floor, may extend to the road-side property line so that the building visually reinforces the building façade line of the street.
 
- iii. **Developer Entity (DE)** means an individual land owner, group of land owners, cooperative societies, / Government Agencies who demonstrate the intent to develop a property.
- iv. **Overlay Zone** means an additional zone defined with different set of development regulations over an established/existing base zone to regulate development in such a zone to achieve a specific set of goals defined in the Development Plan.
- v. **Transit Oriented Development Zone** means the area delineated as per the Master Plan for public transit investments where greater than average transit growth in terms of daily ridership targets are expected.
- vi. **Shoptline** means provision of shops in the ground floor of buildings on plots in the TOD Zone along roads having existing or prescribed width of and between 12 m and 31 m.

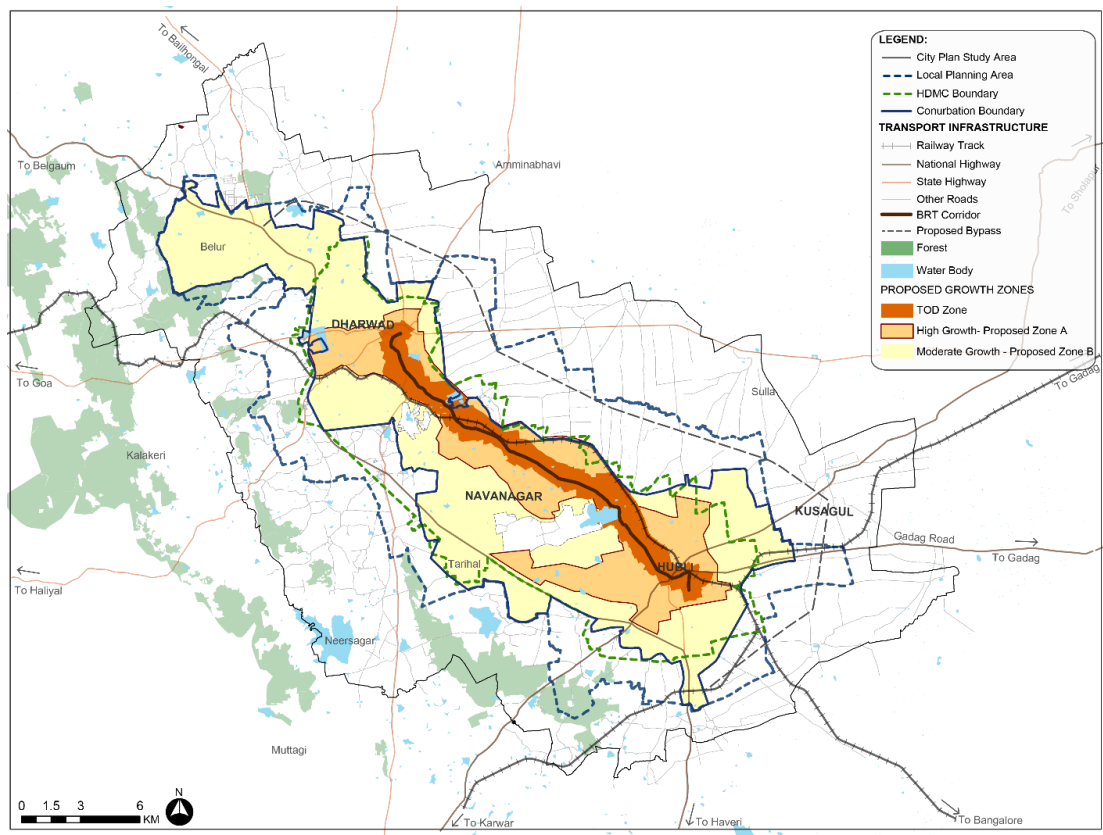
2.1 Differential DCRs

In addition to the main land use zones, differential Development Controls are also proposed for the following areas:

- (1) Zone A – High Growth Zone - Core areas of Hubli & Dharwad and areas identified in Map 2
- (2) Zone B – Areas in the outskirts of the twin city as identified in Map 2
- (3) TOD Zone as identified in Map 2
- (4) Special Regulations
 - a. Natural Conservation Area (Map 1)
 - b. Heritage Zone

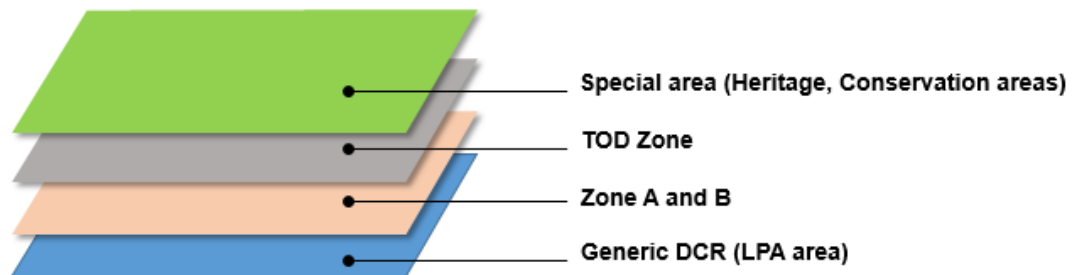


Map 1: Proposed Natural Structure of Hubli-Dharwad



Map 2: Proposed Density Framework in the LPA

The applicability of the regulations shall be considered in the order shown below, such that Regulations for conservation Areas supersede all underlying regulations.



Details of DCRs for each of the above mentioned zones are discussed in the following section.

2.2 Recommendations for Zone A and Zone B

2.2.1 FAR and Setback - Ground Coverage

Suggested Additions: None

Suggested Modifications:

Clause 10.1- c: Up to **15 m height** of building the setbacks are calculated as percentages of depth and width of the plot, as per Table No.10-1 and Table No.10-2.

Clause 10.1- d: Table No.10-3 shall be referred for Buildings which are more than **15 m** in height to fix the setbacks.

Table no. 10-1: Exterior minimum Setbacks for buildings (except Industrial) up to **15 m** in height and plot size up to 4000 sqm for Residential /Commercial use.

Sl. No.	Depth/ Width of site (m)	Depth of Site (m)		Width of Site (m)	
		Front Set Back	Rear Set Back	Left Set Back	Right Set Back
1	2	3	4	5	6
1	Up to 7.0	1.00	0.00	0.00	0.75
2	Over 7.0 up to 10.0	1.00	0.50	0.75	0.75
3	Above 10.0	12%	8% subject to a minimum of 1.00 m on other sides		

Table no. 10-2: For Transportation & Communication / Public Utilities / Public & Semipublic use up to **15 m** in height and plot size up to 4000 Sq. m

Sl. No.	Depth/ Width of site (m)	Depth of Site (m)		Width of Site (m)	
		Front Set Back	Rear Set Back	Left Set Back	Right Set Back
1	2	3	4	5	6
1	Up to 10.0	1.25	0.75 m on other sides		
2	Above 10.0	15%	12% on other sides		

Table no. 10-3: Exterior Setbacks for buildings (except Industrial) above **15 m** in height.

Sl. no.	Height of building in meters	Exterior setbacks to be left on all sides (Front, Rear, and sides in meters)
1	2	3
1	15.0 and above up to 18.0	6.0
2	18.0 and above up to 21.0	7.0
3	21.0 and above up to 24.0	8.0
4	24.0 and above up to 27.0	9.0
5	27.0 and above up to 30.0	10.0
6	30.0 and above up to 35.0	11.0
7	35.0 and above up to 40.0	12.0
8	40.0 and above up to 45.0	13.0
9	45.0 and above up to 50.0	14.0
10	50.0 and above	16.0

Table 11-1: Maximum plot coverage, FAR, and Road width for different plot areas for Residential Buildings

Sl. No.	Plot area (sq.m.)	Maximum Plot Coverage	Permissible FAR		Premium FAR	Minimum Road width (m)
			Zone A	Zone B		
1	Up to 250	75%	2.00	1.75	-	Up to 9.0
2	Above 250 up to 500	65%	2.50	2.00	-	9.0 and above up to 12.0
3	Above 500 up to 4000	55%	2.75	2.50	0.25	12.0 and above up to 18.0
4	Above 4000 up to 20000	50%	3.00	2.75	0.50	Above 18.0
5	Above 20000	As per Development Plan Table no. 7-1				

Table 11-3: Maximum plot coverage, FAR, and Road width for different plot areas for Commercial Buildings

Sl. No.	Plot area (sq.m.)	Maximum Plot Coverage	Permissible FAR		Premium FAR	Minimum Road width (m)
			Zone A	Zone B		
1	Up to 250	80%	2.00	1.75	-	Up to 9.0
2	Above 250 up to 500	75%	2.50	2.25	-	9.0 and above up to 12.0
3	Above 500 up to 4000	65%	2.75	2.50	0.25	12.0 and above up to 18.0
4	Above 4000 up to 12000	50%	3.00	2.75	0.5	Above 18.0
5	Above 12000	As per Development Plan Table no. 7-2				

2.2.2 Dwelling Units

Suggested Additions:

Clause 11/11.1/(c) Notes:

There shall be no restrictions to the number of dwelling units allowed in plots of size less than 500m in Zone A.

Suggested Modifications: None

2.2.3 Land Reservations

2.2.3.1 Subdivision Regulations

Suggested Additions:

- Subdivision Regulations for Zone A and Zone B should be classified separately.
- Clause 6/ 6.1/e. Civic amenities**

The minimum dimension of any side of such amenity space shall not be less than 7.5 m and if the average width of such amenity space is less than 16.6 m, the length thereof shall not exceed 2 1/2 times the average width.

The Civic amenities and Parks/Open spaces and playground area shall be handed over to the Authority/ Local Authority as approved by HDUDA within twelve months from the date of approval /approval of the layout

iii. **Clause 6/ 6.1/e. Civic amenities/ For Zone A:**

Such amenity areas ***shall not be deducted*** from the plot area for the calculation of FAR permissible on the balance plot.

iv. **Clause 6/ 6.1/e. Civic amenities/ For Zone B:**

Such amenity areas ***shall be deducted*** from the plot area for the calculation of FAR permissible on the balance plot.

v. *Note: No amenity plot will be carved out of any land entirely reserved for public purpose.*

Suggested Modifications:

i. **Clause 6/ 6.1/e. Civic amenities/ 1/ For Zone A:** After making provisions for Parks, subdivision of plots in Zone A shall require handing over 5% of plot area for Civic Amenities to the Authority/ Local Authority as approved by HDUDA, and 10% of the plot area for Affordable Housing to KHB free of cost and free of encumbrance.

ii. **Clause 6/ 6.1/e. Civic amenities/ 1/ For Zone B:** After making provisions for Parks, subdivision of plots in Zone A shall require handing over 10% of plot area for Civic Amenities to the Authority/ Local Authority as approved by HDUDA, and 10% of the plot area for Affordable Housing to KHB free of cost and free of encumbrance.

iii. **Clause 6/ 6.1/e. Civic amenities/ 4:** Civic Amenities shall include education, health, social and other amenities as mentioned in KUDA Act, 1987 Section 2(h) and shall be fronting a public road or shall be provided with a perpetual independent right of way as approved with the special permission of the Commissioner. In determining the amenity, the Commissioner shall give due regard to amenity deficits in the ward. Such amenity area shall be exclusive of area under perpetual independent right of way. This clause is operative till amendments to relevant Acts & Rules are made. These amenities shall be exclusively developed by the Authority/ Local Authority as approved by HDUDA. *No separate compensation shall be granted.*

This shall be relinquished to the Authority/local Authority (free of cost and free of encumbrance) and maintained by the owner as per the satisfaction of the Authority/ Local Authority as approved by HDUDA.

Such public amenities or facilities above shall be deemed to be designations or reservations in the MP thereafter.

iv. **Clause 6/ 6.1/e. Civic amenities/ 5:** Due to incorporation of proposed roads of the Master Plan, if the area under the roads in the layout covers more than 40%, reservation of area for civic amenities and affordable housing may be dispensed with.

2.2.3.2 Regulations for Residential Development Plans and Non-Residential Development Plans (Regulation 7)

1. Residential Developments (Regulation 7.1)

Suggested Additions:

- i. Residential Development Regulations for Zone A and Zone B should be classified separately.
- ii. The minimum area requirements for EWS and LIG Housing as per Karnataka Affordable Housing Policy are as follows:
 - a. For EWS: 15 – 25.5 sq.m. Carpet area¹
 - b. For LIG: 30 – 60 sq.m. Carpet area²
- iii. The plot/ dwelling units with Affordable Housing Units under EWS/ LIG category will be handed over to KHB at a mutually pre-determined rate as approved by State Level Empowered Committee for Affordable Housing (SLECAH) for allotment to eligible applicants.
- iv. Developer shall be free to sell the remaining dwelling units as per his choice at such price as may be determined by him.
- v. EWS/ LIG tenements should be in G+3 format.
- vi. All internal development works such as roads, footpaths, water supply, UGD, electrical wirings, parks, and street lights shall be undertaken by the developer.
- vii. Zone A: In case of any residential development in Zone A, the developer will be eligible to avail a premium FSI of 0.5
- viii. Civic Amenities shall include education, health, social and other amenities as mentioned in KUDA Act, 1987 Section 2(h) and shall be fronting a public road or shall be provided with a perpetual independent right of way as approved with the special permission of the Commissioner. In determining the amenity, the Commissioner shall give due regard to amenity deficits in the ward. Such amenity area shall be exclusive of area under perpetual independent right of way. This clause is operative till amendments to relevant Acts & Rules are made.
- ix. These amenities shall be exclusively developed by the Authority/ Local Authority as approved by HDUDA. These areas will be in addition to the Parks/ Open Spaces and Playgrounds, which is 10% of the plot area. This shall be relinquished to the Authority/local Authority (free of cost and free of encumbrance) and maintained by the owner as per the satisfaction of the Authority/ Local Authority as approved by HDUDA.
- x. Parks/Open spaces and playgrounds shall be separated from other uses by means of a road. In unavoidable circumstances, Park shall be separated from other uses by means of 3.00 m wide Path way.

¹ (National Building Codes, 2016)

² (PMAY 2015 Guidelines)

- xi. The minimum dimension of any side of such amenity space shall not be less than 7.5 m and if the average width of such amenity space is less than 16.6 m, the length thereof shall not exceed 2 1/2 times the average width.
- xii. The Civic amenities and open space area shall be handed over to HDMC within twelve months from the date of approval /approval of the development layout

Suggested Modifications:

- i. **Clause 7/7.1/b/ Zone A:** The owner will be allowed to develop the land admeasuring 20,000 sq.m. and above if he agrees to hand over 10% of plot area or 15% of the permissible BUA for EWS/ LIG tenements excluding area reserved for roads under MP 2031 and area reserved for parks, to State Level Nodal Agency i.e. Karnataka Housing Board, along with handing over **5%** of the plot area to HDUDA for provision of civic amenities.
- ii. **Clause 7/7.1/b/ Zone B:** he owner will be allowed to develop the land admeasuring 20,000 sq.m. and above if he agrees to hand over 10% of plot or 15% of the permissible BUA for EWS/ LIG tenements, area excluding area reserved for roads under MP 2031 and area reserved for parks to State Level Nodal Agency i.e. Karnataka Housing Board, along with handing over **10%** of the plot area to HDUDA for provision of civic amenities.
- iii. **Clause 7/7.1/c/ Zone A:** For any residential developments in Zone A, the owner will be entitled to avail the full permissible BUA of the entire plot for other permissible uses in the zone on the remaining land as given in Table No.7-1.
- iv. **Clause 7/7.1/c/ Zone B:** For any residential developments in Zone B, the owner will be entitled to avail the permissible BUA of the land excluding the area allocated for provision of civic amenities and open spaces for development on the remaining land as given in Table No.7-1.

2. Non-Residential Developments (Regulation 7.2):

Suggested Additions:

- i. **In Zone A:** For any Non-residential development in Zone A, the owner will be allowed to develop the land admeasuring 12,000 sq.m. and above if he agrees to hand over 5% of the plot area to the Authority/ Local Authority as approved by HDUDA for provision of civic amenities, and 5% for shared surface parking as per the regulations
- ii. **In Zone B:** For any Non-residential development in Zone B, the owner will be allowed to develop the land admeasuring 12,000 sq.m. and above if he agrees to hand over 5% of the plot area to the Authority/ Local Authority as approved by HDUDA for provision of civic amenities, and 5% for shared surface parking as per the regulations
- iii. Civic Amenities shall include education, health, social and other amenities as mentioned in KUDA Act, 1987 Section 2(h) and shall be fronting a public road or

shall be provided with a perpetual independent right of way as approved with the special permission of the Commissioner. In determining the amenity, the Commissioner shall give due regard to amenity deficits in the ward. Such amenity area shall be exclusive of area under perpetual independent right of way. This clause is operative till amendments to relevant Acts & Rules are made.

- iv. These amenities shall be exclusively developed by the Authority/ Local Authority as approved by HDUDA. These areas will be in addition to the Parks/Open spaces and playgrounds, which is 10% of the plot area. This shall be relinquished to the Authority/local Authority (free of cost and free of encumbrance).
- v. The minimum dimension of any side of such amenity space shall not be less than 7.5 m and if the average width of such amenity space is less than 16.6 m, the length thereof shall not exceed 2 1/2 times the average width.
- vi. The Civic amenities and open space area shall be handed over to the Authority/ Local Authority as approved by HDUDA within twelve months from the date of approval /approval of the layout.

Suggested Modifications:

- i. **Clause 7/7.2/f/ Zone A:** For any non-residential development in Zone A, the owner will be entitled to avail the full permissible BUA of the entire reserved plot for other permissible uses in the zone on the remaining land as given in Table 7-2.
- ii. **Clause 7/7.2/f/ Zone B:** For any non-residential development in Zone B, the owner will be entitled to avail the permissible BUA of the land excluding the area allocated for provision of civic amenities and recreational open spaces for development on the remaining land as given in Table 7-2.

3. Regulation for Integrated Township Development (Regulation 7.3)

Suggested Additions:

- i. Integrated Township development shall be allowed only in Zone B
- ii. At least 10% of the total residential area of the township shall be earmarked for EWS/ LIG housing. The developer has the option to develop only EWS DUs/ plots in lieu of LIG
- iii. The minimum area requirements for EWS and LIG Housing are as follows:
 - a. For EWS: 15 – 25.5 sq.m. Carpet area³
 - b. For LIG: 30 – 60 sq.m. Carpet area⁴
- iv. The EWS/LIG housing shall be in G+3 format

³ (National Building Codes, 2016)

⁴ (PMAY 2015 Guidelines)

Suggested Modifications:

Clause 7/7.3/e Other Regulations for approval of Integrated Township/ 2: 10% of the site area shall be reserved for public & semi-public use / CA sites & shall be handed over to the Authority; the same shall be allotted by the Authority for development for specified C.A. either to the developer or others on lease basis.

2.2.4 Land Amalgamation

Suggested Additions:

- i. **Regulation 6/6.4:** Lands belonging to various categories of land holders including Public lands can be amalgamated for various purposes by obtaining their consent, by resorting to any of the following methods of land amalgamation:
 - a. Purchase of lands, including buildings, if any, standing thereupon
 - b. Exchange of such land with a suitable land of at least equivalent value as per circle rates
 - c. Procurement of Development Rights over such land, by way of registered document; or
 - d. Transfer of all lands included in the scheme to a legal entity (e.g: Registered Society or a Company, Co-operative Housing Society, Charitable Trust, etc.)
 - a. Acquisition of lands, provided the developer has purchased or procured DRs over at least 70% land comprised in the scheme and there are dangerous buildings, declared as such by the Competent Authority, on the balance lands

Suggested Modifications: None

2.2.5 Slum Upgradation

Suggested Additions:

- i. Upgradation shall be undertaken for slums that are not eligible/ feasible for redevelopment and that comes under the following land uses: Residential (Main), Residential (Mixed), Commercial (Central), Commercial (Business), Industrial and agriculture zone in proximity to existing developments.
- ii. A Community Land Trust shall be formed before undertaking any Slum Upgradation Projects. The Community Land Trust shall own the land allocated for upgradation, and will lease out the respective land area to the slum dweller for a certain period.
- iii. The slum dweller shall undertake any type of upgradation on his land as per the regulations
- iv. Any large infrastructure upgradations like supply of water, drainage, community toilets shall be undertaken by the Community Land Trust.
- v. After upgradation, suitable action will be taken for de-notification of these project areas

Suggested Modifications: None

2.3 Recommendations for TOD Zone

2.3.1 Introduction

2.3.1.1 Definition

Transit Oriented Development is essentially any development, macro or micro, which is focused around a transit node, and facilitates complete ease of access to the transit facility, thereby inducing people to prefer to walk and use public transportation over personal modes of transport.

The Primary Goals of TOD are to:

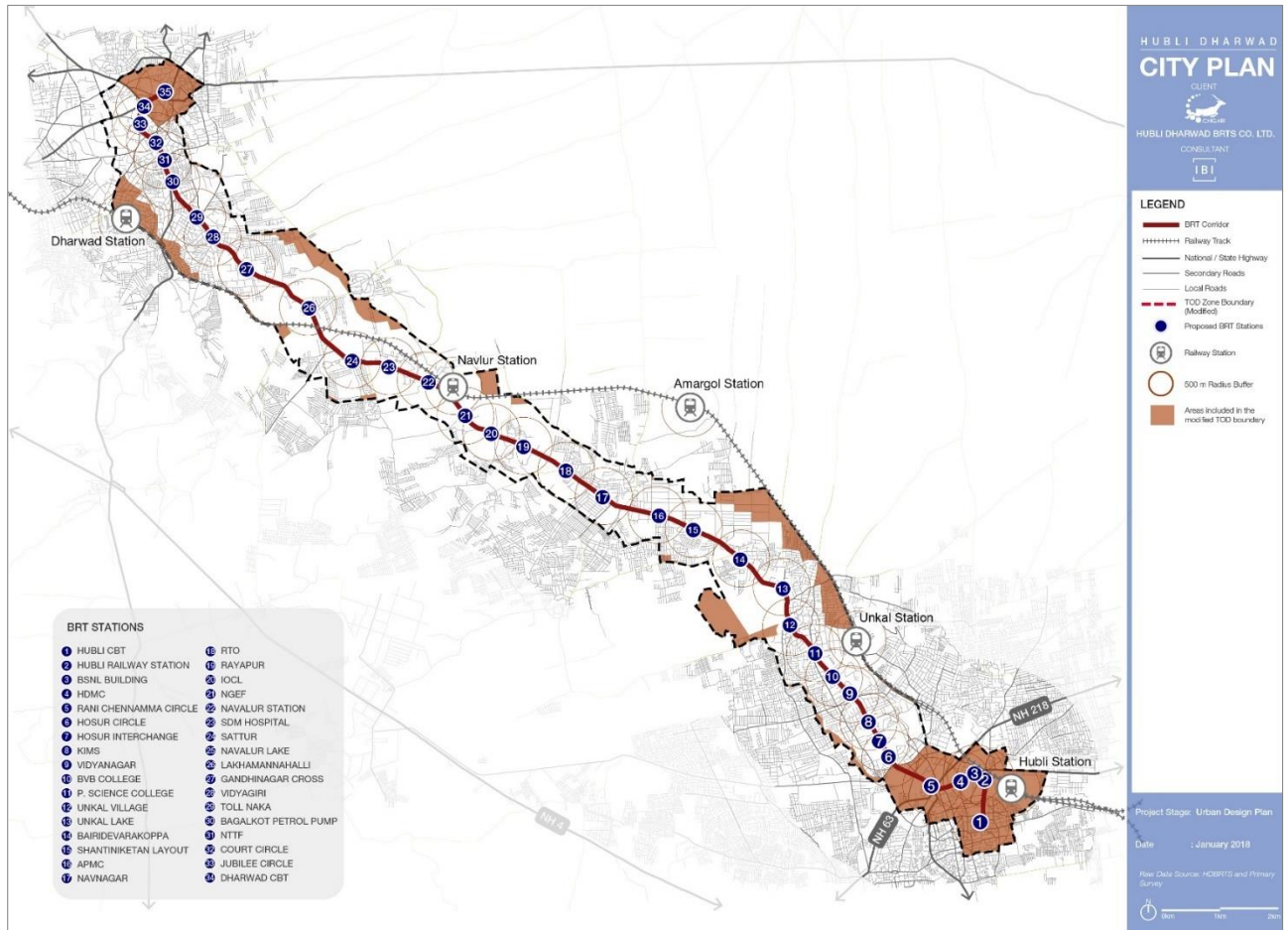
- i. Reduce/ discourage private vehicle dependency and induce public transport use through design, policy measures & enforcement.
- ii. Provide easy public transport access to the maximum number of people within walking distance through densification and enhanced connectivity.

2.3.1.2 Purpose

- (1) This is an overlay zone established on Transit Oriented Development (TOD) principles, which provides opportunity for mixed use and higher density development along the HDBRTS Corridor. This zone takes precedence over all underlying zones, except conservation areas and special areas, by encouraging compact mixed use development. Sustainable transit oriented densification could be achieved through incentivizing development of additional floor space along the transit corridors and station areas.
- (2) The concept of Transit Oriented Development shall be adopted for development within this zone, such that maximum number of people can live, work or find means of recreation within walking/cycling distance of the transit corridors.
- (3) This overlay Zone shall establish separate densities and development regulations applicable to any development in the TOD Zone. The TOD Zones will establish high density environments in the city where bus feeder connectivity is optimum. This zone can benefit from more transit-friendly urban design.

2.3.1.3 Applicability

The TOD zone DCR is applicable to all properties located within the boundaries of the TOD Zone as shown below. The same boundary shall be earmarked on the Hubli Dharwad MP-2031 (Map 3)



Map 3: Revised TOD Zone Boundary

2.3.2 Regulations Applicable to TOD Zone

2.3.2.1 Permissible Land Uses

Description

'Mixed Land Use' areas are those where employment, shopping and residential land uses will be integrated in a compact urban form. Mixed use areas will foster community interaction by providing focus on community facilities. Mixed activity is observed in intensely developed areas (TOD Zone), of Hubli- Dharwad cities. TOD Zone is considered as residential-commercial (mixed) as identified in the Master Plan 2031.

Regulation

Main Land use category: R, C-3, T-1, I-1 & U-2

Ancillary Land use category: C-1, C-2, I-2, T-2, U-3, & U-4

Ancillary land use is permissible up to 40% of the total built up area, if the Plot size is abutting a road as specified below, the ancillary uses can be allowed as Main use. Space standards as per Table No.9-6 are applicable.

Table 1: Ancillary Uses Permitted in TOD Zone

Sr.no.	Plot size (in sq.m.)	Minimum Road Width (m)	Ancillary uses permissible as main land use
1	Upto 240	15.0	C-2, U-3, U-4
2	Above 240 upto 1000	18.0	C-2, T-2, U-3, U-4

2.3.2.2 Prohibited Land Uses

Any new development of land or building that are:

- Not making use of intense utilization of land
- Categorized as polluting and potentially hazardous uses and activities
- Directly or indirectly pollute the existing natural water bodies, parks and open
- Car and heavy vehicle intensive uses

List of Uses including but not limited to:

Table 2: List of Prohibited Land Uses in TOD Zone

REFERENCE CLAUSE	LIST OF PROHIBITED LAND USE
Zonal Regulations (TOD Zone -Prohibited Land Uses - Page 244)	Any new development of land or building that do not make use of intense utilization of land such as: <ul style="list-style-type: none"> ▪ Large scale stand-alone automobile repair and garage centres - ▪ warehouses and storage area for goods, ▪ heavy industries, hazardous industries and heavy manufacturing industries, ▪ Cemeteries, ▪ Golf Courses, Amusement parks and drive-in theatres
Zonal Regulations Table 9-2	<ul style="list-style-type: none"> ▪ Stand Alone Kalyan Mandap (C3-13) ▪ Sale of used junk goods, junk yards (C4-2) ▪ Warehouses and storage areas for goods (C4-3) ▪ Whole sale and trading (C4-4) ▪ Wholesale business and warehouses. (TC5-1) ▪ APMC yards, Agro Mandis (C5-2) ▪ Heavy goods markets, Auto mobile show rooms and service stations. (C5-3)
Zonal Regulations Table 9-3	<ul style="list-style-type: none"> ▪ Leather Products (I3-3) ▪ Transport Equipment:(I3-4) ▪ Ware housing (I-4-2) ▪ Heavy Industries (I5-2)
Zonal Regulations Table 9-3	<ul style="list-style-type: none"> ▪ Leather Products (I3-3) ▪ Transport Equipment:(I3-4) ▪ Ware housing (I-4-2) ▪ Heavy Industries (I5-2)
Zonal Regulations Table 9-4	<ul style="list-style-type: none"> ▪ Stand Alone Multi level car parking (T2-2) ▪ Automobile spares and services, Godowns,(T3-1) ▪ Loading and unloading platforms (with/without Cold storage facility), weigh bridges (T3-2) ▪ Workshops and garages (T3-5) ▪ All uses mentioned in T-4
Zonal Regulations Table 9-5	<ul style="list-style-type: none"> ▪ Burial grounds, Crematorium, Golf course under special circumstances (U2-2) ▪ Airport and ancillary uses (U4-3)

2.3.2.3 Setbacks

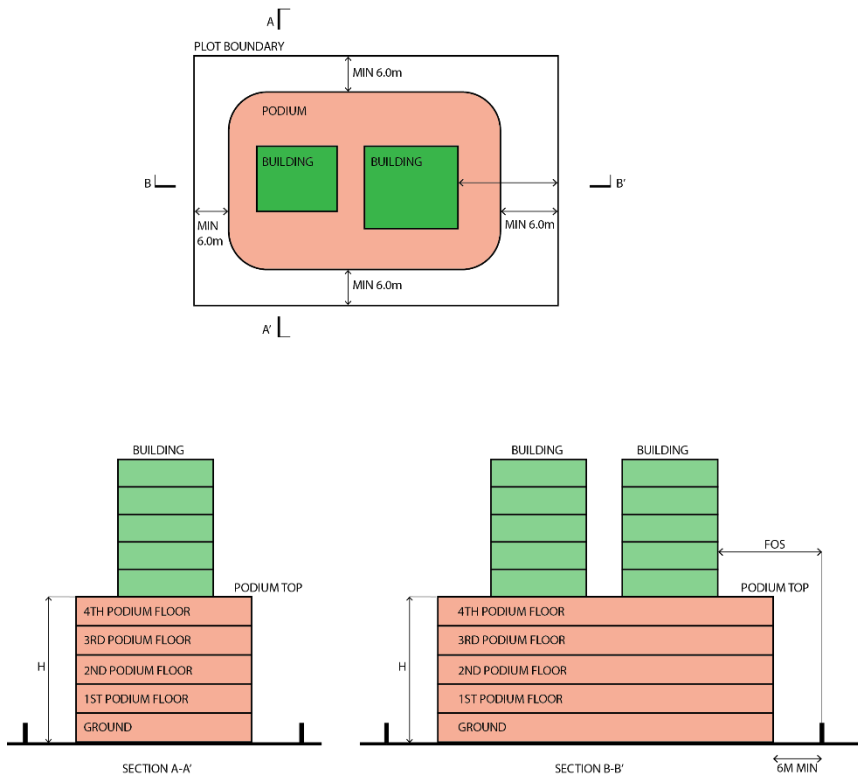
Setbacks for buildings up to 15 m in height shall be in accordance with Table No.10-1 or Table No.10-2 of the Zoning Regulations subject to Maximum Front Setback of 3m or subject to the specified “Build-To Line” (as provided in the Urban Design Guidelines), whichever is more.

- A. For corner plots, the edge of a plot facing the wider street shall be considered the “Front”.
- B. For Residential, Commercial, Public and Semi-public, Transport & Communication, Public utility buildings, above 11.50 m in height, within the TOD Zone, the setbacks, stepbacks and building separation shall be in accordance with Table 3 below.

Table 3: Setback and Stepback Regulations for buildings with height more than 15.00 m

SI	DETAILS	REGULATION
1	Front Setback	<ul style="list-style-type: none"> • Minimum – 1.5m • Maximum – 6.0 m • The maximum front setback may be increased up to an additional 5.0 m where the entire setback is used for publicly-accessible open space, in the form of a plaza or courtyard, and does not include parking or loading spaces • Buildings shall be built to the edge of the front setback line
2	Side & Rear Setback	<ul style="list-style-type: none"> • Minimum for height less than 15m – as per Table 10-1, and 10-2 • Minimum for height above 15m – 6.0 m⁵
3	Podium Requirements for Buildings above 24m in height	<ul style="list-style-type: none"> • Minimum height of a podium – 9m • Maximum height of a podium – 20 m

⁵ minimum setback regulations of NBC & HD Master Plan 2031

SI	DETAILS	REGULATION
		<p>BUILDING ON PODIUM</p>  <p>The diagram illustrates the 'BUILDING ON PODIUM' regulation. The top part is a plan view showing a rectangular plot boundary containing a central podium area. Two green rectangular buildings are situated on the podium. Minimum clearances of 6.0m are specified between the buildings and the plot boundary on all sides. Section lines A-A' and B-B' are indicated. Below the plan view are two cross-sections: SECTION A-A' shows a single building on a podium with floors labeled from GROUND to 4TH PODIUM FLOOR, with a total height H; SECTION B-B' shows two buildings on a podium with the same floor labels, a total height H, and a minimum 6M separation between them. A 'FOS' (Fire of Spread) line is also shown in section B-B'. The height H is defined as H = Min. 9m and Max. 24m.</p> <p>H = Min. 9m and Max. 24m</p>
4	<p>Building Separation</p> <p><i>* Note: For buildings along the edge of a property, the minimum building separation must be halved and considered as minimum distance from plot boundary</i></p>	<ul style="list-style-type: none"> • Minimum for building of height 15m to 24m – 12.0m • Minimum for any portion of a building higher than 24 m – 18.0 m, except that the separation may be reduced to 12.0 m if there are no primary windows or balconies on the wall facing the adjacent flanking building • Minimum for any portion of the building higher than 35.0 m – 25.0m

2.3.2.4 Floor Area Ratio (FAR) and Ground Coverage:

A. FAR for all types of building shall be in accordance with the following table.

Table 4: FAR and Ground Coverage Regulations in TOD Zone

Plot Area (sqm)	Plot Coverage		Permissible FAR			Minimum FAR	Premium FAR	Min. Road width (m)
	Max	Min	Zone A	Zone B	TOD Zone			
Up to 250	70%	-	2	1.75		-	0.25	Up to 9.0
Above 250 & up to 500	70%	-	2.5	2.25		1	0.25	> 9.0 up to 12.0
Above 500 & up to 1250	65%	50%	2.75	2.5	3	1.25	0.25	> 12.0 up to 18.0
Above 1250 & up to 2000					3.25		0.25	
Above 2000 & up to 4000					3.5		0.25	
Above 4000 & up to 12000	60%	50%	3	2.75	3.75	1.5	0.5	>18.0
Above 12000	-	40%	2.25		3	1	0.5	>12.0 up to 15.0
	-	40%	2.5		3.25	1.25	0.5	>15.0 up to 18.0
	-	40%	2.75		3.5	1.5	0.5	>18.0 up to 24.0
	-	40%	3		3.75	1.75	0.5	Above 24.0

B. Premium FAR can be purchased and is applicable in entire TOD Zone provided the following condition is achieved:

The owner/ developer entity (DE) will be eligible to purchase premium FAR if he agrees to develop 15% of the permissible residential BUA for EWS/ LIG tenements that shall be handed over to State Level Nodal Agency i.e. Karnataka Housing Board.

2.3.2.5 Parking

The aim of parking regulations in the TOD zones is to manage and control the parking supply and demand within the area, in order to:

- Reduce vehicular trips to/from, through and within the area.
- Reclaim public land for more equitable uses and
- Shift people to alternative modes of transportation i.e. Metro, buses, IPT, NMT and walking

Refer Table 11-10 of Zonal Regulation for parking standards. Following are the reduced parking standards that will be applicable to the TOD Zone.

Table 5: Parking Space Standards within TOD Overlay Zone

SN	TYPE OF USE	MINIMUM 1 ECS EACH SHALL BE PROVIDED FOR:
1.	Theatres and Auditoriums except in Educational Institutions.	25 seats of accommodation subject to minimum of 20. Minimum 20% parking space to be provided for 2-wheelers and 10% space to be provided for cycles
2.	Retail Business shops, Shopping complexes, Malls, etc)	100 sq.m. of shopping floor area
3.	Multiplex integrated with shopping	100 sq.m. of shopping floor area + requirement at the rate of one parking for every 15 seats of cinema seating accommodation.
4.	Wholesale and warehouse buildings	NA, (Use not allowed in TOD Zone)
5.	Restaurant establishment serving food and drinks and such other establishment	100 sq.m. of floor area. Minimum 20% parking space to be provided for 2-wheelers
6.	Lodging establishments, hotels and Tourist homes	100 sq.m. of floor area.
7.	For star hotels	For every 3 rooms. Additional 10% of the total requirement shall be reserved as parking for visitors.
8.	Office buildings (Government/ Semi-Government and private)	100 sq.m. of floor area. Minimum 20% parking space to be provided for 2-wheelers
9.	Hostels	Every 10 rooms, for all colleges. Minimum 20% parking space to be provided for 2-wheelers and 10% space to be provided for cycles
10.	Industrial Buildings	NA, (Use not allowed in TOD Zone)
11.	Hospitals and Nursing homes	4 Beds or 100 sqm of Floor area, whichever is more.
12.	Kalyana Mantaps, Convention centers	100 sq.m. of floor area.
13.	Recreational clubs	100 sq.m. of floor area. Minimum 20% parking space to be provided for 2-wheelers and 10% space to be provided for cycles
14.	Residential Buildings	One ECS for plot area up to 250 sqm. Plot area above 250 sqm to 500sqm, 1 ECS per DU

SN	TYPE OF USE	MINIMUM 1 ECS EACH SHALL BE PROVIDED FOR:
15.	Multi- dwellings Units/Apartments	For dwelling units of: a) 50 Sqm or less 1 car for 3 dwelling units b) more than 50 Sqm up to 100 Sqm, 1 car for 2 dwelling units c) More than 100 Sqm, additional 1 car for every 100 Sqm area. d) 10 % of additional parking shall be kept for visitors' car parking. Minimum 20% parking space to be provided for 2-wheelers and 10% space to be provided for cycles
16.	Educational buildings	400 sq.m. of floor area. Minimum 20% parking space to be provided for 2-wheelers and 10% space to be provided for cycles
17.	Other Public and Semi-Public and Light Industrial Buildings	135 sq.m. of floor area. Minimum 20% parking space to be provided for 2-wheelers and 10% space to be provided for cycles

- A. Parking may be in the form of surface parking, podium parking, basement parking, stilt parking on surface or within basements or podiums, or any other innovative methods, and shall be compliant with the Requirements stated in Section 11-13 of the Zoning Regulations for relevant parking structure.
- B. Parking is strictly prohibited on fire escape routes around high-rise buildings.
- C. Access to Parking within a plot shall be restricted to a total of 7m width or 20% of the site frontage, whichever is more.
- D. The standards given in Equivalent Car Space (ECS) shall include parking for all types of vehicles i.e. cars, scooters, cycles, light and heavy commercial vehicles, buses etc.
- E. At least 2 car spaces or 5% of Parking spaces, whichever is more, dedicated for differently-abled shall be provided at a minimum distance of 30m from the building entrance of non-residential uses.
- F. Parking spaces shall be provided and leased/ sold separately ("unbundled") from the rent or sale price of a group housing development.
- G. Floor area which is counted in the FAR shall be counted for parking ECS calculations.
- H. Exemptions to Parking shall be as per Section 11.13 of the Zoning Regulations.

2.3.2.6 *Parking Change Regulations*

Shared Parking:

- i. In New/ Redevelopment Projects, all parking facilities shall be shared between uses with different peak hours of activity, so that they are efficiently used round the clock.
Appropriate signage shall display it clearly to users as 'public'.⁶

⁶ UTIPEC Parking Regulations in TOD Influence Zone

- ii. Shared public parking facilities may be developed by the public agencies or private developers/ owners/ Traders' Associations.
- iii. As shared parking is likely to take place between mixed uses, parking requirements shall be calculated by adding the requirements and dividing them by the shared parking factor given below:

Use Type	with		Use Type
RESIDENTIAL			RESIDENTIAL
LODGING			LODGING
OFFICE		1	OFFICE
RETAIL	1.1	1.1	RETAIL
	1.4	1	
	1.2	1.7	
	1.3	1	
	1.2	1.2	
	1		

- iv. Minimum Parking Requirements as provided in Table 5 may be waived, if DE produces proof of shared parking provision as per iii. Above.

Traffic Impact Assessment:

Projects/ uses requesting a waiver from on-site minimum parking requirements would require a Traffic Impact Assessment (TIA) to prove that the area can accept an increase in the congestion borne out of additional street parking. The TIA must provide immediate and future traffic projections due to the proposed development; identify the road network that will be impacted; and clearly define mitigation strategies to address the traffic or street-side parking caused by project. The DE is responsible for implementation of the mitigation strategies.

There will be some developments that will be so significant in size that TIAs should be undertaken as a matter of course. The HDUDA shall hold discretionary power to request for a TIA as a matter of the approval process. As a guide, proposals exceeding the following parameters may attract sufficient additional traffic to warrant a TIA.

- i. Residential developments in excess of 100 units (apartments etc.).
- ii. Business in excess of 5,000 sqm
- iii. Warehousing in excess of 10,000 sqm
- iv. Retail Gross Floor Area (GFA) in excess of 1,000 sqm
- v. 100 trips in and out in the peak hour.
- vi. 100 onsite parking spaces.

2.3.2.7 Affordable Housing

Affordable housing regulation is stated in the TOD Zone regulations to ensure a minimum supply of affordable housing options for low and medium income population within walking/ cycling distance of Stations, and in close proximity to sources of employment and recreation.

Affordable Housing can be any one or in combination of the following:

- EWS Housing
- LIG Housing
- Studio Apartments
- Units / Dormitories with shared kitchen / Dining / Toilet facilities
- Hostels
- Rental Housing
- Housing for Construction Labours
- Night shelters for houseless households and pavement dwellers
- Housing for Industrial workers

In Development/ Redevelopment Projects within TOD Zone area, where:

- A. Residential built up area is more than 2,000 sqm or plot area more than 800 sqm
 - a. A minimum of 10% of overall permissible BUA shall be mandatory for affordable housing
 - b. The minimum area requirements for EWS and LIG Housing are as follows:
 - i. For EWS: 15 – 25.5 sq.m. Carpet area⁷
 - ii. For LIG: 30 – 60 sq.m. Carpet area⁸
 - c. The EWS/LIG housing shall be in G+3 format
 - d. The BUA for affordable housing shall be exempted from the total permissible BUA
- B. Residential built up area is more than 5000 sqm – (*more than 2000 sqm plot*)
 - a. All of above
 - b. Additionally, 5% of the overall FAR shall be mandatory for MIG housing
 - c. Dwelling unit size for MIG housing = 60 - 80 sqm
- C. The dwelling units with Affordable Housing Units under EWS/ LIG/ MIG category will be handed over to KHB at a mutually pre-determined rate as approved by State Level Empowered Committee for Affordable Housing (SLECAH) for allotment to eligible applicants.
- D. Developer shall be free to sell the remaining dwelling units as per his choice at such price as may be determined by him.

⁷ (National Building Codes, 2016)

⁸ (PMAY 2015 Guidelines)

** As per Section-5.1, Karnataka Affordable Housing Policy (KAHP), 2016, reservation will be mandated for all projects of project area of 1 hectare (10,000 sqm) or more. 10 per cent of the Residential portion of the project site shall be reserved for AHUs.*

2.3.2.8 Parks/ Open spaces and Playgrounds

- A. Plot size of more than 2000 sqm, additionally, provision of a minimum 10% of Parks/ Open Spaces and Playgrounds shall be mandatory This shall be subject to the following conditions:-
 - a. Civic amenities provided in Parks/ Open spaces and playgrounds as part of the development shall be exempted from calculation of FAR.
 - b. For plot size more than 12,000 sqm, through-block linkages of width not less than 3.0 meters shall be provided as public easement
 - c. For all plots of all sizes, provision of minimum 20% landscaped or soft paved area is mandatory to reduce rain water run-off.
- B. Open area requirement of the social infrastructure facilities shall be accommodated within the TOD plan (as described in 4.4.4) or integrated into the multi-use Parks/ Open Spaces and Playgrounds provided in the area. For example, school playgrounds may be provided within the Neighbourhood Play Area and must be open for use after-hours by general public.
- C. Open space requirements with different hours of use may also be provided as shared spaces, with appropriate programming.
- D. All open spaces shall be programmed for different income groups, age-groups and activity types, based on hierarchy and functional requirements.
- E. All public spaces and buildings shall be universally accessible.
- F. All public parks / multipurpose grounds shall have provisions for natural rain water management.
- G. Creation of opaque boundary walls and locking of open spaces is prohibited. In case toe-walls with fences are provided, frequently placed openings must be kept to allow rain water to flow into the open spaces.
- H. Proof of rain water harvesting is mandatory for approval of construction of bore-wells within plot premises
- I. Use of public open spaces for parking, unless designated for such use, shall be punishable by Law as per Municipal Act.

2.3.2.9 Green Infrastructure

WATER

- Decentralised water supply system from ground water and recycled water in addition to / absence of municipal piped connection
- Mandate rain water harvesting for buildings on all plots which are more than 200 sq.m. in extent and for G+2 structures. Plots of lesser than 200 sq.m. area shall provide for infiltration of rain water.

- Decentralised treatment plants at sector/ ward level for treating waste water and to generate reusable grey water for non-potable uses.
- Water bodies to be integrated in the master plan as a natural feature for flood prevention, runoff treatment and alternate water source.

SOLID WASTE

- Promote and implement segregation of solid waste at source, reduction of amount of waste, door to door collection of segregated waste, recycling, composting and recovering energy.
- Explore decentralised waste management systems at community or institution or ward level. Sizes can vary from small backyard composting to plants processing 3–20 tonnes per day (TPD) of organic waste.
- Funding and implementation can be through community based cooperatives, local NGO, PPP mode and municipal funds.

ENERGY

- Explore use of renewable sources such as solar energy in both public and private sectors. At least 30% of total demand should be met by renewable energy sources.
- Alternate energy sources include solar energy at macro and micro scale (solar plants and decentralized home production respectively), energy from biomass and solid waste.
- Centralised solar water heating to be provided for
 - Residential > 100sqm or 300 units/month
 - Commercial: 20% of hot water requirement (Zonal Regulation, Master Plan)

SANITATION

- Generate awareness, create facilities and provide funding under government schemes to eradicate open defecation.
- Construct public toilets for floating population at public areas having heavy footfall such as markets, congregation areas, transit nodes, etc.
- Construct decentralised sewage treatment plants to minimise pressure on the central STP,
- Create flexibility for additional new service areas
- Prepare City Sanitation Plan (CSP) to provide proper guidance for upgradation of existing sanitation systems and creation of future STPs.
- Grey water and storm water should be treated before releasing it to water bodies or rivers.
- Recycle and reuse of treated sewage for non-potable applications should be implemented wherever possible.

2.3.3 Transit Oriented Development Plan

Transit Oriented Development Plan is a plan containing proposal for construction of one or more buildings located in the TOD Zone. Approval of Transit Oriented Development/ Layout and Services Plan is compulsory for plot size measuring more than 12,000 sqm. The plot in question considered for approval of Transit Oriented Development Plan shall have an approach of minimum 18 m wide road. For plots facing roads less than 18m will follow different width of roads maximum coverage and FAR allowed are given in Table 4.

2.3.3.1 Regulations for any Development/ Layout Plan in TOD Zone

1. A minimum of 10% of the plot area shall be reserved for Park & Open space. The open space and park shall be relinquished to the Authority free of cost and the same may be allowed to be maintained by the owner to the satisfaction of the Authority.
2. A minimum of 10% of the plot area shall be reserved for public & semi-public use / civic amenities (CA) sites & shall be handed over to the Authority; the same shall be allotted by the Authority for development for specified CA either to the developer or others on lease basis.
3. At least 30% residential and 20% Commercial and Institutional use (min. 5% commercial and minimum 5% institutional use) of FAR is mandatory in every new/ redevelopment project within the TOD Zone.
4. All new industrial dominated projects shall have at least one approach from a road of at least 24m ROW
5. All internal development works such as roads, footpaths, water supply, UGD, electrical wirings, parks, and street lights shall be undertaken by the DE.
6. Proposed Roads of the Master Plan-2031 (Revision-II) shall be incorporated within the Development Plan and shall be handed over to the Authority/ Local Authority free of cost. Through roads passing through the plot shall be handed over to the Authority/ Local Authority and it shall have access for public use.
7. FAR is calculated based on entire plot area irrespective of the reservations made.
8. FAR, Ground Coverage, Setbacks, parking and other regulations are as per TOD Zone regulations.
9. At least one primary pedestrian entry to each building/complex to be located from the main street.
10. Primary pedestrian access to building or complexes should be located at the shortest possible distance from the nearest Station/ bus stop/ primary road junction. Where such entries are absent, they must be added.
11. Vehicular / service access should preferably be from Secondary Street wherever access to building is possible from multiple streets.
12. The maximum distance between two vehicular streets in a network should be no greater than 250m (C/C) at any point, with additional public access thoroughfares cutting through the block, as required. Therefore any block which is longer than

250m on any side, must provide a public thoroughfare for all modes, with additional public pedestrian thoroughfares, as required.

13. The maximum distance between two pedestrian/ NMT only streets in a network should be no greater than 150m (C/C) at any point. Any block which is longer than 150m on any side therefore, must provide a public thoroughfare for pedestrians.
14. All streets must have at-grade pedestrian and NMT crossing facilities
15. No vehicular Street R/W within TOD Zone shall be more than 30m, unless already notified in the Master plan as a City level Arterial.
16. Traffic calming is mandatory for all streets with ROW of 12m or less through various measures like narrowing of driveway, meandering path with use of trees, islands, kerbs, street furniture, provision of sharp 90° turns, traffic-calmed surfaces, green buffers, etc.⁹
17. At least 50% of total street frontage length of any TOD project should have shops or commercial frontage facing the primary road.
18. Commercial frontages at street level should have facades with minimum 50% transparency (un-tinted), active uses looking onto the main streets, to facilitate visual surveillance. Additional recessed walking zones may be created at the edges of the lot boundary (e.g. arcades, colonnades, etc.) while maintaining the transparency of the inner façade edge condition.
19. Other non-residential and non-educational facades should have minimum 30% transparency at street level.
20. Residential frontages should preferably have balconies/ verandas and active spaces facing the street. Higher plinths may be used to create privacy for ground floor windows.

⁹ Refer to HDBRTS Corridor Urban Design Guidelines for more details.

2.4 DCR for Special Areas

2.4.1 Conservation / No Development Zone

This is an Overlay Zone established on environmental sustainability principles, which prohibits and/or regulates development around natural resources to preserve and conserve natural resources for future generations. This zone takes precedence over all underlying zones.

2.4.1.1 Applicability

The Environmentally Sensitive Zones shall consist of the following two categories:

1. **No Development Zone:** This zone consists of water bodies (tanks/ lakes/ ponds/ canal/ stream/ nala), reserved forests and forest plantation areas for the context of Hubli Dharwad. The intent of this zone is to prohibit any possible conflicts between urban development and the natural ecosystem.
2. **Buffer Zone:** This zone includes managed forest areas and waterfront edges around water bodies. The intent of this zone is to prevent any form of development that could impact or directly pollute the natural resources and only allow environmentally sensitive development that has no significant impact on the health of the natural resource.

2.4.1.2 Regulations

1. Regulations for No Development Zone

- a. This Zone includes water sheets and reserved forest areas as demarcated in the master plan.
- b. No uses that disturbs the natural land formation, existing trees and biodiversity.
- c. No building construction of any form shall be allowed in this zone.
- d. The following uses are permissible under the supervision of the Forest Department or other concerned authority
 - i. Agriculture, horticulture and animal husbandry (except for keeping animals on a commercial scale), subject to a limit of 10 head of cattle per acre and providing necessary buildings, garages, pig sties, stables and storage buildings;
 - ii. Gardens and poultry farms; and
 - iii. Forestry and forest plantations.
 - iv. Fish farming

2. Regulations for Buffer Zone

- a. For lakes/ tanks: minimum 10m to 50m from the edge of water bodies based on the water body area:

Sn	Tank / Lake Area	Category	Buffer All Around in m
1	Up to 4 Ha	A	10 m
2	Above 4 Ha to 10 Ha	B	20 m
3	Above 10 Ha to 20 Ha	C	30 m
4	Above 20 Ha	D	50 m

- b. For canal/ nala/ drain: minimum 3m to 9m from the edge of the water course, respectively on either side:

Sn	Types of canal/ nala/ drain	Category	Buffer All Around in m
1	Primary	A	3 m
2	Secondary	B	6 m
3	Tertiary	C	9 m

- c. The areas up to 100m distance surrounding reserved forests.
- d. No development of any kind is permitted between the River/Canal/ Stream and the embankment.
- e. All land uses that are point sources of pollution are prohibited in this zone. Prohibited Land Uses include:
- Industrial (All Industrial uses: I1 to I5 are prohibited)
 - Oil refineries, Fuel stations and pumps, LPG storage
 - Transportation buildings (T2 to T4 are prohibited)
 - Paint, hardware shops
 - Restaurants and hotels
 - Hospitals and specialty hospitals
 - Amusement parks
 - Storage areas and warehouse
 - Sewage treatment plants
 - Solid waste collection areas or landfill areas
 - Junk collection yards
 - Burial/Cremation grounds
- f. If case where the main land use is Industrial, only Green and White Category Industries, as identified by Karnataka State Pollution Control Board, are allowed.
- g. Permissible uses include natural and recreational uses, including:
- Riverfront promenade and green areas
 - Walking trails and jogging paths, Scenic value areas, Parks, Boating, Picnic huts

- iii. Sports centers, community recreational areas and special training camps, where built development shall not exceed an FAR of 0.05
- iv. Organic composting facilities
- h. Ancillary uses permitted within this zone include:
 - i. Structure for watchmen's quarters each not exceeding 20 sqm, numbers of such structures in each plot to be decided by the Concerned Authority.
 - ii. A residential building, if any, shall not be more than ground and one story with a height not exceeding 9.75m. including the height of stilted portion, if any ;
 - iii. Facilities such as toilet blocks, rain shelters, and canteens, provided they conform to the following conditions:
 - a. FAR to be not more than 0.05 for independent plots of area up to one hectare each;
 - b. For plots each more than one hectare in area FAR to be 0.05 for up to the first hectare and thereafter to be not more than 0.025 for the remaining area of the plot, no subdivision of plots being permitted.
 - i. The unpaved area shall be more than or equal to 80% of the plot area.
 - j. The landscape plan shall ensure that the inlet and outlet point of natural drain system is maintained with adequate size of channel for ensuring unrestricted flow of water. Storm water run-off should be filtered before they enter the natural stream.
 - k. Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e. planting of 3 trees for every 1 tree that is cut) shall be done with the obligation to provide continued maintenance for such plantations.

2.4.2 Heritage Zone

1. Heritage Regulations are applicable to all “protected monuments” as per the *Ancient and Historical Monument and Heritage Sites and Remains Act, 1961*, or “ancient monuments” as per the *Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 2010*, and the immediate surroundings of such monuments.
2. Location and listing of heritage monuments recognised by ASI and as State Protected Monuments is provided in Figure 1.

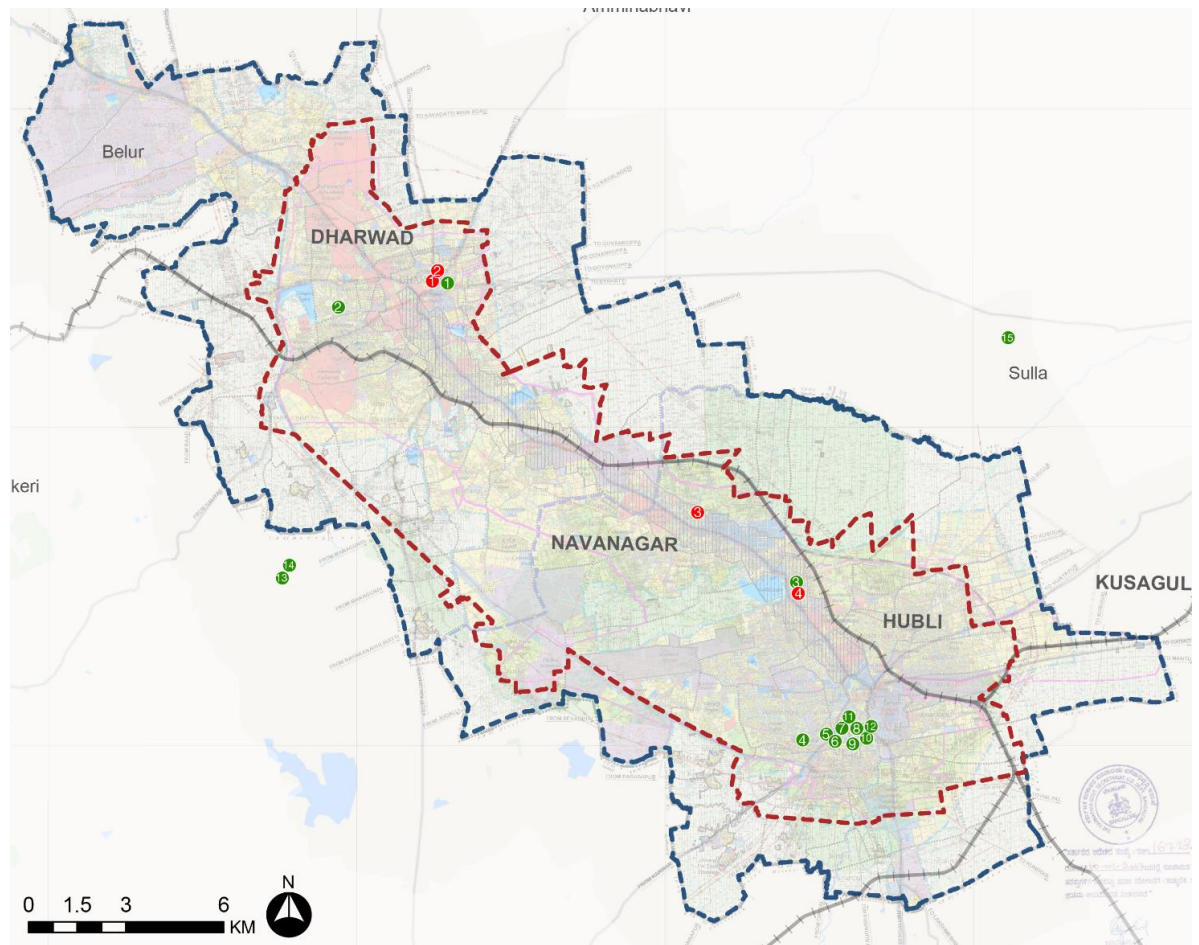
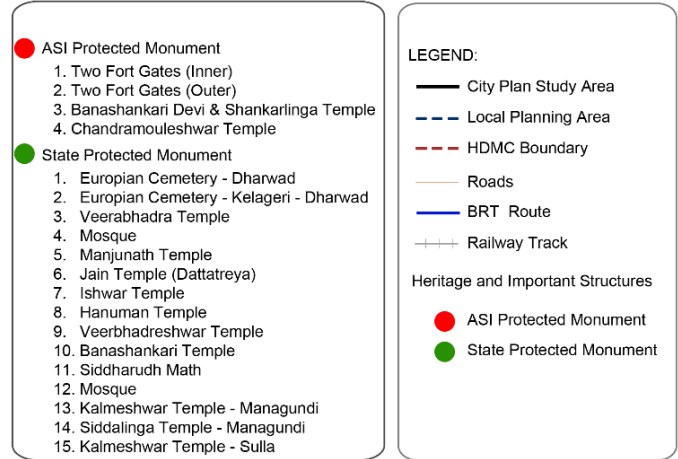
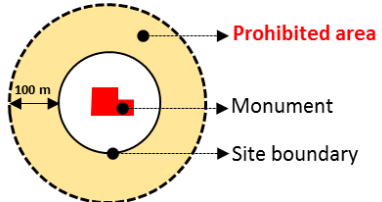
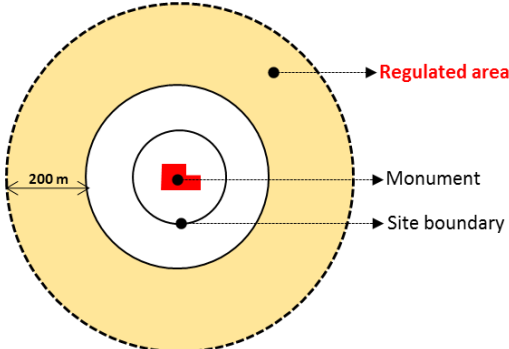


Figure 1: Map and List of Heritage Zones

2.4.2.1 Applicability

The heritage zone regulations are applicable to buildings within the zones described below:

S No.	Area	Description
1.	Prohibited Area 	Beginning at the limit of the protected monuments and extending to a distance of 100 meters in all directions.
2.	Regulated Area 	Beginning at the limit of prohibited area and extending to a distance of 200 meters in all directions.

Delineation of properties to be affected by the Heritage Regulations on the Land Use Plan 2031 to be undertaken by competent authority to avoid ambiguity during enforcement of the regulations.

2.4.2.2 Regulations**1. Regulations for ASI /State protected monuments:****a. Prohibited Area Norms**

- i. Building height is permitted up to 7m from ground level.
- ii. Hoardings, signboards are prohibited.
- iii. Buildings within Heritage precincts shall maintain the skyline and follow similar architectural style (No high-rise or multi storey buildings allowed)

b. Regulated Area Norms:

- i. Building height is allowed up to 10.5 m from ground level.
- ii. Along the main approach roads, hoardings on top of the building, sign board, advertisement boards are prohibited.
- iii. Buildings within Heritage precincts shall maintain the skyline and follow similar architectural style (No high-rise or multi storey buildings allowed)

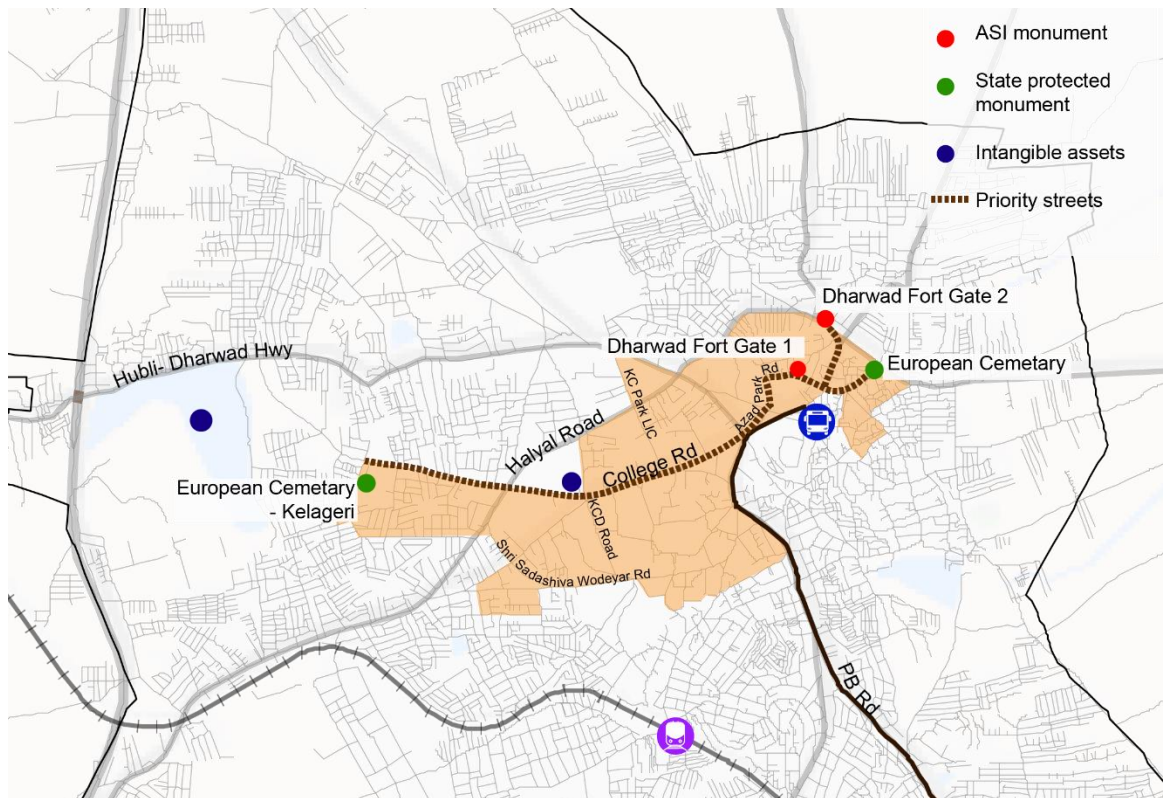


Figure 2: Proposed Heritage Precinct in Dharwad

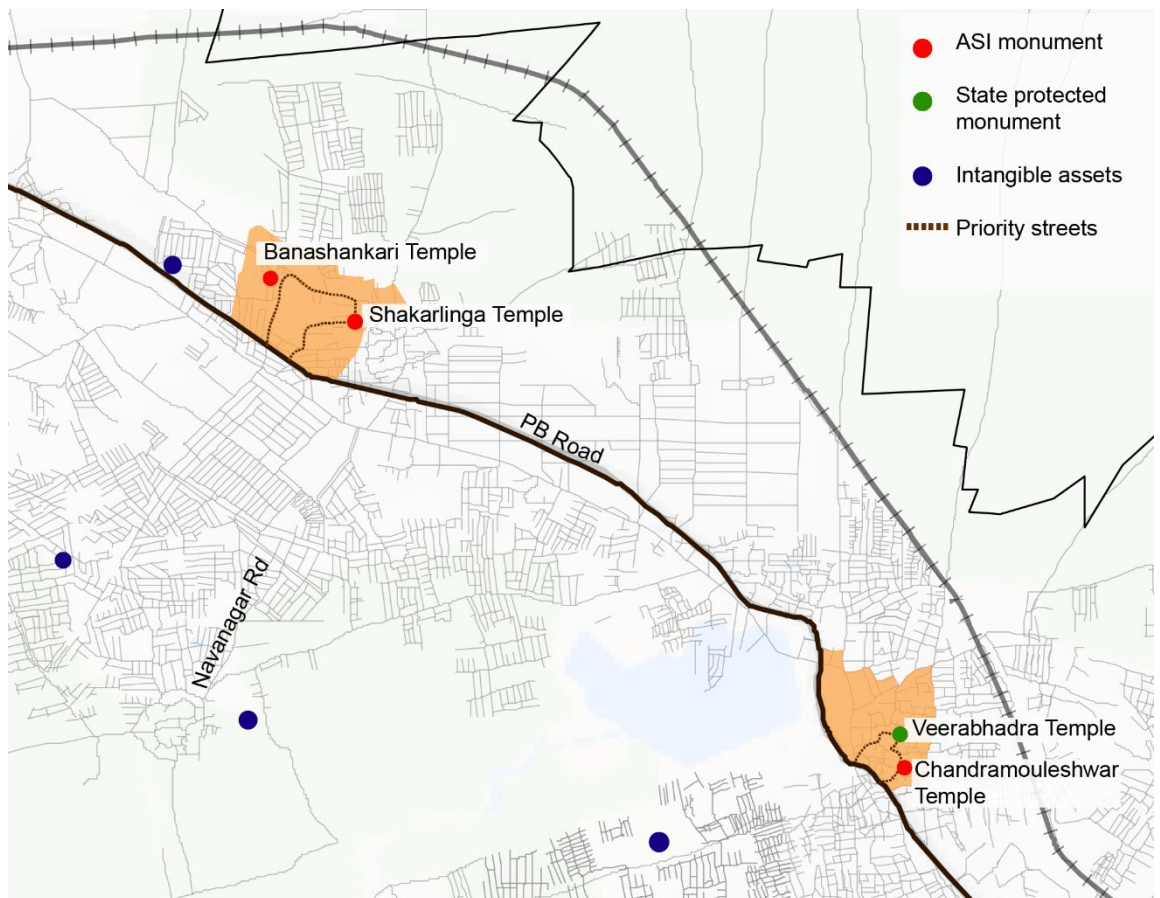


Figure 3: Proposed Heritage Precinct Area around ASI monuments

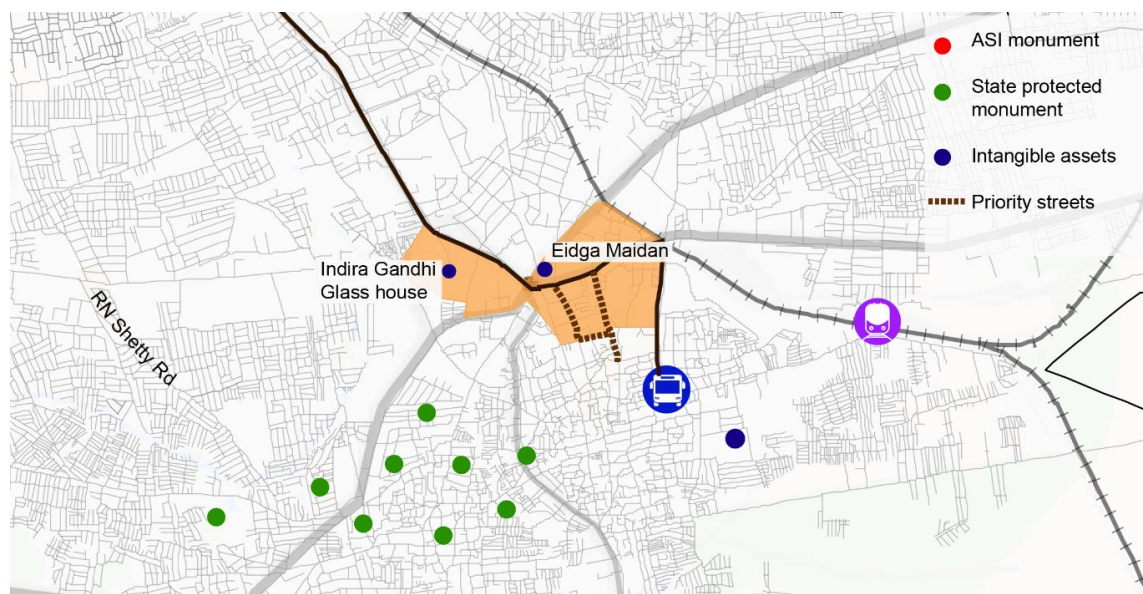


Figure 4: Proposed Heritage Precinct Area in Hubli

2. Common Regulations:

These regulations shall be applicable to all new development/ redevelopment projects shown in Figures 2, 3, and 4.

- a. All new development/ redevelopment shall adhere to the dominant build-to line along the street.
- b. No parking shall be permitted in the front of the building. All parking must be accommodated in the rear of the building.
- c. At least one primary pedestrian entry to each building/complex to be located from the main street.
- d. Compound walls shall be permitted only up to a height of 1m from street level. Iron grill fences shall be permitted above 1m.
- e. On streets narrower than 9m, the DE must provide pedestrian lighting within the premises or on the street wall/ compound wall.

2.4.2.3 Heritage Committee:

Consultation with Competent Authority / Heritage Conservation Committee is required for any developments or redevelopments, renovation, repairs within the prohibited or regulated areas. The Model Heritage Regulations developed by the TCPO recommend the following composition of the Heritage Committee.

Table 6: Proposed Composition of Heritage Committee

S No	Composition*	
1	Heritage Expert having experience of 15 years in the field of heritage conservation	Chairman
2	Chief Town Planner, Municipal Corporation / Development Authority	Member Secretary

3	Structural Engineer having experience of 10 years in the field and membership of the Institution of Engineers, India	1 Member
4	Architect having experience of 10 years: a. Urban Designer b. Conservation Architect	1 Member
5	Environmentalists having in-depth knowledge and experience of 10 years of the subject matter	1 Member
6	Historians having knowledge of the region having 10 years of experience in the field	1 Member
7	Natural heritage experts having 10 years of experience in the field	1 Member

Annexures: Review of HDUDA Master Plan 2031

1 Annexure A: Inconsistencies between Land Use Plan and Zonal Regulations

There are inconsistencies evident between the spatial demarcation of land uses in the Proposed Land Use Plan, 2031 and the Zonal Regulations (ZR). This can lead to ambiguity and cause confusion in on-ground enforcement of these regulations. To ensure that formulated plans are followed, it must be made mandate that the zonal regulations be consistent with the Master Plan 2031.

1.1 Proposed Land Use

Section 11 of the Zonal Regulations provides differential regulations for different types of land use zones including:

- Residential (Main)
- Residential (Mixed)
- Commercial (Central)
- Commercial (Business)
- Industrial – (General)
- Public and Semi-Public (P&SP)
- Transportation and Communication (T&C)
- Public Utilities (PU)
- Parks and Open Space

However, the land use zones marked spatially in the Proposed Land Use Plan, 2031 can be seen in Figure 5 below.


















PROPOSED LANDUSE - 2031				
EXISTING	PROPOSED	LANDUSE	AREA (IN HECT.)	PERCENTAGE %
		RESIDENTIAL	8573.54	38.94
		COMMERCIAL	1645.30	7.47
		INDUSTRIAL	3210.75	14.58
		PUBLIC & SEMI PUBLIC	1949.57	8.85
		PARK, OPEN SPACE & BURIAL GROUND	1654.96	7.52
		PUBLIC UTILITIES	85.49	0.39
		TRANSPORTATION & COMMUNICATION	4899.35	22.25
CONURBATION AREA			22018.96	100.00
		EXISTING DEVELOPMENT AREA OF VILLAGES & RURAL POCKETS	360.37	
		WATER SHEET	734.59	
		AGRICULTURE	17094.08	

Figure 5: HDUDA Proposed Land Use Plan Legend

1.2 Lack of Spatial Demarcation of Zone A & B

The local planning area (LPA) is conceptually organized into two rings i.e. Zone A, and Zone B, for the purpose of regulating building form. Section 1.5 of the document describes **Zone A**

as an **Intensely Developed Area**, whereas other areas fall under Zone B category.

However, Zone A is not spatially demarcated in the Proposed Land use Plan, 2031, leading to ambiguity on allowable building form in the city.

1.3 Existing Land Use Plan does not show Forest Land

The HDUDA Master Plan 2031 shows all land outside of the Conurbation Boundary as Agriculture Zone. However, as per the Forest Department Working Plans, many forested areas, including reserved forest areas exist within the LPA. These are not shown in the HDUDA Land Use Plan. As per the Forest (Conservation) Act 1980, the primary objective of forest reservation is to enable judicial protection of these areas and not allow revenue generating activities. The potential of human-animal conflict also exacerbates if development is allowed within close proximity of forest areas. It is thus essential to mark these lands separately in the Master Plan as inhabitable areas, to protect them from deforestation and future urbanisation.

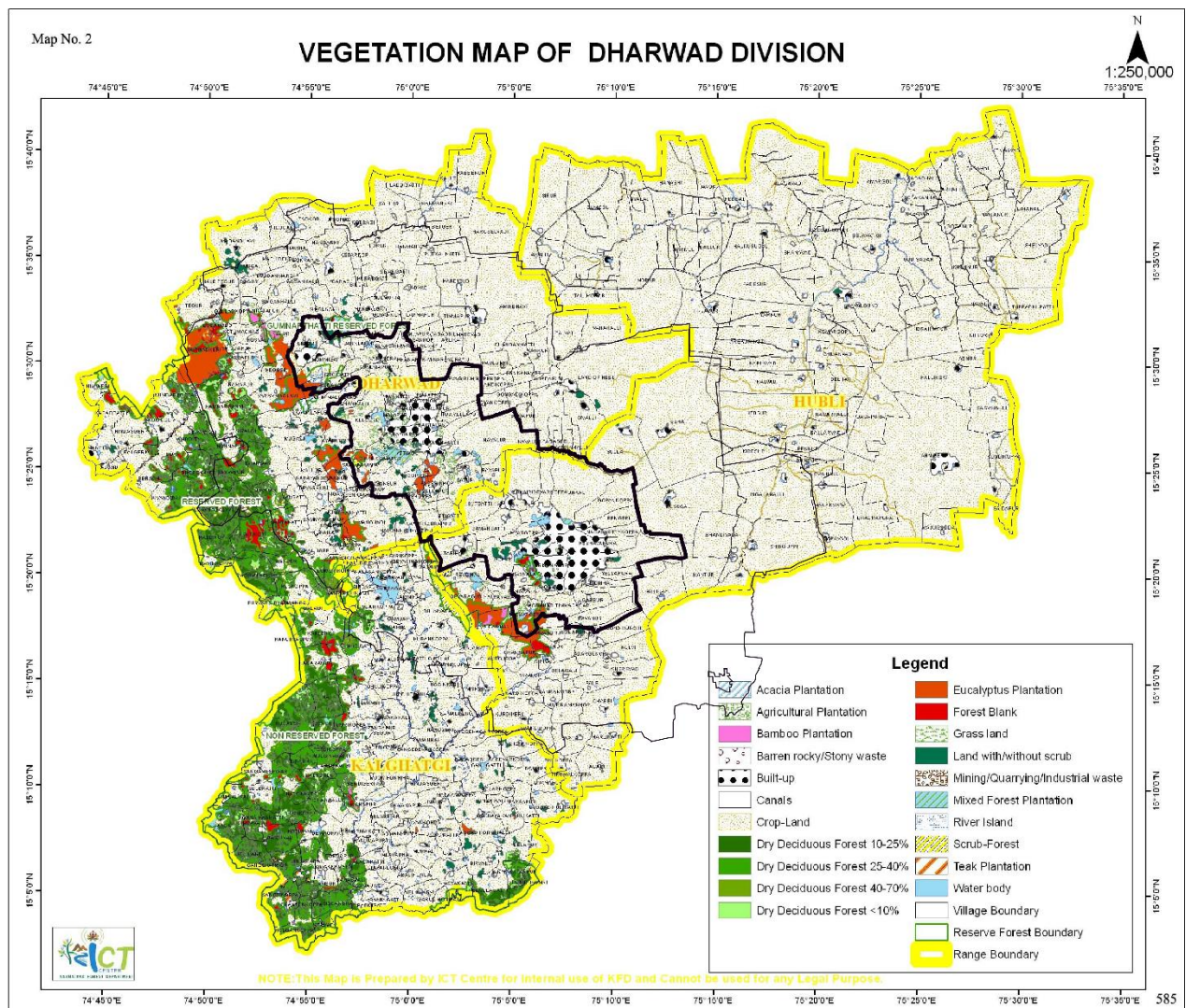


Figure 6: Forest Department Dharwad Division Forest Vegetation Map overlapped with LPA boundary

1.4 Gaps in Regulations for Areas of Special Control

The *HDUDA Master Plan 2031* suggests areas of 'Special control' to be established to allow for the context responsive development. It suggests the following zones to be marked as 'Areas of Special Control' which includes:

- **Heritage control area-** It provides regulations for any development/redevelopment of buildings within the area surrounding the heritage monuments.
- In addition to this, the *HDUDA Master Plan 2031* also specifies regulations for other zones such as **No Development Zone, Air Funnel Zone, and Housing for All Areas.**
- **TOD zone-** It states the permissible and prohibited land uses for the areas within this zone. It also provides special regulations with respect to plot coverage, permissible FAR, and road width for different plots area within the TOD zone.

The Special Control Regulations are reviewed below.

1.5 Heritage Area Regulations

Section 5 of the *HDUDA Provisional Master Plan 2031 Zonal Regulations* defines “*ancient monuments and structures of heritage value, religious artifacts, as declared by the govt., as protected monuments or heritage monuments, under Ancient monuments and Archaeological Sites and Remains Act or Heritage Regulation Act.*” In addition, the Zonal Regulations defines the 'Prohibited' and the 'Regulated zones' around the protected/heritage monuments. It states that the development/ redevelopment in these zones should be in accordance with the “**Ancient and Historical Monument and Heritage Sites and Remains Act, 1961**”. The following gaps are identified in the Heritage Regulations:

1. Heritage Buildings, including ASI Monuments and State Protected Monuments are not defined in *Section 3: Technical Terms and Definitions of the HDUDA Master Plan 2031 Zonal Regulations*. In addition to the state protected monuments, Hubli-Dharwad also has three ASI protected monuments, which are not identified in the Proposed Land Use Plan 2031.
2. Though the ZR define the 'Prohibited' and 'Regulated zones' around the protected monuments, these “zones” are not delineated in the Proposed Land Use Plan 2031.
3. The ZR suggests development or redevelopment to follow detailed guide lines/ regulations provided by the Archaeological department according to ancient and historical monument and heritage sites and remains Act 1961, which is not in accordance with the Ancient Monuments and Archaeological Sites and Remains Act (or AMASR Act) 2010.
4. The ZR also suggests that all development or redevelopment are subject to NOC by the competent authority, but it fails to provide clear guidance on the competent authority.

1.6 Environment Specific Regulations

The *HDUDA Master Plan 2031 – Land Use Plan and Zonal Regulations* provides considerations or regulations for environment-related controls around natural features like lakes and water streams, but not for forests. The buffer regulations also vary between ZR and the land use plan. Many city master plans provide for no development zones (Greater Mumbai Development Plan) or conservation areas (Bangalore Metropolitan Region Development Authority Structure Plan) to ensure conservation of eco-sensitive areas.

Some key areas of concern include:

1. Lakes and Streams:

Unkal Lake, Navalur Lake, Kelagiri Lake, Nuggikeri Lake, Herekeri Tank are some of the existing lakes within the twin cities. Dharwad was once known for its lakes, however some of these, such as Navalur Lake, are drying out, leading to concern over hydrological conditions of the city.

Development around lakes need to be either prohibited or regulated so as not to pollute/ negatively affect the watershed and dependent areas. The 'Karnataka State Action Plan on Climate Change, 2012' specifically calls out the need to develop plans and strategies for lake conservation and prevention of overexploitation of water, in accordance with objectives of the 'National Water Mission' and 'National Lake Conservation Programme'. MoUD's Advisory on Conservation and Restoration of Water Bodies in Urban Areas, 2013 also states that the land around the lake at a certain distance from its shore-perimeter should be declared as eco-sensitive area, and dumping of any solid waste into these areas should be considered as a punishable offence. Master Plan 2031 (ZR and the land use plan) provides buffer regulations around water bodies. However some ambiguity are observed, as discussed below:

- a. Multiplicity of norms for buffer dimensions in ZR (varying in Section 3.70, Section 6.3 and Section 11.9) and land use plan as provided in the following table.

	ZONAL REGULATION	LAND USE PLAN	NGT, BANGALORE																
Lakes / Tanks	b. 30-50m from the edge of water bodies (Section 6.3) c. Section 11.9: <div> <p>Table No. 11-8: Categories of tanks/lakes.</p> <table> <tr> <th>Sl No</th><th>Tank/lake area</th><th>Category</th><th>Buffer all round (in m)</th></tr> <tr> <td>1</td><td>Up to 4 Ha</td><td>A</td><td>10 m</td></tr> <tr> <td>2</td><td>Above 4 Ha up to 20 Ha</td><td>B</td><td>20 m</td></tr> <tr> <td>3</td><td>Above 20 Ha</td><td>C</td><td>30 m</td></tr> </table> </div>	Sl No	Tank/lake area	Category	Buffer all round (in m)	1	Up to 4 Ha	A	10 m	2	Above 4 Ha up to 20 Ha	B	20 m	3	Above 20 Ha	C	30 m	50m from the edge of water body as shown in the land use plan	75m from the edge of water bodies (Clause 1.i., page 4)
Sl No	Tank/lake area	Category	Buffer all round (in m)																
1	Up to 4 Ha	A	10 m																
2	Above 4 Ha up to 20 Ha	B	20 m																
3	Above 20 Ha	C	30 m																
Water Stream /	d. 6m (Section 6.3)	3m, 6m and 9m for primary,	50m, 35m and 25m for primary,																

storm drains / nala	e. 3m, 6m and 9m for primary, secondary, and tertiary drains / valleys (Section 3.70) f. 5m, 8m and 10m for primary, secondary, and tertiary natural valleys (Section 11.9)	secondary, and tertiary drains / valleys as shown in the land use plan	secondary, and tertiary rajkalewas (Clause 1.i., page 4)
---------------------	--	--	--

2. **Forests:** *The Environmental Protection Act, 1986* sets out objectives to protect and improve the ecological environment. It empowers the Central Government to establish authorities charged with the mandate of preventing environmental pollution. The *Karnataka State Forest Department* also sets out policy objectives for preservation of forests in the state. As per information from the Forest Department - Dharwad Division, there is land earmarked under Reserved Forests in Mommigatti, Kedennath, Rayanal and Anchatgeri villages. Following are key concerns:
- These forest areas are not marked in the HDUDA Master Plan 2031 - Existing or Proposed Land Use Maps. Such dereservation of these forests allows for development in forest areas.
 - There are no provisions to regulate the development around the forest ecosystem so as to prevent further degradation of these forests. Such potential conflicts between land use allocation within the LPA and impact on the forest areas bordering the LPA boundary are not given due consideration in the Master Plan.

1.7 Air Funnel Zone Regulations

The HDUDA Master Plan Zonal Regulations provides height restrictions near “aerodrome” area for International Civil Airports and Other Civil Airports. It also provides land use restrictions within 10 km radius of the Aerodrome reference point. However, following are the key concerns:

- The aerodrome area or reference point are not identified on the Land Use Plan.
- Also, more context-specific information is needed to determine the height restrictions around Hubli Airport, in accordance with the Gazette Notification of Ministry of Civil Aviation (Height Restrictions for Safeguarding of Aircraft Operations) Rules, 2015.

1.8 Housing Regulations

The following ambiguities were observed in housing regulations in the HDUDA Master Plan 2031:

- The HDUDA Master Plan 2031 Land Use Plan proposes areas for ‘Housing for All’ (HFA). However, no information or regulations related to the HFA Program is provided in the Zonal Regulations. The correlation between HFA and Slum Redevelopment is also ambiguous, and it is not evident if slum redevelopment can be accommodated in HFA areas.

2. The HDUDA Master Plan 2031 Zonal Regulation include regulations for the development/re-development of slums in terms of setbacks, plot coverage, allowable FAR as well as permissible land uses. A standard FAR of 3.00 is allowable, irrespective of existing FAR, location, plot size and road width. This may lead to the following situations:
 - a. Slum Redevelopment near the HDBRTS Corridor will not be able to reap the incentives available to other plots along the corridor.
 - b. All slum dwelling units may not be able to be accommodated within the allowable FAR of 3 in otherwise dense areas.
 - c. With less incentive to develop larger plots, there will be less opportunity to design well-laid out street network or integrated communities with provision of anganwadis and other essential amenities.
3. Slum regulations do not provide details on the minimum percentage of slum dwellers that would need to be accommodated within the existing slum plot or within a given distance of the original location. Such protections would allow private developer entities (DE) to also participate in Slum Redevelopment.

2 Annexure B: Issues in TOD Zone Demarcation

The special regulations for Transit Oriented Development are intended to be provided to areas within walking distance of the corridor to incentivize high density growth that can take advantage of transit and reduce reliance on private vehicles. The HDUDA Provisional Master Plan 2031 identifies a **special BRT impact area which is 500m on either side of the BRT corridor**, and is earmarked as the TOD zone. Some issues with the current delineation are identified below:

- The core areas of Hubli and Dharwad in the vicinity of the respective CBTs are not included in the TOD Zone.
- Lake areas such as Unkal Lake and Navalur Lake are being cut by the current TOD Zone boundary.
- The presence of existing railway stations in close proximity is not considered in the current delineation.
 - the areas between Unkal Lake and Bairidevarakoppa BRT stations and Unkal Railway station, and
 - Areas between Vidyagiri, Toll Naka, and Bagalkot Petrol Pump and Dharwad Railway Station.
- In some cases the TOD Zone boundary is not following any physical feature such as road network or property boundary and cuts across property.
- Large land parcels under single ownerships and vacant / agricultural lands are partially included, such as:
 - APMC land between the current boundary and the railway line
 - Industrial land near Navalur Station
 - Agricultural lands located south of Navalur Village.

These issues and recommendations in the TOD Zone boundary are shown in the below figure.

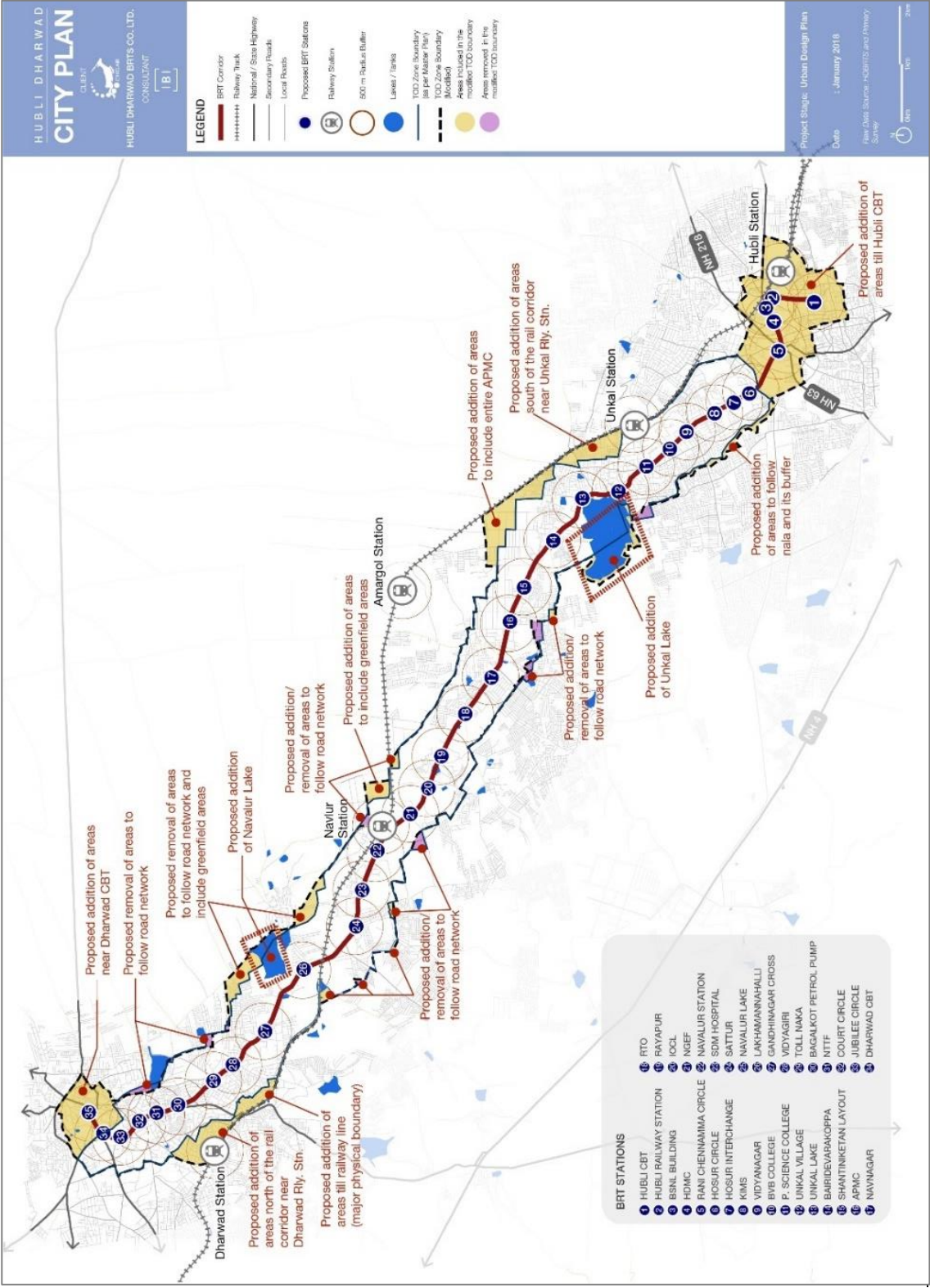


Figure 7: Recommendations to modify TOD Zone boundary

3 Annexure C: Review of Urban Form Regulations

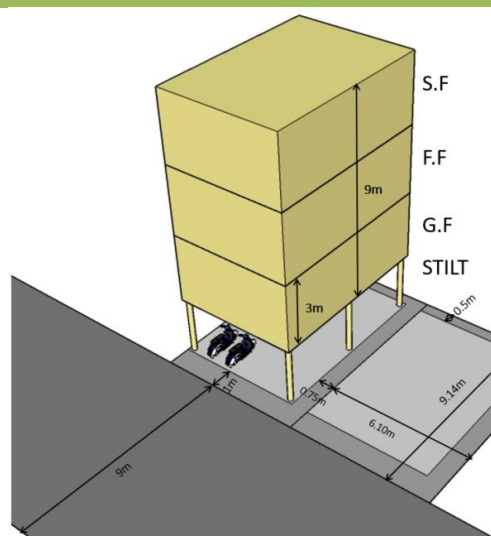
The Urban Form Regulations proposed in the HDUDA Master Plan 2031, including FARs, Setbacks, and Ground Coverage are reviewed in this section. A comparative volumetric study is carried out to enable a better understanding of the differences in the existing and proposed urban form corresponding to relevant FAR and setback norms. The conclusions will help in suggesting changes to the FAR and setback norms in the Master Plan. The volumetric analysis is carried out separately for residential and commercial properties for different types of plot sizes up to 4,000 sqm area.

For the TOD Zone, the analysis is based on potential recommendation that emerge from the analysis of the residential and commercial regulations.

3.1 Residential DCR Evaluation

3.1.1 Plot Size Range: Up to 250sqm

CASE 1: PLOT SIZE = 55 SQM (EQUIVALENT TO HOUSING BOARD LIG PLOT = 20'X30')



Resultant Building Form

A. PLOT DETAILS

Plot size	55 sqm (6.10m X 9.14m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

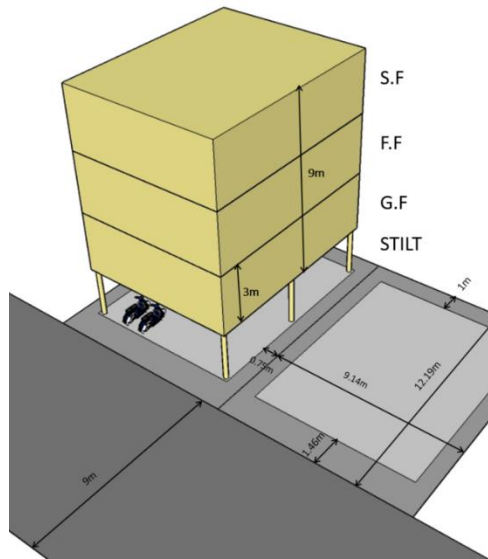
Setback- Front (12%)	1.0m
Setback- Back (8% or min 1m)	0.5m
Setback- Side 1 (8% or min 1m)	0.0m
Setback- Side 2 (8% or min 1m)	0.75m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	11.5m
Multi dwelling units (Apartments) shall be allowed only on plot sizes of above 500 sqm with road width of 12.00 m and above.	1 DU

C. ANALYSIS

Net Plot Area Available (leaving setback)	40.87 sqm
No of Floors Built	3
Area of Each Floor Plate	40.87 sqm
Total Built up used	122.62 sqm
Ground coverage used	73%
Total FAR used	2.20

D. CONCLUSION

Maximum FAR for this plot	2.20
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

CASE 2: PLOT SIZE = 111 SQM (EQUIVALENT TO HOUSING BOARD MIG PLOT = 30'X40')

Resultant Building Form

A. PLOT DETAILS

Plot size	111 sqm (9.14m X12.19m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

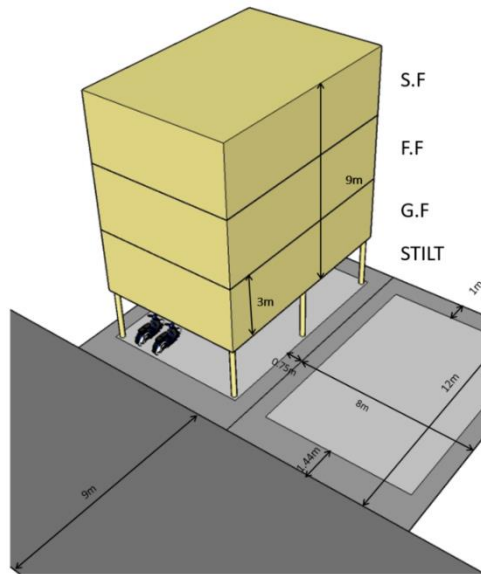
Setback- Front (12%)	1.46m
Setback- Back (8% or min 1m)	1.0m
Setback- Side 1 (8% or min 1m)	1.0m
Setback- Side 2 (8% or min 1m)	1.0m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	11.5m
Multi dwelling units (Apartments) shall be allowed only on plot sizes of above 500 sqm with road width of 12.00 m and above.	1 DU

C. ANALYSIS

Net Plot Area Available (leaving setback)	71.88 sqm
No of Floors Built	3
Area of Each Floor Plate	71.88 sqm
Total Built up used	215.65 sqm
Ground coverage used	65%
Total FAR used	1.94

D. CONCLUSION

Maximum FAR for this plot	1.94
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

CASE 3: PLOT SIZE = 222 SQM (EQUIVALENT TO HOUSING BOARD HIG PLOT = 40'X60')

Resultant Building Form

A. PLOT DETAILS

Plot size	222 sqm (12.19m X18.29m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.19m
Setback- Back (8% or min 1m)	1.46m
Setback- Side 1 (8% or min 1m)	1.0m
Setback- Side 2 (8% or min 1m)	1.0m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	11.5m
Multi dwelling units (Apartments) shall be allowed only on plot sizes of above 500 sqm with road width of 12.00 m and above.	1 DU

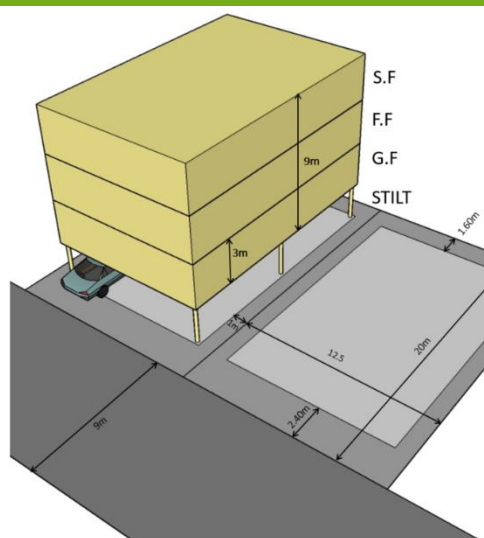
C. ANALYSIS

Net Plot Area Available (leaving setback)	149.10 sqm
No of Floors Built	3
Area of Each Floor Plate	149.10 sqm
Total Built up used	447.30 sqm
Ground coverage used	67%
Total FAR used	2.01

D. CONCLUSION

Maximum FAR for this plot	2.01
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

CASE 4: PLOT SIZE = 250 SQM



Resultant Building Form

A. PLOT DETAILS

Plot size	250 sqm (12.5m X20.0m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.4m
Setback- Back (8% or min 1m)	1.46m
Setback- Side 1 (8% or min 1m)	1.0m
Setback- Side 2 (8% or min 1m)	1.0m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	11.5m
Multi dwelling units (Apartments) shall be allowed only on plot sizes of above 500 sqm with road width of 12.00 m and above.	1 DU

C. ANALYSIS

Net Plot Area Available (leaving setback)	168 sqm
No of Floors Built	3
Area of Each Floor Plate	168sqm
Total Built up used	504sqm
Ground coverage used	67%
Total FAR used	2.02

D. CONCLUSION

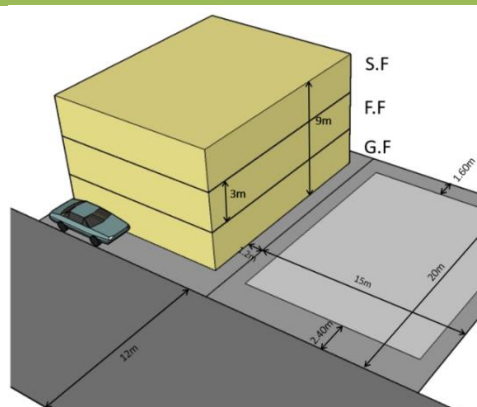
Maximum FAR for this plot	2.02
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

Inferences for plot sizes up to 250 sqm

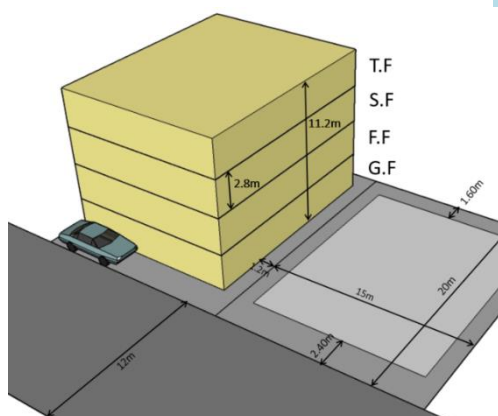
- DCR Limitations for these plots:
 - Building height = 11.5m or Stilt+GF+2 floors (whichever is less)
 - Maximum DU to be accommodated = 1.00
- Ground Coverage:
 - Due to set back regulations, 75% ground coverage is not achievable.
- FAR Utilization:
 - Maximum FAR that can be absorbed = 2.20
 - Premium FAR not advisable for this category.

3.1.2 Plot Size Range: 250sqm to 500sqm

CASE 1A: PLOT SIZE = 300 SQM (TOTAL HEIGHT = 11.5M)



Resultant Building Form of C1 Analysis



Resultant Building Form of C2 Analysis

A. PLOT DETAILS

Plot size	300 sqm (12m X 15m)
Abutting Street	12m

B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.4m
Setback- Back (8% or min 1m)	1.6m
Setback- Side 1 (8% or min 1m)	1.2m
Setback- Side 2 (8% or min 1m)	1.2m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.5
Building Height	11.5m

Multi dwelling units (Apartments) shall be allowed only on plot sizes of above 500 sqm with road width of 12.00 m and above.

1 DU

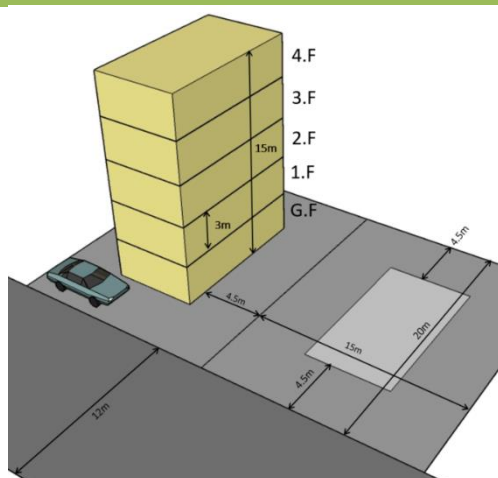
C1. ANALYSIS

Net Plot Area Available (leaving setback)	201.6 sqm
No of Floors Built	3
Area of Each Floor Plate	195sqm
Total Built up used	585sqm
Ground coverage used	65%
Total FAR used	1.95

C2. ANALYSIS

Net Plot Area Available (leaving setback)	201.6 sqm
No of Floors Built (Considering floor to floor height 2.8m, as setback increases beyond 11.5m height)	4
Area of Each Floor Plate	195sqm
Total Built up used	780sqm
Ground coverage used	65%
Total FAR used	2.6

CASE 1B: PLOT SIZE = 300 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form of C3 Analysis

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

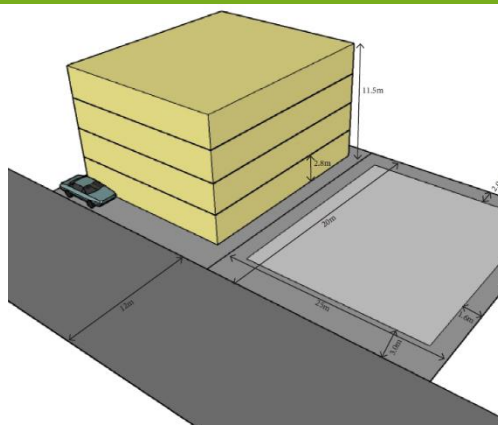
Setback for all sides – (11.5m and above up to 15.0m)	4.5m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.5
Building Height	15.0m

C3. ANALYSIS

Net Plot Area Available (leaving setback)	66.0 sqm
No of Floors Built	5
Area of Each Floor Plate	66.0sqm
Total Built up used	330.0sqm
Ground coverage used	22%
Total FAR used	1.10

D. CONCLUSION

Maximum FAR for this plot	2.6
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

CASE 2A: PLOT SIZE = 500 SQM (TOTAL HEIGHT = 11.5M)

Resultant Building Form of C1 Analysis

A. PLOT DETAILS

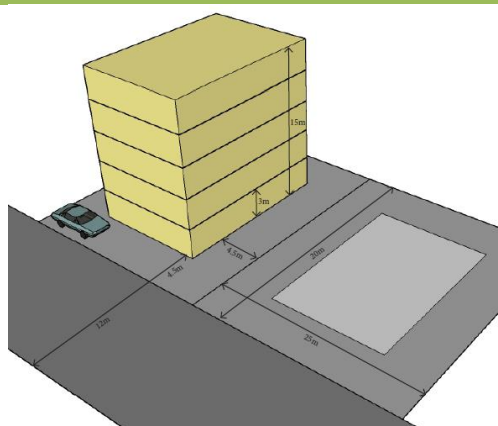
Plot size	500 sqm (20m X25m)
Abutting Street	12m

B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	3.0m
Setback- Back (8% or min 1m)	2.0m
Setback- Side 1 (8% or min 1m)	1.6m
Setback- Side 2 (8% or min 1m)	1.6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.5
Building Height	11.5m
Multi dwelling units (Apartments) shall be allowed only on plot sizes of above 500 sqm with road width of 12.00 m and above.	1 DU

C1. ANALYSIS

Net Plot Area Available (leaving setback)	336.0sqm
No of Floors Built	4
Area of Each Floor Plate	325.0sqm
Total Built up used	1300.0sqm
Ground coverage used	65%
Total FAR used	2.60

CASE 2B: PLOT SIZE = 500 SQM (TOTAL HEIGHT = 15M)

Resultant Building Form of C2 Analysis

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5m and above up to 15.0m)	4.5m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.5
Building Height	15.0m
Multi dwelling units (Apartments) shall be allowed only on plot sizes of above 500 sqm with road width of 12.00 m and above.	1 DU

C2. ANALYSIS

Net Plot Area Available (leaving setback)	176 sqm
No of Floors Built	5
Area of Each Floor Plate	176sqm
Total Built up used	880sqm
Ground coverage used	35%
Total FAR used	1.76

D. CONCLUSION

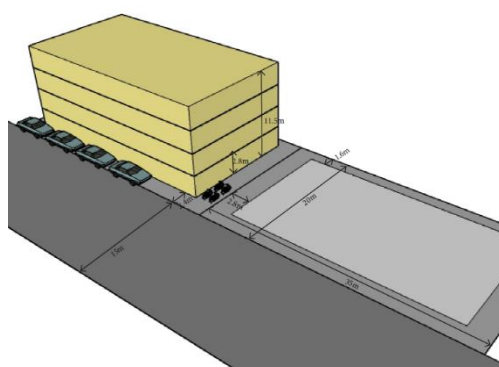
Maximum FAR for this plot	2.60
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

Inferences for plot sizes 250sqm – 500sqm

- DCR Limitations for these plots:
 - Building height = 11.5m is optimum as setback requirement is higher beyond 11.5m (e.g. for 15.0m building height, setback = 5.0 m)
 - Maximum DU to be accommodated = 1.00
- FAR Utilization:
 - Maximum FAR that can be absorbed = 2.60 and Premium FAR not advisable for this category.

3.1.3 Plot Size Range: 500sqm to 4000sqm

CASE 1A: PLOT SIZE = 700 SQM (TOTAL HEIGHT = 11.5M)



Resultant Building Form of C1 Analysis

A. PLOT DETAILS

Plot size	700 sqm (35m X20m)
Abutting Street	15m

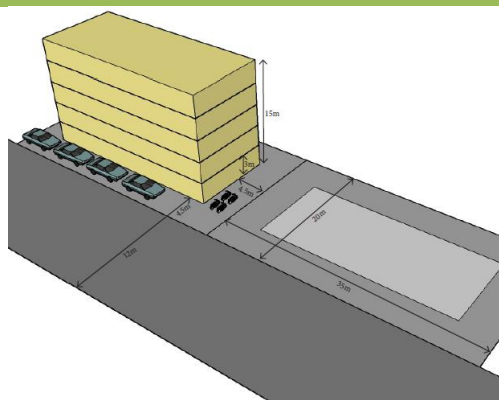
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.4m
Setback- Back (8% or min 1m)	1.6m
Setback- Side 1 (8% or min 1m)	2.8m
Setback- Side 2 (8% or min 1m)	2.8m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	11.5m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	470.4 sqm
No of Floors Built	4
Area of Each Floor Plate	385 sqm
Total Built up used	1,540 sqm
Ground coverage used	55%
Total FAR used	2.20

CASE 1B: PLOT SIZE = 700 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form of C2 Analysis

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5m and above up to 15.0m)	4.5m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	15.0m

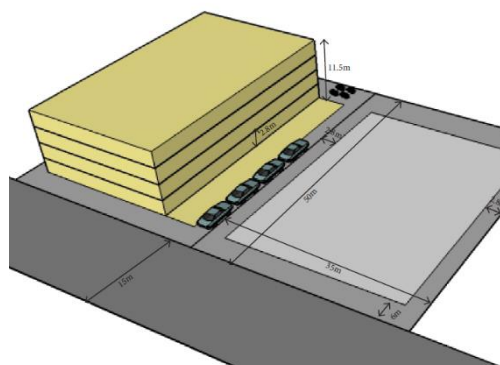
C2. ANALYSIS

Net Plot Area Available (leaving setback)	286 sqm
No of Floors Built	5
Area of Each Floor Plate	286 sqm
Total Built up used	1,430 sqm
Ground coverage used	41%
Total FAR used	2.04

D. CONCLUSION

Maximum FAR for this plot	2.20
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CASE 2A: PLOT SIZE = 1750 SQM (TOTAL HEIGHT = 11.5M)



Resultant Building Form of C1 Analysis

A. PLOT DETAILS

Plot size	1750 sqm (35m X50m)
Abutting Street	15m

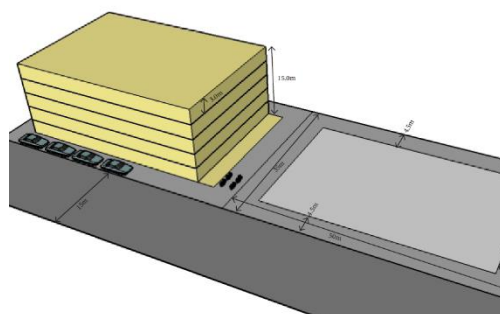
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	6.0m
Setback- Back (8% or min 1m)	4.0m
Setback- Side 1 (8% or min 1m)	2.8m
Setback- Side 2 (8% or min 1m)	2.8m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	11.5m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	1,176 sqm
No of Floors Built	4
Area of Each Floor Plate	962.5 sqm
Total Built up used	3,850 sqm
Ground coverage used	55%
Total FAR used	2.20

CASE 2B: PLOT SIZE = 1750 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form of C2 Analysis

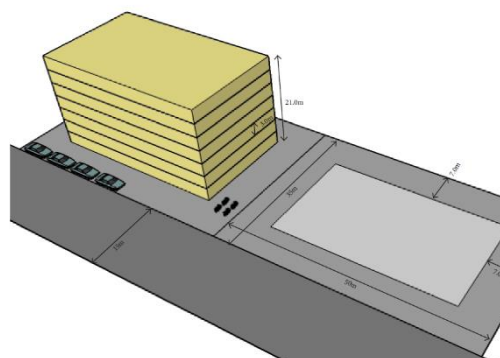
B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5m and above up to 15.0m)	4.5m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	15.0m

C2. ANALYSIS

Net Plot Area Available (leaving setback)	1,066 sqm
No of Floors Built	5
Area of Each Floor Plate	962.5 sqm
Total Built up used	4,812.5 sqm
Ground coverage used	55%
Total FAR used	2.75

CASE 2C: PLOT SIZE = 1750 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form of C3 Analysis

B3. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (18.0m and above up to 21.0m)	7.0m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	21.0m

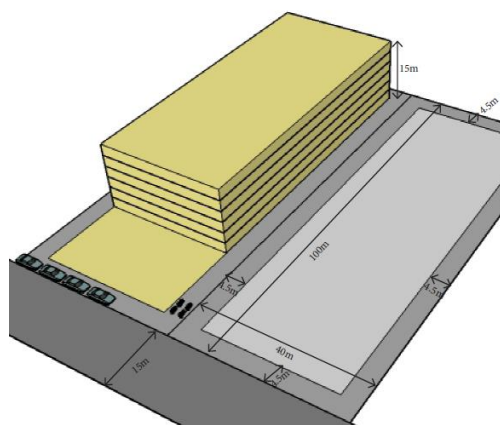
C3. ANALYSIS

Net Plot Area Available (leaving setback)	756 sqm
No of Floors Built	7
Area of Each Floor Plate	756 sqm
Total Built up used	5292 sqm
Ground coverage used	43%
Total FAR used	3.02

D. CONCLUSION

Maximum FAR for this plot	3.02
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CASE 3A: PLOT SIZE = 4000 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form of C1 Analysis

A. PLOT DETAILS

Plot size	4000 sqm (40m X100m)
Abutting Street	15m

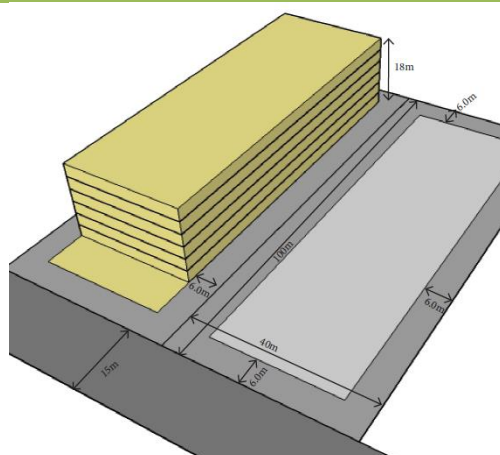
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5m and above up to 15.0m)	4.5m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	15.0m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	2,821sqm
No of Floors Built	5
Area of Each Floor Plate	2200 sqm
Total Built up used	11,000 sqm
Ground coverage used	55%
Total FAR used	2.75

CASE 2B: PLOT SIZE = 4000 SQM (TOTAL HEIGHT = 18M)



Resultant Building Form of C2 Analysis

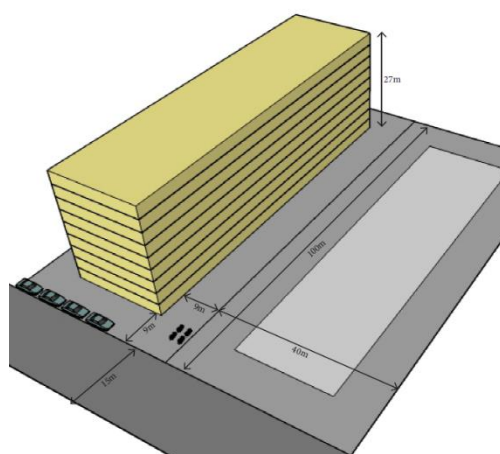
B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (15.0m and above up to 10.0m)	6.0m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	18.0m

C2. ANALYSIS

Net Plot Area Available (leaving setback)	2464 sqm
No of Floors Built	6
Area of Each Floor Plate	2200 sqm
Total Built up used	13,200 sqm
Ground coverage used	55%
Total FAR used	3.30

CASE 2C: PLOT SIZE = 4000 SQM (TOTAL HEIGHT = 24M)



Resultant Building Form of C3 Analysis

B3. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (24.0m and above up to 27.0m)	9.0m
Permissible Ground Coverage	55%
Maximum Permissible FAR	2.75
Building Height	27.0m

C3. ANALYSIS

Net Plot Area Available (leaving setback)	1,804 sqm
No of Floors Built	9
Area of Each Floor Plate	1,804 sqm
Total Built up used	16,236 sqm
Ground coverage used	45%
Total FAR used	4.06

D. CONCLUSION

Maximum FAR for this plot	4.06
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Inferences for plot sizes 500sqm – 4000sqm:

1. DCR Limitations for these plots: Nil
2. FAR Utilization:
 - a. Smaller plots, such as Case 1A & 1B, are not able to consume permissible FAR fully and also can't accommodate the Premium FAR
 - b. Larger plot sizes, such as Case 2B, 2C, 3A, 3B & 3C can fully utilize the permissible FAR and also able to utilise Premium FAR
 - c. Premium or Incentive FAR are advisable in lieu of eligible amenity contributions.

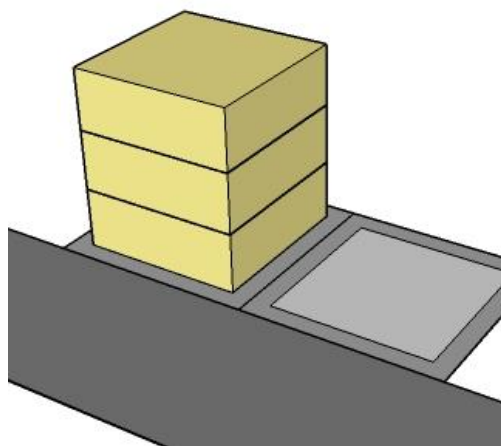
3.1.4 Observations for Residential DCR

1. Plots under 500 sqm in size are not able to utilise full FAR due to Height Restriction of 11.5m
2. Plots of ranges 500 – 1000 sqm and 1000 – 4000 sqm should not be clubbed under the same category, because they have different capacities of consuming FAR.
3. For plot sizes in the higher range of 2000 - 4000 sqm, larger variations in FAR are required to enable differential densities. FAR up to 2 will ensure dwelling unit densities up to 100 DU/HA. For zones where higher densities are desired, FAR up to 3.5 can be provided.
4. Only single dwelling units are allowed in plots less than 500 sqm in size. A higher FAR for this plot size may encourage development of larger unit sizes, which could lead to speculative rise in market prices; or alternatively it could encourage cramped living conditions, as is evident in many intensely developed areas of Hubli. To maintain comfortable densities, it is recommended to allow multi dwelling unit beyond 250sqm plot size with abutting street width of more than 9m.

3.2 Commercial DCR Evaluation

3.2.1 Plot Size Range: Up to 250sqm

CASE 1: PLOT SIZE = 100 SQM



Resultant Building Form

A. PLOT DETAILS

Plot size	100 sqm (10m X 10m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	1.2m
Setback- Back (8% or min 1m)	1.0m
Setback- Side 1 (8% or min 1m)	1.0m
Setback- Side 2 (8% or min 1m)	1.0m
Permissible Ground Coverage	80%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	11.5m

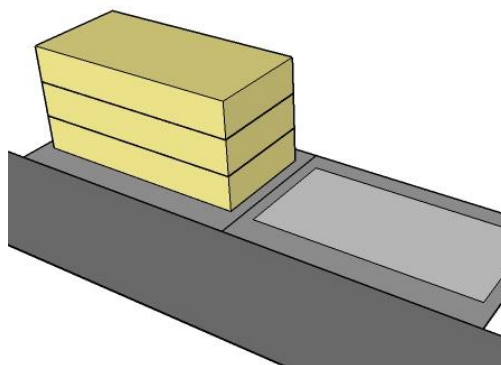
C. ANALYSIS

Net Plot Area Available (leaving setback)	66.0 sqm
No of Floors Built	3
Area of Each Floor Plate	66.0 sqm
Total Built up used	198.0 sqm
Ground coverage used	66%
Total FAR used	1.94

D. CONCLUSION

Maximum FAR for this plot	1.94
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CASE 2: PLOT SIZE = 250 SQM



Resultant Building Form

A. PLOT DETAILS

Plot size	250 sqm (10.5m X 16.0m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.4m
Setback- Back (8% or min 1m)	1.6m
Setback- Side 1 (8% or min 1m)	1.0m
Setback- Side 2 (8% or min 1m)	1.0m
Permissible Ground Coverage	80%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	11.5m

C. ANALYSIS

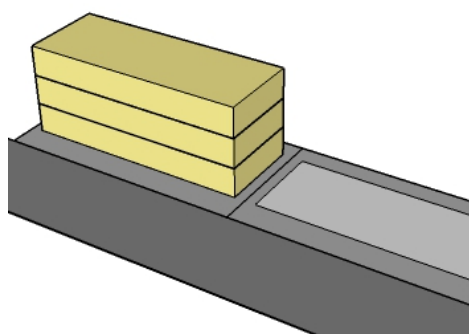
Net Plot Area Available (leaving setback)	168.0 sqm
No of Floors Built	3
Area of Each Floor Plate	168 sqm
Total Built up used	504 sqm
Ground coverage used	67%
Total FAR used	2.02

D. CONCLUSION

Maximum FAR for this plot	2.02
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Inferences for plot sizes up to 250sqm:

1. FAR Utilization: 100%
2. Ground Coverage: due to set back regulations, 80% ground coverage is not achievable and limited to 67%

3.2.2 Plot Size Range: 250sqm to 500sqm**CASE 1A: PLOT SIZE = 312 SQM**

Resultant Building Form of C1 Analysis

A. PLOT DETAILS

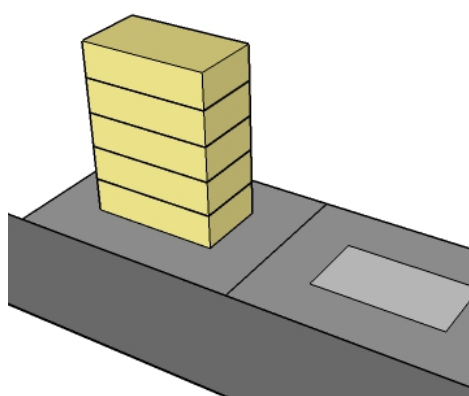
Plot size	312 sqm (13m X 24m)
Abutting Street	12m

B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.88m
Setback- Back (8% or min 1m)	1.92m
Setback- Side 1 (8% or min 1m)	1.04m
Setback- Side 2 (8% or min 1m)	1.04m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.5
Building Height	11.5m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	209.66 sqm
No of Floors Built	4
Area of Each Floor Plate	209.66 sqm
Total Built up used	838.66 sqm
Ground coverage used	67%
Total FAR used	2.69

CASE 1B: PLOT SIZE = 312 SQM

Resultant Building Form of C2 Analysis

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5 and above up to 15.0)	4.5m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.5
Building Height	15m

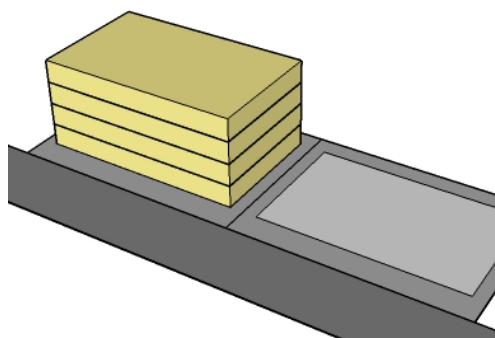
C2. ANALYSIS

Net Plot Area Available (leaving setback)	66 sqm
No of Floors Built	5
Area of Each Floor Plate	66 sqm
Total Built up used	330 sqm
Ground coverage used	21%
Total FAR used	1.10

D. CONCLUSION

Maximum FAR for this plot	2.69
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CASE 2A: PLOT SIZE = 500 SQM



Resultant Building Form of C1 Analysis

A. PLOT DETAILS

Plot size	500 sqm (20m X 25m)
Abutting Street	12m

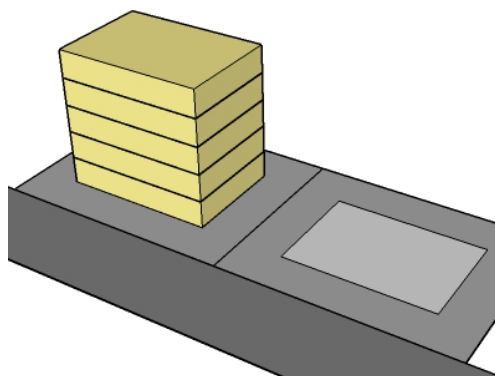
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	3.0m
Setback- Back (8% or min 1m)	2.0m
Setback- Side 1 (8% or min 1m)	1.6m
Setback- Side 2 (8% or min 1m)	1.6m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.5
Building Height	11.5m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	336.0 sqm
No of Floors Built	4
Area of Each Floor Plate	336.0 sqm
Total Built up used	1344 sqm
Ground coverage used	67%
Total FAR used	2.69

CASE 2B: PLOT SIZE = 500 SQM



Resultant Building Form of C2 Analysis

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5 and above up to 15.0)	4.5m
Permissible Ground Coverage	75%
Maximum Permissible FAR	2.5
Building Height	15m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	176 sqm
No of Floors Built	5
Area of Each Floor Plate	176 sqm
Total Built up used	880 sqm
Ground coverage used	35%
Total FAR used	1.76

D. CONCLUSION

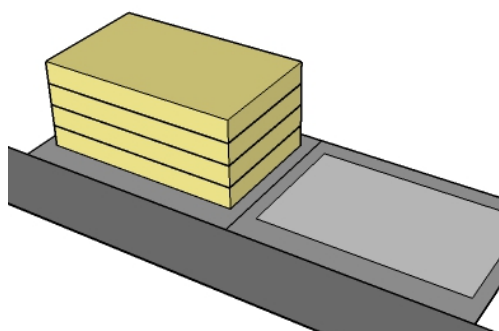
Maximum FAR for this plot	2.69
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Inferences for plot sizes 250sqm – 500sqm:

- DCR Limitations for these plots:
 - 11.5m height restrict development till 3 floors. Building 4 floors will reduce the floor to floor height, i.e. 2.8m.
- FAR Utilization:
 - Full FAR can be consumed, only if 4 floors are built.
- Ground Coverage: due to set back regulations, 75% ground coverage is not achievable.

3.2.3 Plot Size Range: 500sqm to 4000sqm

CASE 1A: PLOT SIZE = 660 SQM



Resultant Building Form of C1 Analysis

A. PLOT DETAILS

Plot size	660 sqm (23m X 30m)
Abutting Street	18m

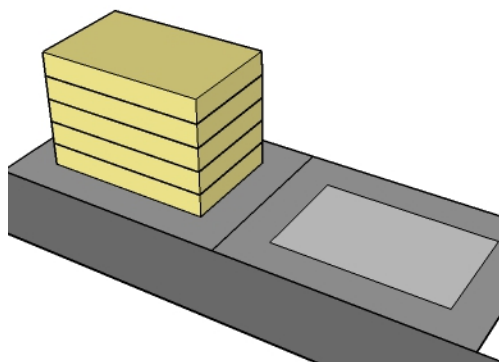
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	3.6m
Setback- Back (8% or min 1m)	2.4m
Setback- Side 1 (8% or min 1m)	1.76m
Setback- Side 2 (8% or min 1m)	1.76m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	11.5m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	443.52 sqm
No of Floors Built	4
Area of Each Floor Plate	429.0 sqm
Total Built up used	1716 sqm
Ground coverage used	65%
Total FAR used	2.60

CASE 1B: PLOT SIZE = 660 SQM



Resultant Building Form of C2 Analysis

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5 and above up to 15.0)	4.5m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	15m

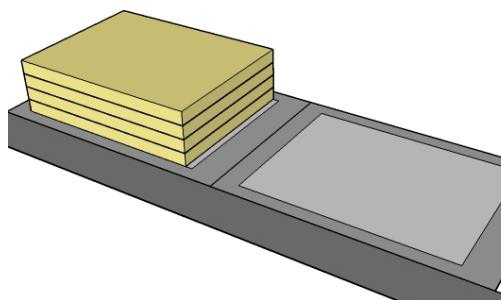
C2. ANALYSIS

Net Plot Area Available (leaving setback)	286 sqm
No of Floors Built	5
Area of Each Floor Plate	286 sqm
Total Built up used	1430 sqm
Ground coverage used	43%
Total FAR used	2.04

D. CONCLUSION

Maximum FAR for this plot	2.60
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CASE 2A: PLOT SIZE = 1750 SQM



Resultant Building Form of C1 Analysis

A. PLOT DETAILS

Plot size	1750 sqm (35m X 50m)
Abutting Street	18m

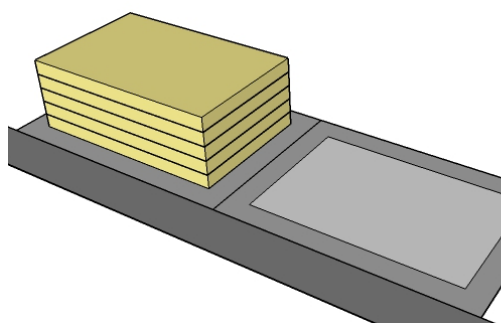
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	6m
Setback- Back (8% or min 1m)	4m
Setback- Side 1 (8% or min 1m)	2.8m
Setback- Side 2 (8% or min 1m)	2.8m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	11.5m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	1176 sqm
No of Floors Built	4
Area of Each Floor Plate	1137.5 sqm
Total Built up used	4550 sqm
Ground coverage used	65%
Total FAR used	2.60

CASE 2B: PLOT SIZE = 1750 SQM



Resultant Building Form of C2 Analysis

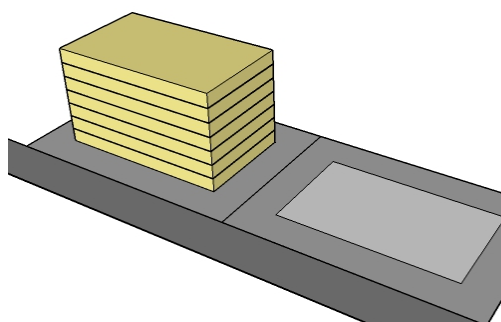
B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5 and above up to 15.0)	4.5m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	15m

C2. ANALYSIS

Net Plot Area Available (leaving setback)	1066 sqm
No of Floors Built	5
Area of Each Floor Plate	1066 sqm
Total Built up used	5330 sqm
Ground coverage used	61%
Total FAR used	3.05

CASE 2C: PLOT SIZE = 1750 SQM



Resultant Building Form of C3 Analysis

B3. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (18.0 and above up to 21.0)	7m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	21m

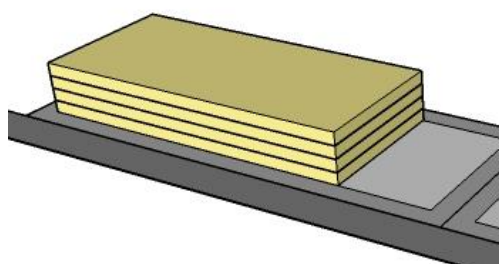
C3. ANALYSIS

Net Plot Area Available (leaving setback)	756 sqm
No of Floors Built	7
Area of Each Floor Plate	756 sqm
Total Built up used	5292 sqm
Ground coverage used	43%
Total FAR used	3.02

D. CONCLUSION

Maximum FAR for this plot	3.05
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CASE 3A: PLOT SIZE = 4000SQM



Resultant Building Form of C1 Analysis

A. PLOT DETAILS

Plot size	4000 sqm (40m X 100m)
Abutting Street	18m

B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (11.5 and above up to 15.0)	4.5m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	15m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	2,821 sqm
No of Floors Built	5
Area of Each Floor Plate	2,200 sqm
Total Built up used	11,000 sqm
Ground coverage used	55%
Total FAR used	2.75

CASE 3B: PLOT SIZE = 4000 SQM

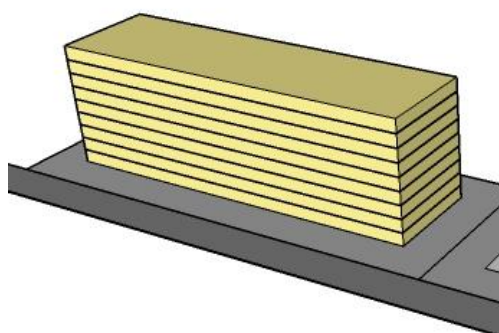
B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (15.0 and above up to 18.0)	6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	18m

C2. ANALYSIS

Net Plot Area Available (leaving setback)	2464 sqm
No of Floors Built	6
Area of Each Floor Plate	2200 sqm
Total Built up used	13,200 sqm
Ground coverage used	55%
Total FAR used	3.30

CASE 3C: PLOT SIZE = 4000 SQM



Resultant Building Form of C3 Analysis

B3. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback for all sides – (24.0 and above up to 27.0)	9m
Permissible Ground Coverage	65%
Maximum Permissible FAR	2.75
Building Height	27m

C3. ANALYSIS

Net Plot Area Available (leaving setback)	1804 sqm
No of Floors Built	1
Area of Each Floor Plate	1804sqm
Total Built up used	16,236 sqm
Ground coverage used	45%
Total FAR used	4.06

D. CONCLUSION

Maximum FAR for this plot	4.06
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Inferences for plot sizes 500sqm – 4000sqm:

1. FAR Utilization:
 - a. Smaller plots, such as case 1 & 2, are not able to fully consume permissible FAR
 - b. Larger plots, such as Case 3, will be able to consume permissible as well as premium FAR beyond 5 floors of development.

3.2.4 Observations for Commercial DCR

- i. Smaller plots below 500sqm are not able to consume:
 - a. Full permissible FAR due to height restriction of 11.5m (3 floors) and
 - b. Ground coverage due to set back norms
- ii. Plots above 500sqm are able to consume permissible and premium FARs within current setback and ground coverage norms.

3.3 TOD DCR Evaluation

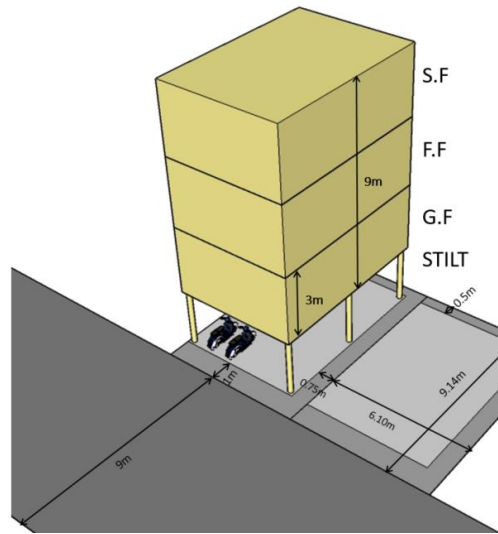
It is evident from the analysis above that within the existing ground coverage and setback conditions, it is not possible on plots of most sizes to consume the full allowable FAR. Identifying the constraints is the first step towards defining alternations such that the TOD Zone is able to consume more FAR and utilize the incentives of building along a transit corridor.

For the analysis, the Residential and Commercial DCRs are considered as the base. However the following assumptions were made to identify the maximum possible FAR.

- Minimum setback requirements of 12% for front setback and 8% for back and side setbacks was allowed for building up to 15m height
- Setback requirements for buildings higher than 15m but up to 24m were capped at 1.5m from front setback and 6m for side and back setbacks
- Ground coverage for plots up to 4000 sqm was capped at 65%, and plots above 4000 sqm was capped at 60%.
- Parking requirements were reduced to half of those prescribed in the Master Plan Zoning Regulations.

3.3.1 Plot Size Range: Up to 250sqm

CASE 1: PLOT SIZE = 55 SQM (EQUIVALENT TO HOUSING BOARD LIG PLOT = 20'X30')



Resultant Building Form

A. PLOT DETAILS

Plot size	55 sqm (6.10m X 9.14m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	1.0m
Setback- Back (8% or min 1m)	0.5m
Setback- Side 1 (8% or min 1m)	0.0m
Setback- Side 2 (8% or min 1m)	0.75m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	15m

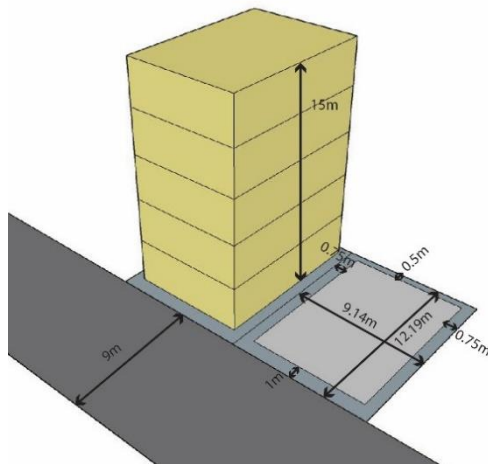
C. ANALYSIS

Net Plot Area Available (leaving setback)	43.5 sqm
No of Floors Built	5
Area of Each Floor Plate	39.03 sqm
Total Built up used	195.14 sqm
Ground coverage used	70%
Total FAR used	3.5

D. CONCLUSION

Maximum FAR for this plot	3.5
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

CASE 2: PLOT SIZE = 111 SQM (EQUIVALENT TO HOUSING BOARD MIG PLOT = 30'X40')



Resultant Building Form

A. PLOT DETAILS

Plot size	111 sqm (9.14m X 12.19m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	1.0m
Setback- Back (8% or min 1m)	0.5m
Setback- Side 1 (8% or min 1m)	0.75m
Setback- Side 2 (8% or min 1m)	0.75m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	15m

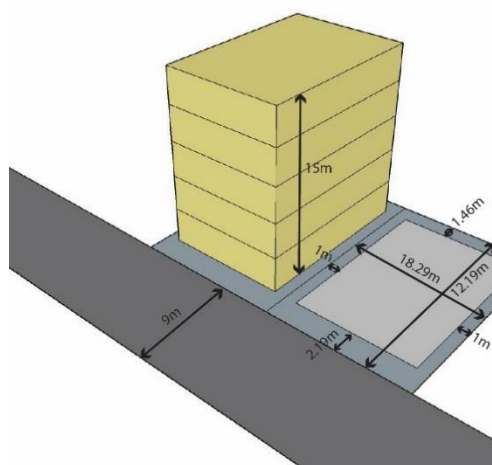
C. ANALYSIS

Net Plot Area Available (leaving setback)	81.67 sqm
No of Floors Built	5
Area of Each Floor Plate	78 sqm
Total Built up used	390 sqm
Ground coverage used	70%
Total FAR used	3.5

D. CONCLUSION

Maximum FAR for this plot	3.5
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

CASE 3: PLOT SIZE = 222 SQM (EQUIVALENT TO HOUSING BOARD HIG PLOT = 40'X60')



Resultant Building Form

A. PLOT DETAILS

Plot size	222 sqm (12.19m X18.29m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.19m
Setback- Back (8% or min 1m)	1.46m
Setback- Side 1 (8% or min 1m)	1.0m
Setback- Side 2 (8% or min 1m)	1.0m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	15m

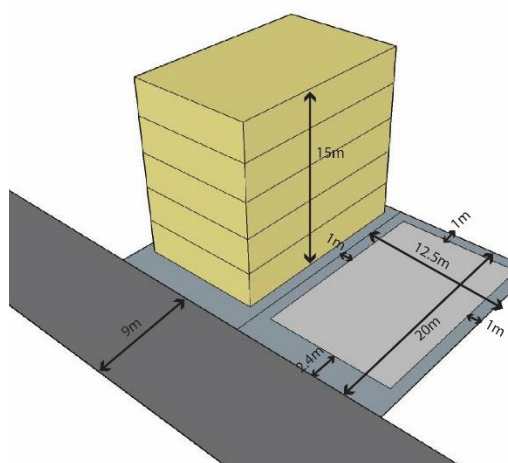
C. ANALYSIS

Net Plot Area Available (leaving setback)	149.10 sqm
No of Floors Built	5
Area of Each Floor Plate	149.10 sqm
Total Built up used	745.5 sqm
Ground coverage used	67%
Total FAR used	3.34

D. CONCLUSION

Maximum FAR for this plot	3.34
No of DU accommodated	1
Parking Requirements (ECS)	1.10 ECS

CASE 4: PLOT SIZE = 250 SQM



Resultant Building Form

A. PLOT DETAILS

Plot size	250 sqm (12.5m X20.0m)
Abutting Street	9m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.4m
Setback- Back (8% or min 1m)	1.0m
Setback- Side 1 (8% or min 1m)	1.0m
Setback- Side 2 (8% or min 1m)	1.0m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.0
Building Height (11.5m or Stilt+GF+2 Floors, whichever is less)	15m

C. ANALYSIS

Net Plot Area Available (leaving setback)	168 sqm
No of Floors Built	5
Area of Each Floor Plate	168sqm
Total Built up used	840sqm
Ground coverage used	67%
Total FAR used	3.36

D. CONCLUSION

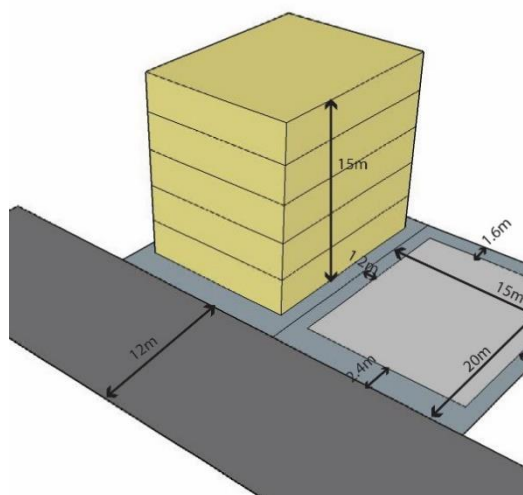
Maximum FAR for this plot	3.36
No of DU accommodated	2
Parking Requirements (ECS)	1.10 ECS

Inferences for plot sizes up to 250 sqm

1. Maximum achievable FAR for all plots of size less than 250 sqm is 3.3.
2. With Base FAR of 2.0, these plots will be able to consume additional FAR of 1.3.
3. Ground Coverage, when reduced to 70% is in conformance with due setback norms for small plots.
4. Minimum FAR Requirement is proposed to be removed for these plots.

3.3.2 Plot Size Range: 250sqm to 500sqm

CASE 1A: PLOT SIZE = 300 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form

A. PLOT DETAILS

Plot size	300 sqm (15m X 20m)
Abutting Street	12m

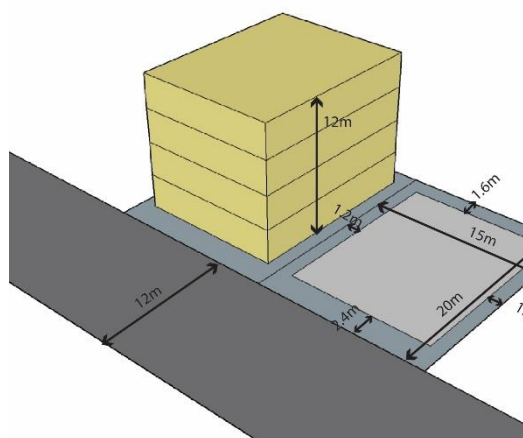
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.4m
Setback- Back (8% or min 1m)	1.6m
Setback- Side 1 (8% or min 1m)	1.2m
Setback- Side 2 (8% or min 1m)	1.2m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.5
Building Height	15m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	201.6 sqm
No of Floors Built	5
Area of Each Floor Plate	201.6sqm
Total Built up used	1008sqm
Ground coverage used	67%
Total FAR used	3.36

CASE 1B: PLOT SIZE = 300 SQM (TOTAL HEIGHT = 12M)



Resultant Building Form

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.4m
Setback- Back (8% or min 1m)	1.6m
Setback- Side 1 (8% or min 1m)	1.2m
Setback- Side 2 (8% or min 1m)	1.2m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.5
Building Height	12.0m

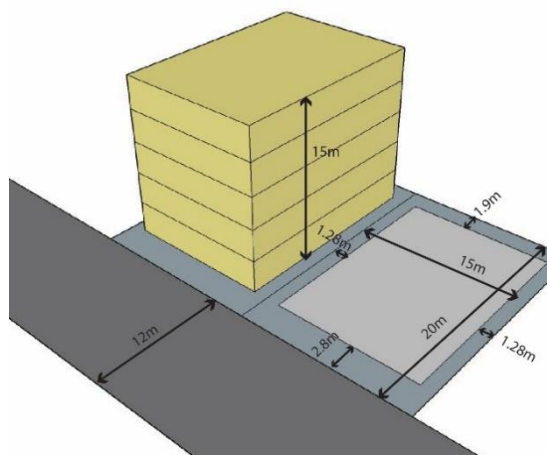
C2. ANALYSIS

Net Plot Area Available (leaving setback)	201.60 sqm
No of Floors Built	4
Area of Each Floor Plate	187.5sqm
Total Built up used	750sqm
Ground coverage used	63%
Total FAR used	2.5

D. CONCLUSION

Maximum FAR for this plot	3.36
No of DU accommodated	2
Parking Requirements (ECS)	1.10 ECS

CASE 2: PLOT SIZE = 384 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form

A. PLOT DETAILS

Plot size	384 sqm (20m X25m)
Abutting Street	12m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.8m
Setback- Back (8% or min 1m)	1.92m
Setback- Side 1, Side 2 (8% or min 1m)	1.28m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.5
Building Height	15m

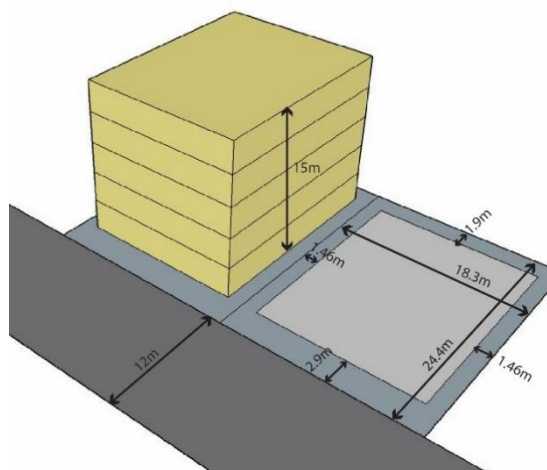
C. ANALYSIS

Net Plot Area Available (leaving setback)	258sqm
No of Floors Built	5
Area of Each Floor Plate	258sqm
Total Built up used	1290sqm
Ground coverage used	67%
Total FAR used	3.36

D. CONCLUSION

Maximum FAR for this plot	3.36
No of DU accommodated	3
Parking Requirements (ECS)	1.10 ECS

CASE 3: PLOT SIZE = 446 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form

A. PLOT DETAILS

Plot size	446 sqm 18.3m X24.4m)
Abutting Street	12m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	2.93m
Setback- Back (8% or min 1m)	1.95m
Setback- Side 1, Side 2 (8% or min 1m)	1.46m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.5
Building Height	15m

C. ANALYSIS

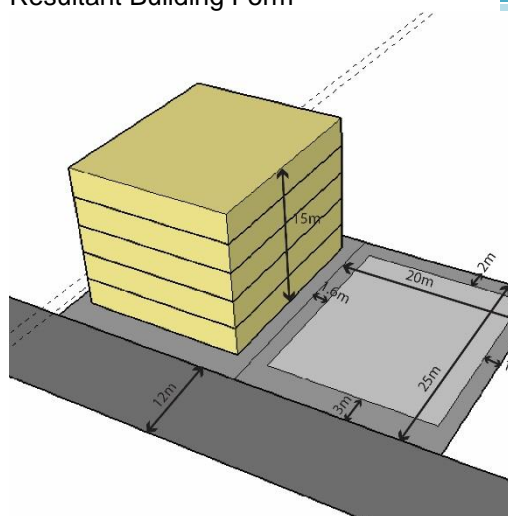
Net Plot Area Available (leaving setback)	300sqm
No of Floors Built	5
Area of Each Floor Plate	300sqm
Total Built up used	1500sqm
Ground coverage used	67%
Total FAR used	3.36

D. CONCLUSION

Maximum FAR for this plot	3.36
No of DU accommodated	3
Parking Requirements (ECS)	1.10 ECS

CASE 4: PLOT SIZE = 500 SQM (TOTAL HEIGHT = 15M)

Resultant Building Form

**A. PLOT DETAILS**

Plot size	500 sqm (20m X25m)
Abutting Street	12m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	3.0m
Setback- Back (8% or min 1m)	2.0m
Setback- Side 1 (8% or min 1m)	1.6m
Setback- Side 2 (8% or min 1m)	1.6m
Permissible Ground Coverage	70%
Maximum Permissible FAR	2.5
Building Height	15m

C. ANALYSIS

Net Plot Area Available (leaving setback)	336.0sqm
No of Floors Built	5
Area of Each Floor Plate	336.0sqm
Total Built up used	1680.0sqm
Ground coverage used	67%
Total FAR used	3.36

D. CONCLUSION

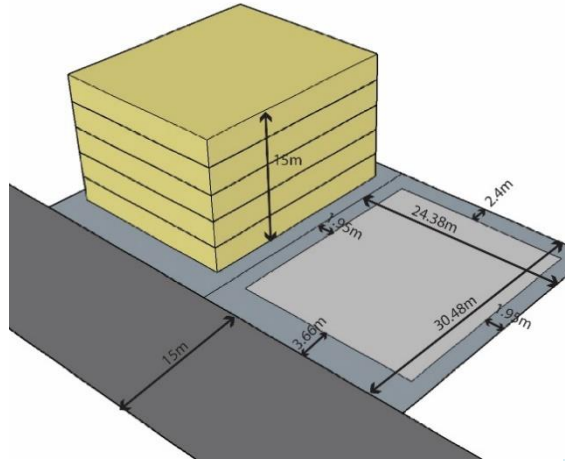
Maximum FAR for this plot	3.36
No of DU accommodated	3
Parking Requirements (ECS)	1.10 ECS

Inferences for plot sizes 250sqm – 500sqm

1. Maximum achievable FAR for all plots of size 250 – 500 sqm is **3.3**
2. With Base FAR of 2.5, these plots will be able to consume additional FAR of 0.8
3. The minimum DU requirement should be removed for plots in TOD Zone.
4. Ground Coverage, when reduced to 70% is in conformance with due setback norms for small plots.
5. Minimum FAR Requirement is proposed to be reduced to 1 for these plots.

3.3.3 Plot Size Range: 500sqm to 1250sqm

CASE 1A: PLOT SIZE = 743 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form

A. PLOT DETAILS

Plot size	743 sqm (24.38m X30.48m)
Abutting Street	15m

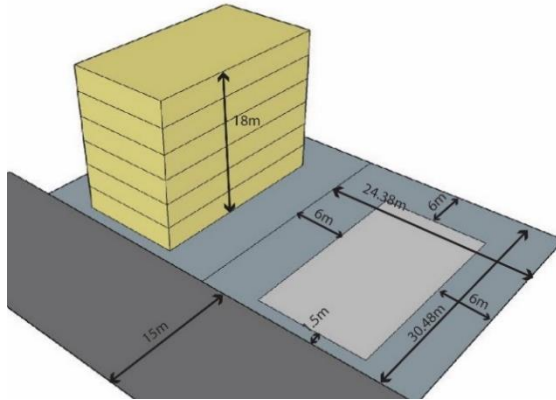
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	3.66m
Setback- Back (8% or min 1m)	2.44m
Setback- Side 1, Side 2 (8% or min 1m)	1.95m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3
Building Height	15m

C1. ANALYSIS

Net Plot Area Available	499.36 sqm
No of Floors Built	5
Area of Each Floor Plate	499.36 sqm
Total Built up used	2496 sqm
Ground coverage used	67%
Total FAR used	3.36

CASE 1B: PLOT SIZE = 743 SQM (TOTAL HEIGHT = 18M)



Resultant Building Form

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback-Front	1.5m
Setback-Back, Side 1, Side 2	6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3
Building Height	18.0m

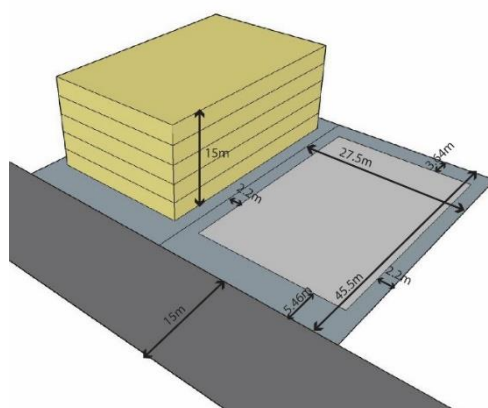
C2. ANALYSIS

Net Plot Area Available	284 sqm
No of Floors Built	6
Area of Each Floor Plate	284 sqm
Total Built up used	1,706 sqm
Ground coverage used	38%
Total FAR used	2.30

D. CONCLUSION

Maximum FAR for this plot	3.36
No of DU accommodated	5
Parking Requirements (ECS)	2.75 ECS

CASE 2A: PLOT SIZE = 1250 SQM (TOTAL HEIGHT = 15M)



Resultant Building Form

A. PLOT DETAILS

Plot size	1250 sqm (45.50m X27.50m)
Abutting Street	15m

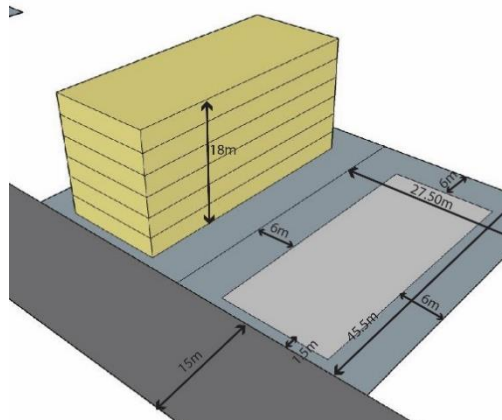
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback- Front (12%)	5.46m
Setback- Back (8% or min 1m)	3.64m
Setback- Side 1, Side 2 (8% or min 1m)	2.20m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3
Building Height	15m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	840.8 sqm
No of Floors Built	5
Area of Each Floor Plate	813.3 sqm
Total Built up used	4066 sqm
Ground coverage used	65%
Total FAR used	3.25

CASE 2B: PLOT SIZE = 1250 SQM (TOTAL HEIGHT = 18M)



Resultant Building Form

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback-Front	1.5m
Setback-Back, Side 1, Side 2	6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3
Building Height	18.0m

C2. ANALYSIS

Net Plot Area Available (leaving setback)	589 sqm
No of Floors Built	6
Area of Each Floor Plate	589 sqm
Total Built up used	3534 sqm
Ground coverage used	47%
Total FAR used	2.82

D. CONCLUSION

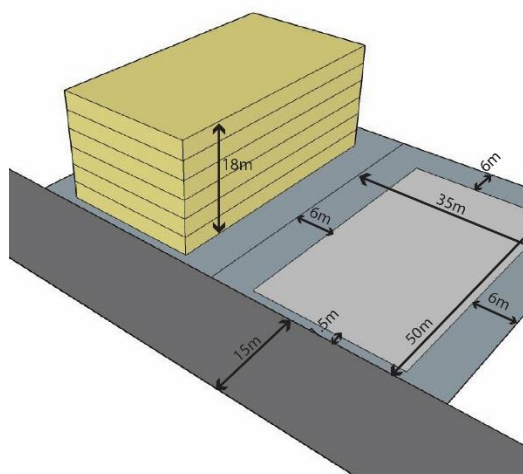
Maximum FAR for this plot	3.25
No of DU accommodated	8
Parking Requirements (ECS)	4.40 ECS

Inferences for plot sizes 500 – 1250 sqm

1. Maximum achievable FAR for plots from 500 to 1250 sqm is 3.25.
2. With Base FAR of 3.0, these plots will be able to consume additional FAR of 0.25.
3. Optimum Ground Coverage for these plots is 65%.
4. 4 – 8 dwelling units can be accommodated, for which parking requirement can be accommodated in a half stilt area.

3.3.4 Plot Size Range: 1250sqm to 2000sqm

CASE 1A: PLOT SIZE = 1750 SQM (TOTAL HEIGHT = 18M)



Resultant Building Form

A. PLOT DETAILS

Plot size	1750 sqm (35m X50m)
Abutting Street	15m

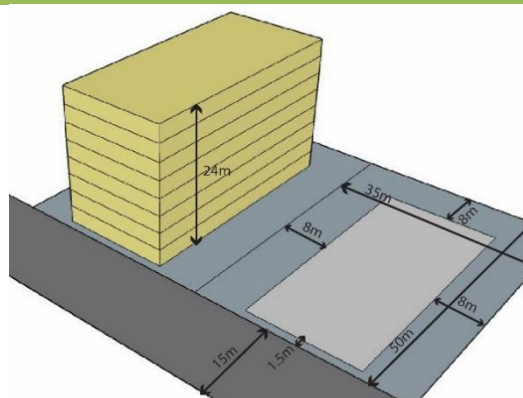
B1. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback-Front	1.5m
Setback-Back, Side 1, Side 2	6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3.25
Building Height	18.0m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	977.5 sqm
No of Floors Built	6
Area of Each Floor Plate	977.5 sqm
Total Built up used	5865 sqm
Ground coverage used	56%
Total FAR used	3.35

CASE 1B: PLOT SIZE = 1750 SQM (TOTAL HEIGHT = 21M)



Resultant Building Form

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback-Front	1.5m
Setback-Back, Side 1, Side 2	6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3.25
Building Height	24.0m

C2. ANALYSIS

Net Plot Area Available (leaving setback)	977.5 sqm
No of Floors Built	8
Area of Each Floor Plate	977 sqm
Total Built up used	7816 sqm
Ground coverage used	56%
Total FAR used	4.4

D. CONCLUSION

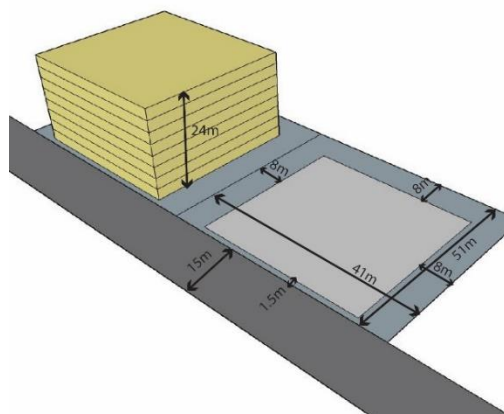
Maximum FAR for this plot	4.4
No of DU accommodated	8
Parking Requirements (ECS)	4.40 ECS

Inferences for plot sizes 1250 – 2000 sqm

1. Maximum achievable FAR for plots from 1250 to 2000 is more than 4.
2. With Base FAR of 3.25, these plots will be able to consume additional FAR as desired.
3. Optimum Ground Coverage for these plots is 55%.
4. More than 8 dwelling units can be accommodated, for which parking requirement can be accommodated in a half stilt area.

3.3.5 Plot Size Range: 2000sqm to 4000sqm

CASE 1A: PLOT SIZE = 3000 SQM (TOTAL HEIGHT = 24M)



Resultant Building Form

A. PLOT DETAILS

Plot size	3000 sqm (50m X60m)
Abutting Street	15m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback-Front	1.5m
Setback-Back, Side 1, Side 2	6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3.5
Building Height	24.0m

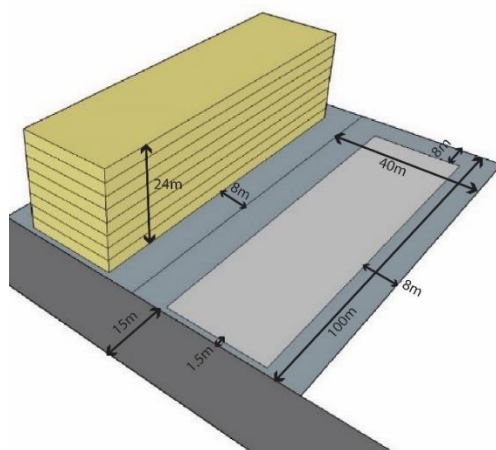
C. ANALYSIS

Net Plot Area Available (leaving setback)	2040 sqm
No of Floors Built	8
Area of Each Floor Plate	1950 sqm
Total Built up used	15600 sqm
Ground coverage used	65%
Total FAR used	5.2

D. CONCLUSION

Maximum FAR for this plot	5.2
No of DU accommodated	17
Parking Requirements (ECS)	9.35 ECS

CASE 2: PLOT SIZE = 4000 SQM (TOTAL HEIGHT = 24M)



Resultant Building Form

A. PLOT DETAILS

Plot size	4000 sqm 100m X40m)
Abutting Street	15m

B2. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback-Front	1.5m
Setback-Back, Side 1, Side 2	6m
Permissible Ground Coverage	65%
Maximum Permissible FAR	3.5
Building Height	24.0m

C1. ANALYSIS

Net Plot Area Available (leaving setback)	2860 sqm
No of Floors Built	8
Area of Each Floor Plate	2600 sqm
Total Built up used	20800 sqm
Ground coverage used	65%
Total FAR used	5.2

D. CONCLUSION

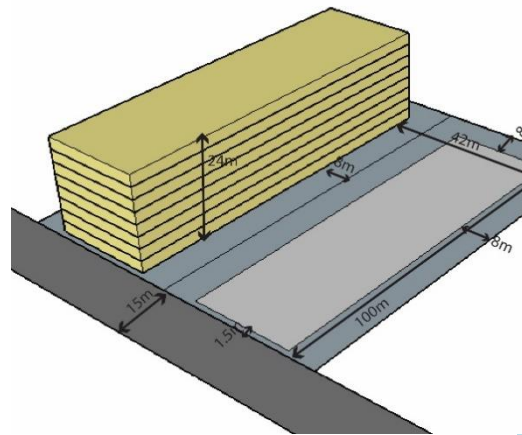
Maximum FAR for this plot	5.2
No of DU accommodated	22
Parking Requirements (ECS)	12.10 ECS

Inferences for plot sizes 2000 – 4000 sqm

1. Maximum achievable FAR for plots from 2000 to 4000 sqm is more than 4.
2. Optimum Ground Coverage for these plots is 55%.
3. More than 15 dwelling units can be accommodated, which increases the parking requirement.

3.3.6 Plot Size Range: 4000sqm and above

CASE 1B: PLOT SIZE = 4200 SQM (TOTAL HEIGHT = 24M)



Resultant Building Form

A. PLOT DETAILS

Plot size	4200 sqm 42X100m)
Abutting Street	15m

B. APPLICABLE DEVELOPMENT CONTROL REGULATIONS

Setback-Front	1.5m
Setback-Back, Side 1, Side 2	8m
Permissible Ground Coverage	60%
Maximum Permissible FAR	3.75
Building Height	24.0m

C. ANALYSIS

Net Plot Area Available (leaving setback)	3036 sqm
No of Floors Built	8
Area of Each Floor Plate	2520 sqm
Total Built up used	20160 sqm
Ground coverage used	60%
Total FAR used	4.71

D. CONCLUSION

Maximum FAR for this plot	4.8
No of DU accommodated	24
Parking Requirements (ECS)	13.20 ECS

Inferences for plot sizes 4000 sqm and above

1. Maximum achievable FAR for plots more than 4000 sqm is more than 4.
2. Optimum Ground Coverage for these plots is 55%.
3. More than 20 dwelling units can be accommodated, which increases the parking requirement.

3.4 Conclusion

Based on the review of urban form regulations, and considering the assumptions stated for TOD Regulations in section 6.3, the following modifications are suggested in the FAR and Ground Coverage Regulations. The cells highlighted in blue are the proposed regulations compared to existing regulations in white.

Table 7: Existing and Proposed FAR Regulations

Plot Area (sqm)		Plot Coverage		Permissible FAR						Minimum FAR		Premium FAR		Min. Road width (m)
				Proposed		Existing		Proposed		Existing (TOD Zone)	Proposed (TOD Zone)	Existing	Proposed	
		Max	Min											
Upto 250		80%	50%	70%	-	1.75	2	2	1.75	2	1	-	0.25	Up to 9.0
Above 250 & upto 500		75%	50%	70%	-	2.25	2.5	2.5	2.25	2.5	1.5	1	0.25	> 9.0 up to 12.0
Above 500 & upto 1250		65%	50%	65%	50%	2.5	2.75	2.75	2.5	3	1.75	1.25	0.25	> 12.0 up to 18.0
Above 1250 & upto 2000													0.25	
Above 2000 & upto 4000													0.25	
Above 4000 & upto 12000		50%	50%	60%	50%	2.75	3	3	2.75	3.75	2	1.5	0.5	>18.0
Above 12000		55%	-	55%	40%	2.25	2.25		3		-	1	0.5	>12.0 up to 15.0
		50%	-	55%	40%	2.5	2.5		3.25		-	1.25	0.5	>15.0 up to 18.0
		50%	-	55%	40%	2.75	2.75		3.5		-	1.5	0.5	>18.0 up to 24.0
		45%	-	55%	40%	3	3		3.75		-	1.75	0.5	Above 24.0

Note:

- Section 1.5 of the *Provisional Zonal Regulations, Master Plan (Revision-II)* document describes Zone A as an Intensely Developed Area, whereas other areas fall under Zone B category



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