View of river Krishna waterfront

6 HOUSING STRATEGY

This chapter present the housing strategies proposed for the Amaravati Capital city.

The chapter covers the following topics:

1. Housing/Residential Plan
2. Housing Densities,
3. Housing Typologies (Heights, Plot sizes)
4. Integration with existing villages and Land Pooling Scheme

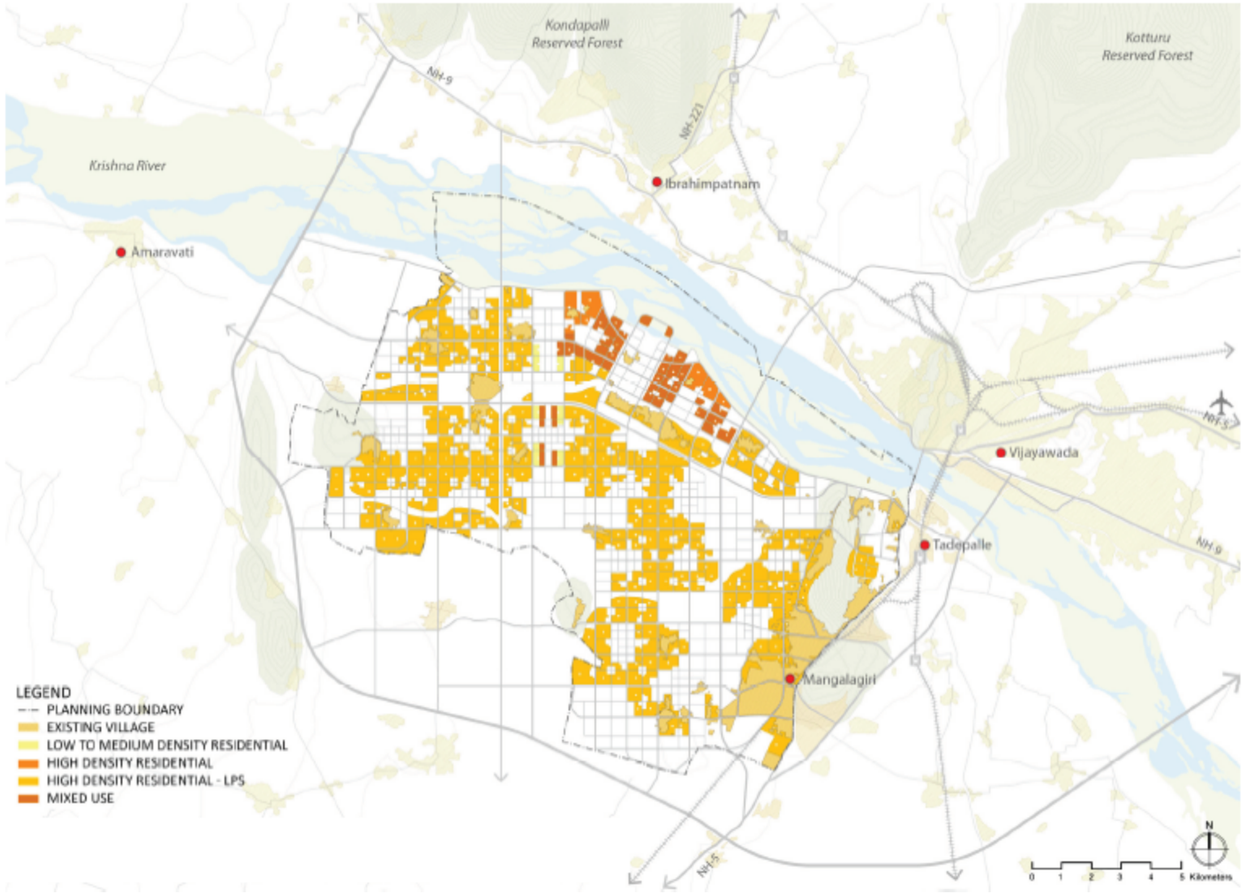
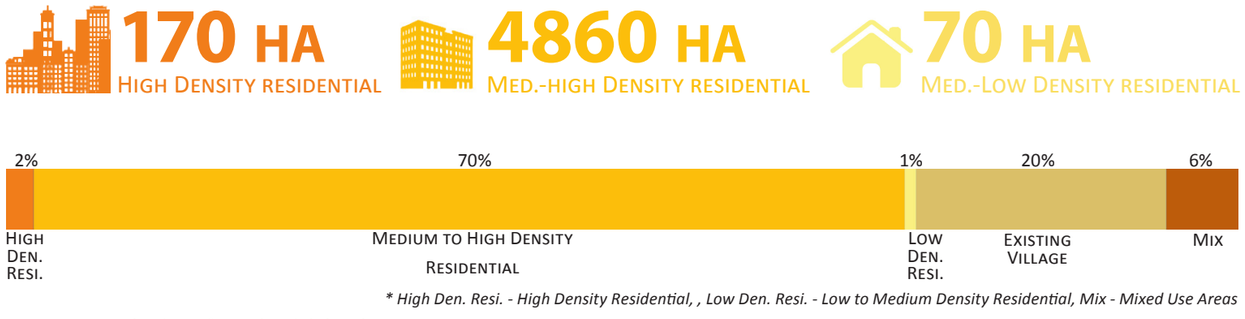


Fig.6.1 Proposed Residential Plan



** High Den. Resi. - High Density Residential, , Low Den. Resi. - Low to Medium Density Residential, Mix - Mixed Use Areas*

Fig.6.2 Distribution of Residential developments

6.1 INTRODUCTION

The Amaravati Capital city will set an example within the nation for providing quality affordable homes for all. The city aims to develop well distributed residential clusters which satisfy the following requirements, planning intention and objectives.

Existing Requirements:

Below are the key requirements that have been identified for the housing sector:

- Increasing demand for affordable housing options in the Capital city
- Demand for smaller individual homes on smaller lots.
- "Green" and "sustainable design" solutions for creating environment friendly residential options.
- Availability of housing options close to jobs supported with cost-effective transportation modes.
- Availability of both rental and resalable homes
- Smart homes planned inside self sufficient smart neighbourhoods
- Encourage home ownership to create a sense of identity for citizens

Concept/Planning Intention:

The Amaravati Capital city needs to develop a clear and positive national and international image which is supported with quality infrastructure and high standard of living.

Planning Objectives:

The planning objectives for the housing distribution in the Amaravati Capital city include:

- To expand home ownership opportunities for low- and moderate-income residents.
- To convert unproductive land to productive residential use.
- To promote new, moderate cost residential construction for home owners.
- To encourage the development of low-cost housing for elderly and low- and moderate- income residents.
- To support agencies and programs which are associated with and vital to the success of the Community Development Program.
- To encourage for-profit builders and developers to reinvest in low- and moderate-income neighbourhoods.

6.2 RESIDENTIAL PLAN

The Amaravati Capital city master plan aims to accommodate 2.5 million people by providing quality affordable homes for all. The plan organizes and distributes affordable homes into residential clusters across the city. In line with the broad development strategy, the plan aims to decentralize employment centres and create self sufficient townships across the Amaravati Capital city. An integration of land use and transport planning sets the foundation of the plan, as residential clusters are distributed along the transit corridors in line with the township model illustrated earlier. The model is the key tool for distributing residential developments across the city. The Residential use plan, translates the above strategies into an implementable landuse plan as illustrated in Figure 6.1.

Key Strategies

Key planning strategies adopted for the Amaravati Capital city master plan have been elaborated below:

1. Residential clustering

The Amaravati Capital city has been structured into 9 themes cities accommodating 22 integrated and self-sustainable townships. Each township is equipped with local employment hubs, social infrastructure, recreational spaces and amenities.

2. Population Distribution

Proportionally distribute 2.5 million people across the Amaravati Capital city into high, medium and low density residential areas. This distribution is based on the development's proximity to urban centres, transit corridors and natural features.

3. Density Distribution

Distribute population densities as per location i.e. city centre, city fringe, regional centres and their peripheries, suburban areas and villages to facilitate organised urban growth. This strategy will help in supporting the market demand generated by the various employment centres.

4. Integration of existing villages

Protect all existing village settlements; and in line with the township model, carefully integrate them within each township while allowing these areas to have flexibility in planning.

5. Transit Oriented Development

Create transit-oriented and walkable communities which have access to a range of housing choices as well as ample employment, amenities and services.

6. Work, Live and Play

Support each township with adequate commercial, civic and recreational facilities in order to create balanced self sufficient townships.

7. Phased Development

Strategically plan and expand urban growth within the city through strategic development phasing.

This will help in optimizing infrastructure and create smaller interwoven communities.

Table 6.1 Residential Density Distribution Table (by Township)

City Name	Area (Ha)	Density (DU/Ha)	Dwelling Units (DU)	Population
Electronics	731.15	91	66,457	2,65,829
Finance	566.45	68	38,509	1,54,035
Government	564.21	73	41,265	1,65,060
Health	1349.90	61	82,747	3,30,990
Justice	566.16	91	51,755	2,07,019
Knowledge	1445.44	99	1,43,394	5,73,575
Media	677.00	94	63,518	2,54,071
Sports	650.89	79	51,648	2,06,592
Tourism	531.48	63	33,334	1,33,335
Total DUs and Population			5,72,627	22,90,507

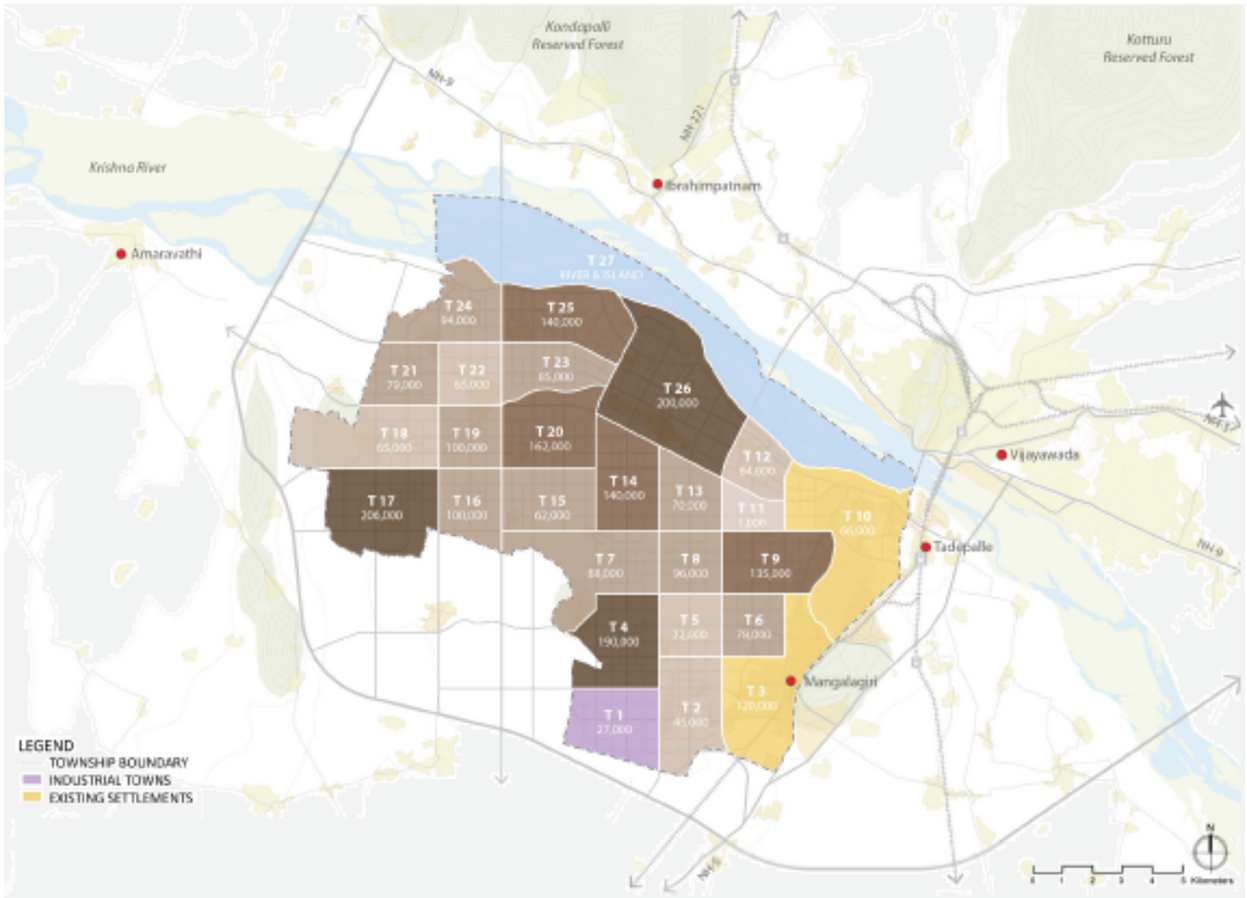


Fig.6.3 Proposed Population Distribution Plan

6.3 RESIDENTIAL DENSITY DISTRIBUTION

Although majority of the residential areas are earmarked for the Land Pooling Scheme residential land, detailed development layouts will ensure distribution of densities as per location and proximity to public transport. The residential densities at the city level will be distributed as per location i.e. city centre, city fringe, regional centres and their peripheries, suburban areas and villages to facilitate organised urban growth. This strategy will help in supporting the market demand generated by the various employment centres.

The CBD will have the maximum residential density to support the large number of jobs that will be created in the waterfront CBD.

Fig.6.4 Mood Images - High Rise Residential

Fig.6.5 Mood Images - Medium - High Density Residential

Fig.6.6 Mood Images - Low - medium density Residential

Fig.6.7 Mood Images - Mixed use Developments

6.3.1 RESIDENTIAL TYPOLOGIES

The residential plan proposes 5 main residential typologies for the new Amaravati Capital city. These typologies have been distributed in accordance with the township model discussed earlier. The following section elaborates the urban character and planning principles for these typologies:

1. High Density Residential

The proposed landuse plan safeguards 24% of total residential land for high density residential developments, which corresponds to 1% of the total city area. These high density residential use clusters primarily comprise of private/ public multi family high rise apartments with integrated community facilities. These facilities include a common playground, club house, multi-purpose hall, car park etc. At a maximum height of G+15, the development density of such developments would be approximately 182 dwelling units per hectare of land.

Planned along transit corridors and within the Central Business District, the high rise residential will enjoy access to the infrastructure and facilities whilst the high footfall brought by high density developments will make infrastructure and businesses more viable. The high density residential clusters have been planned along the river Krishna waterfront to capitalize on the scenic views of the existing hills and river Krishna to create a distinctive identity which will attract both developers and home buyers.

2. Medium to High Density Residential

22% of developable land is proposed for medium to high density residential developments, corresponding to 70% of the total residential area, the highest within the city. The medium to high density residential use primarily includes the land to be returned under land pooling scheme rules 2015[1]. The medium

- high density residential use facilitate detached, semi-detached, attached and mid rise multifamily public/private apartments with common facilities within its compound. The residential typology is dependent on the size of the land parcels to be returned to the land owners. The maximum allowable density of these clusters is about 110 dwelling units per hectare.

2. Low to Medium Density Residential

The proposed low density residential clusters take up 1% of the total residential land in the Amaravati Capital city. They are largely planned in town peripheries close to the neighbourhood centres and along water bodies. Driven by market demand these residential clusters will allow detached, semi-detached and apartment typologies. The maximum height of G+4 typically allows for 35 dwelling units to be housed in one hectare. These residential clusters are planned close to the city and regional parks creating a unique character and ambience.

4. Village Residential

Though anticipating a significant drop in rural population, all existing village settlements have been protected in the landuse plan. The plan encourages redevelopment of these areas into more planned developments. It takes up about 7% of the developable land in Capital city, and 20% of the total land allocated for residential use.

Village neighbourhood centres have been proposed with these villages, supported civic facilities such as schools, polyclinic, police station, community centre, etc in the periphery of these settlements. The height of these settlements is restricted to G+3 storeys in order to create a uniform typology.

5. Mixed Use Residential

Mixed use residential takes up about 2% of the total developable land in the Capital city and 6% of total residential land use. Typically found in the City Centre and along the arterial roads, mixed use developments are used as a strategy to bring activities and vitality into the commercial areas during non-office hours through the live-in population.

The different uses can either be housed in one single building or individually in the same compound. For the former, it is common that the first or the lower floors are assigned for commercial use, that requires the street frontage for walk-in businesses, whilst the residence is housed in the upper floors for better privacy.

Affordable housing will be a part of the government special projects zone, S3 as per the zoning plan prepared for the Capital city.

1 Andhra Pradesh Land Pooling Scheme Rules, 2015

6.4 VILLAGE INTEGRATION & LAND POOLING STRATEGY

6.4.1 Land return strategy

There are 29 village settlements that are currently under land pooling by the CRDA and Andhra Pradesh Government. Several strategies have been identified to effectively implement the land pooling mechanism without compromising the integrity of the Master plan.

Land Pooling act:

In keeping with the will of the Government to build 'people's capital', the land procurement mechanism has been designed to be voluntary and based on consensual process of land pooling. Land pooling mechanism is mainly adopted for development of the Amaravati Capital city area, wherein the land parcels owned by individuals or group of owners are legally consolidated by transfer of ownership rights to the Authority, which later transfers the ownership of a part of the land back to the land owners for undertaking of development for such areas.

The broad objective of the scheme is to provide fair compensation to the people currently residing on the site in lieu of pooling in their agriculture land. This is in sync with the Overall vision of Amravati to be a "People's Capital" and involving people in the development process. Accordingly the Government have issued the "Andhra Pradesh land Pooling scheme".

Quantum of land to be returned:

As part of the Land Pooling Scheme, for every acre of Agricultural Land pooled in:

- 800 to 1,000 sq yards of residential land has to be returned back to the owner &
- 100 to 450 sq yards of commercial land has to be returned back to the owner

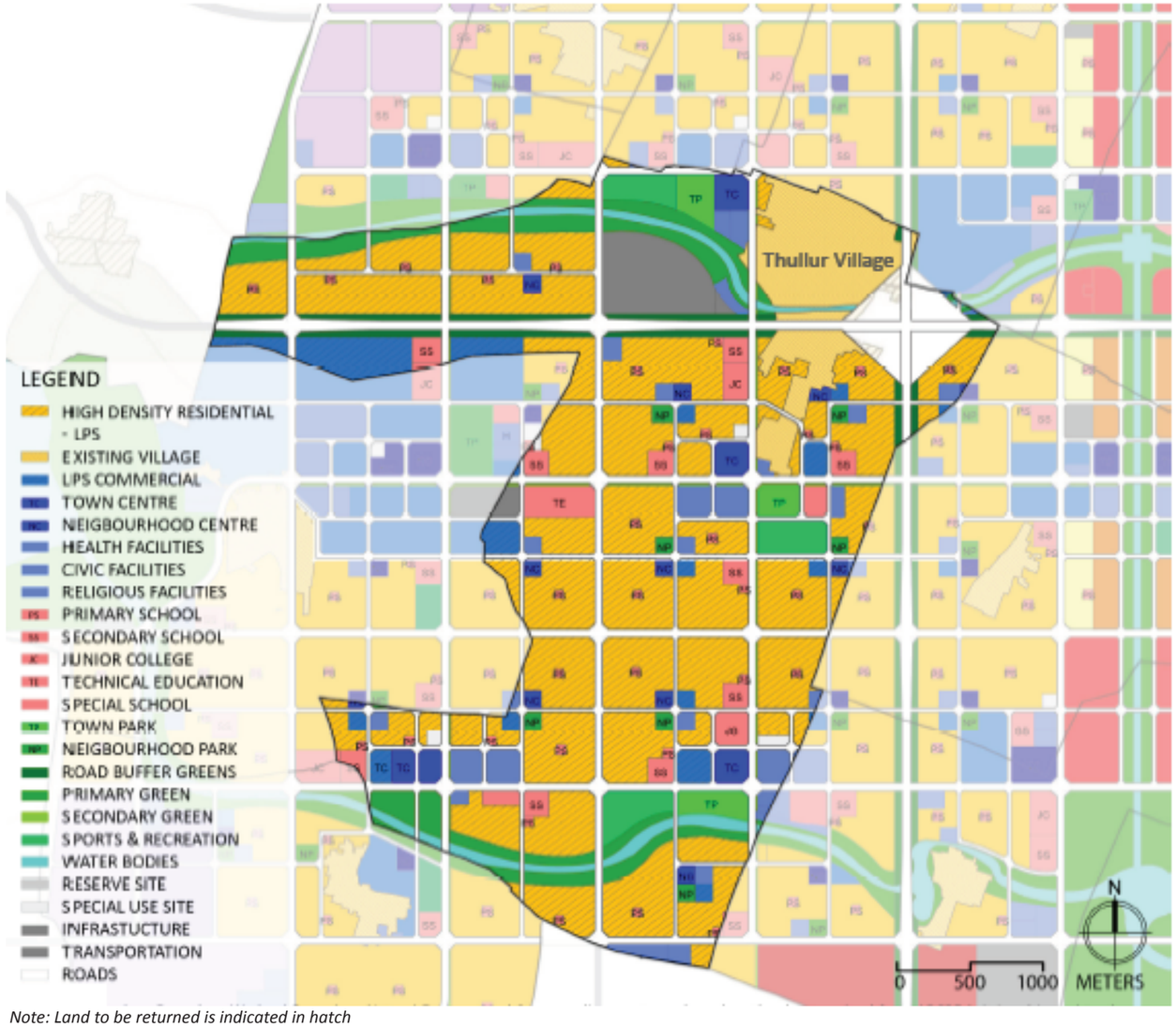
The exact number depends on the quality of agriculture land, location and a few other criteria identified by the CRDA.

Master Plan Strategy for Land Pooling:

There were several criteria that were important in allocating the land to be returned as part of Land Pooling, out of which, following were the key ones:

- The returned land should be within the same Village Administrative Boundary
- It should be as close as possible to the existing village settlements
- All parcels to have good road connectivity.

Using this strategy, appropriate land parcels have been identified to be returned. The adjacent map demonstrates an example of Thullur village, where the hatched land parcels have been identified to be returned for this particular Village Administrative Boundary.



Note: Land to be returned is indicated in hatch

Fig.6.8 Example of Land Pooling Scheme in Thullur village

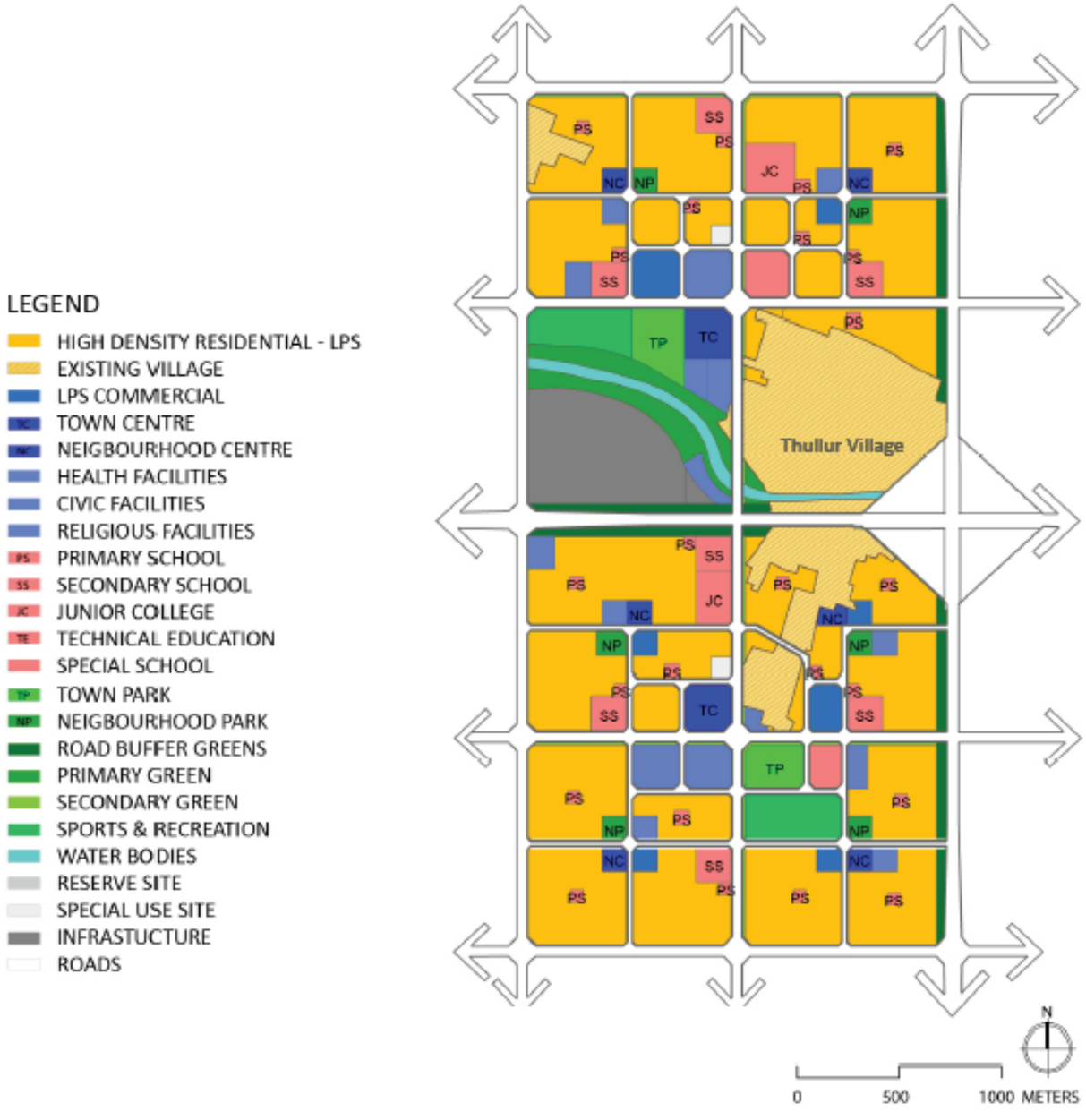


Fig.6.10 Typical village expansion plan

6.4.2 Village Integration Strategy

The existing village settlements pose a very unique challenge to the Master plan. The mandate is to retain all the existing settlements on ground as part of the master plan. Following strategies have been adopted to ensure the smooth integration of the villages with the new Amaravati Capital city.

Framing of the villages:

Currently, there is no definite boundary for the village settlements. As part of the Master plan, local roads have been introduced to frame the villages in order to define their extents. This will enable good connectivity of the existing settlements without being hindered by the proposed landuses in the neighbouring areas.

Amenities within the village expanded area:

In addition to the above two strategies, the villages have been equipped with all the missing amenities such as schools, neighbourhood shopping, metro, etc within the newly planned townships that they are part of. This way, the quality of life of the people residing in the village will be improved together with all the other new residents of the Amaravati Capital city.

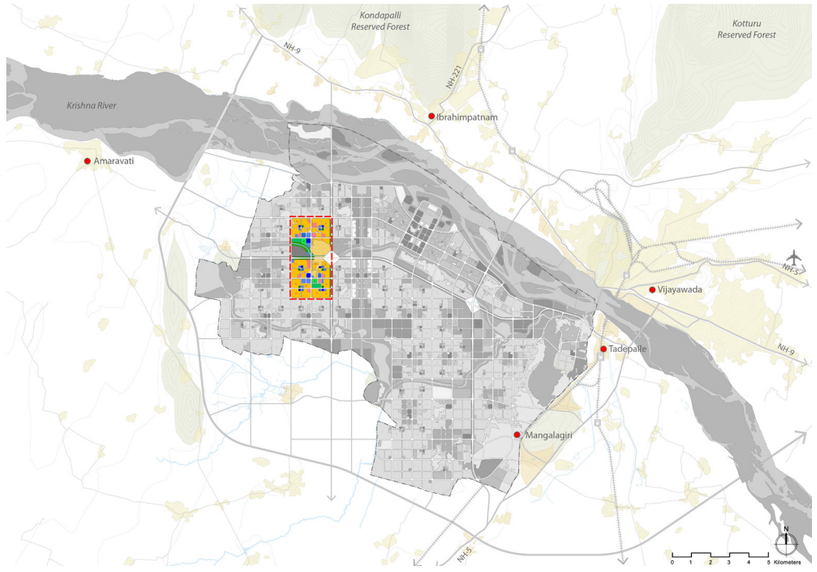


Fig.6.9 Key Plan - Typical village expansion plan