



Planning, 'Violations', and Urban Inclusion: A Study of Ranchi

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Table of Contents

List of Tablesii
List of Figuresii
List of Mapsii
List of Boxesii
Abbreviations Usediii
1. Background 1
2. Introduction: Why study violations?
 3. Urbanisation in Jharkhand
4. Ranchi 10 4.1 Brief Overview 10 4.2 Master Plans of Ranchi 11 4.3 Other Plans for Ranchi 12
 5. Research Objectives and Methodology
 6. Key Findings and Analysis
7. Conclusion
8. Recommendations and Next Steps
References
Annex 1: Case Studies
Annex 2: Land Use Permissibility in Different Use Zones

List of Tables

Table 1: Table 2:	Population Growth in Jharkhand (1901 – 2011) Proportion of Scheduled Tribes Population in Jharkhand and Ranchi, 2011	4 11
Table 3:	Recognised/ Identified Slums in Ranchi	15
Table 4:	Tenurial Rights in Sample Recognised Slums	19
Table 5:	Overlay Analysis of Existing Land Use (2012) and Recognised Slums	21
Table 6:	Overlay Analysis of Draft Proposed Land Use and Recognised Slums	23
Table 7:	Overlay Analysis of Notified Proposed Land Use and Recognised Slums	25
Table 8:	Proposed Land Use vs. Tenurial Rights	28
List of I	Figures	
Figure1:	Population Growth in Ranchi City (1901–2011)	10
List of I	Maps	
Map 1:	Settlement Structure of Jharkhand, 2011	7
Map 2:	Location of Recognised Slums in Ranchi	16
Мар 3:	Location of Sample Recognised Slums in Ranchi and their Reported	18
	Tenurial Arrangements	
Map 4:	Existing Land Use of Ranchi with Recognised Slums	22
Map 5:	Draft Proposed Land Use of Ranchi with Recognised Slums	24
Map 6:	Notified Proposed Land Use of Ranchi with Recognised Slums	27
Map 7:	Incidence of Building Activities in Proposed Agricultural Zone in Draft Master Plan	30
Map 8:	Incidence of Building Activities in Proposed Agricultural Zone in	31
-	Notified Master Plan	

List of Boxes

Box 1:	Dominance of Company Towns in Jharkhand	5
Box 2:	Excerpts from Chhotanagpur Tenancy Act, 1908	9
Box 3:	Recognised Slums in the Heavy Engineering Corporation Limited Area	19
Box 4:	Draft Proposed Land Use vs. Notified Proposed Land Use – 2037	25
Box 5:	Affordable Housing in Jharkhand	32

Abbreviations Used

AMRUT	Atal Mission for Rejuvenation and Urban Transformation
CDP	City Development Plan
CISF	Central Industrial Security Force
CNT	Chhotanagpur Tenancy Act
ELU	Existing Land Use
EWS	Economically Weaker Sections
HEC	Heavy Engineering Corporation Limited
НН	Household
JnNURM	Jawaharlal Nehru National Urban Renewal Mission
LIG	Lower Income Group
MoUD	Ministry of Urban Development
NGO	Non-Governmental Organisation
PLU	Proposed Land Use
PPPP	Public Private People Participation
PSU	Public Sector Undertaking
RMC	Ranchi Municipal Corporation
RRDA	Ranchi Regional Development Authority
SLIP	Service Level Improvement Plan
SPT	Santhal Pargana Tenancy Act
ST	Scheduled Tribe
ТСРО	Town and Country Planning Organisation
UA	Urban Agglomeration
UD&HD	Department of Urban Development and Housing
UDD	Urban Development Department
ULB	Urban Local Body
VAMBAY	Valmiki Ambedkar Aawas Yojana

1. Background

In November 2015, the Indian Institute for Human Settlements (IIHS) in collaboration with Youth for Unity and Voluntary Action (YUVA) conducted a two-day training workshop on 'Urban Planning' for organisations and activists working on housing rights. While the workshop provided an overview of urban planning in India, more in-depth work was needed to engage with the linkages between planning, housing, violations and evictions. There was a felt need to understand ongoing planning mechanisms and ways in which communities could engage in making planning a people-centric process. This led to the commissioning of a research project by YUVA to IIHS, with the objective to understand the nature, kind and quantum of violations in Indian cities with respect to their master plans. This was done through a literature review and in-depth study of two cities—Ranchi and Bhubaneswar. The output is a set of three reports:

- 1. Planning, 'Violations', and Urban Inclusion: A Review of Literature
- 2. Planning, 'Violations', and Urban Inclusion: A Study of Ranchi
- 3. Planning, 'Violations', and Urban Inclusion: A Study of Bhubaneswar

These reports have been published in English and Hindi.

The Ranchi field study was carried out with support from Adarsh Seva Sansthan, an NGO working on the issue of housing rights (among others) in Jharkhand. The team, comprising Lakhi Das, Ravi, Avinash and Rosa, facilitated IIHS' field work in the city. A two-day workshop was organised in Ranchi on 25–26 August 2016 to orient the community members towards master planning in Ranchi, and to share the preliminary findings of the study. In Bhubaneswar, YUVA staff helped the IIHS team in carrying out field work, with oversight by Sachikanta Pradhan and Pratap Sahu.

Over the course of a workshop in Delhi on 3 March 2017, the findings of the Ranchi and Bhubaneswar studies were shared with the project partners, along with academics, researchers, other NGOs, think tanks, etc. Key discussions and suggestions from all these workshops have been incorporated in the respective city reports.

2. Introduction: Why study violations?

In many cities of the world, particularly those in the global South, patterns of inhabitation and settling do not follow the logics or laws of planning. From the favelas in Rio to the bastis and unauthorised colonies in Delhi, the musseques in Luanda or the shacks in Durban, a significant part of these cities are built by residents themselves, often in some tension with law and planning. There is also a significant amount of 'change in land use' that comes across through influence, which could be referred to as development by exception. Teresa Caldeira has described this shared process of citybuilding as 'auto-construction' (Caldeira, 2014). Too often, auto-construction is misrecognised simply as a 'failure' and 'violation' of planning—what in the Indian landscape is called an 'implementation gap.' So how should we understand 'violation' when such acts are committed, often by the city's poorest residents, as a claim to the city and for shelter, and at the same time by the rich through influence? How can we perceive 'encroachment' or an 'illegal' act when it is carried out by such a large proportion of a city's residents? Indeed, what does the fact that our cities are autoconstructed tell us about planning? How should planning respond to such 'violations' that combine the difficulty of orderly urban development with concerns for urban equity and inclusion?

This set of reports seeks to help find answers to such questions by undertaking a literature review and studying the nature, kind and quantum of violations in two Indian cities, Ranchi and Bhubaneswar. They do so in order to gain more in-depth understanding of the kinds of violations that occur in cities. We hope to demystify and unpack this broad category that, within it, encompasses a range of ways of settling and surviving in the 'auto-constructed' city. These reports are intended to better assess both the reasons that these violations become necessary as well as to think about how planning can engage with them. Doing so, we argue, is essential to discern the relationship between planning and urban inclusion in Indian cities.

This report presents the observations and findings from the study conducted in Ranchi. We chose Ranchi because it represents a mid-size city that is at the brink of a significant transition in its new role as the capital of the state of Jharkhand. The city is precariously poised: on the one hand, it is seeing a new impetus for growth and change. On the other, the scalar shift it is about to make will bring new challenges for urban planning, governance, management and, specifically, inclusion. Mid-size cities across India face this transition but each still has the potential for transformation and early responses to inequality that mega-cities like Delhi and Mumbai can no longer access. Can understanding violations be one part of tilting the urbanisation of the Indian mid-size city towards a more inclusive growth pattern? The report proceeds as follows. First, we briefly locate the context of Jharkhand's urbanisation and then present an overview of Ranchi. Here, we note the particularity of the state's urban history and the predominance of 'company towns'. Then, we look closely at one kind of violation in Ranchi-the 'slum', and begin to follow another kind of violation—development in the green belt or agricultural zone. In doing so, we do not imply that violations are solely committed by slums—as in all Indian cities, violations are as much the domain of the elite (Bhan, 2013). We focus on the 'slum' because it is the kind of violation most closely related with urban vulnerability and represents a governmental category recognisable within urban governance in India. We argue that it is essential to disaggregate 'slum' into the varied historical, spatial and legal forms of settlement that fall within this category. We do so by first mapping slums against Ranchi's master plans to assess the precise nature of the violation, and then drawing a typology of differential vulnerability and deviation from formal planning. Given the study objectives, we focus on tenure, property rights and land use of slums, and not necessarily on housing, infrastructure and services. In conclusion, we suggest possible ways in which to understand these 'violations', and how to frame the engagement between 'slums', 'violations' and master plans.

3. Urbanisation in Jharkhand

3.1 Population Growth and Settlement Pattern

With a population of 32.9 million, Jharkhand is the 14th most populous state in the country and 27th most urbanised, with an urban population share of 24 per cent. As of 2011, Jharkhand has 228 urban centres, 40 of which are statutory towns with urban local bodies, accounting for more than 65 per cent of the total urban population in the state. Jharkhand's urban population has grown from approximately 0.9 million at the time of independence, to approximately 8 million as of 2011. The decades between 1951 and 1971 saw the fastest growth in the state's urban population. This period coincides with the setting up of mineral-based industrial townships in erstwhile undivided Bihar. Table 1 highlights these trends.

Table 1: F	opulation Gro	wth in Jharkha	nd (1901–2011)			
Census Year	Total Population	Growth of Total Population	Urban Population	Growth of Urban Population	Percentage Urban	Growth of Percentage Urban
1901	6,068,233	ropulation	129,307	ropulation	2%	orban
1911	6,747,122	11%	176,365	36%	3%	23%
1921	6,767,770	0%	264,557	50%	4%	50%
1931	7,908,737	17%	347,958	32%	4%	13%
1941	8,868,069	12%	507,133	46%	6%	30%
1951	9,697,254	9%	905,584	79%	9%	63%
1961	11,606,489	20%	1,153,304	27%	10%	6%
1971	14,227,133	23%	1,880,200	63%	13%	33%
1981	17,612,069	24%	2,948,090	57%	17%	27%
1991	21,843,911	24%	3,925,303	33%	18%	7%
2001	26,945,829	23%	5,791,744	48%	21%	20%
2011	32,988,134	22%	7,933,061	37%	24%	12%
Source: Cer	Source: Census of India, various years.					

Jharkhand has a very large proportion of tribal population: approximately 26 per cent of the total population is made up of Scheduled Tribes (STs), accounting for more than 8 per cent of the total ST population of India. However, only 9 per cent of Jharkhand's ST population lives in urban areas, out of which a large proportion—approximately 62 per cent—lives in the state's 40 cities that have urban local bodies. This could indicate the existence of some form of barriers of entry for tribal populations into cities. However, the large presence of a tribal population (and tribal lands) is an important aspect to consider in the physical expansion of urban areas in Jharkhand given the prevalence of tenancy laws, as discussed in later sections.

The spatial distribution of major urban areas in Jharkhand (Map 1) is strongly correlated with the mineral-rich region of Chhotanagpur Plateau and the trunk rail and road linkages connecting the plateau with the port in Kolkata. At a macro level, all Class I cities of Jharkhand (except Deoghar) along with major industrial cities of Odisha (e.g., Rourkela, Jharsuguda) and Chhattisgarh (e.g., Korba, Bilaspur), form a closed ring around the Chhotanagpur Plateau. Interestingly, this belt, apart from Ranchi, also exhibits a skewed distribution of the ST population within the cities—averaging to less than 0.5 per cent of the total population. This model of urbanisation driven by industry location and employment generated by these industries is discussed further in Box 1.

Box 1: Dominance of Company Towns in Jharkhand

As seen in the population growth and settlement pattern, company towns have had a big role to play in Jharkhand's urbanisation. Of the four major urban agglomerations in Jharkhand including Ranchi, Dhanbad, Jamshedpur and Bokaro, the latter two entirely started out as company towns and the other two have also had a large company presence (Heavy Engineering Corporation Limited in Ranchi and coal/steel companies in Dhanbad).

Company town is defined as 'a settlement built and operated by a single business enterprise' (Garner, 1992). This has been refined to make the distinction that in company towns, land ownership also substantially comes under that enterprise (Borges and Torres, 2012; Crawford, 1995). In India, the legislative foundation for these new forms of corporate urbanism lies in the Constitutional provision of 'industrial township', incorporated as an exception to the representative municipal framework envisaged under India's 74th Constitutional Amendment in 1992.

Kling in his work mentions Jamshedpur as being the largest company town in the world in terms of population, and also probably the oldest extant company town because it is still controlled and administered by the Tata Iron and Steel Company (TISCO), which founded it in 1909 (Kling, 1998). A point to note here is that company towns in other countries have mostly been removed from the sole control of the company and integrated with the prevailing administrative system.

In India, moves to constitute municipal corporations and notified area authorities in such areas have been resisted (Sivaramakrishnan, 1977). For example, as per notification no. 707 dated 28 December 2005 by the Government of Jharkhand, Bokaro Steel City, Chas, Bandhgora and the village of Kamaldih together formed the Chas-Bokaro Municipal Corporation. However, the Urban Development Department, Government of Jharkhand reduced the municipal boundary of Chas Municipality to exclude Bokaro Steel City, Bandhgora and Kamaldih village. So the present area of Chas Municipal Corporation is confined to the old municipal boundary.¹

The formation of such towns is also criticised on account of being centred around building an industry while treating the settlement itself as an adjunct or subordinate entity (Sivaramakrishnan, 1977; Garner, 1992). The failure to recognise the physical and socio-economic issues of a growing town lead to large housing shortages in these towns (Sivaramakrishnan, 1977; Sinha & Singh, 2011). Company towns in the US have similarly faced housing shortages, leading to lower-level workers staying in cramped camps (Green, 2012; Carlson, 2014). Same is the case with the 'boom towns' of Australia, where housing shortages have led to 'people living in caravans, backyard sheds, tents, garages' (Haslam-McKenzie et al., 2009). However, in both cases there was some kind of government intervention or provision of housing to counter these issues, unlike in

¹ Source: http://chas.jharkhandonline.in/city-guide/About-Chas (retrieved on 20 July 2016).

industrial towns in India, where 'temporary camps' came up around such towns. The authorities assumed that these temporary camps would 'vanish on a designated date' but they have endured and expanded (Sivaramakrishnan, 1977).

The issues of infrastructure provision, governance and land have been discussed extensively in K.C. Sivaramakrishnan's report, 'New Towns in India', where he looks at the six new towns in the eastern region of the country—Rourkela, Bhilai, Durgapur, Bokaro, Jamshedpur and Bhubaneswar—five of which are industrial towns.

Map 1: Settlement Structure of Jharkhand, 2011



3.2 Town Planning in Jharkhand

As mentioned in the previous section, a large number of urban areas in present-day Jharkhand have developed as planned company towns. After independence, the Bihar Town Planning and Improvement Trusts Act, 1951 was passed, and the town planning function was undertaken as per the provisions of this act. However, the Act was repealed by the Bihar Regional Development Authority Act, 1981 (*Md. Mustaque vs State of Bihar and Ors.*, 2004). In Ranchi, the Ranchi Regional Development Authority (RRDA) was made responsible for the preparation of master plans, and the Ranchi Municipal Corporation (RMC) along with the RRDA were the plan implementation agencies.

After the state's bifurcation, the Bihar Regional Development Authority Act, 1981 was adopted by Jharkhand as the Jharkhand Regional Development Authority Act, 1981 (also referred to as the Jharkhand Regional Development Authority Act, 2001). In 2011, the state passed the Jharkhand Municipal Act, 2011 under which the town planning function was entrusted to the municipalities and, in the case of Ranchi, to the RMC.

The present governing body for town planning at the state level in Jharkhand is the Urban Development Department. Among the 40 statutory towns in Jharkhand, only five have an approved master plan (TCPO, 2015). In 2014, the Urban Development Department of Jharkhand decided to prepare GIS-based master plans and zonal development plans for 32 towns of the state (Government of Jharkhand, 2014). Some of the master plans have been prepared and the drafts are being made available online (UDD Jharkhand, 2016).

3.3 Prevalence of Tenancy Acts

Land and planning cannot be looked at separately. Land in Jharkhand is governed by a set of laws: Bihar Land Reforms Act, 1950, the Chhotanagpur Tenancy Act, 1908 (hereafter referred to as CNT Act) and the Santhal Pargana Tenancy Act, 1949 (hereafter referred to as SPT Act). The provisions of the SPT Act are applicable in the Dumka, Sahebganj, Godda, Jamtara, Godda, Deogarh and Pakur districts of Jharkhand and that of the CNT Act in the other districts of Jharkhand. Since the CNT Act is applicable in Ranchi, only the provisions of this Act are discussed in some detail in the present report.

The history of these tenancy acts goes back to pre-independence times when the British introduced the Zamindari system to make land revenue collection easier. The area under Jharkhand, part of the then Bengal Province, also came under the Zamindari system. However, the land revenue collection led to the exploitation of the tribal communities, resulting in tribal unrest. The Chhotanagpur Tenancy Act was introduced by way of protecting the interests of the tribal communities and their possession over land. Thus, the Act aims at two things—integrating the traditional land systems and restricting transactions to avoid exploitation.

The Act lays down different types of tenure holdings and classes of tenants. It is necessary to understand the exact category of a piece of land to determine the relevant provisions in terms of alienability, transferability and inheritability. Within a given settlement, each piece of land might fall under a different category and thus be governed by different provisions. Category and other details of the land can be found in the revenue record. The 'record of rights' in respect of one holding in which plot no. area, boundary, nature of holding, etc., are mentioned is called a '*khata*' and the volume containing *khatas* is called a '*khatian*', which is a common term used in the area while talking about land ownership (Judicial Academy Jharkhand).

The details of some of the types of Record of Rights (RoR) in the area have been studied, and are presented in Box 2.

Box 2: Excerpts from Chhotanagpur Tenancy Act, 1908

For the purposes of this Act, there shall be following classes of tenants:

- 1. Tenure holders, including under-tenure-holders;
- 2. raiyat, namely
 - a) occupancy-*raiyats*, that is to say *raiyats* having a right of occupancy in the land held by them,
 - b) non-occupancy raiyats that do not have such occupancy right, and
 - c) raiyats having *khunt-katti* rights;
- 3. under raiyats, that is to say, tenants holding, whether immediately or mediately, under *raiyats;* and;
- 4. *Mundari Khunt-kattidar* A Mundari who cleared the jungle and made the land fit for cultivation and his descendants in the male line.

[The classification of tenant is not exhaustive, but the Act deals only with the enumerated class of tenants. Others are governed by Transfer of Property Act.]

Source: Section 4, Chapter II, CNT Act, 1908.

4. Ranchi

4.1 Brief Overview

Set up in 1834 by the British, Ranchi city housed several offices and merely served as the administrative headquarters of the South-West Frontier Agency of the British until the 1950s. In 1958, with the establishment of the Heavy Engineering Corporation Ltd. (HEC), the city started attracting people to its industrial establishments. Several educational institutions were also established, which made it an educational hub in the area. Through all these years, Ranchi has continued to serve as a regional and administrative centre, as the district headquarters as well as the summer capital of Bihar. With the creation of Jharkhand in 2000, Ranchi became the state capital and houses the state's administrative departments, thus regaining its prominence as an administrative headquarters.

With a population of around 1.13 million, Ranchi Urban Agglomeration (UA) is the third largest in the state after Jamshedpur and Dhanbad. RMC, which has a population of almost 1.07 million, is the second largest in the state after Dhanbad. Ranchi City witnessed the maximum rate of growth in the 1960s and 1970s, with the setting up of HEC in 1958 and MECON Limited in 1973.



Almost 20 per cent of the population in the RMC area consists of STs. Ranchi has a higher-than-average proportion of ST population in urban areas; it accounts for close to 28 per cent of the entire tribal population living in urban areas, and more than 45 per cent of all tribal population living in statutory towns. This could be due to the fact that Ranchi was only partially developed as a company town, as against Jamshedpur, Dhanbad and Bokaro. Furthermore, as evident in Table 2, rural areas in the neighbourhood of Ranchi city that form part of the Ranchi Planning Area have an even larger share of ST population than the city.

Table 2: Proportion of Scheduled Tribes Po	pulation in Jharl	khand and Ra	nchi, 2011	
Location	Area (sq. km)	Population	ST	%age ST
			Population	Population
Jharkhand	79,716	32,988,134	8,645,042	26%
Jharkhand Urban	2,424	7,933,061	776,892	10%
All Statutory Towns in Jharkhand	1,082	5,371,345	478,592	9%
Ranchi District	5,097	2,914,253	1,042,016	36%
Ranchi Planning Area	652	1,388,482	343,699	25%
Ranchi City	175	1,073,427	217,024	20%
Ranchi District without Ranchi City	4,922	1,840,826	824,992	45%
Ranchi Planning Area without Ranchi City	477	315,055	126,675	40%
Source: Census of India, 2011; Ranchi Master Plan – 2	2037.			

Ranchi is, in a sense, a dual city. One part of it is with HEC, while the rest is outside of it. Established in 1958, HEC is 'one of the leading suppliers of capital equipment in India for steel, mining, railways, power, defense, space research, nuclear and strategic sectors' (HEC, 2016). It is a Public Sector Undertaking (PSU). In 1958, HEC acquired approximately 29 square kilometres of land. Of this, it utilised only about 11 square kilometres (0.5 square kilometres for offices, 1.7 square kilometres for residential and 8.9 square kilometres under plant and machinery). Of the remaining unused land, 11.3 square kilometres is being transferred to the Government of Jharkhand and the Government of India for different purposes such as the formation of Core Capital Area, establishment of the Central Industrial Security Force (CISF), etc. At present, 6.7 square kilometres of land under HEC is lying vacant or unutilised (MoUD, 2016).

4.2 Master Plans of Ranchi

The first attempt to prepare a master plan for Ranchi was initiated in 1965, but this plan was not approved. After years of delay, in 1972, the Master Plan of Ranchi Town was notified vide Government Notification No. 6972/LSG dated 28.07.1972, with 1983 as the perspective year. This plan was prepared by the Ranchi Improvement Trust, with the assistance of the State Town & Country Planning Organization, and covered an area of 129.50 square kilometres (RMC, 2015; CRISIL, 2013). It was revised in 1983. The Master Plan for 1983–2001, prepared by the RRDA, covered an area of approximately 175 square kilometres and was approved vide Government Notification No. 1095/82 dated 25.10.1983.

The latest proposed revised Ranchi Master Plan 2037 (hereafter referred to as the 'Ranchi Master Plan') has been prepared by the consultants Feedback Infra Private Limited and BE Consultants for an area of approximately 652.20 square kilometres (including Greater Ranchi Phase-I, an area of 8.32 square kilometres), the clients being the Urban Development and Housing Department, RMC and Ranchi Regional Development Authority. The entire area under this plan is referred to as the Ranchi Planning Area (RPA). This master plan was approved and notified by the Urban Development and Housing Department, Government of Jharkhand, vide Government Notification No. 02/UD/Master Plan – 104/2008/4371 dated 30.11.2015.

What is important to note in this master plan (as well as earlier master plans) is that it makes no differentiation between various kinds of land that come under the CNT Act. This, as we argue later, is a crucial distinction that deeply affects the implementation of the plan and the landscape of 'violations'.

In addition to master plans, Jharkhand has building bye-laws (2015), which apply to all development and building activity across all regional development authorities and urban local bodies. However, in case 'Master Plan/Development Plans/Zonal Plans are notified by the authority subsequent to the publication of these bye-laws, the corresponding provisions made in the master plan/development plans/zonal plans shall override the provisions made in these bye-laws' (UD&HD, 2015).

4.3 Other Plans for Ranchi

There are a number of other kinds of plans that exist with respect to Ranchi city. These are not statutory in nature but are mostly prepared under various schemes with attached funding for implementation, and thus, have a bearing on how the city is shaped. For example, the City Development Plan for Ranchi was prepared under the Jawaharlal Nehru National Urban Renewal Mission (JnNURM). More recently, Service Level Improvement Plans (SLIPs) are being prepared under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT). The Smart City Proposal of Ranchi envisages greenfield development on 1.4 square kilometres of land situated in close proximity to the proposed capital complex.

5. Research Objectives and Methodology

5.1 Objective

The underlying aim of this research project was to study informal settlements in the context of the Ranchi Master Plan. The specific objectives are as follows:

- 1. Mapping the informal settlements in Ranchi, with a particular focus on recognised slums;
- 2. Developing a typology of recognised slums with respect to their tenurial arrangements;
- 3. Analysing master plan provisions for the land under recognised slums; and
- 4. Mapping violations (with regard to master plan land use) other than recognised slums.

5.2 Methodology

- 1. Secondary data collection and review: As a first step, secondary information was gathered about Ranchi, including Acts, master plans, other plans, studies, reports, and available documentation on 'slums' and informal settlements.
- 2. Database creation: A list of 'slums' was obtained from RMC, which included location data as well. A spatial database was created combining location and other available data on 'slums'. Land use maps were extracted from the master plan, geo-referenced and combined with the 'slum' data. This entire dataset formed the backbone of further fieldwork and analysis.
- 3. Ground truthing, validation and profiling: Since the 'slum' lists contain no information on the tenure and other characteristics like level of services, it was decided to undertake primary field work and visit a sample of 'slums' to enable profiling of some of them in terms of tenurial rights, land ownership, age of settlement, service provision, housing quality, etc. A sample of 63 recognised 'slums' was covered while ensuring a balanced geographical spread. Primary visits helped in conducting ground truthing and validation. In addition to these 'slums', eviction, resettlement and redevelopment sites were also visited.

The information recorded is based on self-reporting. We spoke to a group of residents, or a minimum of three residents, in order to reduce the possibility of individual bias and/or misreporting as much as possible. Due to time constraints, only certain parts of the slums were visited. In the case of large slums, some of the characteristics may differ in other parts of the same slum.

- 4. Typology development: A typology of 'slums' was developed based on the reported tenurial rights and land ownership. Three broad categories emerged: 1. No tenurial rights (primarily on government land); 2. Clear RoR over land and property; and 3. Unclear right over property. This helped in understanding the nature of recognised 'slums', which is very important while working out a housing strategy for slums.
- 5. Overlay analysis with land use plans: Overlay analysis of the slum map was carried out with the existing land use plan and proposed land use plans, to identify the instances and nature of violations. This was supplemented by further layers of analysis, including typology, location, etc. While the results of the exercise were not verified on ground, an attempt was made to overlay Google Earth imagery on the proposed land use map and identify constructions (hence, violations) in the proposed green belt.

5.3 Scope, Limitations and Challenges

- 1. Due to resource and time constraints, only a sample of 'slums' could be visited for ground truthing and understanding tenurial arrangements.
- 2. Again due to resource and time constraints, the existing list of 'slums' was used; no new surveys to identify 'slum-like' settlements were done. However, a note was made wherever 'slum-like' conditions were observed during ground truthing.
- 3. In-depth understanding of tenurial rights is of utmost importance to the study of planning, violations and urban inclusion in Jharkhand; however, only a cursory understanding of tenurial rights was possible in such a short span of time.
- 4. Since the raster images of existing and proposed land use maps were manually georeferenced and digitised, there may be some mismatch in the overlay analysis between the maps and the actual conditions on ground.
- 5. Mapping 'violations' other than slums was found to be difficult in such a short span of time. An attempt was made to identify sites of construction in the agricultural zone, and this has been discussed in Section 6.3.3 of this report.

6. Key Findings and Analysis

6.1 Recognised slums in Ranchi

There are 254 recognised slums^{2,3} in Ranchi, as per the survey conducted by RMC in 2013. As mentioned in the methodology section, we obtained slums lists from several sources and the numbers varied. These include: studies, master plans, City Development Plan (CDP), and Census data, among others. Table 3 presents the slum estimates taken from various sources. The variations in these estimations tell their own tale of how 'violations' are understood and accounted for in the city.

Table 3: Recogr	ised/Identifie	d Slums in Ran	chi		
Source	Number of	Number of	Proportion of	Slum	Proportion of
	Slums	Households	households	population	total population
RMC (2013)	254	47,733	22.99%	2,32,023	21.6%
Census of India (2011)	-	14,426	6.95%	74,287	6.9%
Master Plan 2037 (2011)	95	-	-	82,816	7.7%
Jaruhar and Saxena (2013)	215	-	-	~3,60,000	34.0%
CDP (2006)	52	35,037	-	2,37,191	-

A comprehensive list of 'slums' (along with location) was provided by the RMC (Map 2). The sizes of the slums range from 1.2 hectares to 308.4 hectares, the smallest being Pakka Kuwa in Ward 14 and the largest being Pundag in Ward 38. The number of households in these slums also varies—from as low as 12 households to as high as around 1,400. The slums listed by RMC cover an area of around 7.5 square kilometres, which is 4.3 per cent of the total municipal area of 175 square kilometres. The total number of households living in these slums is almost 50,000.

² 'Notified Slums: All notified areas in a town or city notified as 'slum' by State, UT Administration or Local Government under any Act including a 'Slum Act'; Recognised Slums: All areas recognised as 'slum' by State, UT Administration or Local Government, Housing and Slum Boards, which may have not been formally notified as slum under any act; Identified Slum: A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities' (Source: Census of India, 2013).

³ The definition of a slum as per Dr. Pronab Sen Committee Report on Slum Statistics/Census says that 'a slum is a compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions' (MoHUPA, 2010). This is also the definition used by the Rajiv Awas Yojana (MoHUPA, 2011) for which the RMC list was prepared. Five slums in the list have less than 20 households, which by the above definition do not qualify to be recognised as a slum.



Map 2: Location of Recognised Slums in Ranchi, 2013

6.2 Characteristics of Recognised Slums

A sample of 63 slums (Map 3) was visited to understand their broad characteristics in terms of tenure, land ownership, age of settlement, housing and services. This section provides an overview of these characteristics for the sample slums, based on observations and self-reporting by residents. Further details of some of these settlements are provided in Annex 1.

6.2.1 Spatial Distribution

Most of the recognised slums in Ranchi are located in the central parts of the city. The other concentration of slums is in the HEC area.

6.2.2 Age of Settlement

The average age of the recognised slums visited during field visits was reported to be 75–100 years. A possible explanation for this is that most of them were formerly villages, which became part of the urban area gradually over the years but do not yet have access to services like water and sanitation. Even the recognised 'slums' on unused HEC land were village-like settlements which were inhabited by a variety of people after land acquisition. Of 63, only two 'slums' were relatively new; these too were around 25–30 years old.

6.2.3 Tenure

Ranchi, especially due to its history and the prevalence of the CNT Act, has a diverse set of tenurial classes. The tenurial classification would need detailed work but the brief field work revealed three broad classes (Map 3):

- 1. Settlements located on government/HEC land with no tenurial rights.
- 2. Settlements where households had some kind of RoR; this means that they had some papers for the land (locally known as *khatian*), however, the exact nature of the *khatian* and its terms and conditions are not known. The *khatian* could range from merely the right to occupy to full ownership (including sale and transfer).
- 3. Settlements where the land ownership was not clear, and it was not known whether the households had any papers or not, included donated lands, lands purchased from brokers, etc.



Map 3: Location of Sample Recognised Slums in Ranchi and their Reported Tenurial Arrangements

The primary survey revealed that households in a majority of the settlements (63.5 per cent) had some kind of RoR. The nature of this RoR varied across the 'slums' and also within the 'slum'. For example, in Tupudana basti, some of the residents that the team spoke to had a '*bhumihari*' record, while some had a '*rayati*' record. The settlement also had '*pahanai*' land where few houses existed. About one-third of the settlements visited were located on land belonging to the government. Eight out of them were located on land belonging to the residents like fisheries. In four settlements, the tenurial status of the households was not clear (Table 2).

Table 4:	Tenurial Rights in Sample Recognised Slum	IS	
S. No.	Tenure Type	Number of Sample 'slums'	Percentage
1	No Tenurial Rights	19	30.2
а	On Railway Land	4	6.3
b	On HEC Land	8	12.7
С	Other Government Land	7	11.1
2	Possession of Some Form of RoR	40	63.5
3	Unclear Tenurial Rights	4	6.3
а	Donated	2	3.2
b	Broker	1	1.6
с	Agricultural	1	1.6
N = 63			

Source: As reported by residents during IIHS Primary Survey, 2016

Box 3: Recognised Slums in the Heavy Engineering Corporation Limited Area

HEC was originally allocated around 29 square kilometres of land. Of this, it has handed over a total of 9.5 square kilometres of land back to the Government of Jharkhand as part of a revival package (*Hindustan Times*, 2015). Based on the tentative original boundary of the HEC indicated by HEC officials, 21 recognised slums come under HEC land. Eight of these are located in the area allocated for the development of Greater Ranchi, for which the land has already been transferred to the Government of Jharkhand by the HEC. Even after this transfer, however, around 13 slums are located on HEC land.

Newspaper reports and discussions with local NGOs indicate that there could be more than 21 settlements in the area that are not included in the 'recognised slums' list prepared by the RMC (*Hindustan Times*, 2015). It is estimated that more than 40,000 squatters live on HEC land and are now facing the prospect of eviction (ibid.).

6.2.4 Housing

Houses in the settlements which had some kind of RoR were mostly permanent, as compared to settlements on government land, where more temporary materials for roofing (asbestos/tin/plastic sheets) could be seen. Some of the very old 'slums' had houses made of mud walls and tiled roofs, remnants of the village-like features of the settlement. These were often in contrast with the surrounding buildings which were newly built, concrete and multi-storied constructions.

6.2.5 Services

In general, Ranchi city has poor infrastructure and services. It is, in fact, difficult to distinguish recognised slums from the rest of the city with respect to access to services, particularly sewer connections and drainage network. Even though Census reports indicate access to piped sewer—14 per cent total households, 12 per cent slum households—it was found that the city had no functional sewerage system. In the case of treated tap water as well, overall, Ranchi fares only marginally better than the 'slums'; 35 per cent total households have access to treated tap water compared to 30 per cent slum households with the same level of access.

Field work also revealed that in many 'slums', piped water supply was unavailable and residents had to depend on community hand-pumps. However, a lot depends on location: inner city settlements had more piped water supply compared to settlements in the outskirts. In the case of settlements on HEC land, the distinction between planned colonies and 'slums' was very clear. The latter had none of the services (except electricity, which is present in almost the whole of Ranchi) that were otherwise available to other residents in the HEC area.

6.3 Master Plan, Slums and Violations

Land use zoning and Development Control Regulations (DCRs) are the two main instruments in the master plan that guide urban growth and development. While land use zoning at the city level indicates the broad land use zones, DCRs give details of uses/activities permitted under each land use zone category. For example, Residential Use Zone (R) is a broad category under which permitted activities include plotted housing, group housing, night shelters, convenience shopping, high school, community hall, etc. The uses and activities permitted under each of the land use zones are listed in Annex 2.

Please note that the following analysis has been conducted based on the layer of broad land use zones as earmarked in the master plan.

6.3.1 Understanding Land Use Violations: Overlay Analysis

a. Existing Land Use, 2012

Overlay analysis of recognised 'slums' on Existing Land Use (2012) revealed that majority of the settlements (~60 per cent) have been marked as entirely residential (either primary residential or unplanned/informal residential, and in some cases, a mix of both). Twenty-nine recognized 'slums' have been marked as unplanned/informal residential entirely, and another 54 partially. A number of land parcels (~20 per cent) where settlements exist are marked as partially residential vacant land. Another 17 per cent of the settlements lie on land that has been marked as partially residential and partially non-residential. About 3 per cent settlements are in the Greater Ranchi area. Only one recognised 'slum' has been marked as entirely non-residential in the existing land use map. However, during the survey, it was found that another two to three 'slumlike' settlements which did not form part of the 'slum' list are located on land marked as entirely non-residential in the existing land use map.

S. No.	Existing Land Use	No. of 'slums'	Percentage
1.	Primary Residential	86	33.9
2.	Unplanned/Informal Residential	29	11.4
3.	Partly Primary Residential, Unplanned/Informal Residential	37	14.6
4.	Partly Primary Residential, Residential Vacant Plot	42	16.5
5.	Partly Unplanned/Informal Residential, Residential Vacant Land	3	1.2
6.	Partly Primary Residential, Unplanned/Informal Residential, Residential Vacant Land	4	1.6
7.	Partly Primary Residential, Other Use(s)	33	13.0
8.	Partly Unplanned/Informal Residential, Other Use(s)	3	1.2
9.	Partly Residential Vacant Land, Other Use(s)	1	0.4
10.	Partly Primary Residential, Unplanned/Informal Residential, Other Use(s)	4	1.6
11.	Partly Primary Residential, Residential Vacant Plot, Partly Other Use(s)	2	0.8
12.	Partly Primary Residential, Unplanned/Informal Residential, Residential Vacant Land, Other Use(s)	1	0.4
13.	Greater Ranchi	8	3.1
14.	Non-residential Use(s)	1	0.4
	Total	254	100.0

Map 4: Existing Land Use of Ranchi - 2012 with Recognised Slums



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b. Draft Proposed Land Use, 2037

Compared to Existing Land Use (2012), overlay analysis of identified/recognised slums on Draft Proposed Land Use (2037) revealed that almost 9 per cent of the settlements are on land parcels entirely earmarked for non-residential uses, and another 3 per cent on the land earmarked for Greater Ranchi (Table 4). Unlike the existing land use map, which has a distinct category for informal residential, in the draft PLU residential land use is further sub-divided only based on densities. While at some level this omission flattens the distinction between formal and informal, the lack of distinction also eliminates the possibility of differential treatment, which might be necessary for these informal settlements.

Almost 71 per cent of the settlements are on land earmarked for residential use (of varying densities), and another 9 per cent on land earmarked partially for residential use and partially for other use(s). Seven per cent settlements are marked as composite use zones, fully or partially.

Table 6:	Table 6: Overlay Analysis of Draft Proposed Land Use and Recognised Slums				
S. No.	Draft Proposed Land Use	No. of Slums	Percentage		
1.	Residential	181	71.3		
2.	Composite Use	2	0.8		
3.	Partly Residential, Composite Use	11	4.3		
4.	Partly Residential, Other Use(s)	24	9.4		
5.	Partly Composite Use, Other Use(s)	1	0.4		
6.	Partly Residential, Composite Use, Other Use(s)	4	1.6		
7.	Greater Ranchi	8	3.1		
8.	Transportation	5	2.0		
9.	Agricultural	4	1.6		
10.	Recreational	4	1.6		
11.	Public Semi-Public	3	1.2		
12.	Industrial and Manufacturing	2	0.8		
13.	Water Bodies	1	0.4		
14.	Mix of Two or More Non-Residential Uses	4	1.6		
Grand T	otal	254	100.0		
Source:	HS Analysis, 2016–17.	· · · · · · · · · · · · · · · · · · ·			

Again, another five 'slum-like' settlements were seen in the draft proposed green belt/agricultural zone during field work.

Map 5: Draft Proposed Land Use of Ranchi - 2037 with Recognised Slums



	Legend RESIDENTIAL R1 Low Density R2 Medium Density R3 High Density R4 Very High Density Village Settlement Village Settlement COMMERCIAL Retail Shopping Zone Vinolesale Trade Vinolesale Trade COMPOSITE USE Composite Use I CUMUNCE Composite Use I
	CU-II Composite Use II INDUSTRIAL & MANUFACTURING IT IT Park M-1 Service & Light Industry Extensive & Heavy Industry
	PUBLIC & SEMI PUBLIC PS-1 Govt./Semi Govt. PS-2 Education & Research PS-3 Medical & Health
nttoning I	PS-4 Social, Cultural & Religious Image: PS-5 Cremation & Burial Grounds Image: PS-6 Defence/Army Area
	UTILITIES & SERVICES WTP Water Supply System STP Sewage Treatment Plant SWS Solid Waste Landfill Site ESS Electric Sub Station High Tension Line OCF Other Utilities & Services
	P-1 Playground, Sport Complex P-2 Parks & Gardens P-3 Special Recreational Zones P-4 Multipurpose Open Space P-5 Reserved Green/Green Belt





AGRICULTURAL

Agriculture

NATURAL FEATURES



Reserved Forest Water Bodies

OTHERS Recognised Slums



HE HE Planning Boundary



+= += Municipal Boundary Greater Ranchi Boundary Contour Milestones



Source: Draft Master Plan of Ranchi - 2037; Slum data collected from RMC, 2016; IIHS Analysis 2016-17.

Box 4: Draft Proposed Land Use vs. Notified Proposed Land Use, 2037

The draft Master Plan of Ranchi was put forward for public feedback in 2013–14; the final Plan was notified on 30 November 2015. There are significant differences between the two plans. To highlight a few, a large proportion of the agricultural zone has been made residential; the proportion of composite use has increased significantly; an affordable housing zone has been introduced; and the residential land use zones are no longer differentiated in terms of densities at the master plan level.

c. Notified Proposed Land Use, 2037

Similar to Existing Land Use (2012) and Draft Proposed Land Use (2037), analysis of Notified Proposed Land Use (2037) shows that majority of the 'slums' (60 per cent) fall entirely in the residential category, including affordable housing and village settlement.

A significant proportion (20 per cent) now falls under composite use, either fully or partially, along with residential use, which means the possibility of work in these 'slums' is enhanced. However, this could also lead to an increase in land value and the pressure that entails on slum-dwellers.

About 11 per cent of the slums are partially on land earmarked for uses other than residential/composite use, and almost 9 per cent of slums are entirely on land earmarked for non-residential uses.

Table 7: Overlay Analysis of Notified Proposed Land Use and Recognised Slums				
S. No.	. Notified Proposed Land Use No. of Slums		Percentage	
1.	Residential	149	58.7	
2.	Affordable Housing	1	0.4	
3.	Village Settlement	2	0.8	
4.	Partly Residential, Village Settlement	1	0.4	
5.	Composite Use	11	4.3	
6.	Partly Residential, Composite Use	40	15.7	
7.	Partly Village, Residential, Composite Use	1	0.4	
8.	Partly Residential, Other Use(s)	23	9.1	
9.	Partly Composite Use, Other Use(s)	1	0.4	
10.	Partly Residential, Composite Use, Other Use(s)	3	1.2	
11.	Greater Ranchi	8	3.1	
12.	Transportation	5	2.0	
13.	Industrial and Manufacturing	2	0.8	
14.	Water Bodies	3	1.2	
15.	Recreational	1	0.4	
16.	Public Semi-Public	1	0.4	
17.	Mix of Two or More Non-Residential Uses	2	0.8	

Table 7: Overlay Analysis of Notified Proposed Land Use and Recognised Slums			
S. No.	Notified Proposed Land Use	No. of Slums	Percentage
Grand T	otal	254	100.0
Source: IIHS Analysis, 2016–17.			

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Map 6: Notified Proposed Land Use of Ranchi - 2037 with Recognised Slums

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		т
	Residential	ċ
	Affordable Housing	
	Village Settlement	
COMMER	CIAL	
C1	Retail Shopping Zone	
XXX	Wholesale Trade	
СС	City Commercial Centre	
COMPOS	ITE USE	_
/cu-/	Composite Use I	_
CN-II	Composite Use II	
INDUSTRI	AL & MANUFACTURING	Ļ
M-1	Extensive & Heavy Industry	L
M-2	Service & Light Industry	
IT	IT Park	
DUDUCO		
POBLIC &	SEMI PUBLIC Education & Research	E
PS-2	Medical & Health	E
PS-3	Govt./Semi Govt.	
PS-4	Social, Cultural & Religious	
P3-4	Cremation & Burial	
PS-5	Grounds	A
}\$ \$	Defence/Army Area	Ê
CFC	City Facility Centre	
OCF	Other Community Facility	N
UTILITIES	& SERVICES	Ē
WTP	Water Supply System	
STP	Sewage Treatment Plant	
SWS	Solid Waste Landfill Site	2
ESS/ GSS	Electric Sub Station/ Grid Sub Station	C
	High Tension Line	
RECREATI	ONAL	[
P-1	Playground, Sport Complex	
P-2	Parks & Gardens	L
P-3	Special Recreational Zones	F
P-4	Multipurpose Open Space	
P-5	Reserved Green/Green Belt	
	Open Spaces as per Ranchi Master Plan-1983	
N		

TRANSPORTATION & COMMUNICATION

T-1	Road (ROW=60M)
	Kudu (KUW-601VI)
T-2	Road (ROW=45M)
T-2A	Road (ROW=36M)
T-3	Road (ROW=30M)
T-4	Road (ROW=24M)
T-5	Road (ROW=21M)
T-6	Road (ROW=18M)
T-7	Road (ROW=9-15M)
	Other Road
T-11	Bus Terminal/ Depot
T-12	Truck Terminal
T-13	Railway Station
	Railway Line
- • -	LRTS/MRTS Line I
- • -	LRTS/MRTS Line II
- • -	LRTS/MRTS Line III
T-14	Airport
$\backslash /$	Airport Funnel Zone
\/ T-16	Airport Funnel Zone Tele Communication

AGRICULTURAL Agriculture

NATURAL FEATURES



Plantation/Forest Hillocks Water Bodies Contour



Recognised Slums HEHE Planning Boundary 🕶 🕶 Municipal Boundary Village Boundary Greater Ranchi Boundary Milestones



Source: Master Plan of Ranchi - 2037; Slum data collected from RMC, 2016; IIHS Analysis 2016-17.

6.3.2 Land Use Zoning and Tenurial Rights

Table 8 presents the cross-tabulation between proposed land use for the sample settlements and their tenurial rights. It is seen that a relatively high proportion of settlements that possess an RoR have proposed land use as residential/composite use (83 per cent) compared to settlements with no tenurial rights, where 58 per cent settlements are marked as residential/composite use zones (one is under the affordable housing zone). For the 'slums' (especially without tenure), which are on land earmarked for residential/composite use, this means that the extra step of conversion of land use is not required to bring them under the legal framework.

Table 8: Proposed Land Use vs. Tenurial Rights					
S. No.	Notified Proposed Land Use	No	Possess Some	Unclear	Notified PLU
		Tenurial	Form of Record	Tenure	Total
		Rights	of Rights		
1.	Residential	9	27	2	38
2.	Affordable Housing	1			1
3.	Composite Use		1		1
4.	Partly Residential, Composite Use	1	5	1	7
5.	Partly Residential, Other Use(s)	3	4	1	8
6.	Partly Residential, Composite	2			2
	Use, Other Use(s)				
7.	Mix of Two or More Non-	1			1
	Residential Uses				
8.	Transportation	1	3		4
9.	Water Bodies	1			1
Typology Total		19	40	4	63
Source: IIHS Analysis, 2016–17.					

6.3.3 Incidence of Built-scape in Agricultural Zone⁴

Map 7 presents an overlay analysis of Google Earth on the draft proposed land use. An attempt was made to highlight built areas (indicated in red) on the agricultural zone using Google Earth imagery. A number of built-up areas can be seen in the agricultural zone; most of these areas are in close proximity to the constructed section of the ring road. This constitutes a violation of not only the master plan but also the Tenancy Act since most of the land originally belonged to the STs and the transfer of land is not permitted.

⁴ This analysis has not been verified on ground and needs to be followed up in future. This will enable identification of areas in violation of the Master Plan that are not necessarily 'slums'.

However, when the same built-up zones are overlaid on the notified proposed land use map, a different picture emerges (Map 8). As highlighted in Box 4, a large proportion of the agricultural zone in Draft Proposed Land Use is finally notified as residential or under other non-agricultural use zones. This implies that a lot of construction taking place around the ring road would no longer be in 'violation' of the Plan. Map 7: Incidence of Building Activities in Proposed Agricultural Zone in Draft Ranchi Master Plan



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Source: Draft Master Plan of Ranchi - 2037; Google Earth; IIHS Analysis 2016-17.
Map 8: Incidence of Building Activities in Proposed Agricultural Zone in Notified Ranchi Master Plan - 2037



RESIDEN	TIAL Residential
	Affordable Housing
	Village Settlement
COMMER	CIAL
C1	Retail Shopping Zone
XXX	Wholesale Trade
СС	City Commercial Centre
COMPOS	ITE USE
/cu-/	Composite Use I
C⊍-II	Composite Use II
INDUSTR	IAL & MANUFACTURING
XM-X()	Extensive & Heavy Industry
M-2	Service & Light Industry
IT	IT Park
PUBLIC 8	SEMI PUBLIC
PS-1	Education & Research
PS-2	Medical & Health
PS-3	Govt./Semi Govt.
PS-4	Social, Cultural & Religious
PS-5	Cremation & Burial Grounds
P\$-6	Defence/Army Area
CFC	City Facility Centre
OCF	Other Community Facility
UTILITIES	& SERVICES
WTP	Water Supply System
STP	Sewage Treatment Plant
SWS	Solid Waste Landfill Site
ESS/ GSS	Electric Sub Station/ Grid Sub Station
	High Tension Line
RECREAT	IONAL
P-1	Playground, Sport Complex
P-2	Parks & Gardens
P-3	Special Recreational Zones
P-4	Multipurpose Open Space
P-5	Reserved Green/Green Belt
	Open Spaces as per Ranchi Master Plan-1983
N	0 2

ANSPORTATION &

	IICATION
T-0	Road (ROW=91M)
T-1	Road (ROW=60M)
T-2	Road (ROW=45M)
T-2A	Road (ROW=36M)
T-3	Road (ROW=30M)
T-4	Road (ROW=24M)
T-5	Road (ROW=21M)
T-6	Road (ROW=18M)
T-7	Road (ROW=9-15M)
	Other Road
T-11	Bus Terminal/ Depot
T-12	Truck Terminal
T-13	Railway Station
•••••	Railway Line
	LRTS/MRTS Line I
• • -	LRTS/MRTS Line II
• • -	LRTS/MRTS Line III
T-14	Airport
$\backslash /$	Airport Funnel Zone
T-16	Tele Communication

RICULTURAL Agriculture



TURAL FEATURES Plantation/Forest Hillocks Water Bodies Contour





Built-up/Construction Zones in Agricultural Land

Built-up/ Construction Zones in Agricultural Land in Draft Master Plan



Source: Master Plan of Ranchi - 2037; Google Earth IIHS Analysis 2016-17.

6.3.4 Master Plan and Housing for the Urban Poor

According to the Ranchi Master Plan estimates for 2011–12, almost 51 per cent of the households in Ranchi belong to the Lower Income Group (LIG) and Economically Weaker Section (EWS) categories. The Plan also estimates the number of slums in Ranchi to be 95. The total housing deficit was estimated to be 88,434 units in 2012, while the figure for 2037 is projected at 508,410 units. EWS and LIG housing demand is proposed to be met through site and services scheme, with finances from the various centrally sponsored schemes.

Regarding slums, the Ranchi Master Plan proposes the following:

- 1. Upgradation of existing slums on government land that is not needed for the development of any infrastructure or other urban activities;
- 2. Resettlement of other slum pockets with due consideration of distance from the workplaces of the inhabitants; and
- 3. Financial assistance to all beneficiaries under the housing/slum upgradation schemes to improve the structural conditions of their houses.

Additionally, all new development schemes shall reserve 1 per cent land for informal sector/vendor markets, part of which shall be developed for a night shelter. The final notified Master Plan for Ranchi has also introduced a 'Affordable Housing Zone' in Ranchi, essentially located in the HEC area. The document, however, makes no reference to the 'Affordable Housing Zone' and provides no further details.

Box 5: Affordable Housing in Jharkhand

The Department of Urban Development and Housing (UD&HD), Government of Jharkhand has also passed the Affordable Urban Housing Policy for the state of Jharkhand in 2016 (Resolution No.2135). The policy aims at creating an enabling environment for providing 'affordable housing for all in urban areas,' with special emphasis on EWS and LIG, and other vulnerable sections of the society. Public Private People Participation (PPPP) is advocated for addressing the shortage of adequate and affordable housing.

The policy puts forward a range of supply side, demand side, service provisioning, livelihood, and land bank strategies to fulfil its aims and objectives. For example, some of the supply side strategies that the policy advocates include mandatory reservations in both public and private housing development projects, and the constitution of a housing land bank under the control of UD&HD. The policy also suggests including mixed-use housing zones, in-situ development, public transport linkages, etc., as part of livelihood strategies.

A number of models have been proposed for the development of affordable housing, including mandatory development of EWS housing, development of affordable housing projects, in-situ slum development, relocation and redevelopment, beneficiary-led individual house construction

or enhancement, credit-linked subsidy scheme, rental housing, housing projects by cooperative societies, and the development of EWS/LIG housing on private land.

Source: Affordable Urban Housing Policy, 2016 for the State of Jharkhand.

6.4 Evictions in Ranchi

Unlike big metropolitan cities in India like Delhi and Mumbai, there has not been a massive eviction drive in Ranchi. This could be partly because of the fact that a majority of the 'slums' in Ranchi are in fact not co-terminus with squatters/encroachments; they are settlements with tenurial rights but without services. However, the Jharkhand High Court judgement in 2010–11 asking for the 'removal of encroachments on public land' has instigated a number of evictions in the recent past.

Most of the evictions in Ranchi were not accompanied by resettlement—for example, Islam Nagar (polytechnic land), Naga Baba Khatal (disputed land), the settlement next to the Ranchi railway station (railway land), etc. The only instance of resettlement, to some extent, was the one originally located near the Khadgarha bus station site for its expansion. Residents were resettled in G+3 apartments near Pahadi Mandir, about 5 kilometres away. Another recent instance of eviction involves a site next to Banas Talaab, whose inhabitants are being offered resettlement, again near Pahadi Mandir. There is one more resettlement site in Ranchi, Chiranuji, which is far from the city, and has inhumane living conditions. This resettlement was undertaken under the Valmiki Ambedkar Aawas Yojana (VAMBAY).

A few sites of eviction and resettlement have been documented in Annex 1.

7. Conclusion

The detailed study of violations, disaggregated by tenurial rights and relationship to land use zones in the existing, proposed and notified Land Use Plans suggests several important insights that must be investigated further as an extension of this study or through more studies.

The characterisation and use of the term 'slum' flattens diverse land and property regimes and neighbourhoods. This is particularly true in the context of transitioning, mid-size urban centres like Ranchi where the expansion of municipal boundaries often leads to the inclusion of erstwhile villages in urban limits. Applying the definition of 'slum' to these villages in the same way as it is applied to bigger cities (to ensure recognition and therefore, protection) could possibly have the opposite effect. This would imply that 'slums' with tenure and those without tenure could potentially be approached in a similar fashion under a 'slum' improvement programme. It is important to keep the two layers of tenurial rights and physical environment separate. Even solely from the point of view of the physical environment, it may not be ideal to call erstwhile villages 'slums' as soon as they enter the urban limits, especially when the entire city lacks basic infrastructure and services.

In this study, we note that a significant part of our sample of 'slums' possesses some kind of RoR. These claims then counter a simplistic reduction of settlements with varied histories to the 'slum' which signals not just inadequacy of services but also violation of planning and law. Here, the category of 'slum' hides more than it reveals about the nature of supposed violation. In Ranchi, particularly because of the history of the CNT Act, there are a range of claims to property and land that have their own valid and legitimate histories. This is critical because it alters the kind of policy interventions that are possible in settlements that lack infrastructure and services but do possess strong claims of varying kinds to tenure. Many of these 'slums' were simply villages that entered urban limits with municipal expansion. Categorising them as 'slums' and not 'villages' has a land use implication as well because while villages are permissible in all land use zones, 'slums' (residential areas) are not. The fact that the Ranchi Master Plan makes no reference to the CNT Act makes it both dangerous and counterproductive because land is an essential resource for the implementation of any plan.

In this regard, the overlay analysis is important. Even if residents in these 'slums' have tenurial rights, if they are against land use zoning they would still be in violation of the Plan. Our analysis, however, shows that most slums are located on land meant for residential use, whether one goes by Existing Land Use or the Proposed Land Use for 2037. However, it is critical to note that the current provisions for 'informal residential' are not included in the proposed Master Plan 2037. What does the loss of this sub-

zoning category entail? On the one hand, it could be beneficial as it does not mark informal housing as separate from residential. On the other, the absence of such a distinction prevents land use zoning from being used to protect urban land and reserve it for what is currently informal housing. Such reservations could take the form of Affordable Housing Zones, which in the notified Ranchi Master Plan have been restricted to a small area in the original HEC township. There are also no Affordable Housing Zones in the expansion area, which is already under construction through a different form of 'violation'.

Ranchi clearly has what Bhan (2013) has called an 'upgrading dividend'. Even with the current definition, the area under 'slums' is only 4.3 per cent of the total municipal area, but it houses more than 20 per cent of the population. At this juncture, settlements that require infrastructure and services are both at good locations within the city (where employment and transportation are viable) and have strong tenurial rights that make upgradation politically feasible. This is precisely the kind of opportunity that a mid-size city, poised for a big urban transition, could seize. How should the Master Plan for 2037 use its zoning categories and land allocations to protect and upgrade these settlements rather than inadvertently deem them as violations? As new zones change around settlements—such as the case of Chadri (refer to Annex 1), the risk is that a planning process that is not sensitive to existing 'slums' will turn them into violations despite their long existence. Here, it will be planning that regulates and creates illegality rather than the other way around (Bhan, 2013).

For settlements that lack tenurial rights but are on government land, the recognition that they do not violate zoning categories also provides the possibility of arguing for insitu forms of development and expansion of tenure. After all, the nature of the 'violation' is simplified—residential land is being used for its intended purpose and is publicly owned. Here, upgradation and tenure expansion would not require a change of land use, and municipal acts, in particular, give the state authority to grant more expansive tenure. Such a move would be much more complicated and, indeed, very difficult politically, if most 'slums' had violated land use zones in addition to not having legal claims to the property they are built on. Again, a closer look at the nature of violations suggests certain possible, pragmatic and feasible political moves that are otherwise not evident.

There is a need to demand a second tier of Plans, be it zonal plans, town planning schemes or in some cases, even layout plans. There is a provision for the preparation of Town Planning Schemes under the Jharkhand Municipal Act. Second-tier plans not only make the master plan provisions clearer and more detailed, but are also easier to comprehend by the local community. This would also give an opportunity to people to participate in plan-making. A case in point is the Greater Ranchi area, which is currently

marked as one solid patch on the Ranchi Master Plan, but it is not clear what exactly will come over there, whether there is a residential component and the 'slums' in the area could co-exist or not.

Assessing the nature of violations, and deepening the size of our sample as work continues, will allow us to create a complete typology of Ranchi's recognised slums. Such data would be a powerful tool in engaging with the municipality and urban planning authorities while arguing in favour of nuanced, contextual and particular solutions to addressing the tenurial and infrastructural needs of 'slums'. Departing from the notion that 'slums' are simply 'violations' that can be dispensed with, such analysis instead argues that different grades and types of violations can represent opportunities for incremental solutions that are both effective and politically feasible.

8. Recommendations and Next Steps

The study, followed by workshops and discussions, brought out a number of questions, ideas and suggestions. These are summarised below:

- a. <u>Simplification of Ranchi Master Plan</u>: It was realised time and again that the master plan, in its current form, is not readable and comprehensible by the local community. There is a need to unpack the concepts, instruments and even colours used in the master plan, and present them in a way that is understandable by members of the local community, who would otherwise not know its implications.
- b. <u>Demand for second-tier planning</u>: The Jharkhand Municipal Act, 2011 empowers the municipality to prepare and implement detailed Town Planning Schemes subject to the master plan prepared by the Development Authorities. Since there was hardly any public participation at the master plan level in Ranchi, this opportunity for second-tier planning must be tapped into. A second-tier plan would not only add detail to the provisions of the master plan and make them easier to comprehend, but also provide an opportunity for public participation in the plan-making process.
- c. <u>Areas for further research</u>: The present study highlights the following issues to indicate future lines of inquiry:
 - i. Previous master plans of Ranchi need to be looked at to understand policy changes, and gaps in implementation. This could become a useful tool to demand things that were promised in a master plan but were never implemented.
 - ii. The CNT Act, its amendment and implications on master planning and land transfers need to be better understood. The current process of building in Ranchi needs to be explored, including the kind of tenure documents possessed by private builders.

- iii. On the lines of percentage of land occupied by 'slums', land under construction in agricultural zone needs to be estimated.
- A literature review is required to understand how different layers of a settlement (use, land ownership, tenure, typology, age, developer, etc.) can be integrated in the master plan. Also, how the definition/declaration of 'slums' can be challenged and made more context specific.

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Chadri		Location Map
Ward No.:	No. of Households:	
22	175	, A-X
	of the city, near Albert Ekka community in the settlement Scheduled Tribes, and most of	
residents, the land used to b donated it to the current sett around 100 years ago. Howe	ver, it was said that the land with the government. People here	* }
<i>kutcha</i> houses as well. The se	inantly semi- <i>pucca</i> , with a few attlement has community taps for ewerage is absent.	
kutcha houses as well. The se water supply but drainage/se	ettlement has community taps for ewerage is absent.	Google Earth Imagery 2016
<i>kutcha</i> houses as well. The se	ttlement has community taps for	Image: Constraint of the second se
kutcha houses as well. The se water supply but drainage/se	ettlement has community taps for ewerage is absent.	Final State Final State </td
kutcha houses as well. The se water supply but drainage/se	ettlement has community taps for ewerage is absent.	

Existing and proposed land use maps: Ranchi Master Plan 2037 Photographs: IIHS primary survey 2016

Chuna Bhatta			Location Map
Ward No.:		No. of Households:	
)9		63	, And
Chuna Bhatta is locat	ed on Haz	zaribagh road. The area doesn't	
ook like a slum but is	still cate	gorised as one by the RMC. It	
used to be a village, s	ettled aro	ound 60 years ago. There is a	A start and a start and a start
oolarity in terms of h	ousing qu	ality. Plots with greater	
proximity to Hazariba	agh Road I	have <i>pucca</i> houses and the	
ones away from the r	oad have	<i>kutcha</i> houses. The primary	
reason stated for the	transform	nation of the village was the)
selling of road-side pl	lots by ori	ginal residents, and building of	
<i>bucca</i> houses by the s	successive	e owners.	
While all the houses a	are built o	n tribal land, the inhabitants	
pelong to tribal as we	ell as non-t	tribal communities. Land is	
ransferred to non-tri	ibal peopl	e through a broker.	
	a state		
	Contraction of the	135 10 10 10	
	Cologle or th	the second s	Coole and
Google Earth Imagery	/ 2004	Google Earth Imagery 2010	Google Earth Imagery 2016
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3 432	100		T2A
	-1C-		
		Draft Proposed Land Use	Notified Proposed Land Use
Existing Land Use 201	12:	•	
Existing Land Use 20 ⁴ Primary Residential	12:	2037: Low Density Residential	2037: Partly Residential, Composite Use I

Photographs: IIHS primary survey 2016

Malhar Kocha Ward No.: No. of Households: 42

11

The residents, belonging to the Malhar tribe, were originally nomads. A few generations ago, they decided to settle in the nearby village of Pakal Kudwa. At that time, they were allowed to do so upon payment of rent. After years of staying there, they decided to buy land and settle in the village permanently. However, later they realised that the landowner had sold the same piece of land to two parties. They then moved to and started living on the government land, where they have continued to stay till date, still without basic services.

In the last 5–10 years, construction in the surrounding areas has increased. The *basti* was involved in a court case in the Ranchi Civil Court and then the Jharkhand High Court. On one occasion, the 'Red Flag' police was brought to evict them. The residents requested the Mayor to ask the Municipal Corporation to shift them to a nearby piece of government land which was earlier used for rock mining.





Existing Land Use 2012: Partly Primary Residential, Water **Bodies**

Draft Proposed Land Use 2037: Partly Low Density Residential, Water Bodies, Composite Use I

Notified Proposed Land Use 2037: Partly Low Density Residential, Water Bodies, Composite Use I

Sources:

Name of slums and boundaries: Ranchi Municipal Corporation Data, 2013 Existing and proposed land use maps: Ranchi Master Plan 2037 Photographs: IIHS primary survey 2016

Birsa Bus Stand		Location Map
Ward No.: 13	No. of Households: 88	, AAX
Ranchi Bus Station in Khadga		
which have applied for house	t on the site, the inhabitants of es under Basic Services for the ing has been done so far in this o have been settled there for	
Google Earth Imagery 2004	Google Earth Imagery 2010	Google Earth Imagery 2016
Existing Land Use 2012: Primary Residential	Draft Proposed Land Use 2037: Very High Density Residential	Notified Proposed Land Use 2037: Residential

Photographs: IIHS primary survey 2016

Banhas Talaab Chutia		Location Map
Ward No.:	No. of Households:	
14	36	, And the second
A row of 60–70 houses line the inhabitants claim to have been 60–70 years. They said that the fisheries department. The resid government scheme but they w they felt their livelihood and acc affected as resettlement sites a Some said that they were not u their large family size, some me outside in the open and that wo Others expressed reservations	pond in Bahu Bazar. The residing on this piece of land for land used to belong to the lents were offered flats under a vere not ready for the shift since cess to facilities would be re usually far from the city. sed to the flat system and given embers were used to sleeping buldn't be possible in a flat.	
resettlement in order to get a h However, as a basti they did no in-situ rehabilitation.	•	
Google Earth Imagery 2004	Google Earth Imagery 2010	Google Earth Imagery 2016
	Same (
Existing Land Use 2012: Partly	Draft Proposed Land Use	Notified Proposed Land Use
Water Bodies, Informal	2037: Partly Water Bodies,	2037: Partly Water Bodies,
Residential	Green Belt	Green Belt

Sources: Name of Slums and boundaries: Ranchi Municipal Corporation Data, 2013 Existing and proposed land use maps: Ranchi Master Plan 2037 Photographs: IIHS primary survey 2016

Location Map Purani Ranchi Ward No.: No. of Households: 24 420 The area had signboards that mentioned which survey number fell under which *pahan*, etc. We found one of the *pahans* and spoke to him. He mentioned that the records were still in the name of his grandfather, who used to be the *pahan* in his time. He said that he had no right to sell the land and that in this area the laws are strict. He also mentioned that the area is one of the oldest in Ranchi city. Google Earth Imagery 2004 Google Earth Imagery 2010 Google Earth Imagery 2016 Existing Land Use 2012: Partly Draft Proposed Land Use Notified Proposed Land Use 2037: Partly Residential, Informal Residential, Primary 2037: Very High Density Residential Residential Composite Use I Sources: Name of Slums and boundaries: Ranchi Municipal Corporation Data, 2013

Existing and proposed land use maps: Ranchi Master Plan 2037 Photographs: IIHS primary survey 2016

Bangali Mohalla		Location Map
Ward No.:	No. of Households:	
36	196	, And
Bengali families that settled th the houses in the colony belon they have <i>raiyat</i> rights to the la and semi- <i>pucca</i> (tile-roofed), as	nd. These houses seemed old	
they had applied to various go times (including the Indira Awa improvement in the housing. T everyone used.	vernment schemes multiple is Yojana) but there was no the basti had one toilet which ents of the other houses, which	
hostile and did not give clear a	nswers when asked about land hat their fathers might know more	
		Cogle
Google Earth Imagery 2004	Google Earth Imagery 2010	Google Earth Imagery 2016
R.		- Contraction
		Notified Dreposed Land Lise
Existing Land Use 2012:	Draft Proposed Land Use	Notified Proposed Land Use

Photographs: IIHS primary survey 2016

Mosi Badi

Ward No.:	No. of Households:
42	1240

This *basti* is located on land which belongs to the HEC, having settled right after its establishment, around 1957. The residents comprise mostly of those who migrated to the city as labourers for the construction of the industrial area or for contract work at the industry. Several of the residents also belong to villages that existed before the acquisition of land for the HEC, having returned to their original village land after seeing that it was lying vacant and no alternative development was taking place on it.

In 2005, there was news of evicting the *basti* and in this context, the 'Basti Bachao Andolan' was initiated and a committee formed to pursue the matter. The evictions did not occur then and the inhabitants were told that future master plans of the HEC would recognise those bastis. There has been no progress on that front ever since.







Google Earth Imagery 2004



Existing Land Use 2012: Partly Informal Residential, Greater Ranchi

Google Earth Imagery 2009



Draft Proposed Land Use 2037: Partly Low Density Residential, Greater Ranchi, Recreational



Google Earth Imagery 2016



Notified Proposed Land Use 2037: Partly Residential, Greater Ranchi, Recreational

Sources: Name of Slums and boundaries: Ranchi Municipal Corporation Data, 2013 Existing and proposed land use maps: Ranchi Master Plan 2037 Photographs: IIHS primary survey 2016



Sources: Name of Slums and boundaries: Ranchi Municipal Corporation Data, 2013 Existing and proposed land use maps: Ranchi Master Plan 2037 Photographs: IIHS primary survey 2016

Anantpur (Opp. Mandir)		Location Map
Ward No.: 48	No. of Households: 102	
This cluster of houses, on what I has been in existence since the land purchased by the ancestors However, no change was made thus the present residents do no in their own or their ancestors' r record of the payment made for original owner from whom the la the descendants of the original o land. Thus, a case is ongoing bet and the descendants of the orig	1950s. It was a piece of tribal s of the current residents. In the land revenue records and ot have any land revenue record names. However, they do have a the purchase of the site. The and was bought is no more and owner claim ownership to the sween the present residents	
Google Earth Imagery 2004	Google Earth Imagery 2009	Google Earth Imagery 2016
Existing Land Use 2012: Partly Informal Residential, Primary Residential	Draft Proposed Land Use 2037: Low density residential	Notified Proposed Land Use 2037: Residential
Sources: Name of Slums and boundarie Existing and proposed land use maps: R Photographs: IIHS primary survey 2016	s: Ranchi Municipal Corporation Data, 20 anchi Master Plan 2037	13

Satranji		Location Map
Ward No.:	No. of Households:	
55	392	
The settlement is located close t Ranchi municipal boundary. Dis- residents (one of whom was a sl settlement was earlier under the included in the corporation area It was also the site of relocation displaced from land allotted to t to the residents, half the village and the other half was essential phrase 'displaced <i>zameen</i> ' was u situation. The women were not	o the southern edge of the cussions with four-five women nopkeeper) revealed that this e Panchayat, and it was about six to seven years ago. for households that were he HEC in the 1950s. According consisted of native villagers ly displaced population. The sed to describe the land coo certain about the kind of	
There are some government ins	talled hand pumps in the	All Planter Age of the
There are some government ins	talled hand pumps in the	
There are some government ins settlement; very few households	talled hand pumps in the	Google Earth Imagery 2016
There are some government ins settlement; very few households	talled hand pumps in the shave toilets.	Google Earth Imagery 2016
There are some government ins settlement; very few households	talled hand pumps in the shave toilets.	cui oce Tupud
There are some government ins settlement; very few households	talled hand pumps in the shave toilets.	267 CU1. OCT Tupud 18.KM 18.KM CU1

Photographs: IIHS primary survey 2016

Annex 2: Land Use Permissibility in Different Use Zones

S.	1			Use	Zon	es in	whic	ch Pe	rmitte	d	
No.	Land Uses ¹	R	C	I	Р	Т	G	E	CU1	CU2	Α
1	Airport, Helipad, Flying Club										
2	Art Gallery, Museum, Exhibition Centre										
3	Auto Supply Store and Showroom for Motor Vehicle and Machinery										
4	Automobile Service and Repairing Station										
5	Bank and Safe Deposit Vault										
6	Bird Sanctuary										
7	Boarding or Lodging House										
8	Botanical Garden										
9	Bus Depot										
10	Bus Terminal										
11	Canteen and Eating House Serving the										
	Industries										
12	Cemetery, Crematorium, Burial Ground,										
	Electric Crematorium										
13	Children Traffic Park										
14	Cinema										
15	Clinic for Pets										
16	Clinical Laboratory										
17	Club House not Conducted Primarily as Business										
18	Club House or Other Recreational Activities										
	Conducted as Business										
19	Cold Storage and Ice Factory										
20	College										
21	Commercial/ Business Offices ²										
22	Community Hall and Welfare Centre										
23	Contractor Plant and Storage for Building Material										
24	Convenience Shopping Centre										
25	Convention Centre										
26	Cottage, Handloom and Household Industries ³										
27	Court										
28	Creche and Day Care Centre										
29	Cultural and Information Centre										
30	Customary Home Occupation										
31	Defence										
32	Dairy and Poultry Industry										
33	Dispensary										
34	Dry Cleaners-Cleaning and Dyeing										
35	Educational and Research Institution										
36	Electric Sub-Station										
37	Existing Village ⁴										
38	Fair Ground										
39	Film Studio ⁵										
40	Fish Curing ⁶										

S.	Land Uses ¹			Use	Zon	es in	whic	ch Pe	rmitte	d	
No.	Land Uses	R	С	1	Р	Т	G	E	CU1	CU2	A
41	Flatted Group Industry										
42	Flood Control Work										
43	Forensic Science Laboratory										
44	Forest										
45	Gas Godown										
46	General Industries ⁷										
47	Golf Course										
48	Green House										
49	Gymnasium										
50	Health Centre										
51	Hospital										-
52	Hostels for Educational Institution										<u> </u>
53	Hotel										
54	Indoor Games Hall										-
55	Jail										<u> </u>
56	Junk Yard ⁸										-
57	Local, Municipal, State or Central										
0.	Government Office										
58	Mechanical Workshop with Lathes, Drills,										
	Grinders, Spot Welding Set										
59	Medical, Eye and Dental Practitioners' Clinic										
60	Monument ⁹	-									
61	Motor Driving Training Centre										
62	Municipal Facility										
63	Music, Dance, Drama Training Centre										
64	Neighbourhood Shopping Centre-										
	convenience and local shopping with										
	vegetables, fruits, flowers, fish and meat										
65	Night Shelter										
66	Nursery, Horticulture and Orchards										
67	Nursing Home										
68	Oil Depot ¹⁰										
69	Open Air Theatre										
70	Orphanage										
71	Park, Play Ground, Playfield and	-									
	Recreational Area										
72	Personal Service Shop										
73	Petrol Filling Station										-
74	Photograph Studio and Laboratory										-
75	Piggery										
76	Planetarium										
77	Police Headquarter and Police Lines										
78	Police Station, Out Post and Fire Station										-
79	Post Office, Telephone Exchange,										-
	Telegraph Offices										
80	Professional Office of a Resident of the										-
	Premise										

No.RCIPTGECU1CU281Public Library82Radio Broadcasting Studio66	S.	Land Use -1	Use Zones in which Permitted									
82 Radio Broadcasting Studio Image: Studio Image: Studio 83 Railway Station Image: Studio Image: Studio 84 Reformatory (luvenile Home) Image: Studio Image: Studio 85 Refigious Place like Temple, Namghar, Sarna Sathal, Mosque, Church, etc. Image: Studio Image: Studio 86 Residential Development Centre Image: Studio Image: Studio Image: Studio 87 Research and Development Centre Image: Studio Image: Studio Image: Studio 88 Residential Diot - Plotted Housing Image: Studio Image: Studio Image: Studio 90 Residential Diot - Plotted Housing Image: Studio Image: Studio Image: Studio 91 Restaurant, Cafeteria, Milk Bar Image: Studio Image: Studio Image: Studio Image: Studio 92 Retail Shop12 Image: Studio Ima	No.	Land Uses ¹	R	С	1	Р	Т	G	E	CU1	CU2	А
83 Railway Station 84 Reformatory (Juvenile Home) 85 Refinery ¹¹ 86 Religious Place like Temple, Namghar, Sarna Sathal, Mosque, Church, etc. 87 Research and Development Centre 88 Residential Dwelling 90 Residential Divelling 91 Residential Divelling 92 Retail Shop ¹² 93 Satellite and Telecommunication Centre 94 Schools 95 Service Centre 96 Sewage Treatment Plant 97 Social, Cultural and Religious Institution 98 Specialised Park/ Ground 99 Sports Training Centre 99 Sports Training Centre 100 Stadium 101 Storage, Warehouses and Godown 102 Storage, Warehouses and Godown 103 Swimming Pool 104 Taxi Stand and Bus Stand, Cycle and Rickshaw Stand 105 Theatre, Assembly or Concert Hall, Dance and Music Hall and Such Other Place of Entertainment 106 Truck Terminal 107 Vending Booth 108 <td>81</td> <td>Public Library</td> <td></td>	81	Public Library										
84 Reformatory (juvenile Home) 1 1 1 1 85 Refinery ¹¹ 1 1<	82	Radio Broadcasting Studio										
85 Refinery ¹¹ 8 8 86 Religious Place like Temple, Namghar, Sarna Sathal, Mosque, Church, etc. 8 87 Research and Development Centre 8 88 Residence cum Work Plot 8 89 Residential Dwelling 9 90 Residential Dvelling 9 91 Restaurant, Cafeteria, Milk Bar 9 92 Retail Shop ¹² 9 93 Satellite and Telecommunication Centre 9 94 Schools 9 95 Service Centre 9 96 Sewage Treatment Plant 9 97 Social, Cultural and Religious Institution 9 98 Specialised Park/ Ground 9 99 Sports Training Centre 9 100 Storage of Petroleum and Other Inflammable Materials 9 101 Storage, Warehouses and Godown 9 102 Storage, Warehouses and Godown 9 103 Swimming Pool 9 104 Taxi Stand and Bus Stand, Cycle and Rickshaw Stand 9 105 Theatr	83	Railway Station										
86 Religious Place like Temple, Namghar, Sarna Sathal, Mosque, Church, etc. 9 87 Research and Development Centre 9 88 Residential Dwelling 9 90 Residential Dvelling 9 91 Restaurant, Cafeteria, Milk Bar 9 92 Retail Shop12 9 93 Satellite and Telecommunication Centre 9 94 Schools 9 95 Service Centre 9 96 Sewage Treatment Plant 9 97 Social, Cultural and Religious Institution 9 98 Specialised Park/ Ground 9 99 Sports Training Centre 9 100 Stadium 9 101 Storage of Petroleum and Other Inflammable Materials 9 102 Storage, Warehouses and Godown 9 103 Swimming Pool 9 104 Taxi Stand and Bus Stand, Cycle and Rickshaw Stand 9 105 Theatre, Assembly or Concert Hall, Dance and Music Hall and Such Other Place of Entertainment 9 105 Theatre, Assembly or Concert Hall, Dance and Music Hall and	84	Reformatory (Juvenile Home)										
Sama Sathal, Mosque, Church, etc.Sama Sathal, Mosque, Church, etc.87Research and Development Centre9988Residence cum Work Plot9989Residential Dwelling9990Residential Dwelling9991Restaurant, Cafeteria, Milk Bar9992Retail Shop ¹² 9993Satellite and Telecommunication Centre9994Schools9995Service Centre9996Sewage Treatment Plant9997Social, Cultural and Religious Institution9998Specialised Park/ Ground9999Sports Training Centre99100Stadium99101Storage of Petroleum and Other Inflammable Materials9102Storage, Warehouses and Godown9103Swimming Pool9104Taxi Stand and Bus Stand, Cycle and Rickshaw Stand9105Theatre, Assembly or Concert Hall, Dance and Music Hall and Such Other Place of Entertainment9106Truck Terminal99107Vending Booth9108Vocational Training/ Technical Training Institute9109Watchmen or Caretaker's Lodges9109Watchmen or Caretaker's Lodges9	85	Refinery ¹¹										
88 Residence cum Work Plot Image: Comparison of the second s	86											
89 Residential Dwelling Image: Constraint of the second seco	87	Research and Development Centre										
90Residential Plot - Plotted Housing91Restaurant, Cafeteria, Milk Bar92Retail Shop12 </td <td>88</td> <td>Residence cum Work Plot</td> <td></td>	88	Residence cum Work Plot										
91Restaurant, Cafeteria, Milk Bar92Retail Shop1293Satellite and Telecommunication Centre94Schools95Service Centre96Sewage Treatment Plant97Social, Cultural and Religious Institution98Specialised Park/ Ground99Sports Training Centre100Stadium101Storage of Petroleum and Other Inflammable Materials102Storage, Warehouses and Godown103Swimming Pool104Taxi Stand and Bus Stand, Cycle and Rickshaw Stand105Theatre, Assembly or Concert Hall, Dance and Music Hall and Such Other Place of Entertainment106Truck Terminal107Vending Booth108Vocational Training/ Technical Training Institute109Watchmen or Caretaker's Lodges	89	Residential Dwelling										
92Retail Shop12 <td< td=""><td>90</td><td>Residential Plot – Plotted Housing</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	90	Residential Plot – Plotted Housing										
93 Satellite and Telecommunication Centre Image: Construct Centre Image: Construct Centre 94 Schools Image: Construct Centre Image: Construct Centre Image: Construct Centre 95 Service Centre Image: Construct Centre Image: Construct Centre Image: Construct Centre 96 Sewage Treatment Plant Image: Construct Centre Image: Construct Centre Image: Construct Centre 97 Social, Cultural and Religious Institution Image: Construct Centre Image: Construct Centre Image: Construct Centre 98 Specialised Park/ Ground Image: Construct Centre Image: Construct Centre Image: Construct Centre 99 Sports Training Centre Image: Construct Centre Image: Construct Centre Image: Construct Centre Image: Construct Centre 100 Stadium Image: Construct Centre Image: Constrent Centre Image: Construct Centre	91	Restaurant, Cafeteria, Milk Bar										
94SchoolsImage: service CentreImage: service Centre </td <td>92</td> <td>Retail Shop¹²</td> <td></td>	92	Retail Shop ¹²										
95Service CentreImage: Control of the service o	93	Satellite and Telecommunication Centre										
96Sewage Treatment Plant111 <t< td=""><td>94</td><td>Schools</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	94	Schools										
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and Music Hall and Such Other Place of EntertainmentImage: Solution of Caretaker's LodgesImage: Solution of Caretaker's Lo	104											
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108 Vocational Training/ Technical Training 109 Watchmen or Caretaker's Lodges	106											
Institute Institute 109 Watchmen or Caretaker's Lodges	107	Vending Booth										
	108	U U										
110 Water Treatment Plant	109	Watchmen or Caretaker's Lodges										
	110	Water Treatment Plant										
111 Weekly Market/ Informal Sector Unit	111	Weekly Market/ Informal Sector Unit										
112 Wholesale Trade Image: Constraint of the second secon	112	Wholesale Trade										
113 Wireless Transmitting and Weather Station, Transmission Power	113	-										
114 Zoological Park	114	Zoological Park										

Index of Use Zones:

- R Residential
- C Commercial
- l Industrial
- P Public and Semi-Public
- T Transportation
- G Green Belt (Recreational and Open Space)
- E Eco-sensitive
- CU1 Composite Use I
- CU2 Composite Use II
- A Agricultural Use

Notes:

- 1. All existing non-nuisance, non-polluting uses to continue in the following use zones:
 - Residential
 - Commercial
 - Industrial
 - Public/ Semi-Public
 - Transportation and Communication
 - Composite Use I
 - Composite Use II

All existing non-nuisance, non-polluting uses may be allowed to continue/ discontinue after an application for special permission to the Authority in following use zones:

- Recreational
- Eco-sensitive
- Agricultural
- 2. To be permitted in commercial areas to be indicated in Industrial Use Zones in Local Area Plans/ Layout Plans
- 3. In Residential use zone, existing uses to continue and new ones to come on special permission from the Authority. Also refer Annexure 13.1 of the Master Plan.
- 4. No further expansion of residential area
- 5. In the New Development proposed Recreational Area
- 6. Only existing uses to continue
- 7. Only those industries as listed in Annexure 13.1 of the Master Plan
- 8. Permitted only in Heavy Industrial Zone
- 9. Existing locations to continue
- 10. Permitted only in Heavy Industrial Zone
- 11. Permitted only in Heavy Industrial Zone

- 12. In commercial centres
- 13. In industrial areas
- 14. Parks, parking, circulation and utilities can be located in any of the use zones. In recreation and eco-sensitive zone, these would be permissible with special permission from the Authority.





ΤM

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