

6.1 Background

The first step in preparation of development plan is the identification of the landuse characteristic and existing settlement structure of the development area. Detailed survey of the existing situation has been made. The existing landuse of the SDA area as per 2010 is discussed here before making the proposals for development plan.

In SDA, there are 95 villages and three census town namely, Sambalpur, Burla and Hiraikud. There is no question of controlling the development but the development area has to be developed from the tourist point of view considering the dam site and the natural features available in the region and conserving the heritage of Sambalpur. Sambalpur – Jharsuguda should be developed as a twin city also to be given due consideration. One of the major considerations in framing the proposals for SDA has been to utilize the existing natural features and the infrastructure facilities to the extent possible.

To realize the stated objectives a detailed methodology has been worked. For the purpose of preparation of development plan a detailed and extensive study has been done. An exhaustive review of literature on regional planning documented for various similar regions was also undertaken. The primary data has been collected from various discussions with persons involved in the development work followed by interactions with the local people and stakeholders. It was supplemented with reconnaissance survey and numerous visits to the site. However, the plan proposals substantially utilized secondary and recorded data collected from various sources and relied on the Census 1991, 2001 and available census 2011 data. The latest census data of 2011 is available till now only for the towns having population more than one lakh. Within SDA area, since only Sambalpur town has a population of more than one lakh, the latest population figure of 183383 as per census 2011 data of Sambalpur town has been considered for the future projection.

6.2 Existing Landuse

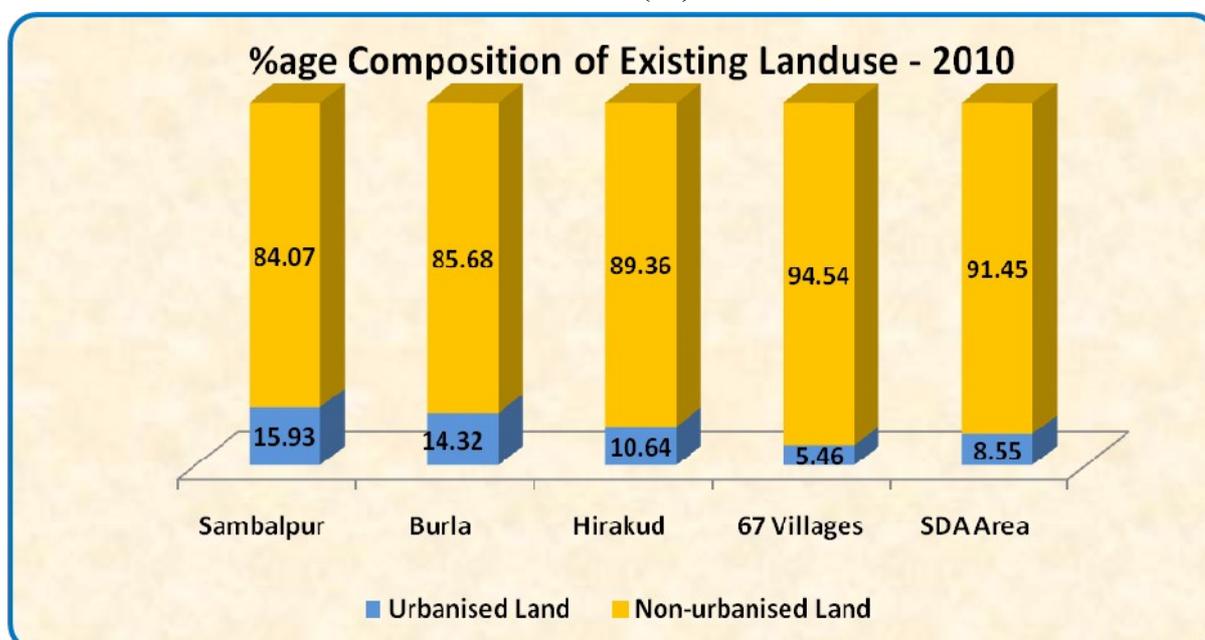
The broad existing landuse classification of the urbanized land of the SDA area as obtained from the interpretation of the Satellite imageries is shown in the **Table 6A** below. The non-urbanized land comprises of area under Agriculture use, brick kiln, mining, burial & crematorium ground, water body, forest and marshy land. The percentage composition of existing urbanized and non-urbanized land in the SDA area is depicted in **Chart 6(a1)** below. 67 villages though are rural in nature but certainly they have the impact of nearby urban areas of Sambalpur, Burla, Hiraikud and Jharsuguda. Since they have been included in the SDA area recently the landuse composition is considered to be urban in character. The village around the 67 villages continues their rural character.

Table 6A

Broad Existing Landuse Classification of the Urbanized Land of the SDA Area – 2010

Landuse	Area in Hectares				
	Sambalpur	Burla	Hirakud	67 Villages	SDA Area
Residential	774.07	344.68	189.09	598.47	1906.31
Commercial	56.75	0.5	3.17	6.38	66.8
Industrial	31.98	4.12	108.25	365.05	509.4
Public & semi-public	67.29	9.57	22.85	51.18	150.89
Utility & services	10.45	0	12.47	2.48	25.4
Recreational & Open Space	9.22	3	9.86	1.15	23.23
Transportation	515.38	156.62	122.96	703.02	1497.98
Total Urbanized Land	1465.14	518.49	468.65	1727.73	4180.01
Non-urbanized Land	7730.76	3103.13	3935.39	29925.23	44694.51
Total Area	9195.90	3621.62	4404.04	31652.96	48874.52

Chart 6(a1)



As per the above table and Chart obtained from the interpretation of the satellite imageries using advanced technology, the existing land use indicates that less than 10 percent (only 8.55%) of the total land in the SDA area is a developed land or is urbanized. Development area of Sambalpur is the most urbanized within the SDA being the only municipality town in SDA. About 16% of the land in Sambalpur is urbanized or is developed land. In the 67 villages which were added to SDA recently, only 5.46 percent of land can be classified as developed land.

Refer **Chart 6(a2)**, **Chart 6(a3)**, **Chart 6(a4)**, **Chart 6(a5)** and **Chart 6(a6)** for the broad existing landuse classification of the urbanized land of the development area of Sambalpur, Burla, Hirakud, 67 villages and SDA area respectively as is obtained from the interpretation of the Satellite imageries. Refer **Figures 6.2(a)**, **6.2(b)**, **6.2(c)**, **6.2(d)** and

6.2(e) for the existing landuse map of CDP Area, Sambalpur Development Area, Burla Development Area, Hirakud Development Area and 67 villages Development Area respectively.

Chart 6(a2)

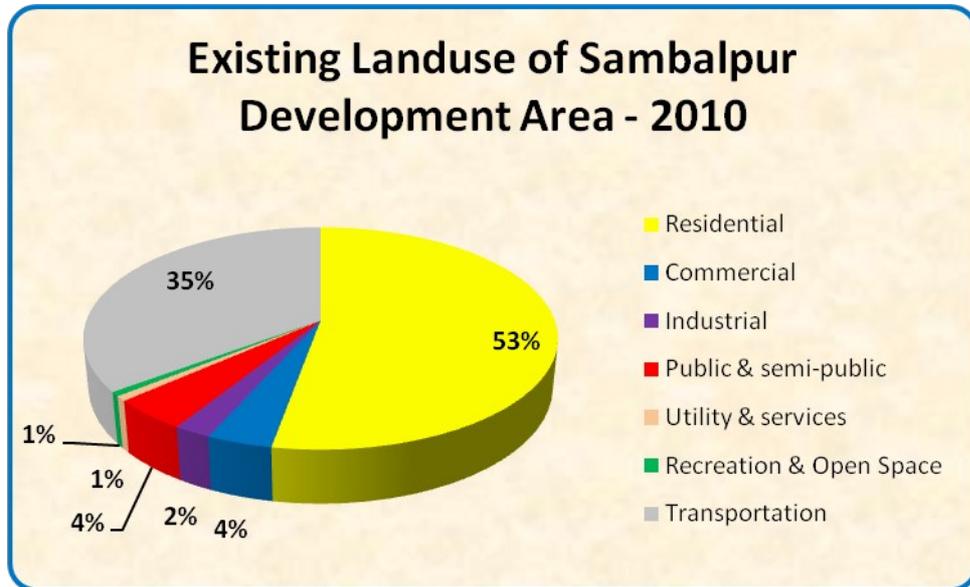


Chart 6(a3)

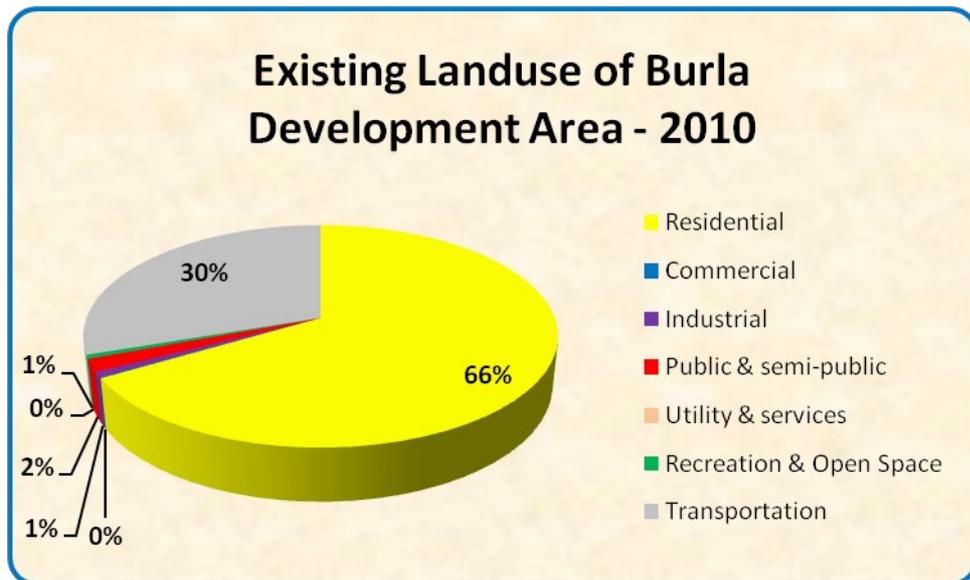


Chart 6(a4)

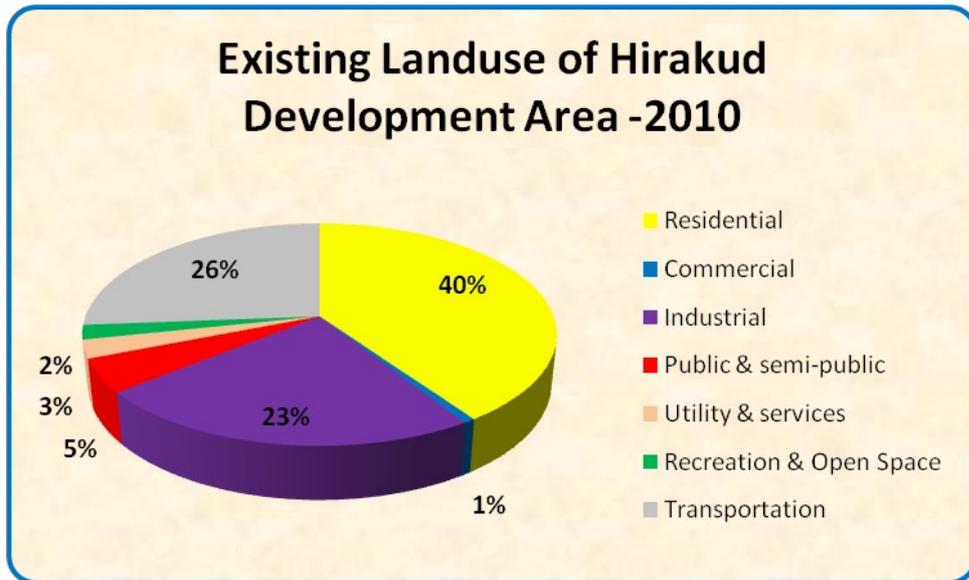


Chart 6(a5)

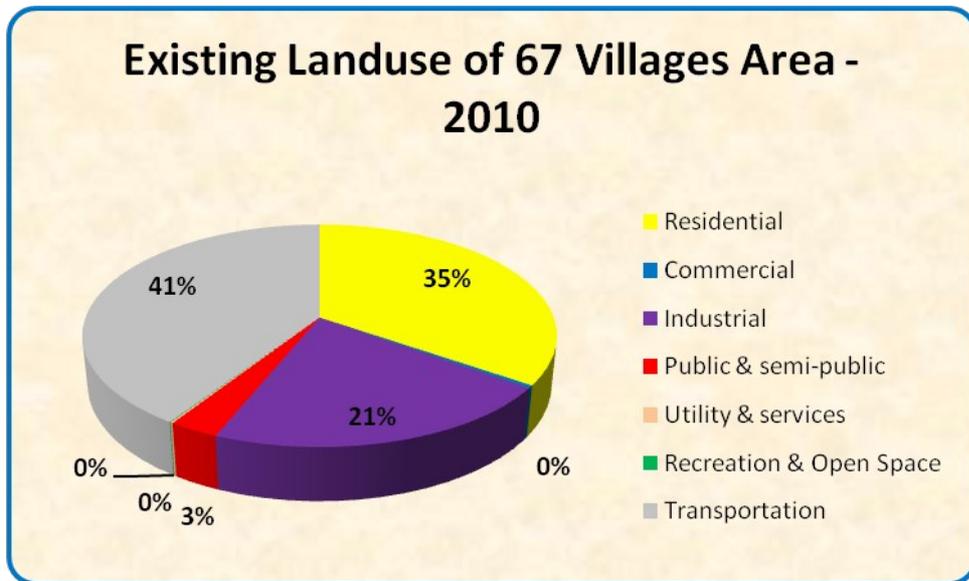
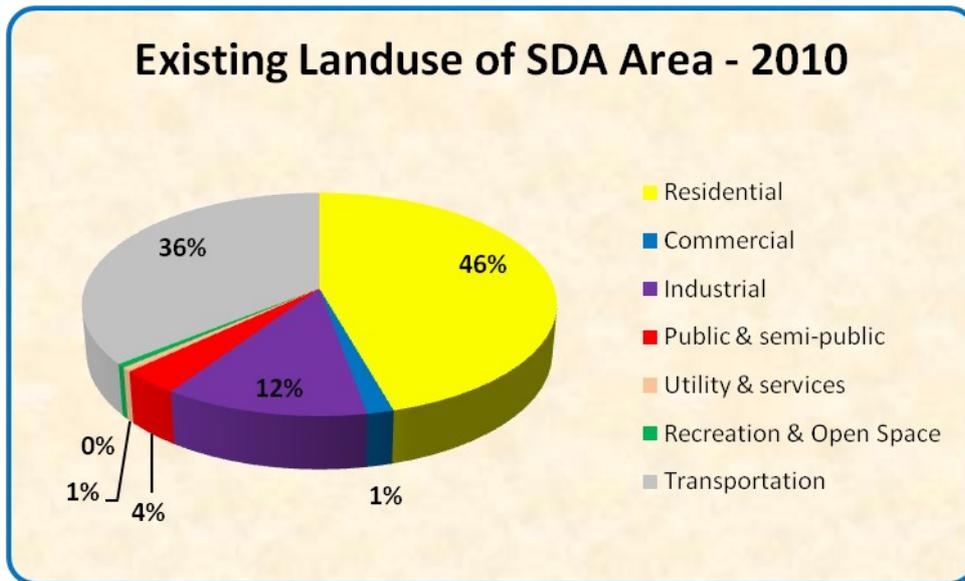


Chart 6(a6)



As per the above table and Charts the existing land use indicates that 46 percent of the developed land is used for the residential purposes in the areas of the SDA. Maximum percentage of landuse under residential area is in Burla where 66 percent of land is being presently used for residential purposes.

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Land use under transportation is also very high. In fact transportation is the second biggest land use in the SDA area. More than one third about 36 percent of the urbanized land in the SDA area is covered under transportation use zone as per the status in 2010. In the 67 villages, this land use for transportation and circulation is to the tune of 41 percent which is quite high compared to any norms and standards and is even more than the existing residential use in these villages. This is due to the presence of two national highways, one state highway and other major roads in these 67 villages. The existing communication facilities can be used for better planning of the SDA area.

Refer **Table 6B** for the list of existing transportation facilities in the SDA area.

Table 6B

List of Transportation Facilities in the SDA area - 2010

A	Bus Terminus	Ainthapali Bus stand near Golebazar Burla Bus stand Hirakud Bus stand
B	Railway stations	Sambalpur at Khetrajpur Sambalpur Road Sambalpur City Burla – Hirakud
C	Air port / Air strips	Bhubaneswar (325 kms) and Raipur (300 kms) Sangulpali Airstrip
D	Bridges/Fly-overs	Mahanadi Bridge near Burla Budharaja Flyover
E	Roads	1 Sambalpur to Anugul-cuttack- in the southeast by NH-42/55 Bhubaneswar 2 Sambalpur to Baragarh-Raipur in the southwest by NH-6/53 3 Sambalpur to Deogarh in the east by NH-6/53 4 Sambalpur to Jharsuguda in the north by SH-10 5 Sambalpur to Sonapur in the South by Major Road
F	Truck parking	Ainhiapali to Remed Chowk

About 12 percent of the urbanized land in the SDA area at present is under industrial land use. About one fourth (23 percent) of the developed land in the Hirakud development area is used for the industrial purpose. Industrial land use in the 67 villages is also on the higher side. More than 20 percent of urbanized land in 67 villages is under industrial zone. Overall industrial activity is high in the SDA area.

Commercial activities are not significant in the SDA area. Only one percent of the total urbanized land in the SDA area is under the commercial land use. Because of low commercial activities the employment opportunities in the area is low. This percentage of commercial land use has to be increased so as to generate the employment opportunities in the SDA area.

Percentage of Open space and recreation use in the urbanized land is almost nil in the SDA area. Planning intervention is required to address this issue. Highest percentage of area under recreation and open space is in the Hirakud development area because of the presence of Hirakud dam.

6.3 Proposed Landuse

Based on the development concepts discussed earlier, the proposed landuse of the SDA area has been framed for the target population of **5.75lakh by 2030 AD** spread over **48874.52 hectares** of area. Considering the target population of 5.75 lakhs, the gross population density of 12 persons per hectare will be there in SDA area by 2030 AD, while net density shall be 67 persons per hectare in 2030. The net residential density is proposed to be **142 persons per hectare**.

The proposed urbanisable area of SDA is broadly divided in following zones:

1 Residential Use Zone

2 Commercial Use Zone

- Retail Business Neighborhood Shopping Use Zone
- Wholesale Warehousing and Storage Use Zone

3 Industrial Use Zone

4 Public Semi-Public Use Zone

5 Utilities and Services Use Zone

6 Recreation (and Open Space) Use Zone

7 Transportation Use Zone

8 Special Area Use Zone

- Special Heritage Use
- Environmentally sensitive Use Zone

The non-urbanisable area of SDA includes the area as under:

1 Agriculture and Allied Use Zone

It includes the area under Agriculture use, brick kiln, mining, burial & crematorium ground, forest and marshy land.

2 Water Bodies Use Zone (outside urbanisable area)

The digital base map of study area is created using satellite imageries and superimposing with the revenue maps for Comprehensive development plan which is represented in the form of 18''X 18'' grid using GIS technology. Rectification and geo referencing of the satellite imagery was done using DGPS control survey. The revenue sheets are properly edge matched to form revenue villages and mosaics of villages are made to form the Development Plan Area. A grid base is generated for the CDP area to produce the hard copy maps in standard A1 size in 1: 2000 scale. The GIS database is developed in ArcGIS platform. The soft copy of the base map in the scale of 1 : 2000 prepared by interpreting

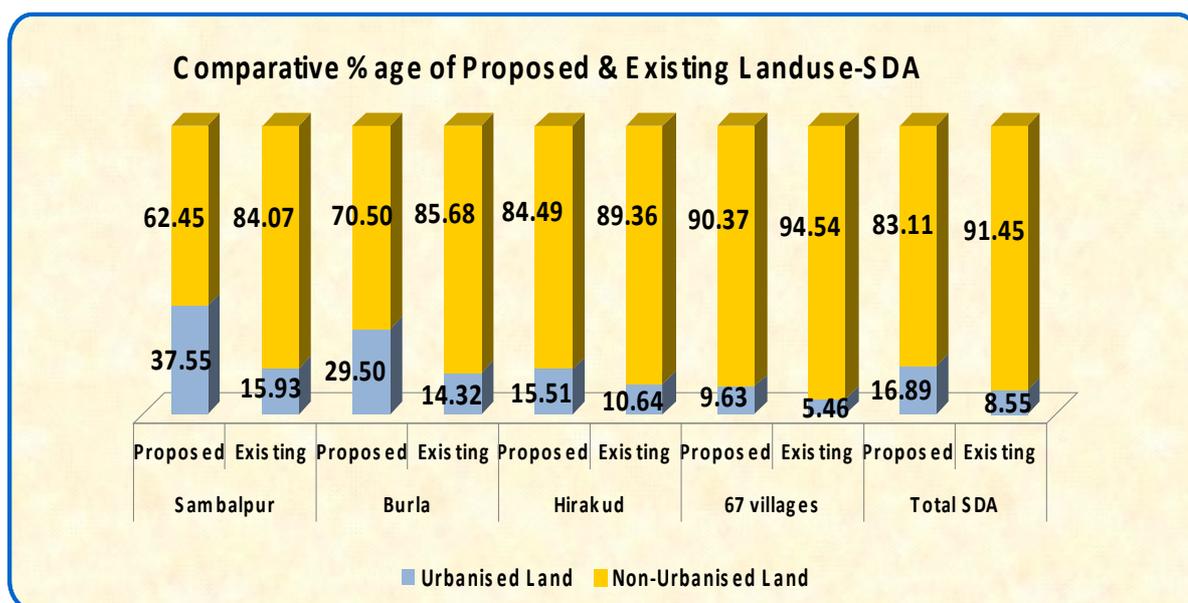
the satellite imageries. Comprehensive Development Plan proposals have been conceived for SDA after making detailed survey of the SDA area.

The extent of proposed urbanisable and non-urbanisable land in the development area of Sambalpur, Burla and Hirkud and in the recently added 67 villages is compared with the existing status and is shown in the **Table 6C** below and in the **Chart 6 (c)**.

Table 6C
Composition of Land (in %age) – Existing and Proposed

	Sambalpur		Burla		Hirkud		67 villages		Total SDA	
	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Urbanised Land	37.55	15.93	29.50	14.32	15.51	10.64	9.63	5.46	16.89	8.55
Non-Urbanised Land	62.45	84.07	70.50	85.68	84.49	89.36	90.37	94.54	83.11	91.45
Total Land (Hect)	9195.90		3621.62		4404.04		31652.96		48874.52	

Chart 6 (c)



It is proposed to increase the percentage of urbanisable land of the SDA from the existing 8.55 percent to 16.89 percent. Sambalpur being the only municipality in the SDA area, it is proposed to keep higher percentage of urbanisable land. 37.55 percent of total land of Sambalpur is proposed to be made urbanisable. Urbanisable area of the SDA is roughly doubled in the proposed CDP over a period of twenty years.

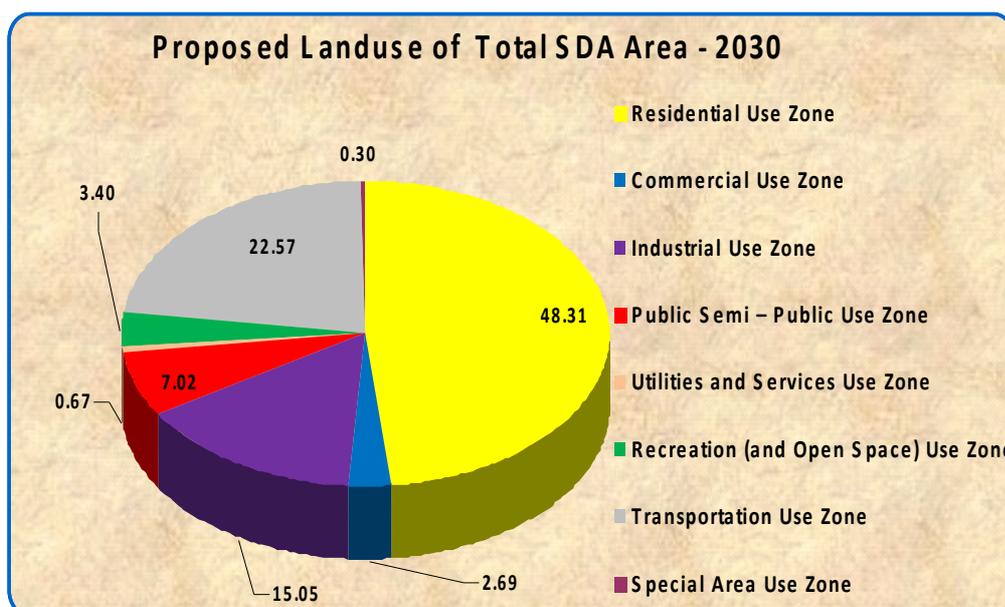
The area under the various land use proposed for the population of 5.75 lakh projected for 2030 in the 488.75 Km² of the total SDA area is tabulated in the **Table 6D** and is depicted in **Chart 6(d1)** below.

Table 6D

Proposed Landuse of SDA Area, 2030

Landuse	Existing – 2010		Proposed – 2030	
	Area in Hectares	%age of Urbanized Land	Area in Hectares	%age of Urbanized Land
1 Residential Use Zone	1906.31	45.61	3986.94	48.31
2 Commercial Use Zone	66.8	1.60	222.07	2.69
3 Industrial Use Zone	509.4	12.19	1241.73	15.05
4 Public Semi-Public Use Zone	150.89	3.61	579.66	7.02
5 Utilities & Services Use Zone	25.4	0.61	55.05	0.67
6 Recreational (and Open Space) Use Zone	23.23	0.56	280.53	3.40
7 Transportation Use Zone	1497.98	35.84	1862.53	22.57
8 Special Area Use Zone	---	---	24.40	0.30
Urbanized Land	4180.01	100	8252.91	100
9 Agriculture and Allied Use Zone	39345.41		35359.59	
10 Water Bodies Use Zone	5349.10		5262.02	
Non-Urbanized Land	44694.51		40621.61	
Total SDA Area	48874.52		48874.52	

Chart 6(d1)



(Figures are in %age)

Area under the various land uses in the proposals for 2030 has been increased considering the requirement of target population of 5.75 lakh and the planning proposals. Total urbanized land is proposed to be increased from 4180.01 hectares to 8252.91 hectares i.e. almost double than what is the existing. Area for commercial activities has been increased. Due consideration has been given to significantly increase the area under recreational and open space use zone. It is proposed to increase the area from mere 23.23 hectares at present to 280.53 hectares. Though the area under transportation zone has been increased to cater to the need of the projected population and the regional requirement, the percentage has come down to the standard level as the area under other landuse zones have been increased considering the requirement and the planning proposals and to make the Landuse as near to the norms and standard set by the UDPFI guidelines. Refer **Chart 6(d2)** for comparing the existing and proposed landuse for the CDP of SDA area in terms of Hectares while **Chart 6(d3)** shows the comparison in terms of percentage of different components of Landuse to the urbanisable area.

Chart 6(d2)

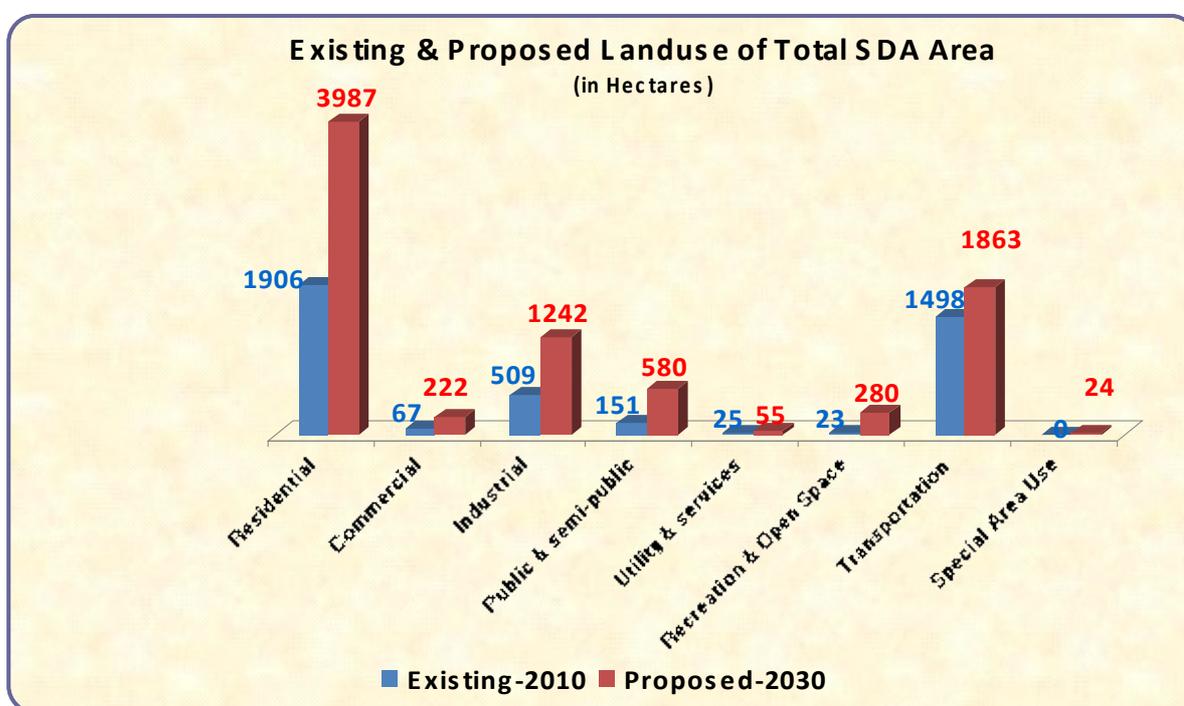
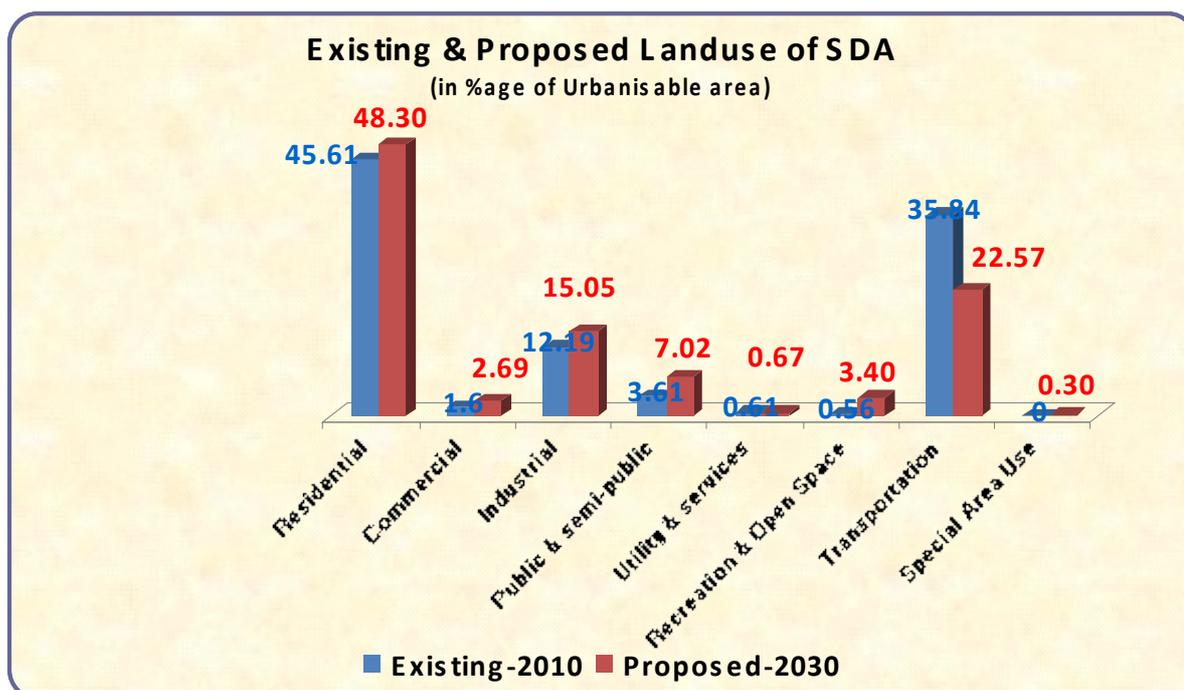


Chart 6(d3)



Refer **Figure 6.3(a)** for the proposed landuse and zoning plan of the whole of the SDA area for the target year of 2030. Various zones, area under public, semi-public uses, natural drainage channel and its realignment, area under various reservations for public purposes under section 9 and 10 of the ODA act, 1982, various road network, transportation facilities, area under agricultural and horticulture use, brick kiln, burial and crematorium ground, water bodies, special area use zone, central villages, community satellite town, industrial manufacturing / marketing node, socio-economic node, etc, are all shown in this figure. The Special Area Use Zone comprises of Special Heritage Use zone and Environmentally sensitive Use Zone. This zone is proposed in the Sambalpur municipality area only. In the proposed CDP, this zone includes area under rural / urban mouza settlements, old built up area, buildings of historical, architectural and archeological importance and area of scenic value including hills and reserve forests which are environmentally sensitive areas. These places have to be conserved and care should be taken not to disturb their basic fabric so that their originality can be preserved for the next generation. The special area zone admeasuring 24.40 hectares has been marked in the landuse plan of Sambalpur development area.

The proposed development activities will not only create economic base but will also create specific identity of the SDA.

The planning area of the SDA is divided into various Zones on the basis of homogeneity in the character of development and its location. Sambalpur development area is divided into 10 Zones, Burla into 3 Zones, Hirakud into 3 Zones and 67 villages in to 7 Zones. Thus the whole of SDA area is divided into 23 Zones. Refer **Figure 6.3(b)** for boundary of various Zones. The Zonal Plan for three Zones of Sambalpur, two Zones of Burla and one Zone of Hirakud is prepared containing detailed information regarding provision of

social infrastructure, parks and open spaces, vehicular parking, circulation system, etc. These Zonal plans shall act as a link between the CDP and the layout plan to create a sustainable environment for better quality of life. The Zonal plans are in the form of structural plans -Refer **Figure 6.3(b)**.

The proposals of the CDP in each of the planning component of the development area of Sambalpur, Burla and Hiraikud and the recently added 67 villages is discussed separately in details in the following paragraphs. Zonal Plans are also discussed at the relevant section.

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6.4 Proposals in Sambalpur Development Area

It is proposed to have 41 percent of total development area of Sambalpur admeasuring 9195.90 hectares as urbanisable land which will be developed as per the proposals of CDP and the development regulations. Rest 59 percent is non-urbanized land. Refer **Figure 6.4(a)** for proposed land use and zoning plan of Sambalpur development area.

a. Residential Use Zone

Existing residential activity is concentrated in the core area of the municipal town. Khetrajpur, Modipara, Gol bazaar, Baraipali, Danipali, Talbhatta, Sakhi Gopinath, Sunapali, Dhanupali, Dhankuda, Mathapali are some places where residential activities are concentrated. Few scattered residential activity can also be found in the adjoining rural settlements of the surrounding 21 villages. To cater to the projected population of 5.43 lakh in the SDA area, it is proposed to increase the residential zone in the Sambalpur town which is having the municipality status. It is proposed to bring all the land within the river on the south and NH-6/53 on north within the residential zone, except for some portion on the east and west side where other activities have been proposed. Portion of Aintahapli and Sarla within Railway line and NH -6 /53 is also proposed in the residential zone as activity is growing towards Jharsuguda.

In the earlier master plan, the portion of Durgapali between railway line and 24 m road was proposed for residential zone. But looking to the existing land use, to avoid isolated development it is proposed to put the residential zone only for the portion having the existing residential activity. Moreover, residential activity is not encouraged in this portion considering the vicinity of the railway bridge and proposed environmental complex.

b. Slums in Sambalpur municipality

As per the 2001 census report, the slum population in the Sambalpur municipality is 30,726 persons occupying different locations in the 28 wards of the municipality. The total population of the Sambalpur municipality as per the 2001 census was 153643. It means about 20% of the municipality population is living in the slums. The wardwise slum population in Sambalpur municipality as per 2001 census is shown in the **Table 6E** below.

Table 6E

Slum Population in Sambalpur Municipality – 2001

Ward No.	Slum Population	%age to Total Slum Population
Sambalpur (M) - Ward No. 1	691	2.25
Sambalpur (M) - Ward No. 2	576	1.87
Sambalpur (M) - Ward No. 3	2025	6.59
Sambalpur (M) - Ward No. 5	702	2.28
Sambalpur (M) - Ward No. 6	1117	3.64

Sambalpur (M) - Ward No. 7	582	1.89
Sambalpur (M) - Ward No. 8	580	1.89
Sambalpur (M) - Ward No. 9	1341	4.36
Sambalpur (M) - Ward No. 12	761	2.48
Sambalpur (M) - Ward No. 15	1159	3.77
Sambalpur (M) - Ward No. 16	1240	4.04
Sambalpur (M) - Ward No. 17	581	1.89
Sambalpur (M) - Ward No. 18	749	2.44
Sambalpur (M) - Ward No. 19	1726	5.62
Sambalpur (M) - Ward No. 20	1179	3.84
Sambalpur (M) - Ward No. 21	2156	7.02
Sambalpur (M) - Ward No. 22	617	2.01
Sambalpur (M) - Ward No. 23	676	2.20
Sambalpur (M) - Ward No. 24	3154	10.26
Sambalpur (M) - Ward No. 25	2202	7.17
Sambalpur (M) - Ward No. 26	2822	9.18
Sambalpur (M) - Ward No. 27	3030	9.86
Sambalpur (M) - Ward No. 28	1060	3.45
Sambalpur (M)	30726	100

Source: Census 2001

Highest number of slums is in Ward No. 24 where more than 10% of the total slum population is residing. Almost one-third of the slum population is living in three wards (no. 24, 26 and 27) of the Sambalpur municipality.

There are 13 slum pockets located very close along the Dhobijore Nala and Tangra Nala as shown in **Table 6F** below polluting the water flow. Refer **Figure 6.4(b)** for the location of these 13 slum pockets by the side of Dhobijor and Tangra nalas in Sambalpur municipality.

Table 6F
Slum Pockets by the side of Dhobijor and Tangra Nalas in Sambalpur, 2011

Sr. No	Name of Location	Area in Hectares (approximate)
1	Sambalpur	0.62
2	Sambalpur	0.87
3	Sambalpur	0.61
4	Sambalpur	0.51
5	Gole Bazar	1.24
6	Gole bazaar	0.73
7	Bara bazaar	1.56
8	Bareipali	0.71
9	Bareipali	0.71
10	Bareipali	1.74
11	Sambalpur	0.05
12	Sakshi Gopinath	1.08
13	Sakshi Gopinath	2.08
	Total	12.51

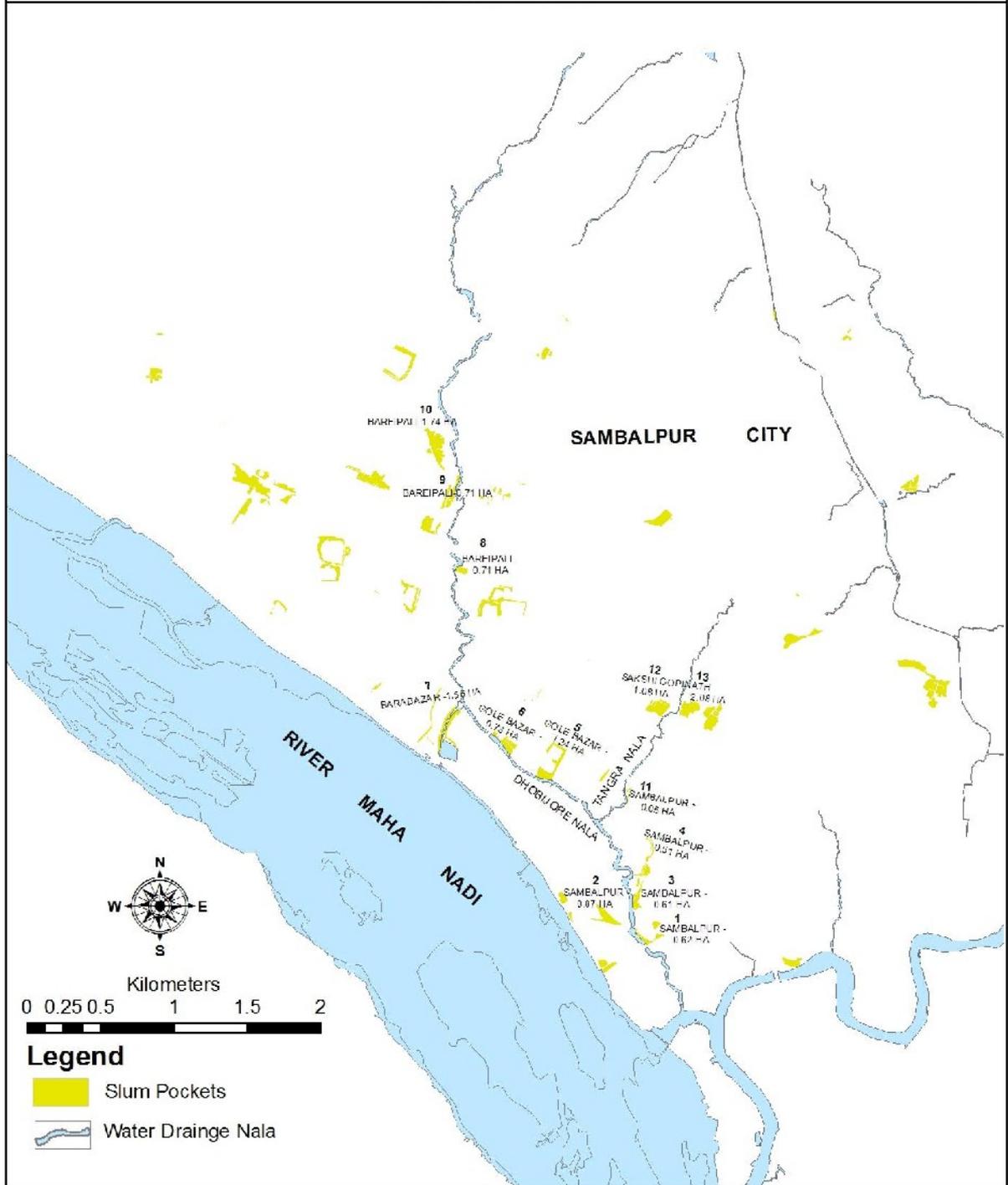
As per the above table, about 12.51 hectares of land of the Sambalpur municipality are occupied by the 13 different slum pockets by the side of Dhobijore Nala and Tangra Nala. Slums in the Sakshi Gopinath occupy the maximum area of more than 2 hectares along this stretches. Because of these slums, the nala always remains polluted, giving disturbing look to the town. In the CDP, it is proposed to resettle and rehabilitate these slum dwellers of 13 slums in the first phase in another location at one place in a better living condition to be provided with all basic amenities. About 16.13 hectares of land has been reserved in the CDP in the development area of Sambalpur for resettlement of these slum dwellers at south west corner of the municipality which is the waste land near Railway Bridge on the bank of Mahanadi River on both sides of the railway line. Once this resettlement is complete and successful the same process may be replicated in case of other slums also.

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**DRAFT COMPREHENSIVE DEVELOPEMENT PLAN 2030
SAMBALPUR, BURLA, HIRAKUD AND 67 VILLAGES**

**SLUM POCKETS BY THE SIDE OF DIIOBJJOR AND TANGRA NALAS
SAMBALPUR**

FIG. 6.4(b)



D J C C S A G I T C O

DEEPLYOT CONSULTANTS
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GUJARAT INDUSTRIAL AND TECHNICAL CONSULTANCY ORGANISATION
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Source : Atlas of Orissa

The slum population data in Burla and Hirakud NAC was not available in the Census 2001. Small slum pockets can be seen scattered in the development area of Burla and Hirakud which at present does not need any planning intervention. As and when required, the SDA can go for slum improvement in these areas by providing basic amenities.

The existing residential landuse is on 774.07 Hectares. With the above proposal the residential zone is proposed to the tune of 1983.71 Hectares.

c. Commercial Use Zone

Commercial activity in the town is found scattered. Most of the commercial activities are found in the Gol bazaar area, along the Laxmi talkies road, along the road from Khetrajpur to Laxmi talkies, Ashok talkies road and along the NH near Remed Chowk. With the increase in population lot of business activity is going to take place in this town. It is proposed to have strategically located commercial zones in the town having approach from the wider road and presently uncongested. It is proposed each zone shall have atleast one commercial center. Bigger commercial centers have also been proposed between Sambalpur City railway station and NH, in Khetrajpur, along NH near Remed Chowk, Ainthapalai chowk, Danipali, etc. Street commercial centers have been proposed in the main internal roads. The commercial zone is proposed to be divided into two sub zones, viz., Retail Business Neighborhood Shopping Use Zone (100.44 Hectares) and Wholesale Warehousing and Storage Use Zone (6.32 Hectares).

The existing commercial landuse is on 56.75 Hectares. With the above proposal the commercial zone is proposed to the tune of 106.76 Hectares.

d. Industrial Use Zone

There is not much industrial activity in the town. Only 31.98 hectares of land is under the industrial use as per the 2010 data near Remed chowk having approach from the NH. No urban center can develop without the generation of economic activity. Industries are the main source of employment and economic generation. It is proposed to have large industrial pocket at such a place so that wind direction does not affect the human habitation. One big chunk of land at Remed having approach from NH 6 /53 and other at Mathapali having approach from NH 42/55 is being proposed. With this proposal the industrial zone is proposed to the tune of 291.02 Hectares.

e. Public, Semi-Public Use Zone

Existing government, semi government and public undertaking offices are part of this zone. In **Fig 6.4(a)**, existing educational use, hospital and health center use and religious use are part of this zone. Sambalpur lacks any signature structure which can identify the town. It is proposed to have a City Symbolic Spot near Police Line on 18 mts road. Here statue can be erected and decorated with the works of local artisans using traditional design and building materials. History of Sambalpur can be written on a stone or rock and can be placed here. Small Park can be developed around the structure. Similarly, City Emblem in the Botanical Garden is proposed at a place when one enters the town from the Jharsuguda SH so that they feel that now they are entering the Sambalpur town. Cultural Center and the Art Gallery (CCAG) have been proposed in the Putibandh village just outside the municipal area having approach from the 18 m road and convenient access to both the national Highways. Kalyan mandap, town hall, party plot, library, aquarium, toilet blocks etc. have been proposed. Land have been reserved for the purposes of Town Hall, Community center, Library, aquarium, city emblem, Cultural Center and the Art Gallery, Tourist offices with parking area in the Sambalpur

development area. Most of these reservations are proposed on the government land or the waste land. Wherever it is proposed on the private land, SDA can allow the landowner to develop the land themselves for the purpose it is reserved for. Otherwise it may be acquired by the SDA.

With this proposal the Public, Semi-Public use zone is proposed to the tune of 244.31 Hectares.

f. Utilities and Services Use Zone

There is few utility services installation in Sambalpur. At present only 77.74 hectares of land in this town can be classified under this heading. The **Fig 6.4(a)** indicates the area in Sambalpur development area which is not getting the water supply as of now but has to be introduced in the future. In Sambalpur, existing water supply is through rising main of 1000 mm diameter and water is supplied through main distribution line 300 mm diameter.

Dhobijore and Tangra Nallas is the main natural drainage channel in Sambalpur. It is proposed to realign this natural drainage to make the flow straight so as to avoid flooding. It is proposed to strengthen these natural drainage lines by 3 feet deep stone pitching on the inside of nalla and providing 15 feet wide walkway with stones. Trees may be planted along the nalla at a distance of 50 feet center to center.

Land is reserved for Waste water (Sewage and Sludge) Treatment Facility which is proposed near the place where natural drains meet the Mahanadi river.

Existing garbage land fill sites are located at (i) Laxmi Dungri - Jamadarpali (ii) Dhanupali which can be used for the plan period.

Fig 7.1 UTILITY SERVICIES PLAN may be referred for detailed layout of components of water supply, sewerage, garbage disposal sites and location of public toilets block.

With this proposal the Utilities and Services zone is proposed to the tune of 26.20 Hectares.

g. Recreation (and Open Space) Use Zone

In the name of recreation the town has nothing to boast of except for the few parks and play grounds which are though open but are not easily accessible to the general public. Lot of activities is required in this town in the name of recreation and open space so as to provide lung not only to the Sambalpur but also to the surrounding areas. At present only 9.22 hectares of land is in this category.

It is proposed to have a big Botanical garden of about 14 hectares near the junction of NH-6 and SH-10 in Ainthapali area. Ayurvedic plants can be grown in this garden. Regional Level Park is proposed in the Tumbesingha area having access from NH-6/53. Vrundavan type garden can be developed in this park. Mela Ground is proposed near the railway crossing on NH 6 in Ainthapali area.

A huge environment complex has been proposed in the Khetrajpur area on the south of the railway line having approach from the proposed 18 m and 24 m road. A flyover is proposed on this 18 m road so as to cater to the other surrounding areas also. The complex comprises of land specifically designated for Urban Forestry (UF), Environment Education Park (EEP), Zoo and Spiritual Hall (SH). Vehicular Parking Space (VPS) has also been proposed in this complex. This complex will serve as regional recreation center and will be the main attraction of the SDA.

Stadium for rural sports has also been proposed on around 10.5 hectares of area. Many local parks and open spaces with or without ponds have been proposed.

For all these purposes to cater to the recreation requirement of the people, the land has been reserved in the CDP. Most of these reservations are proposed on the government land or the waste land. Wherever it is proposed on the private land, SDA can allow the landowner to develop the land themselves for the purpose it is reserved for. Otherwise it may be acquired by the SDA.

It is proposed to develop the area around the Natural Drainage Channel and existing ponds in the builtup area of the town by 1 meter deep stone pitching on the inside and providing 4.5 meter wide stone walkway on the bank of such ponds with stones. Trees may be planted along the periphery of the ponds at a distance of 16 meters center to center. Street lights may also be provided.

With this proposal the recreation and open space zone is proposed to the tune of 162.93 Hectares.

h. Transportation Use Zone

Sambalpur town has an advantage of good road and rail connectivity. Two NH and one SH pass through this town. The town is connected to major urban centers in five directions by important roads.

1	Sambalpur to	Jharsuguda	in the	North	by	SH-10
2	Sambalpur to	Baragarh-Raipur	in the	southwest	by	NH-6 / 53
3	Sambalpur to	Dhama	in the	south	by	Major road
4	Sambalpur to	Anugul – Cuttack - Bhubaneshwar	in the	southeast	by	NH-42 / 55
5	Sambalpur to	Deogarh	in the	east	by	NH-6 / 53

National High Way No 6 / 53 which serves the purpose of a ring road helps vehicular traffic to avoid passing through the heart of the city and allows bypassing the busy city road net work. This road also allows the easy accessibility to Burla and Hirakud. The direct connection of National High Way No 6 / 53 to the State High Way No 10 allows easy movement of vehicular traffic from Jharsuguda to south - eastern and south – western sectors of Sambalpur – Burla – Hirakud complex. State High Way No 10 linking Sambalpur with Jharsuguda will provide an opportunity to develop a linear township providing a strong linkage to the Twin Cities of Sambalpur – Jharsuguda. Within the town, the road network and road width is not sufficient to take the load of existing vehicle population. Mix of motorized and non-motorized vehicle results in slow movement of traffic. Parking is one of the major issues as is in other similar towns. Mainly on-street parking is in practice all over the town in the absence of proper parking space. The existing landuse under this category in this town is about 515.38 hectares.

The road network is proposed in the CDP in such a manner that hierarchy and interconnectivity is properly organized and all the traffic generating activities gets the proper access from the required width of road. The widening of various roads has been proposed on the basis of traffic volume survey analysis. In terms of hierarchy, National Highway is with 80m right of way. State Highway is having width of 45 m right of way. Primary road within the town has been proposed to widen upto 30m and 24 m according to the availability of land. Secondary roads providing access to the important buildings

and commercial activities and land reserved for various public purposes have been proposed as 18 m wide road. Tertiary road of 12m wide have been proposed to connect the various localities in the town as well as various surrounding rural settlements. All other internal roads in the town including the popularly known ring road parallel to the river embankment have been proposed as 9m wide road. Where 9m is also not available, width even less than 9m has been proposed so as to complete the inter connectivity and providing access to all the concerned.

A 9.0m road has been existing through Lamdungri reserved forest to connect Jogipali where Satellite Township is proposed with the NH-6 /53 passing through the town. For easy accessibility a 30 m road is proposed from west of the existing bus station linking NH at Khetrajpur to the Satellite town. Within Sambalpur, this road proposed is of 30m. Road width is reduced in the portion under the reserved forest to maintain its sanctity and not to disturb the flora and fauna of the reserved forest. Accessiibility to the proposed Township is also given through 24 m and 30 m wide proposed roads on north of Lamdungri connected to SH 20.

More area for Sambalpur bus station near Sambalpur Junction railway station in Khetrajpur has been proposed as stated in the chapter Traffic and Transportation..

Walkway has been proposed along the river Mahanadi where only pedestrian movement will be allowed.

A flyover has been proposed on the railway track on the west of the Sambalpur Junction railway station so as to connect freely the Khetrajpur with the proposed Environment Complex and the various localities on the south of the town. This will decrease the distance for the people coming from Hirakud and Burla to the Sambalpur town for, trade, business and shopping, recreation etc. The proposed flyover will have width of 9m. Another proposed flyover over the railway track immediately on the west of Khetrajpur railway station will provide easy access to NH 6/53 at Remed from Sambalpur. vehicular parking spaces at strategic locations have been proposed in the CDP to take care of off-street parking. Such parking spaces have been proposed at Sambalpur Junction, adjacent to NH near Ainthapali chowk, in the proposed Environment complex, near government buildings etc. Within the core area of the town where not enough space for parking is available, underground parking space has also been proposed in the busy Gol bazaar area on the Laxmi talkies chowk.

A bridge over Mahanadi River is proposed to provide the connectivity of Sambalpur town from Bhatra village at Sambalpur to Basantpur village near Burla. This will also reduce the distance for the traffic coming from the Cuttack, Deogargh and Dhama side and going towards Bargargh. The bridge can be accessed through 24 mts wide road which connects the NH 6 / 53 and NH 42 / 55 with the proposed bridge. Though construction of this bridge may not be taken on a priority as it is a capital intensive project but as and when finance is available it should be constructed to boost the development of the town.

Sambalpur is an important junction on Raipur-Puri broad-gauge railway track. Landuse under railway has not been increased as there was no such demand from the railway authorities.

A road bridge over Mahanadi River connecting Burla with Hirakud has also been proposed which is going to reduce the distance by 5 kms. The bridge is necessary to develop the sleepy Burla-Hirakud region as a proposed tourist hub and to save the traveling time between the two towns to boost the economic development of SDA area.

SDA must approach the State Govt for the financing the construction of these two bridges over the Mahanadi River.

The nearby Airports are at Bhubaneswar (325 kms) and Raipur (300 kms). The Air strip at Sangupali which is about 70 kilometers away from Jharsuguda by road is partially functional for small planes. An air port is proposed in the Sangulpali area upgrading the existing Air Strip adjacent to Sambalpur and Hirakud. SDA has to approach the Airport Authority of India through State Govt. for the urgency of development of the airport.

With this proposal the transportation use zone is proposed to the tune of 613.92 hectares.

i. Special Area Use Zone

Sambalpur town has succeeded in developing a distinct identity of its own in the realms of creative arts. The Sambalpuri culture has a three tiered structure with interfaces and interpolation, the tribal/ethnic, the folk/peasant and the urban/classical which existed side by side enriching and enlarging the cultural dimensions.

In the proposed CDP, this zone includes area under rural / urban mouza settlements, old built up area, buildings of historical, architectural and archeological importance and area of scenic value including hills and reserve forests which are environmentally sensitive areas. These places have to be conserved and care should be taken not to disturb their basic fabric so that their originality can be preserved for the next generation.

The special area zone admeasuring 24.40 hectares has been marked in the landuse plan of Sambalpur development area.

j. Agriculture Use Zone and Water Bodies

Existing activities in the rural settlements surrounding the town has been kept as it is. No new proposal except for a Sports Ground is being made in these areas as these being fertile land agricultural activity should be promoted. Existing area under brick kiln and mining, reserved forest and under the water bodies have been kept as it is. Agricultural area has been reduced judiciously so that development and agricultural should go side by side and land use of developed land has been proposed such that it is fully implemented by 2030.

The non-urbanisable area in the Sambalpur will be to the tune of 5742.65 hectares which is about 62 percent of the total planned area of Sambalpur. This includes area under agriculture and horticulture use, water bodies (outside the urbanisable area), brick kilns, marshy land etc.

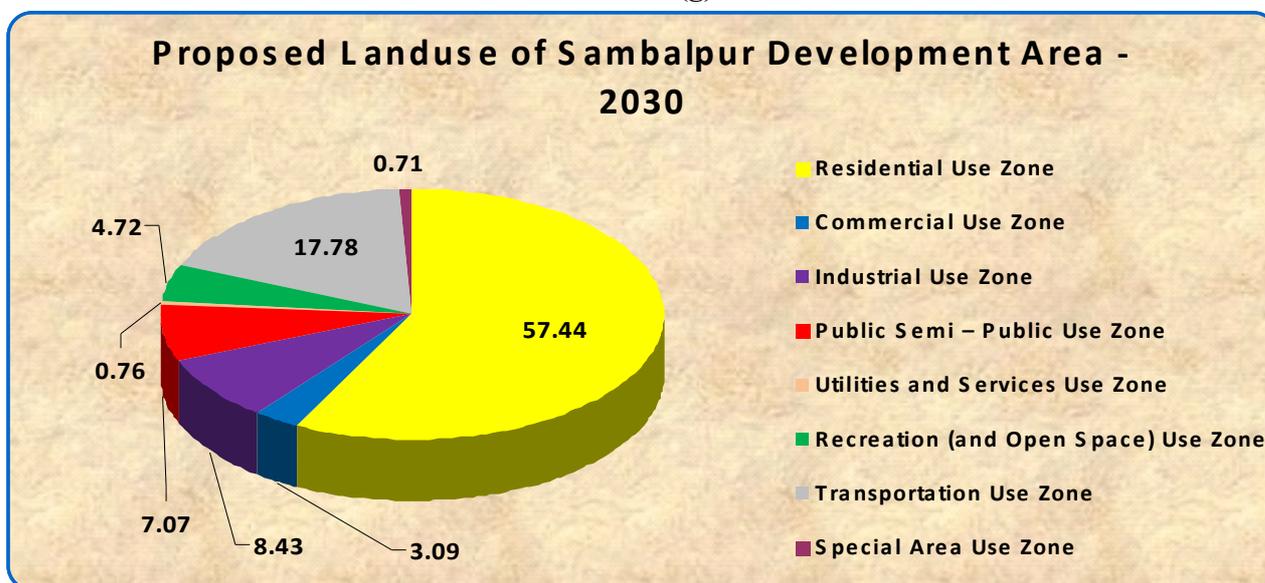
With these proposals mentioned above, the proposed landuse for the development area of Sambalpur as per the broad landuse classification shall be as shown in the **Table 6G** and depicted in **Chart 6(g)** below.

Table 6G

Proposed Landuse of Sambalpur to the Urbanisable area – 2030

Sr.No.	Land Use Component	Sambalpur		
		Area (Ha)	%age of Urbanised Land	Composit ion of Land (in %age)
1	Residential Use Zone	1983.71	57.44	37.55
2	Commercial Use Zone	106.76	3.09	
	a) Retail Business Neighborhood Shopping Use Zone	100.44 Hect		
	b) Wholesale Warehousing and Storage Use Zone	6.32 Hect		
3	Industrial Use Zone	291.02	8.43	
4	Public Semi – Public Use Zone	244.31	7.07	
5	Utilities and Services Use Zone	26.20	0.76	
6	Recreation (and Open Space) Use Zone	162.93	4.72	
7	Transportation Use Zone	613.92	17.78	
8	Special Area Use Zone	24.40	0.71	
Urbanised Land		3453.25	100.00	
9	Agriculture and Allied Use Zone	5208.80		62.45
10	Water bodies Use Zone	533.85		
Non-Urbanised Land		5742.65		
Total Sambalpur		9195.90		100

Chart 6(g)



(Figures are in %age)

6.5 Proposals in *Burla* Development Area

It is proposed to have about 30 percent of total development area of Burla admeasuring 3621.62 hectares as urbanisable land which will be developed as per the proposals of CDP and the development regulations. Rest 70 percent is non-urbanisable land. Refer **Figure 6.5** for proposed land use and zoning plan of Burla development area.

a. Residential Use Zone

Burla town is a notified area committee. It is a small town on the west bank of Mahanadi, and is about 20 kms from Sambalpur. One adjoining village of Amsadhha Katpali is also included in the Burla master plan area. Existing residential activity is concentrated in the core area of the Burla between the power channel and 30 mt road on the south side and on the north side along the 24m road. Major residential activities are within the premises of educational institutions and area under the Coal India Limited.

Few scattered residential activity can also be found in the adjoining rural settlements. To cater to the projected population of 5.75 lakh in the SDA area, it is proposed to increase the residential zone in the Burla town also. New residential zone is proposed on the north side of the town above 24 m road and on the west of the Engineering College campus. Another residential pocket is proposed on the south east of the University campus bounded by railway line on the east, 30 m road on the north and university campus on the west side.

The existing residential landuse is on 344.68 Hectares. With the above proposal the residential zone is proposed to the tune of 560.93 Hectares.

b. Commercial Use Zone

Commercial activity in the town is found scattered. The town centre is small and is divided into 'Kaccha Market' and 'Pukka Market' and hosts numerous small stores and stalls, which are mostly family based small business enterprises. The town's economy is mainly in retail, driven by the students, employees (their families) of the numerous educational institutions, local government employees (their families) and the incoming patient population for treatment at VSS Medical College. Most of the commercial activities are within the institutional premises. No commercial center is there in Burla.

With the increase in population lot of business activity is going to take place. It is proposed to have strategically located commercial centers in the town having approach from the wider road. Burla lacks any signature structure public building which can identify the town. A new Central Business District CBD has been proposed in the Burla adjacent to the new proposed residential zone on the north side of the town. This CBD is provided with a wider road frontage from the proposed 24meter wide road. This road connects the Burla with Hirakud by a proposed bridge over the rive Mahanadi. The CBD will cater not only to the Burla but also to the Hirakud which is being developed as a hub of tourism activities. District and Zonal commercial center pockets have been proposed in the proposed residential zone on the south east of the University Campus with wider frontage from the 30 m road near the NH 6/53. Street commercial centers have also been proposed in the main internal roads along the power channel. The existing commercial landuse is only on the 0.5 Hectares. With the above proposal the commercial zone is proposed to the tune of 31.38 Hectares.

A3 size fig. 6.5 to be inserted separately

c. Industrial Use Zone

Burla is an institutional town. Hence, there is not much industrial activity in the town. Only 4.12 hectares of land is under the industrial use as per the 2010 data mainly within the Coal India Limited. As discussed above, no urban center can develop without the generation of economic activity. Industries are the main source of employment and economic generation. It is proposed to have large industrial pocket at such a place so that wind direction does not affect the human habitation. One big chunk of land on the eastern side of the Hirakud railway station having approach from the 80m NH-6 / 53 is being proposed. Another pocket for industrial activity has been created within the portion of land on the south of Burla bounded by Railway track and the NH-6/53. Few brick kilns are already there in the area.

With this proposal the industrial zone is proposed to the tune of 67.16 Hectares which will cater to the need of light and small scale industry and ware house.

d. Public, Semi-Public Use Zone

Under this heading Burla town has number of public buildings. Burla acts as a premier institutional town of Orissa with more than 40 years old Sambalpur University, 50 years old Medical College and 52 years old University College of Engineering besides office of Hirakud Dam Reservoir. The town is also headquarters of Mahanadi Coal Fields Ltd., a subsidiary of Coal India Ltd. There are many schools and colleges also. Existing educational centers, health centers, Social / Cultural Centre / Club / Puja Mandap, water tank, post office, electric substation, Nehru Minar etc. have been shown in the **Figure 6.5**.

At present only 9.57 hectares of land in this town can be classified under this heading. For the benefit of the people it is necessary to have many more public buildings which shall also act as the landmark for the town. Socio-cultural center, puja mandap, clubs have been proposed in the vicinity of residential area for the benefit of residents. On such center has been proposed on the north of the existing Coal India Limited Township.

With this proposal the Public, Semi-Public use zone is proposed to the tune of 161.50 Hectares.

e. Utilities and Services Use Zone

There is few utility services installation in Burla. The **Figure 6.5** indicates the new development area in Burla where water supply scheme is to be introduced in future as and when area gets developed and need arises for water supply.

In Burla, water is supplied through main distribution line of 200 and 150 mm diameter pipe. Refer Figure 7.1, UTILITY SERVICES PLAN for components of Water Supply, Sewerage, Garbage and Public Toilets. Existing Garbage Land fill sites is in Burla-NAC and other in Amsadhakatapali area.

With this proposal the Utilities and Services zone is proposed to the tune of 5.35 Hectares.

f. Recreation (and Open Space) Use Zone

In the name of recreation the town has nothing to boast of except for the few parks and play grounds which are though open but are not easily accessible to the general public. At present only 3 hectares of land is in this category. Nearby attractions like Hirakud Dam, Gandhi Minar and Nehru Minar is to be developed for recreation purpose. Lands have

been reserved for Local Park/Open Space with or without Pond / Play Area spread all over the town. Natural Drainage Channel and ponds within the built-up area of the town has been proposed to strengthen and beautify it with 1 meter deep stone pitching inside and 4.5 meter wide stone walkway with 16 meter center to center trees and street lights.

With this proposal the recreation and open space zone is proposed to the tune of 56.06 Hectares.

g. Transportation Use Zone

Burla town has an advantage of good road and rail connectivity. National High Way No 6 / 53 which runs north south along the railway line serves the purpose of a bypass and helps vehicular traffic to avoid passing through the center of Burla. This road also allows the easy accessibility to Sambalpur, Burla and Hirakud. Within the town, the road network is not bad but looking too the future need, the roads are widened. Parking is one of the major issues as is in other similar towns. Mainly on-street parking is in practice all over the town in the absence of proper parking space. The existing landuse under this category in this town is about 156.62 hectares.

The road network is proposed in the CDP in such a manner that hierarchy and interconnectivity is properly organized and all the traffic generating activities gets the proper access from the required width of road. The widening of various roads has been proposed on the basis of traffic volume survey analysis. In terms of hierarchy, National Highway is with 80m right of way. Primary road having width of 30m and 24 m within the town has been proposed according to the availability of land. Secondary roads providing access to the important public buildings and commercial activities have been proposed as 18 m wide road. Tertiary road of 12m wide have been proposed to connect the various localities in the town as well as various surrounding rural settlements.

A new road over bridge 18 meter wide has been proposed on the river Mahanadi on the north of the town so as to provide good connectivity between Burla and Hirakud without taking the detour and using the NH. This bridge will boost the tourism as well as economic development along the region.

Vehicular parking spaces at strategic locations have been proposed in the CDP to take care of off-street parking. Such parking spaces exist adjacent to Hospital, bus stand, near government/institutional buildings etc.

With these proposals the transportation use zone is proposed to the tune of 185.87 Hectares.

h. Special Area Use Zone

In the proposed CDP, this zone includes area under rural / urban mouza settlements and area of scenic value. These places have to be conserved and care should be taken not to disturb their basic fabric so that their originality can be preserved for the next generation. The special area zone has not been proposed in the landuse plan of Burla.

Thus, total urbanized area with the above use zones is proposed to be 1068.25 Hectares for the Burla development area in the CDP.

i. Agriculture Use Zone and Water Bodies

Existing area under brick kiln and mining, reserved forest and under the water bodies have been kept as it is. Agricultural area has been reduced judiciously so that development and agricultural should go side by side and land use of developed land has

been proposed such that it is fully implemented by 2030.

The undeveloped area in the Burla will be to the tune of 2553.37 hectares which is about 70 percent of the total planned area of Burla. This includes area under agriculture and horticulture use, water bodies (outside the urbanisable area), brick kilns, marshy land etc.

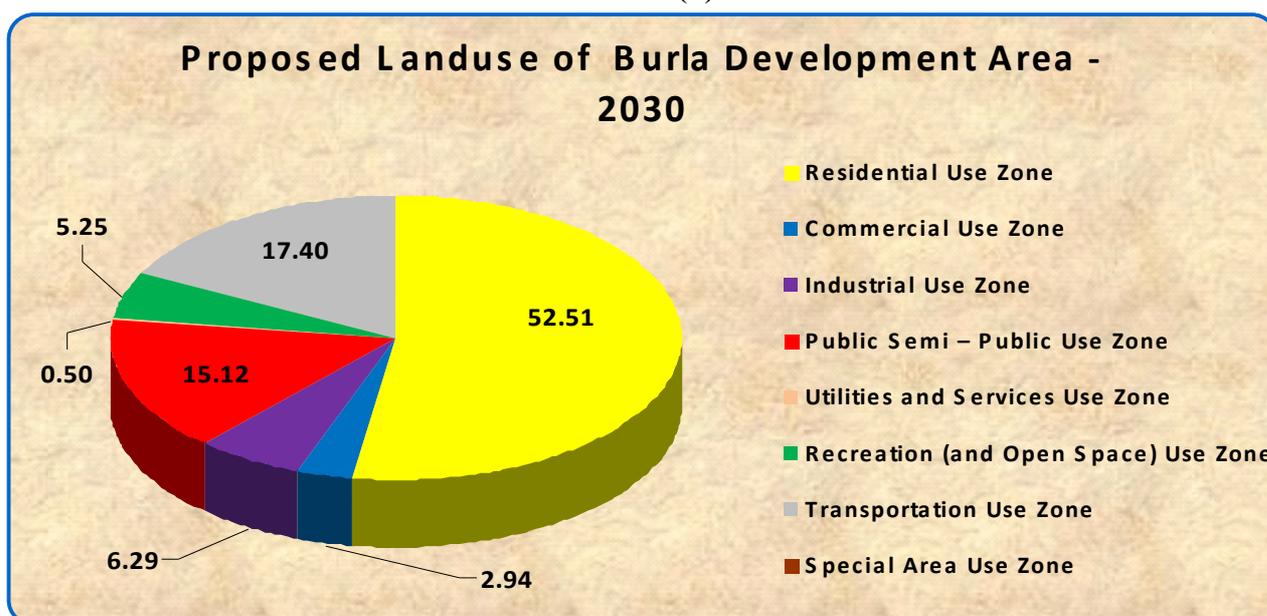
With these proposals mentioned above, the proposed landuse for the development area of Burla as per the broad landuse classification shall be as shown in the **Table 6H** and is depicted in **Chart 6(h)** below.

Table 6H

Proposed Landuse of Burla to the Urbanisable area – 2030

Sr.No.	Land Use Component	Burla		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	560.93	52.51	
2	Commercial Use Zone	31.38	2.94	
3	Industrial Use Zone	67.16	6.29	
4	Public Semi – Public Use Zone	161.50	15.12	
5	Utilities and Services Use Zone	5.35	0.50	
6	Recreation (and Open Space) Use Zone	56.06	5.25	
7	Transportation Use Zone	185.87	17.40	
8	Special Area Use Zone	0.00	0.00	
Urbanised Land		1068.25	100	29.50
9	Agriculture and Allied Use Zone	1642.64		
10	Water bodies Use Zone	910.73		
Non-Urbanised Land		2553.37		70.50
Total Burla		3621.62		100

Chart 6(h)



(Figures are in %age)

6.6 Proposals in *Hirakud* Development Area

It is proposed to have 15.51 percent of total development area of Hirakud admeasuring 4404.04 hectares as urbanisable land which will be developed as per the proposals of CDP and the development regulations. Rest 84.49 percent is non-urbanisable land. Refer **Figure 6.6** for proposed land use and zoning plan of Hirakud development area.

a. Residential Use Zone

Hirakud town is a notified area committee. Formerly it was a small island lying between two branches of river Mahanadi. It is famous for the Hirakud Dam built over the Mahanadi River. It is a multipurpose project with the objective of flood control, irrigation, generation of electricity, navigation, soil conservation etc. It is a small town on the north of Mahanadi. Existing residential activity is concentrated in the core area of the town between the Mahanadi river and south of the existing railway line and Hindalco industry.

Few scattered residential activity can also be found in the rural settlements adjoining the Sambalpur. To cater to the projected population of 5.75 lakh in the SDA area, it is proposed to increase the residential zone in the Hirakud town. New residential zone is proposed adjoining the existing residential pocket. Because of proposed new bridge over Mahanadi some residential activity are proposed on the west of the proposed 24 m road.

The existing residential landuse is on 189.09 Hectares. With the above proposal the residential zone is proposed to the tune of 280.96 Hectares.

b. Commercial Use Zone

There is no much commercial activity in the town. Few local shops can be found in the vicinity of residential area. No commercial center is there in Hirakud.

With the increase in population lot of business activity is going to take place. It is proposed to have strategically located Central Business District CBD in the town having approach from the wider 30m road near the complex having Cultural center and the Water Park and connected to Burla Town by the proposed bridge over the river. This will be going to be a major tourist attraction in the years to come and SDA has to take care that this complex is developed in a well planned manner. The CBD will attract people from all over the SDA area and hence it is proposed at place near the proposed road bridge over Mahanadi so that it is near to Burla as well as Sambalpur. District and Zonal commercial center pockets have been proposed in the proposed residential zone. Street commercial centers have been proposed in the main internal roads.

The existing commercial landuse is only on the 3.17 Hectares. With the above proposal the commercial zone is proposed to the tune of 16.98 Hectares.

c. Industrial Use Zone

Functionally Hirakud is an Industrial town with number of Industries particularly HINDALCO. Located 15 kms from the nearest city of Sambalpur, it is a quiet town with a large portion of the population engaged in various Industries located here. About 108.25 hectares of land is under the industrial use as per the 2010 data. As discussed above, no urban center can develop without the generation of economic activity. Industries are the main source of employment and economic generation. It is proposed to have large industrial pocket at such a place so that wind direction does not affect the human habitation. One big chunk of land on the bounded between the 30 m major road and Laxmi dungri reserve forest has been proposed for light industrial zone. The zone is

A3 size fig. 6.6 to be inserted separately

proposed in such a manner that it gets verywide frontage from the 30 meter wide primary road. Few brick kilns are already there in the area.

With this proposal the industrial zone is proposed to the tune of 154.01 Hectares which will cater to the need of light and small scale industry and ware houses.

d. Public, Semi-Public Use Zone

Hirakud does not have many public buildings. Existing educational centers, health centers, Social / Cultural Centre / Club / Puja Mandap, Gandhi minar etc. have been shown in the Figure 6.4. For the benefit of the people it is necessary to have many more public buildings. Socio-cultural center, puja mandap, clubs have been proposed in the vicinity of residential area for the benefit of residents.

Sambalpur lacks any signature structure public building which can identify the town. It is proposed to have a big scale Cultural Center on the south of the Hirakud having wider approach from the 24 m road to attract tourists and other residents of the SDA area. The location is just near the proposed Burla Hirakud Bridge over Mahanadi River and adjacent to the proposed CBD and Water Park. This 24 m road will connect the Burla with Hirakud through a proposed bridge over the Mahanadi River. The land admeasuring 10.14 hectares has been reserved under section 9 and 10 of the ODA Act, 1982 for the purpose of Cultural center on the Govt. / waste land. Location of Water Tank, Overhead tank, Pump houses, water treatment plant and other facilities are shown in **Figure 6.6**. Existing Garbage Land fill sites is in Jamadarpali and Larbanga area. Natural Drainage Channel and ponds within the built-up area of the town has been proposed to strengthen and beautify it with 1 meter deep stone pitching inside and 4.5 meter wide stone walkway with 16 meter center to center trees and street lights.

With this proposal the Public, Semi-Public use zone is proposed to the tune of 56.10 Hectares.

e. Utilities and Services Use Zone

Few public utility services installations in Hirakud are part of the industrial, residential and public purpose land use. Refer Figure 7.1, UTILITY SERVICES PLAN for components of Water Supply, Sewerage, Garbage and Public Toilets. With these proposals the Utilities and Services zone is proposed to the tune of 10.42 Hectares.

f. Recreation & Open Space Use Zone

In the name of recreation the town has nothing to boast of except for the few parks and play grounds which are though open but are not easily accessible to the general public. At present only 9.86 hectares of land is in this category. Nearby attractions like Hirakud Dam, Gandhi Minar can be developed for recreation purpose. Local parks with or without ponds have been proposed spread all over the town. A Water Park on 25.26 hectares has also been proposed near the proposed river bridge having approach from 24 meter road and having wider river bank. This public purpose being location specific considering the advantage of River Bridge, CBD, cultural center, vicinity to Burla town and the Lamdungri reserve forest, this land is reserved for the purpose under section 9 and 10 of the ODA Act, 1982 on the Govt. / waste land.

With this proposal the recreation and open space use zone is proposed to the tune of 51.86 Hectares.

g. Transportation Use Zone

Hirakud town has one major 30m road running east west in the town. 18m road provide access to the industrial area from this 30 m major road. This 30m road also allows the easy accessibility to Sambalpur. But for going to Burla one has to take a long detour and has to use the NH. It is proposed to link the Hirakud with Burla by a new road bridge over Mahanadi. Within the town, the road network is not bad but looking to the future need, the roads are widened. The existing landuse under this category in this town is about 156.62 hectares.

The road network is proposed in the CDP in such a manner that hierarchy and interconnectivity is properly organized and all the traffic generating activities gets the proper access from the required width of road. The widening of various roads has been proposed on the basis of traffic volume survey analysis. In terms of hierarchy, National Highway is with 80m right of way. Primary road within the town for providing access to the important buildings and commercial activities and land reserved for various public purposes has been proposed as 30m and 24m wide roads. Secondary roads have been proposed as 18 m wide road. Tertiary road of 12m wide have been proposed to connect the various localities in the town as well as various surrounding rural settlements

A new road over bridge 18 meter wide has been proposed on the river Mahanadi on the north of the town so as to connect freely the Burla and Hirakud by 24 m road without taking the detour and using the NH. This bridge will boost the development along the region and shall attract lot of tourist.

With these proposals the transportation use zone is proposed to the tune of 112.90 Hectares.

h. Special Area Use Zone

In the proposed CDP, this zone includes area under rural / urban mouza settlements and area of scenic value. These places have to be conserved and care should be taken not to disturb their basic fabric so that their originality can be preserved for the next generation. The special area zone has not been proposed in the landuse plan of Hirakud.

Thus, total urbanized area with the above use zones is proposed to be 683.23 Hectares for the Hirakud development area in the CDP.

i. Agriculture Use Zone and Water Bodies

Existing area under brick kiln and mining, reserved forest and under the water bodies have been kept as it is. Agricultural area has been reduced judiciously so that development and agricultural should go side by side and land use of developed land has been proposed such that it is fully implemented by 2030.

The non-urbanisable area in the Hirakud will be to the tune of 3720.81 hectares which is about 84.49 percent of the total planned area of Hirakud.

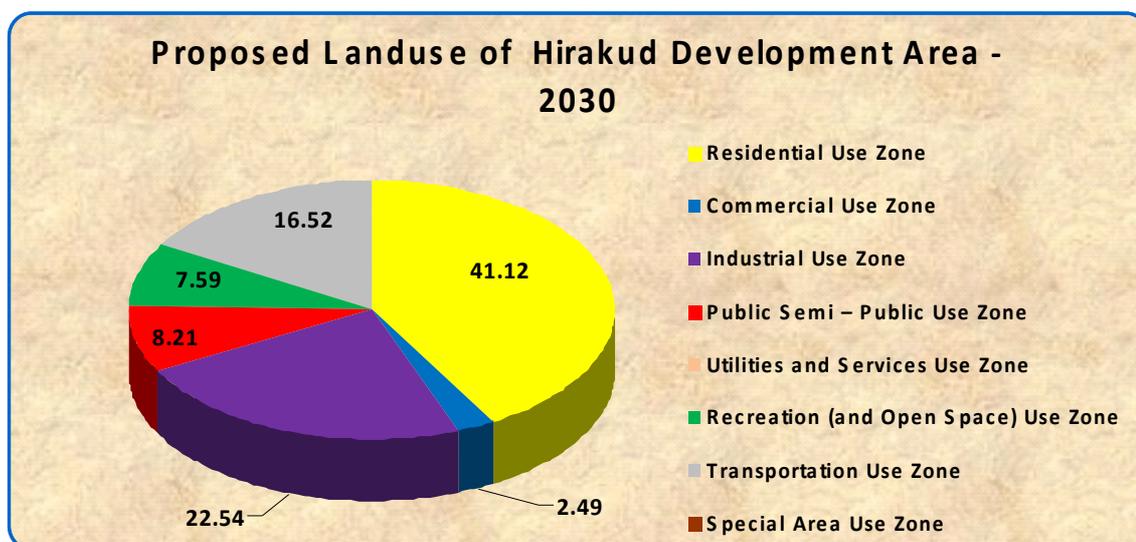
With these proposals mentioned above, the proposed landuse for the development area of Hirakud as per the broad landuse classification shall be as shown in the **Table 6I** and depicted in **Chart 6(i)** below.

Table 6I

Proposed Landuse of Hirakud to the Urbanisable area – 2030

Sr.No.	Land Use Component	Hirakud		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	280.96	41.12	
2	Commercial Use Zone	16.98	2.49	
3	Industrial Use Zone	154.01	22.54	
4	Public Semi – Public Use Zone	56.10	8.21	
5	Utilities and Services Use Zone	10.42	1.53	
6	Recreation (and Open Space) Use Zone	51.86	7.59	
7	Transportation Use Zone	112.90	16.52	
8	Special Area Use Zone	0.00	0.00	
	Urbanised Land	683.23	100	15.51
9	Agriculture (and Horticulture) Use Zone	3120.65		
10	Water bodies Use Zone	600.16		
	Non-Urbanised Land	3720.81		84.49
	Total Hirakud	4404.04		100

Chart 6(i)



6.7 Proposals in the 67 Villages

It is proposed to have 10 percent of total area of the 67 villages added in the SDA in July 2011 admeasuring 31652.96 hectares as urbanisable land which will be developed as per the proposals of CDP and the development regulations. Rest 90 percent is non-urbanisable land. Refer **Figure 6.7** for proposed land use and zoning plan of the area under 67 Villages.

In the 67 Villages surrounding the Sambalpur, Burla and Hirakud towns, the **Central**

Villages have been identified having the population of more than 1000 for the balanced development of the SDA area by providing work centers and linking the whole area by means of strong networking. Ten such selected villages as shown in **Table 6J** with minimum population of 1000 will act as Central Villages to support surrounding village population engaged in agricultural activities. These villages are Balbaspur, Salad, Derba, Talaimal, Pondoloi, Katarbaga and Nuaramplela in the linear corridor of 67 villages on north and Kalamati, Garmunda and Chiplima located on south of Burla and west of Mahanadi. These selected Central Villages will provide agricultural seed and grain storage depots, Tractor and agricultural production service facility, marketing of grains and vegetables facility and rural community buildings for the surrounding villages. (**Figure 6.7**).

Table 6J

Proposed Central Villages

Sr. No	Name of the Village	Area in Acres	Population 2001
1	Balbaspur	605.17	1028
2	Salad	2825.92	1683
3	Derba	3067.88	1895
4	Talaimal	2008.65	1477
5	Pondoloi	1438.77	1002
6	Katarbaga	3194.25	5146
7	Nuaramplela	1337.66	2240
8	Kalamati	4491.93	8893
9	Garmunda	119.36	1653
10	Chiplima	575.90	2783

To facilitate above activities an area of about 25 hectares in each identified village will be provided by the Department of Agriculture through the concerned office of the District Development Officer.

a. Residential Use Zone

Community Satellite Township is proposed over 426.58 Hectares of land on the north side of the Lamdungri reserve Forest near Sambalpur in Madhupur – Jogipali village. The site is made accessible by the proposed 30 mt road passing through the reserve forest and connecting the NH-6 /53. The township is accessible from the SH-10 by a proposed 30 m road running east west. Another 24 m road exists to connect the site with SH-10. The Sambalpur Development Authority in the year 2007 has also conceived the idea of developing the satellite Township along the Sambalpur-Jharsuguda road over an area of 810 Hectares (2000 Acres) to cater to the need of the people atleast upto 2050 AD in PPP

mode. Lot of facilities and amenities were thought of for providing in the township. The area of 810 hectares seems to be on the higher side considering the residential zone now being proposed in the Sambalpur area of the SDA. With the residential zone proposed in the Sambalpur near the main town adjacent to the SH-10 and Central villages being provided with necessary community facilities in the 67 Villages of the SDA, it is justified only to have around 400 hectares of land for the satellite township and accordingly, 426.58 hectares of land is proposed for Satellite Town near Sason. Satellite town is proposed to attract entrepreneurs to the town of Sambalpur. Moreover, 810 hectare is assumed for the projected population of 2050 Ad

A3 size fig. 6.7 to be inserted separately

while the CDP is proposed for 2030 AD. This site can be developed by taking the help of experts and professionals so that land can be used optimally and finance can be generated for developing the township.

With the above proposal the residential zone is proposed to the tune of 1161.33 Hectares in the 67 villages.

b. Commercial Use Zone

There is no much commercial activity in the rural areas of SDA. Few local shops can be found in the vicinity of residential area. No commercial center is there in the rural area.

A big commercial zone admeasuring about 42.07 hecatres have been proposed having approach from the SH 10 near the Sambalpur town in village Bhaktpali adjacent to the proposed hospital and in the vicinity of the proposed community satellite town. With the increase in population lot of business activity is going to take place. It is proposed to have strategically located Socio-economic node in Rengali on the western side of the Railway station and having connection with the SH-10 by a proposed road. The Node will attract people from all over the SDA area and hence it is proposed at place near the Rengali railway station and Rengali bus station. Commercial zone has also been proposed in the Lapanga village along the SH-10 where Industrial and Manufacturing marketing node is proposed in the 67 Villages. The commercial zone is proposed to be divided into two sub zones, viz., Retail Business Neighborhood Shopping Use Zone (64.28 Hectares) and Wholesale Warehousing and Storage Use Zone (2.67 Hectares).

With the above proposal the commercial zone is proposed to the tune of 66.95 Hectares.

c. Industrial Use Zone

Household industries, iron and small scale units are already working in many of the 67 Villages. Lapanga is proposed to be developed as industrial, manufacturing and marketing node because of its vicinity to the already existing industrial units and access to the 45 m wide SH-10. Area of the 67 villages is dotted with small scale and household industries which are proposed to be continued in the CDP.

With this proposal the industrial zone is proposed to the tune of 729.54 Hectares.

d. Public, Semi-public Use zone

The area does not have many public buildings. For the benefit of the people it is necessary to have many more public buildings. Educational, religious, health centers, etc. in the 67 villages have been shown in the map. A big hospital on 11.18 hectares of land is proposed in the Bhaktpali area adjacent to the SH-10 for catering to the need of the proposed satellite township as well as the population of 67 villages.

With these proposals the public, semi-public use zone is proposed to the tune of 117.75 Hectares.

e. Utilities and Services Use Zone

Utilities and Services zone to the tune of 13.08 Hectares is proposed in the 67 villages.

f. Recreation & Open Space Use Zone

In the name of recreation the area under 67 villages does not have any facility. Though rural area are open and sports facilities will be the part of Central Villages, green zone on 4.26 Hectares of land has been proposed in the rural area of the SDA.

The recreation and open space zone is proposed to the tune of 9.68 Hectares.

g. Transportation Use Zone

To strengthen the existing rural links, upgradation of existing village roads to MDR is proposed. These are the roads which primarily link the first order and second order rural settlements. The road network is proposed in the CDP in such a manner that hierarchy and interconnectivity is properly organized and all the traffic generating activities gets the proper access from the required width of road. In terms of hierarchy, National Highway (NH-6/53) is with 80 m right of way and State Highway is with 45 m right of way. Primary road within the villages has been proposed to widen upto 30m and 24 m according to the availability of land. Secondary roads providing access to the important commercial and industrial activities and land reserved for various public purposes have been proposed as 18 m wide road. Tertiary road of 12m wide have been proposed to connect the various localities in the rural areas as well as various surrounding rural settlements. All other internal roads have been proposed as 9m wide road so as to complete the inter connectivity and providing access to all the concerned.

Air port has been proposed at Sanglapali which has direct access from Sambalpur and from SH-10 connecting Sambalpur with Jharsuguda.

With these proposals the transportation use zone is proposed to the tune of 949.84 Hectares.

h. Special Area Use Zone

In the proposed CDP, this zone includes area under rural mouza settlement and area of scenic value. These places have to be conserved and care should be taken not to disturb their basic fabric so that their originality can be preserved for the next generation. The special area zone has not been proposed in the landuse plan of 67 villages.

Thus, total urbanized area with the above use zones is proposed to be 3048.18 Hectares for the 67 Villages development area in the CDP.

i. Agriculture Use Zone and Water Bodies

Existing area under brick kiln and mining, reserved forest and under the water bodies have been kept as it is. Agricultural area has been reduced judiciously so that development and agricultural should go side by side and land use of developed land has been proposed such that it is fully implemented by 2030. Existing area under brick kiln and mining, reserved forest and under the water bodies have been kept as it is.

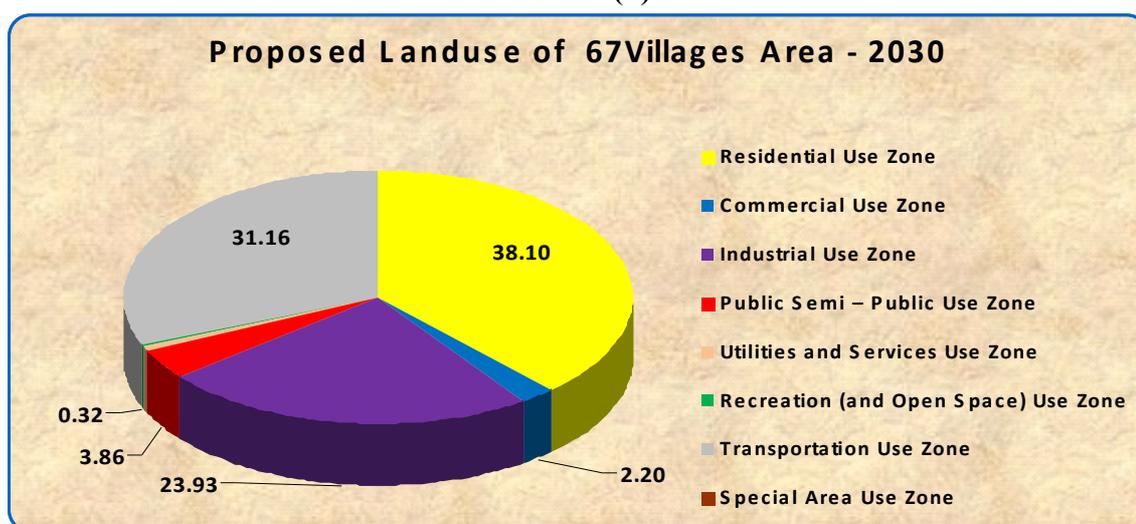
The non-urbanisable area in the 67 villages will be to the tune of 28604.78 Hectares which is about 90 percent of the total planned area of 67 villages. This includes area under agriculture and allied use, water bodies (outside the urbanisable area), brick kilns, marshy land etc.

With these proposals mentioned above, the proposed landuse for the development area of 67 villages as per the broad landuse classification shall be as shown in the **Table 6K** and depicted in **Chart 6(k)** below.

Table 6K
Proposed Landuse of 67 Villages to the Urbanisable area – 2030

Sr.No.	Land Use Component		67 Villages			
			Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)	
1	Residential Use Zone		1161.33	38.10		
2	Commercial Use Zone		66.95	2.20		
	a	Retail Business Neighborhood Shopping Use Zone				64.28 Hect
	b	Wholesale Warehousing and Storage Use Zone				2.67 Hect
5	Utilities and Services Use Zone		13.08	0.43		
6	Recreation (and Open Space) Use Zone		9.68	0.32		
7	Transportation Use Zone		949.84	31.16		
8	Special Area Use Zone		0.00	0.00		
Urbanised Land			3048.18	100		9.63
9	Agriculture (and Horticulture) Use Zone		25387.50			
10	Water bodies Use Zone		3217.28			
Non-Urbanised Land			28604.78		90.37	
Total of 67 villages			31652.96		100	

Chart 6(k)



6.8 Planning Strategy in 67 Villages

a. Background

The data and its analysis in the Draft Development Plan so far, draws the line of action to manipulate the way in which its population and economic activities can be organized in various sectors of planning area. The relationship of the agricultural population on one hand of the spectrum and the urban population at the other is required to be organized. Between these extremes is to be found the net work of settlements ranging from central villages, characterized nodal settlements and satellite town. The relationship between various types of settlements ties the elements into a system consists of the web of

economic transactions and communication amongst them. Proposed 67 Mouza development areas in the Sambalpur Development Authority's area are shown in the **Figure 6.7**.

b. Development Potentials of 67 Villages

To correct the present imbalance in urban and rural population distribution, development activities in the 67 villages (area of 31652.96 hectares) are required to be introduced in the selected villages. This measure will help to check the concentration of industrial and business activities in Sambalpur, Burla and Hirakud urban centers. As such there is a strong possibility of developing Community Satellite Town, Economic Node, Industrial Manufacturing Marketing Centre and Central Villages.

It is expected that in the years to come a large proportion of the Sambalpur District will continue to remain predominantly rural. This necessitates the establishment of a rural urban continuum. As measure of balanced development along with the urban development activities rural areas have to be developed by providing social overheads and promoting agro based industries. Creation of hierarchy of villages and urban areas in order to optimize physical, social and cultural services would result in a balanced distribution of population leading towards physical development in rural communities and rural urban continuum. Developing rural areas, modernizing agriculture, creating growth activities, developing central villages are the core strategies to decongest Sambalpur urban complex area. The urban policy during the next two decades should impose effective checks over the indiscriminate growth of Sambalpur urban complex area and bring about integrated development of surrounding rural area. This can be achieved by establishing rural service, small scale industrial and business centres with sports and recreation facilities and by equipping Sambalpur, Burla and Hirakud urban centers with required infrastructural facilities.

Three nodes have been identified in the 67 Villages for planned and balanced development of the SDA area.

Following economic nodal villages are selected for the purpose.

- (i) Madhupur, Jogipali, Talaba, Padripali and Bhualpali villages are contemplated to be developed as Community Satellite Town on an area admeasuring 438.27 Hectares.
- (ii) Rengali as socio-economic Node where small factories processing forest based goods, pharmaceuticals, herbs, fauna, flora, water and fish life production activities with lodging and boarding houses, hotels and restaurants will provide the setting for thriving business on an area admeasuring 73.46 Hectares.
- (iii) Lapanga is proposed to be developed as an Industrial Manufacturing Marketing Centre with small scale iron and steel manufacturing industries, sambalpuri textile, handloom, cottage industries and supporting infrastructure on an area admeasuring 76.97 Hectares.
- (iv) Ten villages having population more than 1000 as per 2001 census will act as Central Villages to support surrounding village population engaged in agricultural activities. These villages are Balbaspur, Salad, Derba, Tilaimal, Pondoloi, Katarbaga and Nuaramplela, Kalamati, Garmunda and Chiplima. These selected Central Villages will provide agricultural support facilities to the surrounding villages.

c. Madhupur-Jogipali Community Satellite Town

At a regional level Sambalpur – Jharsuguda are emerging as twin cities having very close socio-economic relationship. Both these towns are about 70 kms apart and are connected with railway and State Highway no 10. Jharsuguda is a cosmopolitan town and along with the linear corridor of villages is located on north of Sambalpur.

This corridor is well accessible and connected to other parts of the state and other states as well to facilitate the flow of commodity, goods and services to the required destination. Hirakud dam reservoir is located on north of Sambalpur urban settlement and stretches on west, along major length of rail and road connections between Sambalpur and Jharsuguda. Huge reserve forest adjacent to the SDA area shall provide input for the forest based industries along with small and medium scale industrial units which can be linked to the markets of major urban centers of Raipur, Bilaspur and Rourkela. As such, the possibility of developing a Community Satellite Town to facilitate corporate houses, decent residential and sports cum recreation activity area is great.

The location of the township has been selected considering the importance of the linear developing corridor of 67 villages located on north of Sambalpur urban Complex. This area is required to be close to the main urban centre of Sambalpur as the community is not used to live away from the Central Business District (CBD). People are not habituated to travel from long distance of place of residence to the place of work in and around existing CBD. The decent living township area is required to be not very far from CBD. Keeping in view these criteria, the area of about 438.27 hectares has been selected beyond Lamdungri Reserve Forest on north and along the state high way 10 (**Refer Figure 6.7**). The township is served by the wide frontage from existing 30 meter wide road on its south and west side. One 24 meter east – west road is proposed on the north side of village Bhualpali to connect the 30 meter road on the west with SH-10 on the east side. A loop of 18 meter road is also proposed in the township to connect the proposed 24 meter road with the existing 30 meter road so as to have wider frontage for the development to be coming in the township. Accessibility from the Bus station has also been proposed for the development of this area.

Refer **Figure 6.8(a)** for the structural plan of this township.

The composition of landuse proposed within this Madhupur, Jogipali Community Satellite Town is shown in the **Table 6L** below.

Table 6L

Proposed Landuse of Community Satellite Town

Sr. No	Landuse	Percentage of total area
1	Residential Use	60
2	Commercial Use	05
3	Public / Utilities Services	03
4	Open Land Use / Parking	15
5	Roads	17
	Total	100

Considering the approximate value of agricultural land to be Rs. 6,00,000/- per hectare,

the average cost of acquisition of land is worked out be Rs.26.30 crores.

At the rate of 100 persons per hectare, 60% Of the township area of about 263 hectares will accommodate population of 26,000 inhabitants. The physical and social infrastructure development cost may be roughly 110 crores at the rate of Rupees 25 lacs per hectare (438.27 hectares x 25 lacs). Thus the total cost of developing this Community Satellite Town will be Rupees 136.30 crores roughly (Land Acquisition cost Rs. 26.30 crores + Development cost Rs. 110 crores = 136.30 crores).

Sambalpur Development Authority (SDA) will find it difficult to get finance for land acquisition, development and management of the land for the proposed township. More over land acquisition is time consuming.

It is not easy to obtain exorbitant financial help of rupees 136.30 crores from the Government or /national/international agency. It is imperative for the SDA to work on the self financing land acquisition and land development mechanism without depending on financial help from other sources. This goal can be achieved through the self-sustaining land readjustment scheme which is known as **Town Planning Scheme** as provided for under sections 26 to 49 of chapter VI of Orissa Development Authorities Act, 1982. SDA will not have to get funds for the development of the township area under the Town Planning Scheme preparation mechanism as the funds will be created through self financing technique. Another way to develop such a Township, private sector may be invited to initiate and implement the project.

d. Town Planning Scheme

The land readjustment scheme or Town Planning Scheme is a detailed area planning technique which has been successfully practiced in Gujarat since 1915. Basically land readjustment scheme is a technique of plot readjustment. In addition to detailed area planning, it provides legislative support and finance for implementation. The technique is rational and equitable. The land parcels in the proposed township area are unequal in area and irregular in shape. These plots will be much improved in terms of shape build ability and accessibility. However the area of each plot will be reduced for which the owner of the land will get compensation

For preparing the Town Planning Scheme, the land parcels having common ownership are marked as one original plot on the map and all such original plots are pooled together for planning purpose. In other words, for planning purpose, the area is treated as one monolithic piece of land without any dividing boundaries. After caving out public roads and sites for public purpose, remaining area is laid out into regular shaped plots or final plots. As a result of area consumed in public roads and public purpose plots, final plots that will be allotted will be reduced in area. These final plots are normally allotted on or very close to their respective plots. Though final plot that is allotted is reduced in size for the provision made for roads and public purpose plots in the scheme, it is very much improved in terms of shape, build ability and accessibility. The owner gets compensation for the area deducted from his original plot. Also since the final plot has got better accessibility and in turn better potentiality (with all the community facilities on the public purpose plots contributed by the owners in the area) for development, its value is enhanced. The owner is required to pay half of the enhanced value towards the actual cost of preparation and finalization of the scheme. The net amount of increment in value of the plot derived after deducting the amount of compensation payable for the loss of area is levied from owners under the system of Town Planning Scheme. This in a nut shell describes the principal features of the scheme.

Following are the benefits of the TP Scheme:-

(i) The owner retains at least half of the increment in market value of the plot on a particular date that is the date of declaration of intention to prepare the scheme. SDA can provide services like roads, street lights, water supply net work, sewerage, storm water drainage and sites for community buildings available to the community. By charging betterment cost to the owners of the plots.

(ii) The sites for public plots and roads are available to the SDA at right location and at the right time for which SDA will incur the cost on paper but will not enter in to any transaction of cash payment to the owners The SDA will allot the public purpose plots on lease to the entrepreneurs.

(iii) The owner is not totally deprived of his holding like in the case of Land Acquisition.

e. Rengali as Socio- Economic Node

Rengali with a population of 574 persons has an area of 344.99 acres (139.67 hectares). It is located at almost the mid-point of the corridor of 67 villages between Sambalpur and Jharsuguda. The railway and state highway 10 between Sambalpur and Jharsuguda pass through Rengali which makes the selection of the village very suitable for rural market activities. The opportunity for producing forest based commodities like honey, wooden furniture, toys, bamboo materials, herbs, flora and fauna, Rope making, Sambalpuri textile, handloom, cottage industries etc. and the marketing of the same is enormous with the help of State Government. Incentives to produce aurvaedic pharmaceuticals and tinned water and fish life should be provided to the entrepreneurs. Provision of Exhibition Hall, lodging and boarding houses, hotels and restaurants should also be made in the commercial area. Adequate infrastructure of residential area and commercial area to support small scale industrial activity is proposed. An area of 75 hectares to accommodate all the above mentioned activities will provide setting required for thriving economic function of the node.

Out of 139.67 hectares (344.99 acres) of village land 73.46 Hectares is proposed to be used for the development of this node. The rough break up of land uses is given in **Table 6M** below. It is to be noted that all the landuses includes the area under road and the vehicular parking spaces. It is proposed to have 50 percent of the land for industrial use. Commercial activities to be allowed on 20 percent of the land and rest 30 percent is proposed to be put under residential use. Bus station has also been proposed for the development of this area.

Refer **Figure 6.8(b)** for the structural plan of this Rengali economic node.

Table 6M**Proposed Landuse in the Rengali Economic Node**

Sr. No.	Land Use	Percentage of total area	Land Area in Hectares
1	Small scale and household factories	50	36.95
2	Commercial Use	20	14.27
3	Residential Use	30	22.24
	Total	100	73.46

It is suggested that SDA should not undertake such a development but efforts should be made to approach Agriculture Produce Market Committee, Contractors dealing with forest wood business, Businessmen through respective Government Departments and so on to get the land developed under SDA's supervision. Here SDA should assume the role of nodal Agency for the purpose. Alternatively, as discussed above it is recommended to develop the land through the mechanism of self sustaining Town Planning Scheme as provided under sections 26 to 49 of chapter VI of Orissa Development Authorities Act, 1982.

f. Lapanga as Industrial Manufacturing / Marketing Node

Lapanga is proposed to be developed as an Industrial Manufacturing / Marketing Node with small scale iron and steel manufacturing industries, other small scale industries, marketing Offices and supporting infrastructure (**Figure 6.7**).

Lapanga with a population of only 213 persons has an area of 3506.32 acres (1419.56 hectares). It is located in north of the stretch of 67 villages between Sambalpur and Jharsuguda. The state highway 10 between Sambalpur and Jharsuguda pass through Lapanga very close to Jharsuguda which makes the selection of the village very suitable for industrial activities. The opportunity for producing iron and steel manufacturing commodities exist in this area. The supporting infrastructure with marketing offices will help developing the area. Provision of enough commercial area with lodging and boarding houses, hotels and restaurants should also be made along with residential area. An area of 76.97 hectares to accommodate all the above mentioned activities will provide setting required for thriving economic function of the node. Accessibility from the Bus station has also been proposed for the development of this area.

Out of 1419.56 hectares (3506.32 acres) of village land 5.42% of land will account for 76.97 hectares which is required to be developed. The rough break up of land uses is given in **Table 6N** below. It is to be noted that all the landuses includes the area under road and the vehicular parking spaces. It is proposed to have 60 percent of the land for industrial use. Commercial activities to be allowed on 17 percent of the land and rest 23 percent is proposed to be put under residential use.

Refer **Figure 6.8(c)** for the structural plan of this Lapanga industrial manufacturing / marketing node.

Table 6N**Proposed Landuse in the Lapanga Industrial Manufacturing / Marketing Node**

Sr. No.	Land Use	Percentage of total area	Land Area in Hectares
1	Iron and Steel small scale units	60	44.45
2	Commercial Use	17	14.75
3	Residential Use	23	17.77
	Total	100	76.97

It is suggested that SDA should not undertake such a development but efforts should be made to approach Chamber of Commerce and to get the land developed under SDA's supervision. Here SDA should assume the role of nodal Agency for the purpose. Alternatively, it is recommended to develop the land through the mechanism of self sustaining Town Planning Scheme as provided under sections 26 to 49 of chapter VI of Orissa Development Authorities Act, 1982.

A3 size fig. 6.8(a,b,c) to be inserted separately

6.9 Zonal Plans

The planning area of the SDA is divided into various Zones on the basis of homogeneity in the character of development and its location. Sambalpur development area is divided into 10 Zones, Burla into 3 Zones, Hirakud into 3 Zones and 67 villages into 7 Zones. Thus the whole of SDA area is divided into 23 Zones. Refer **Figure 6.3(b)** for boundary of various Zones.

The Zonal Plan for three Zones of Sambalpur, two Zones of Burla and one Zone of Hirakud is prepared containing detailed information regarding provision of social infrastructure, parks and open spaces, vehicular parking, circulation system, etc. These Zonal plans shall act as a link between the CDP and the layout plan to create a sustainable environment for better quality of life. The Zonal plans are in the form of structural plan. Road geometrics are given details. Traffic signals, street lights, street furniture, design of traffic islands, traffic junctions, footpath, walkways, location of bus stands, parking lots, parking spaces, etc. have all been shown for the micro level planning in the zonal maps. The planning details of the Zonal Plans area discussed in the following paragraphs.

a. Sambalpur Zonal Plan, Zone I

It includes the high density main activity area of the town within the municipality area encompassed between railway line on the north, river Mahanadi on the South, Ward No. 2/p, 3, 4/p on east and Ward No. 24/p on west. May be termed as CBD of the town. The zone includes area like, Golebazar, Kamlibazar, Nadapara, Marwaripara, Laxmi talkies, various administrative buildings, Circuit House, office buildings, Government Hospital, Private Bus stand, Stadium, T.V. center, Jail, Samlaeswari Temple etc.

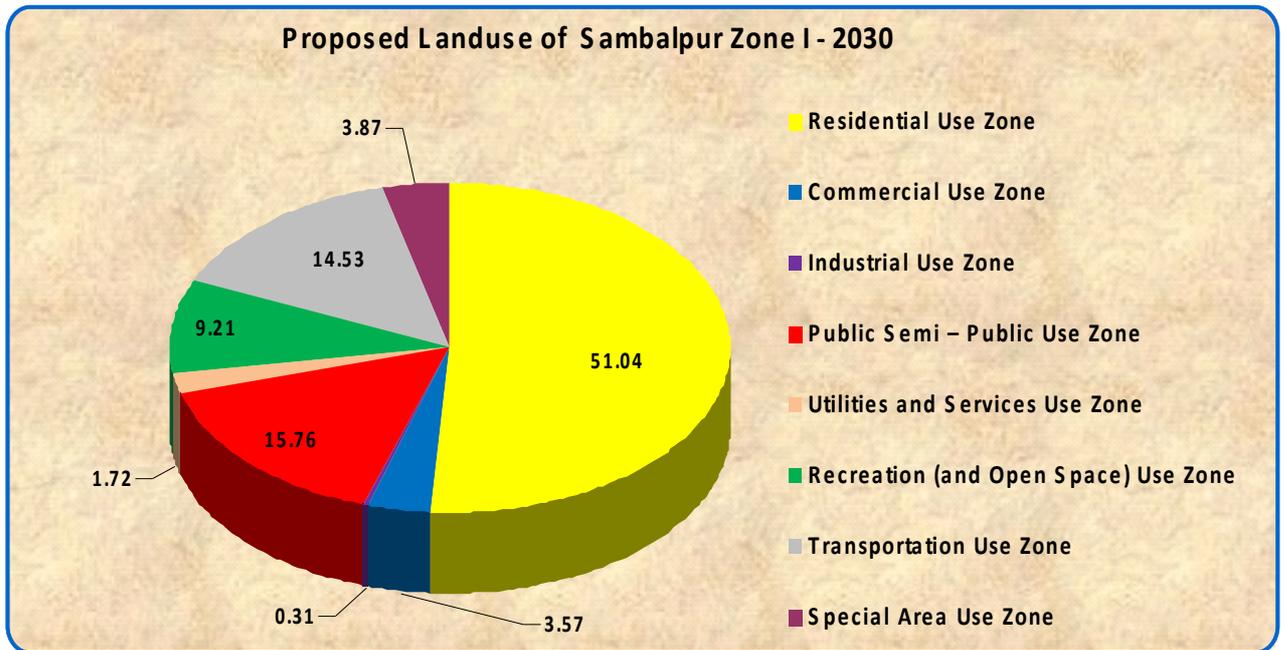
Proposals include, huge environment complex, zoo, area for urban forestry, town hall, garden, vehicular parking spaces, zebra crossings, development of aquarium, 14 toilet blocks, flyover on railway, etc. All these proposals are shown in detail in **Figure 6.9(a)**.

Refer **Table 6O and Chart 6(o)** below for the proposed landuse of the Zone I of the Sambalpur for the year 2030.

Table 6O
Proposed Landuse of Sambalpur Zone I – 2030

Sr.No.	Land Use Component	Sambalpur Zone I		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	340.36	51.04	
2	Commercial Use Zone	23.79	3.57	
3	Industrial Use Zone	2.10	0.31	
4	Public Semi – Public Use Zone	105.09	15.76	
5	Utilities and Services Use Zone	11.47	1.72	
6	Recreation (and Open Space) Use Zone	61.39	9.21	
7	Transportation Use Zone	96.89	14.53	
8	Special Area Use Zone	25.79	3.87	
	Urbanised Land	666.88	100	86.94
9	Agriculture (and Horticulture) Use Zone	16.32		
10	Waterbodies Use Zone	83.85		
	Non-Urbanised Land	100.17		13.06
	Total	767.05		100

Chart 6(o)



A3 size fig. 6.9(a) to be inserted separately

b. Sambalpur Zonal Plan, Zone II

This zone includes the trade & commercial area through which passes the portion of NH-6 from Remed chowk in the west to Railway level crossing near Tangarpali in the east. It encompasses the area north of the railway line upto the boundary of the municipality. Ward No. 23, 24/p, 25, 26, 27, 28 and 29 of Sambalpur Municipality are part of this Zone. Remed Chowk, Baraipali chowk, Ainthapali Chowk, Government Bus stand are included in this Zone. Recent fast development of commercial and residential activities has been witnessed in this Zone in Ward No. 28 along the road from Ainthapali Chowk upto the railway line in the north - south direction. Budharaja Reserve forest falls in this Zone.

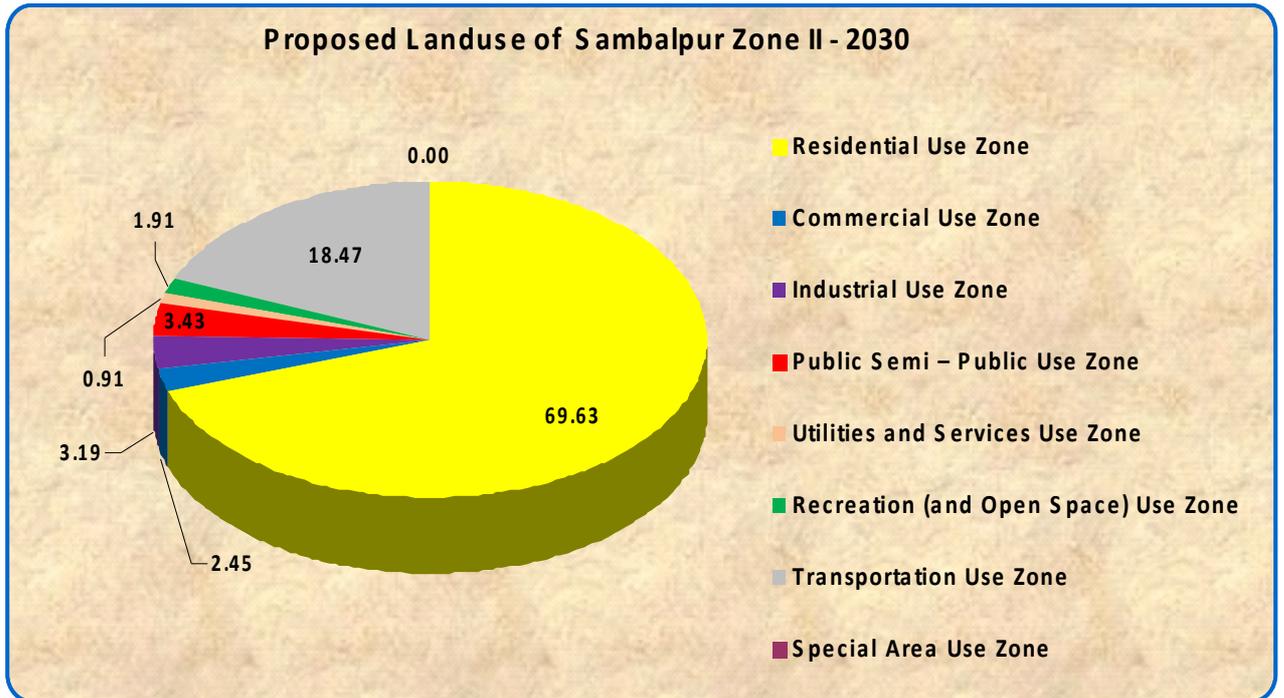
Proposals include botanical garden, bus station, mela ground, 3 toilet blocks, vehicular parking spaces, zebra crossings, etc. All these proposals are shown in detail in **Figure 6.9(b)**.

Refer **Table 6P and Chart 6(p)** below for the detailed proposed landuse of the Zone II of the Sambalpur for the year 2030.

Table 6P
Proposed Landuse of Sambalpur Zone II – 2030

Sr.No.	Land Use Component	Sambalpur Zone II		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	420.23	69.63	
2	Commercial Use Zone	14.80	2.45	
3	Industrial Use Zone	19.25	3.19	
4	Public Semi – Public Use Zone	20.73	3.43	
5	Utilities and Services Use Zone	5.49	0.91	
6	Recreation (and Open Space) Use Zone	11.52	1.91	
7	Transportation Use Zone	111.50	18.47	
8	Special Area Use Zone	0.00	0.00	
	Urbanised Land	603.52	100	84.73
9	Agriculture (and Horticulture) Use Zone	85.31		
10	Waterbodies Use Zone	23.44		
	Non-Urbanised Land	108.75		15.27
	Total	712.27		100

Chart 6(p)



A3 size fig. 6.9(b) to be inserted separately

c. Sambalpur Zonal Plan, Zone III

It includes the low development area of the municipality encompass between Zone I on the west, Zone II on the North, municipality boundary on the east and boundary of river on the south. Ward No. 2/p, 3, 8/p and 9 of Sambalpur Municipality are part of this Zone. It includes rural area of Dhankaura also. Broad gauge railway line from Sambalpur to Talcher to Cuttack passes through this zone. Portion of NH-6 is also falling in this zone where sparse development on both sides could be seen. Motijharan Reserve forest falls in this Zone.

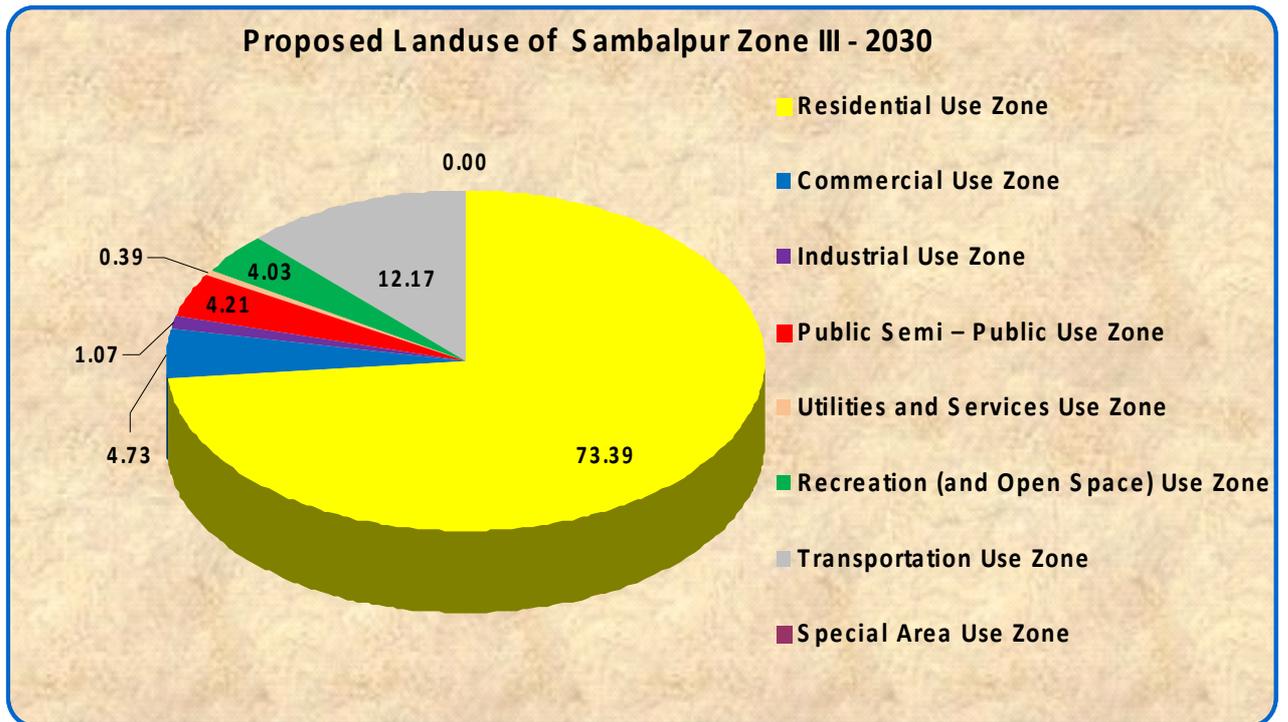
Proposals includes mela ground, 2 toilet blocks, parks and gardens, stadium for urban rural sports, vehicular parking spaces, zebra crossings, etc. All these proposals are shown in detail in **Figure 6.9(c)**.

Refer **Table 6Q and Chart 6(q)** below for the detailed proposed landuse of the Zone III of the Sambalpur for the year 2030.

**Table 6Q
Proposed Landuse of Sambalpur Zone III – 2030**

Sr.No.	Land Use Component	Sambalpur Zone III		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	500.00	73.39	
2	Commercial Use Zone	32.23	4.73	
3	Industrial Use Zone	7.30	1.07	
4	Public Semi – Public Use Zone	28.68	4.21	
5	Utilities and Services Use Zone	2.68	0.39	
6	Recreation (and Open Space) Use Zone	27.46	4.03	
7	Transportation Use Zone	82.93	12.17	
8	Special Area Use Zone	0.00	0.00	
	Urbanised Land	681.28	100	80.20
9	Agriculture (and Horticulture) Use Zone	122.10		
10	Waterbodies Use Zone	46.13		
	Non-Urbanised Land	168.23		19.80
	Total	849.51		100

Chart 6(q)



A3 size fig. 6.9(c) to be inserted separately

d. Burla Zonal Plan, Zone-I

The NAC area of Burla is divided into two zones. The area bounded by the East – West Power channel and Mahanadi River is designated as Zone I. This zone includes the old Burla, VSS Medical College and Hospital, Engineering College, Burla College, OSEB Guest House, Officer’s colony and Staff quarters. PG Chowk is the important traffic junction in this zone. One major road running east - west from this Chowk meets NH-6 on the eastern side of the zone. Commercial activities could be seen on both sides of this major road of the town. Ward No. 11, 12, 13, 14 and 15 of Burla NAC are part of this Zone. Mainly intuitional areas are included in this zone.

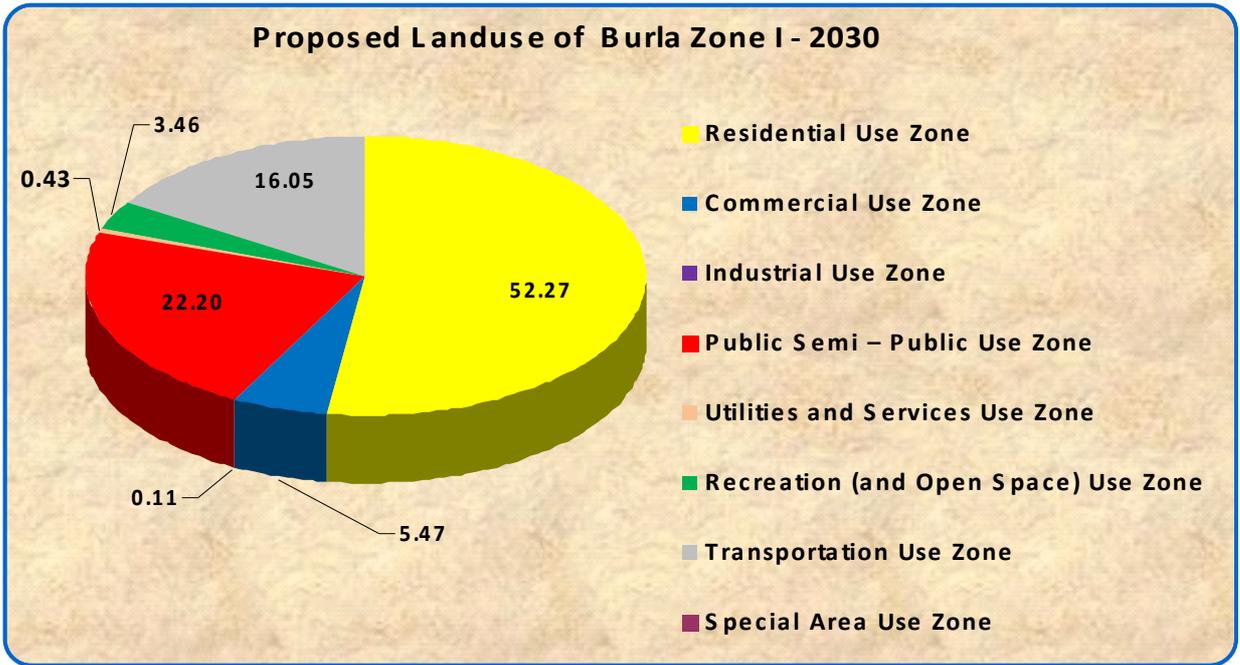
Proposals includes commercial center, walkway, 18m and 24 meters wide road, 2 toilet blocks, gardens, vehicular parking spaces, etc. All these proposals are shown in detail in **Figure 6.9(d)**.

Refer **Table 6R and Chart 6(r)** below for the detailed proposed landuse of the Zone I of the Burla for the year 2030.

Table 6R
Proposed Landuse of Burla Zone I – 2030

Sr.No.	Land Use Component	Burla Zone I		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	164.74	52.27	
2	Commercial Use Zone	17.24	5.47	
3	Industrial Use Zone	0.36	0.11	
4	Public Semi – Public Use Zone	69.97	22.20	
5	Utilities and Services Use Zone	1.37	0.43	
6	Recreation (and Open Space) Use Zone	10.92	3.46	
7	Transportation Use Zone	50.60	16.05	
8	Special Area Use Zone	0.00	0.00	
	Urbanised Land	315.20	100	23.07
9	Agriculture (and Horticulture) Use Zone	324.28		
10	Waterbodies Use Zone	726.84		
	Non-Urbanised Land	1051.12		76.93
	Total	1366.32		100

Chart 6(r)



A3 size fig. 6.9(d) to be inserted separately

e. Burla Zonal Plan, Zone-II

The area of the Burla NAC on the South of the Power Channel is included in the Zone II. Most of the new residential and commercial developments are concentrated in this part of the NAC. Burla Power House, NAC office, Sambalpur University Campus, Jagannath temple, Hirakud Railway station etc. is important locations falling in this zone. Most of the residential localities and the daily markets are located in this zone between Power Channel and the east-west main road connecting NH-6 on the east to Power House, Nehru Minar and Hirakud Dam in the west. The institutional area is on the south of this main road of the town. Some residential development on the west of the NH-6 could be seen in this zone. Ward No. 1 to 10 of Burla NAC is part of this Zone.

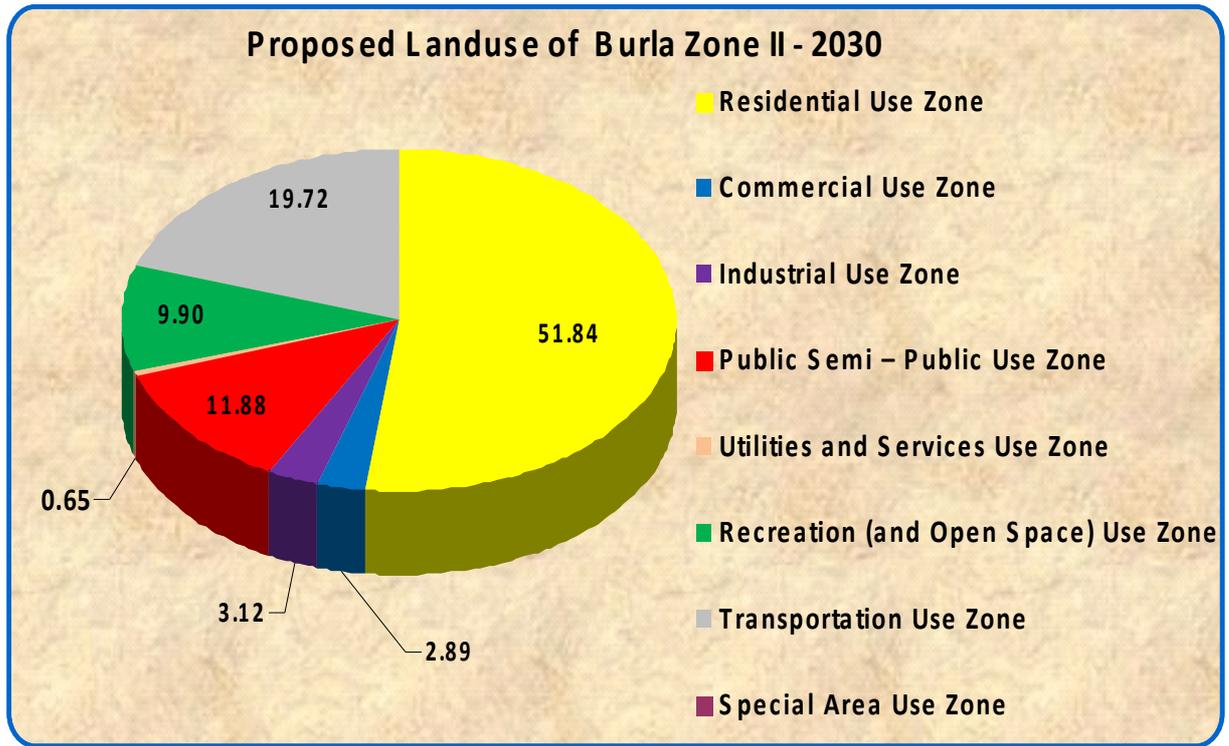
Proposals includes residential and commercial zone, CBD, 18m and 24 meters wide road, walkway, 1 toilet block, parks and gardens, vehicular parking spaces, etc. All these proposals are shown in detail in **Figure 6.9(e)**.

Refer **Table 6S and Chart 6(s)** below for the detailed proposed landuse of the Zone II of the Burla for the year 2030.

Table 6S
Proposed Landuse of Burla Zone II – 2030

Sr.No.	Land Use Component	Burla Zone II		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	227.12	51.84	
2	Commercial Use Zone	12.67	2.89	
3	Industrial Use Zone	13.67	3.12	
4	Public Semi – Public Use Zone	52.04	11.88	
5	Utilities and Services Use Zone	2085	0.65	
6	Recreation (and Open Space) Use Zone	43.35	9.90	
7	Transportation Use Zone	86.38	19.72	
8	Special Area Use Zone	0.00	0.00	
	Urbanised Land	438.08	100	38.24
9	Agriculture (and Horticulture) Use Zone	613.92		
10	Waterbodies Use Zone	93.60		
	Non-Urbanised Land	707.52		61.76
	Total	1145.60		100

Chart 6(s)



A3 size fig. 6.9(e) to be inserted separately

f. HiraKud Zonal Plan, Zone-II

The development area of HiraKud is divided into two zones. The linear shaped area bounded by the East – West railway line in the north and river Mahanadi & Laxmidungri Reserve Forest in the south is classified as Zone I. This zone is developed with 30.0 mt wide main road running east – west connecting NH- 6 in the east with the town center in the west and further to the Gandhi Minar by 24 mts wide road. IDC, ITI, ITI hostel, office of the NAC, Dam main office, OSEB, PHED, SER, residential township of INDALCO, Government hospital, High School, football field, police station, Nehru park, Satsang mandir, residential areas and old and new market are located in this zone. There being linear development, all the places are connected by the network of roads of various widths. The area of the town bounded by the Zone I boundary in the South and boundary of NAC on the north is classified as Zone II. Major portion of this zone is occupied by INDALCO. Other development seen in this zone is the HPCL, factory of Hira Cables, Re-rolling mill and FCI. 12.0 mts wide east-west road is the only main road in this zone catering to these developments. Recent residential development has been noticed in this zone on the eastern tip which is adjoining to Sambalpur town near Remed Chowk. Lambadungri is part of this zone. Ward No. 1/p, 3/p, 4/p, 5, 6, 7/p, 8, 9/p, 10, 11, 12, 13/p, 15/p and 17 of HiraKud NAC is part of this Zone II. Since Zone I is developed and Zone II is in the process of development in HiraKud, the detail planning proposals has been suggested for Zone II.

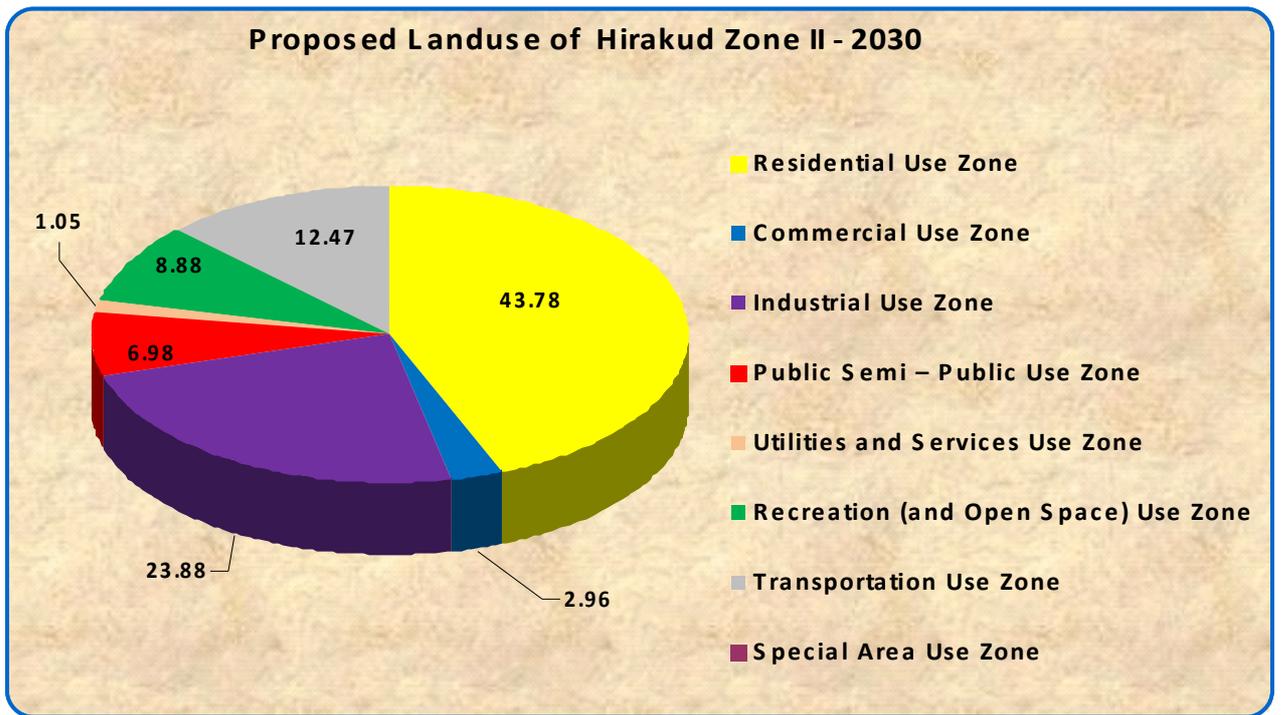
Proposals includes industrial zone, water park, cultural center, CBD, 30m, 18m and 24 meters wide road, walkway, 2 toilet blocks, parks and gardens, vehicular parking spaces, etc. All these proposals are shown in detail in **Figure 6.9(f)**.

Refer **Table 6T and Chart 6(t)** below for the detailed proposed landuse of the Zone II of the HiraKud for the year 2030.

Table 6T
Proposed Landuse of HiraKud Zone II – 2030

Sr.No.	Land Use Component	HiraKud Zone II		
		Area (Ha)	%age of Urbanised Land	Composition of Land (in %age)
1	Residential Use Zone	276.68	43.78	
2	Commercial Use Zone	18.71	2.96	
3	Industrial Use Zone	150.90	23.88	
4	Public Semi – Public Use Zone	44.13	6.98	
5	Utilities and Services Use Zone	6.63	1.05	
6	Recreation (and Open Space) Use Zone	56.13	8.88	
7	Transportation Use Zone	78.82	12.47	
8	Special Area Use Zone	0.00	0.00	
	Urbanised Land	632.00	100	43.12
9	Agriculture (and Horticulture) Use Zone	793.16		
10	Waterbodies Use Zone	40.41		
	Non-Urbanised Land	833.57		56.88
	Total	1465.57		100

Chart 6(t)



A3 size fig. 6.9(f) to be inserted separately

6.10 Government Land

Details of Government land available from the concerned State Government department is tabulated below in **Table 6U**. The location of these government plots along with the reservations for public purpose under section 9 and 10 of the Orissa Development Authority Act, 1982 in different Mouza is shown in the maps submitted separately. These lands have been demarcated using the guidelines on Urban GIS Database Development for CDP /Master Plan Preparation.

Table 6U

Statistics of Government Land in SDA area

Sr. No.	Mouza	Number of Plots	Total Area in (Ha)
1	AINTHAPALI	287	59.5573
2	AMASARAKATAPALI	865	342.7924
3	BAIDARNUAPALI	191	32.9201
4	BARABAZAR	1142	48.4905
5	BAREIPALI	520	30.8056
6	BHATRA	312	13.6533
7	BURLA NAC	970	302.0622
8	DANDEIPALI	143	35.9172
9	DANIPALI	317	29.0865
10	DENGSARGI	190	41.3718
11	DHANKAUDA	145	60.3723
12	DHANUPALI	273	70.2839
13	DURGAPALI	406	63.9507
14	GAMBHARKATA	110	58.2194
15	GOLEBAZAR	1172	23.6257
16	GARMUNDA	984	235.9914
17	JAMDA	113	30.9005
18	JAMDARPALI NO 5	599	245.2259
19	KAINSIR	117	50.8938
20	KSHETRAJPUR	179	10.3899
21	KUDOPALI	49	16.8886
22	LAMBDUNGARI NO 8	314	92.1709
23	LARBANGA	376	183.9721
24	LARPANK	463	107.7832
25	MALIPALI	67	12.2073
26	MATHPALI	50	12.4185
27	MODIPARA	655	51.4136
28	NAXAPALI	407	74.8497
29	NEW_HIRAKUD	119	29.3529
30	PARDHIAPALI	359	109.2925
31	PUTIBANDH	26	9.4292
32	RANIBANDHA	359	113.117
33	REMED	731	111.141
34	SAKSHIGOPINATH	524	26.4734
35	SAMBALPUR	1176	74.4957
36	SANKARMA	138	49.8318
37	SARDHAPALI	89	25.2634

38	SARLA	119	33.7567
39	SINDURPANK	440	56.0255
40	SINGHPALI	89	36.7677
41	SOLABANDH	19	5.1088
42	SUNAPALI	376	41.0646
43	TALBHATA	733	40.7351
44	THEMERA	536	105.7536
45	TUMBESINGHA	79	32.8189