



2015

## Service Level Improvement Plan (SLIP) Atal Mission for Rejuvenation and Urban Transformation (AMRUT)



# BERHAMPUR



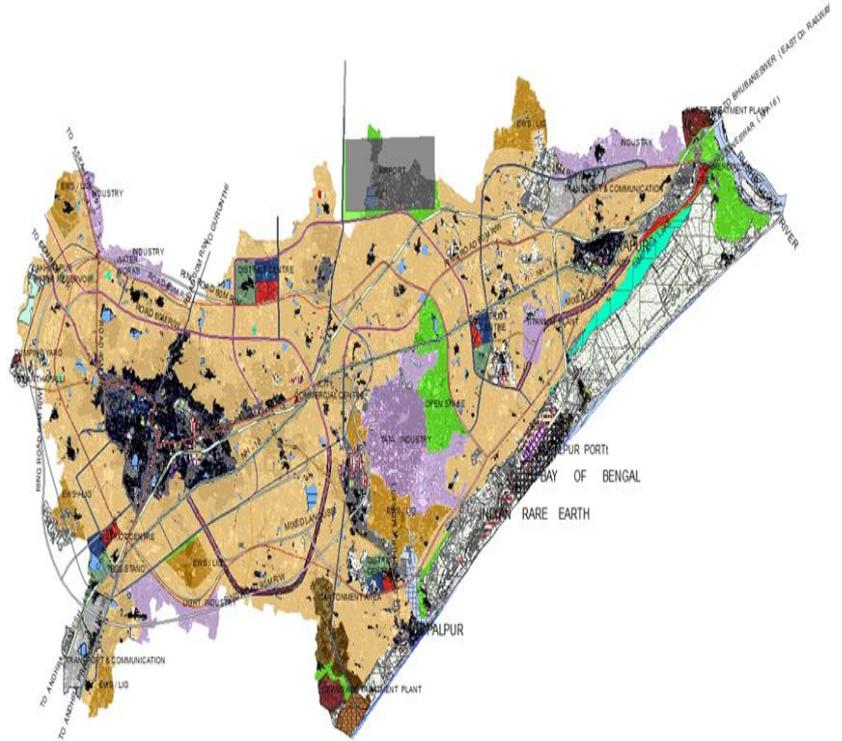
# Berhampur

As per the 2011 census, the population of Berhampur Municipal Corporation is 3.57 Lakh. The decadal growth rate of the city is @ 16%. The average floating population is about 15,000. Both horizontal and vertical growth of the city is observed during the recent years. Satellite townships are developing in the outskirts of the city. Nearby towns like *Chatrapur*, *Gopalpur*, *Hinjili*, and *Digapahandi* are likely to merge in the future to provide a regional commercial & tourism hub.

Berhampur is a city of multi-dimensional regional importance with tourist attraction at *Gopalpur on sea*, *Chilikalake* and *Taptapani*; an all-weather port; and presence of an ammunition storage and air defense training centre. Also known as the silk city, Berhampur is famous for handicraft work and silk trading. It is the trading gateway for south Odisha. Economy of the city revolves around whole sale trading and support services.

Skilled manpower is available in the city in the fields of tourism & hospitality, engineering, and services. Adequate land available for horizontal growth of the city can accommodate infrastructure needs. There is very low environmental risk. A major still production unit of TISCO is in progress. Projects Proposal for augmenting potable water supply to match national benchmark is in the process. Similarly, a storm water drainage project is undertaken with assistance from the World Bank under Odisha Disaster Recovery Project (ODRP). Sewerage system is proposed through the state plan. Municipal solid waste of the city is managed on PPP mode including landfill and treatment. Berhampur is well connected by rail and road (NH 5). There is an air strip near by the city. Good transport facility is available with city bus service on PPP mode. Educational facility in the city is good with presence of a major medical college cum hospital, private engineering colleges, ITI centers and a varsity.

In the Service Level Improvement Plan (SLIP) for Berhampur, sector-wise projects identified and the estimated costs are: water supply-5 nos./Rs. 386.37 Cr.; sewerage/Septage- 7 nos./ Rs. 605.17 Cr.; storm water drainage- 6 nos/ Rs. 246.86 Cr.; urban transport – 7 nos. / Rs. 24.15 Cr.; and parks – 23 nos./ Rs. 6.78 Cr. In total 48 nos of projects have been identified with a total estimated cost of Rs. 1269.33 Crore.



# Water Supply

## Mission Management Information System

### 1. Assess the Service Level Gap

The first step is to assess the existing situation and service levels gaps for Water Supply (AMRUT Guidelines; para 3&6). This will also include existing institutional framework for the sector. AMRUT is focused on improvement in service levels. The zone wise data shall be used in identifying the gaps. These zone-wise gaps will be added to arrive at city level service gaps. While assessing service level gap reply following questions not more than word indicated against each question

**Question:** What kind of baseline information is available for water supply system of the city? Detail out the data, information, plans, reports etc related to sector. Is zone wise information available?(75 words)

**Ans.**Ward wise detail data is available. Consumer and asset database is maintained and updated annually. One project is ongoing with State funding and OUIDF funding for improving the coverage of the corporation area.

**Question:** Have you collected census 2011 data? Are you aware of baseline survey data of MoUD? Have you correlated data from these and other sources? (75 words)

**Ans.**The data regarding census 2011 has been collected. We have correlate the data with other sources before preparing the proposal

**Question:**What are existing service levels for water supply in the city? What is the coverage of water supply Connections? What is per capita supply of water? How much is the extent of metering? How much is non-revenue water? Provide information in table.

**Ans.**The existing service levels for water supply to Rourkela are given below in the prescribed table.

Table: Status of Water Supply service levels

**TABLE 1.1 : Status of Water Supply Service**

Sr. No.	Indicators	Present status	MOUD Benchmark	Reliability Level
1	Coverage of water supply connections	39%	100%	B
2	Per capita supply of water	134	135	C
3	Extent of metering of water connections	0%	100%	D
4	Extent of non-revenue water	38%	20%	C
5	Quality of water supplied	100%	100%	C
6	Cost recovery in water supply services	56%	100%	C
7	Efficiency in collection of water supply related charges	46%	90%	B

Question: What is the gap in these service levels with regard to benchmarks prescribed by MoUD? (75 words)

Ans. The coverage has a gap of 61% for household level connectivity. Availability of water is adequate. There is no consumer level metering which leads to a high NRW. The NRW has to be reduced to 20%. The cost recovery is low and has to be enhanced to 100%.

### **SOURCE OF WATER AND WATER TREATMENT SYSTEM.**

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: What is the existing source of water? Is it surface water source or under ground water source? What is the capacity of these sources?

Ans. The existing water supply is from Surface source from Dakhnpur with 31.25 MLD WTP capacity, Ground water source from Bada Madhapur Collector wells with 20 MLD & 4 MLD from Production wells in different locations in Berhampur

Question: Is there any treatment provided to water from these sources? How much water is required to be treated daily? What is the treatment capacity installed in the city?

Ans. Yes, Surface source with 31.25 MLD WTP capacity is being treated in 4 Treatment Plants at Dakhnpur, Berhampur. The other ground sources are disinfected before supply.

Question: What per capita water supply in LPCD (liter per capita per day) comes out, if you divide total water supply by the total population?

Ans. 134 LPCD

### **DISTRIBUTION ZONES**

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: City is divided in how many zones for water supply?

Ans. City is divided into 24 Zones for water supply purpose.

Question: Provide details of total no of Households (HH) in each zone, no of HH with and without water tap connections in the Table

Ans:-Detailed information given below.

Table: Zone Wise Coverage of Households

**TABLE 1.2: Zone wise coverage of household**

Zone No	Total No of Households	Households with direct water supply Connection	Households without direct water supply connections
1	2518	941	1577
2	3521	1287	2234
3	2692	998	1694
4	2982	1097	1885
5	2834	1049	1785
6	5121	1838	3283
7	2063	784	1279
8	1613	627	986
9	3221	1183	2038
10	2462	917	1545
11	3221	1183	2038
12	3190	1168	2022
13	4942	1776	3166
14	4974	1785	3189
15	3902	1416	2486
16	4075	1477	2598
17	2674	1012	1662
18	1258	503	755
19	2246	846	1400
20	2221	836	1385
21	3569	1302	2267
22	3527	1287	2240
23	3615	1315	2300
24	1829	703	1126
<b>Total</b>	<b>74270</b>	<b>27330</b>	<b>46940</b>

**STORAGE OF WATER**

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: What is the total water storage capacity in the city? What is capacity of elevated and ground water reservoirs?

Ans. The total water storage capacity including on-going projects is 10.37 ML. ESR Capacity 4.46 ML & UGR capacity is 6.91 ML.

Question: In case of surface water, does city need to have ground level reservoirs to store raw treated water?

Ans. There is no requirement to store raw water since adequate pondage is available. However storage capacity for treated water is required.

Question: Is water being supplied to consumers through direct pumping or through elevated reservoirs?

Ans. Both practice are adopted as of now. After completion of ongoing project the supply shall be from ESR.

Question: Is storage capacity sufficient to meet the cities demand?

Ans.No.

## **DISTRIBUTION NETWORK**

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: What is the total length of water supply distribution pipe line laid in the city?

Ans. Total existing water supply distribution pipe line in the city is 142.77 Km and another 154.2 Km pipe laying is in progress. The total pipe line after completion of the project shall be 296.9 Km

Question: What is the total road length in the city? Is the pipe lines are laid in all streets? Is the objective of universal coverage of water supply pipe line is achieved?

Ans. The city has 296.9 Km of road length. After completion of the ongoing project all the street will be covered with pipeline.

Question: What are the kinds of pipe materials used in distribution lines?

Ans. C.I & D.I.

Question: Provide zone wise details of street length with and without water distribution lines in the Table?

Table: Zone Wise length of distribution network

**TABLE 1.3: Zone wise length of distribution network**

<b>Zone No</b>	<b>Total Street Length (Km)</b>	<b>Street length with water distribution pipe line (Km)</b>	<b>Street length without water distribution pipe line (Km)</b>	<b>Remark</b>
1	5.347	5.347	0	Information provided includes existing and ongoing being taken up with separate source of funding
2	14.401	14.401	0	
3	6.048	6.048	0	
4	8.262	8.262	0	
5	12.389	12.389	0	
6	10.778	10.778	0	
7	6.199	6.199	0	
8	10.717	10.717	0	

9	8.947	8.947	0
10	14.721	14.721	0
11	20.626	20.626	0
12	15.408	15.408	0
13	15.173	15.173	0
14	7.824	7.824	0
15	17.44	17.44	0
16	12.375	12.375	0
17	10.335	10.335	0
18	12.424	12.424	0
19	23.225	23.225	0
20	17.536	17.536	0
21	17.674	17.674	0
22	11.814	11.814	0
23	12.715	12.715	0
24	4.569	4.569	0
<b>Total</b>	<b>296.9</b>	<b>296.9</b>	<b>0.0</b>

## INSTITUTIONALFRAMEWORK

Please provide information in 150 words on the above responding to (however not limited to) following questions.

Question: Define role and responsibilities in terms of O&M, policy planning, funding, service provision in table

Table: Functions, roles, and responsibilities Planning and Design

**TABLE 1.4a: Functions, roles, and responsibilities Planning and Design**

Planning and Design	Construction/ Implementation	O&M
Planning and design Cell in EIC (PH) office headed by SE(P&D) and supported by technical cell and PDMC	Project team headed by divisional EE of PHEO along with supervision field engineers (AEE/AE/JE) and supported by PMMU and PDMC. MoU will be signed between PHEO and ULB for execution of the project	O & M team headed by EE of PHEO and supported by operations engineers and operators. MoU will be signed between PHEO and ULB for O & M of the infrastructure. Outsourced PPP model will also be explored.

Question: How city is planning to execute projects?

Ans. The city is planning to execute the ongoing and proposed project through a dedicated field supervision team with hierarchical monitoring by PHEO.

Question: Shall the implementation of project be done by Municipal Corporation or any parastatal body? Please refer para 8.1 of AMRUT guidelines.

Ans. It will be implemented by PHEO, a wing of H&UD Department

## 2. Bridge the Gap

Once the gap between the existing Service Levels is computed, based on initiatives undertaken in different ongoing programs and projects, objectives will be developed to bridge the gaps to achieve universal coverage. (AMRUT Guidelines; para 6.2 & 6.3, Annexure-2; Table 2.1). Each of the identified objectives will be evolved from the outcome of assessment and meeting the opportunity to bridge the gap.

Question: List out initiatives undertaken in different ongoing programs and projects to address these gaps. For this provide details of ongoing projects being carried out for sector under different schemes with status and when the existing projects are scheduled to be completed? Provide information in Table

Table: Status of Ongoing/ Sanctioned

Sl. No.	Name of Project	Scheme Name	Cost (Cr. Rs.)	Month of Completion	Status
1	Improvement of water supply to Berhampur city (distribution Network)	OUIDF	80.00	March 2019	Procurement process initiated
2	Improvement of water supply to Berhampur city (distribution Network)	State Plan	46.92	March 2019	Procurement process initiated

Question: How much the existing system will be able to address the existing gap in water supply system? Will completion of above will improve the coverage of network and collection efficiency? If yes, how much. (100 words)

Ans. After completion of the above project the entire corporation area will be covered and the cost recovery will improve substantially.

Question: Does the city require additional infrastructure to improve the services? What kind of services will be required to fulfill the gap?

Ans. Yes. Additional infrastructures are required to address source reliability. The water to the present WTP is sourced from the irrigation canal system which is closed for 3 months in a year. Also the flow in the system has reduced over the period of time. Hence to ensure source reliability, source improvement is required.

Question: How does the city visualize to take the challenge to rejuvenate the projects by changing their orientation, away from expensive asset replacement programs, to focusing on optimum use of existing assets?

Ans. The service provided has in the past tried to optimally utilize the existing assets before proposing new assets and will continue to adopt the same principle.

Question: Has city conducted assessment of Non-Revenue Water? If yes, what is the NRW level? Is city planning to reduce NRW?

Ans. City has conducted assessment of Non-Revenue Water through indirect methods which is approximately 38.00%. Yes the city has plans to reduce NRW by way of introduction of HH level metering, reducing illegal connections and reducing technical losses.

Question: Based on assessment of existing infrastructure and ongoing / sanctioned projects, calculate existing gaps and estimated demand by 2021 for water supply pipe network, number of household to be provided with tap connections, and required enhancement in capacity of water source/ treatment plant (MLD). Gaps in water supply service levels be provided as per Table.

**TABLE 1.5: Gaps in water supply service levels**

Component	2015			2021	
	Present	Ongoing projects	Total	Demand	Gap
Source (MLD) -Surface Source	31		31	73	<b>42</b>
Treatment capacity (MLD)	31		31	73	<b>42</b>
Elevated Storage capacity (ML)	4.46	19.9	24.36	24.3	<b>0.0</b>
Distribution network coverage (m)	208993	87954	296947	296947	<b>0</b>

**Note : The gaps have been generated due to the addition of new area into the ULB limits. However efforts have been made to optimally utilize the existing infrastructures to cater to the demand of new area.**

#### **OBJECTIVES**

Based on above, objectives will be developed to bridge the gaps to achieve universal coverage. While developing objectives following question shall be responded so as to arrive at appropriate objective.

Please provide List out objectives to meet the gap in not more than 100 words.

Question: Does each identified objectives will be evolved from the outcome of assessment?

Each of the objective have been evolved from the outcome assessment. Which can be listed as follows

1. Ensure quality to water
2. Universal household level access with adequate water
3. Reduce NRW thereby increase the coverage & cost recovery

Question: Does each objective meet the opportunity to bridge the gap?

Ans. Yes each of the objective meets the opportunity to bridge the gaps.

#### **3.Examine Alternatives and Estimate Cost**

The objective will lead to explore and examine viable alternatives options available to address these gaps.. These will include out of box approaches. (AMRUT Guidelines; Para 6.4 & 6.8 & 6.9). This will also include review of smart solutions. The cost estimate with broad source of funding will be explored for each. While identifying the possible activities, also examine the ongoing scheme and its solutions including status of completion, coverage and improvement in O&M. Please provide information on the above responding to (however not limited to) following questions.

Question: What are the possible activities and source of funding for meeting out the objectives? (75 words)

Ans.State plan & OUIDF for improving the coverage

AMRUT for improving the source, house service connection and rehabilitation

Question: How can the activities be converged with other programme like JICA/ADB funded projects in the city etc?(100words)

Ans.The program is being converged with OUIDF, State Plan and RAY project

Question: What are the options of completing the ongoing activities?(75words)

Ans.Balance funding through state budgetary support

Question: How to address the bottlenecks in the existing project and lessons learnt during implementation of these projects? (75 words)

Ans.Availability of land is the major bottle neck which have been specifically addressed prior to preparation of SLIP for the AMRUT projects. Technically feasible lands have been identified and the concerned authorities have been moved for transfer of land.

Question: What measures may be adopted to recover the O&M costs?(100words)

Ans.Cost recovery is being proposed by increasing the consumer base and reducing the operational cost.

Question: Will metering system for billing introduced?

Ans. Yes.

Question: Whether reduction in O&M cost by addressing NRW levels be applied? (75 words)

Ans.Yes, O & M cost will be reduced by reducing the NRW levels.

Question: Does each objective meet the opportunity to bridge the gap?

Ans.Yes

The alternative activities to meet these activities be defined as per table.

Table: Alternative Activities To Meet Objectives

**TABLE 1.6: Alternative Activities to Meet Objectives**

Sr. No.	Objective	Activities	Financing Source
1	Quality water supply	Rehabilitation of venerable stretches	UIDF, State Plan & AMRUT
2	Adequacy of water	Treatment facility	AMRUT & State Plan
3	Universal coverage	Network expansion and house connection	UIDF, State Plan & AMRUT
4	NRW reduction	Consumer metering & leak reduction	UIDF, State Plan & AMRUT
5	Cost recovery	Coverage & NRW reduction	

#### **4. Citizen Engagement**

ULBs will organize and conduct city level citizen consultation and receive feedback on the suggested alternatives and innovations. Each alternative will be discussed with citizens and activities to be taken up will be prioritized to meet the service level gaps. ULB will prioritize these activities and their scaling up based on the available resources. (AMRUT Guidelines; Para 6.6, 6.7 & 7.2). Please explain

following questions in not more than 200 words detailing out the needs, aspirations and wishes of the local people.

Question: Has all stakeholders involved in the consultation?

Ans. Yes

Question: Has ward/ zone level consultations held in the city?

Ans. Yes.

Question: Has alternative proposed above are crowd sourced?

Ans. Yes.

Question: What is feedback on the suggested alternatives and innovations?

Ans. The suggested alternatives quite acceptable to the stake holders

Question: Has alternative taken up for discussions are prioritized on the basis of consultations?

Ans. Yes, the alternatives taken up have been prioritized on the basis of consultation.

Question: What methodology adopted for prioritizing the alternatives?

Ans. Cost benefit analysis

## **5. Prioritize Projects**

Based on the citizen engagement, ULB will prioritize these activities and their scaling up based on the available resources to meet the respective objectives. While prioritizing projects, please reply following questions in not more than 200 words.

Question: What are sources of funds?

Ans. State Plan, OUIDF and AMRUT

Question: Has projects been converged with other program and schemes?

Ans. Yes

Question: Has projects been prioritized based on "more with less" approach?

Ans. Yes

Question: Has the universal coverage approach indicated in AMRUT guidelines followed for prioritization of activities?

Ans. Yes

## **6. Conditionalities**

Describe in not more than 300 words the Conditionalities of each project in terms of availability of land, environmental obligation and clearances, required NOC, financial commitment, approval and permission needed to implement the project.

**Ans.** Lands is available for the proposed infrastructures. Environmental clearances are not required proposed project. Water for the 2 MLD WTP will be drawn from the existing intake which already has a water drawal permission. Power availability has been discussed with NESCO and agreed upon.

## 7. Resilience

Required approvals will be sought from ULBs and competent authority and resilience factor would be built in to ensure environmentally sustainable water supply scheme. Describe in not more than 300 words regarding resilience built in the proposals.

Ans: The projects are environmentally sustainable and also disaster resilient.

## 8. Financial Plan

The State has identified 5 Water Supply projects with an estimated cost of Rs. 386.37 Cr. to achieve universal coverage as envisaged under AMRUT. The completion period of these projects is by the year 2019-20. The water supply projects shall be implemented by a parastatal agency, i.e. Public Health Engineering Organization (Urban). As the own revenue of ULBs is insufficient, the State has taken a decision to meet ULB share from within state resources and funds. Therefore, all infrastructure development projects under AMRUT will be funded by Centre/State grants or loan funds by state agencies. Accordingly, the present investment on AMRUT projects is on the basis of 50 percent fund as grant from Centre and 50 percent fund that will be met by State Government grant. The state share will be met from funds budgeted for the Housing and Urban Development Department. In the case of Bhubaneswar however, the water supply project is proposed for implementation through PPP and State Government share by way of VGF (Viability Gap Funding) will predicate on the response to the PPP offering. Based on the above financial plan the specific responses to the questionnaires given in the template are as under:

- **How the proposed finance plan is structured for transforming and creating infrastructure projects?**

The financial plan is made considering 50 % Central grant and 50% state grant. Since the ULB do not have the financial capability, no share has been considered from ULBs. Nevertheless, the state government has taken proactive steps to amend Municipal Corporation and Odisha Municipalities Act to amend property tax to improve the revenue stream of the ULBs. This will help the service provider manage the O & M expenses (OPEX) and move towards financial sustainability. The state shall provide budgetary support fill up the financial gaps if any.

- **List of individual project which is being financed by various stakeholders?**

All the projects listed are planned under AMRUT on the basis of 50 % Central grant and 50% state grant. Soft loan from funding agencies will be explored which will form part of ULB contribution. However, the state share will not be less than 20%.

- **Has financial plan prepared for identified projects based on financial convergence and consultation with funding partners?**

Yes, the project identified here does not include the ongoing projects covered under other schemes. As all the identified projects are funded under AMRUT on 50:50 basis, consultation with external funding partners is not required. However, consultation for involving other funding partners will be explored to achieve the objective of the mission.

- **Is the proposed financial structure sustainable? If so then whether project has been categorized based on financial considerations?**

Yes, the financial structure proposed is sustainable. The state govt. is committed to contribute required funds for all AMRUT projects. However, the O&M cost for these projects will be met from internal resources including collection of user charges. The projects have been categorized based on gap analysis identified for universal coverage as required under AMRUT scheme.

- **Have the financial assumptions been listed out?**

Yes, the financial assumption of 50% grant by the State Government is committed and listed.

- **Does financial plan for the complete life cycle of the prioritized development?**

Yes, projects proposed include O&M for 5 years, which shall form an integral part of the execution contract so that the agency/contractor who develops the assets shall be responsible for post asset creation O&M for 5 years. The O&M cost for Water Supply shall be borne by the PHEO, which is provided with budgetary support for both CAPEX and OPEX by the State Government.

- **Does financial plan include percentage share of different stakeholders (Centre, State, and ULBs)**

Yes, the financial plan is based on 50 % Central grant and 50% state grant.

- **Does it include financial convergence with various ongoing projects?**

Yes, it includes convergence with various ongoing projects under different schemes supported by both Central & State grant.

- **Does it provide year-wise milestones and outcomes?**

Yes, the detailed milestones and outcomes are furnished at table 2.1.

Details in financial plan shall be provided as per table 8.1, 8.2, 8.3, 8.4 and 8.5. These tables are based on amrut guidelines tables 2.1, 2.2, 2.3.1, 2.3.2, and 2.5.

**TABLE 2.1: Master Plan of Water Supply Projects for Mission period**

Sr. No.	Project Name & code	Priority number	Year in which to be implemented	Year in which proposed to be completed	Estimated Cost (Cr. Rs.)
1	Improvement of WS to Berhampur -Rehabilitation P1 (AMRUT/OD/BERHAMPUR/WS/01)	1	15-16	16-17	20.50
2	Improvement of WS to Berhampur -Rehabilitation P2 (AMRUT/OD/BERHAMPUR/WS/02)	2	15-16	16-17	15.76
3	Improvement of WS to Berhampur -Rehabilitation P3 (AMRUT/OD/BERHAMPUR/WS/03)	3	15-16	16-17	11.93
4	Improvement of WS to Berhampur -Rehabilitation P4 (AMRUT/OD/BERHAMPUR/WS/04)	4	15-16	16-17	6.56
8	Improvement of WS to Berhampur - Headworks P1 (AMRUT/OD/BERHAMPUR/WS/05)	5	15-16	18-19	331.62
	<b>TOTAL</b>				<b>386.37</b>

**TABLE 2.2: Master Service Level Improvement during Mission period**

Sr. No.	Project Name & code	Physical Component	Change in Service Levels			Estimated Cost (Cr. Rs.)
			Indicator	Existing (As-Is)	After (To-be)	
1	Improvement of WS to Berhampur -Rehabilitation P1 (AMRUT/OD/BERHAMPUR/WS/01)	DG set & metering	Continuity	1 hr	24 hr	20.50
2	Improvement of WS to Berhampur -Rehabilitation P2 (AMRUT/OD/BERHAMPUR/WS/02)	Replacement pipes	Quality	100% C	100% A	15.76
3	Improvement of WS to Berhampur -Rehabilitation P3 (AMRUT/OD/BERHAMPUR/WS/03)	Replacement pipes	Quality	100% C	100% A	11.93
4	Improvement of WS to Berhampur -Rehabilitation P4 (AMRUT/OD/BERHAMPUR/WS/04)	Replacement pipes	Quality	100% C	100% A	6.56
8	Improvement of WS to Berhampur - Headworks P1 (AMRUT/OD/BERHAMPUR/WS/05)	Surface Source Development	Per capita water supply	134	135	331.62

**NOTE**

The surface source development is proposed to ensure reliability of water supply from surface source

**TABLE 2.3.1a: Total Fund Sharing Pattern for water supply projects during mission period**

Sr. No.	Name of Project & code	Total Project Cost (Cr. Rs.)	Share (Amount in Cr. Rs.)				
			GOI	State	ULB	Others	Total
1	Improvement of WS to Berhampur -Rehabilitation P1(AMRUT/OD/BERHAMPUR/WS/01)	20.50	10.25	10.25			20.50
2	Improvement of WS to Berhampur -Rehabilitation P2(AMRUT/OD/BERHAMPUR/WS/02)	15.76	7.88	7.88			15.76
3	Improvement of WS to Berhampur -Rehabilitation P3(AMRUT/OD/BERHAMPUR/WS/03)	11.93	5.96	5.96			11.93
4	Improvement of WS to Berhampur -Rehabilitation P4(AMRUT/OD/BERHAMPUR/WS/04)	6.56	3.28	3.28			6.56
8	Improvement of WS to Berhampur - Headworks P1 (AMRUT/OD/BERHAMPUR/WS/05)	331.62	165.81	165.81			331.62
	<b>Total</b>	<b>386.37</b>	<b>193.18</b>	<b>193.18</b>	-	-	<b>386.37</b>

**TABLE 2.3.1b: Annual Fund Sharing Pattern for water supply projects**

Sr. No.	Name of Project & code	Total Project Cost (Cr. Rs.)	Share (Amount in Cr. Rs.)				
			GOI	State	ULB	Others	Total
1	Improvement of WS to Berhampur -Rehabilitation P1(AMRUT/OD/BERHAMPUR/WS/01)	20.50	5.12	5.12			10.25
2	Improvement of WS to Berhampur -Rehabilitation P2(AMRUT/OD/BERHAMPUR/WS/02)	15.76	3.94	3.94			7.88
3	Improvement of WS to Berhampur -Rehabilitation P3(AMRUT/OD/BERHAMPUR/WS/03)	11.93	2.98	2.98			5.96
4	Improvement of WS to Berhampur -Rehabilitation P4(AMRUT/OD/BERHAMPUR/WS/04)	6.56	1.64	1.64			3.28
8	Improvement of WS to Berhampur - Headworks P1 (AMRUT/OD/BERHAMPUR/WS/05)	331.62	-	-			-
	<b>Total</b>	<b>386.37</b>	<b>13.69</b>	<b>13.69</b>	-	-	<b>27.37</b>

**TABLE 2.3.2: Annual Fund Sharing break up for water supply project**

All Amount in Crores of Rs.

Sr. No.	Project Name & code	Gol	State			ULB			Convergence	Others	Total
			14 <sup>th</sup> FC	Others	Total	14 <sup>th</sup> FC	Others	Total			
1	Improvement of WS to Berhampur - Rehabilitation P1 (AMRUT/OD/BERHAMPUR/WS/01)	5.12		5.12	5.12					10.25	
2	Improvement of WS to Berhampur - Rehabilitation P2 (AMRUT/OD/BERHAMPUR/WS/02)	3.94		3.94	3.94					7.88	
3	Improvement of WS to Berhampur - Rehabilitation P3 (AMRUT/OD/BERHAMPUR/WS/03)	2.98		2.98	2.98					5.96	
4	Improvement of WS to Berhampur - Rehabilitation P4 (AMRUT/OD/BERHAMPUR/WS/04)	1.64		1.64	1.64					3.28	

8	Improvement of WS to Berhampur - Headworks P1 (AMRUT/OD/BERHAMPUR/WS/05)	-	-	-	-	-	-	-	-	-
<b>Total</b>		<b>13.69</b>	<b>-</b>	<b>13.69</b>	<b>13.69</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>27.37</b>

**TABLE 2.5: Year wise Plan for Service Level Improvement**

Proposed Project	Project Cost in Cr. Rs.	Indicator	Baseline	Annual Targets						
				(Increment from the Baseline Value)						
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020	
				H1	H2					
Proposed under OUIDF & State Plan	126.92									
Proposed under AMRUT	386.37									
		Coverage of water supply connections	39%	39%	40%	45%	60%	100%	100%	
		Per capita supply of water	134	135	135	135	135	135	135	
		Extent of metering of water connections	0%	0%	2%	10%	40%	80%	100%	
		Extent of non-revenue water	38%	37%	35%	30%	25%	20%	20%	
		Quality of water supplied	100%	100%	100%	100%	100%	100%	100%	
		Cost recovery in water supply services	56%	56%	58%	60%	80%	90%	100%	
		Efficiency in collection of water supply related charges	46%	46%	50%	60%	80%	100%	100%	

# Storm Water Drainage

## **I. Assess the Service Level Gap**

The first step is to assess the existing situation and service levels gaps for Storm Water Drainage (AMRUT Guidelines; para 3 & 6). This will also include existing institutional framework for the sector. AMRUT is focused on improvement in service levels. The zone wise data shall be used in identifying the gaps. These zone-wise gaps will be added to arrive at city level service gaps. While assessing service level gap reply following questions not more than word indicated against each question.

### **1.1 . What kind of baseline information is available for storm water drainage system of the city? Detail out the data, information, plans, reports etc related to sector. Is zone wise information available? (75 words)**

There are 40 Wards in BeMC area. The package wise existing SWD is enclosed.

Package-1	-	12.7 Kms.
Package-2	-	13.365 Kms.
Package-3	-	12.16 Kms.
Package-4	-	<u>15.5 Kms.</u>
<b>TOTAL</b>		<b>53.725 Kms</b>

Total length of Drain – 161.94 Kms.

### **1.2. Have you collected data from census and other sources? Are you aware of baseline survey data of MoUD? Have you correlated data from these and other sources? (75 words)**

Census data of 2011 is available with BeMC and based on this data. The Ward-wise existing storm water drain have been prepared. We are not aware of baseline survey data of MoUD. We have not correlated on this and other sources.

### **1.3 What is existing service levels for storm water drainage in the city? What is the coverage of drains? What are the no of incidence of sewerage mixing in the drains? How many times water logging incidence happens in the city? Provide comparative information of service levels (in tabulated form) with respect to the service level bench marks prescribed by MoUD and sustainable standards for service levels under the National Mission on Sustainable Habitat (NMSH) in table 1.1**

Sr. No.	Indicators	Sustainable standards	Black (Caution for improvement)	Red (Immediate action for improvement)	Present Status
1	Coverage of Storm water drainage network	100%	<75%	<50%	42.55%
2	Incidence of sewerage mixing in the drains <sup>1</sup>	0%	<25%	<50%	37.9%
3	Incidence of water logging <sup>2</sup> (in nos. per year)	0	<25	<50	20%

Table 1.1 : Status of Storm Water Level Service levels

**1.4: What is the gap in these service levels with regard to benchmarks prescribed by MoUD and sustainable standards for service levels under the National Mission on Sustainable Habitat (NMSH)?(75 words)**

As per the Table 1.1 the gaps are as follows:

1. Coverage of Storm water drainage network - 57.45%
2. Incidence of sewerage mixing in the drains - 37.9%
3. Incidence of water logging<sup>3</sup> (in nos. per year) – 20%

**1.5 What are major challenge facing the city in regard to achieving these service level benchmarks?**

1. Due to inadequate construction of SWD – 230.57 Kms.
2. Non-existence of Sewerage system in the City.
3. Lack of adequate drain in water logged areas.

<sup>1</sup>Incidence of sewerage mixing in the drains are ratio of no of households discharging wastewater directly into the drains to the total no of households.

<sup>2</sup> No of times water logging is reported in a year, at flood prone points in the city

<sup>3</sup> No of times water logging is reported in a year, at flood prone points in the city



**1.6: Identify gaps in capacity in managing the services efficiently and also provide an innovative solution for efficiently managing these services.**

Recently Tata Consulting Engineers have been engaged for preparation of Master Plan of SWD system and DPR for Roads and Drains under ODRP funded by World Bank, The survey works is under Progress and the DPR preparation is likely to be completed by 1<sup>st</sup> week of January 2016.

**1.7: Brief the ongoing drainage projects in the city. The components included in these projects, how and up to what extent it will support to the drainage system of the city. Weather it address all the issues related to drainage?**

There are no ongoing SWD projects being implemented in the City.

**2.0 Coverage of drains \*\***

*Please provide information in 150 words on the above responding to (however not limited to) following questions.*

**2.1: Describe how at present, the storm water of City is drained off? How many natural and manmade drains are exists and their coverage with respect to road network?**

Existing length of SWD- 161.94 Kms.  
Coverage Percentage – 42.55%

**2.2 What is the capacity and condition of these drains? Is sufficient to carry the peak flow of the catchment/water shed?**

The condition of all the drains are not good and is not sufficient to carry the peak flow.

**2.3 Does city have separate storm water drainage network? If no, provide the information regarding locations of gray water mixes with the existing drains in table 1.2. In case of mixed drainage how it works in peak rainy days?**

The City has no separate SWD system. In all the 40 wards grey water mixes with the existing drains.

All are combined system all across the city, gray water mixes with the storm water.

S.No.	Sewer Zone/ Ward No	Location	Merging with which sewer
1.		All area	

Table 1.2: Detail of Locations where storm water get mixed with sewer

**2.4 In case of mixed drainage how it works in peak rainy days?**

In peak rainy days, it is not able to carry the combine discharge. Hence water logging occurs.

### 3.0 Water Logging

Please provide information in 150 words on the above responding to (however not limited to) following questions.

#### 3.1 Presently how the problem of water logging is handled? Is it provides the satisfactory outcome?

By using machinery, desilting of Nalas/ Drains are carried out to facilitate draining out excess water. However it does not work satisfactorily.

#### 3.2 Provide details of flood points/areas prone to frequent water logging with special focus on Key road intersections, along roads (50 mt length or more) and Locality (affecting 50 HH or more) in the Table 1.2.

S.No.	Area	No of points	No of times water logging reported in a year ( stagnant water for more than four hours of a depth more than 6" )
1	Key road intersection	a. Corporation Road and Aska Road intersection b. Gajapati Nagar and NH-59 intersection c. Ambapua and NH-15	1
2	Along roads ( 50 mt length or more)	Gajapati Nagar, Neelanchal Nagar, Tulsi Nagar, Sri Ram Nagr, NeeladriVihar, Bhabani Nagar, Banka Bihari Nagar, Radha Krishna BilaSahi, Bank Colony near All India Radio, Jyoti Nagar, Jayaprakash Nagar, Banchhanidhi Nagar,	1
3	Locality (affecting 50 HH or more)	Saradhaballi, Basudevsnagar, Kalinga Nagar, Kautakinagar, Mayuri Vihar, Badriraj Nagar, Sadananda Vihar (Gosaninuagan) Patitapaban Nagar, Dharma Nagar, Spectrum Colony, Gandhi Nagar 7 <sup>th</sup> Lane to 10 <sup>th</sup> lane	2

Table 1.2: Flood prone points in the city

### 4.0 Chocking of drains

Please provide information in 150 words on the above responding to (however not limited to) following questions.

#### 4.1 Provide details of flood points/areas prone to frequent water logging with special focus on Key road intersections, along roads (50 mt length or more) and Locality (affecting 50 HH or more) in the Table 1.2.

S.No.	Ward No	Location	Stretch Length Affected
1.	14	Gandhi Nagar	400mts
2.	31	Gajapati Nagar	950mts
3.	9,34,14,16,21,36	Neelanchal Nagar, Tulsi Nagar, Sri Ram Nagr, Neeladri Vihar, Bhabani Nagar, Banka Bihari Nagar, Radha Krishna BilaSahi, Bank Colony near All India Radio, Jyoti Nagar, Jayaprakash Nagar, Banchhanidhi Nagar,	4500 mts
4.	36,37,28,25,14	Saradhaballi, Basudevsnagar, Kalinga Nagar, Kautakinagar, Mayuri Vihar, Badriraj Nagar, SadanandaVihar (Gosaninuagan) Patitapaban Nagar, Dharma Nagar, Spectrum Colony, Gandhi Nagar 7 <sup>th</sup> Lane to 10 <sup>th</sup> lane	3200 mts

Table 1.2: Detail of Locations prone to chocking of drains due to solid waste

#### 4.2 How presently the problem is addressed?

The choking of drain is cleared by clearing the solid waste dumped in the drains by the Solid waste pickers.

## 5.0 Institutional Framework

Please provide information in 150 words on the above responding to (however not limited to) following questions.

**5.1 Define role and responsibilities in terms of O&M, policy planning, funding, service provision in table 1.3. Is it in accordance with the AMRUT guidelines (Clause 8.1)?**

Planning and Design	Construction/ Implementation	O&M
BeMC, Berhampur	BeMC, Berhampur	BeMC, Berhampur
Drainage Division, Berhampur	Drainage Division, Berhampur	Drainage Division, Berhampur

Table 1.3: Functions, roles, and responsibilities

**5.2 How city is planning to execute projects?**

The ULB is planning to execute the project by open tendering process, done as per OPWD code and procurement guideline of World Bank.

**5.3 Shall the implementation of project be done by Municipal Corporation? If no, weather resolution has been passed by the Municipal Corporation and accordingly, a tripartite Memorandum of Understanding (MoU) between State Government, Municipal Corporation and Parastatal has been signed? Please refer para 8.1 of AMRUT guidelines.**

Yes, it will be implemented by BeMC.

## II. Bridge the Gap

Once the gap between the existing Service Levels is computed, based on initiatives undertaken in different ongoing programs and projects, objectives will be developed to bridge the gaps to achieve universal coverage. (AMRUT Guidelines; para 6.2 & 6.3, Annexure-2; Table 2.1). Each of the identified objectives will be evolved from the outcome of assessment and meeting the opportunity to bridge the gap.

**1.1 List out initiatives undertaken in different ongoing programs and projects to address these gaps. For this provide details of ongoing projects being carried out for sector under different schemes with status and when the existing projects are scheduled to be completed? Provide information in Table**

Tata Consulting Engineers is entrusted with the preparation of Master Plan for SWD and DPR for Roads and SWDs. They will submitting the DPR in the 1<sup>st</sup> week of January 2016.

Table 1.4: Status of Ongoing/ Sanctioned

S. No.	Name of Project	Scheme Name	Cost	Month of Completion	Status (as on ddrmm 2015)
1.	None	None	None	None	None

**1.2 How much the existing system will able to address the existing gap in storm water drainage system? Will completion of above improve the coverage of network; eliminate the chocking of drains and water stagnation problem? If yes, how much. (100 words)**

8.1 Kms length of SWD will be taken up by ODRP.

222.47 Kms. Length of SWD will be by AMRUT.

**1.3 Does the city require additional infrastructure to improve the services? What kind of services will be required to fulfill the gap?**

Yes. The city would require Branch drain (left out primary, secondary & tertiary drainages) over the drain to connect to the main drain, hence covering of the complete drainage system.

**1.4 How does the city visualize to take the challenge to rejuvenate the projects by changing their orientation, away from expensive asset replacement programs, to focusing on optimum use of existing assets?**

The necessary has to be constructed, but if there is possibility of rejuvenation would be considered first. Covering of the drains needs to be looked after as this could solve major gaps in the existing sector.

**1.5 Has city conducted assessment of O&M cost of drains and potable pumps? if yes, what is it? Is city planning to reduce it?**

Repairing and desilting as in when required is done as part of the maintenance, which is generally once in a year. An approx. cost of 1cr is spent on maintenance. Yes the BeMC is trying to reduce the cost.

**1.6 Based on assessment of existing infrastructure and ongoing / sanctioned projects, calculate existing gaps and estimated demand by 2021 for Rejuvenation of existing drains, construction of new primary and secondary drains, construction of pump house with pumping machinery, covering of drains. Gaps in Storm water drainage service levels are provided as per Table 1.5.**

Approximately Rupees 400 Crs. required

**1.7 Provide details of flood points/areas prone to frequent water logging with special focus on Key road intersections, along roads (50 mt length or more) and Locality (affecting 50 HH or more) in the Table 1.5.**

Component	2015			2021	
	Present	Ongoing projects	Total	Demand	Gap
Major Drains (new construction)	0	0	0	8.1	8.1
Network requirement to provide proper drainage to all identified water stagnation point/ flooding points up to the end discharge point (in Km)	383.41	0	383.41	383.41	383.41
Network length where households discharging wastewater directly into the drains	144.21	0	144.21	144.21	144.21
Rejuvenation of existing primary drains and primary drains including covering and installation of filter	53.725	0	53.725	53.725	53.725

**1.8 Whether these gaps presented in measurable/ execution able ways considering all the ongoing projects? (75 words)**

Yes, the gap considered has taken up the consideration of the existing project that is creation of the major / primary drains that is of length 8.1 km.

## **2.0 Objectives**

Based on above, objectives will be developed to bridge the gaps to achieve universal coverage. While developing objectives following question shall be responded so as to arrive at appropriate objective.

### **2.1 Does each identified objectives will be evolved from the outcome of assessment?**

Yes, the objective has been evolved from the SLB assessment which tries to fill the gap in order to achieve the 100% universal coverage.

### **2.2 Does each objective meet the opportunity to bridge the gap?**

Yes, all the objectives has been derived keeping in mind the existing opportunities which would probably try to bridge the existing gap in order to achieve the 100% universal coverage.

### **2.3 Does objectives clearly address all these gaps /solution to all the problems related to storm water drainage of the city?**

Yes, each of the objective has been formulated in order to bridge the existing gap and find solution to all the problems related to storm water drainage of the city.

Please provide List out objectives to meet the gap in not more than 150 words.

## **III. Examine Alternatives and Estimate Cost**

The objective will lead to explore and examine viable alternatives options available to address these gaps. These will include out of box approaches. (AMRUT Guidelines; Para 6.4 & 6.8 & 6.9). This will also include review of smart solutions. The cost estimate with broad source of funding will be explored for each. While identifying the possible activities, also examine the ongoing scheme and its solutions including status of completion, coverage and improvement in O&M. Please provide information on the above responding to (however not limited to) following questions.

### **1.1 Does all these gaps clearly identified and addressed? (75 words)**

It is being identified. Tata Consulting Engineers is preparing Master Plan for SWD and Preparation of DPR for Roads & SWDs. The DPR will be submitted in the first week of January 2016. In the DPR, detailed cost estimates will be provided.

### **1.2 What are the possible activities and source of funding for meeting out the objectives? (75 words)**

The possible activities are as follows:

- 1) Construction of RCC drain with cover slabs
- 2) Renovation and repair of the existing drains
- 3) Construction of SW channels
- 4) Desilting of existing drains
- 5) Frequent Cleaning of SWD channel.

The major funding of the above sector has been three folded that is central, state and BeMC.

**1.3 How can the activities be converged with other programme like SBM/Smart city mission projects in the city etc.? (i.e. convergence with other schemes)(100 words)**

The convergence of the activity cannot be done for the city as the city is not covered in any of the major mission like SBM/ Smart city mission. However, the AMRUT and World Bank schemes will be implemented which will help in improving the SWD of the city.

**1.4 What are the options (financial alternatives) of completing the ongoing activities specially on going JnNURM projects? (75 words)**

As the SWD sector is not covered under the JnNURM/UIDSSMT etc for Berhampur city. So there are no other mission which would cater as a financial alternative. Further there is no major ongoing activity on the sector for the city.

**1.5 What are the lessons learnt during implementation of similar projects? (100 words)**

There has been an issue related to execution of the similar project. There exists local and site specific issues. Further there are also encroachment & eviction of the property adjacent to the SWD.

Also there are various service lines like cable line/ service lines/ phone line laid with the SWD which creates an unnecessary delay in O&M and also renovation of the SWD. Also, there has been shortage of staff, lack of skilled personnel, training. The BeMC also need proper capacity building for the staffs and the service providers who can improvise the day to day activities. It is felt that Covering of drains is very necessary for maintaining hygienic. Further it helps in maintenance as scope of desilting is reduced considerably.

**1.6 Have you analyzed best practices and innovative solutions in sector? Is any of the practice be replicated in the city?(75 words)**

We have not analysed.

**1.7 What measures may be adopted to recover the O&M costs?(100 words)**

There is need of creation of Awareness among the people. Further there it is needed to cover the drains and there should be Adequate design / renovation of the existing drains.

**1.8 Whether reduction in O&M cost by energy efficient pumps etc be applied?(75 words)**

There are no pumps used in the city.

**1.9 Are different options of PPP such as Design-build-Operate-Transfer (DBOT), Design Built Finance Operate and Transfer (DBFOT) are considered?(100 words)**

Sr. No.	Objective	Activities	Financing Source
1	To Have Complete Coverage Of The Storm Water Network	Augmentation Of The SWD Network	State / Central/ BeMC
		Creation of the new network	
2	To reduce the flooding points and its flooding time	Covering of the SWD	
		Improving the SWM under Swatch Bharat Mission & AMRUT initiatives	
		Creating the pumping facility	
3.	To reduce the backflow of the flooding water	Creating the pumping facility	
		Creating the Swiss gate facility	

There is no drainage tax or fee.

The alternative activities to meet these activities be defined as per Table 1.6

#### **IV. Citizen Engagement**

ULBs will organize and conduct city level citizen consultation and receive feedback on the suggested alternatives and innovations. Each alternative will be discussed with citizens and activities to be taken up will be prioritized to meet the service level gaps. ULB will prioritize these activities and their scaling up based on the available resources. (AMRUT Guidelines; Para 6.6, 6.7 & 7.2). Please explain following questions in not more than 200 words detailing out the needs, aspirations and wishes of the local people.

##### **1.1 Has all stakeholders involved in the consultation?**

All the major stakeholder has been included in the consultancy workshop. This includes socialworkers, advocates, senior citizen, social activist, media persons, council members etc.

##### **1.2 Has ward/ zone level consultations held in the city?**

No zone level consultations held in the city.

##### **1.3 Has alternative proposed above are crowd sourced?**

No.

##### **1.4 What is feedback on the suggested alternatives and innovations?**

No.

##### **1.5 Is any new potential alternative is received? If so, how it is addressed?**

No.

##### **1.6 Has alternative taken up for discussions are prioritized on the basis of consultations?**

No.

##### **1.7 What methodology adopted for prioritizing the alternatives?**

Our approach has been taken up with the consideration of prioritizing the more problematic area with less problematic area as the city is flood affected.

#### **V. Prioritize Projects**

Based on the citizen engagement, ULB will prioritize these activities and their scaling up based on the available resources to meet the respective objectives. While prioritizing projects, please reply following questions in not more than 200 words.

##### **1.1 What are sources of funds?**

The major sources of State fund / BeMC fund/ World Bank

##### **1.2 Has projects been converged with other program and schemes?**

Yes. But partly and indirectly with the SWM, for choking of the drains

##### **1.3 Has projects been prioritized based on “more with less” approach?**

Our approach has been taken up with the consideration of prioritizing the more problematic area with less problematic area as the city is flood affected.

##### **1.4 Has the universal coverage approach indicated in AMRUT guidelines followed for prioritization of activities?**

Yes, we have taken up approach to completely solve (Universal coverage that is 100% coverage) the problem of SWD.

## **VI. Conditionalties**

Describe in not more than 300 words the Conditionalties of each project in terms of availability of land, environmental obligation and clearances, required NOC, financial commitment, approval and permission needed to implement the project. \*\* (Plz : attach pages)

As the project is for Storm Water Drainage so no major land is required. However, it is necessary for the pump house. There is requirement of environmental clearance and the NOC for the outfall points.

The financial commitment, approval and permission is needed to be implement for the project from the necessary department.

## **VII. Resilience**

Required approvals will be sought from ULBs and competent authority and resilience factor would be built in to ensure environmentally sustainable storm water drainage scheme. Describe in not more than 300 words regarding resilience built in the proposals. \*\* (Plz : attach pages)

The BOD and the COD of the storm should be lower down to the necessary level such that it doesn't affect the nearby environment.

Further the possibility of the necessary ground water recharge for the area should be considered.

## **VIII. Financial Plan**

Once the activities are finalized and prioritized after consultations, investments both in terms of capital cost and O&M cost has to be estimated. (AMRUT Guidelines; para 6.5) Based on the investment requirements, different sources of finance have to be identified. Financial Plan for the complete life cycle of the prioritized development will be prepared. (AMRUT Guidelines; para 4, 6.6, 6.12, 6.13 & 6.14). The financial plan will include percentage share of different stakeholders (Centre, State and City) including financial convergence with various ongoing projects. While preparing finance plan please reply following questions in not more than 250 words

- **How the proposed finance plan is structured for transforming and creating infrastructure projects?**

The financial plan is made considering 50 % Central grant and 50% state grant. Since the ULB do not have the financial capability, no share has been considered from ULBs.

- **List of individual projects which are being financed by various stakeholders?**

All the projects listed are planned under AMRUT on the basis of 50 % Central grant and 50% state grant.

- **Has financial plan prepared for identified projects based on financial convergence and consultation with funding partners?**

Yes, as all the identified projects are funded under AMRUT on 50: 50 basis, consultation with other funding partners is not required. However, consultation for involving other funding partners will be explored to achieve the objective of the mission.

- **Is the proposed financial structure is sustainable? If so then whether project has been categorized based on financial considerations?**

Yes, the financial structure proposed is sustainable. The state govt. is committed to contribute required funds for completing the projects. However, the O&M cost for these projects will be met from internal resources including collection of user charges. The projects have been categorized based on gap analysis identified for universal coverage as required under AMRUT scheme.

- **Have the financial assumptions been listed out?**

Yes, the financial assumption has been listed to work out the operational sustainability.

- **Does financial plan for the complete life cycle of the prioritized development?**

Yes, the financial plan takes care of apart from infrastructure cost, the O&M requirement of project life cycle. It will be possible to be sustained throughout the life cycle.

- **Does financial plan include percentage share of different stakeholders (Centre, State, and ULBs)**

Yes, the initial sharing of financial plan is based on 50 % Central grant and 50% state grant.

- **Does it include financial convergence with various ongoing projects?**

Yes, it includes various ongoing projects under different schemes supported by both Central & State grant.

- **Does it provide year-wise milestones and outcomes?**

Yes, it has been provided as per detailed furnished at table 1.7

Details in financial plan shall be provided as per Table 1.7,1.8,1.9,1.10 and 1.11. These tables are based on AMRUT guidelines tables 2.1, 2.2,2.3.1,2.3.2, and 2.5.

**Table 1.7 Master Plan of Storm Water Drainage Projects for Mission period (As per Table 2.1of AMRUT guidelines)**

Sr. No	Project Name	Priority number	Year in which to be implemented	Year in which proposed to be completed	Estimated Cost
1	Improvement of SWD in Berhampur City in zone 4AMRUT/OD/BERHAMPUR/SWD/04	1	2015-16	2016-17	50.34
2	Improvement of SWD in Berhampur City in zone 3AMRUT/OD/BERHAMPUR/SWD/03	2	2016-17	2017-18	71.53
3	Improvement of SWD in Berhampur City in zone 5AMRUT/OD/BERHAMPUR/SWD/05	3			
4	Improvement of SWD in Berhampur City in zone 2AMRUT/OD/BERHAMPUR/SWD/02	4	2017-18	2018-19	36.35
5	Improvement of SWD in Berhampur City in zone 6AMRUT/OD/BERHAMPUR/SWD/06	5	2018-19	2018-19	45.35
6	Improvement of SWD in Berhampur City in zone 1AMRUT/OD/BERHAMPUR/SWD/01	6	2019-20	2019-20	43.29
<b>Grant Total</b>					<b>246.86</b>

**Table 1.8 Master Service Levels Improvements during Mission Period**  
(As per Table 2.2 of AMRUT guidelines)

Sr.No	Project Name	Physical Component	Change in Service Levels		
			Indicator	Existing As-Is	After to Be
1	Improvement of SWD in Berhampur City in zone 4 AMRUT/OD/BERHAMPU R/SWD/04	1. Construction of covered storm water drainage network. 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	37.28%	100%
			Incidence of Water Logging	2	0
2	Improvement of SWD in Berhampur City in zone 3 AMRUT/OD/BERHAMPU R/SWD/03	1. Construction of covered storm water drainage network. 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	41.82%	100%
			Incidence of Water Logging	1	0
3	Improvement of SWD in Berhampur City in zone 5 AMRUT/OD/BERHAMPU R/SWD/05	1. Construction of covered storm water drainage network. 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	40.54%	100%
			Incidence of Water Logging	1	0
4	Improvement of SWD in Berhampur City in zone 2 AMRUT/OD/BERHAMPU R/SWD/02	1. Construction of covered storm water drainage network. 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	18.55%	100%
			Incidence of Water Logging	2	0
5	Improvement of SWD in Berhampur City in zone 6 AMRUT/OD/BERHAMPU R/SWD/06	1. Construction of covered storm water drainage network. 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	40.64%	100%
			Incidence of Water Logging	0	0
6	Improvement of SWD in Berhampur City in zone 1 AMRUT/OD/BERHAMPU R/SWD/01	1. Construction of covered storm water drainage network. 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	47.07%	100%
			Incidence of Water Logging	0	0

**Table1.9 Annual Fund Sharing Pattern for Storm Water Projects**  
(As per Table 2.3.1 of AMRUT guidelines)

Sr.No	Name of Project	Financial Year	Total Project Cost	Share				Total
				Gol	State	UL B	Others	
1	Improvement of SWD in Berhampur City in zone 4AMRUT/OD/BERHAMPUR/SWD/04	2015-16	50.34	25.17	25.17			50.34
2	Improvement of SWD in Berhampur City in zone 3AMRUT/OD/BERHAMPUR/SWD/03	2016-17	34.47					
3	Improvement of SWD in Berhampur City in zone 5AMRUT/OD/BERHAMPUR/SWD/05	2016-17	37.06					
4	Improvement of SWD in Berhampur City in zone 2AMRUT/OD/BERHAMPUR/SWD/02	2017-18	36.35					
5	Improvement of SWD in Berhampur City in zone 6AMRUT/OD/BERHAMPUR/SWD/06	2018-19	45.35					
6	Improvement of SWD in Berhampur City in zone 1AMRUT/OD/BERHAMPUR/SWD/01	2019-20	43.29					
<b>Total</b>			<b>246.86</b>	<b>25.17</b>	<b>25.17</b>			<b>50.34</b>

**Table 1.11 Year wise Plan for Service Levels Improvements**

Project	Gol	State			ULB			Convergence	Others	Total
		14 <sup>th</sup> FC	Others	Total	14 <sup>th</sup> FC	Others	Total			
<b>Total</b>										

**Year wise Plan for Service Levels Improvements**

Sl. No	Indicator	Base Line	Present Status	Gap	FY2016		FY 2017	FY 2018	FY 2019	FY 2020
					H1	H2				
1	Coverage of Storm Water Drainage Network	100%	43%	57%	0%	56.72%	72.44%	80.57%	92.97%	100%
2	Incidence of Water Logging	0	4	4	0	2	1	1	0	0

Sewerage

## Mission Management Information System

### 1. Assess the Service Level Gap

The first step is to assess the existing situation and service levels gaps for Sewerage (AMRUT Guidelines; para 3 & 6). This will also include existing institutional framework for the sector. For this City has to review all policy, plans, scheme documents etc. to identify service level gaps and hold discussions with officials and citizens. AMRUT is focused on improvement in service levels. The zone wise data shall be used in identifying the gaps. These zone-wise gaps will be added to arrive at city level service gaps. While assessing service level gap reply following questions not more than word indicated against each question.

Question: What kind of baseline information is available for sewerage system of the city? Detail out the data, information, plans, reports etc related to sewerage available with city? Is zone wise information available? Have you correlated your data with census 2011 data? (100 words)

Ans. Census 2011 & City Sanitation Plan are available and have been correlated with census 2011 data.

Question: What are existing service levels for sewerage for coverage of sewerage network services, efficiency of collection of sewerage and efficiency in treatment. Provide information in table

**Table 2.1 : Status of sewerage network and Service Levels**

Sr. No.	Indicators	Existing Service level	MOUD Benchmark
1	coverage of latrines (individual or community)	86%	100%
2	Coverage of sewerage network services	0%	100%
3	Efficiency of collection of sewerage	0%	100%
4	Efficiency in Treatment: Adequacy of sewerage treatment capacity	0%	100%

**Question:** What is the gap in these service levels with regard to benchmarks prescribed by MoUD? (75 words)

Ans: There is no sewerage network & hence no collection & no treatment. The septage disposal is irregular and mostly to open drains. Hence the gap in these service level with regard to benchmarks prescribed by MoUD is 100% .

Question: Does city has separate drainage system or sewer lines take care of storm water? (50 words)

Ans: Yes, the city is having partly separate drainage system.

**Coverage of latrines (individual or community), Please provide information in**

**Table 2.2 A**

Table 2.2a Coverage of latrines (individual or community)

Zone No	Total number of HH ( a)	Total number of HH without individual or community toilets within walking distance b	Coverage of latrines (%),(a-b)/a*100%
1	26650	3731	86%
2	26454	3704	86%
3	21616	3026	86%
<b>Total</b>	<b>74720</b>	<b>10461</b>	

**SEWERAGE NETWORK AND COLLECTION OF SEWERAGE**

Question: How much of the area of the city is covered by sewerage network? What is the status of household connections in each zone? What are the areas covered under septage? Provide information in Table

Table 2.2b : Sewerage network and collection of sewage

Zone No	Total No. of Households(HH) a	Households with Sewerage Network b	Coverage of sewerage network services (b/a)*100%
1	26650	0	0
2	26454	0	0
3	21616	0	0

Question: Are there any areas where sewer lines have been laid but still households are not connected to sewer lines? Are there any areas where toilets may be connected to sewer lines but kitchen or bathroom waste are not connected to sewerage system? (75 words)

Ans: Such condition does not arise.

Question: Is there any systematic and organized method to collect and treat waste from septic tanks? What is the duration of cleaning of septic tanks (monthly, quarterly, semiannually or annually)? Indicate status of overflows of septic tanks, either in the nearby drains /open fields/ sewerage lines etc? (75 words)

Ans: At present there is no systematic and organized method to collect and treat waste from septic tanks. Only 3 (Three) nos. of Cess Pool emptier are available which is not sufficient for systematic and organized cleaning. As there is no organized method of collection in many of the cases, the septic tanks overflow either into nearby drains/open fields etc.

Question: What is the situation of O&M of the existing sewerage system? Does the city has routine maintenance system or breakdown maintenance system? What is the duration of cleaning of sewer lines (monthly, quarterly, semiannually or annually)? Indicate infrastructure available for O&M of the sewerage system i.e sewer jetting machines etc? (100 words)

Ans: Does not arise, since there is no sewerage system .

### SEWAGE TREATMENT SYSTEM

Question: Does city has Sewage Treatment Plant (STP)? Which areas are covered under each of the STPs? Provide details in Table 2.3

**Table 2.3: Status of Existing STPs :**

Sr. No	Location zone	Capacity (MLD)	Inflow in the STP (MLD)	Efficiency in %
1		NIL		
2		NIL		
3		NIL		

**Question:** Does decentralized waste treatment system exists or planned in the city? If yes, provide details (75 words)

Ans: There is no decentralized waste treatment system in the city

Question: How much of sewerage is generated in the city? How much of this sewerage generated reaches the STPs? What is the Biological Oxygen Demand (BOD) of incoming and outgoing sewage of each STP? (100 words)

Ans: NIL. Since there is no sewer collection & treatment system, no sewage reaches the STP.

**Question:** Is treated sewage being reused or recycled? Is treated water being used for irrigation or industrial purpose? Does the option of power generation being explored? (75 words)

Ans: No.

## INSTITUTIONAL FRAMEWORK

**Question:** Define role and responsibilities in terms of O&M, policy planning, funding, service provision in table

**Table: 2.4: Functions, roles, and responsibilities**

Planning and Design	Construction/ Implementation	O & M
Planning and design Cell in Ms of , OWSSB	Project team headed by divisional PE OWSSB supported by PMMU and PDMC. There will be MoU between Municipal Corporation and State Govt/ OWSSB for implementation.	O & M team headed by Municipal Engineer of Berhampur Municipal Corporation .

**Question:** Please also detail that how city is planning to execute projects. Shall the implementation of project be done by Municipal Corporation or any parastatal body? (75 words)

Ans: Implementation of project will done by Orissa Water Supply & Sewerage Board

## 2. BRIDGE THE GAP

Once the gap between the existing Service Levels is computed, based on initiatives undertaken in different ongoing programs and projects, objectives will be developed to bridge the gaps to achieve universal coverage. (AMRUT Guidelines; para 6.2 & 6.3, Annexure-2; Table 2.1). Each of the identified objectives will be evolved from the outcome of assessment and meeting the opportunity to bridge the gap.

Question: List out initiatives undertaken in different ongoing programs and projects to address these gaps. For this provide details of ongoing projects being carried out for sewerage system under different schemes with status and when the existing projects are scheduled to be completed? Provide information in Table

**Table: 2.5 Status of Ongoing/ Sanctioned**

Sr. No	Name of Project	Scheme name	Cost in Rs Cr	Month of completion	Status (as on dd mm 2015)
	NIL		0		

Question: How much the existing system will be able to address the existing gap in sewerage system? Will completion of above will improve the coverage of network and collection efficiency? If yes, how much. (100 words)

Ans: The existing system will be able to address the existing gap by 0%. Since no on going scheme, ongoing/ sanctioned system will be able to improve 0% network and collection efficiency.

Question: Does the city require additional infrastructure to improve the services? What kind of services will be required to fulfill the gap?

Ans: Yes, the city requires additional infrastructure to improve the services. It needs sewerage system and treatment.

Question: How does the city visualize to take the challenge to rejuvenate the projects by changing their orientation, away from expensive asset replacement programs, to focusing on optimum use of existing assets?

**Table 2.6: Demand Gap Assessment.**

Component	2015			2021	
	Existing	Ongoing projects	Total	Demand	Gap
Sewerage net work km	0	0	0	385.01	385.01
No of Households covered under sewerage system (2021 demand)	0	0	0	98705	98705
Sewerage treatment plant MLD (2030 demand)	0	0	0	63.3	63.3

*Note: The demand gap will be fulfilled as per requirement of CPHEEO Manual.*

Based on assessment of existing infrastructure and ongoing / sanctioned projects, calculate existing gaps and estimated demand by 2021 for sewerage network, number of household to be provided with connections, and required enhancement in capacity of STP (MLD), area to be covered under septage management. Based on the demand and gap assessment, evolve objectives to achieve bridging this gap.

Question: Does each identified objectives will be evolved from the outcome of assessment?

Ans: Yes

Question: Does each objective meet the opportunity to bridge the gap? Please provide List out objectives to meet the gap in not more than 100 words.

Ans: Yes, each objective meets the opportunity to bridge the gap.

### **3. EXAMINE ALTERNATIVES AND ESTIMATE COST**

The objective will lead to explore and examine viable alternatives options available to address these gaps. These will include out of box approaches. (AMRUT Guidelines; Para 6.4 & 6.8 & 6.9). This will also include review of smart solutions. The cost estimate with broad source of funding will be explored for each alternative. While identifying the possible activities, also examine the ongoing scheme and its solutions including status of completion, coverage and improvement in O&M. Please reply following questions in not more than 200 words.

Question: What are the possible activities and source of funding for meeting out the objectives?

Ans: The activities are sewer net work, treatment and house connection to meet the objective for universal coverage of sewerage system.

Question: How can the activities be converged with other programmes like JICA/ ADB funded projects in the city etc?

Ans: Does not arise.

Question: What are the options of completing the ongoing activities?

Ans: here does not arise. But done Through State Govt and other funding.

Question: How to address the bottlenecks in the existing project and lessons learnt during implementation of these projects?

Ans: The bottlenecks that is disposal arrangements, reuse of treated waste water etc learnt have been addressed and shall be taken care during implementation of these projects under AMRUT.

Question: Has projects includes O&M of sewerage system?

Ans: Yes.

Question: What measures may be adopted to recover the O&M costs? Can the option of sale of treated wastewater be applicable to recover the O&M cost.

Ans: Collection of of new connection fees and monthly sewerage fees.

Question: What are innovative alternative solutions explored in achieving objectives?

Ans: Options for STP methodology and innovation that is reuse of treated waste water explored in achieving objectives.

Question: Are different options of PPP such as Design-build-Operate-Transfer (DBOT), Design Built Finance Operate and Transfer (DBFOT) are considered?

Ans: Yes, Design-build-Operate-Transfer (DBOT) will be considered.

Question: How the recycle and reuse of waste water will be done? How much quantity of treated water may be reused?

Ans: Does not arise.

Question: Have you analysed best practices and innovative solutions in sewerage sector? Is any of the practice be replicated in the city?

Ans: Yes.

Question: Have you identified the areas for decentralized waste treatment system? Explore the approaches for septage management i.e People Public Private Partnership (PPPP) model or replacing septic tanks by bio-digesters, bioremediation etc.

Ans: Decentralized waste treatment system provided.

The alternative activities to meet these activities be defined as per Table 2.7

**Table 2.7 Alternative Activities To Meet Objectives**

Sl. No	Objective	Activities	Financing Source
1	Universal coverage with sewerage system	Sewerage system and construction of STP, re use of treated waste water.	AMRUT

#### **4. CITIZEN ENGAGEMENT**

Each alternative will be discussed with citizens and activities to be taken up will be prioritized to meet the service level gaps. ULB will prioritize these activities and their scaling up based on the available resources. (AMRUT Guidelines; Para 6.6, 6.7 & 7.2). Please reply following questions in not more than 200 words.

Question: Has all stakeholders involved in the consultation?

Ans: Yes

Question: Has ward/ zone level consultations held in the city?

Ans: Yes

Question: Has alternative proposed above are crowd sourced?

Ans: Yes, Action under progress through website.

Question: What is feedback on the suggested alternatives and innovations?

Ans: Proposed proposal is well appreciated.

Question: Has alternative taken up for discussions are prioritized on the basis of consultations?

Ans: Yes.

Question: What methodology adopted for prioritizing the alternatives?

Ans: Keeping in mind how the house holds can be well covered under sewerage facilities opted for achieving early coverage of the gap assessed under AMRUT.

## **5. PRIORITIZE PROJECTS**

Based on the citizen engagement, ULB will prioritize these activities and their scaling up based on the available resources to meet the respective objectives. While prioritizing projects, please reply following questions in not more than 200 words.

Question: What are sources of funds?

Ans: State Govt. fund/ Govt. of India fund

Question: Has projects been converged with other program and schemes?

Ans: Yes

Question: Has projects been prioritized based on “more with less” approach?

Ans: Yes.

Question: Has the universal coverage approach indicated in AMRUT guidelines followed for prioritization of activities?

Ans: Yes.

## **6. CONDITIONALITIES**

Describe the Conditionalities of each project in terms of availability of land, environmental obligation and clearances, required NOC, financial commitment, approval and permission needed to implement the project. Please reply following questions in not more than 100 words.

Ans: Govt land has been identified and available. Environmental clearance applied and other clearances / NOC are under process.

## **7. RESILIENCE**

Required approvals will be sought from competent authority and organisations. The resilience factor would be built in to ensure environmentally sustainable sewerage scheme. Please reply following questions in not more than 100 words.

Ans: The proposed project under AMRUT and ongoing/ sanctioned would be built-in to ensure environmentally sustainable sewerage scheme. Also Odisha State Pollution Board requirements shall be adhered to.

## **8. FINANCIAL PLAN**

Once the activities are finalized and prioritized after consultations, investments both in terms of capital cost and O&M cost has to be estimated. (AMRUT Guidelines; para 6.5) Based on the investment requirements, different sources of finance have to be identified. Financial Plan for the

complete life cycle of the prioritized development will be prepared. (AMRUT Guidelines; para 4, 6.6, 6.12, 6.13 & 6.14). The financial plan will include percentage share of different stakeholders (Centre, State and City) including financial convergence with various ongoing projects. While preparing finance plan please reply following questions in not more than 200 words

- **Does financial plan for the complete life cycle of the prioritized development?**

Yes, projects proposed include O&M for 5 years. O&M shall be integral part of the execution contract so that the agency/contractor who develops the assets shall be responsible for post asset creation O&M for 5 years. The O&M cost for Water Supply shall be borne by the OWSSB (Odisha Water Supply and Sewerage Board).

- **Does financial plan include percentage share of different stakeholders (Centre, State, ULBs and)**

Yes, the financial plan is based on 50 % Central grant and 50% state grant.

- **Does it include financial convergence with various ongoing projects?**

Yes, it includes convergence with various ongoing projects under different schemes supported by both Central & State grant.

- **Does it provide year-wise milestones and outcomes?**

Yes, it has been provided as per detailed furnished at table 8.1

Details in financial plan shall be provided as per Table 8.1, 8.2, 8.3, 8.4 and 8.5. These tables are based on AMRUT guidelines tables 2.1, 2.2, 2.3.1, 2.3.2, and 2.5.

**Table 8.1 Master Plan of Sewerage Projects for Mission period**

Sr. No.	Project Name and Code <sup>6</sup> (list all projects to achieve universal coverage in the City separately for water supply and sewerage	Infrastructure Improvement			
		Change in Service Levels			Estimated Cost
		Priority number	Year in which to be implemented	Year in which proposed to be completed	(Amount in Rs. Cr.)
1	Sewerage System for BERHAMPUR, Zone 1 – Sewer network, - AMRUT /OD/BERHAMPUR /SG/01	2	2016-17	2018-19	158.78
2	Sewerage System for BERHAMPUR, Zone 1 – STP & Pumping Stations. AMRUT /OD/BERHAMPUR /SG/02	3	2016-17	2018-19	54.95
3	Sewerage System for BERHAMPUR, Zone 2 – Sewer network, AMRUT/OD/BERHAMPUR /SG/03	4	2016-17	2018-19	166.1
4	Sewerage System for BERHAMPUR, Zone 2– STP & Pumping Stations. AMRUT/OD/BERHAMPUR /SG/04	5	2016-17	2018-19	48.5
5	Sewerage System for BERHAMPUR, Zone 3 – Sewer network AMRUT/OD/BERHAMPUR /SG/05	6	2016-17	2018-19	131.27

6	Sewerage System for BERHAMPUR, Zone 3– STP & Pumping Stations. AMRUT/OD/BERHAMPUR /SG/06	7	2016-17	2018-19	43.19
7	Septage Management for BERHAMPUR AMRUT/OD/BERHAMPUR /SG/07	1	2015-16	2015-16	2.38
<b>Grand Total</b>				Total AMRUT	<b>605.17</b>
				on going	0

**Table 8.2: Master Service Levels Improvements during Mission Period**

(As per Table 2.2 of AMRUT guidelines)

Sl. No.	Project Name and code7	Infrastructure Improvement				
		Physical components	Change in Service Levels			Estimated Cost (Amount in Rs. Cr)
			Indicator	Existing	After	
				(As-is)	(To-be)	
1	Sewerage System for BERHAMPUR , Zone 1 – Sewer network, - AMRUT /OD/BERHAMPUR /SG/01	Sewer network & house connection	a .Coverage b.Collection efficiency	0%	100%	158.78
2	Sewerage System for BERHAMPUR, Zone 1 – STP & Pumping Stations. AMRUT /OD/BERHAMPUR /SG/02	STP, Pumping main and Pumping Stations	Sewage treatment & disposal	0%	100%	54.95
3	Sewerage System for BERHAMPUR, Zone 2 – Sewer network, AMRUT/OD/BERHAMPUR /SG/03	Sewer network & house connection	a .Coverage b.Collection efficiency	0%	100%	166.1
4	Sewerage System for BERHAMPUR, Zone 2– STP & Pumping Stations. AMRUT/OD/BERHAMPUR /SG/04	STP, Pumping main and Pumping Stations	Sewage treatment & disposal	0%	100%	48.5
5	Sewerage System for BERHAMPUR, Zone 3 – Sewer network AMRUT/OD/BERHAMPUR /SG/05	Sewer network & house connection	a .Coverage b.Collection efficiency	0%	100%	131.27
6	Sewerage System for BERHAMPUR, Zone 3– STP & Pumping Stations. AMRUT/OD/BERHAMPUR /SG/06	STP, Pumping main and Pumping Stations	Sewage treatment & disposal	0%	100%	43.19
7	Septage Management for BERHAMPUR AMRUT/OD/BERHAMPUR /SG/07	FSM & ID work	Collection & Treatment	0%	100%	2.38
<b>Total</b>						<b>605.17</b>

**Table 8.3 Annual Fund Sharing Pattern for Sewerage Projects**

Sector	Total Project cost	Share				
		Govt	State	ULB	Others (OUIDF)	Total in Cr
Sewerage and Septage management						
Proposed Projects						
Sewerage System for BERHAMPUR , Zone 1 – Sewer network, - AMRUT /OD/BERHAMPUR/SG/01	158.78	0	0			0
Sewerage System for BERHAMPUR, Zone 1 – STP & Pumping Stations. AMRUT /OD/BERHAMPUR/SG/02	54.95	0	0			0
Sewerage System for BERHAMPUR, Zone 2 – Sewer network, AMRUT/OD/BERHAMPUR/SG/03	166.1	0	0			0
Sewerage System for BERHAMPUR, Zone 2– STP & Pumping Stations. AMRUT/OD/BERHAMPUR/SG/04	48.5	0	0			0
Sewerage System for BERHAMPUR, Zone 3 – Sewer network AMRUT/OD/BERHAMPUR/SG/05	131.27	0	0			0
Sewerage System for BERHAMPUR, Zone 3– STP & Pumping Stations. AMRUT/OD/BERHAMPUR/SG/06	43.19	0	0			0
Septage Management for BERHAMPUR AMRUT/OD/BERHAMPUR/SG/07	2.38	1.19	1.19			2.38
<b>Total</b>						<b>2.38</b>

**Table 8.4: Annual Fund Sharing Break-up for Sewerage Projects**

Sr. No.	Project	Gol	State			ULB			Convergence	Others	Total in Cr
			14 <sup>th</sup> FC	Others	Total	14 <sup>th</sup> FC	Others	Total			
1	Sewerage System for BERHAMPUR , Zone 1 – Sewer network, - AMRUT /OD/BERHAMPUR/SG/01	0.00		0.00	0.00					0.0	
2	Sewerage System for BERHAMPUR, Zone 1 – STP & Pumping Stations. AMRUT/OD/BERHAMPUR/SG/02	0.00		0.00	0.00					0.00	
3	Sewerage System for BERHAMPUR, Zone 2 – Sewer network, AMRUT/OD/BERHAMPUR/SG/03	0.00		0.00	0.00					0.00	
4	Sewerage System for BERHAMPUR, Zone 2– STP & Pumping Stations. AMRUT/OD/BERHAMPUR/SG/04	0.00		0.00	0.00					0.00	
5	Sewerage System for BERHAMPUR, Zone 3 – Sewer network AMRUT/OD/BERHAMPUR/SG/05	0.00		0.00	0.00					0.00	
6	Sewerage System for BERHAMPUR, Zone 3– STP & Pumping Stations. AMRUT/OD/BERHAMPUR/SG/06	0.00		0.00	0.00					0.00	
7	Septage Management for BERHAMPUR AMRUT/OD/BERHAMPUR/SG/07	1.190		1.190	1.190					2.380	
	<b>Total</b>									<b>2.380</b>	

**Table 8.5: Year wise Plan for Service Levels Improvements**

(As per Table 2.5of AMRUT guidelines)

Proposed Projects	Total Project Cost in Cr	Indicator	Baseline	Annual Targets (Increment from the Baseline Value)					
				FY 2016 / 2015-16		FY 2017	FY 2018	FY 2019	FY 2020
				H1	H2				
Ongoing Sewerage Project	0								
Sewerage and Septage Management	605.17								
		1. Coverage of latrines (individual or community)	86%	88%	90%	97%	100%	100%	100%
		2. Coverage of sewerage network services	0%	0%	0%	0%	0%	100%	100%
		3. Efficiency of Collection of Sewerage	0%	0%	0%	0%	0%	100%	100%
		4. Efficiency in treatment	0%	0%	10%	10%	10%	20%	100%

# Urban Transport

# Mission Management Information System

## Sector Wise Slip Template: Urban Transport

Under AMRUT Mission, Urban Transport components which are admissible are; Side-walks, Foot-over bridges, Non-motorized transport (NMT), Buses, BRTS, Multi-level parking, Waterways Ferry vessels Ferries and Waterways. (AMRUT Guidelines; para3).

### 1. Service Level Gaps Assessment

#### 1. SERVICE LEVEL STATUS

Assess the existing transportation situation and service levels gaps for indicators urban to achieve service level benchmarks. (AMRUT Guidelines Table.1.4 & Table2.5). Service Level gaps will be analyzed as per indicators prescribed in Service Level Benchmarks (SLBs) for urban transport of MoUD, GoI. Please provide information in 200 words responding to the following questions;

**Question:** What is the baseline information available for improvement city transportation? Whether City has prepared City Mobility Plan? If yes then, Does CMP includes NMT, Ferries, water-ways?

**Answer:**

A City Development Plan (CDP) has been prepared in the year 2006. Apart from that a Detailed Project Report (DPR) for City bus services has been prepared which elucidates the future requirement of the city bus fleet and all other infrastructure required. The present rolling stock structure for the City has been identified through the DPR. There is no other respective document that studies the city transportation situation. There is a proposal for preparing a City Mobility Plan (CMP) in the near future which includes the study of NMT but not the study of Waterways or ferries..

There are four Levels of Services (LOS) which will be calculated considering various indicators as LOS1, LOS2, LOS3 and LOS4 correspond to adequacy and quality of city's available transportation services. The summary of the service level gap and performance should be presented as per illustrative Table

Table: Service level Benchmark

Sl. No	Indicators	Levels of Service as per SLB, MoUD		Present Service Level
		Level of Service	Range	
1	Service Coverage of urban transport in the city	1	>=1	3
		2	0.7-1	
		3	0.3-0.7	
		4	<0.3	

2	Availability of urban transport per 1000 population	<b>Level of Service</b>	<b>Range</b>	4
		1	$\geq 0.6$	
		2	0.4-0.6	
		3	0.2-0.4	
		4	$\leq 0.2$	

**Question:** Have level of services (LOS) been calculated based on the indicators prescribed in the SLB for urban transport by Ministry of Urban Development? As per MoUD SLB for urban transport, there are four Levels of Services (LOS) which will be calculated considering various indicators as LOS1, LOS2, LOS3 and LOS4 correspond to adequacy and quality of city's available transportation services.

**Answer:** Yes

**Question:** While assessing the above indicators, also analyze following aspects as an outcome of the broad components of urban transport under AMRUT;

a) **Non-Motorised Transport Facilities**

1. % of network covered
2. Encroachment on NMT roads by vehicle parking (%)
3. NMT parking facilities at interchanges (%)

**Answer:**

1. None
2. None
3. LOS - 0.5

b) **Parking:** Availability of parking spaces

**Answer:**

**Authorized municipal parking spaces:** Giri Market, Sai Complex Jn (Near Gandhi Nagar), Annapurana Market (Near Stadium Road), Old Bus Stand, In front of Hotel Nanadan International, State Bank Main Road, Near BijuPatnaik Park (Corporatin Road), Mayuree Tower to Gajapati Statue via Girija Jn.

**Unauthorized parking spaces:** KamalabariSahiJn, Sai Complex Jn (Near Gandhi Nagar), Annapurana Market (Near Stadium Road), Mardarajpur Vending Zone (near MKCG), Near Baikuntha Nagar Vending Zone

**Development of parking areas:** KamalabariSahiJn, Giri Market, Sai Complex Jn (Near Gandhi Nagar), Annapurana Market (Near Stadium Road), Old Bus Stand, In front of Hotel Nanadan International, State Bank Main Road, Mardarajpur Vending Zone (near MKCG), Near BijuPatnaik Park (Corporation Road), Near Baikuntha Nagar Vending Zone, Mayuree Tower to Gajapati Statue via Girija Jn.

**Question:** Have specific issues for the city been identified and addressed including issues with the existing traffic, NMT, parking / transport environment?

**Answer:** Yes. As the roads in most parts of the city are narrow and there is no enough space for the vehicles to ply, the pedestrians face most of the troubles crossing the roads and also to normally walk on the roads. Recently new buses have been procured under City Buses program, there is no much accessibility as they are not able to move inside the city roads. Apart from this, parking has been a constant threat to the road users which eat up almost half of the road width which have been identified to make them autorised and ML Parking.

### **Sidewalks, Foot-over bridges and NMT**

**Question:** Do you think city roads are safe for pedestrians? If no then, which section of roads needs immediate attention?

**Answer:**No. the city roads are rather narrow and there are insufficient footpaths available for pedestrians to walk. There needs to be few proposals that need to be identified to implement NMT in the city.

**Question:** What type of Non-Motortised Vehicle (NMV) infrastructure available in the city?

1. Lanes reserved for NMV
2. Footpath allocated for both pedestrian and NMV
3. Area allocated to NMV parking

**Answer:**

Footpaths:

- Kamapalli to Tata Benz Circle
- Aska Rd to NH-59 Jn (1.5 kms)
- Kamapalli to Gopalpur Jn (Engg School Jn)

**Question:** Has budget provision for NMT included in the transportation projects in the city?

**Answer:**Yes

### **Buses and BRTS**

**Question:** Have city initiated feasibility of BRTS?

**Answer:** No

**Question:** What kind of public transport is available in the city? Please mention Number of public transport vehicles operating in the city.

**Answer:** City Bus Services has been initialized and 30 city buses have been procured.

**Question:** What is the total length of public transport corridor in the city limits?

**Answer:**40 kms

### **Multi-level parking**

**Question:** Whether city has designated parking spaces? If yes, provide list of

**Answer: Authorised municipal parking spaces:** Giri Market, Sai Complex Jn (Near Gandhi Nagar), Annapurana Market (Near Stadium Road), Old Bus Stand, In front of Hotel Nanadan International, State Bank Main Road, Near Biju Patnaik Park (Corporation Road), Mayuree Tower to Gajapati Statue via Girija Jn.

There are no existing Multi Level Parking spaces in Berhampur

**Question:** What is the total available on street paid parking spaces on Arterial, sub arterial roads?

**Answer:** 6 on street paid parking spaces available

### **Availability of paid parking spaces**

Total available on street paid parking spaces = (a) = 6

Total available on street Parking Spaces = (b) = 11

Availability of paid parking spaces =  $(a/b) * 100 = (6/11) * 100 = 54.5\%$

**Question:** Whether parking supply inventory is available for the city including; Types of on-road and off road parking restrictions (time of day, duration, private etc)

**Answer:** No inventory available.

**Restrictions:** Bus Stand, Medical Area (NH-59)

**Time of Restriction:** for HOV's – 7AM-12PM & 4PM – 10PM

**Private agency:** 6 parking spaces

**Question:** Whether parking facilities available for bicycles, auto rickshaw, goods delivery.

**Answer:**

**Bicycle Stands:** Railway Station, New Bus Stand, Old Bus Stand, Medical Hospital

**Auto Stands:** New Bus Stand, Railway Station Old Bus Stand, Medical Hospital

**Truck Terminal:** Aska Road (Near 2st Gate Jn)

**Transport Nagar:** IDCO – Haldiapadar, Jagannath Auto Nagar (1<sup>st</sup> Gate)

**Question:** Is private sector involved in parking?

**Answer:** Yes.

Giri Market, Annapurana Market (Near Stadium Road), Old Bus Stand, In front of Hotel Nanadan International, State Bank Main Road, Near Biju Patnaik Park (Corporation Road),

**Question:** Whether adopted parking bans/restrictions on major roads .

**Answer:** Yes. Aska Road, NH-59

### **Waterways and Ferry vessels**

If city has waterways system then provide following questions;

**Question:** Whether city has inland waterways system?

**Answer:** No

**Question:** Who is managing and operating the ferry system? if any

**Answer:** No

**Question:** Provide number of ferry vessels

**Answer:** No

### **Institutional Set Up**

Describe the institutional framework including role and responsibilities in terms; administration and Policy making, planning, Vehicle Registration, public transportation operators including Private operators and overall traffic management.

Role and Responsibilities of all the agencies shall be provided in the illustrative tableNo. 2

Table: Role and responsibility of agencies involved in management of City transport

<b>Sl. No</b>	<b>Agencies</b>	<b>Responsibilities</b>
1	BeMC, BeDA	Planning
2	GUTSL	City Bus Services
3	RTO	Vehicle Registration
4	SP (POLICE)	Traffic Management
5	GA & LEGISLATION DEPARTMENT	Administration and Policy making

Please provide information in 200 words responding to the following questions;

**Question:** Who is responsible for management of urban transport in the city?

**Answer:** BeMC, BeDA, GUTSL

**Question:** Is there enough provisions for enforcement of traffic rules for pedestrian safety on roads?

**Answer:** SP (POLICE), Traffic Inspector, TMC headed by SP (chair), Commissioner, Local MLA's

**Question:** How are you planning for execution of transport related projects for AMRUT, whether, present role and responsibilities lying with these organizations is capable to implement projects under AMRUT?

**Answer:**urban transport projects that need to be implemented under AMRUT are prioritized on the basis of land availability for creating new street parking and new ML Parking spaces and road space for creating NMT and city bus services. In case of Berhampur, there are enough spaces that can be allotted to create parking areas but the roads are rather narrow to ply more buses. With respect to the organisations, yes there is enough capacity to implement projects.

## 1.2 Status of On-going Projects

Critically examine the existing and ongoing projects for improvement of urban transport as to be filled in illustrative Table No.3

**Notice:** Undefined index: table12\_proposed\_projects in

/var/www/html/amrut/urbantransport-result.php on line 312

Project/Sector	Approved Cost (Rs. Lakhs)	Status of projects (till May 13)	Expenditure (Rs. Lakhs)	Scheme
<b>Road Improvement</b>				
Lanjipalli to Goods Shed	265.00	Completed		State Plan
Ankuli to NH-5 Rd	188.00	Completed		State Plan
<b>Total</b>	<b>453.00</b>			
<b>Road over Bridges</b>				
Goods Shed Road		Ongoing		State Plan
Engg. School to Ankuli Rd		Ongoing		State Plan
Near gopalpur Jun.		Ongoing		State Plan
<b>Total</b>	<b>12581.00</b>			

**Question:** which are the initiatives taken for the implementation of NMT facilities in the city? Please list out initiatives undertaken in different ongoing programs and projects to address these gaps

Answer: None

**Question:** Whether convergence with other ongoing Central and State and Local Government Programs/ Schemes can be done at this stage.

Answer: None

**Question:** Whether ongoing scheme and projects has been critically reviewed? Please explain what is the extent of convergence to bridge the gaps?

Answer: Yes

## 2. Bridging the Gap

### Demand Gap Assessment

Despite the fact, non-motorized modes and public transit account for a significant proportion of travel activity of a city. The city needs to pursue different strategies and programs for bridging the gap on transportation facilities where the city is and where it wishes to go in future.

Please provide information in 200 words responding to the following questions

**Question:** What steps can be taken to bridge these gaps? Please explain in 200 words,

**Answer:** Provision of designated parking spaces, widening of roads to allocate enough space for plying of city buses and providing NMT facilities

Whether present level gaps as identified through SLB indicators will be achievable by 2021 as compare with the present level of gap and demand?. (Table)

Table: Bridging the gap- Demand Assessment

Sl. No	Benchmark	Levels of Service as per SLB, MoUD		Present Service Level	Current Gap	Demand/ Target by 2011
1	Service Coverage of urban transport in the city	<b>Level Service</b>	<b>of Range</b>	4		
		1	$\geq 1$			
		2	0.7-1			
		3	0.3-0.7			
		4	$< 0.3$			
2	Availability of urban transport per 1000 population	<b>Level Service</b>	<b>of Range</b>	4		
		1	$\geq 0.6$			
		2	0.4-0.6			
		3	0.2-0.4			
		4	$\leq 0.2$			
	Other indicators					
3	Percentage of City Covered by footpaths wider than 1.2m	-				
4	Non Motorised Transport Facilities including;					
a)	% of network covered	-				
b)	Encroachment on NMT roads by vehicle parking (%)	-				
c)	NMT parking facilities at interchanges (%)	<b>LoS</b>	<b>Range</b>	3		
		1	$\geq 75$			
		2	50-75			
		3	25-50			
		4	$< 25$			

5	Availability of On-street paid public parking spaces (%)	Level of Service		2		
			Range			
		1	$\geq 75$			
		2	50-75			
		3	25-50			
4	$< 25$					
6	Water ways and Ferries	-				

### 3. Objectives

The objective will lead to explore and examine viable alternatives options available to address these gaps. These will include out of box approaches. (AMRUT Guidelines: para 6.4 & 6.8 & 6.9).

Please provide information in 200 words responding to the following questions;

**Question:** How will you define your overall goal to improve city transport?

**Answer:** The vision of the City Public Transport is “**To provide safe, efficient and cost effective multi modal transportation system accessible to all the citizens which is compatible with future land use and strengthening the capacity and frequency of city buses with introduction of BRTS in Berhampur.**”

**Question:** What possible strategies envisaged to achieve various LoS to improve the transportation components under AMRUT?

**Answer:** Road widening by removal of encroachment from the major roads, development of structure plan for the urban area with transit as one of the lead components which will direct the urban growth so as to bring about a structural fit between transit infrastructure and urban growth. This will also examine a comprehensive multi-modal public transit system to bring about the most of the development. Besides this improvement of parking places in different locations, Proper traffic management system with traffic signal system is very necessary.

**Question:** How well does goals and objective for developing efficient urban transportation facilities can articulate the use of NMT options and parking facilities to improve the quality of life of local citizens?

**Answer:** Unless there is enough space for roads in the city limits, implementation of non-motorised vehicles is not plausible. As estimated, unless the roads in the city while having the ROW with sufficient lane width supposed for NMT can be implemented. As there are ongoing road improvement projects, it is high time to improve road conditions and storm water scenario inside the city to make way for safe movement of pedestrians which paves way for better mobility of citizens.

**Question:** How identified each objective can evolve considering bridging the gap with present level of services as to achieve SLB indicators.

**Answer:** each identified objective needs to be assessed carefully and proposed with respect to citizen and stakeholder consultation. The present level of service of every transport component is inadequate and to enhance the same requires lot of funding and land availability. As there is enough land for implementing off street parking and depots/terminals for City Bus Services, land need to identified to widen the most important roads so to ply the buses and increase efficiency and accessibility to citizens.

**Question:** How objectives can be framed ensuring sustainable mobility solutions and creating city-wide NMT facilities for pedestrians and cyclists.

**Answer:** The objectives need to be framed in such a manner so to provide safe and secure way to promote walkability and mobility to citizens. Improving main road structure and enforcing the most congested and crowded zones of the city such as markets, mandis, old city areas, railway station etc to convert them to NMT zones.

**Question:** How objectives for improvement of NMT facilities integrate with other modes of transport.

**Answer:** Presently, there is a provision of 30 buses under City Bus Services connecting several important areas. But still the demand would not be met for the overall citizens in the city. As we know there is no existing NMT facility for the city, pedestrian tracks should proposed in future which would be integrated to the existing CBS so to achieve the first and last mile connectivity.

#### 4. Alternate Activities to Meet Objectives

Evolve overall objective is to ensure that mobility solutions for the city that are sustainable and create city-wide NMT facilities for pedestrians and cyclists and integrate them with other modes of transport. Suggest possible strategies and options to achieve each objective with estimate cost of alternate solutions as per table 1 & Table 2

Table1: Possible Strategies to meet objectives

Sl. No	Objectives	Possible Activities	Financing Source
1	NMT	Pedestrian walkways, footpaths, cycle tracks, parks and open spaces	Municipality
2	Parking	Multi level parking	Municipality
3	City Bus Services	Augmentation and Network increasing	Centre/Municipality
4	City Mobility Plan	DPR	Municipality
5	Road Widening	Widening of RoW for Sub Arterial roads	State Govt.

**Table2:Estimated Cost for various possible activities**

Sl. No	Projects	Unit	Quantity	Total Cost (in Cr)
1	Construction of Street Parking (AMRUT/OD/BERHAMPUR/UT/01)	No. of buses	8	4.80
	<b>Street Parking</b>			
	. Old Bus Stand	Area	120'x200'	3.40
	. Kamala Bari Street	Area	80'x30'	0.30
	. Aska Rd near Khaja Street	Area	66'x40'	0.40
	. Near Mardarajpur Vending Zone	Area	100'x30'	0.40
	. Near Annapurna Market	Area	66'x50'	0.50
	. Near Vending Zone at Baikunthanagar	Area	80'x50'	0.60
	. Corporation Rd in front of BijuPatnaik Park	Area	26'x30	0.10
	. Near South West corner of Ramalingam Tank	Area	100'x40'	0.60
2	Construction of Non Motorised Transport facilities (AMRUT/OD/BERHAMPUR/UT/02)	No.	10	4.50
3	Preparation of DPR on City Mobility Plan (CMP) (AMRUT/OD/BERHAMPUR/UT/03)	kms	1	0.50
4	Construction of Bus Shelters (AMRUT/OD/BERHAMPUR/UT/04)	No	12	1.50
5	Construction of Foot Over Bridges (AMRUT/OD/BERHAMPUR/UT/05)	No	5	3.00
6	Pilot Project - Pedestrianisation on Big Bazar Road (AMRUT/OD/BERHAMPUR/UT/06)	No	1	2.00
7	Augmentation of City Bus fleet (AMRUT/OD/BERHAMPUR/UT/07)	Buses	1	12.00
	<b>Total</b>			<b>24.15</b>

While addressing alternate solution to achieve these objects, please provide information in 500 words responding to the following questions:

**Question:** How realistic and feasible urban transport strategies are to be evolved to address key challenges, priorities as an outcome of the citizen consultation

**Answer:** With respect to the citizen and stakeholder consultation, there are several actions that need to be addressed to improve the city wide transportation scenario. Mostly improving/widening/upgradation of roads, improved network of CBS, installation of NMT facilities at congested areas, development of truck terminal, parking areas and rickshaw areas etc

**Question:** What alternative innovative solution can be adopted for improving the service delivery by creating

**a:** Citizen friendly provision of barrier free pedestrian facilities including, footpaths, road marking and signages

**Answer:** Vehicle tracking System, automatic pedestrian crossing facility,

**b: pathways**

**Answer:** Urban planning with built-in street design,

**c: Parking**

**Answer:**Automated Multilevel parking spaces, Zoning near the congested areas to promote NMT

**d: traffic management using ITS**

**Answer:** Vehicle tracking System, Surveillance System, GIS based traffic analysis

**Question:** What strategic intervention is required in the implementation of above projects?

**Answer:** Special Purpose Vehicles (SPVs), Traffic Management Committees or agencies etc appointed to overlook and undertake the specific tasks related to the transport criteria

**Question:** Whether alternative modes of transport such as cycling can be provided in major roads

**Answer:** Yes.

**Question:** Whether non-Motorised Transport (NMT) facilities corridor suggested with dedicated NMV, Cycle track and Signalized Intersection count.

**Answer:** No

**Question:** How innovative solutions for alternative modes of transport including NMT such as cycling, pedestrian and public transportation system will address the overall transportation issue of the city?

**Answer:** this would shape the future city transportation in such a way to improve mobility of the city with barrier free pedestrian movement and enhanced levels of safety and security.

**Question:** What will be the source of funding for identified project?

**Answer:** Central, State, ULB and community Participation and funding from other development agencies through pooling of resources.

**Question:** Whether convergence with other scheme has been made. Please explain each identified projects and their source of funding such as AMRUT, 14th FC and also converge with other schemes.

**Answer:** No

## **5. Citizen Engagement**

Each alternative will be discussed with citizens and activities to be taken up will be prioritized to meet the service level gaps. The section will summarize the Citizens priorities for adoption of alternate solution of urban mobility, drawing on SLIP preparation.

Please provide information in 200 words responding to the following questions:

**Question:** Have all stakeholders including residents (RWAs), Transporters, RTOs, Traffic Police attended the citizen consultation?

**Answer:** Yes.

**Question:** Has alternate proposed crowd sourced?

**Answer:** Yes. Crowd and stakeholder sourced.

**Question:** What is feedback on the suggested alternatives and innovations?

**Answer:** the most important criteria for citizens is enhancing the public transport which can cater to almost all the areas of the city. Secondly, to designate various parking spaces so to decongest the main roads.

**Question:** Has alternative taken up for discussions are prioritized on the basis of consultations?

**Answer:** Yes

**Question:** What methodology adopted for prioritizing the alternatives?

**Answer:** Studying the entire area and identifying the loopholes in the service provision.

**Question:** How citizen has been exposed best practices and smart solutions in order to generate citizen-driven solutions for urban mobility?

**Answer:** Through presentations and seminars.

**Question:** Please examine whether identified solutions are addressing citizens requirement

**Answer:** Yes

**Question:** Whether ULB have adequate resources to implement prioritized alternate solutions?

**Answer:** No.

**Question:** How innovative alternate options of NMT facilities examined and shared with citizens?

**Answer:** Yes. Through presentations and study material.

## 6. Prioritization of projects

Based on the citizen engagement, ULB will prioritize these activities and their scaling up based on the available resources to meet the respective objective. (AMRUT Guidelines; para 6.6, 6.7 & 7.2). Please provide information in 200 words responding to the following questions:

**Question:** Are innovative solution prioritized based on the available resources and demand of citizens?

**Answer:** Yes.

**Question:** Has source of funding considered while prioritizing the project?

**Answer:** Yes

**Question:** Whether project has been prioritized considering last mile connectivity?

**Answer:** No

Table1: Possible Strategies to meet objectives

Priority No	Project	Cost (in Cr.)	Financing Source
1	Augmentation of CBS	4.80	State/AMRUT
2	Non Motorised Transport	4.50	State/AMRUT
3	DPR on City Mobility Plan	0.50	State/AMRUT
4	Street Parking	0.65	State/AMRUT
5	Bus Shelters	1.20	State/AMRUT

## 7. Out of Box Solution Used

Please provide information in 200 words responding to the following questions:

**Question:** What are the out of box thinking on alternative and new innovative solutions for the following;

a: Citizen friendly provision of barrier free pedestrian facilities including, footpaths, road marking and signages,

**Answer:** Escalators and underpasses for pedestrian movement, solar lighting and panels for signages and road marking.

**b: pathways**

**Answer:** Escalators and travelators, automated Subway Systems for pedestrian movement

**c: parking**

**Answer:** Automated Valet System, Mobile integrated citizen info systems, parking line alarms,

**d: traffic management using ITS**

**Answer:** Real Time Vehicle tracking using Satellite imagery

**Question:** Whether solution provided to improve the safety of vulnerable groups such as old age/handicapped/children

**Answer:** Yes

## **8. Conditionalities Fulfilled and Resilience Built-in**

First and foremost condition is to identify the availability of land for projects such as parking, widening of roads for pedestrian, cycle tracks and hawkers zone. Further, agencies need to be brought on board for any new initiatives as part of convergence process and necessary approval and permissions.

Please provide information in 200 words responding to the following questions:

**Question:** Whether described the conditionalities of each project in terms of availability of land parking, widening of roads for pedestrian, cycle tracks and hawkers zone?

**Answer:** Yes. Government lands are available.

**Question:** How these projects will be funded? Are projects being implemented through own sources or borrowing then which is the commitment in this regard.

**Answer:** Both sources are considered. This can be done through Central, State, ULB and community Participation and funding from other development agencies through pooling of resources.

**Question:** Has environmental obligation such as clearances and NOC required? Please suggest action and initiatives need to be taken in this regards

**Answer:** Yes

## **9. Financial Plan**

Prepare Financial Plan for the complete life cycle of the prioritized development. The financial plan will include percentage share of different stakeholders (Centre, State, ULBs and) including financial convergence with various ongoing projects. Describe briefly the institutional arrangement), leveraging potential partnerships, convergence with other Government Schemes, monitoring and evaluation and also provide year-wise milestones and outcomes.

- **How the proposed finance plan is structured for transforming and creating infrastructure projects? Explain in 200 words how these institutional arrangements are leveraging partnership and converge with government scheme and provide list of individual projects which is being financed by various stakeholders.**

The financial plan is made considering 50 % Central grant and 50% state grant. Since the ULB do not have the financial capability, no share has been considered from ULBs.

- **Has financial plan prepared for identified projects based on financial convergence and consultation with funding partners?**

Yes, the project identified here does not include the ongoing projects which are covered under other scheme. Therefore, financial convergence from other schemes has not been planned for projects listed under this scheme. Since all the identified projects are funded under AMRUT on 50: 50 basis. Consultation with other funding partners is not required. However, consultation for involving other funding partners will be explored to achieve the objective of the mission.

- **What are the different sources of funding being tapped for this project.(75 words)**

Own Source, PPP mode and CSR source of funding will be tapped

- **Is the proposed financial structure is sustainable? If so then whether project has been categorized based on financial considerations (100 words)**

Yes, the financial structure proposed is sustainable. The state govt. is committed to contribute required funds for completing the projects. However, the O&M cost for these projects will be met from internal resources including collection of user charges. The projects have been categorized based on gap analysis identified for universal coverage as required under AMRUT scheme.

- **Have the financial assumptions been listed out? Please provide the list. (100 words)**

Yes, the financial assumption has been listed to work out the operational sustainability.

## **10. Finalization of Master Service Level Improvement Plan**

**Question:** Discuss Draft Master Service Level Improvement Plan with citizen. Based on the final citizen consultations, prepare final Master Service Level Improvement Plan. Annual Plan will be prepared as an application for monitoring the improvement in achieving the service level indicators as targeted in the Service level improvement plan. (AMRUT Guideline; Table 2.1, 2.2, 2.3., 2.4 and 2.5) and Annual Plan (AMRUT Guidelines; Annexure- 2, 3, 4, 5& 6)

**Answer:**

Details in financial plan shall be provided as per table 8.1, 8.2, 8.3, 8.4 and 8.5. These tables are based on amrut guidelines tables 2.1, 2.2, 2.3.1, 2.3.2, and 2.5.

## MASTER SERVICE LEVELS IMPROVEMENTS DURING MISSION PERIOD

(As per Table 2.2 of AMRUT guidelines) (Amount in Rs. Cr)

**Notice:** Undefined index: table6\_sno in

/var/www/html/amrut/urbantransportresult.phpOn line 869

Sl. No	Project Name	Physical Components	Change in Service Levels			Estimated Cost
			Indicator	Existing	Proposed	
1	Construction of Street Parking (AMRUT/OD/BERHAMPUR/UT/01)					0.65
2	Construction of Non Motorised Transport facilities (AMRUT/OD/BERHAMPUR/UT/02)					4.50
3	Preparation of DPR on City Mobility Plan (CMP) (AMRUT/OD/BERHAMPUR/UT/03)					0.50
4	Construction of Bus Shelters (AMRUT/OD/BERHAMPUR/UT/04)					1.50
5	Construction of Foot Over Bridges (AMRUT/OD/BERHAMPUR/UT/05)					3.00
6	Pilot Project - Pedestrianisation on Big Bazar Road(AMRUT/OD/BERHAMPUR/UT/06)					2.00
7	Augmentation of City Bus fleet (AMRUT/OD/BERHAMPUR/UT/07)					12.00
8						

## ANNUAL FUND SHARING PATTERN FOR URBAN TRANSPORT PROJECTS

(As per Table 2.3.1 of AMRUT guidelines) (Amount in Rs. Cr)

**Notice:** Undefined index: table7\_sno in

/var/www/html/amrut/urbantransportresult.phpOn line 917

Sl. No	Name of Project	Total Project Cost (in cr)	Share				
			Gov	State	ULB	Others	Total
1	Construction of Street Parking (AMRUT/OD/BERHAMPUR/UT/01)	0.65	0.325	0.325			0.65
2	Construction of Non Motorised Transport facilities(AMRUT/OD/BERHAMPUR/UT/02)	4.50	2.25	2.25			4.50
3	Preparation of DPR on City Mobility Plan (CMP)(AMRUT/OD/BERHAMPUR/UT/03)	0.50	0.25	0.25			0.50
4	Construction of Bus Shelters (AMRUT/OD/BERHAMPUR/UT/04)	1.50	0.75	0.75			1.50
5	Construction of Foot Over Bridges (AMRUT/OD/BERHAMPUR/UT/05)	3.00	1.50	1.50			3.00
6	Pilot Project - Pedestrianisation on Big Bazar Road(AMRUT/OD/BERHAMPUR/UT/06)	2.00	1.00	1.00			2.00
7	Augmentation of City Bus fleet (AMRUT/OD/BERHAMPUR/UT/07)	12.00	6.00	6.00			12.00
		24.15	12.075	12.075			24.15

## ANNUAL FUND SHARING PATTERN FOR URBAN TRANSPORT PROJECTS

(As per Table 2.3.2 of AMRUT guidelines)

**Notice:** Undefined index: table8\_sno in /var/www/html/amrut/urbantransportresult.php

On line 973

Sl. No	Project	Gol	State			ULB			Convergence	Others	Total
			14th FC	Others	Total	14th FC	Others	Total			
1	Construction of Street Parking (AMRUT/OD/BERHAMPUR/UT/01)	0.325			0.325						0.65
2	Construction of Non Motorised Transport facilities (AMRUT/OD/BERHAMPUR/UT/02)	2.25			2.25						4.50
3	Preparation of DPR on City Mobility Plan (CMP) (AMRUT/OD/BERHAMPUR/UT/03)	0.25			0.25						0.50
4	Construction of Bus Shelters (AMRUT/OD/BERHAMPUR/UT/04)	0.75			0.75						1.50
5	Construction of Foot Over Bridges (AMRUT/OD/BERHAMPUR/UT/05)	1.50			1.50						3.00
6	Pilot Project - Pedestrianisation on Big Bazar Road, (AMRUT/OD/BERHAMPUR/UT/06)	1.00			1.00						2.00
7	Augmentation of City Bus fleet (AMRUT/OD/BERHAMPUR/UT/07)	6.00			6.00						12.00
8		12.075			12.075						24.15





# Urban Transport

# Mission Management Information System

## PARKS AND PLAY GROUNDS

The objective of this template is to assist ULBs in preparation of SLIP for Green Space and Parks component for rejuvenation of at least one park in each of the 500 Urban Local Bodies (ULBs) involving creation and upgradation of basic elements, especially for the youth, children and the elderly. Rejuvenation also includes involving local citizens and groups in the maintenance and upkeep of the park in order to make the development sustainable. Cost of this component will be met from the 2.5 per cent annual allocation for development of parks under the Mission and used in accordance with its Guidelines. (Refer AMRUT Guidelines: Section 5.1 Sr.No.6, 6.7 & Annexure-1 Sr.No.4) SLIP would involve write up on following sections:

### 1. Assess the Service Level Gap

First and foremost aspect of SLIP is to assess the existing situation and service levels gaps for organised Green Space and Parks based on standards prescribed in URDPFI Guidelines (Refer AMRUT Guidelines; Para 3.1.6 & 6.2). This shall also include describing existing institutional framework vis-à-vis development and maintenance of organised green space/ parks. In order to assess the service level gap the City shall have to review all policies, plans; scheme documents etc., hold discussions with concerned officials and citizens, as per the requirement and conduct physical assessment of city parks to understand the current status (Refer Indicative Parks Assessment Tool as given in Annex-1 of this document). The city should undertake overall assessment of Parks and Open/ Green Space in terms of a) Physical Activities Resources, b) Family Facilities including child friendly play equipment's, c) Available General Services and Facilities, and, d) Aesthetics and other

While discussing about the existing status of the organised green space in your city make a sincere effort to analyze the proportion of area under the categorization of parks as per URDPFI Guidelines eg: Housing Area Park (HAP), Neighbourhood Park (NP) Community Park (CP), District Park (DP), and Sub-City Park (SCP). Also focus on qualitative aspects of existing parks like geographical distribution across the city, encroachments, child and elderly friendly features; staffing, maintenance & equipment issues; and maintenance by RWAs/ Corporates under their CSR Activities etc.

Please respond to the questions given below (Word Limit: 800 words).

**Question: What are the available data sources/ plans/ reports/ schemes that exist as regards development and maintenance of parks?**

Berhampur municipality has done elementary tabulation of the existing parks such as name of the park, area, O&M costs and brief description about the parks apart from this there is a CDP report mentioning about this sector in the Landuse Pattern. But the existing parks are developed with the help of state government and maintenance of the parks is covered in the municipal expenditure

**Question: Review the recommendation on open/ green space as per Master Plan/ Development Plan and map existing green cover against the same. Identify the areas where there is deficiency of open/green space**

There is a CDP which provide the landuse 0.55% and stating that green spaces have to be developed in the city but there is no document where the deficiency of open/green spaces identified to fill the gap and there is a map showing the existing green space locations for the city.

**Question: Does the ULB follow URDPFI Guidelines to categorize its organized greens/ parks/ open space or follow its own categorization? If ULB follow its own categorization, what is the rationale and how well they are interlinked to development of parks?**

Berhampur municipality does not categorize the parks and open spaces as per the hierarchy of organized green spaces based on population and area criteria as prescribed by URDPFI guidelines it only categorizes parks in developed and undeveloped category .

**Question: What is the per person open space availability in the city in general and within built-up areas?**

38 acres is the cumulative area of developed parks in the Berhampur town and open spaces and playgrounds spread over the city for children's to play and elders to take a fresh walk in the morning but these play grounds and not equipped with any amenities.

### Service Level Status

Sr. .No	Indicators	Present Status	Benchmark	Source	Reliability Factors
1	Per person open space in plain areas as per URDPFI guidelines	0.43sq.m	10-12 Sq. m	Municipality	C

Source:URDPFI–2014&AnalysisofULBLevelData

**Question: Have the ULB/ City prepared park wise inventory of facilities and amenities? (ULB should identify some of the quick-win parks, which could be developed with minimal intervention that can attract good number of citizens)**

Berhampur municipality has done elementary tabulation of the existing parks such as name of the park, area, O&M costs and brief description about the parks apart from this they identified few parks for renovation which can attract a lot of people to use the parks and enhancing children friendly features identified by the municipality will make tem quick-win parks.

**Question: How is the physical condition of parks in the city? Do they have boundary wall, fenced area, facilities of public conveniences, tube well, dustbins etc. (Mention in proportions, if possible)**

Parks in Berhampur municipality are in good physical condition overall , nevertheless three parks namely NEHRU PARK, INDIRA PRIYADARSHINI PARK and BIJU PATNAIK PARK needs renovations for lack of toilet facility and park furniture is not in a good shape .

**Question: Whether parks have well planned play area encouraging physical activity? Are they equipped with child friendly play equipment, snack/ ice cream parlors/ kiosks etc. (Mention in proportions, if possible?)**

NEHRU PARK and BIJU PATNAIK PARK has child friendly equipment but they need renovations. Snack/ ice cream parlors/ kiosks need to be established. INDIRA PRIYADARSHINI PARKis not functioning at all.

**Question: How well aesthetics component have been built in parks of your city? Are they well illuminated, landscaped – manicured with waterbodies/ fountains etc. wherever possible? (Mention proportions, if possible)**

Parks in Berhampur municipality are in decent aesthetic condition overall, nevertheless BIJU PATNAIK PARK has shortageoflandscape and park furniture is not in a good shape. INDIRA PRIYADARSHINI PARKhas to be facilitated with the required equipment and land scape to make it functioning.

**Question: Are there some running schemes/ projects – Central/ State/ Donor funded in the city as regard development of parks/ open spaces? Or else ULB is funding park development of parks/ green space out of its own budget?**

Development of open spaces, green spaces and parks in Berhampur are done with the help of state government and maintenance of the parks is covered by the municipal fund

**Question: Explain the process how a park/ open space is normally shortlisted for development? Does the city have rationale for park selection for development or it is done on ad-hoc basis.**

Berhampur municipality shortlists the parks/open spaces in a unique process as follows

1. Identification of government lands in the city
2. Gap analysis based on the existing parks coverage
3. Initial prioritization based on the size and coverage of the park
4. Stakeholder consultation by the municipal engineers
5. Citizen consultation and enlightening them with the facts
6. Finally considering all the above aspects the chairperson and counsellors shortlists parks for development

**Question: List the organizations/ authorities/ private sector firms etc. and describe their roles and responsibilities in development of city parks/ open space along with green area under their jurisdiction.**

No such private sector firms /organizations are involved in the development or maintenance of any park in the city, all the parks are under the municipal authority and they operate and maintain.

**Question: Where can new parks be developed in the future; how much space may be available.**

Berhampur municipal Corporation has identified few government lands in the municipal jurisdiction where there is a need for parks but the land is under the state body which has to be transferred to the municipality so that they can plan and execute the projects.

**Question: How much is allocated under Parks/ Open/ Recreational space as per the DP or Master Plan for new areas?**

DP which provide the land use 0.55% and stating that green spaces have to be developed in the city but there is no allocated under Parks/ Open/ Recreational space as per the DP or Master Plan for new areas.

**Question: Who manages the parks in the city? How much delegation of responsibility has been given to RWAs and/or NGOs?**

Parks are undertaken by the municipality, no NGO's delegation of responsibility has been given.

**Question: Which parks have uneasy accessibility issues or get flooded/water logged etc.?**

All the existing parks are easy to access and there is no such problem of flooding/water logging etc transpired in the parks.

**Question: Does the ULB have any guidelines for providing safe and secure access to parks for children and elders?**

Private architects are hired for designing the parks and then the plans are reviewed by the internal technical experts with regard to safety, security and universal accessibility measures taken in the design and then finalize the plan for execution which makes parks in Berhampur safe and secure for all age groups.

**Question: Is there a system for preventing the entry of animals into parks?**

All the existing parks in the BERHAMPUR municipality are with the boundary wall so there is not even a single event occurred in the past few years that the animals entering the parks.

**Question: Does the city have any guidelines for horticulture; types of trees and plants, etc?**

City has not specifically followed any guidelines for horticulture or selecting type of trees or plants .the plan given by the landscape architect is followed and implemented on field because of shortage if capacity in that sector.

Table2:Jurisdiction wise–Allocation of Green space and Parks

Sr. No	Jurisdiction	No. of Parks	Area of Parks (in hec)	Proportion (in Percentage)
1	ULB	5	0.82	83
2	Development Authority	1		17
3	Private Ownership Corporate/NGO's	0	0	0
	Total	6	3.68	100

Table3: Hierarchy of Organized Greens in the City (AsperURDPFI-2014)

Sr. No	Category	No. of Parks	Area under the category (in hec)	% Area under parks and open spaces
1	Housing Area Park (HAP) (Less than 5000 Sq. m.)	5	0.82hec	0.12
2	Neighbourhood Park (NP)(5000 -10000 sq. m.)	0	0	0
3	Community Park (CP) (10000 - 50000 sq.m	1	2.86	0.43
4	District Park (DP) (50000 – 250000 Sq.m.)	0	0	0
5	Sub-City Park (SCP) (2,50,000sq.m. & above )	0	0	0

**2. Bridge the Gap**

Once the gap between the existing Service Levels is computed, list out initiatives undertaken in different ongoing programs/ projects/ master – development plans to address these gaps. While bridging the gaps convergence with other ongoing Central, State and Local Government Programs/ Schemes will also be looked into. Based on above, objectives will be developed to bridge the gaps (AMRUT Guidelines; Para 6.3, Annexure-2; Table 2.1). Each of the identified objectives will be

evolved from the outcome of physical assessment of parks using “Assessment Tools for Parks” (Refer Annex-1 of this document) and meeting the opportunity to bridge the gap.

As per para 5.1 (Sr.No.6) of AMRUT guidelines all projects involving development of green spaces & parks shall have to make special provision for child friendly components and establish a system of maintenance with local residents participation. At least one park from each of the 500 ULBs under AMRUT would be taken up for developing facilities for Children, Youth and Elderly.

Assessment of the current status of City parks/ open spaces would clearly bring out the gap/ dearth of open spaces in terms of area allocation, having inadequate citizen friendly features and issues pertaining to its maintenance. And these will lead to formulation of three broad objectives.

Please respond to the following questions in not more than 500 words

**Question: Have the city took physical assessment of city parks? (ULB’s may refer Annex-1 indicative procurement of this document)**

**Question: Estimate the demand gap of open/green space in the city.**

The demand gap of the city is 1021 acres as per URDPFI Guidelines

**Question: Explain how the city plans to fill the gap in green cover and progressively enhance green cover within City to 15% over next 5 years. ?**

Berhampur municipality has done elementary tabulation of the existing parks and decided to construct a park every year and renovate the existing facilities so that they can fill the gap in green cover and within next decade green cover in the city will be close to 15 %.

**Question: Assess and describe, if requisite provisions as per Master Plan and other State legislation have already been made?**

No requisite provisions as per Master Plan and other State legislation have already been made

**Question: Explain the city’s action plans to make special provisions for installing child friendly components in the city parks as per AMRUT Guidelines. ?**

Indira Priyadarshini Park lacks in child friendly components s the municipality is planning to renovate the park apart from that all the new proposed parks are with child friendly components.

**Question: Provide details of the initiatives undertaken in different ongoing programs and projects to address the gaps in enhancing the green cover and rejuvenation/ development of parks. Provide information in Table 4.**

There are no ongoing projects in this sector as the city is concerned

Tabel4: Status of Ongoing/Sanctioned/CommittedProjects

Sr. No.	Name of the Project	Scheme Name	Cost in Rs. Lakhs	Month of Completion	Status (as on dd mm 2015)



**Question: Has all relevant stakeholders groups been involved in the consultation?**

Private architects are hired for designing the parks and then the plans are reviewed by the internal technical experts and then the discussions are carried out to the all relevant stakeholders groups

**Question: Explore option for O&M Contracts including PPPP with (RWAs/ Citizens Groups/ Corporate Groups – CSR, Selling advertisement rights etc.).**

City is trying to incorporate the industries surrounded by to take reasonability and develop parks as part of corporate social responsibility to compensate the pollution created by tm in the city .these are in the stages of discussion but under implementation

**Question: Explain how the city plans to establish a system of maintenance with active citizen's engagement as per AMRUT Guidelines.**

**Question: Has ward/ zone level consultations held in the city**

Ward level consultations are done after the stakeholder consultation and they are used for prioritization of the projects

**Question: Has alternatives explored are crowd sourced?**

No

**Question: What is feedback on the suggested alternatives and innovations?**

3 times consultation programs were held under the chairmanship of collector Berhampur for development of Berhampur town all the feedbacks and suggestions are considered in planning the parks

**Question: Has alternative taken up for discussions are prioritized on the basis of consultations?**

No it is not done based on consultation initially, all the technical aspects are considered by engineers & the chair person

**Question: What methodology adopted for prioritizing the alternatives?**

Berhampur municipality prioritizes the parks/open spaces in an exclusive process as follows

1. Gap analysis based on the existing parks coverage
2. Initial prioritization based on the size and coverage of the park
3. Citizen consultation and enlightening them with the facts and ask their priorities
4. Finally considering all the above aspects the chairperson and counsellors prioritizes parks for development

## **5. Prioritize Projects**

Based on the citizen engagement, ULB will prioritize these activities and their scaling up based on the available resources to meet the respective objectives. While prioritizing projects, please reply following questions (Word Limit: 100 Words)

**Question: What are the sources of funds?**

**The funds are divided into three parts**

- 1. Construction of parks 50% from AMRUT(GOI)**
- 2. Construction of parks 50% from STATE GOVERNMENT**
- 3. O&M cost by ULB 100%**

**Question: Has projects been converged with other program and scheme**

No

**Question: Has projects been prioritized based on “more with less” approach?**

YES the projects undertaken are prioritized based on “more with less” approach in such a way that we spend less money and coverage is more

## **6. Conditionalities**

**1.1 Describe the Conditionality’s of each project in terms of availability of land, environmental & social obligation and clearances, required NOC, financial commitment, approval and permission needed to implement the project. Required approvals will be sought from competent authority and organizations. (Word Limit: 100 words)**

Berhampur municipality has identified few government lands in the municipal jurisdiction where there is a need for parks but the land is under the state body which has to be transferred to the municipality so that they can plan and execute the projects if provided funds on time by the state & central government, and approval of DPR by the apex committee

## **7. Resilience**

The resilience factor would be built in to ensure environmentally sustainable, safe and secured park development schemes. Ensure use of rust free sturdy steel structures for child and elderly friendly features. (Word Limit: 100 words)

Plans are reviewed by the internal technical experts with regard to safety, security and universal accessibility measures taken in the design and then finalize the plan for execution which makes parks in Berhampur safe and secure for all age groups. And the materials used considering there sustainability in mind

## **8. Financial Plan**

Once the activities are finalized and prioritized after consultations, investments both in terms of capital cost and O&M cost has to be estimated. (AMRUT Guidelines; para 6.5) Based on the investment requirements, different sources of finance have to be identified. Financial Plan for the complete life cycle of the prioritized development will be prepared. (AMRUT Guidelines; para 4, 6.6, 6.12, 6.13 & 6.14). The financial plan will include percentage share of different stakeholders (Centre, State and City) including financial convergence with various ongoing projects. While preparing finance plan please reply following questions (Word Limit: 100 words)

- How the proposed finance plan is structured for transforming and creating infrastructure projects?**

The financial plan is made considering 50 % Central grant and 50% state grant.

- **List of individual project which is being financed by various stakeholders?**

All the projects listed are planned under AMRUT on the basis of 50 % Central grant and 50% state grant.

- **Has financial plan prepared for identified projects based on financial convergence and consultation with funding partners?**

Yes, the project identified here does not include the ongoing projects which are covered under other scheme. Therefore, financial convergence from other schemes has not been planned for projects listed under this scheme. Since all the identified projects are funded under AMRUT on 50: 50 basis. Consultation with other funding partners is not required. However, consultation for involving other funding partners will be explored to achieve the objective of the mission.

- **Is the proposed financial structure is sustainable? If so then whether project has been categorized based on financial considerations?**

Yes, the financial structure proposed is sustainable. The state govt. is committed to contribute required funds for completing the projects. However, the O&M cost for these projects will be met from internal resources including collection of user charges. The projects have been categorized based on gap analysis identified for universal coverage as required under AMRUT scheme.

- **Have the financial assumptions been listed out?**

Yes, the financial assumption has been listed to work out the operational sustainability.

- **Does financial plan for the complete life cycle of the prioritized development?**

Yes, the financial plan takes care of both CAPEX and OPEX costs to ensure sustenance throughout the life cycle of all projects identified in SLIP.

- **Does financial plan include percentage share of different stakeholders (Centre, State, ULBs and)?**

Yes, the financial plan is based on 50 % Central grant and 50% state grant.

- **Does it include financial convergence with various ongoing projects?**

Yes, it includes financial and physical convergence with various ongoing projects under different schemes supported by both Central & State grant.

- **Does it provide year-wise milestones and outcomes?**

Yes, it has been provided

Details in financial plan shall be provided as per Table 2.7, 2.8, 2.9, 2.10 and 2.11. These tables are based on AMRUT guidelines tables 2.1, 2.2, 2.3.1, 2.3.2, and 2.5.

## MASTERSERVICELEVELSIMPROVEMENTSDURINGMISSION PERIOD

(As per Table 2.2 of AMRUT guidelines) (Amount in Rs. Cr)

Sr. No.	Project Name	Physical Components				Estimated Cost (Cr)
			Indicator	Existing (As-Is)	After (To-be)	
1	Development of Indira Priyadarshini Park at Mochl street in Berhampur - AMRUT/OD/Berhampur/PR/01					0.26
2	Development of Biju Patnaik Park at Corporation Road in Berhampur - AMRUT/OD/Berhampur/PR/02					0.27
3	Development of Park at Dhonba Bandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/03					0.28
4	Construction of Park at Baikunta Nagar in Berhampur - AMRUT/OD/Berhampur/PR/04					0.16
5	Construction of Park at Prem Nagar in Brhampur - AMRUT/OD/Berhampur/PR/05					0.13
6	Construction of Ganadhi Nagar Upper Road Park in Berhampur - AMRUT/OD/Berhampur/PR/06					0.26
7	Construction of Park at Gajapati Nagar in Berhampur - AMRUT/OD/Berhampur/PR/07					0.02
8	Construction of Parks in BRIT Colony in Berhampur - AMRUT/OD/Berhampur/PR/08					0.85
9	Construction of Nehru Park at Station Road in Berhampur - AMRUT/OD/Berhampur/PR/09					0.43
10	Construction of Park at Bada Bandha in Berhampur - AMRUT/OD/Berhampur/PR/11					0.93
11	Construction of Park at Ankuli in Berhampur - AMRUT/OD/Berhampur/PR/12					0.22
12	Construction of Park at Municipal Colony Lanji Palli in Berhampur - AMRUT/OD/Berhampur/PR/13					0.16
13	Construction of Park at Industrial Estate Chakka in Berhampur - AMRUT/OD/Berhampur/PR/14					0.16
14	Construction of Park at Komapalli Bandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/15					0.15
15	Construction of Park at Bimala Nagar in Berhampur - AMRUT/OD/Berhampur/PR/16					0.18
16	Construction of Park at Saradha Check in Berhampur - AMRUT/OD/Berhampur/PR/17					0.15
17	Construction of Park at Angula Bandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/18					0.46
18	Construction of Park at Somanath Nagar in Berhampur - AMRUT/OD/Berhampur/PR/19					0.27
19	Construction of Park at Gopalpur Main Road in Berhampur - AMRUT/OD/Berhampur/PR/20					0.48
20	Construction of Park at Santa Nagar in Berhampur - AMRUT/OD/Berhampur/PR/21					0.48
21	Construction of Park at Balaji pentha Sahi in Berhampur - AMRUT/OD/Berhampur/PR/22					0.22

22	Construction of Park at Mentu Check in Berhampur - AMRUT/OD/Berhampur/PR/23					0.03
23	Construction of Park at Sunga tanka in Berhampur - AMRUT/OD/Berhampur/PR/24					0.21

### ANNUAL FUND SHARING PATTERN FOR PARKS AND GREEN SPACE PROJECTS

(As per Table 2.3.1 of AMRUT guidelines)

(Amount in Rs. Cr)

r. No.	Name of the Project	Total Project Cost (Cr)					Total (in Cr)
			GOI	State	ULB	Others	
1	Development of Indira Priyadarshini Park at Mochl street in Berhampur - AMRUT/OD/Berhampur/PR/01	0.26	0.13	0.13			0.26
2	Development of BijuPatnaik Park at Corporation Road in Berhampur - AMRUT/OD/Berhampur/PR/02	0.27	0.14	0.14			0.27
3	Development of Park at DhoneBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/03	0.28	0.14	0.14			0.28
4	Construction of Park at Baikunta Nagar in Berhampur - AMRUT/OD/Berhampur/PR/04	0.16	0.08	0.08			0.16
5	Construction of Park at Prem Nagar in Brhampur - AMRUT/OD/Berhampur/PR/05	0.13	0.07	0.07			0.13
6	Construction of Ganadhi Nagar Upper Road Park in Berhampur - AMRUT/OD/Berhampur/PR/06	0.26	0.13	0.13			0.26
7	Construction of Park at Gajapati Nagar in Berhampur - AMRUT/OD/Berhampur/PR/07	0.02	0.01	0.01			0.02
8	Construction of Parks in BRIT Colony in Berhampur - AMRUT/OD/Berhampur/PR/08	0.85	0.42	0.42			0.85
9	Construction of Nehru Park at Station Road in Berhampur - AMRUT/OD/Berhampur/PR/09	0.43	0.22	0.22			0.43
10	Construction of Park at BadaBandha in Berhampur - AMRUT/OD/Berhampur/PR/11	0.93	0.46	0.46			0.93
11	Construction of Park at Ankuli in Berhampur - AMRUT/OD/Berhampur/PR/12	0.22	0.11	0.11			0.22
12	Construction of Park at Municipal Colony LanjiPalli in Berhampur - AMRUT/OD/Berhampur/PR/13	0.16	0.08	0.08			0.16
13	Construction of Park at Industrial Estate Chakka in Berhampur - AMRUT/OD/Berhampur/PR/14	0.16	0.08	0.08			0.16
14	Construction of Park at KomapalliBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/15	0.15	0.07	0.07			0.15
15	Construction of Park at Bimala Nagar in Berhampur - AMRUT/OD/Berhampur/PR/16	0.18	0.09	0.09			0.18
16	Construction of Park at Saradha Check in Berhampur - AMRUT/OD/Berhampur/PR/17	0.15	0.08	0.08			0.15
17	Construction of Park at AngulaBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/18	0.46	0.23	0.23			0.46
18	Construction of Park at Somanath Nagar in Berhampur - AMRUT/OD/Berhampur/PR/19	0.27	0.14	0.14			0.27
19	Construction of Park at Gopalpur Main Road in Berhampur - AMRUT/OD/Berhampur/PR/20	0.48	0.24	0.24			0.48
20	Construction of Park at Santa Nagar in Berhampur - AMRUT/OD/Berhampur/PR/21	0.48	0.24	0.24			0.48
21	Construction of Park at Balaji penthaSahi in Berhampur - AMRUT/OD/Berhampur/PR/22	0.22	0.11	0.11			0.22
22	Construction of Park at Mentu Check in Berhampur - AMRUT/OD/Berhampur/PR/23	0.03	0.02	0.02			0.03
23	Construction of Park at Sunga tanka in Berhampur - AMRUT/OD/Berhampur/PR/24	0.21	0.11	0.11			0.21

**ANNUAL FUND SHARING BREAK\_UP FOR PARKS and PLAY GROUND PROJECTS**  
(As per Table 2.3.2 of AMRUT guidelines)

Sr. No	Project	GOI	State			ULB			Convergence	others	Total
			14th Fc	Others	Total	14th Fc	Others	Total			
1	Development of Indra Priyadarshini Park at Mochl street in Berhampur - AMRUT/OD/Berhampur/PR/01	0.13			0.13						0.26
2	Development of BijuPatnaik Park at Corporation Road in Berhampur - AMRUT/OD/Berhampur/PR/02	0.14			0.14						0.27
3	Development of Park at DhonbaBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/03	0.14			0.14						0.28
4	Construction of Park at Baikunta Nagar in Berhampur - AMRUT/OD/Berhampur/PR/04	0.08			0.08						0.16
5	Construction of Park at Prem Nagar in Brhampur - AMRUT/OD/Berhampur/PR/05	0.07			0.07						0.13
6	Construction of Ganadhi Nagar Upper Road Park in Berhampur - AMRUT/OD/Berhampur/PR/06	0.13			0.13						0.26
7	Construction of Park at Gajapati Nagar in Berhampur - AMRUT/OD/Berhampur/PR/07	0.01			0.01						0.02
8	Construction of Parks in BRIT Colony in Berhampur - AMRUT/OD/Berhampur/PR/08	0.42			0.42						0.85
9	Construction of Nehru Park at Station Road in Berhampur - AMRUT/OD/Berhampur/PR/09	0.22			0.22						0.43
10	Construction of Park at BadaBandha in Berhampur - AMRUT/OD/Berhampur/PR/11	0.46			0.46						0.93
11	Construction of Park at Ankuli in Berhampur - AMRUT/OD/Berhampur/PR/12	0.11			0.11						0.22
12	Construction of Park at Municipal Colony LanjiPalli in Berhampur - AMRUT/OD/Berhampur/PR/13	0.08			0.08						0.16
13	Construction of Park at Industrial Estate Chakka in Berhampur - AMRUT/OD/Berhampur/PR/14	0.08			0.08						0.16
14	Construction of Park at KomapalliBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/15	0.07			0.07						0.15
15	Construction of Park at Bimala Nagar in Berhampur - AMRUT/OD/Berhampur/PR/16	0.09			0.09						0.18
16	Construction of Park at Saradha Check in Berhampur - AMRUT/OD/Berhampur/PR/17	0.08			0.08						0.15
17	Construction of Park at AngulaBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/18	0.23			0.23						0.46



Construction of Park at Municipal Colony LanjiPalli in Berhampur - AMRUT/OD/Berhampur/PR/13	0.16								
Construction of Park at Industrial Estate Chakka in Berhampur - AMRUT/OD/Berhampur/PR/14	0.16								
Construction of Park at KomapalliBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/15	0.15								
Construction of Park at Bimala Nagar in Berhampur - AMRUT/OD/Berhampur/PR/16	0.18								
Construction of Park at Saradha Check in Berhampur - AMRUT/OD/Berhampur/PR/17	0.15								
Construction of Park at AngulaBandha Huda in Berhampur - AMRUT/OD/Berhampur/PR/18	0.46								
Construction of Park at Somanath Nagar in Berhampur - AMRUT/OD/Berhampur/PR/19	0.27								
Construction of Park at Gopalpur Main Road in Berhampur - AMRUT/OD/Berhampur/PR/20	0.48								
Construction of Park at Santa Nagar in Berhampur - AMRUT/OD/Berhampur/PR/21	0.48								
Construction of Park at Balaji penthaSahi in Berhampur - AMRUT/OD/Berhampur/PR/22	0.22								
Construction of Park at Mentu Check in Berhampur - AMRUT/OD/Berhampur/PR/23	0.03								
Construction of Park at Sunga tanka in Berhampur - AMRUT/OD/Berhampur/PR/24	0.21								

Annex-1: Indicative Assessment Tools for Parks (Indicative – ULBs can have its own assessment tool as per the requirement or customize this tool to suit its need)