



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



BHADRAK

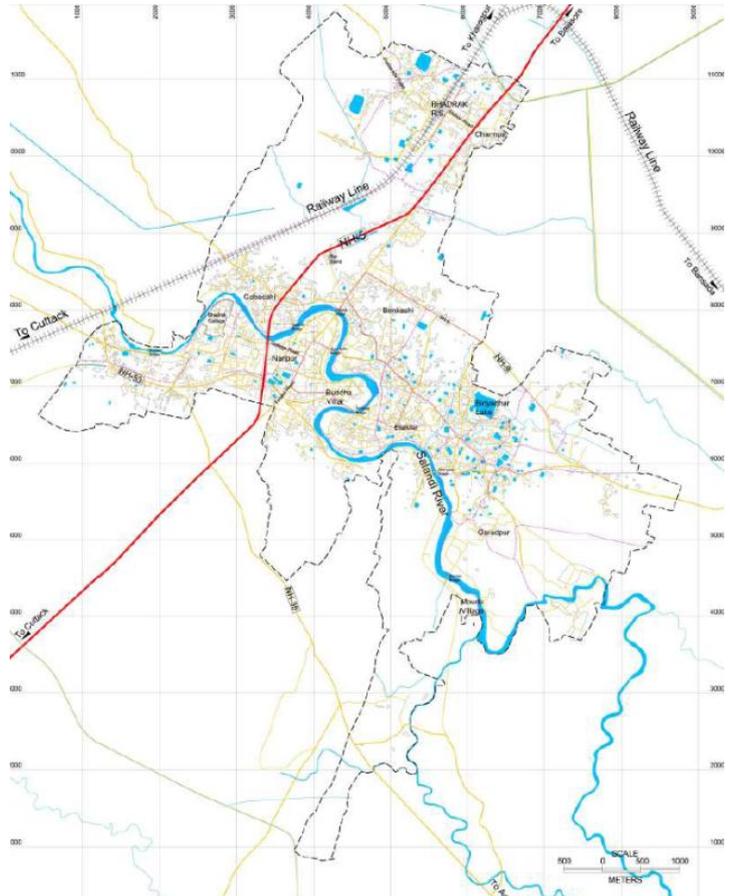


Bhadrak

As per the 2011 census, the population of Bhadrak Municipal Corporation is 1.07 lakh. The decadal growth rate of the city is @ 16.16%. The average floating population is about 10,000. Both horizontal and vertical growth of the city is observed during the recent years. The city has grown along the both sides of the Salandi river. The central part of the city is high density zone with major land use under residential and commercial activities.

Bhadrak is primarily centre of agriculture, trade and commerce activities with few industrial units. The Municipality areas do not have many industrial units excluding some small scale and HH industries along NH5 and SH9. There are few rice mills and pulse mills with in municipal unit along NH5.

After the construction of railway line from Howrah to Madras, the town developed as an important transport node for the surrounding region. The transport gained momentum with the construction of SH9 and Number of Major District roads. Due to its location in the core of cyclonic tract in the Bay of Bengal and causing natural hazards in the costal tract, its growth could not sustain and town remained static till the turn of the Century.



In the Service Level Improvement Plan (SLIP) for Bhadrak, sector-wise projects identified and the estimated costs are: water supply-8 nos./Rs. 107.16 Cr.; sewerage/Septage- 5 nos./ Rs. 221.95 Cr.; storm water drainage- 5 nos/ Rs. 277.26 Cr.; urban transport – 8 nos. / Rs. 30.80 Cr.; and parks – 6 nos./ Rs. 1.98 Cr. In total 32 nos of projects have been identified with a total estimated cost of Rs. 639.11 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 frame work 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? (75words)

Ans. As per census 2011 the population of the town is 1,07,463. The city is completely dependent on ground source with 20 nos. of production wells and 86.33 km pipeline. There are 1,064 house connections and 102 nos. of stand posts are available. The water is available for 8 hours for the consumer. All information are available ward wise. Consumer and asset database is maintained which are updated annually.

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? (75words)

Ans. The data regarding census 2011 has been collected. We have correlated 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

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	7%	100%	B
2	Per capita supply of water	45.25	135 LPCD	C
3	Extent of metering of water connections	0%	100%	D
4	Extent of non-revenue water	87%	20%	D
5	Quality of water supplied	100%	100%	C
6	Cost recovery in water supply services	25%	100%	B
7	Efficiency in collection of water supply related charges	56%	90%	B

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

Ans: The quality of water has low reliability though the benchmarks are achieved. HH coverage is deficit by 93% as compared to the benchmark. The LPCD is very low at 45.25. The draw down is observed in isolated pockets which will affect the ground source being not sustainable in long run. In absence of metering the NRW is high at 87%. The low cost recovery is due to low coverage.

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 underground water source? What is the capacity of these sources?

Ans. The existing source is underground water & the Capacity of total nos of sources is 6.09 MLD from 20 production wells

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. As the water is ground water, only disinfection in the form of chlorination through bleaching powder is being done to the water supply system. There are 4 nos. of Bleaching dosing pumps are operating in the system.

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: The per capita water supply is 45.25 LPCD after deduction of 15% towards losses from the total production.

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. The W/S system of the city is functioning in 4 zones.

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

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	4498	530	3968
2	6560	206	6354
3	6344	162	6182
4	2719	166	2553
Total	20121	1064	19057

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 in the city is 0.33 ML. Capacity of ESR is 0.1 ML & Ground water reservoirs is 0.23 ML.

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

Ans. No, raw water storage is not required since the source is perennial. However clear water storage is required.

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

Ans. Through direct pumping.

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. 86.33 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 total road length in the city is 313.78 KM. Pipelines are not laid in all streets. The objective of universal coverage of water supply pipe line is not achieved.

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

Ans. The pipe materials used in distribution lines are generally CI & PVC.

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

TABLE 1.3: Zone wise length of distribution network

Zone No	Total Street Length (m)	Street length with water distribution pipe line (m)	Street length without water distribution pipe line (m)
1	50,630	17,573	33,057
2	83,160	24,670	58,490
3	1,30,120	32,817	97,303
4	49,870	11,270	38,600
Total	3,13,780	86,330	2,27,450

INSTITUTIONAL FRAMEWORK

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 along with supervision field engineers (AEE/AE/JE) and supported by PMMU and PDMC	O & M team headed by EE and supported by operations engineers and operators. Outsourced PPP model will also be explored

Question: How city is planning to execute projects?

Ans: The project will be executed by PHEO through a dedicated project team.

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 executed by a Public Health Engineering Organisation, which a wing of Housing & Urban Development 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 1.4b: Status of Ongoing/ Sanctioned projects

Sl. No.	Name of Project	Scheme Name	Cost	Month of Completion	Status
	NIL				

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: The gaps are being addressed in a small incremental way with business as usual

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 the demand gap. New WTP, feeder main, storage and distribution are needed to bridge the gap and attain the benchmark levels.

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: Gaps have been computed after optimally utilizing the existing assets. Replacements are proposed only for the sections which are affecting the service levels.

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 87.00%. 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) - Ground Source	6.09		6.09	24	24
Treatment capacity (MLD)			0	24	24
Elevated Storage capacity (ML)	0.1		0.1	5.16	5.06
Distribution network coverage (m)	86330		86330	313780	227450

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?

Ans. : 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: AMRUT for holistic approach to achieve universal coverage in all the 4 zones

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

Ans: The activities are converged with small incremental projects undertaken under state plan

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

Ans: The ongoing projects will be completed with 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 bottleneck 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: Increase coverage, introduce metering, reduce unauthorized connection, introduce automation and the like

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. Reduction in NRW will lead to lower production levels and hence reductions in direct operational costs like chemical, electricity, manpower etc.

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

Ans: Yes.

THE ALTERNATIVE ACTIVITIES TO MEET THESE OBJECTIVES BE DEFINED AS PER TABLE

TABLE 1.6: Alternative Activities to Meet Objectives

Sr. No.	Objective	Activities	Financing Source
1	Quality water supply	Rehabilitation of venerable stretches	AMRUT
2	Reliability of source & adequacy of water	Source & treatment facility	
3	Universal coverage	Network expansion and house connection	
4	NRW reduction	Consumer metering & leak reduction	
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. Ward level consultation

Question: Has alternative proposed above are crowd sourced?

Ans. Yes

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

Ans.

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: The prioritization is based on objective, land/power/water availability, implementation feasibility and sustainability

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. Central and state support on 50:50 basis under AMRUT mission

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. Power availability has been discussed with NESCO and agreed upon. The funding shall be tied up with AMRUT scheme

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 proposal has taken into consideration disaster resilience into consideration

8. Financial Plan

Total No of Projects identified is 8 nos with an estimated cost of Rs. 107.16 Cr. is required to achieve universal coverage as envisaged under AMRUT. The completion period of this project is planned by 2019-20. The water supply system is under parastatal agency i.e. Public Health Engineering Organization (Urban). The ULB own generated fund is not able to cover the operational requirements of ULB and has been depending upon the state grant for the same. Therefore, all infrastructure development projects are required to be funded by Centre/ State grants or loan funds by state agencies. Accordingly the present investment on the projects is planned based on 50% fund as grant from Centre and 50% fund to be met by state grant and some limited funds from ULB/ soft loans from financial agency like OUIDF. At the planning stage, it is not possible to identify the breakup of funding pattern for state 50 % share of fund and it is considered that this fund shall be made available from state resources. 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.

- **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 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 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, ULBs and)**

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 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.

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 Bhadrak -Rehabilitation P1 (AMRUT/OD/BHADRAK/WS/01)	1	15-16	16-17	6.12
6	Improvement of WS to Bhadrak -New Z1 (AMRUT/OD/BHADRAK/WS/05)	5	16-17	18-19	11.59
7	Improvement of WS to Bhadrak -New Z2 (AMRUT/OD/BHADRAK/WS/06)	6	16-17	18-19	20.26
8	Improvement of WS to Bhadrak -New Z3 (AMRUT/OD/BHADRAK/WS/07)	7	16-17	18-19	27.38
9	Improvement of WS to Bhadrak -New Z4 (AMRUT/OD/BHADRAK/WS/08)	8	16-17	18-19	10.60
12	Improvement of WS to Bhadrak - Headworks P1 (AMRUT/OD/BHADRAK/WS/03)	3	16-17	17-18	2.52
13	Improvement of WS to Bhadrak - Headworks P2 (AMRUT/OD/BHADRAK/WS/04)	4	16-17	18-19	23.69

14	Improvement of WS to Bhadrak - Headworks P3 (AMRUT/OD/BHADRAK/WS/02)	2	17-18	18-19	5.00
Grand Total					107.16

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)	
	Improvement of WS to Bhadrak -Rehabilitation P1 (AMRUT/OD/BHADRAK/WS/01)	Consumer meter & pipe replacement	Metering	0%	5%	6.12
			Quality	100% C	100% A	
	Improvement of WS to Bhadrak -New Z1 (AMRUT/OD/BHADRAK/WS/05)	Storage & Distribution	Coverage	11.8%	100.0%	11.59
	Improvement of WS to Bhadrak -New Z2 (AMRUT/OD/BHADRAK/WS/06)	Storage & Distribution	Coverage	3.1%	100.0%	20.26
	Improvement of WS to Bhadrak -New Z3 (AMRUT/OD/BHADRAK/WS/07)	Storage & Distribution	Coverage	2.6%	100.0%	27.38
	Improvement of WS to Bhadrak -New Z4 (AMRUT/OD/BHADRAK/WS/08)	Storage & Distribution	Coverage	6.1%	100.0%	10.60
	Improvement of WS to Bhadrak - Headworks P1 (AMRUT/OD/BHADRAK/WS/03)	Source Development	Per capita water supply	45	135	2.52
	Improvement of WS to Bhadrak - Headworks P2 (AMRUT/OD/BHADRAK/WS/04)	Treatment	Per capita water supply	45	135	23.69
	Improvement of WS to Bhadrak - Headworks P3 (AMRUT/OD/BHADRAK/WS/02)	Source Development	Per capita water supply	45	135	5.00

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 Bhadrak -Rehabilitation P1 (AMRUT/OD/BHADRAK/WS/01)	6.12	3.06	3.06			6.12
6	Improvement of WS to Bhadrak -New Z1 (AMRUT/OD/BHADRAK/WS/05)	11.59	5.80	5.80			11.59
7	Improvement of WS to Bhadrak -New Z2 (AMRUT/OD/BHADRAK/WS/06)	20.26	10.13	10.13			20.26
8	Improvement of WS to Bhadrak -New Z3 (AMRUT/OD/BHADRAK/WS/07)	27.38	13.69	13.69			27.38
9	Improvement of WS to Bhadrak -New Z4 (AMRUT/OD/BHADRAK/WS/08)	10.60	5.30	5.30			10.60
12	Improvement of WS to Bhadrak - Headworks P1 (AMRUT/OD/BHADRAK/WS/03)	2.52	1.26	1.26			2.52
13	Improvement of WS to Bhadrak - Headworks P2 (AMRUT/OD/BHADRAK/WS/04)	23.69	11.84	11.84			23.69
14	Improvement of WS to Bhadrak - Headworks P3 (AMRUT/OD/BHADRAK/WS/02)	5.00	2.50	2.50			5.00
	Total	107.16	53.58	53.58	-	-	107.16

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 Bhadrak -Rehabilitation P1 (AMRUT/OD/BHADRAK/WS/01)	6.12	1.53	1.53			3.06
6	Improvement of WS to Bhadrak -New Z1 (AMRUT/OD/BHADRAK/WS/05)	11.59	-	-			-
7	Improvement of WS to Bhadrak -New Z2 (AMRUT/OD/BHADRAK/WS/06)	20.26	-	-			-
8	Improvement of WS to Bhadrak -New Z3 (AMRUT/OD/BHADRAK/WS/07)	27.38	-	-			-
9	Improvement of WS to Bhadrak -New Z4 (AMRUT/OD/BHADRAK/WS/08)	10.60	-	-			-
12	Improvement of WS to Bhadrak - Headworks P1 (AMRUT/OD/BHADRAK/WS/03)	2.52	0.25	0.25			0.50
13	Improvement of WS to Bhadrak - Headworks P2 (AMRUT/OD/BHADRAK/WS/04)	23.69	2.37	2.37			4.74
14	Improvement of WS to Bhadrak - Headworks P3 (AMRUT/OD/BHADRAK/WS/02)	5.00	0.50	0.50			1.00
	Total	107.16	4.65	4.65	-	-	9.30

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 th FC	Others	Total	14 th FC	Others	Total			
1	Improvement of WS to Bhadrak - Rehabilitation P1 (AMRUT/OD/BHADRAK/WS/01)	1.53		1.53	1.53					3.06	
6	Improvement of WS to Bhadrak - New Z1 (AMRUT/OD/BHADRAK/WS/05)	-		-	-					-	
7	Improvement of WS to Bhadrak - New Z2 (AMRUT/OD/BHADRAK/WS/06)	-		-	-					-	
8	Improvement of WS to Bhadrak - New Z3 (AMRUT/OD/BHADRAK/WS/07)	-		-	-					-	
9	Improvement of WS to Bhadrak - New Z4 (AMRUT/OD/BHADRAK/WS/08)	-		-	-					-	
12	Improvement of WS to Bhadrak - Headworks P1 (AMRUT/OD/BHADRAK/WS/03)	0.25		0.25	0.25					0.50	
13	Improvement of WS to Bhadrak - Headworks P2 (AMRUT/OD/BHADRAK/WS/04)	2.37		2.37	2.37					4.74	
14	Improvement of WS to Bhadrak - Headworks P3 (AMRUT/OD/BHADRAK/WS/02)	0.50		0.50	0.50					1.00	
	Total	4.65	-	4.65	4.65	-	-	-	-	9.30	

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	FY	FY	FY	
				H1	H2	2017	2018	2019	2020	
Improvement fo water supply to Bhadrak under AMRUT	107.16									
		Coverage of water supply connections	7.2%	8%	10%	12%	50%	80%	100%	
		Per capita supply of water	45.25	46	46	46	135	135	135	
		Extent of metering of water connections	0%	0%	2%	20%	70%	90%	100%	
		Extent of non-revenue water	87%	85%	83%	70%	50%	30%	20%	
		Quality of water supplied	100%	100%	100%	100%	100%	100%	100%	
		Cost recovery in water supply services	25%	25%	30%	35%	50%	80%	100%	
		Efficiency in collection of water supply related charges	56%	56%	60%	70%	80%	90%	100%	

Storm Water Drainage

Mission Management Information System

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)

The base line information of urban population(ward wise) is available in Census-2011, rainfall data and climatic data with significance of catchment area is received from metrological department, information about length of roads& drains (ward wise by CDP), maps (GIS by CDP), City Development Plan 2015.

Yes, zone wise information for Storm Water Drainage (SWD) is available.

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

Yes, the data are collected from population Census 2011, District Statistics Office, slum population from IHSDP& IIHL.

Yes, the above information relating to baseline survey data of MoUD are ascertained from CDP for Bhadrak City-2040.

Yes, all the data above are correlated as per availability of different 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%	10.5%
2	Incidence of sewerage mixing in the drains ¹	0%	<25%	<50%	1%
3	Incidence of water logging ² (in nos. per year)	0	<25	<50	12

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)

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

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

The coverage area of drain is achieved only by 10.5% w.r.t. road length. So there is an gap of 89.5%. Further, There are 36nos. of water logging spots are identified within the city. The water logging happens approximately 10-12 times a year.

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

The challenges faced by the city to achieve SLB are as follows

1. Lack of proper drainage network
2. Encroachment & obstacles
3. Due to maximum opening of the Hadgadh Dam during rainy seasons because of low intake capacity and high catchment area.
4. Choking of drains by solid waste
5. Silting of drains
6. Uncovered Drainages

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

The challenges faced by the city to achieve SLB are as follows

1. Existing drain should be covered
2. Kutcha drains need to be converted to RCC/pukka.
3. Raising & widening of existing culverts and drains.
4. Renovation and retrofitting of old stone masonry drains
5. Encroachment of drains needs to be checked
6. Construction of roads with drains.

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?

No, there is no existing drainage project.

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?

There exist a network of kutch of total length 210 km and pucca 33 km drains finally leading to natural drain of 25.72 km which finally leads to Mahanadi River.

There are ten drains but there is one major natural drains named Nazor Nala of 10 km with the discharge point at Ichapur is around total of 13 km. This compared to 313kms of road network provides an coverage 10.5% on storm water drainage sector with consideration of only manmade drains.

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

Presently the existing Pucca drains are in depilated condition and are uncovered as it is approximately 5 years old. These SWD are not repaired and maintained since last two years. No, the existing SWD network is not sufficient to carry the peak flow of the catchment/water shed which leads to flooding at 36 places.

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?

There is no separate SWD network prevailing in the city. All households in the city dispose their gray water to the existing SWD.

S.No.	Sewer Zone/ Ward No	Location	Merging with which sewer
All households/all zone/ward in the town outlet their gray water to the existing drains.			

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?

During the peak rainy days the waste water that is storm water and the sewer water floods up the roads, household and the intersection. This flooding happens 10-12 times in a year and creating nuisance for minimum of 2-8days.

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?

At, the present during water logging 15-16 pumps are used to pump out the water in the water logging area. In majority of time the fire dept. comes for the help of municipality in order to solve the SWD issue.

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.

The reason for water logging and flooding are generally observed during peak rainy season in low laying areas of the City with adjacent to the locality of the river bed side. Especially during flood situations. As a result of which a very few households on the slum pockets are being affected.

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	Santhia, Nilakanthapur, Nanghamohalla, Kajisahi, San karpur, Darjipatti, Patnasahi, Jamirpatti, Mulnasahi, Issa fpur, Helasahi, Chhadak Mohalla,	10
2	Along roads (50 mt length or, more)	Chhadak Mohalla, Tinapatti, Allalpur, Nangha Mohalla, Mirzapur, Katualsahi, Nathasahi, Beherasahi, Dhanatola, NayaNagar, Nuasahi, Bhuyanmohalla, Garadpur, Durgapur, Kntabania	12
3	Locality (affecting 50 HH or more)	Chhadak Mohalla, Bankasahi, Hazari Nagar, Kuansh, Chamarsahi, Naripur, Januganj, Bagur ai, Sahapur, Gabasahi, Mathasahi, Bhadrak College Area, Apartibindha, Mirsahi, Elkha, Baralapokhari, Dag arasahi, Belamal, Kantapal, Telangapatti	12

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.	Sewer Zone/Ward No	Location	Stretch Length Affected
1		Bhadrak college chowk	60 mts
2		Bhadrak high school chowk	50 mts
3		Yousufpur	50 mts
4		Talasai culvert	55 mts
5		Bridge no-3	53 mts

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

4.2 How presently the problem is addressed?

This ULB is taking all appropriate measures for Desiltingof drains by municipality sweepers and engaging outsourced sweepers, engaging JCB and Pumps to pump out the waters.

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)?

This ULB is confined with promoting basic amenities to its City's people in terms of O&M creating awareness amongst the people and their role of social responsibility through the community participation. The Planning & Policies are being prepared and monitored by technical experts and stakeholders.

Planning and Design	Construction/ Implementation	O&M
ULB	ULB	ULB

Table 1.3: Functions, roles, and responsibilities

5.2 How city is planning to execute projects?

The council of the ULBs at the beginning of the FY prepares the projects to be undertaken under this head with availability of state government funds and own resource. With execution of projects in time bound manner through tendering under the direct supervision of EO and Works dept.

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. The projects shall be implemented by the ULB concerned with due weightage to MoUD and AMRUT mission with the help of technical experts, designers and stakeholders. But presently the SWD system is being maintained by the ULB in traditional process.

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

S. No.	Name of Project	Scheme Name	Cost	Month of Completion	Status (as on ddmm 2015)
Nil	Nil	Nil	Nil	Nil	Nil

Table 1.4: Status of Ongoing/ Sanctioned

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)

The existing system is able to cover only 10.5% of the road length and as there is no further project in the SWD sector so there is no further gap being bridged.

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 additional asset creation and renovation of the existing one to achieve the 100 % universal coverage necessary to improve the SWD system.

The city needs 100% SWD coverage with covered drains and which would need proper maintenance of the existing infrastructure and new system.

1.4 How does the city visualizes 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 existing network of kuccha and dilapidated pucca drains could be retrofitted and rejuvenated to bring down the cost of the total new asset creation.

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?

There is no assessment done in maintenance of the drains and the pumps. However there are maintenance as in when required.

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.

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)		nil		25.7	25.7
Network requirement to provide proper drainage to all identified water stagnant point/ flooding points up to the end discharge point (in Km)	33.0	nil	33.0	313.78	280.78
Network length where households discharging wastewater directly into the drains	33	nil	33		
Rejuvenation of existing primary drains and primary drains including covering and installation of filter	0		0	9.9	9.9

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

As there are no existing projects available.

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)

Yes, The detail estimate with source of funding have been identified in respect of Bhadrak City with respect to SWD which can some extent improvise the present scenario with an expectation of greater utility.

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

The construction kuccha drains, retrofitting, renovation of the necessary pucca drains and lining of the left out natural drains could be constructed under the state and ULB funding. (Annual cleaning of Drainage is also from state / ULB fund)

The possible activities are as follows:

- 1) Construction of RCC kuccha drains with cover slabs
- 2) Covering of existing puccaa drains
- 3) Desilting/ retrofitting, renovation of exsting puccaa drains
- 4) Lining of the left out natural drains
- 5) Frequent Cleaning of SWD channel.

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

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

The convergence of the activity can't be done for the city as the city is not covered in any of the major mission like JICA/ ADB funded/Smart city. However, the SBM is taken up by the municipality. So we could propose the action necessary to avoid choking of the drainage through the SBM. Which indirectly helps 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 Bhadrak city is not covered under the JNNURM/UDISSMT etc. 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 ULB also need proper capacity building for the staffs and the service providers who can improvise the day to day activities.

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

Certain of cities of Kerala and cuttack is seen to be the best practice and many of the issues related to the flooding and storm water network could be resolved by looking at those city.

However there are no similarity in geographical features of the Cuttack and Bhadrak.

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

Presently there is only holding tax being imposed in the City so by imposing property tax the sector could achieve the required financial from the government would help at least for the maintenance.

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

Yes, as the ULB uses pumps in the city to take off the flooding water so it is necessary to considered energy efficient pumps.

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)

There are no PPP mode used in any of the plan or project in Bhadrak city.

Sr. No.	Objective	Activities	Financing Source
	To Have Complete network Coverage and covering of The Storm Water Network	Augmentation Of The SMD Network	State / Central/ ULB
		Creation of the new network	
	To reduce the flooding points	Covering of the SMD	
		Improving the SWM under Swatch Bharat Abhiyan	
		Creating the energy efficient pumping facility	
	To reduce the backflow of the flooding water	Creating the energy efficient pumping facility	
		Creating the Swiss gate facility	

The alternative activities to meet these activities are 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 majorly council members and media persons etc.

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

Yes, but not separately the ward’s prominent person have been called up in the consultations.

1.3 Has alternative proposed above are crowd sourced?

No the alternative hasn’t been proposed above the crowd source.

1.4 What is feedback on the suggested alternatives and innovations?

Yes, only the major and the relevant feedbacks and alternatives/innovations has been taken up.

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

No there are no potential alternative is received.

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

As no alternatives has been received so it hasn’t been taken up for discussion.

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 / ULB fund/ finance commission fund (central)

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. 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. ** (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 lowered down to the necessary level such that it doesn't affect the nearby environment.

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. 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 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 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)

Master Plan of Storm Water Drainage Projects for Mission period

Sr. No	Project Name	Priority number	Year in which to be implemented	Year in which proposed to be completed	Estimated Cost
1	Augmentation of SWD in Bhadrak town in zone 4 AMRUT/OD/BHADRAK/SWD/04	1	2015-16	2016-17	72.15
2	Augmentation of SWD in Bhadrak town in zone 2 AMRUT/OD/BHADRAK/SWD/02	2	2016-17	2016-17	27.23
3	Augmentation of SWD in Bhadrak town in zone 5 AMRUT/OD/BHADRAK/SWD/05	3	2017-18	2017-18	54.35
4	Augmentation of SWD in Bhadrak town in zone 3 AMRUT/OD/BHADRAK/SWD/03	4	2018-19	2018-19	35.92
5	Augmentation of SWD in Bhadrak town in zone 1 AMRUT/OD/BHADRAK/SWD/01	5	2019-20	2019-20	87.61
Grant Total					277.26

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			Estimated Cost
			Indicator	Existing As-Is	After to Be	
1	Augmentation of SWD in Bhadrak town in zone 4 AMRUT/OD/BHADRAK/SWD/04	1. Construction of covered storm water drainage network. 2. Renovation of Existing Storm Water Drainage 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	10.31%	100%	72.15
			Incidence of Water Logging	4	0	
2	Augmentation of SWD in Bhadrak town in zone 2 AMRUT/OD/BHADRAK/SWD/02	1. Construction of covered storm water drainage network. 2. Renovation of Existing Storm Water Drainage 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	11.77%	100%	27.23
			Incidence of Water Logging	3	0	
3	Augmentation of SWD in Bhadrak town in zone 5 AMRUT/OD/BHADRAK/SWD/05	1. Construction of covered storm water drainage network. 2. Renovation of Existing Storm Water Drainage 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	8.69%	100%	54.35
			Incidence of Water Logging	2	0	

4	Augmentation of SWD in Bhadrak town in zone 3 AMRUT/OD/BHAD RAK/SWD/03	1. Construction of covered storm water drainage network. 2. Renovation of Existing Storm Water Drainage 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	13.10%	100%	35.92
			Incidence of Water Logging	2	0	
5	Augmentation of SWD in Bhadrak town in zone 1 AMRUT/OD/BHAD RAK/SWD/01	1. Construction of covered storm water drainage network. 2. Renovation of Existing Storm Water Drainage 3. Construction of wet well. 4. Construction of Pumping Station and erection of pumping arrangement. 5. Arrangement of Sluice gate	Coverage Drainage Network	10.13%	100%	87.61
			Incidence of Water Logging	1	0	

Table 1.9 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
				Govt	State	ULB	Others	
1	Augmentation of SWD in Bhadrak town in zone 4 AMRUT/OD/BHADRAK/SWD/04	2015-16	28.86	14.43	14.43			28.86
2	Augmentation of SWD in Bhadrak town in zone 4 AMRUT/OD/BHADRAK/SWD/04	2016-17	43.29					
3	Augmentation of SWD in Bhadrak town in zone 2 AMRUT/OD/BHADRAK/SWD/02	2016-17	27.23					
4	Augmentation of SWD in Bhadrak town in zone 5 AMRUT/OD/BHADRAK/SWD/05	2017-18	54.35					
5	Augmentation of SWD in Bhadrak town in zone 3 AMRUT/OD/BHADRAK/SWD/03	2018-19	35.92					
6	Augmentation of SWD in Bhadrak town in zone 1 AMRUT/OD/BHADRAK/SWD/01	2019-20	87.61					
Total			277.26	14.43	14.43			28.86

Sr. No.	Project	Gol	State			ULB			Convergence	Others	Total
			14 th FC	Others	Total	14 th FC	Others	Total			
1	Augmentation of SMD in Bhadrak town in zone 4 AMRUT/OD/BHADRAK/SMD/04	14.43	14.43							28.86	
2											
3											
4											
5											
	Total										

Table 1.11 Year wise Plan for Service Levels Improvements
(As per Table 2.5 of AMRUT guidelines)

Year wise Plan for Service Levels Improvements											
Sl. No	Proposed Project Cost in Cr.	Indicator	Base Line	Present Status	Gap	FY2016		FY 2017	FY 2018	FY 2019	FY 2020
						H1	H2				
1	277.26	Coverage of Storm Water Drainage Network	100%	11%	89%	0%	22.06%	49.95%	71.69%	85.72%	100.00%
2		Incidence of Water Logging	0	12	12	12	8	5	3	1	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, Draft CDP, 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)	62%	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

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	4498	1709	62%
2	8298	3153	62%
3	7325	2784	62%
Total	20121	7646	

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 seepage? 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	4498	0	0
2	8298	0	0
3	7325	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 1 (one) 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 RAMEWORK

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 PMU and PDMC . There will be MuJ between Municipality and State Govt/ OWSSB for implementation.	O & M team headed by Municipal Engineer of Bhadrak Municipality.

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 ddmm 2015)
	NIL		0		
			0		
			0		
Total			0		

Question: How much the existing system will 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 require 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	166.06	166.06
No of Households covered under sewerage system (2021 demand)	0	0	0	23119	23119
Sewerage treatment plant MLD (2030 demand)	0	0	0	9.8	9.8

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

Table2.7 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 through website under active process.

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 ⁶ (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 BHADRAK, Zone 1 – Sewer network AMRUT/OD/BHADRAK/SG/01	2	2016-17	2017 - 18	55.91
2	Sewerage System for BHADRAK, Zone 1 – STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/02	3	2016-17	2017 - 18	12.21
3	Sewerage System for BHADRAK, Zone 2 – Sewer network AMRUT/OD/BHADRAK/SG/03	4	2016-17	2018-19	127.89
4	Sewerage System for BHADRAK, Zone 2 – STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/04	5	2016-17	2018-19	22.55
5	Septage Management for BHADRAK AMRUT / OD / BHADRAK / SG/05	1	2015-16	2015-16	3.35
Grand Total				Total AMRUT on going	221.91 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 BHADRAK , Zone 1 – Sewer network AMRUT/OD/BHADRAK/SG/01	Sewer network & house connection	a. Coverage b. Collection efficiency	0%	100%	55.91
2	Sewerage System for BHADRAK, Zone 1 – STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/02	STP, Pumping main and Pumping Stations	Sewage treatment & disposal	0%	100%	12.21
3	Sewerage System for BHADRAK, Zone 2 – Sewer network AMRUT/OD/BHADRAK /SG/03	Sewer network & house connection	a. Coverage b. Collection efficiency	0%	100%	127.89
4	Sewerage System for BHADRAK, Zone 2– STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/04	STP, Pumping main and Pumping Stations	Sewage treatment & disposal	0%	100%	22.55
5	Septage Management for BHADRAK AMRUT / OD / BHADRAK / SG/05	FSM & Treatment work	Collection & Treatment	0%	100%	3.35
	Total					221.91

Table 8.3 Annual Fund Sharing Pattern for Sewerage Projects

(Rs. in Cr.)

Sector	Total Project cost	Share				
		Govt	State	ULB	Others (OUIDF)	Total in Cr
Sewerage and Septage management						
Proposed Projects						
Sewerage System for BHADRAK , Zone 1 – Sewer network AMRUT/OD/BHADRAK/SG/01	55.91	0	0			0
Sewerage System for BHADRAK, Zone 1 – STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/02	12.21	0	0			0
Sewerage System for BHADRAK, Zone 2 – Sewer network AMRUT/OD/BHADRAK/SG/03	127.89	0	0			0
Sewerage System for BHADRAK, Zone 2– STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/04	22.55	0	0			0
Septage Management for BHADRAK AMRUT / OD / BHADRAK / SG/05	3.35	1.675	1.675			3.35
Total						3.35

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

Sr. No.	Project	Gol	State			ULB			Convergence	Others	Total in Cr
			14 th FC	Others	Total	14 th FC	Others	Total			
1	Sewerage System for BHADRAK , Zone 1 – Sewer network AMRUT/OD/BHADRAK/SG/01	0.00		0.00	0.00					0.0	
2	Sewerage System for BHADRAK, Zone 1 – STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/02	0.00		0.00	0.00					0.00	
3	Sewerage System for BHADRAK, Zone 2 – Sewer network AMRUT/OD/BHADRAK /SG/03	0.00		0.00	0.00					0.00	
4	Sewerage System for BHADRAK, Zone 2– STP & Pumping Stations. AMRUT/OD/BHADRAK/SG/04	0.00		0.00	0.00					0.00	
5	Septage Management for BHADRAK AMRUT / OD / BHADRAK / SG/05	1.675		1.675	1.675					3.350	
Total										3.350	

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										
		1. Coverage of latrines (individual or community)	62%	68%	74%	93%	100%	100%	100%	
		2. Coverage of sewerage network services	0%	0%	0%	0%	30%	100%	100%	
		3. Efficiency of Collection of Sewerage	0%	0%	0%	0%	30%	100%	100%	
		4. Efficiency in treatment	0%	0%	10%	10%	40%	100%	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.SERVICELEVELSTATUS

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, Gol. 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 and is in the finalization process. 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	4
		2	0.7-1	
		3	0.3-0.7	
		4	< 0.3	

2	Availability of urban transport per 1000 population			4
		Level of Service	Range	
		1	≥ 0.6	
		2	0.4-0.6	
		3	0.2-0.4	
4	≤ 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 (%) - 1

Answer:

No NMT Parking facilities available in Bhadrak

b) Parking: Availability of parking spaces

Answer: Bonth Chakk, New Bus Stand, Charampa (Near Kailash Talkies), Burma Bye-pass, Front of Tehsil Office, Budhwar Hut, Kodumbeda (Old Veterinary Office), Haldidua Square

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

Answer:

81% of the roads in the city are surfaced; the road widths in the central areas of the city are much lesser at 8-10 feet with medium density with concentration of residential population and commercial and institutional activities on both sides. Condition of pukka roads is very poor at many of the places and water logging is a common phenomenon. The major roads in city are O.T Road, Katchari Road, Purna Bazar etc. comprised of commercial activities. Encroachment, concentration of informal activities and high pedestrian population is also high on the roads in core.

Traffic Congestion: O.T Road, Katchari Road, Purna Bazar are the key congested areas in Bhadrak.

Road Accidents: The number of traffic accidents reported in Bhadrak till June 2014 was 135. Numbers of accidents are increasing every year with average annual growth rate of 41%. The continuous increase in accidents in Bhadrak city can be attributed to the growing vehicular traffic, faulty public transportation and lack of pedestrian facilities. Major accident prone areas are NH and bypass road.

Few important issues are: Lack of grade separation at railway crossings, Narrow width of internal roads, Parking issue, Congestion at Major Junctions, Lack of public transport facilities, Lack of traffic, enforcement rules, Lack of footpath, Encroachments on roads, Shortage of street lights

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:

1. Road from Mahatab Statue to Dahanigadia.
2. Road from kacheri bazaar chhaka to Banka Bazar Chaka.
3. Road from GosalaChhaka to Puruna Bazar Chhak.
4. Road from Charampa to Railway Station.

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:No such Provision have been made

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

Answer:No

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 - 24 buses has been sanctioned, Town buses - 18

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

Answer:Around 30 kms

Multi-level parking

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

Answer:

Authorized:None

Unauthorized: BonthChakk, New Bus Stand, Charampa (Near Kailash Talkies), Burma Bye-pass, Front of Tehsil Office, Budhwar Hut, Kodumbeda (Old Veterinary Office), Haldidua Square

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

Answer: None

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: On road &Off road parking restriction has been imposed by the police only in market areas.

Time of day: None, **Duration:** None

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

Answer: Railway Station, New Bus Stand, Kacheri Gate (front),

Question: Is private sector involved in parking?

Answer:No

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

Answer: NESCO (front), Kacheri Chhak area upto DSP House, Banka Chhak, Kali Mandir Chhak, Bondh Chhak (East, South, North zone), Old Bus Stand (East Side), Market Area

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 table No. 2

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

Sl. NO	Agencies	Responsibilities
1	Regional Transport Authority	Registration of vehicles
2	District Police	Traffic Management
3	District Administration	Planning
4	Bus Syndicate	Private bus management
5	BBUTT	City Bus Service

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

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

Answer:1. R.T.O & District Police.

2. BBUTT for City Bus Service.

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

Answer:SP (Police), Regulation by RTO and DA.

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:Yes

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

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Project/Sector	Approved Cost (Rs. Lakhs)	Status of projects (till May 13)	Expenditure(Rs. Lakhs)	Scheme
Non motorized Transport	Nil			
Street Parking	Nil			
Multi Level Parking	Nil			
Others	Nil			

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

Answer: Yes, City Bus Service is under process

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 one way traffic in the main roads, construction of fly over bridges extension of road width including footpaths, development of parking places, etc are required to be improved.

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	Level of Service	Range	4		
		1	≥ 1			
		2	0.7-1			
		3	0.3-0.7			
		4	< 0.3			
2	Availability of urban transport per 1000 population	Level of Service	Range	4		
		1	≥ 0.6			
		2	0.4-0.6			
		3	0.2-0.4			
		4	≤ 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 (%)	-													
5	Availability of On-street paid public parking spaces (%)	<table border="1"> <thead> <tr> <th>Level of Service</th> <th>Range</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>≥ 75</td> </tr> <tr> <td>2</td> <td>50-75</td> </tr> <tr> <td>3</td> <td>25-50</td> </tr> <tr> <td>4</td> <td>< 25</td> </tr> </tbody> </table>	Level of Service	Range	1	≥ 75	2	50-75	3	25-50	4	< 25	4		
Level of Service	Range														
1	≥ 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: Appropriate planning is required after proper survey & identifying the needs of the Town.

- 1) Road Widening to ply City buses
- 2) Creation of new roads, bye passes
- 3) Construction of over bridges, flyovers near Khankha (Bridge No 3)
- 4) Parking places wherever required to decongest roads

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

Answer:

1. Improvement of existing infrastructure i.e. roads & bridges.
2. Separate terminals/ stands for buses, trucks, taxis, cars, auto rickshaw , etc.
3. Improvement of parking places in different locations.
4. Proper traffic management system with traffic signal system.

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: As Above

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

Answer: if another 6 buses will be given under AMRUT Mission ,this Municipality can improve the level of services.

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

Answer:

1. By widening the road and implementing cycle tracks and pedestrian walkways .
2. By acquisition of more city buses for better accessibility.

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

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.

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	PWD(R&B), Municipality
2	Widening of roads	Widening of RoW for Sub Arterial roads	State Govt.
3	Proper co-ordination between responsible authorities	Integration of Governance	State Govt.
4	City Mobility Plan	DPR	State Govt & AMRUT
5	There should be proper arrangement of traffic for flow of traffic.	Signalisation, Junction Design, Widening of roads	State Govt & AMRUT
6	Parking	Multi level parking	Municipality

Table2: Estimated Cost for various possible activities

Sl. No	Projects	Unit	Quantity	Total Cost (in Cr)
1	Construction of Street Parking, (AMRUT/OD/BHADRAK/UT/01)	No	8	0.50
2	Preparation of DPR on City Mobility Plan (CMP) (AMRUT/OD/BHADRAK/UT/02)	No	1	0.50
3	Augmentation of City Bus fleet, (AMRUT/OD/BHADRAK/UT/03)	Buses	1	10.00
4	Construction of Cycle parking near Bus Stand (AMRUT/OD/BHADRAK/UT/04)	No	1	0.30
5	Upgradation of Bus Depots, (AMRUT/OD/BHADRAK/UT/05)	No	1	0.50
6	Development of Transport Nagar, (AMRUT/OD/BHADRAK/UT/06)	No	1	10.00
7	Construction of Foot Over Bridges, (AMRUT/OD/BHADRAK/UT/07)	No	5	3.00
8	Construction of Non Motorised Transport facilities (Footpaths & Cycle Tracks & Cycle Parking), (AMRUT/OD/BHADRAK/UT/08)	Kms	3	6.00
				30.80

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/up-gradation 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: 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 criteriasuch as widening the roads, Creating path way, Proper traffic arrangement

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

Answer: Yes. From Mahta Chhak to Charampa (ROW-30 mts, Length – 4 kms),

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:Govt. grants under AMRUT

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	Road Improvements	72.24	State/AMRUT
2	Augmentation of CBS	10.00	State/AMRUT
3	Over Bridges	6.00	State/AMRUT
4	DPR on City Mobility Plan	0.50	State/AMRUT
5	Parking spaces identified	0.50	State/AMRUT
6	Cycle parking near Bus Stand	0.03	State/AMRUT
7	Upgradation of Bus Depots	0.50	State/AMRUT
8	Development of Transport Nagar	10.00	State/AMRUT
9	Foot Over Bridges	3.00	State/AMRUT
10	Construction of Non Motorised Transport facilities (Footpaths & Cycle Tracks & Cycle Parking)	6.000	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 innovativesolutions 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, Regarding land parking, this Municipality has selected five to six places & proposals have been sent to Govt. for alienation. For widening of roads, the matter has been taken up with PWD.

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: Only Govt. grant is the source of fund

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

Answer: Clearance & NOC will be obtained as per Govt. guidelines

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 (Cr)
			Indicator	Existing	Proposed	
1	Construction of Street Parking (AMRUT/OD/BHADRAK/UT/01)	Off Street Parking				0.50
2	Preparation of DPR on City Mobility Plan (CMP) (AMRUT/OD/BHADRAK/UT/02)	DRP to study feasibility of NMT, CBS etc				0.50

3	Augmentation of City Bus fleet (AMRUT/OD/BHADRAK/UT/03)	Bus Fleet				10.00
4	Construction of Cycle parking near Bus Stand (AMRUT/OD/BHADRAK/UT/04)	Cycle parking				0.30
5	Upgradation of Bus Depots (AMRUT/OD/BHADRAK/UT/05)	Depots and terminal				0.50
6	Development of Transport Nagar (AMRUT/OD/BHADRAK/UT/06)	Truck Logistic Hub				10.00
7	Construction of Foot Over Bridges (AMRUT/OD/BHADRAK/UT/07)	O&M				3.00
8	Construction of Non Motorised Transport facilities (AMRUT/OD/BHADRAK/UT/08)	Footpaths & Cycle Tracks & Cycle Parking				6.00
						30.80

ANNUAL FUND SHARING PATTERN FOR SEWERAGE 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.php On line 917

Sl. No	Name of Project	Total Project Cost	Share				
			Govt	State	ULB	Others	Total
1	Construction of Street Parking (AMRUT/OD/BHADRAK/UT/01)	0.50	0.25	0.25			0.50
2	Preparation of DPR on City Mobility Plan (CMP) (AMRUT/OD/BHADRAK/UT/02)	0.50	0.25	0.25			0.50
3	Augmentation of City Bus fleet (AMRUT/OD/BHADRAK/UT/03)	10.00	5.00	5.00			10.00
4	Construction of Cycle parking near Bus Stand (AMRUT/OD/BHADRAK/UT/04)	0.30	0.15	0.15			0.30
5	Upgradation of Bus Depots (AMRUT/OD/BHADRAK/UT/05)	0.50	0.25	0.25			0.50
6	Development of Transport Nagar (AMRUT/OD/BHADRAK/UT/06)	10.00	5.00	5.00			10.00
7	Construction of Foot Over Bridges (AMRUT/OD/BHADRAK/UT/07)	3.00	1.50	1.50			3.00
8	Construction of Non Motorised Transport facilities (AMRUT/OD/BHADRAK/UT/08)	6.00	3.00	3.00			6.00
		30.80	15.40	15.40			30.80

ANNUAL FUND SHARING BREAK-UP FOR SEWERAGE PROJECTS

(As per Table 2.3.2 of AMRUT guidelines)

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Online973

Sl. No	Project	Gol	State			ULB			Convergence	Others	Total
			14th FC	Others	Total	14th FC	Others	Total			
1	Construction of Street Parking (AMRUT/OD/BHADRAK/UT/01)	0.25			0.25						0.50
2	Preparation of DPR on City Mobility Plan (CMP) (AMRUT/OD/BHADRAK/UT/02)	0.25			0.25						0.50
3	Augmentation of City Bus fleet (AMRUT/OD/BHADRAK/UT/03)	5.00			5.00						10.00
4	Construction of Cycle parking near Bus Stand (AMRUT/OD/BHADRAK/UT/04)	0.15			0.15						0.30
5	Upgradation of Bus Depots (AMRUT/OD/BHADRAK/UT/05)	0.25			0.25						0.50
6	Development of Transport Nagar (AMRUT/OD/BHADRAK/UT/06)	5.00			5.00						10.00
7	Construction of Foot Over Bridges (AMRUT/OD/BHADRAK/UT/07)	1.50			1.50						3.00
8	Construction of Non Motorised Transport facilities (AMRUT/OD/BHADRAK/UT/08)	3.00			3.00						6.00
	Total	15.40			15.40						30.80

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?

Bhadrak 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 Land use 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 7.51% 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?

Bhadrak 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?

0.75 acres is the cumulative area of developed parks in the Bhadrak 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	0.03 Sq.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)

Bhadrak 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)

Park in Bhadrak municipality are in good physical condition overall , nevertheless the CHACHA NEHRU 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?)

CHA CHA NEHRU PARK has child friendly equipment but they need renovations. Snack/ ice cream parlors/ kiosks need to be established.

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

Park in Bhadrak municipality are in decent aesthetic condition overall, nevertheless CHA CHA NEHRU PARK has shortage of landscape and park furniture is not in a good shape.

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 Bhadrak 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.

Bhadrak 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.

Bhadrak 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.

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 7.51% 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 Bhadrak safe and secure for all age groups.

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

Existing park in the BHADRAK 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	1	0.3	100
2	Development Authority	0		0
3	Private Ownership - Corporate/NGO's	0	0	0
	Total	1	0.3	100

Table3: Hierarchy of Organized Greens in the City (As per URDPFI-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.)	1	0.3	100
2	Neighbourhood Park (NP)(5000 -10000 sq.m.)	0	0	0
3	Community Park (CP) (10000 - 50000 sq.m)	0	0	0
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 498 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. ?

Bhadrak 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 te 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. ?

The Cha Cha Nehru Park in the Bhadrak municipality is built exclusively for Children and well equipped 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:StatusofOngoing/Sanctioned/Committed Projects

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

OBJECTIVES

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

Question: Please provide a set of 2-3 objectives to meet the gap in not more than 100 words.

1. Installation of child friendly equipment
2. Image of wild life to be conserved
3. Urban greenery in prioritization through plantation on both sides of all pivot routes
4. Identification of huge vacant lands in the city to build parks

3. Examine Alternatives and Estimate Cost

Suggest alternatives/ options to complete the ongoing projects pertaining to developing parks and green spaces. Identify quick-win parks and open space which can also have play area and associated facilities for Children, Youth & Elderly. Also identify & describe the prevailing models of parks development & maintenance in your city? Any new model your city wishes to adopt? (Word Limit: 200 Words)

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

Tabel 4: Cost Estimates for Park Development

Sr. No.	Component	Rate	Amount in Rs.
1	Boundary wall	2000	3230000
2	Jogging track	150	3412631.25
3	Gate	200000	1000000
4	fountain	250000	1250000
5	Toilet	200000	1400000
6	Garden Bench/Sitting	5000	140000
7	Lawn	100	14954908.5
8	Shade loving foliage Plants	200	12000
9	Gate Light	7500	45000
10	Focus Light	5000	30000
11	Coffee Stall	25000	125000
12	Snacks Centre	25000	150000
13	sliders	15000	150000
14	See-saw	10000	150000
15	Swing	5000	55000
Grand Total			26104539.75

As per AMRUT guidelines half of Rs. Cr. may be sought from Government of India under the scheme and balance could be explored and converged from other sources like 14th Finance Commission, State Government (Park Development Fund) and CSR Activities of Corporate Groups active in the City.

4. Citizen Engagement

ULBs will organize and conduct city level citizen consultation and receive feedback on the suggested alternatives and innovations. Each alternative pertaining to development and maintenance models for parks 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. (Refer AMRUT Guidelines; Para 6.6, 6.7 & 7.2). Please explain following questions detailing out the needs, aspirations and wishes of the local people. (Word Limit: 250 Words)

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 Bhadrak for development of Bhadrak 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?

Bhadrak 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)

Bhadrak 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 Bhadrak 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)

(Amount in Rs. Cr)

Sr. No.	Project Name	Physical Components				Estimated Cost (Cr)
			Indicator	Existing (As-Is)	After (To-be)	
	Construction of Park in Bhadrak near Revenue Village, Baralpokhari - AMRUT/OD/Bhadrak/PR/01					0.39
	Construction of Park in Bhadrak near Garadapur - AMRUT/OD/Bhadrak/PR/02					0.25
	Construction of Park in Bhadrak near to salandi River - AMRUT/OD/Bhadrak/PR/03					0.44
	Construction of Park in Bhadrak near to Dakshineswar Kali Mandhir - AMRUT/OD/Bhadrak/PR/04					0.47
	Construction of Park in Bhadrak near Mirzapur (Bidyadhar Adi Adi) - AMRUT/OD/Bhadrak/PR/05					0.4

ANNUAL FUND SHARING PATTERN FOR PARKS AND GREEN SPACE PROJECTS

(As per Table 2.3.1 of AMRUT guidelines)

(Amount in Rs. Cr)

Sr. No.	Name of the Project	Total Project Cost (Cr)					Total (in Cr)
			GOI	State	ULB	Others	
1	Construction of Park in Bhadrak near Revenue Village, Baralpokhari - AMRUT/OD/Bhadrak/PR/01	0.39	0.20	0.20			0.39
2	Construction of Park in Bhadrak near Garadapur - AMRUT/OD/Bhadrak/PR/02	0.25	0.13	0.13			0.25
3	Construction of Park in Bhadrak near to salandi River - AMRUT/OD/Bhadrak/PR/03	0.44	0.22	0.22			0.44
4	Construction of Park in Bhadrak near to Dakshineswar Kali Mandhir - AMRUT/OD/Bhadrak/PR/04	0.47	0.24	0.24			0.47
5	Construction of Park in Bhadrak near Mirzapur (Bidyadhar Adi Adi) - AMRUT/OD/Bhadrak/PR/05	0.4	0.20	0.20			0.4

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	Construction of Park in Bhadrak near Revenue Village, Baralpokhari - AMRUT/OD/Bhadrak/PR/01	0.20			0.20					0.39	
2	Construction of Park in Bhadrak near Garadapur - AMRUT/OD/Bhadrak/PR/02	0.13			0.13					0.25	
3	Construction of Park in Bhadrak near to salandi River - AMRUT/OD/Bhadrak/PR/03	0.22			0.22					0.44	
4	Construction of Park in Bhadrak near to Dakshineswar Kali Mandhir - AMRUT/OD/Bhadrak/PR/04	0.24			0.24					0.47	
5	Construction of Park in Bhadrak near Mirzapur (Bidyadhar Adi Adi) - AMRUT/OD/Bhadrak/PR/05	0.20			0.20					0.4	

YEAR WISE PLAN FOR SERVICE LEVELS IMPROVEMENTS

(As per Table 2.5of AMRUT guidelines)

Proposed Project	Project Cost	Indicator	Baseline	Annual targets (Increments form the baseline value)					
				FY 2016		FY 2017	FY 2018	FY 2019	FY 2020
				H1	H2				
Construction of Park in Bhadrak near Revenue Village, Baralpokhari - AMRUT/OD/Bhadrak/PR/01	0.39								
Construction of Park in Bhadrak near Garadapur - AMRUT/OD/Bhadrak/PR/02	0.25								
Construction of Park in Bhadrak near to salandi River - AMRUT/OD/Bhadrak/PR/03	0.44								
Construction of Park in Bhadrak near to Dakshineswar Kali Mandhir - AMRUT/OD/Bhadrak/PR/04	0.47								
Construction of Park in Bhadrak near Mirzapur (Bidyadhar Adi Adi) - AMRUT/OD/Bhadrak/PR/05	0.4								

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)