

# BHATPARA MUNICIPALITY

## Detailed Project Report

for Construction of 858 EWS Houses under BLC mode  
of Pradhan Mantri Awas Yojana (PMAY)-HFA (U) for  
Bhatpara Municipality

**2017-18**



Submitted By

**Bhatpara Municipality**  
Dist: 24 Parganas(N), West Bengal

**July, 2017**

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## 1. Introductory Note by Chairman and brief History of Bhatpara Municipality.



On the outset I would like to take this privilege to let know you that Bhatpara Municipality has finished the preparation of **Housing for All Plan of Action for the time frame 2015-16 to 2021-22**. The municipality has conducted introductory workshop of the Housing for ALL among the members of Board of councillors. Thereafter the core team has been formed for the preparation of the Plan. The Core team has organized several workshops, Focus Group Discussions, Ward Level Consultations among the people across the sections of the citizens and the staff members of the municipality. Citizen, elected councillors and other stakeholders have had interactive sessions and opined about their need, demand, aspirations and the concerned personnel duly recorded those views. The **Housing for All Plan of Action** is the outcome of the series of Demand survey workshops, FGDs, Consultations and meetings. It has been compiled by the technical persons of Bhatpara Municipality which have eventually become the **Housing for All Plan of Action** of Bhatpara Municipality. The respected citizens expressed their valuable opinions and views. Again those views have been duly incorporated in the **Housing for All Plan of Action**.

The people of the municipality, the elected councillors, the staff members, the surveyors, the technical persons have extended their fullest cooperation in preparing the whole process of **Housing for All Plan of Action**. I must take the opportunity to acknowledge their endeavours and extend gratitude to the authorities of SUDA and MA Department of Govt. Of W.B. for extending their cooperation.

I wish that this **Housing for All Plan of Action** would enable the ULB to undertake comprehensive, sustainable development of its jurisdiction with the growing demand of 21<sup>st</sup> century's modernized society.

  
Chairman  
Bhatpara Municipality

## c. List of Maps


SI No.	Name of the Maps
1	Map 1: All Slum showing Maps of Bhatpara Municipality
2	Map 2: Image Map of Slums

## d. List of Figures

SI.No	Name of the Figures
1	Figure 1: Stakeholder and Slum dwellers Workshop at Bhatpara
2	Figure: 2 :Housing Shortage preventive approach
3	Figure 3: The institutional arrangement of the mission is describe in below

## e. Abbreviation

A&OE	Administrative and Other	LIG	Low Income Group
AHP	Affordable Housing in	MD	Mission Directorate
AIP	Annual Implementation Plan	MoA	Memorandum of
BMTPC	Building Materials &	MoHUPA	Ministry of Housing
CDP	City Development Plan	MoU	Memorandum of
CLS	Credit linked subsidy	NA	Non Agricultural
CNA	Central Nodal Agencies	NBC	National Building
CPHEEO	Central Public Health and	NHB	National Housing
CSMC	Central Sanctioning and	NOC	No Objection
DIPP	Department of Industrial Policy	NPV	Net Present Value
DPR	Detailed Project Report	PLI	Primary Lending
EMI	Equated Monthly Installment	RWA	Residents' Welfare
EWS	Economically Weaker Section	SECC	Socio Economic and
FAR	Floor Area Ratio	SFCPoA	Slum Free City Plan
FSI	Floor Space Index	SLAC	State Level Appraisal
HFA	Housing for All	SLNA	State Level Nodal
HFAPoA	Housing for All Plan of Action	SLSMC	State Level Sanction
IEC	Information Education &	TDR	Transfer of
IFD	Integrated Finance Division	TPQMA	Third Party Quality
IIT	Indian Institute of Technology	ULB	Urban Local Boday
IS	Indian Standard	UT	Union Territory

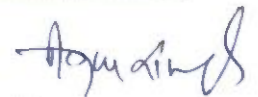
  
Engineer  
Bhatpara Municipality

  
Chairman  
Bhatpara Municipality

<b>f. Working Definitions</b>	
Affordable Housing Project:	Housing Projects where 35 % of the houses are constructed for EWS category
Beneficiary	A beneficiary family will comprise husband, wife and unmarried children. The beneficiary family should not own a pucca house (an all-weather dwelling unit) either in his//her name or in the name of any member of his/her family in any part of India
Carpet Area	Area enclosed within the walls, actual area to lay carpet. This area does not include the thickness of the inner walls.
Central Nodal Agencies	Nodal Agencies identified by Ministry for the purposes of implementation of Credit Linked subsidy component of the mission
Economically Weaker Section(EWS)	EWS households are defined as households having an annual income up to Rs 3, 00,000(Rupees Three Lakhs). States/UTs shall have the flexibility to redefine the annual income criteria as per local conditions in consultation with the Centre
EWS House	An all-weather single unit or a unit in a multi storeyed super structure having carpet area of upto 30 sq.m. with adequate basic civic services and infrastructure services like toilet , water, electricity etc. States can determine the area of EWS as per their local needs with information to Ministry
"Floor Area Ratio" (FAR)/FSI	The quotient obtained by dividing the total covered area (plinth area) on all the floors by the area of the plot:
Implementing Agencies	Implementing agencies are the agencies such as Urban Local Bodies, Development Authorities, and Housing Boards etc. which are selected by State Government / SLSMC for implementing Housing for All Mission.



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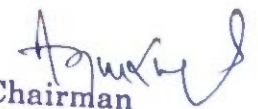


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Bhatpara Municipality

Low Income Group (LIG)	LIG households are defined as households having an annual income between Rs.3, 00,000 (Rupees Three Lakhs One) up to Rs.6, 00,000 (Rupees Six Lakhs). States/UTs shall have the flexibility to redefine the annual income criteria as per local conditions in consultation with the Centre.
Primary Lending Institutions (PLI)	Scheduled Commercial Banks, Housing Finance Companies, Regional Rural Banks (RRBs), State Cooperative Banks, Urban Cooperative Banks or any other institutions as may be identified by the Ministry
Slum	A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.
State Land Nodal Agencies (SLNAs)	Nodal Agency designated by the State Governments for implementing the Mission
Transfer of Development Rights (TDR)	TDR means making available certain amount of additional built up area in lieu of the area relinquished or surrendered by the owner of the land, so that he can use extra built up area himself in some other land.



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Bhatpara Municipality

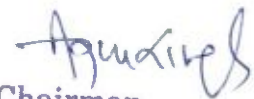
## Brief History Bhatpara Municipality.

Bhatpara Municipality is one of the 41 Urban Local Bodies in the Kolkata Metropolitan Area. Bhatpara Municipality is one of the largest Municipalities in West Bengal within Kolkata Metropolitan Area. In the British era and afterwards it had become an important industrial hub on Hooghly river bank mainly for the high density of jute processing plants. It is one of the oldest municipalities in West Bengal and it was constituted a municipality in 1899, when it was separated from the Naihati municipality. At the beginning of 20th century; the British had constructed mills, especially Jute mills on the riverfront of Hooghly and hired labour mainly from Bihar & Uttar Pradesh with the help of local Mukhias. In the British era and afterwards it had become an important industrial hub on Hooghly river bank mainly for the high density of jute processing plants. It is a town in the district of North 24 Parganas. It is bounded on south by South 24 Parganas, on west by Hooghly district, on north by Nadia district and on east by Bangladesh. The township covers an Area of 32.44 square km. The whole area is divided into 35 wards for the purpose of municipal administration. The main town is sandwiched between the Hooghly River in the west and railway track linking Sealdah and Krishnanagar in the east. It's located on the Northern side of KMA area about 36 Km from Kolkata.

As per provisional reports of Census India, population of Bhatpara in 2011 is 390,467; of which male and female are 207,876 and 182,591 respectively. The sex ratio of Bhatpara city is 878 per 1000 males. Bhatpara has a rail station named 'Kankinara' which connects it to Kolkata through Sealdah main line to Krishnanagar and Ranaghat. It also has boat services to the other bank of Hooghly River, connecting it to Chinsura and Chandannagar. The municipality is very thickly populated compared to other municipalities within North 24 Parganas district due to the existence of industries, Government establishments, Housing complex etc. The town is well connected by roads (Kalyani Barrackpore Expressway) and rail with the state capital. The distance between Kolkata and Bhatpara is 36 Kms Inclusion of four GPs including Madral-Panpur, Narayanpur, Rahuta II & I etc. in the year 1995 with total area further increased to 32 sq. km. The municipal town is characterized with rich historical footprints with the genesis of erstwhile village moujas like Bhatpara, Kankinara, Jagatdal Authpur and Shyamnagar can be traced back to the Mohammedans period. In the 17th & 18th century Jagatdal was an important commercial place where German capitalists had their Kutirs, known as Bankibazar. Bhatpara area was once abode of Sanakrit and Nayay Shastra learning.



Engineer  
Bhatpara Municipality



Chairman  
Bhatpara Municipality



**Annexure 7C**  
**(Para 14.5 of the Guidelines)**  
**Format for Project under Beneficiary Led Construction Or Enhancement**

1	Name of the State:	West Bengal						
2	Name of the District:	North 24 Parganas						
3	Name of the City:	Bhatpara						
4	Project Name:	HFA-BHATPARA 2017-18						
5	Project Code:	19801695034N0						
6	State Level Nodal Agency:	State Urban Development Agency (SUDA)						
7	Implementing Agency/ ULB	Bhatpara Municipality						
8	Date of Approval by State Level Sanctioning and Monitoring Committee (SLSMC)							
9	No. of location covered in project: No of Slum Area Covered & No of Non Slum Area Covered	Name of Location	No. of beneficiaries	Whether Slum / Non-Slum	If Slum, then Slum type	If slum, whether it gets completely rehabilitated		
		Bhatpara Municipal Area	600	Covering both Slum & Non-Slum area	Notified	No		
10	Project Cost (Rs. In Lakhs)	2,428.80						
11	No. of beneficiaries covered in the project	GEN	SC	ST	OBC	Total	Minority	Person with Disability
		472	84	04	40	600	21	Nil
12	Whether beneficiary have been selected as PMAY Guidelines?	Yes						
13	No. of Houses constructed / acquired. Please specify ownership (Any of these)	Joint	Female	Male	Transgender			
		Nil	175	425	Nil			
14	No. of beneficiaries covered in the project	Male	Female	Transgender				
		424	176	Nil				
15	Whether it has been ensured that selected beneficiaries have rightful ownership of the land ?	Yes						
16	Whether building plan for all houses have been Approved?	Yes						
17	i. GoI grant required (Rs. 1.5 lakh per eligible beneficiary)	900.00						

	(Rs. in Lakhs)	
	ii. State grant, (Rs. in Lakhs)	1,268.40
	iii. ULB grant (Rs. in Lakhs)	110.40
	iv. Beneficiary Share (Rs. in Lakhs)	150.00
	v. Total (Rs. in Lakhs)	2,428.80
18	Whether technical specification / design for housing have been ensured as per Indian Standards / NBC/ State Norms?	Yes
19	Whether it has been ensured that balance cost of construction is tied up with State Grant, ULB Grant & Beneficiary Share ?	Yes
	Whether trunk and line infrastructure is existing or being provisioned ?	
	i. Water Supply	Existing
	ii. Sewerage	Existing
	iii. Road	To be provisioned
	iv. Storm Water Drain	To be provisioned
	v. External Electrification	Existing
	vi. Solid Waste Management	Existing
	vii. Any Other	No
	viii. In case, any infrastructure has not been proposed, reason thereof.	No
20	Whether disaster (earthquake, flood, cyclone, landslide etc.) resistant features have been adopted in concept, design and implementation of the project ?	Yes
21	Whether Demand Survey Completed for entire city ?	Yes
22	Whether City-wide integrated project have been formulated ? If not reasons thereof ?	Yes
23	Whether validation with SECC data for housing condition conducted ?	Yes
24	Whether Direct Benefit Transfer (DBT) of fund to individual bank account of beneficiary ensured in the project ?	Yes

25	Whether there is provision in DPR for tracking/monitoring the progress of individual houses through geo-tagged photographs ?	Yes
26	Whether any innovation/cost effective / Green technology adopted in the project?	Yes
27	Comments of SLAC after techno economic appraisal of DPR	Project covers the most needy beneficiaries
28	Project brief including any other information ULB/State would like to furnish	The project covers all wards
29	Project Submission Date to SLSMC	

is hereby confirmed that State/UT and ULB have checked all the beneficiaries as per guidelines of RFA. It is also submitted that no beneficiary has been selected for more than one benefit under the Mission including Credit Linked Subsidy Scheme (CLSS) component of the Mission.

*Ajmal Singh*

Signature of the  
Mayor/ Chairperson/Municipal Commissioner  
Chairman  
Bhatpara Municipality

Signature  
Chief Engineer  
M.E Dte,GoWB

Signature  
(Director, SUDA)

Signature  
(Secretary, IJ & MA Department, GoWB)



2. WATER SUPPLY (TO BE FILLED UP)											
3 STORM WATER DRAINS (TO BE FILLED UP)											
	Drain	A	4346.5	R.M	2540/M	110.4	110.4	0	55.2	55.2	0
<b>Total Infrastructure Cost Sub Total (B)</b>						<b>220.80</b>	<b>220.80</b>	<b>0.00</b>	<b>110.40</b>	<b>110.40</b>	<b>0.00</b>
<b>GRAND TOTAL (A+B)</b>						<b>2,428.80</b>	<b>2,428.80</b>	<b>900.00</b>	<b>1,268.40</b>	<b>110.40</b>	<b>150.00</b>

  
**Engineer**  
**Bhatpara Municipality**

Signature of the ULB level  
 Competent Technical  
 officer  
 Name & Designation:

Fax No:

Telephone No:

E-mail:

Signature of the State level  
 Competent Technical  
 Officer

Name & Designation: Chief  
 Engineer, MeDte, GoWB  
 Bikash Bhavan, South Block, 1<sup>st</sup>  
 Floor, Salt lake, Kol-91

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033-23375474

033-23371331

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 com

Signature

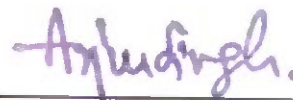
Director(SUDA)

Name & Designation: Sri Sutanu Prasad  
 Kar, IAS, Director, SUDA

Fax No: 033-23585767

Telephone No: 033-23585767

E-mail: wbsudadir@gmail.com



Signature of the Mayor/  
 Chairperson/ Municipal  
 Commissioner  
**Chairman**  
**Bhatpara Municipality**

Name & Designation:

Fax No:

Telephone No:

E-mail:

**AIP Tables****Annexure 6**

(Para 8.6 &amp; Para 14.4 of the Guidelines)

**Summary Sheet for Annual Implementation Plan (AIP) for the Year 2017-18**

<b>District:</b>	<b>North 24 Parganas</b>					
<b>Name of the ULB:</b>	<b>Bhatpara</b>					
<b>Admissible Component</b>	<b>Target for the Year 2015-16</b>	<b>Achievement for the Year 2015-16</b>	<b>Target for the Year 2016-17</b>	<b>Achievement for the Year 2016-17</b>	<b>Target for the Year 2017-18</b>	<b>Remaining Target as per HFAPoA</b>
<b>A. Beneficiary Led Construction</b>						
• New Houses	289	289	622	622	600	2818
• Enhancement	Nil	Nil	Nil	Nil	Nil	Nil
• Sub Total (A)	289	289	622	622	600	2818
<b>B. In-situ Slum Rehabilitation with participation of Private Sector</b>						
• Number of Slums	Nil	Nil	Nil	Nil	Nil	Nil
• Number of Households (B)	Nil	Nil	Nil	Nil	Nil	Nil
<b>C. Affordable Housing in Partnership (EWS Category) (C)</b>	Nil	Nil	Nil	Nil	Nil	Nil
<b>D. Credit Linked Subsidy</b>						
• EWS Households	Nil	Nil	Nil	Nil	Nil	Nil
• LIG Households	Nil	Nil	Nil	Nil	Nil	Nil
• Sub Total (D)	Nil	Nil	Nil	Nil	Nil	Nil
<b>E. TOTAL (A+B+C+D)</b>	<b>289</b>	<b>289</b>	<b>622</b>	<b>622</b>	<b>600</b>	<b>2818</b>



# BHATPARA MUNICIPALITY

## Detailed Project Report

for Construction of 600 EWS Houses under BLC mode  
of Pradhan Mantri Awas Yojana (PMAY)-HFA (U) for  
Bhatpara Municipality

2017-18



Submitted By

**Bhatpara Municipality**  
Dist: 24 Parganas(N), West Bengal

**MARCH, 2018**





#### IV. Affordable Housing for Weaker Section through Credit Linked Subsidy

Year *	No. of Slums	Affordable Housing through Credit Linked Subsidy					
		No. of Beneficiaries availed Loan		Resource Mobilisation (Rs in Crores)		Estimated Interest Subsidy Availed	
		EWS	LIG	EWS	LIG	EWS	LIG
2015-16	New Housing	Nil	Nil	Nil	Nil	Nil	Nil
	Enhancement (Existing House)	Nil	Nil	Nil	Nil	Nil	Nil
2016-17	New Housing	Nil	Nil	Nil	Nil	Nil	Nil
	Enhancement (Existing House)	Nil	Nil	Nil	Nil	Nil	Nil
2017-18	New Housing	Nil	Nil	Nil	Nil	Nil	Nil
	Enhancement (Existing House)	Nil	Nil	Nil	Nil	Nil	Nil
2018-19	New Housing						
	Enhancement (Existing House)						
2019-20	New Housing						
	Enhancement (Existing House)						
2020-21	New Housing						
	Enhancement (Existing House)						
2021-22	New Housing						
	Enhancement (Existing House)						
<b>Total</b>		<b>Nil</b>	<b>Nil</b>	<b>Nil</b>	<b>Nil</b>	<b>Nil</b>	<b>Nil</b>

*Ajay Singh*

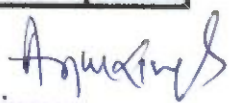
Signature of the  
Mayor/ Chairperson/  
Municipal Commissioner  
Charman  
Bhatpara Municipality

Signature  
(Director,SUDA)


## 5. SLUM WISE DETAILS OF FUND

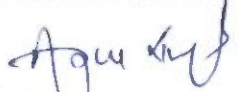
SLUM WISE DETAILS OF DU AND INFRASTRUCTURE COST OF 2017-18										
Serial No.	Name of Slum	Slum Code	Area SqKm	Population	Dwelling Units (@ Rs. 3.67858 Lakh/ each)		Drainage (M) (Rs. 2540.00/M) (Section - 400x400)		Pipe Line @ Rs.1066.00 /M	
					Qty.(Nos)	Amt. (in Lakh)	Qty.(M)	Amt. (in Lakh)	Qty.(M)	Amt. (in Lakh)
1	BABURANI PARA(S.C.- 001)	1	0.07	1596	5	18.39	0	0	0	0
2	Kumar Para Burning Ghat(S.C.- 002)	2	0.08	2741	7	25.75	0	0	0	0
3	BAZAR ROAD(S.C.- 003)	3	0.11	2011	10	36.79	0	0	0	0
4	GOYALA PARA- II(S.C.-004)	4	0.12	2853	3	11.04	0	0	0	0
5	Ambagan(S. C.-005)	5	0.31		10	36.79	0	0	0	0
6	Padma Pukur Road(S.C.- 006)	6	0.27	3020	11	40.46	0	0	0	0
7	Kantadanga Road(S.C.- 007)	7	0.13	6550	16	58.86	0	0	0	0
8	NAYA BAZAR(S.C.- 011)	11	0.14	21781	7	25.75	0	0	0	0
9	B L 07(S.C.- 012)	12	0.02	7370	10	36.79	0	0	0	0
10	B L-20(S.C.- 015)	15	0.06	6314	10	36.79	0	0	0	0
11	RAMNAGAR EAST(S.C.- 016)	16	0.27	7897	30	110.36	0	0	0	0
12	B L 11(S.C.- 023)	23	0.01	11432	9	33.11	0	0	0	0
13	BAKAR MUHALLA(S. C.-026)	26	0.03	11933	10	36.79	0	0	0	0
14	GOYALA PARA (S.C.- 033)	33	0.03	10926	11	40.46	0	0	0	0
15	SUORMARI (S.C-036)	36	0.02	16203	13	47.82	0	0	0	0
16	1 NO. KEBIN ROAD(S.C.- 37)	37	0.1	4056	24	88.29	0	0	0	0
17	B L 02(S.C.- 044)	44	0.9	15466	5	18.39	0	0	0	0
18	B L 11(S.C.- 045)	45	0.10	8530	10	36.79	0	0	0	0
19	GUPTAR BAGAN(S.C.- 046)	46	0.14	6944	7	25.75	0	0	0	0
20	B L 09(S.C.- 048)	48	0.02	8334	8	29.43	0	0	0	0
21	RUSTAM GUMTI(S.C.- 054)	54	0.02	10900	6	22.07	0	0	0	0
22	BANKIM NAGAR(S.C.- 056)	56	0.12	9206	20	73.57	0	0	0	0

  
Engineer  
Bhatpara Municipality

  
Chairman  
Bhatpara Municipality

23	MULA ZORE(S.C.- 058)	58	0.06	1994	20	73.57	0	0	0	0
24	SASTRI NAGAR(S.C. 061)	61	0.07	5390	20	73.57	0	0	0	0
25	SANTI NIWAS PALLY(S.C.- 062)	62	0.02	4701	3	11.04	0	0	0	0
26	Netaji Nagar Coloney(S.C. -064)	64	0.04	3530	21	77.25	0	0	0	0
27	SATIN SEN NAGAR(S.C.- 065)	65	0.2	4974	21	77.25	0	0	0	0
28	RABINDRA PALLY(S.C.- 068)	68	0.24	2911	9	33.11	0	0	0	0
29	Nag Bagan(S.C.- 069)	69	0.11	4826	10	36.79	0	0	0	0
30	CHAK GURADAH RAM MOHAN PALLY(S.C.- 071)	71	0.10	1750	20	73.57	0	0	0	0
31	HOUSE KHANA(S.C.- 072)	72	0.21	2569	22	80.93	0	0	0	0
32	GURDAH(S. C.-077)	77	0.45	4350	35	128.75	0	0	0	0
33	Melekerpara( S.C.-078)	78	0.12	4311	35	128.75	0	0	0	0
34	B.R.S.(S.C.- 079)	79	0.21	6720	15	55.18	0	0	0	0
35	Rahute(S.C.- 081)	81	0.21	4070	15	55.18	0	0	0	0
36	Hindustan Colony(S.C.- 082)	82	0.12	4785	10	36.79	0	0	0	0
37	RAM KRISHNA PALLY(S.C.- 087)	87	0.26	8254	20	73.57	0	0	0	0
38	Balishkhane( S.C.-091)	91	0.13	1560	28	103.00	0	0	0	0
39	SOUTH NARAYAN PUR(S.C.- 093)	93	0.15	1720	27	99.32	0	0	0	0
40	KEWTIA PALPARA(S C.-095)	95	0.29	2816	27	99.32	0	0	0	0
41	DULE PARA(S.C.- 098)	98	0.24	1515	12	44.14	0	0	0	0
42	MANGAL PANDEY PALLY(S.C.- 099)	99	0.07	1630	12	44.14	0	0	0	0
43	PALER MATH(S.C.- 100)	100	0.06	4347	11	40.46	0	0	0	0
44	FAKIR PARA (SOUTH) (S.C.-112)	112	0.21	2671	8	29.43	0	0	0	0
45	Manasha Colony(S.C.- 114)	114	0.25	2780	7	25.75	0	0	0	0
46	64 PALLY(S.C.- 115)	115	0.26	3371	50	183.93	0	0	0	0

  
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47	JAGAN NATH COLONY(S. C.-117)	117	0.11	2530	50	183.93	0	0	0	0
48	KUNDUR BAGAN(S.C.-118)	118	0.41	4520	54	198.64	0	0	0	0
49	STHIRPARA (S. C.-120)	120	0.36	3628	54	198.64	0	0	0	0
<b>Total</b>			<b>8.07</b>	<b>273788</b>	<b>858</b>	<b>3156.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## 6. INFRASTRUCTURE COST

SLUM WISE DETAILS OF INFRASTRUCTURE COST OF 2017-18										
Serial No.	Name of Slum	Slum Code	Area SqKm	Population	Drainage (M) (Rs.2540.00/M) (Section - 400x400)				Concrete Roads (@ Rs. 2605.01/Sq.M)	
					Pipe Line @ Rs.1066.00 /M		Qty.(M)	Amt. (in Lakh)	Qty.(M)	Amt. (in Lakh)
					Qty.(M)	Amt. (in Lakh)				
1	BABURANI PARA(S.C.-001)	1	0.07	1596	0	0	0	0	1.839	0.05
2	Kumar Para Burning Ghat(S.C.-002)	2	0.08	2741	0	0	0	0	2.575	0.07
3	BAZAR ROAD(S.C.-003)	3	0.11	2011	0	0	0	0	3.679	0.10
4	GOYALA PARA-II(S.C.-004)	4	0.12	2853	0	0	0	0	1.104	0.03
5	Ambagan(S.C.-005)	5	0.31		0	0	0	0	3.679	0.10
6	Padma Pukur Road(S.C.-006)	6	0.27	3020	0	0	0	0	4.046	0.11
7	Kantadanga Road(S.C.-007)	7	0.13	6550	0	0	0	0	5.886	0.15
8	NAYA BAZAR(S.C.-011)	11	0.14	21781	0	0	0	0	2.575	0.07
9	B L-07(S.C.-012)	12	0.02	7370	0	0	0	0	3.679	0.10
10	B L-20(S.C.-015)	15	0.08	6314	0	0	0	0	3.679	0.10
11	RAMNAGAR EAST(S.C.-016)	16	0.27	7897	0	0	0	0	11.036	0.29
12	B L 11(S.C.-023)	23	0.01	11432	0	0	0	0	3.311	0.09
13	BAKAR MUHALLA(S.C.-026)	26	0.03	11933	0	0	0	0	3.679	0.10
14	GOYALA PARA (S.C.-033)	33	0.03	10928	0	0	0	0	4.046	0.11
15	SUORMARI(S.C-036)	36	0.02	16203	0	0	0	0	4.782	0.12
16	1 NO. KEBIN ROAD(S.C.-37)	37	0.1	4056	0	0	0	0	8.829	0.23
17	B L 02(S.C.-044)	44	0.9	15466	0	0	0	0	1.839	0.05

  
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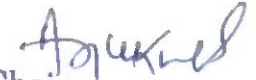
  
Chairman  
Bhatpara Municipality

18	B L 11(S.C.-045)	45	0.10	8530	0	0	0	0	3.679	0.10
19	GUPTAR BAGAN(S.C.-046)	46	0.14	6944	0	0	0	0	2.575	0.07
20	B L 09(S.C.-048)	48	0.02	8334	0	0	0	0	2.943	0.08
21	RUSTAM GUMTI(S.C.-054)	54	0.02	10900	0	0	0	0	2.207	0.06
22	BANKIM NAGAR(S.C.-056)	56	0.12	9206	0	0	0	0	7.357	0.19
23	MULA ZORE(S.C.-058)	58	0.06	1994	0	0	0	0	7.357	0.19
24	SASTRI NAGAR(S.C.-061)	61	0.07	5390	0	0	0	0	7.357	0.19
25	SANTI NIWAS PALLY(S.C.-062)	62	0.02	4701	0	0	0	0	1.104	0.03
26	Netaji Nagar Colony(S.C.-064)	64	0.04	3530	0	0	0	0	7.725	0.20
27	SATIN SEN NAGAR(S.C.-065)	65	0.2	4974	0	0	0	0	7.725	0.20
28	RABINDRA PALLY(S.C.-068)	68	0.24	2911	0	0	0	0	3.311	0.09
29	Nag Bagan(S.C.-069)	69	0.11	4626	0	0	0	0	3.679	0.10
30	CHAK GURADAH RAM MOHAN PALLY(S.C.-071)	71	0.10	1750	0	0	0	0	7.357	0.19
31	HOUSE KHANA(S.C.-072)	72	0.21	2569	0	0	0	0	8.093	0.21
32	GURDAH(S.C.-077)	77	0.45	4350	0	0	0	0	12.875	0.34
33	Malakarpara(S.C.-078)	78	0.12	4311	0	0	0	0	12.875	0.34
34	B.R.S.(S.C.-079)	79	0.21	6720	0	0	0	0	6.618	0.14
35	Rahuta(S.C.-081)	81	0.21	4070	0	0	0	0	6.618	0.14
36	Hindustan Colony(S.C.-082)	82	0.12	4785	0	0	0	0	3.679	0.10
37	RAM KRISHNA PALLY(S.C.-087)	87	0.28	8254	0	0	0	0	7.357	0.19
38	Balishkhana(S.C.-091)	91	0.13	1580	0	0	0	0	10.300	0.27
39	SOUTH NARAYAN PUR(S.C.-093)	93	0.15	1720	0	0	0	0	9.932	0.26
40	KEWTIA PALPARA(S.C.-095)	95	0.29	2816	0	0	0	0	9.932	0.26
41	DULE PARA(S.C.-098)	98	0.24	1515	0	0	0	0	4.414	0.11
42	MANGAL PANDEY PALLY(S.C.-099)	99	0.07	1630	0	0	0	0	4.414	0.11

43	PALER MATH(S.C.- 100)	100	0.06	4347	0	0	0	0	4.046	0.11
44	FAKIR PARA (SOUTH) (S.C.-112)	112	0.21	2571	0	0	0	0	2.943	0.08
45	Manasha Colony(S.C.- 114)	114	0.25	2780	0	0	0	0	2.575	0.07
46	64 PALLY(S.C.- 115)	115	0.28	3371	0	0	0	0	18.393	0.48
47	JAGAN NATH COLONY(S. C.-117)	117	0.11	2530	0	0	0	0	18.393	0.48
48	KUNDUR BAGAN(S.C.- 118)	118	0.41	4520	0	0	0	0	19.864	0.52
49	STHIRPARA (S.C.-120)	120	0.38	3628	0	0	0	0	19.864	0.52
Total			0.76	273788	0	0.00	0	0	315.62	8.22

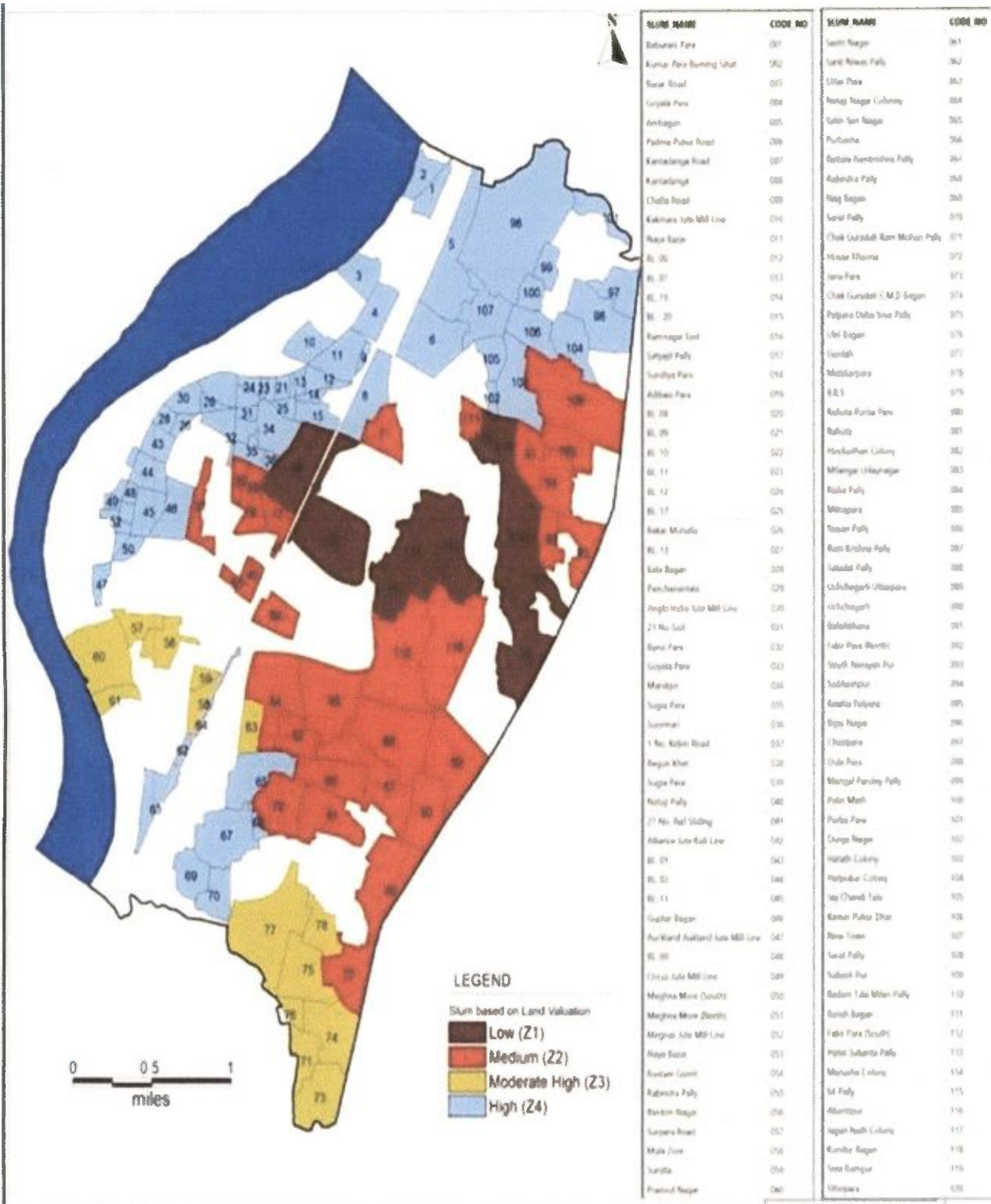


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**7. MAP OF BHATPARA**



  
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 Chairman  
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## 8. CITY PROFILE

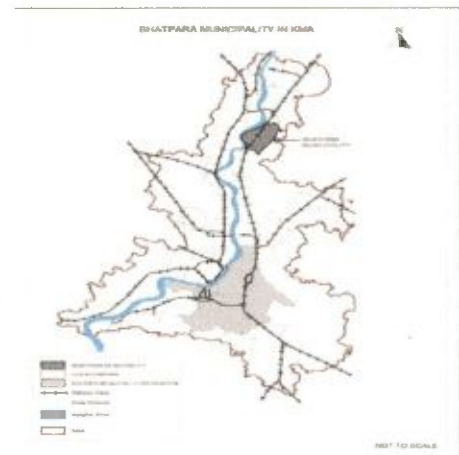
### City Overview

Constituted in 1899 with the de-merger of part of municipal area (consisting of Bhatpara, Jagatdal, Authpur and Shyamnagar, together with the village Kankinara) falling under erstwhile Naihati Municipality, Bhatpara Municipality is one of the oldest municipalities in West Bengal. It is one of the northern most towns of North 24 Parganas District of West Bengal and Kolkata Metropolitan Area (KMA). The municipality falls under Jagatdal PS jurisdiction of Barrackpore subdivision. The name 'Bhatpara' originates from the ancient name "Bhatta-Palli", where "Bhatta" denotes the section of Brahmin Sanskrit pandits and "Palli" denotes locality or village.

Owing to strategic location of the town with bank of river Hooghly bordering the town along the western side of the town, Bhatpara Municipality is home to number of water intensive industries (mainly Jute milling units) all located along the river bank. These jute mills drew in large pool of labour forces mainly from the Bihar & Uttar Pradesh who gradually settled at Coolie lines just nearest to the mills or in the vicinity of the mills. Over the years, with the economic downturn coupled with stiff overseas competition some of Jute Mills discontinued their operations in Bhatpara leading to gradual transformation from an industrial hub to a city with mere existence of handful of jute mills.

### History and Evolution of Bhatpara

Since the incorporation of the municipality in 1899 slicing out the southern part of Naihati Municipality admeasuring an area of 11.65 Square Kms. Bhatpara Municipality is observed to have constantly evolved and grown in area with the inclusion of part or full adjacent village mouzas afterwards. Following are the additions to the jurisdiction of the municipality in a chronological order: Inclusion of whole village Sundia, a portion of Sthirpara Mouza and Chalkgurdah Mouza on 8th July 1924 leading to rise in municipal area to 14.24 Sq. km with effect from 1st April 1925. Inclusion of four GPs including Madral-Panpur, Narayanpur, Rahuta II & I etc. in the year 1995 with total area further increased to 32 sq. km.



The municipal town is characterized with rich historical footprints with the genesis of erstwhile village moujas like Bhatpara, Kankinara, Jagatdal Authpur and Shyamnagar can be traced back to the Mohammedans period. In the 17<sup>th</sup> & 18<sup>th</sup> century Jagatdal was an important commercial place where German capitalists had their Kutirs, known as Bankibazar. Bhatpara area was once abode of Sanakrit and Nayay Shastra learning.

### Location of Bhatpara

Bhatpara Municipality is located at the northern part of Kolkata Metropolitan Area with its i) latitude position being 22°53'00" latitude North, 22°48'34" latitude South and ii) longitude position at 88°26'00" longitude East and 88°22'08" longitude West. The Town has an average elevation of 12 metres (39 feet) from west to east direction.

The municipality is bordered by the river Hooghly along the western side of the town, while the Barrackpore Kalyani Expressway defines the eastern boundary of the municipality. The municipality is surrounded by rural areas in the South and Eastern side with villages namely Kawgachi Gram panchayat located in the South and Panpur & Abhirampur Gram panchayat towards East. In terms of proximity to other major towns, the municipality is bounded by Naihati Municipality towards North and Garulia Municipality to the South. The city is connected with the railway line from Sealdah (Kolkata) and railway line cuts across the length of the city into eastern and westerns parts.

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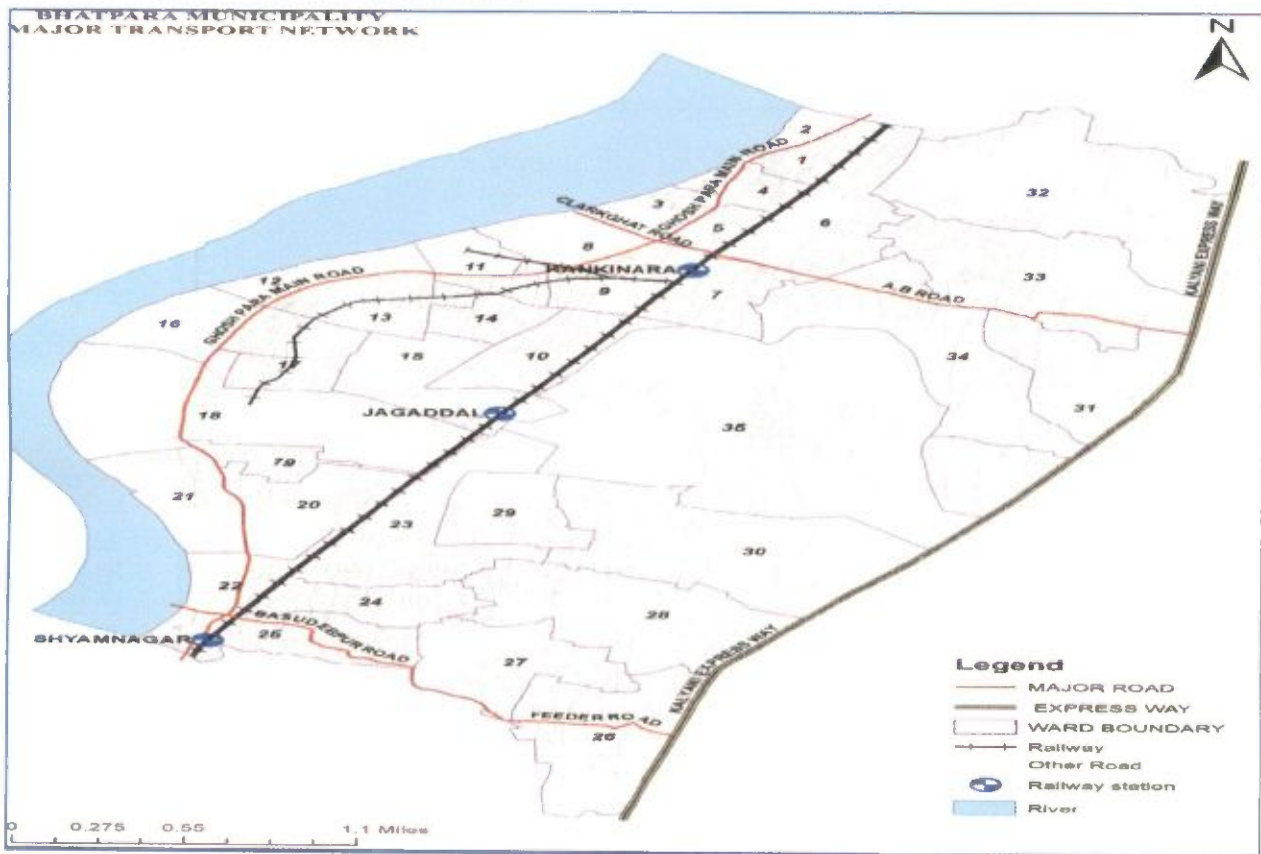
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Bhatpara Municipality

**Physical Linkages**

Bhatpara is located 37 Km North of Kolkata-the state capital and it is linked by both modes of transportation viz. Road and Rail, state highway and a number of district Roads have linked the town with Kolkata, other important towns and places of North 24 Parganas and other district HQs mainly through Barrackpur Trunk Road and Barrackpore Kalyani Expressway. Other major roads including Ghosh Para main road, A.B Road, Basudevpur Road, Clarkghat Road etc. serve different parts of the town in connecting them with state highway and Barrackpur Trunk Road.

The town is well connected with remaining parts of the state by railway. There are 3 railway stations Kankinara, Shyamnagar, and Jagatdal within the municipality area and they connect the town.

**Figure 2 Transportation Network in Bhatpara Municipality**



through Sealdah (Kolkata) main line supporting movement of the daily passengers using a suburban railway services for coming down at Kolkata for work. It also caters for the daily movement of the majority of goods to Kolkata and other areas.

In addition, number of regular ferry services is operating on Hooghly River and the services connect the town to Hooghly-Chinsurah, Chandernagar, and Bhadrashwar - towns on other bank of Hooghly river. The images below present transportation network of Bhatpara Municipality and entire Bhatpara Municipal area in Satellite Image

*[Signature]*  
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 Bhatpara Municipality

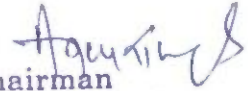
*[Signature]*  
 Chairman  
 Bhatpara Municipality

BHATPARA MUNICIPALITY



Map 1 Bhatpara Municipality on satellite image

  
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Bhatpara Municipality

  
Chairman  
Bhatpara Municipality

## 9. EXISTING CENTRAL GOVT. PROJECT OF BHATPARA MUNICIPALITY.

In the areas of slum development, housing and infrastructural development projects have been taken up in the last 7 years under BSUP. Projects have been undertaken in four phases in Bhatpara and a total of 4577 DUs have been allotted till December 2013. The following table presents the details of the 4 phases of BSUP scheme carried out in Bhatpara Municipality till March 2014.

**Table 2 Details of BSUP Implemented in Bhatpara Municipality**

Sl. No.	Phase	Total Investment for Housing and Basic Amenities (in Lakhs)	Total no. of DUs allotted	Total No. of DUs occupied
1.	Phase I	1791.38	797	797
2.	Phase II	6955.58	1947	1947
3.	Phase III	4318.77	1034	1034
4	Phase IV	3811.26	799	799
Total		16876.99	4577	4577
5	Rajiv Awash Yojana	849.98	198	96
6	Construction of Modern Abotoir	796		

Source: Bhatpara Municipality

Apart from this, drains, roads, pathways, street lights and community centres have also been commissioned under this scheme.

Recently a Pilot Project of PMAY at 1 No. Kebin Road, Kewtia Palpara & Sthirpara slum with a project cost of Rs. 9.18 Crores (target completion date March 2015) has been initiated and has reached an advanced stage of construction in a very short period of time.

## 10. Physical Infrastructure profile

From the very inception of Bhatpara as municipality, the main source for the supply of drinking water was from river Hooghly. Water was treated at vintage water treatment plants run by jute mills and distributed through pipeline network covering a small part of the town. Over the years, municipality has taken up number of water supply augmentation, including i) laying piped water supply distribution network by drawing funds from its own budget and other sources like CUDP III, 10<sup>th</sup> Finance commission etc., ii) rolling out 24x7 water supply scheme, a Rs. 250 crores project (2010-2014) implemented by KMDA under JNNURM, involving construction of a new 23 MGD Water Treatment Plant at Jagatdal, 18 overhead reservoirs and further spreading out of surface water pipeline network in other parts.

Currently, the town has a total of 330 km of surface water pipeline network catering to 96% of total population of the city and providing direct water connections to 31,000 households, of which 110 km runs within wards 1-22 and the remaining in the other 13 wards. Post the implementation of JNNURM project, daily piped water supply of the town has reached at 70 MLD.

Despite the existence of surface water supply network and coverage, municipality has to resort to ground water to meet the supply at some parts of the town. As per ULB records, 10% of the entire water supply is dependent on groundwater through deep tube wells and hand pumps, mainly in the ward nos. 06, 07, 25, 32 and 35.

The table below presents a service level standard of Bhatpara in terms of coverage of the city with respect to water supply.

  
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**Table 3: Water Supply Benchmarks for Bhatpara Municipality**

S/No	Indicator	Central Level Benchmarks	State Level Benchmarks	Present Status 2013-14	Targeted status during 2014-15
1	Coverage of Water Supply Connection	100%	100%	82%	92%
2	Per Capita available of Water at consumer end	135 Lpcd	135 Lpcd	105 Lpcd	135 Lpcd
3	Extent of metering of Water Connections	100%	100%	0%	0%
4	Extent of Non-Revenue Water	20%	20%	20%	20%
5	Continuity of Water Supply	24/7 Hrs/Day	24/7 Hrs/Day	10 Hrs./Day	18 Hrs/Day
6	Efficiency in redressal of customer complaints	80%	80%	82%	90%
7	Quality of Water supplied	100%	100%	80%	95%
8	Cost recovery in water supply service	100%	100%	22%	35%
9	Efficiency in collection of water supply related charges	90%	90%	60%	70%

Source: MoUD, Gol and Bhatpara Municipality, 2014

#### **Storm water Drainage**

Mukterpur canal starting from Tinshukia to river Hoogli (5 km in length) is the main channel for waste water outlet of the town. Other two main drains, namely, Rishi Bankimkhal and Shyam Nagar Khal, run through the northern and southern boundary area feeding canals of Mukterpur and Barti Beel respectively. These channels now have been silted. The banks of the channel are fairly high with respect to the intermediate spread of land. Bhatpara has 107 km of pucca drains and 125kms of katcha drains.

Due to lack of maintenance and heavy siltation these channels are not adequate for drainage in current form. As a result, a large number of low lying pockets, which remains water logged in the rainy seasons, have been created. The land in the municipal area is generally flat and the slope is towards intermediate field from the riverbanks.

**Table 4: Storm water Drainage Benchmarks for Bhatpara Municipality**

Indicator	Central Level Benchmarks	State Level Benchmarks	Present Status 2013-14	Targeted status during 2014-15
1 Coverage of Storm Water Drainage	100%	100%	80%	85%

  
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## Sewerage & Sanitation

The sewerage network has only 15% coverage in the entire city. The network has primarily evolved in three stages, which are:

- **Stage I (1931-1973):** It started with laying of initial drainage network in 1931, which was further extended by the PHE in 1973. This led to laying of total 20.42 km of drainage network at this stage. Also a STP of capacity 10 MLD was constructed which is presently functional.
- **Stage II (1987-1993):** Bhatpara was brought under the purview of Ganga Action Plan (GAP) in the period 1987-1993, during which the old drains and outfall points were intercepted and 5 lifting stations and 2 pumping stations were constructed for better collection and transmission. A total of 15 km of pipeline was constructed during this phase in wards 1-22.
- **Stage III (2013- 2017 Projected):** Further improvement of the sewerage system is being implemented under NGRBA since 2013. Scheduled to be completed by 2017, this project is focused on eastern wards of the municipality, which has no sewerage system currently. As part of this Rs. 332 crores project, key envisaged outcomes include:
  - Laying of 125 km of Sewerage Pipeline
    - Setting up of 23 lifting stations
    - Setting up of 3 Pumping Stations
  - Setting up of 3 STPs at a) Jagatdal ward No 15, b) Dipali Math ward No 23 and c) Rabindra Pally ward No 6 with a total capacity of 61 MLD

As on June, 2014 the project is running on time and 27% of the project work is already completed. In addition to sewerage and sanitation works carried out in above three stages, municipality had underwent annual repair and maintenance work for the existing pipelines leveraging own fund of the municipality based on as-is-where-is basis.

The table below presents a service level standard of Bhatpara in terms of coverage of the city with respect to sanitation and sewerage. Table clearly shows though toilet coverage of the town is reasonably good, but lot of interventions are required to improve sanitation and sewerage facilities as there is no household level drainage facility leading to unhygienic environment in slums.



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Chairman  
Bhatpara Municipality

**Table 5: Sewerage and Sanitation Benchmarks for Bhatpara Municipality**

1	Coverage of Toilets	100%	100%	85%	90%
2	Coverage of wastewater network services	100%	100%	25%	45%
3	Collection Efficiency of Waste Water Networks	100%	100%	60%	65%
4	Adequacy of Waste water treatment capacity	100%	100%	45%	55%
5	Extent of Reuse and recycling of treated wastewater	20%	20%	3%	15%
6	Quality of Waste Water Treatment	100%	100%	94%	95%
7	Efficiency in redressal of customer complaints	80%	80%	60%	75%
8	Extent of cost recovery in Waste Water Management	100%	100%	4%	7%
9	Efficiency in collection of sewerage charges	90%	90%	0%	0%

Source: MoUD, Gol and Bhatpara Municipality 2014

### Solid Waste Management

Bhatpara Municipality generates approximately 6050 MT/month of solid waste. Presently there is no proper solid waste management in the municipality and it is dumped in open landfill sites. There are two spots which currently the municipality uses as dumping grounds. They are: i) Madral low cost treatment plant (in use for last 10 years) and ii) Fingapara Ward 29-35 border (in use for last 4 years). The waste is collected mostly by Handcarts and then dumped by tractors and trailers. Recently, a SWM pilot project (Rs. 28 Crore approx.) is being implemented under NGRBA.

The table below presents a service level standard of Bhatpara in terms of coverage of the city with respect to Solid Waste Management. In terms of household level coverage solid waste management and segregation of municipal solid waste, the municipality is not at a good stage.

**Table 6: SWM Benchmarks for Bhatpara Municipality**

S/NO	Indicators	Central Level Benchmarks	State Level Benchmarks	Present Status 2013-14	Targeted status during 2014-15
1	Household level coverage of solid waste management services	100%	100%	25%	45%
2	Efficiency of collection of municipal solid waste	100%	100%	90%	92%
3	Extent of segregation of municipal solid waste	100%	100%	15%	20%
4	Extent of municipal solid waste recovered	80%	80%	80%	85%
5	Extent of scientific disposal of municipal solid waste	100%	100%	15%	40%
6	Extent of cost recovery in solid waste management services	100%	100%	10%	15%
7	Efficiency in collection of solid waste management charges	90%	90%	10%	11%
8	Efficiency in redressal of customer complaints	80%	80%	85%	90%

Source: MoUD, Gol and Bhatpara Municipality 2014

### Road Coverage and Condition

As per the Land Use map of Bhatpara, only 2.7% of the entire municipal area is dedicated to roads. This indicates a very high density of settlement and less developed vehicular network within the city. The settlement and concentration of the activities in this town was originally centered on the rail lines. B.K. Expressway and Ghoshpara Main Road both run along the length of Bhatpara Municipality Connecting Kolkata, Barrackpore, Barasat and Kalyani. A number of state Highways and District Roads link with the municipality, district head quarter and Kolkata, the state capital. Road network in Bhatpara has grown to a total of 1089.67 Km. While only 36% of roads are black topped and concrete, remaining 64% of the road network is still katcha. Most of the existing arterial roads are narrow with two lane carriageways and needs to be widened to cater for the increasing vehicular traffic. Due to lack of proper maintenance, the surface conditions of the roads are not good which in turn reduces the speed of moving traffic.



Engineer  
Bhatpara Municipality

Chairman  
Bhatpara Municipality

**11.The Project slums and existing scenario of Infrastructure**

The various indicators and their score to assess infrastructure deficiency are provided in the table below:

**Indicators for assessing Infrastructure deficiency**

		1	2	3
1.	<b>Water:</b> Percentage of Households without Individual tap connection	0-30	30-60	60-100
2.	<b>Sanitation:</b> Percentage of Households without access to individual latrine	0-30	30-60	60-100
3.	<b>Drains:</b> Whether the slum is connected, not connected or partially connected to city wide storm water drainage system	Connected	Partially Connecte	Not Connected
4.	<b>Roads:</b> Percentage of Households with Non Motorable Katcha and Non Motorable Pucca Roads	0-30	30-60	60-100

**Note: 0-30 means less than equal to 30, 30-60 means more than 30 but not more than 60, 60-100 means more than 60**

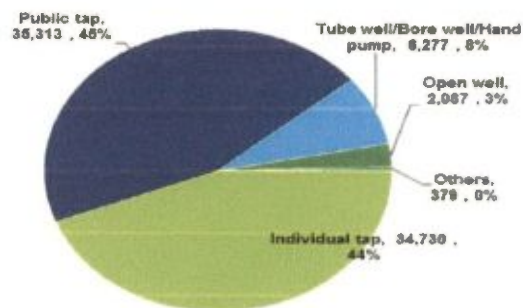
Status of all the 120 slums in terms of infrastructure is listed in Annexure-B9 and the deficiency parameters are analysed as follows:

**Water**

The slum households of Bhatpara have reasonably good access to drinking water, either from individual taps or from public taps. The figure alongside reveals that:

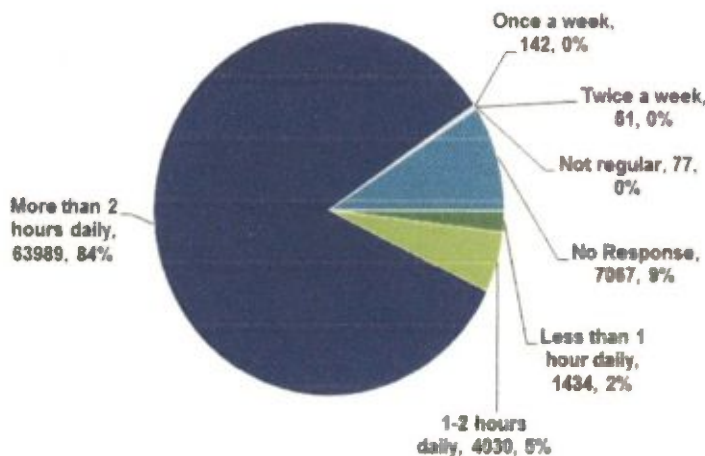
Around 44% of the total slum households (34,730 in number), have individual tap connection in their own premises. Out of these, majority of the households (30,000 in total) stay in notified slums,

**Figure 3 Sources of Drinking water available in Slums**



Around 45% of slum households are dependent on public tap and about 8% in aggregate, resort to Tube well/Bore well/Hand pump for collection of drinking water.

**Figure 4 Duration of Water Supply in Slums**



Remaining 3% households (2450 in number) are dependent on open well, tank/pond, canal, water tanker etc. Majority of the slum households in Bhatpara have a decent duration of water supply with about 84% of the slum households having water supply for more than two hours. Only 2% of slum households, are reported to have access to drinking water for less than one hour daily. Only 193 HHs receive water only once or twice a week.

37 slums have a score of "1", that is, slums with less than 30% households having individual tap connection. Number of slums getting scores of "2" and "3" are 37 and 46 respectively indicating around 38% slums have more than 60% households without individual tap connection.

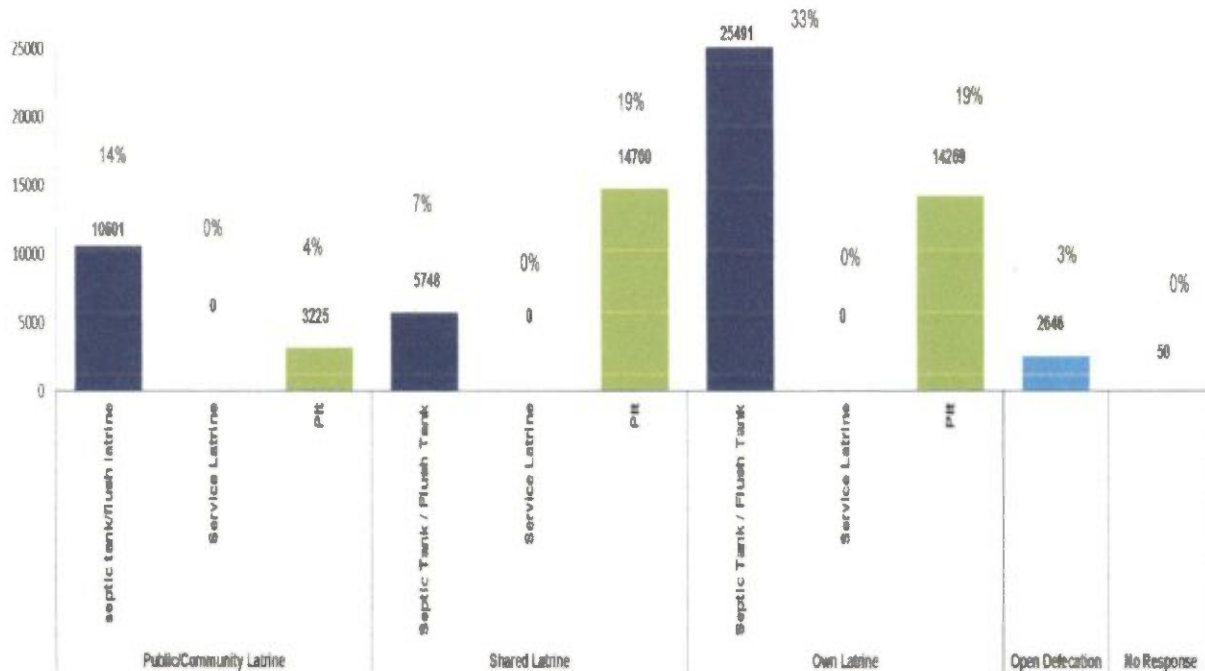
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**Sanitation**

In terms of access to sanitation facilities, 33% of the households have their own latrines, 7% households have shared latrines and 14% avail community toilets. Figure below shows households living in slums of Bhatpara have a pit inside their premises with their share accounting for 19% of total slum households. A total of 42% of the population avail these pits. A small percentage of about 3% households resort to open defecation.



Majority of the slums (66 slums) have been given the score "1", that is, slums having less than 30% households without access to individual latrine. Moreover, of the 66 slums given the score of "1", it is observed that 31 slums have less than 10% households who do not have access to latrine facilities inside their premises. In comparison, out of the 32 slums having more than 60% households without individual latrine facilities, in 9 slums more than 90% households do not have facilities inside their houses. Significant among them include i) Alliance Jute Kuli Line (S.C.-042), ii) Auckland Jute Mill Line(S.C.-047), iii) Circus Jute Mill Line(S.C.-049), iv) Kankinara Jute Mill Line(S.C.-010) etc.

  
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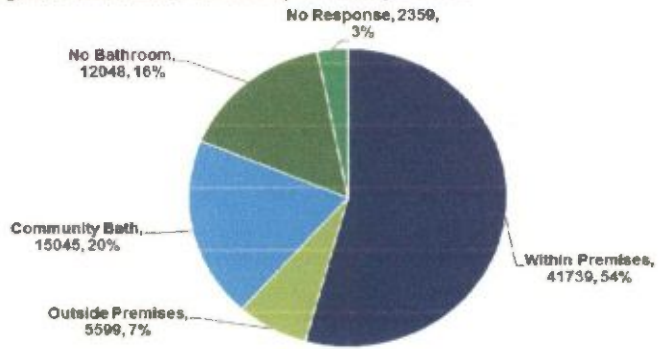
  
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**Access to Bathroom facility**

Figure 5 : Distribution of Types of Sanitation Facilities

\* In terms of access to bathroom facilities, 54% of the households have bathrooms within their premises, of which more than 80% households are from notified slums  
 \* 16% households do not have bathrooms within their premises, of which 71% households are from notified slums. Significant slums coming under this category are Naya Bazar (S.C.-011), B L.06(S.C.-012), B L.11 (S.C.-045), Uttar Para(S.C.-063) etc.

Figure 6 Distribution of Availability of Sanitary Services



**Drains**

The lack of proper drainage system is a critical issue in Bhatpara. The topography of the town varies mostly based on the proximity to the river and also the large number of ponds on the eastern part and a canal cutting across the town. All these above factors contribute to the drainage problems of Bhatpara. The following table shows status of storm water drainage connectivity of the slums.

Table 7 Status Connectivity of Drains in Slums

Category	Connectivity			Notified Slums			Non-Notified Slums		
	No. of Slums	No. of HHs	Population	No. of Slums	No. of HHs	Population	% Slums	% total HHs	
Fully Connected	1	428	1850	0	0	0	1%	1%	
Partially	58	45,451	1,77,715	17	10,890	42,128	63%	73%	
Not Connected	30	12,793	49,513	14	7,228	28,070	37%	26%	
<b>TOTAL</b>	<b>89</b>	<b>58,672</b>	<b>2,29,078</b>	<b>31</b>	<b>18,118</b>	<b>70,198</b>	<b>100%</b>	<b>100%</b>	

From the table above we can observe that:

Only 1% of the slums HHs are fully connected to the drainage system, while 37% slums with 20,000 households are not connected to drainage system at all. 63% slum are partially connected to the drainage system, covering more than 56,000 households

Most of the slums which are not connected to the drainage system are located on the Eastern Fringe of the municipality and are close to the Kalyani Expressway.

On account of absence of household level details on connectivity status to the drainage system in

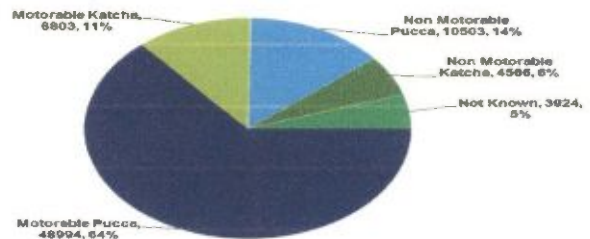
Fringe of the Municipality are close to Kalyani Express Way.

**Roads**

One of the most important physical criteria that determine the condition of a slum is the condition of roads. From the figure alongside, following key things can be ascertained

About 64% households in slums have access to motorable pucca road and another 14% households have access to non-motorable pucca road

17% of the slum households have no direct access to pucca road.



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76 slums (63% of total) have scored "1" as they have less than 30% Households in their slums with access to Non Motorable Katcha and Non Motorable Pucca Roads, of which 35 slums have less than 5% households. 56 slums have less than 10% households with access to Non Motorable Katcha and Non Motorable Pucca Roads.

### Vulnerability

The various indicators and their score to assess vulnerability is provided in the table below

#### Indicators for assessing vulnerability

		1	2	3
1.	<b>Housing:</b> Percentage of Households with Katcha and Semi Pucca Houses	0-30	30-60	60-100
2.	<b>Income Level:</b> Percentage of HH having income < Rs.3000/- per month	0-30	30-60	60-100
3.	<b>Caste Status:</b> Percentage of SC , ST and OBC in slum	0-30	30-60	60-100
4.	<b>Minority Population:</b> Percentage of Minority Population in a slum	0-30	30-60	60-100

(0-30 means less than equal to 30, 30-60 means more than 30 but not more than 60, 60-100 means more than 60)

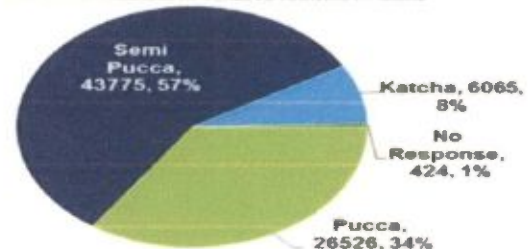
Status of all 120 slums in respect of the four vulnerability parameters is detailed below:

#### Housing

The condition of housing in the slums is one of the key determinants of the condition of the slum and also one of the most compelling issues to be addressed. In Bhatpara, slums comprise mostly of semi-permanent structures or slums with permanent structures in dilapidated conditions. From the figure alongside, following observations can be derived:

Out of 76,790 households, majority of the households (57% of total HHs) stay in semi-pucca houses followed by households staying in pucca houses, which constitute another 34% of total households. (Refer Annexure B-6 for photographs of slum structures)

Figure 8 Distribution of Types of Housing in Slums



Katcha and semi pucca houses taken together accounts to about 65% of the total houses. . Out of these total 49,840 houses[1], around 6,000 houses are katcha with four slums [Chalta Road (S.C No. 9), 27 No Railway Station Siding (S.C No. 41), B.R.S (S.C No. 79) and 1 No. Kebin Road, Kewtia Palpara & Sthirpara having more than 50% households staying in katcha houses. Moreover, maximum concentration of katcha houses is observed in ten slums, which accounts for 35% of total katcha houses in slums of Bhatpara

As evident from the above, only 4 slums have score of "1" which means less than 30% Households stay in Katcha and Semi Pucca Houses.

Maximum concentration of slums (63 Nos.) have score of "3" and out of these 63 slums, 13 slums have more than 90%

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## 12.National poverty Alleviation Programmes and PMAY

[1] Total number of katcha and semi pucca houses shall be lower than 49,840 by 298 houses as slum development work has been initiated in 1 No. Kebin Road, Kewtia Palpara & Sthirpara slum (196 katcha and semi pucca houses) and hence, it should be excluded. DPR prepared of this slum has been sanctioned from MoHUPA, Gol in September, 2013.

## 12.National poverty Alleviation Programmes and PMAY

Slum: the focus Area

Under section-3 of the Slum Area Improvement and Clearance Act, 1956, slums have been defined as mainly those residential areas where dwellings are in any respect unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and designs of such buildings, narrowness and faulty arrangement of streets, lack ventilation, light or sanitation facilities or any combination of these factors which are detrimental to safety, health and morals. Thus, conceptually slums are compact overcrowded residential areas (and not isolated or scattered dwellings) unfit for habitation due to lack of one or more of the basic infrastructure like drinking water, sanitation, electricity, sewerage, streets etc.

It is in this background that in the 2001 Census, an innovative attempt was made to collect demographic data slum areas across the country.

As per 2001 population census, the slum population is estimated to be 61.8 million, out of a total urban population of 285.35 million people reside in urban areas.

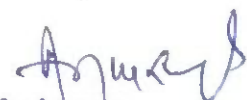
The analysis of the data in this report provided an overview of the population characteristics of slums and squatter settlements and is expected to serve as a benchmark for pragmatic and realistic town planning while dealing with the issue of slums and slum dwellers.

### Background

- i.
- ii. Urbanization is fast becoming the defining process in shaping the course of social transformation & ensuing development concerns in India. About 377 million persons or about 31% of India's population of 1.21 billion lived in urban areas in 2011, spread over 5161 towns. As per Report on Indian Urban Infrastructure and Services (NIUA) Report, the urban population is likely to grow to about 600 million by 2031. About one-fourth (24%) of the urban population of India is poor i.e. their expenditure on consumption goods is less than the poverty line benchmark. The benefits of urbanization have eluded this burgeoning 67 million urban poor population, most of who live in slums. An analysis of population growth trends between 1991 and 2001 shows that while India grew at an average annual growth rate of 2%, urban India grew at 3% mega cities at 4% unplanned urbanization and simultaneous growth of urban population in the limited living spaces has a visible impact on the quality of life of the slum dwellers of the city.
- iii. It is increasing clear that sustainable growth can only take place when it is inclusive and when the entire population including the poor and marginalized need to have at the least access to descent shelter, basic amenities, livelihoods and a voice in governance.' Keeping this in mind the Government of India and the various State Governments have been taking up several schemes on partnership mode.



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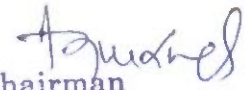
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### National Missions for Slum Development and Poverty Reduction

- i. The Government of India is committed to creating a slum free India as part of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) sub mission on Basic Services for the Urban Poor (BSUP & Rajiv Awas Yojana). More recently it has also launched the Pradhan Mantri Awas Yojana [PMAY] for affordable housing for the poor for inclusive, sustainable and equitable urban development and to address the 'problem of slums in a definitive manner' (PMAY guidelines).
- ii. **Jawaharlal Nehru National Urban Renewal Mission (JNNURM)** : JNNURM is a reform- linked urban development and slum upgrading program. Under JNNURM, the Government of India has been providing central assistance to 65 metro and large cities to invest in infrastructure improvements with governance reforms under sub mission on Urban Development.
- iii. **Basic Services for Urban Poor (BSUP)** : BSUP is focussed on slum upgradation and poverty reduction through creating access and networking slums to urban infrastructure improvements. BSUP also has a 7-Point Charter that envisages integration of urban slum upgrading activities with social development programs/missions such as for health, education, social welfare, etc. to ensure comprehensive development.
- iv. **Swarna Jayanti Shahri Rozgar Yojana (SJSRY)** : SJSRY is a centrally sponsored program and it mainly emphasizes on the poverty reduction through employment generation. Main target groups of the program are: Urban poor, Women, SC/ST, Disabled etc.
- v. **National Slum Development Program (NSDP)**: NSDP is a centrally assisted slum development program. NSDP is mainly for improvement in the environment in the slums as a broader objective through provision of infrastructure facilities and shelter for improving living conditions in the slums.
- vi. **Valmiki Ambedkar Awas Yojana (VAMBAY)**: VAMBAY is a central Government scheme to provide housing to the poor. Under VAMBAY scheme, an amount of Rs. 50,000 is extended to a beneficiary in a city with more than 10 lacs population while in the cities having population less than 10 lacs. each beneficiary gets Rs. 40,000/- fifty percent of the amount is central government grant while the rest could be taken as loan from HUDCO/ other nationalized banks/ state government/ urban local bodies.
- vii. **Integrated housing and slum development program (IHSDP)**: IHSDP was under Jawaharlal Nehru Urban Renewal Mission (JNNURM) beginning from the year 2005-2006. The major objectives for the IHSDP program are:-
  - Focussed attention to integrated development of basic services to the poor. The basic services include security of tenure at affordable price, improving housing, water supply and sanitation. Secure effective linkages between asset creation and asset management so that the basic services to the urban poor created in the cities, are not only maintained efficiently but also become self sustaining over time.



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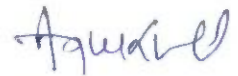
### 13.HFAPoA and Pradhan Mantri Awas Yojana(PMAY)

**Slum Free City Plan of Action and Pradhan Mantri Awas Yojana [PMAY]** To make cities Slum-free is currently on the global agenda. One of the Millennium Development Goals (MDGs) is to 'achieve significant improvement in the lives of at least 100 million slum dwellers, by 2020 (UNDP, 2003). Similar goals are set forth by Pradhan Mantri Awas Yojana [PMAY] , to create a Slum-free India.

All urban development initiatives have an impact on the poor within the city. It is now recognised that the past process of urban development and city planning has not been sufficiently inclusive. The process of preparing and implementing Slum Free City Plan of Action will involve 'learning by doing' in partnership with slum communities themselves. The HFAPOA will contain a holistic and temporal view of how the city could develop planning processes and projects targeted at the urban poor and improving living conditions in slums. The plan while being developed with a 10-15 year perspective will need to be updated and modified at regular intervals so as to remain relevant. The slum free city planning exercise will help the city to take a holistic view of slum settlements and the urban poor, by systematic data gathering and analysis at zone, ward and slum level which would help it to address policy / regulatory constraints in the access to affordable shelter solutions for the urban poor in the city.

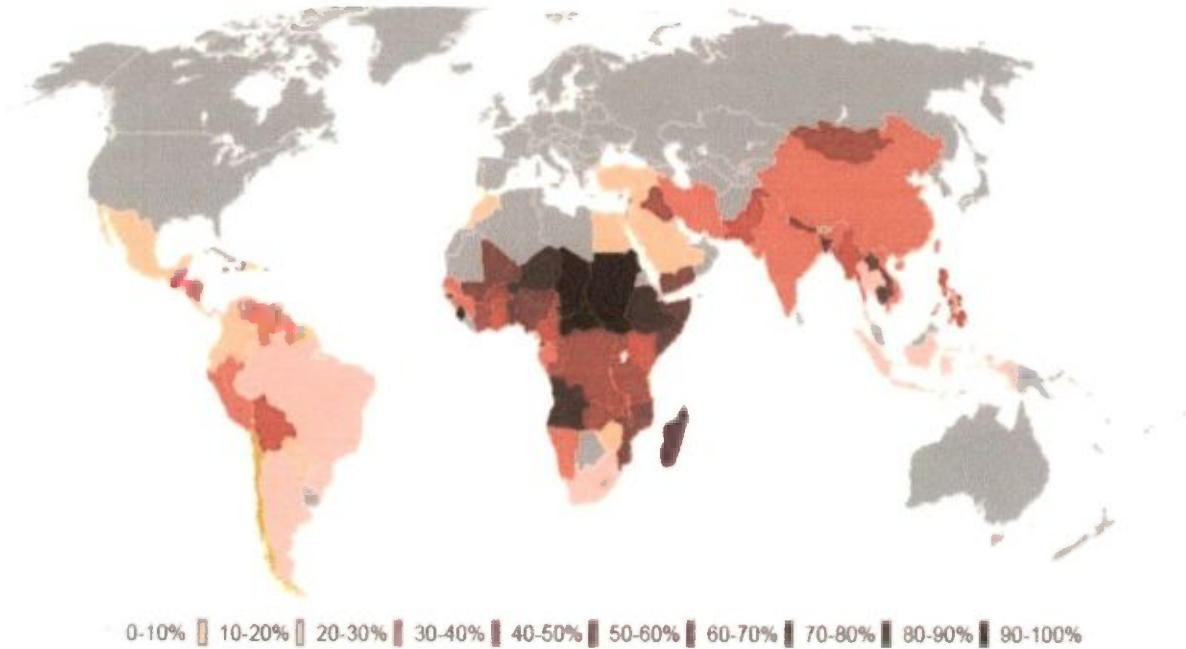


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## Urban Population Living in Slums and the Indian Scenario (source: UN-HABITAT)



The preparation of HFAPoA Plan will broadly involve Slum Development/Rehabilitation Plans based on

- a. Survey of all slums – notified and non-notified;
- b. Mapping of slums using the state-of-art technology;
- c. Integration of geo-spatial and socio-economic data; and
- d. Identification of development model proposed for each slum.

1. Base maps to an appropriate scale would be a pre-requisite for the preparation of Slum Development Plan/Slum-free City Plan. States/UTs may need to proceed in the following steps for the preparation of Slum-free City Plans.
2. Securing CARTOSAT II/latest satellite images from NRSC/ISRO and preparation of base maps for the whole city and its fringes using the images;
3. Identification and inventory of all slum clusters of all descriptions in the urban agglomeration with the help of satellite image and other available data;

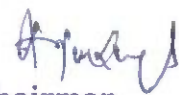
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4. Inventory of all possible vacant lands in each zone of the urban agglomeration that could be used for slum development/ rehabilitation development purposes;
5. Development of Slum Map of every slum within the city and its fringes using GIS with CARTOSAT II images, ground level spatial data collected through total station survey, collating spatial information with respect to plot boundaries, network of basic infrastructure like roads, sewerage, storm drainage and water lines, etc and superimposing this on the satellite image and importing them into GIS platform as the first step towards the preparation of Slum Development Plans and Slum Free City Plan.
6. This may be undertaken with the help of technical partners of NRSC/ ISRO/other technical institutions/agencies;
7. Identification and engagement of Lead NGO/CBO to guide and anchor community mobilization for the purpose of slum survey, (May be more than one NGO/CBO in different slum zones) of the city. These Lead NGOs/CBOs should also be associated in slum survey operations and dialogues for preparation of slum level development plans;
8. Conduct of Slum Survey based on the detailed formats (with or without changes) prepared by the Ministry of Housing & Urban Poverty Alleviation with the help of National Buildings Organization (NBO) - after due training of trainers, training of survey personnel /cavassers and canvassing. It would be helpful for community mobilization to pick as many cavassers from the sourced slum or nearby slum pockets;
9. Collection of bio-metric identification data of slum dwellers based on the above survey (subject to guidelines issued by Unique Identity Authority of India (UIDAI));
10. Entry of data from Slum Surveys in the web-enabled MIS application (to be provided by Ministry of HUPA), compilation and collation of data, preparation of Slum-wise, City and State Slum Survey Database and Baseline Reports. The MIS will assist in developing a robust Slum and Slum Households Information System. (Guidelines and software for development of the MIS will be issued by the Ministry of HUPA);
11. Integration of Slum MIS with GIS Maps to enable the preparation of GIS-enabled Slum Information System that is to be used for the preparation of meaningful Slum Development Plans and Slum-free City Plan using a city-wide/zone-based approach.(Guidelines and software for development of GIS platform and its integration with the MIS will be issued by the Ministry of HUPA);
12. For each slum identified, Slum Development Plan to be decided based on models like PPP development, infrastructure provision only, community-based development through Rajiv Awas Housing Societies, etc. This decision-making should necessarily be done with the involvement of the community after community mobilization and dialogue for deciding the model to be adopted. Each slum development plan should have the timeline against each of the activities; and
13. Preparation of HFAPoA Plan should be based on the development plans for all slums and strategies for the prevention of future slums, including reservation of land and housing for the urban poor. The Plan should contain timeline of activities for achieving slum-free city, phasing information and financial estimates against each of the activities



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#### **14. Introduction to Pradhan Mantri Awas Yojana (PMAY)**

i. Pradhan Mantri Awas Yojana [PMAY] a path breaking scheme for the slum dwellers and urban poor envisages a 'Slum-free India' through encouraging States/Union Territories to tackle the problem of slums in a holistic manner. It calls for a multi-pronged approach focusing on:

- Bringing existing slums within the formal system and enabling them to avail of the same level of basic amenities as the rest of the town.
- Redressing the failures of the formal system that lie behind the creation of slums.
- Tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor and force them to resort to extra-legal solutions in a bid to retain their sources of livelihood and employment.

ii. PMAY envisages the following

- Development of 'city-wide' slum free city plans that can then get integrated at the state level through a broad State wide slum free action plan
- Enactment of a set of reforms at the state and city level related to inclusive planning, regulation and financing, which would ensure that adequate fresh housing stock and services get created on an ongoing basis to address both current and future needs of cities.
- An integrated approach covering shelter, services and livelihoods for poor slum communities.

iii. The duration of Pradhan Mantri Awas Yojana [PMAY] will be in the following two phases:

- (2015-2022) – covering innovative and projects and initial set of cities ready with City –wide plans.

iv. Eligible Components of the PMAY: In each slum, an integrated approach will be taken, with provision of infrastructure, basic civic and social amenities and decent housing, with attention to planning the layout (after reconfiguration of plots, if possible), total sanitation (with provision of individual toilets and water supply to each household) and provision of adequate green spaces as per (modified, if necessary) town planning norms.

Projects pertaining to the following will not be considered for support under PMAY:

1. Power generation
2. Telecom
3. Employment generation programs and
4. Staffing



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## **15. The duration of Pradhan Mantri Awas Yojana [PMAY] 2015 TO 2022**

ii. *The duration of Pradhan Mantri Awas Yojana [PMAY] will be in the following two phases:*

- (2015-2022) – covering innovative and pilot projects and initial set of cities ready with City –wide plans.

## **16. Need for Projects**

This projects are needed to fully understand and develop redevelopment models that can be replicated in the city with benefits. One of the key objectives of developing Projects is to incentivize innovation and encourage new approaches

Such innovation could encompass:

- Projects with strong community participation i.e. Slum upgradation/ redevelopment projects initiated/spearheaded by the community; or with their demonstrable involvement and participation in design, planning and implementation
- Creation of fresh rental housing stock and transit shelters
- New models of public-private partnerships whereby the private sector can be encouraged to take up affordable housing for the EWS/LIG
- Innovations in planning, demonstrating integrated livelihoods, shelter ; or convergence
- Innovative or cost effective and green building design and technologies
- Financial innovations in delivering the city/state wide programme

## **Aims and Objectives**

### **Vision**

Pradhan Mantri Awas Yojana envisages a 'Housing For All' with inclusive and equitable cities in which every citizen has access to basic civic and social services and decent shelter. It aims to achieve this vision by encouraging States/Union Territories to tackle the problem of slums in a definitive manner, by a multi-pronged approach focusing on:

- Bringing all existing slums, notified or non-notified within the formal system and enabling them to avail of the same level of basic amenities as the rest of the town;



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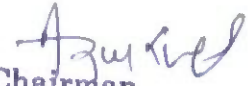
  
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- Redressing the failures of the formal system that lie behind the creation of slums; and tackling the shortages of urban land and housing that keep shelter out of reach of the urban poor and force them to resort to extra-legal solutions in a bid to retain their sources of livelihood and employment.

Thus, the main focus of Pradhan Mantri Awas Yojana [PMAY] is an integrated approach aimed at bringing within the formal system those who are forced to live in extra-formal spaces and in denial of right to services and amenities available to those with legal title to city spaces, and at correcting the deficiencies of the formal system of urban development and town planning that have failed to create conditions of inclusiveness and equity; so that, henceforth, new urban families, whether by way of migration or natural growth of population, have recourse to housing with municipal services, and are not forced to create encroachments and slums and live extralegal lives in conditions of deprivation of rights and amenities.



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## 17. Funding Pattern of PMAY

<b>FUND FLOW PATTERN</b>						
Rupees in lakhs						
NAME OF THE SCHEME	ESTIMATED COST	YEAR 2017-18				TOTAL
		GOI	GOWB	ULB	Beneficiaries	
PMAY project - , Bhatpara Municipality	3471.84	1287.00	1812.53	157.81	214.50	3471.84

**PHASING OF FUND**

Rupees in lakhs

YEAR 2015-16	RELEASE OF FUND				
	GOI	GOWB	ULB	Beneficiaries	TOTAL
1st Installment @ 40%	514.80	725.01	63.124	214.50	1517.44
2nd Installment @ 40%	514.80	725.01	63.124	0	1302.94
3rd Installment @ 20%	257.40	362.51	31.562	0	651.47
<b>TOTAL</b>	<b>1287.00</b>	<b>1812.53</b>	<b>157.81</b>	<b>214.50</b>	<b>3471.84</b>

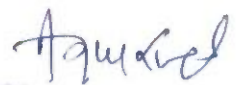
**REQUIREMENT OF FUND**

Rupees in lakhs

SL. NO	NAME OF THE SCHEME	YEAR 2017-18	TOTAL
1	PMAY project - , Bhatpara Municipality	3471.84	3471.84
	<b>Total</b>	<b>3471.84</b>	<b>3471.84</b>



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## 18. Demographic features of the Bhatpara Municipality

Social and demographic profile of Bhatpara Municipality builds upon analysis of recent and past Census data of the district of North 24 Parganas and Bhatpara Municipality. Census records show that district of North 24 Parganas has recorded a high growth of urban population recording around 18.2% during 2001-2011 period. This has led the district to become 2<sup>nd</sup> largest district of India and largest in state in terms of population size in 2011. It has rightly been represented by district wise number of municipalities as North 24 Parganas is highest among all districts with 27 municipalities in the district spread across five subdivisions. Bhatpara Municipality is one of the key municipalities in the North 24 Parganas district.

Population of Bhatpara constitutes only 4% of total district population and the total urban population of North 24 Parganas it comes around 57% of district's population. Bhatpara Municipality comes among the top three municipalities[1] of the district ranked in terms of population size with its population recording around 6.8% of the urban population of the North 24 Parganas. Demographic overview of the municipality over the decades has been presented in the table below.

**Table 8 Overview of the Bhatpara municipality**

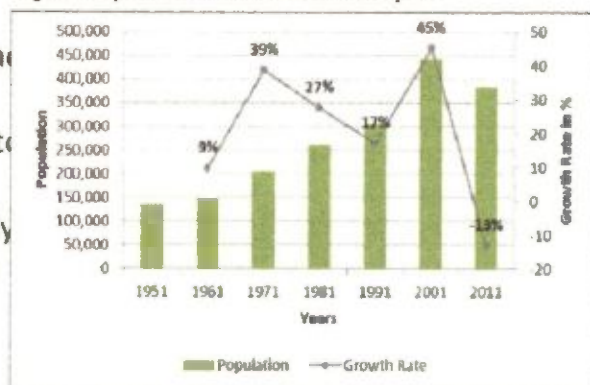
No.	Indicators	2001	2011	2014 (P)
1.	Population (in Lakhs)	4.42	3.84	4.1
2.	Decadal Population Growth Rate	45.07%	-13.25%	5.11%
3.	No of HHs	80,005	87,076	91,700
4.	Average Household Size	5.53	4.41	4.41
5.	Population Density (Persons per Sq. Km)	16,556	14,362	15,097
6.	Overall Male-Female Ratio	55:45:00	53:47:00	--

Source: Census, DDP, USHA survey and validation under [PMAY] Population Projection

Following observations can be inferred from the above table:

Bhatpara municipality witnessed a steep decline in population during 2001-2011 period with a negative growth rate at 13.25%, as compared to growth trend recorded in West Bengal and North 24 Parganas at 14% and 12% respectively during the same period. Growth rate of Urban Population of North 24 Parganas was about 18% during 2001-2011. .

**Figure 9 Population & Growth Rates of Bhatpara**



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- After analysing population data of the previous census records, it reveals that population growth trend for Bhatpara was upward and consistent between 1961-2001 period with highest growth rate recorded during 1991-2001 at 45% (see Figure 6). Based on feedback received from Bhatpara Municipality we are given to understand that this sudden trend fluctuation coupled with increase in number of households during 2001-2011 period may be attributed to outmigration or temporary absence of house members during the period of enumeration.

- The projected population of Bhatpara as on 2014 is expected to be about 410809[2] with number of households estimated at 91700.

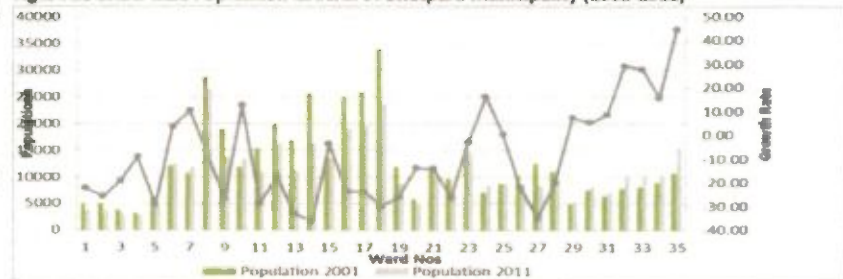
[1] Other densely populated Municipalities are South Dum Dum, Rajarhat Gopalpur with share of their population recording more than 7% of total urban population.

[2] The population for 2014 has been projected assuming an average annual growth rate based on the decadal growth rate observed since 1961-71.

The analysis of the ward wise population growth over the last decade reveals a distinct pattern of the direction of growth of the town. From the figures above it can be concluded

Wards located in the western side of the town are comparatively more populated with 8 wards appearing in top 10 wards of the town in terms of population size. On

Figure 10 Ward wise Population Growth of Bhatpara Municipality (2001-2011)



the contrary, 9 wards located in eastern part of the town come in top 10 wards ranked in respect of population growth rate during 2001-2011. Ward no. 15 located in central-eastern part of the town is the only ward which comes in top 10 wards of the municipality with respect to population size and population growth

- Further analysis of the negative population growth of the town during 2001-2011 period reveals that 23 out of total 35 wards have recorded negative population growth rate during that period and except for ward no. 23 recording negative 2.9% growth, remaining 22 wards are located at the western side of the railway track. Further, around 98% of downfall in town population is observed to be driven by reduction of population in only 10 wards of which 5 wards (13, 14, 16, 17 and 18) account for 63% of total decline (around 37,000) and all these wards are jute mill zones.

- More specifically, all the 8 most densely populated wards located on western side of railway track have registered negative growth rate with growth rates of four of them (16, 17, 18 and 9) recording more than negative 20% growth during 2001-2011.

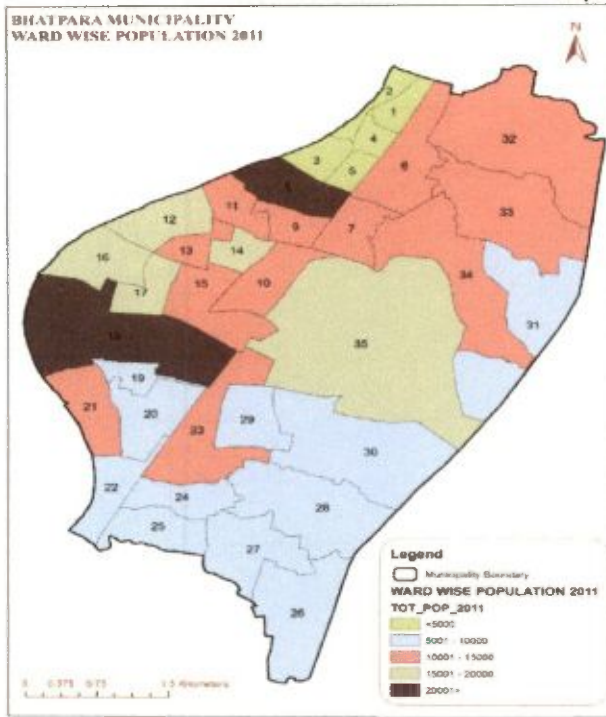
- In comparison, north western part of the Municipality (ward no. 32, 33 and 34) have registered substantial positive growth with growth rate more than 15%, since it is the newer region and has vacant land to offer for newer developments.

  
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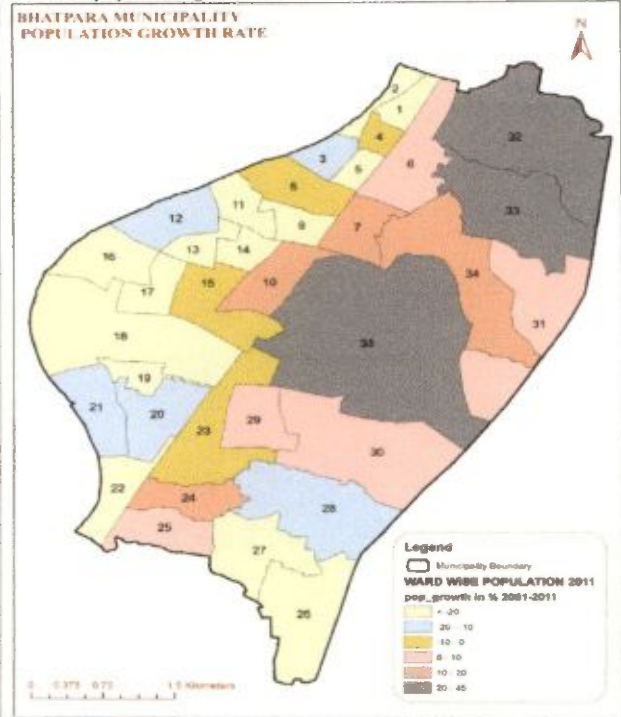
  
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These are rightly represented in figures below showing ward wise population size and growth in Bhatpara municipality.

Map 2 Ward wise Population



Map 3 Ward wise population growth rate



**Population Density**

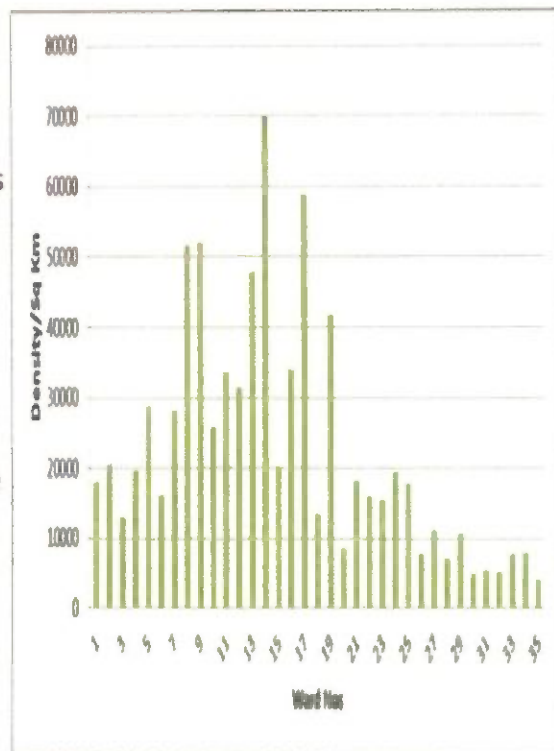
Population density of Bhatpara is on a higher side, though density is observed to have decreased from 16,556 persons/sq. km in 2001 to 14,362 persons/sq km in 2011. This is much higher than the district level density figure, however, unlike Bhatpara, district level density has increased from 2,182 persons/sq. km in 2001 to 2,445 persons /sq. km in 2011. Ward wise analysis reveals following key observations:

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Population density varies substantially across the wards with four wards (14,17,9 and 8) recording population and household densities recording of more than 50,000 persons/ sq. km and more than 9500 HHs/sq.km respectively. Wards ranked based on population density sizes reveal that all the top 10 wards are located on the western part of the town, Whereas all the thirteen (13) wards located in eastern part of the town are relatively lesser dense with average population and household densities recording around 9,600 persons/sq. km. and 2425 HHs/sq.km. Low population density of the wards located along the eastern part railway track vis-à-vis rest of the wards is attributed to presence of large chunk of vacant land in majority of these wards (26, 28, 30, 31, 32, 33, 34, 35 etc.). .

Figure 11 Ward wise Population Density of Bhatpara,2011



- Low population density of the eastern side wards coupled with high rate of population growth is leading to the growth in the eastern side.

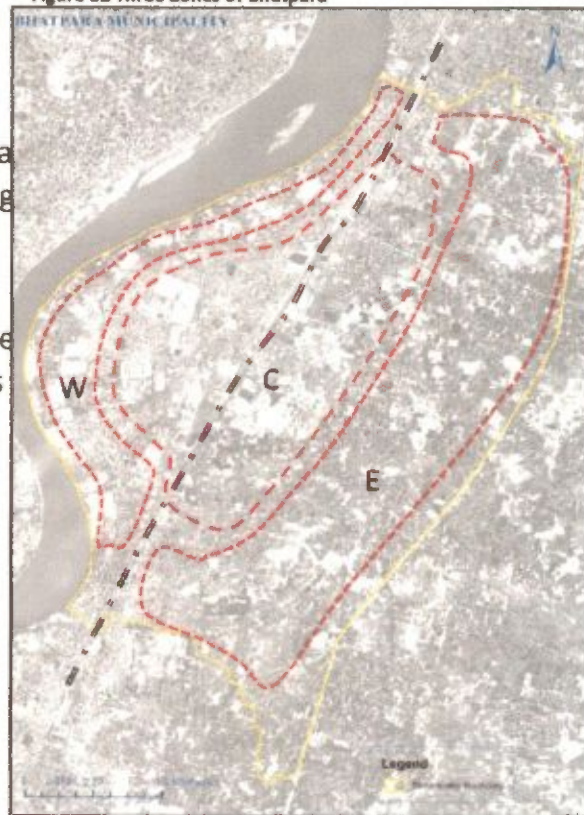
**Spatial Growth Patterns**

**Existing pattern of Development**

Based on variation in intensities of growth across wards, development pattern of Bhatpara carves out into three distinct zones with varying intensities of growth as depicted in figure alongside. The zones are:

- **Western Periphery (W):** The older part of the city with the jute mills situated along the banks of river Hooghly. This zone lies between the banks of Hooghly River and the Ghoshpara Main Rd. This area is characterized with presence of number of industrial units leading to high rate of residential growth and population density..
- **Core (C):** The central core area of the city with dense built-up area and road network on the immediate east and west of the railway track.

Figure 12 Three Zones of Bhatpara



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- **Eastern Periphery (E):** Most of it is newly added area comprising of settlements having low density and residential growth, large chunk of open land and a number of water

### Growth Direction of City

With the inclusion of the mouzas in the eastern periphery of town in 1995, trend towards sub urbanization and urban sprawl (low density, spatially dispersed and segregated land use) have gradually started to impact the mobility of the town and growth direction. This has further been compounded by enormous population pressure in the core and western periphery of town characterized with shrinking space for habitation. However, the growth movement was lopsided till Barrackpur Kalyani Expressway bordering the eastern part of the town was constructed. Barrackpur Kalyani Expressway has played a key role in shaping the growth pattern toward the eastern direction which is mainly in the ward nos. 23-35. A noticeable growth is visible in most of these wards driven by potential growth drivers like availability of vacant land, and road connectivity for real estate development

Table below presents the list of most promising wards in terms of growth as measured by the municipality along with the underlying reason behind the growth in these wards.

**Table 9 Growth Patterns in Bhatpara Municipality**

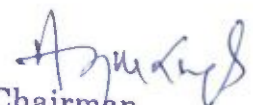
Ward No.	Nature of Growth			Growth Drivers		
	Residential	Commercial	Industrial	Population Growth	Road Connectivity	Vacant Land availability
25	√				√	√
26			√	√	√	√
28			√	√	√	√
30			√	√	√	√
32	√		√	√	√	√
33	√			√	√	√
34	√			√	√	√
35	√			√	√	√

Source: Bhatpara Municipality

From the above table it is clearly evident that ward nos. 32-35 and 25 have witnessed the significant real estate projects primarily on account of i) availability of large parcels of vacant land, ii) road-rail connectivity and iii) inward migration from adjacent rural areas leading to residential growth. In comparison, some north-western and western wards (Nos. 8, 9, 11, 12, 15-20) of the town witness limited but sporadic real estate developments over the years took place primarily on account of demolition of old structures thereby creating vacant space.



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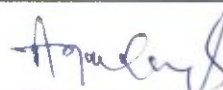
**19. List of slums under Bhatpara Municipality**

## List of slums under Bhatpara Municipality

Sl.No	Slum Code	Slum Name
1	191106850049.00	Naba Pally(S.C.-1)
2	191106850072.00	Kankinara Jute Mill Line(S.C.-1)
3	191106850086.00	Malakarpara(S.C.-002)
4	191106850106.00	Naya Bazar(S.C.-002)
5	191106850017.00	B L.11(S.C.-3)
6	191106850075.00	Gopi Krishna Goswami(S.C.-3)
7	191106850060.00	Rahuta(S.C.-4)
8	191106850073.00	East Ghosh Para Road(S.C.-4)
9	191106850061.00	Rahuta Purba Para(S.C.-5)
10	191106850047.00	Meghna More(S.C.-6)
11	191106850014.00	B L.01(S.C.-7)
12	191106850032.00	B L.11(S.C.-7)
13	191106850035.00	B L.09(S.C.-8)
14	191106850066.00	South Narayan Pur(S.C.-9)
15	191106850080.00	Sastri Nagar(S.C.-10)
16	191106850055.00	Pramod Nagar(S.C.-11)
17	191106850079.00	Alliance Jute Kuli Line(S.C.-11)
18	191106850051.00	Netaji Nagar Coloney(S.C.-12)
19	191106850076.00	Uttar Para(S.C.-12)
20	191106850074.00	Santi Niwas Pally(S.C.-13)
21	191106850081.00	Mitrapara(S.C.-013)
22	191106850040.00	Kela Bagan(S.C.-14)
23	191106850107.00	House Khana(S.C.-014)
24	191106850005.00	B.R.S.(S.C.-15)
25	191106850077.00	Jana Para(S.C.-15)
26	191106850089.00	Satyajit Pally(S.C.-016)
27	191106850109.00	Chak Guradah Ram Mohan
28	191106850083.00	Kewtia Palpara(S.C.-017)
29	191106850110.00	Chak Guradah C.M.D. Bagan(S.C.-
30	191106850053.00	Palpara Deba Sree Pally(S.C.-18)
31	191106850117.00	Chasipara(S.C.-018)
32	191106850057.00	Purbasha(S.C.-19)
33	191106850111.00	Milangar Udyanagar(S.C.-019)
34	191106850041.00	Hindustan Colony(S.C.-20)
35	191106850091.00	Ram Krishna Pally(S.C.-020)
36	191106850008.00	Bakar Muhalla(S.C.-21)
37	191106850108.00	Uchchegarh Uttarpara(S.C.-021)
38	191106850003.00	Abantipur(S.C.-22)
39	191106850118.00	Uchhegarh(S.C.-022)
40	191106850030.00	Hatat Sukanta Pally(S.C.-23)
41	191106850114.00	Balishkhana(S.C.-023)



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87	191106850099.00	64 Pally(S.C.-059)
88	191106850001.00	1 No. Kebin Road(S.C.-62)
89	191106850095.00	Fakir Para(S.C.-063)
90	191106850069.00	Sugia Para - Ward (14) (S.C.-64)
91	191106850004.00	Ambagan(S.C.-65)
92	191106850013.00	Begun Khet(S.C.-66)
93	191106850020.00	B L.13(S.C.-67)
94	191106850092.00	Ramnagar East(S.C.-068)
95	191106850090.00	Bl-17(S.C.-069)
96	191106850084.00	Kela Bagan(S.C.-070)
97	191106850062.00	Sarat Pally - Ward (25) (S.C.-71)
98	191106850039.00	Kantadanga Road(S.C.-73)
99	191106850037.00	Goyala Para - Ward (5) (S.C.-74)
100	191106850050.00	Naya Bazar(S.C.-75)
101	191106850016.00	B L.10(S.C.-76)
102	191106850052.00	Padma Pukur Road(S.C.-77)
103	191106850010.00	Barui Para(S.C.-78)
104	191106850054.00	Panchanantala(S.C.-79)
105	191106850088.00	Sundiya Para(S.C.-080)
106	191106850065.00	Satin Sen Nagar(S.C.-81)
107	191106850042.00	Jagan Nath Colony(S.C.-82)
108	191106850033.00	B L.09(S.C.-83)
109	191106850026.00	Chalta Road(S.C.-84)
110	191106850038.00	Kantadanga(S.C.-85)
111	191106850058.00	Rabindra Pally - Ward (24) (S.C.-
112	191106850071.00	Surpara Road(S.C.-87)
113	191106850048.00	Mula Zore(S.C.-88)
114	191106850012.00	Bazar Road(S.C.-89)
115	191106850085.00	21 No Goli(S.C.-090)
116	191106850093.00	Nag Bagan(S.C.-091)
117	191106850009.00	Bankim Nagar(S.C.-92)
118	191106850011.00	Battala Ramkrishna Pally(S.C.-94)
119	191106850070.00	Sundia(S.C.-95)
120	191106850125.00	Suormari(S.C-096)



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**20. List of Non slums under Bhatpara Municipality**

List of Non-Slums under Bhatpara Municipality is given below:-

S/ No	Name of Non-Slum
1	Bhatpara Area from Ward No-01 to 05
2	Rathtala Fingapara Kantadanga Area from Ward No-06, 07 & 34
3	Kankinara Area from Ward No-08 to 14
3	Jagatdal Area from Ward No-15 to 18
4	Shyamnagar Area from Ward No-19 to 30
5	Madral Subashpur Area from Ward No-31 to 33
6	Sthirpara Area in Ward No-35

Land of total Non-Slum Area is 21.1 Sq.Km.

**21. Project Justification**

Bhatpara Municipality selected the slum 1 No. Kebin Road, Kewtia Palpara & Sthirpara slum for the following reasons as project for preparation of DPR under slum free city plan – PMAY/HFA.

1. The condition of living in the slum is unhygienic since majority of the slum dwellers rear pigs.
2. Land belongs to the Private Ownership..
3. 40 years old settlement
4. The State Highway - 1 is only 1.8kms away
5. Major population is living in huts, made of darma / bricks with tin sheets and asbestos/tiles on roof.
6. No sewerage system
7. Majority portion of roads are brick paved or Katcha roads.
8. Habitation pattern in the slums is congested with insufficient open space
9. Land belongs to Private Ownership.

The proposed HFA project would address the existing problems in the slum which includes lack of basic physical infrastructure and environmental betterment.



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## 22. Existing Slums Details

The environmental condition in the slums is poor. It lacks basic civic amenities mainly drainage, thereby leading to water logging, mainly during rainy season. Majority of the residents are involved daily labour in their rearing. This has led to an unhygienic living condition in the slum. Most of the roads within slums are brick paved or kutchra road. Though there are no streetlights available. Most of the population adopts unhygienic method for disposing their waste; thereby causing huge damage to health that ultimately leads to significant loss of man-days of work amongst others. Overall physical and social infrastructure is poor.

### Project Land Particulars

#### Income and Expenditure Pattern of Households (HH)

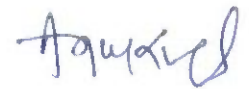
The average monthly income of most of the Household varies between Rs 2000 – Rs 3000.

Average Monthly Income of Household(in Rs.)					
<2000	2000-3000	3000-4000	4000-6000	6000-9000	>9000
9	189	0	0	0	0

Average Monthly Expenditure of Household(in Rs.)					
<2000	2000-3000	3000-4000	4000-5000	5000-8000	>8000
10	187	1	0	0	0



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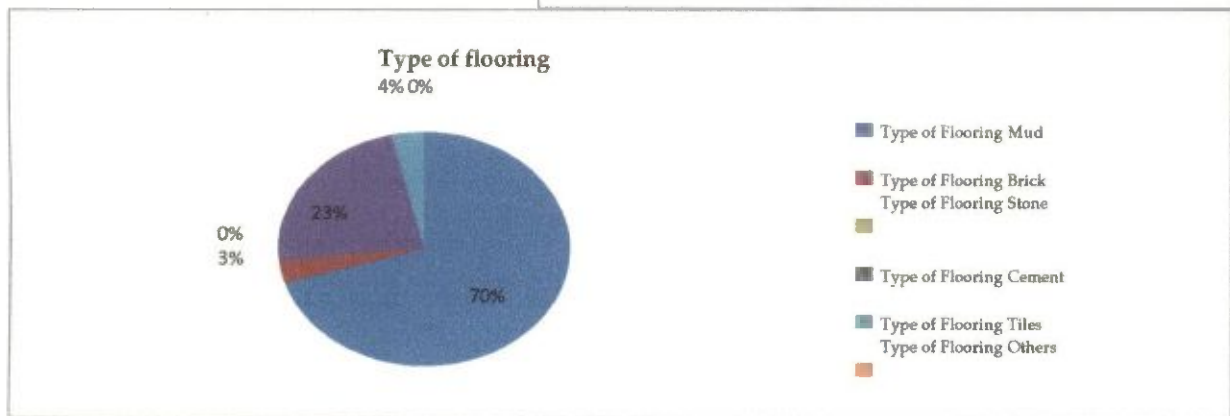
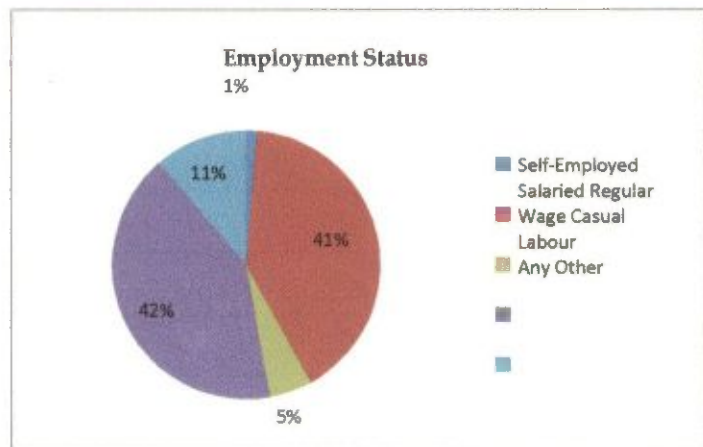
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### Employment Status

It is observed that only 25% of the total population constitute of earning family members and their employment status is as follows:

Self-Employed	Salaried	Regular Wage	Casual Labour	Any Other
3	94	12	96	26

41% of the people are salaried workers most of whom works under Bhatpara Municipality



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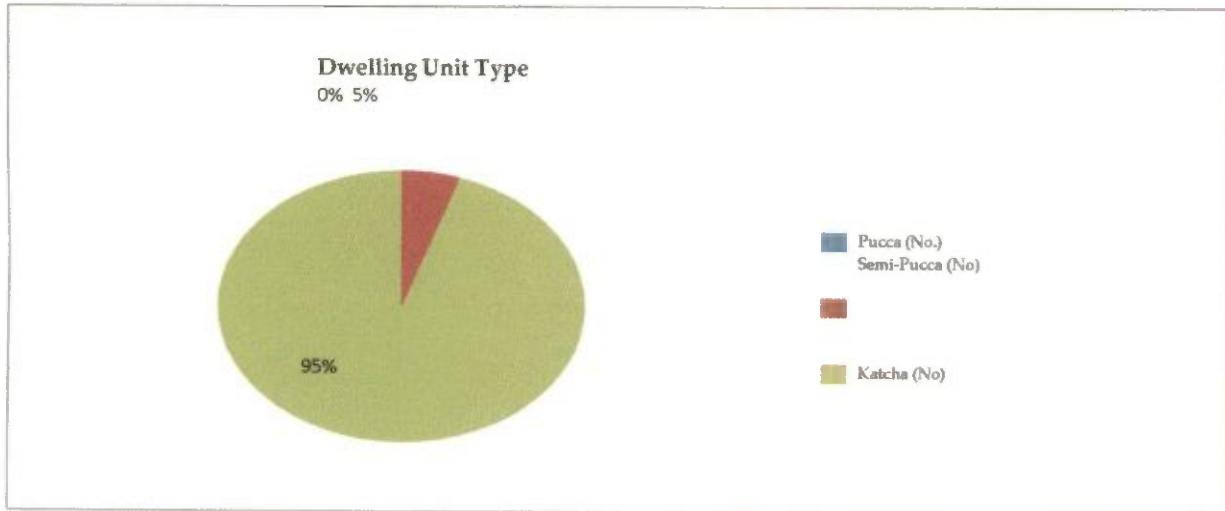
**Migration**

Maximum dwellers have migrated from rural areas due to lack of employment in agriculture sector. Out of 198 Household about 191 household had migrated from rural to urban area. Majority of the population of this slum is living for more than 40 years in this slum. Hence, dwellers are now permanently depending on 1 No. Kebin Road, Kewtia Palpara & Sthirpara slums. This justifies as a parameter on the importance of Slum for Insitu development.

**Housing Status**

Housing is the constituent of the social infrastructure of the economy. Like the other constituents, such as the system of education and health, housing also can either reduce or enhance the disparities in the society.

The total number of dwelling units in the slum is 196 of which 10 are semi-pucca houses and 186 kutchha houses. It is observed that some dwelling units have multiple partitions holding more than 1 family.



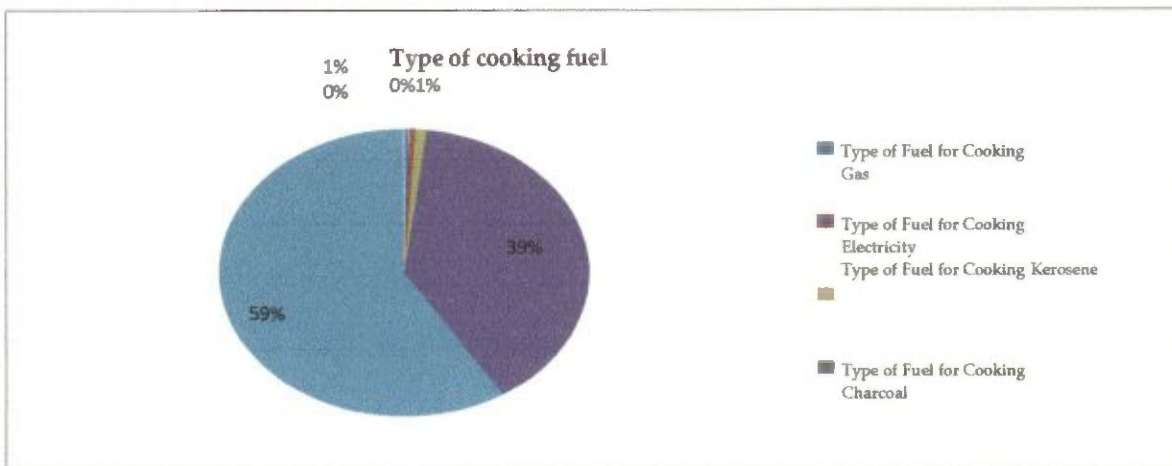
All 196 dwelling units have Raniganj tiles on roof

House by Type/Structure		
Pucca(Dilapidated)	Semi-Pucca	Katcha
0	10	186

Most of the dwelling units have mud flooring closely followed by cement flooring. Firewood is the major source of cooking fuel in majority of the slum household.

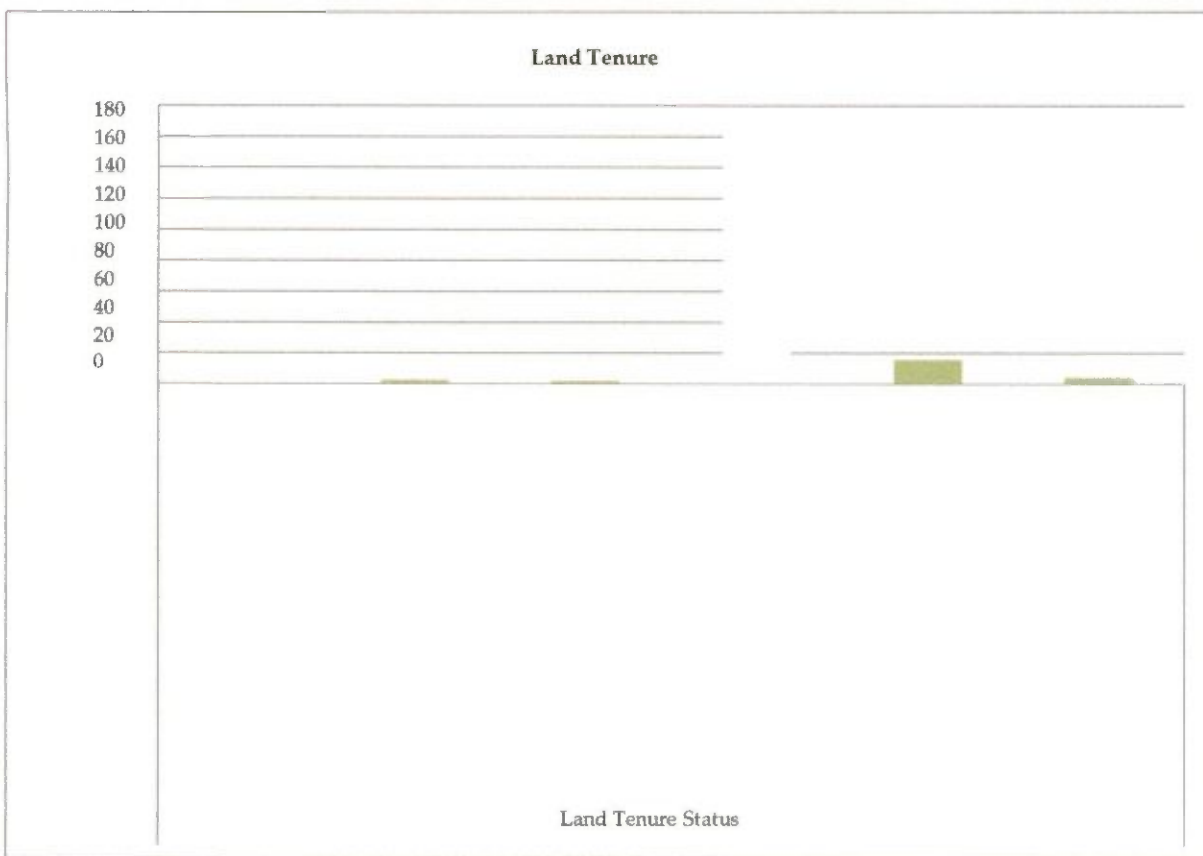
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Land Tenure status

Majority of the existing household are encroachment on public land.



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*[Signature]*  
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### Physical Infrastructure

Infrastructure is the basic requirement of urban life and its adequacy and accessibility are two important ingredients and key contributors in the up gradation and enrichment of quality of urban life which is the primary objective of any planned development effort. These infrastructure facilities are broadly classified into two aspects:

**Physical infrastructure:** Water supply, Sewerage and drainage, Solid waste, Roads, Electricity

**Social infrastructure:** Health, School, Community Hall, Post Office

### Status of Physical Infrastructure

Sl. No.	Physical Infrastructure	Status
1	Connectivity to City-wide Water Supply System	Partially Connected
2	Connectivity to City-wide Storm-water Drainage System	Partially Connected
3	Connectivity to City-wide Sewerage System	Partially Connected
4	Whether the slum is prone to flooding due to rains	Not prone
5	Frequency of Garbage Disposal	Daily
6	Arrangement for Garbage Disposal	Municipal staff
7	Frequency of Clearance of Open Drains	Once in 2 days
8	Approach Road/Lane/Constructed Path to the slum	Motorable Kaccha
9	Distance from the nearest Motorable Road	Less than 0.5KM.
10	Internal Road	Non-Motorable Kaccha
11	Whether Street light facility is available in the slum	No

### Water Supply

#### Existing condition of water supply

1 No. Kebin Road, Kewtia Palpara & Sthirpara Slum is Partially Connected City-wide Water Supply System

Source of Drinking Water								
Within			Outside Premises					
Individual tap	Tube well/Bore well/ Hand pump	Open well	Public tap	Tube well/Bore well/Hand pump	Open well	Tank/Pond	River/ Canal/ Lake/Spring	Water Tanker
2	0	2	193	0	0	0	0	0



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Majority of the household uses public taps for water supply. The situation of water supply in the slum is poor. There is presently only one water tank (ESR) but the slum is not connected to its supply. 194 households replied that they receive water supply more than 2 hours while, 2 households replied they receive 1 to 2 hours daily.

### Sewerage and Storm Water Drains

Drains, sewerage system is available is poor. The slum dwellers are heavily into rearing of pigs as result of which the living condition is unhygienic. Disposal of storm water/ Sullage disposal drain/ culverts are not available. Stagnant water has been observed at many places in and around the slum. 66% of the household uses community septic tank/flush latrine, 24% uses community dry latrines, 9% use shared septic tank/flush latrine, and open defecation doesn't prevail. The existing toilet facilities in the slum are of poor condition.

Own Septic Tank/Flush Latrine	Own Dry Latrine	Shared Septic tank/Flush Latrine	Shared Dry Latrine	Community Septic tank/Flush Latrine	Community dry Latrine	Open Defecation
0	1	18	0	127	46	0

Majority of the population (89%) use community bath while 10% household doesn't have bathroom.

Bath Room Facilities available			
Within Premises	Outside Premises	Community Bath	No Bathroom
2	1	172	19

### Solid waste

At Solid Waste Management system in the slum is mainly done by the ULB. The waste which is generated is collected daily. The drains are cleared by the local people once in 2 days.

### Roads

Approach road to the slum which is less than 0.5 KM far from the slum is a kaccha non-motorable road. 53% the existing roads in front of the houses are non-motorable pucca road, 1% the existing roads in front of the houses are motorable kaccha road, 37% of the existing roads in front of the houses are non-motorable kaccha road and only 9% the existing roads in front of the houses are motorable pucca roads.

  
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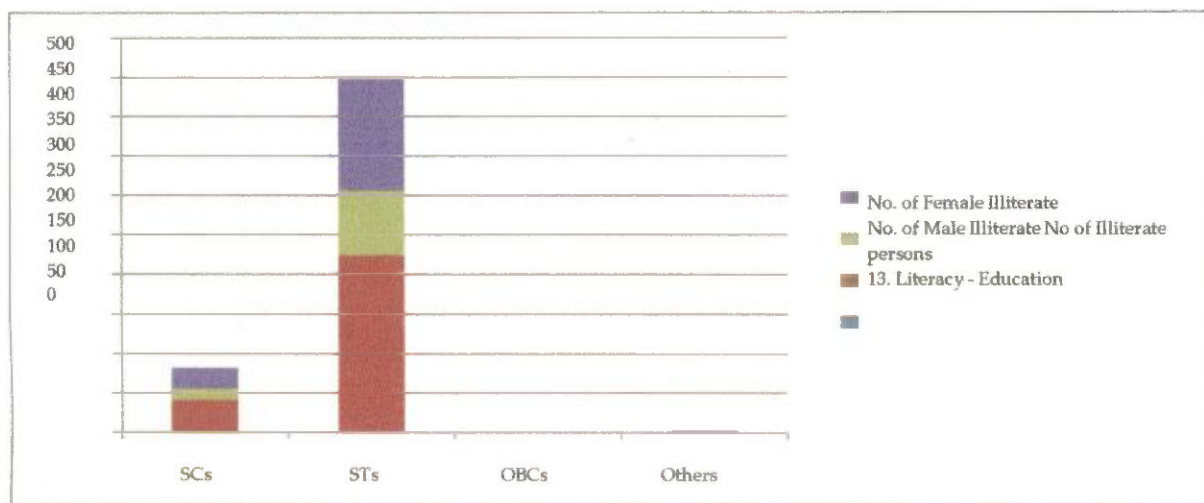
Roads in front of house			
Motorable Pucca	Motorable Katcha	Non Motorable Pucca	Non Motorable Katcha
16	2	95	65

### Electricity

Majority of the household (99%) have electricity connections, 1% of households are using kerosene for lighting their houses. The condition of street lighting is poor in the slum.

### Literacy level

It is observed that majority of the population is illiterate. Literacy of the female population is more than that of the male.



### Details of Social Infrastructure at a glance:

Education Facilities	
Pre-primary School	NA
Anganwadi under ICDS	With distance less than 0.5 kms
Municipal pre-school	0
Private pre-school	0
Primary School	
Municipal	NA
State Government	With distance less than 0.5 kms
Private	NA
High School	
Municipal	NA
Private	NA
State Government	With distance less than 0.5 kms
Adult Education Centre	NA
Health Facilities	
Urban Health Post	NA
Primary Health Centre	With distance less than 0.5 kms

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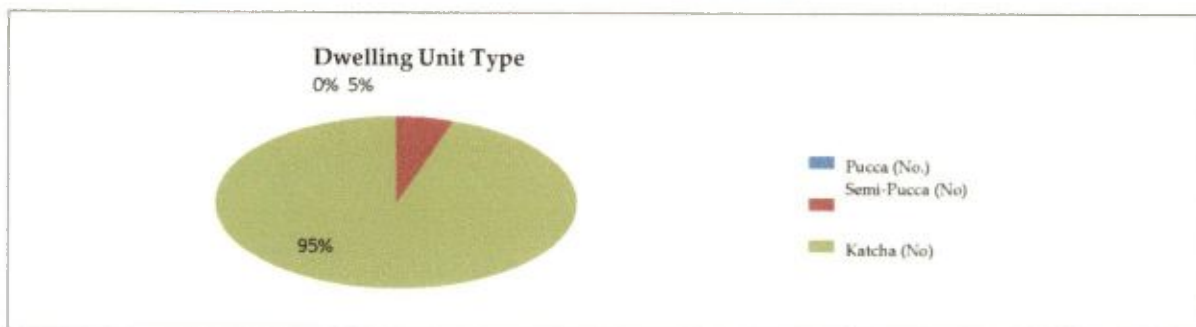
Government Hospital	1.0 to 2.0 kms
Maternity Centre	0.5 to 1.0 kms
Private Clinic	With distance less than 0.5 kms
Registered Medical Practitioner(RMP)	With distance less than 0.5 kms
Ayurvedic Doctor/Vaidya	1.0 to 2.0 kms
<b>Social Development/Welfare</b>	
Community Hall	NA
Livelihood/Production Centre	NA
Vocational training/Training-cum-	1.0 to 2.0 kms
Street Children Rehabilitation centre	0
Night Shelter	0
Old Age Home	2.0 to 5.0 kms
Self Help Groups/ DWCUA Groups in	0
No. of Neighbourhood	0
Slum-dwellers Association	0
Youth Associations	1
Women's Associations/Mahila	0

### 23. Housing Status

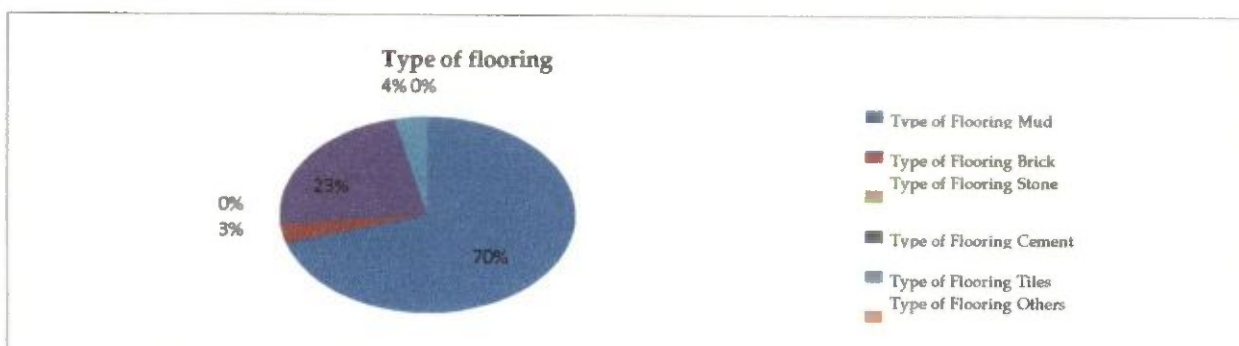
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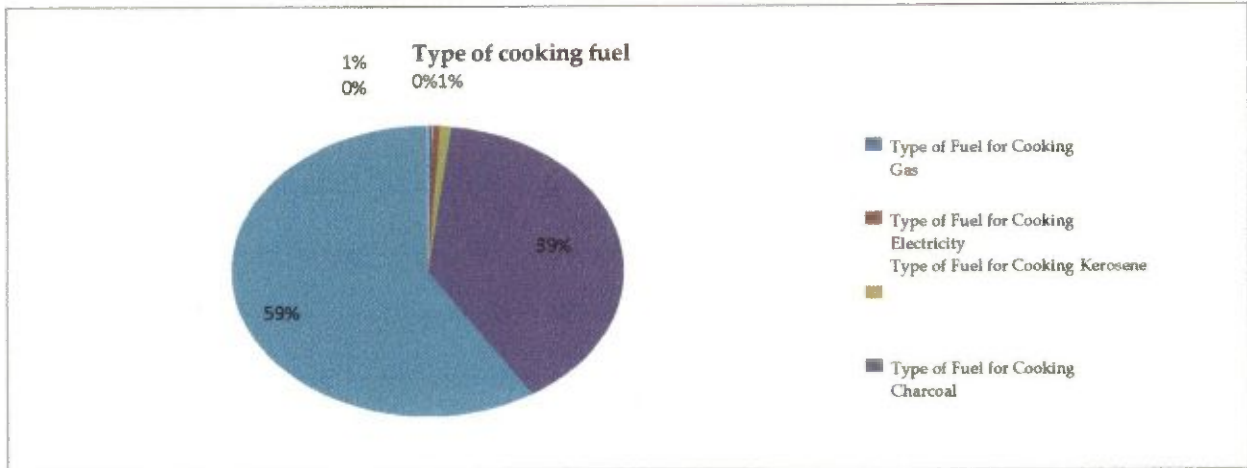
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Most of the dwelling units have mud flooring closely followed by cement flooring. Firewood is the major source of cooking fuel in majority of the slum household.



## 24. Social infrastructure

Education Facilities	
Pre-primary School	NA
Anganwadi under ICDS	With distance less than 0.5 kms
Municipal pre-school	0
Private pre-school	0
Primary School	
Municipal	NA
State Government	With distance less than 0.5 kms
Private	NA
High School	
Municipal	NA
Private	NA
State Government	With distance less than 0.5 kms
Adult Education Centre	NA
Health Facilities	
Urban Health Post	NA
Primary Health Centre	With distance less than 0.5 kms
Government Hospital	1.0 to 2.0 kms
Maternity Centre	0.5 to 1.0 kms
Private Clinic	With distance less than 0.5 kms
Registered Medical Practitioner(RMP)	With distance less than 0.5 kms
Ayurvedic Doctor/Vaidya	1.0 to 2.0 kms
Social Development/Welfare	

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Community Hall	NA
Livelihood/Production Centre	NA
Vocational training/Training-cum-production centre	1.0 to 2.0 kms
Street Children Rehabilitation centre	0
Night Shelter	0
Old Age Home	2.0 to 5.0 kms
Self Help Groups/ DWCUA Groups in Slum	0
No. of Neighbourhood Groups(NHGs) in slum	0
Slum-dwellers Association	0
Youth Associations	1
Women's Associations/Mahila Samithis	0

## 25. The Supply Demand Gap and Requirements

### The Supply Demand Gap and Requirements

Particulars	Requirements
Housing:	<p>Dwelling Unit provision for 198 Households with</p> <ul style="list-style-type: none"> <li>• 1 Multipurpose Room</li> <li>• 1 Bed Room</li> <li>• 1 Kitchen</li> <li>• 1 Toilet</li> <li>• 1 W.C</li> <li>• 1 Balcony</li> </ul>

Physical Infrastructure Requirement:

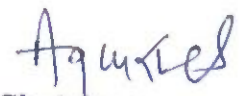
Standard Infrastructure Provision for

- Water Supply
- Sewerage & Drainage
- Electricity/ Power
- Roads

Requirement:	Provision for-
	<ul style="list-style-type: none"> <li>• Informal Market</li> <li>• Community centre</li> <li>• Piggery</li> </ul>



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**Physical Infrastructure required**

Water supply, Sewerage, Drain, Electricity

**Social Infrastructure required**

Community centre, Informal market complex

**Project Development Option**

in-situ redevelopment and whole of the plot project will be addressed in the project

**26. Financial Implementation**

The following models can be adopted:

**Community Partnership:** implies development of housing by involvement of community

**PPP:** the market existing can be redeveloped through PPP for providing livelihood means to the slum dwellers

**Beneficiary led Participation:** implies development of housing by involvement of Beneficiary

**Public Consultations:**

Public consultations play a key role in the success of project. To make the system transparent and to create awareness among the slum dwellers, consultations are required. Through the regular interaction with the slum dwellers, the following can be known in greater details which are the prime points for the success of the project.

- Composition of beneficiaries
- Socio-economic profile
- Benefits incurred viz., social, economic, etc.
- Perception on the implementation of the Scheme
- Knowledge of PMAY

This is an innovative technique which increases the success rate of the project, assess the appropriateness of the scheme concept and design and its effectiveness in meeting objectives and the extent to which it have contributed towards



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## 27. Post Project Monitoring

A strong implementation plan and administration framework is essential for implementation of the identified projects that require strengthening of the Municipal Corporation and evolution of a Community Structure. Accurate assessment of investment requirements and devising a suitable financing strategy are the key components of any sustainable slum rehabilitation program. Implementing bodies must recognize and measure the various costs of developing infrastructure and housing, including the costs for subsequent maintenance. As the scheme is a collaborative effort of multiple stakeholders, with a few of them contributing financially as well, it is important to estimate the required capital expenditure for developing the infrastructure and improving the housing stock as accurately as possible.

### National Level

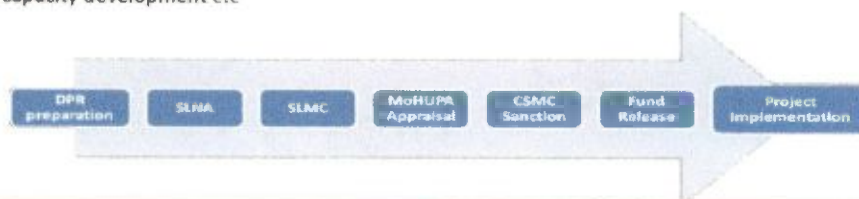
#### PMAY Mission Directorate

There shall be a PMAY Mission Directorate under the charge of a Joint Secretary under the Ministry of Housing and Urban Poverty Alleviation, supported by staff and a Programme Management Unit with experts having expertise in the areas of survey and statistics, computerization and MIS, GIS, Planning, Project engineering, Social development, Monitoring and evaluation etc. for ensuring effective co-ordination with State Governments for expeditious processing of the State Slum-free PoAs and project proposals and providing handholding support to States/ITTs

#### State PMAY Mission Director

The State Level Nodal Agency for PMAY/SUDA, West Bengal will have coordination of all scheme and reform-related activities more than one department handling Urban development, Local self government, and Housing, SLNA. The Mission Directorate supported by a team of dedicated professionals having expertise in the fields of GIS, MIS, town planning, community development,

project engineering, capacity development etc



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## Municipal Corporation

The Municipal Corporation shall act as the implementation agency for the project. Keeping in mind the criticality of the project, a dedicated '**Bustee Works Management Committee (BWMC)**' has been set up for implementation and operation & maintenance (O&M) of the proposed infrastructure under the scheme.

The BWMC will have representatives of local councillor, Chairman-in-Council, municipal engineers, town project officer, community organizers and member from the local slum dwellers.

Some of the responsibilities of BWMC are listed below:

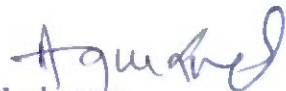
- i. Delineation of poverty pockets in this town to execute the scheme.
- ii. Recruitment of community organizers
- iii. Guiding and assisting the community organizer to form neighbourhood group (NHG) and for identification of RCVs.
- iv. Formation of NHCs and CDs.
- v. Constitution of town level planning and monitoring committee (TLPMC).
- vi. Liaison with CMOH and other concerned district level officers and NGOs for conference.
- vii. Regular contact with SUDA and Department of Municipal Affairs.
- viii. Convening meeting of TLPMC to take stock of programme implementation and convergence.
- ix. Dovetail all poverty alleviation programmes with IHSDP.
- x. Obtain regular feedback from CDS and send the required monthly progress report to SUDA by the end of first week of the next month in the prescribed MIS format.

## Participation through Ward committees

People's participation in municipal planning and development is critical and shall be ensured through of Ward Committees in each ward irrespective of their population and size.

The Ward Committee Rules have also been framed in such a way so as to ensure involvement of the members of the Ward Committees in the overall municipal administration and resource mobilization. The Ward Committee created especially for the purpose of PMAY will be headed by the Councillor of the Ward, who would in turn submit the report of progress to BWMC

  
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Some of the responsibilities the Ward Committee will be:

- i. Supervision of the physical progress of the work under the project
- ii. Designating in-charge, who would be held responsible for individual scheme under the project
- iii. Collecting user charges for operation and maintenance (O&M) activities
- iv. Ensuring proper maintenance of each of the assets that is created under the project

### Participation through Community Based Organization

Participation of poor families in planning and implementation of slum level Basic Infrastructure Development as well as Socio-Economic Development has been ensured through formation of Community Based Organization. The Ward Committee will also have representative of weaker community. Similar structure have also been involved by the municipalities in providing civic services like conservancy services, maintenance of street light, etc. municipal administration and resource mobilization.

However, basic guidelines, which will be followed in implementation of the projects, are been laid down below:

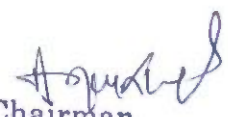
#### 28. Water Supply, Drainage and Solid waste management

From the very inception of Bhatpara as municipality, the main source for the supply of drinking water was from river Hooghly. Water was treated at vintage water treatment plants run by jute mills and distributed through pipeline network covering a small part of the town. Over the years, municipality has taken up number of water supply augmentation , including i) laying piped water supply distribution network by drawing funds from its own budget and other sources like CUDP III, 10<sup>th</sup> Finance commission etc., ii) rolling out 24x7 water supply scheme, a Rs. 250 crores project (2010-2014) implemented by KMDA under JNNURM, involving construction of a new 23 MGD Water Treatment Plant at Jagatdal, 18 overhead reservoirs and further spreading out of surface water pipeline network in other parts.

Currently, the town has a total of 330 km of surface water pipeline network catering to 96% of total population of the city and providing direct water connections to 31,000 households, of which 110 km runs within wards 1-22 and the remaining in the other 13 wards. Post the implementation of JNNURM project, daily piped water supply of the town has reached at 70 MLD.



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Despite the existence of surface water supply network and coverage, municipality has to resort to ground water to meet the supply at some parts of the town. As per ULB records, 10% of the entire water supply is dependent on groundwater through deep tube wells and hand pumps, mainly in the ward nos. 06, 07, 25, 32 and 35.

The table below presents a service level standard of Bhatpara in terms of coverage of the city with respect to water supply.

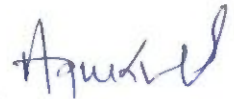
Table 10: Water Supply Benchmarks for Bhatpara Municipality

S/No	Indicator	Central Level Benchmarks	State Level Benchmarks	Present Status 2013-14	Targeted status during 2014-15
1	Coverage of Water Supply Connection	100%	100%	82%	92%
2	Per Capita available of Water at consumer end	135 Lpcd	135 Lpcd	105 Lpcd	135 Lpcd
3	Extent of metering of Water Connections	100%	100%	0%	0%
4	Extent of Non-Revenue Water	20%	20%	20%	20%
5	Continuity of Water Supply	24/7 Hrs/Day	24/7 Hrs/Day	10 Hrs./Day	18 Hrs/Day
6	Efficiency in redressal of customer complaints	80%	80%	82%	90%
7	Quality of Water supplied	100%	100%	80%	95%
8	Cost recovery in water supply service	100%	100%	22%	35%
9	Efficiency in collection of water supply related charges	90%	90%	60%	70%

Source: MoUD, Govt and Bhatpara Municipality, 2014



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### Storm water Drainage

Mukterpur canal starting from Tinsukia to river Hoogli (5 km in length) is the main channel for waste water outlet of the town. Other two main drains, namely, Rishi Bankimkhal and Shyam Nagar Khal, run through the northern and southern boundary area feeding canals of Mukterpur and Barti Beel respectively. These channels now have been silted. The banks of the channel are fairly high with respect to the intermediate spread of land. Bhatpara has 107 km of pucca drains and 125kms of katcha drains.

Due to lack of maintenance and heavy siltation these channels are not adequate for drainage in current form. As a result, a large number of low lying pockets, which remains water logged in the rainy seasons, have been created. The land in the municipal area is generally flat and the slope is towards intermediate field from the riverbanks.

**Table 11: Storm water Drainage Benchmarks for Bhatpara Municipality**

S/No	Indicator	Central Level Benchmarks	State Level Benchmarks	Present Status 2013-14	Targeted status during 2014-15
1	Coverage of Storm Water Drainage Network	100%	100%	80%	85%

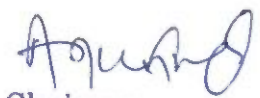
### Sewerage & Sanitation

The sewerage network has only 15% coverage in the entire city. The network has primarily evolved in three stages, which are:

- **Stage I (1931-1973):** It started with laying of initial drainage network in 1931, which was further extended by the PHE in 1973. This led to laying of total 20.42 km of drainage network at this stage. Also a STP of capacity 10 MLD was constructed which is presently functional.
  - **Stage II (1987-1993):** Bhatpara was brought under the purview of Ganga Action Plan (GAP) in the period 1987-1993, during which the old drains and outfall points were intercepted and 5 lifting stations and 2 pumping stations were constructed for better collection and transmission. A total of 15 km of pipeline was constructed during this phase in wards 1-22.
  - **Stage III (2013- 2017 Projected):** Further improvement of the sewerage system is being implemented under NGRBA since 2013. Scheduled to be completed by 2017, this project is focused on eastern wards of the municipality, which has no sewerage system
    - Laying of 125 km of Sewerage Pipeline
    - Setting up of 23 lifting stations
    - Setting up of 3 Pumping Stations
- Setting up of 3 STPs at a) Jagatdal ward No 15, b) Dipali Math ward No 23 and c) Rabindra Pally ward No 6 with a total capacity of 61 MLD



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As on June, 2014 the project is running on time and 27% of the project work is already. In addition to sewerage and sanitation works carried out in above three stages, municipality had underwent annual repair and maintenance work for the existing pipelines leveraging own fund of the municipality based on as-is-where-is basis.

The table below presents a service level standard of Bhatpara in terms of coverage of the city with respect to sanitation and sewerage. Table clearly shows though toilet coverage of the town is reasonably good, but lot of interventions are required to improve sanitation and sewerage facilities as there is no household level drainage facility leading to unhygienic environment in slums.

**Table 12: Sewerage and Sanitation Benchmarks for Bhatpara Municipality**

	Indicator	Central Level Benchmark	State Level Benchmarks	Present Status 2013-14	Targeted status during 2014-15
1	Coverage of Toilets	100%	100%	85%	90%
2	Coverage of wastewater network services	100%	100%	25%	45%
3	Collection Efficiency of Waste Water Networks	100%	100%	60%	65%
4	Adequacy of Waste water treatment capacity	100%	100%	45%	55%
5	Extent of Reuse and recycling of treated wastewater	20%	20%	3%	15%
6	Quality of Waste Water Treatment	100%	100%	94%	95%
7	Efficiency in redressal of customer complaints	80%	80%	60%	75%
8	Extent of cost recovery in Waste Water Management	100%	100%	4%	7%
9	Efficiency in collection of sewerage charges	90%	90%	0%	0%

Source: MoUD, GoI and Bhatpara Municipality 2014.

### **Solid Waste Management**

Bhatpara Municipality generates approximately 6050 MT/month of solid waste. Presently there is no proper solid waste management in the municipality and it is dumped in open landfill sites. There are two spots which currently the municipality uses as dumping grounds. They are: i) Madral low cost treatment plant (in use for last 10 years) and ii) Fingapara Ward 29-35 border (in use for last 4 years). The waste is collected mostly by Handcarts and then dumped by tractors and trailers. Recently, a SWM pilot project (Rs. 28 Crore approx.) is being implemented under NGRBA.

The table below presents a service level standard of Bhatpara in terms of coverage of the city with respect to Solid Waste Management. In terms of household level coverage solid waste management and segregation of municipal solid waste, the municipality is not at a good stage.



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**Table 13: SWM Benchmarks for Bhatpara Municipality**

	Indicators	Central Level Benchmarks	State Level Benchmarks	Present Status 2013-14	Targeted status during 2014-15
1	Household level coverage of solid waste management services	100%	100%	25%	45%
2	Efficiency of collection of municipal solid waste	100%	100%	90%	92%
3	Extent of segregation of municipal solid waste	100%	100%	15%	20%
4	Extent of municipal solid waste recovered	80%	80%	80%	85%
5	Extent of scientific disposal of municipal solid waste	100%	100%	15%	40%
6	Extent of cost recovery in solid waste management services	100%	100%	10%	15%
7	Efficiency in collection of solid waste management charges	90%	90%	10%	11%
8	Efficiency in redressal of customer complaints	80%	80%	85%	90%

### 29. Definition of Slum for Housing

Different definitions of a slum exist in different statutes and in urban poverty literature. For the purpose of HOUSING SCHEME, it is proposed to adopt the definition given in the 2001 Census, which is as follows:

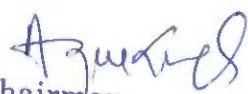
**‘Slum’ or ‘Slum Area’** – is a compact settlement of at least 20 households ( For NE & Special Category States it is 10-15 households) with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions.

### 30. Proposed Intervention & Building Plan

In line with the vision to **‘housing for all’**, an integrated housing programme is proposed to be implemented. The target will be all the slum dwellers in the pocket. DUs have been designed after required calculations. The following table provides the breakup of the building units based on its type:



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## Building Plan

The buildings are proposed to cover an area of approximate 30 Sq.mt along with provision of 2 rooms, kitchen and sanitation facility. The layout, size and type design of housing dwelling units depends on the local conditions and the preferences of the beneficiary. The houses, has been designed in accordance with the desire of the beneficiaries, keeping in view the climatic conditions and the need to provide ample space, kitchen, ventilation, sanitary facilities, etc. and the community perceptions, preferences and cultural attitudes. In line with the scheme, carpet area of the house will be not less than 25 sq. mts and preferably two room accommodation plus kitchen and toilet should be constructed.

## Building material

- PCC (1:3:6) for foundation
- RCC M-25 for substructure & superstructure (Column, Beam, Slab)
- HYSD Steel
- 1st class Brick Masonry
- 1:6 (Cement: Sand) plaster – 10 mm on soffit of beam & slab, 15 mm on internal walls & 20 mm on external walls
- IPS flooring

## Structural Design

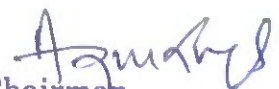
- 2
  - For all structural elements, M20 grade concrete and Fe 415 grade of steel is used.
    - Plinth beams passing through columns are provided as tie beams.
    - Pedestals are proposed up to ground level.
    - Beam Centre-line dimensions are followed for analysis and design.
    - For all the building, walls of 225 mm and 125mm thick with 20 mm External plaster and 12 mm thick internal plaster are considered.
  - Seismic loads are considered acting in the horizontal direction along either of the two principal directions.

## Design data

- Live load: 2.0 kN/m<sup>2</sup> at typical floor
- 1.5 kN/m<sup>2</sup> on terrace (With Access) : 0.75 kN/m<sup>2</sup> on terrace (without Access)
- Floor finish 50mm (0.05\*24) = : 1.2 kN/m<sup>2</sup>
- Ceiling plaster 12mm (0.012\*20.8) : 0.25 kN/m<sup>2</sup>
- Partition walls (Wherever Necessary) : 1.0 kN/m<sup>2</sup>



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All the proposed roads are rigid pavement-cement concrete roads. Rigid pavements are those which possess noteworthy flexural strength. The concrete pavement slab can very well serve as a wearing surface as well as effective base course. Therefore usually rigid pavement structure consists of a cement concrete slab, below which a granular base or sub base course may be provided. Rigid pavements are generally designed and the stresses are analyzed using elastic theory, assuming pavement as an elastic plate resting over elastic or a viscous foundation.

Construction of granular sub-base (GSB) 200 mm thick. Construction of 150 mm thick cement concrete pavement, as per Clause 1501.2.2 M30 (Grade), as per drawing and Technical Specification Clause 1501.

The details of proposed roads provide are as follow:

- Terrace finish: 1.5 kN/m<sup>2</sup>
- Earthquake load: As per IS-1893 (Part 1) - 2002
- Depth of foundation below ground: 1.5 m
- Walls: 230 mm thick brick masonry walls at external and 115mm walls internal.

#### Reference Codes:

- IS 456: 2000 - Code of practice -Plain and Reinforced concrete.
- IS :1893 :2002 - Criteria for Earthquake resistant design of structures(Par
- IS: 13920: 1993 - Ductile detailing of Reinforced concrete structures subjected to seismic forces.
- SP: 34 - Hand Book on Concrete Reinforcement and Detailing.
- S: 875: 1987 - Code of practice for design loads (other than earthquake) for buildings and structures. (Part-2)

It is thus proposed to have an integrated drainage programme covering the slum pocket. The programme shall envisage construction of pucca drain throughout the road length and installing a maintenance programme to ensure that the drains are kept free from clogging from plastics and other materials. Depending on the availability of space and requirement, a sections have been designed, Designs of which have been provided in the relevant sections.

  
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Construction of open Drains with 250 and 300 size are proposed by using 1st class bricks masonry in CM 1:4 over a bed of 100mm thick C.C. 1:3:6, filling of edged with 1:2:4 artificial stone flooring, 12mm cement plaster (1:4.), drain 1.5x1.5m size up to existing RCC pipe Culvert. The drains have been planned in matter that they shall have an outfall on connecting drains. The playground has drains running on both side, one on the internal side along the road and the other on the external side. The boundary wall along the playground will be provided with weep-holes.

### **31. Summary of Investment**

*The costing for the individual sectors has been made on the basis of applicable Schedule of Rates. The details of each of the sub-projects have been provided in the respective sections.*

The cost components include:

*Infrastructure:* Cost of infrastructure development/up-gradation including water supply, sewerage, storm water drainage, solid waste management, roads & drainage, street lights, etc.

*Social infrastructure :* Cost for the social infrastructure (like community halls, Balwadi / School, common toilet & bath etc. Market/ Shopping, Play area/ park and parking) should also be calculated in a similar manner prescribed above.

*Housing:* Construction Costs would need to be arrived from the various components that are proposed to be implemented and would vary depending on the development option

#### **Other costs**

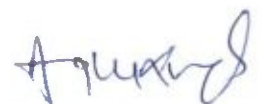
*Administrative overheads and engineering design:* In addition to the cost of infrastructure, calculated at the current market prices, a reasonable cost should also be estimated for administrative overheads and engineering design

*Land:* There should not generally be any cost for land unless the land needs to be purchased/ acquired for the scheme implementation, where necessary.

*Operation & Maintenance Costs:* Costs for O&M of assets created under PMAY is permissible. This has been fixed at 2% of the approved project cost of which the Central share would be 50% i.e 1% of the approved project cost.



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**GOI Contribution:**

PMAY scheme guidelines stipulate that, fifty percent (50%) of the cost of provision of basic civic and social infrastructure and amenities and of housing, including rental housing and transit housing for in-situ redevelopment in slums, would be borne by the Centre. However, for the North Eastern and Special Category States the share of the Centre would be 90% including the cost of land acquisition, if required.

The Central share would be available as per milestones set out in Memorandum of Agreement (MoA). GoI would also extend overall support to the implementation of the HFA which would include (a) Technical guidance and assistance to the States/cities and funds for preparatory activities (b) Supporting community education/mobilisation through engagement of non-governmental organizations

**State Contribution:**

The decision would be left to the State/UT as to the sharing of the amount given by the Centre as explained above, between infrastructure costs and shelter subsidy, and the means of raising their matching share. However, it is mandated that state share should be a minimum of 20% of the cost of provision of infrastructure and civic amenities, to ensure their financial and monitoring stake in the works

**Beneficiary Contribution:**

In order to ensure beneficiaries interest, financial contribution by the beneficiaries is critical.. The share of beneficiary contribution in housing is proposed to be a minimum of 5% of total cost . As per PMAY guidelines no contribution from the beneficiaries is expected in infrastructure improvements.

The ability of these beneficiaries to access formal affordable credit in case of housing is difficult, hence enabling structures/frameworks would need to be evolved. The beneficiaries would need to actively participate in the process of accessing formal credit. Options such as aggregation of loans to a community of beneficiaries wherever feasible, should be examined and encouraged

**ULB Contribution:**

The remaining share would have to be arranged by the ULBs out of its resources. ULBs would need to continue fiscal reforms that have already been initiated under PMAY and other schemes. Approach to financing of the ULB contribution will be a combination of initiatives that ring-fence and maximise internal accruals. and developing a framework The phased financial projections would then be compared with the investments to assess the adequacy. In case the finances are inadequate, the investments would need to be reassessed for phasing and prioritization.



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## 32. Convergence of Health and Education Health

Development Objectives for the Health Care Service Delivery Improvement Plan. Some of the development objectives, which the Bhatpara Municipality address through their Health Care Service Delivery Improvement Plan, are as follows:

### Theme 1: Public Health Services:

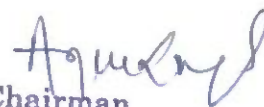
- i. Better coordination with State Government hospitals and dispensaries for maintaining a better referral system.
- ii. Improve the asset and human resource utilization pattern of health services such as ambulance services, dispensaries etc.
- iii. Ensure that all types of cooked / uncooked food in the municipality area are sold by licensed food sellers to prevent spread of diarrhoeal and other disease in the area.
- iv. Strengthening and developing Health Management Information System.
- v. Exploring opportunities for strengthening decentralization and other public private partnerships in providing such public health services
- vi. Partner with leading private sector providers of medical services for better utilisation and maintenance of medical infrastructure such as municipal dispensaries, maternity homes.

### Theme 2: Reproductive and Child Health Care Services:

- i. To establish quality antenatal care to 100% of the slum women.
- ii. To establish 100% institutional delivery for all women living in slums.
- iii. 100% immunization of infants against six killer diseases within 12 months of
- iv. Making sterilization services available by way of improving efforts related to family planning.
- v. Formulate a wider basket of services aimed at providing health priorities within the RCH domain that have not been adequately addressed, as well as some health priorities outside the RCH domain which are major contributors to the burden of disease and impoverishment are included.
- vi. Spreading health awareness through various methods of communication not only to the beneficiaries of the Programme but also to the excluded groups and



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### Theme 3: All other Government Programmes for Preventive Health Care and other Independent Initiatives taken by the ULB:

- i. Promotion of hygienic measures to lead to reduced diarrhoeal disease with prompt and appropriate care and reducing household expenditure on recurrent diarrhoea.
- ii. Increase the coverage of vector control operations by rationalizing the use of assets and human resources available.
- iii. Effective implementation of Government Programmes to achieve the targeted goals and objectives.
- iv. The following schemes under implementation by the State Govt. in the social sector can be dovetailed and integrated with the IHSDP Program to ensure effective slum development. The Socio Economic Survey has already identified beneficiaries under the scheme.

#### RCH & IPP VIII Extension:

A surveillance program initiated by the State Govt. after completion of the World Bank Assistance in the two schemes. Main objective is to provide Health care facilities at the door steps of the slum dwellers / BPL Population, with emphasis on Mother and child health, preventive cares and immunization, Institution delivery, birth control.

#### Health Program under DFID Assistance:

With the same objective as above with decentralization of health care activities by formation of Health sub centers, which can be operated from the Community Seva Kendras, proposed earlier.

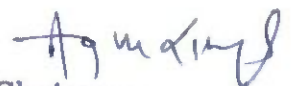
#### Education

The Municipality has been actively implementing key initiatives in the Education sector through convergence with the following objectives:

- Improvement Of the Status & Infrastructure & Basic Service in Primary Schools under Municipality.
- Achieving 100% enrolment in schools for next 5 years.
- Enhancing the quality of education provided in pry school with respect to student performance & teaching quality.
- Leveraging the existing resources created under the NSDP and other programme and increase the coverage in excluded committee and squatter settlements



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- Achieving higher enrolment of children in age group of 6-14 in SSK centres
- Strengthening Parent Teacher Association and involving community participation in improving the performance of school
- Creating awareness in the community through the existing community structures (NHG, NHC, CDS members) on the importance of primary and adult education.

Extensive training programme for teachers & sahayekas is being organized for improvement of quality teaching. Construction, extension and repair of SSK buildings must be done so that a greater portion of children aged 5 to 14 yrs can attend there.

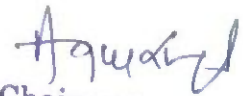
**SSA :** 'Sarba Siksha Abhiyan' – a scheme meant for '*education for all*'

**SSK :** 'Sishu Siksha Kendra' – Mainly aimed at offering free primary education to the poorer section of the community.

**Mid-day Meal:** A program initiated to central the drop out rates, has been found success since its initiation.



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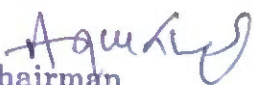


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### 33. Environment Impact Assessment

IMPACT & REMEDIES		
1	Utilization of alternative material characteristic and availability of alternative material	Locally available bricks etc will be used.
2	Rehabilitation of water bodies and measures for maintaining surface runoff smoothly	No water body is affected by the alignment of road. The roadside open c.c./ brick masonry drains have been provided for free flow of storm water
3	Measures for Erosion Control	Not applicable for the slum area
4	Conservation of Topsoil	
	a) Extent of loss of topsoil	
	b) Area requirement for topsoil conservation	
	c) Inclusion of conservation of topsoil	Not applicable for the slum area
5	Impact on Heritage & culture	
	a) Identification of locally significant cultural properties	
	b) Assessment of likely impacts on each cultural property due	
	c) Possible measures of avoidance	
	(i) Identification of alternative routes	
	(ii) Relocation of cultural property in consultation with local	
	(iii) Common property	
		Question does not arise
6	Location of natural habitants	It will not be disturbed
7	Construction of site office/ camp	Temporary construction of camp/ office shall be established by contractor and since the project is small and scattered, the temporary impact on environment for construction camp/ office at the time of execution of work is negligible.
8	Quarrying of materials	The construction materials require for the project shall be procured from:
	a) Sourcing of materials from quarries	a) Stone metal: from the existing quarry
	b) Lead from various existing quarries	b) Bricks: from the existing brick fields, nearby the project site
	c) Adequacy of materials for the project in these quarries	

  
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### **34. Operation & Maintenance**

#### *Formulation and Implementation of "Operation and Maintenance Plan for Slum Level Infrastructure work"*

##### **Background**

It is recognized that the assets created in slums are required to be properly used and maintained. For this purpose, 'Operation and Maintenance Plan' for the slum is being prepared

##### **Formulation and implementation of O&M Plan**

1. The assets created in project area are required to be properly used and maintained.
2. For this purpose each ULB will formulate and implement a fully resourced 'Operation and Maintenance Plan' for project area where infrastructure works have been undertaken from BSUP funds.
3. The following steps will be taken prior to preparation of the 'Operation and Maintenance Plan' for each slum :
  - a) The ULB along with the CDS working in the Slum where infrastructure works were performed will arrange a meeting (1st) with all slum dwellers of that particular slum.
  - b) At this meeting the Local Councillor, Chairman-in-Council or Mayor-in-Council of slum development work, Municipal Engineers, Town Project Officer, Community Organiser, CDS members and RCVs of that particular slum will be present. Other members / officials as felt necessary may also be present.
  - c) At this meeting the need for formation of Bustee Works Management Committee (BWMC) for looking after 'Operation and Maintenance Plan for Slum Level Infrastructure work' will be explained to the slum dwellers.
  - d) The stock of work done and assets created under slum level infrastructure works of that particular slum will be listed at this meeting.
  - e) At this meeting the ULB will brief the slum dwellers about the constitution, role and functions of the BWMC.
  - f) A similar next meeting (2nd) will be held at which the BWMC will be elected as per constitution through informal election. If one meeting is not sufficient more such meetings may be arranged.
  - g) Minute of each meeting with signature of the participants should be maintained.



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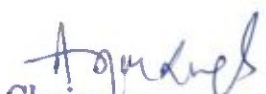
Constitution & functions of the Bustee Works Management Committee

(BWMC):

- a) The BWMC will consist of minimum 5 members, all of whom will be resident of that particular slum.
- b) In addition, one RCV from that slum will be member.
- c) There will be at least two female members in the BWMC.
- d) The members of the BWMC may be from BPL / APL or both.
- e) At least one member will belong to a Neighbourhood Group (NHG) from that slum.
- f) The BWMC will be elected through an informal process of election.
- g) There must be good publicity to ensure wide attendance.
- h) At least 40% of slum dwellers must be present in the meeting during election of BWMC.
- i) The BWMC will be an independent body. The ULB will be responsible for overseeing the work of BWMC.
- j) The BWMC will hold office for a period of two years, after which a new committee will be elected. If any member resigns or moves out of the slums or is incapable of functioning for any reason, another member will be elected in his / her place within one month.
- k) Each BWMC will open and operate a separate bank account. This bank account will function as the O&M fund for that slum.
- l) The BWMC will be authorized by the ULB to raise funds for O&M as is elaborated under item no. 13.
- m) The ULB will make matching contribution against the fund raised by the BWMC through user charges to encourage the process.
- n) The BWMC will report to the slum dwellers in a meeting held once in six months on revenue, expenditure and maintenance issues. This meeting will be attended by Local Councillors, ULB Officials & Engineers, Community Organizer, Town Project Officer, CDS member.
- o) There must be an agreed upon O&M Plan between the ULB, CDS and BWMC for the assets created in that particular slum under IHSDP as listed in 1st meeting.
- p) They will need interim hand holding which will be extended by the ULB by providing their technical person and accounts person for technical and accounts support. Otherwise the ULB can take help of local NGOs / CSOs for providing support to BWMC.
- q) Chairman, Secretary and Cashier will be selected within the BWMC. Bank account will be operated by any two of them jointly.
- r) The existing Beneficiary Committee will cease after the BWMC is formed.



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**Maintenance:****Water Supply:**

## Routine maintenance

- a) Daily cleaning
- b) Petty repair
- c) Periodical testing of water

Petty repair involves mainly replacement of street stand posts, repairing of hand pump and platform. It is to be ascertained by the ULB / Bustee Works Management Committee (BWMC) how much money is roughly required per month for meeting the cost of this petty repair, daily cleaning and periodical testing of water. The cost of petty repair works and daily cleaning is to be met from collection of fund from the Beneficiaries.

The Bustee Works Management Committee (BWMC) will supervise this ,Daily cleaning and petty repair work`.

**Sanitation: Community latrine**

## Daily cleaning and petty repair work:

- It requires daily cleaning (once, twice or more) by engaging a sweeper on contract.
- Replacement of Bib cock and other petty repairing work

It is to be ascertained by the ULB / BWMC as to how much money is required per month for carrying out the work of item (i & ii). The cost of item (i & ii) is to be met from ULB fund / Beneficiary Contribution / or a combination of both in every month. This decision may be taken. The BWMC is required to collect the contribution from Beneficiaries every month and supervise the work.

**Major repair and maintenance work:**

Periodical maintenance of latrine structure by way of plastering, colour washing, door, window, floor repairing, replacement of broken (W.C.) pan, cleaning of septic tank etc

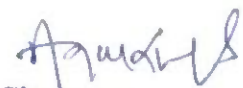
Major repair and maintenance work will be implemented by the ULBs from their fund by engaging CDS / contractor or ULB staff.

**Drainage:**

## Petty repair, operation and maintenance:



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It requires cleaning at least once or twice in a week and occasional petty repair. This work should be executed by the BWMC, for which the BWMC will first decide how much money will be required in every month for getting this work done. Once the amount is ascertained, the ULBs will decide whether this expenditure may be fully met from the contribution of the Beneficiaries only or proportionately shared by ULB and Beneficiaries. The BWMC will collect the contribution from Beneficiaries. It is to be decided how the contribution be collected. The BWMC will supervise the work

Major maintenance and repairing work like plastering, reconstruction of damaged portion and other works may be needed from time to time.

Major maintenance and repairing work will be executed by the ULBs from their fund by engaging CDS / contractor or ULB staff.

#### **Road:**

Maintenance of Concrete paved road:

Sweeping, petty repair and maintenance will be implemented by the BWMC for which they will collect contribution from Beneficiaries.

#### **Solid waste management:**

1. Daily door to door collection and depositing to the nearby container / trailer
2. Will be done by the ULB with existing staff. The staff engaged for this work will report to the BWMC who will supervise their work. The BWMC will maintain the attendance of the staff attending the work and report on weekly basis to the ULB regarding their attendance and performance. BWMC will first assess how much money will be required every month. The BWMC will collect the contribution from Beneficiaries every month. BWMC will supervise the work.
3. Transporting from container / trailer to dumping / composting ground
4. The ULBs will execute the work from their fund.

#### **Duties of BWMC**

1. They will maintain a register showing the existing services / structures under their control :



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**i. Water supply**

- a) What is the length of water line
- b) What is the diameter and material of water line
- c) How many stand posts are there
- d) How many small dia-deep tube wells are there and their status (functioning /
- e) How many big dia deep tube wells are there and their status (functioning /

They will maintain a register for keeping stock of materials which are often required for day to day maintenance work like bib cock, short pipe for stand posts etc.

**ii. Sanitation, Drainage, Solid waste management, Community Centre**

a) They will maintain a register showing number of existing community latrines, Community Seva Kendra and community centres under their control with their status. They will also maintain a register of consumable goods like Muriatic acid, brush, broom, towel, soap etc. which will be required for maintenance purpose.

2. They will maintain an attendance Register for the persons attending duties. They should also maintain a register of income (collection) and expenditure.

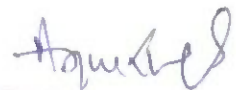
3. The Bustee Works Management Committee (BWMC) will be responsible for awareness generation amongst the slum dwellers for upkeep and maintenance of the assets created.

**Function of ULB for O&M work through BWMC:**

- i) Formation of Bustee Works Management Committee (BWMC) through a process of election.
- ii) One cashier to be elected among the BWMC for keeping accounts.
- iii) O&M Plan as per format to be discussed with all slum dwellers and agreed and a Tripartite Agreement signed by ULB, CDS and Bustee Works Management Committee.
- iv) ULB to pass the O&M Plan by Board of Council and earmark funds as required.
- v) ULB to allot work to one engineer and one accounts person to supervise, implement of O&M Plan and keep in regular touch with the BWMC to ascertain and solve minor problems. Local councillor may also be asked to supervise along with the engineer and liaise with the BWMC.
- vi) Necessary corrective action from time to time may be taken by ULB.



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### Proposed funding pattern for O&M work by BWMC

Under PMAY Projects, guidelines indicate that, O & M cost of first five years. This should be applicable to Cost of Buildings i.e. group housing, community centre etc. The beneficiaries should form a Residents Welfare association who should be responsible for maintenance of residential buildings, community facilities beyond the first five years. As far as the infrastructure viz. Roads, drains, street lighting, Water supply, sewerage is concerned the O & M becomes part of city wide infrastructure. However it is considered appropriate that beneficiaries would pay user charges for infrastructure for which the concerned authorities should work out appropriate User charge with suitable cross subsidy. In addition, the administrative arrangement for attending to complaint and regular maintenance to ensure on time maintenance also needs to workout.

Future year's operation and maintenance will be met out from a mix of user charges and ULB funding.

Arrangement for training to the members of the BWMC for petty repair, operation and maintenance work should be made by the ULB.

A cost for O&M of assets created under PMAY is permissible. This has been fixed at 2% of the approved project cost of which the Central share would be 50% i.e. 1% of the approved project cost.

### **35. Institutional Capacity**

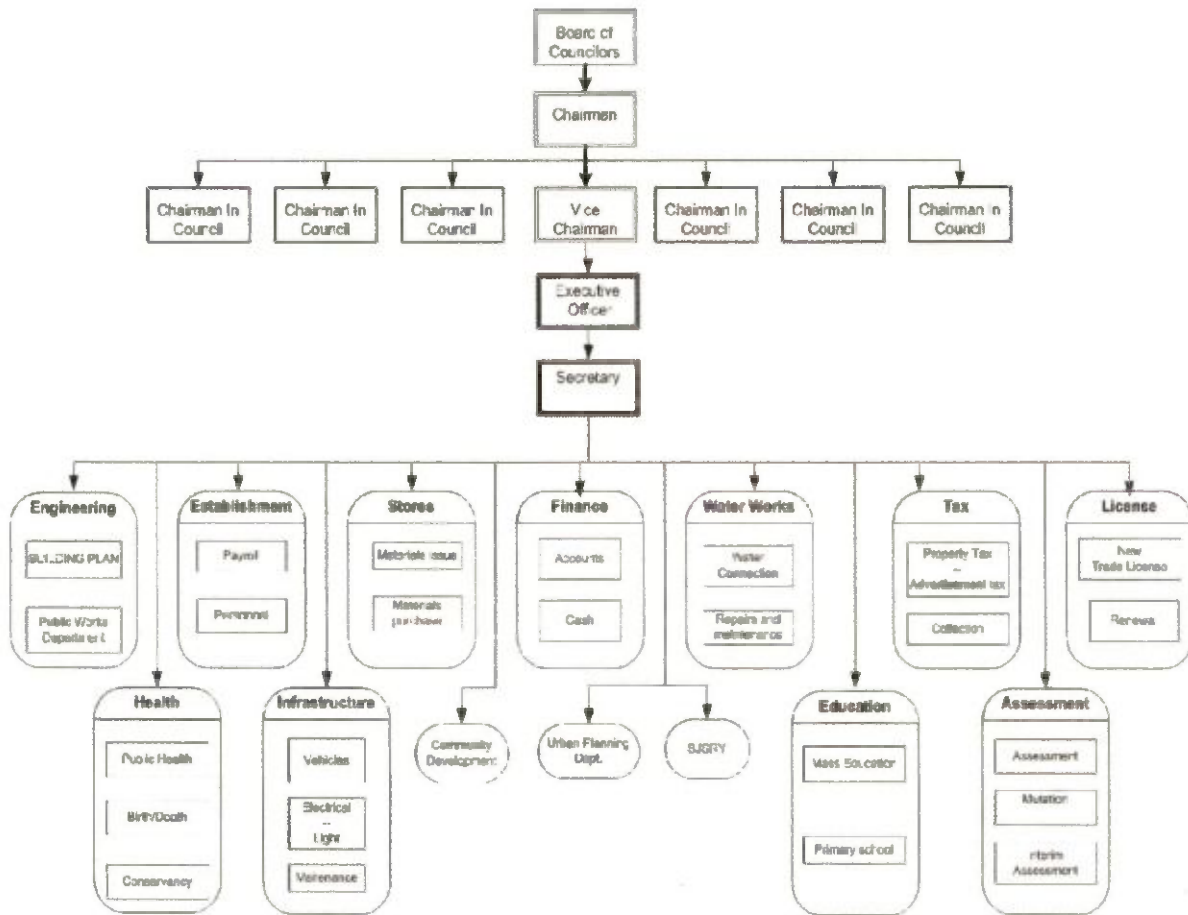
**Bhatpara Municipality**, with its elected local body in place, has developed institutional strength to implement, operate & maintain proposed infrastructure. The municipality spreading over an area of 29.14 square kilometres is comprised of 20 wards. With efficient and trained manpower, the municipality has developed both technical and administrative skills. The development of appropriate municipal organizational structures with qualified staff is essential if municipalities are to provide cost effective services to citizens. With local government reform municipalities are required to take on new tasks, and provide new services. This will only be possible if municipalities have cost-effective and appropriate structures and staff that are well qualified and highly motivated. The municipalities should plan in such a way so as to ensure that they can meet the needs of citizens effectively and efficiently.

A brief profile of the municipality is provided here below:

- ◆ **Chairman:** Sri Arjun Singh
- ◆ **Area of Operation:** 32.55 square kilometers
- ◆ **Number of Wards:** 35
- ◆ **Population:** 390,467 (2011-12)
- ◆ **Roads:** 1049.57 km
- ◆ **Sewage Line:** Coverage upto 30% of total household
- ◆ **Drain Line:** 232 km
- ◆ **Water Line:** 165.5 km
- ◆ **Number of Street Lights:** 7474

  
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The municipality is entrusted with the responsibilities of providing the following civic services and infrastructural facilities to the citizens:


• <b>Solid Waste Management</b>	• <b>Markets</b>
• <b>Birth and Death Registration</b>	• <b>Storm Water Drainage and Flood</b>
• <b>Crematoria and burial ground</b>	• <b>Parks and Playgrounds</b>
• <b>Prevention of food adulteration</b>	• <b>Plantations</b>
• <b>Preventive Health Care and Health Care</b>	• <b>Town Planning</b>
• <b>Roads and its development</b>	• <b>Slum Improvement and Urban</b>
• <b>Widening &amp; improvement to roads</b>	• <b>Education</b>
• <b>Street Lighting</b>	• <b>Water</b>
• <b>Bus Stands, Public Urinals</b>	• <b>Beautification</b>
	• <b>Auditoriums</b>

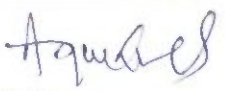
  
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## 36. Estimate &amp; Drawing

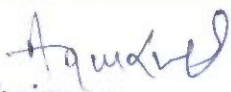
DETAILED ESTIMATE FOR THE CONSTRUCTION OF SINGLE UNIT DWELLING HOUSE					
Pradhan Mantri Awas Yojana Housing For All (Urban)					
Total Covered Area- 32.18 sq.m (With Electrical Works)					
Reference of Schedule of Rates : PWD (W.B.), Schedule of Rates Building & Sanitary w.e.f-01.07.2014 & Corrigenda (Kolkata /24 Pgs (N & S)/ Kalyani Sub Div.)					
Floor Area 25.37 sqm					
SL NO	Description of Works	Quantity	Unit	Rate	Amount (Rs.)
1	Earthwork in excavation in foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing spreading or stacking the spoils within a lead of 75 m as directed including trimming the sides of trenches, levelling, dressing and ramming the bottom, bailing out water etc. as required complete. a) Depth of excavation not exceeding	13	%cu.m.	12047	1566.11
	<b>SOR, PWD, P-1, I -2 a</b>				
2	Earth work in filling in foundation trenches or plinth with good earth in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete.( Payment to be made on the basis of measurement of finished quantity of work ) a) With earth obtained from excavation of foundation.	11.12	%cu.m.	7831	870.81
	<b>SOR, PWD, P-1, T/3 a</b>				
3	Supplying Laying Polithin Sheets etc. <b>SOR, PWD, P-45, T - 13</b>	22	sqm	25	550
4	Cement concrete with graded Stone ballast (40 mm.) excluding shuttering.a) In ground floor and foundation.6 : 3 : 1 proportion Pakur variety <b>SOR, PWD, Page 24 ; Item -10 a</b>	3.5	cu.m.	5823	20380.5
5	25 mm. thick damp proof with cement concrete (4:2:1) (with graded stone aggregate 10 mm. Normal size) and painting the top surface with a coat of bitumen using 1.7 kg. per sq.m. including heating the bitumen and cost and carriage of all materials complete. <b>SOR, PWD, P-45, T-12</b>	6.81	sqm,	297	2022.57
	Brick work with 1st class bricks in cement mortar (6:1) a) In foundation and plinth.	10.43	cum	5719	59649.17
6	b) In super structure <b>SOR, PWD, P-29, T -22(a), (b)</b>	15.24	cum	5943	90571.32
7	125mm thick brick work with 1st. class bricks in cement mortar (4:1). a) In ground <b>SOR, PWD, P-73, I -29</b>	23.22	sq.m.	783	18181.26
8	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes (i) Pakur Variety <b>SOR, PWD, P-14, T -7(i)</b>	3.94	cu.m.	6851.66	26995.54

  
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9	Reinforcements for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc. including supply of rods, initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16G black annealed wire at every inter-section complete as per drawing				
	(a) For works in foundation, basement and upto roof of ground floor / upto 4m. (i) Tor steel/Mild steel. <b>SOR, PWD, P-27, T -15(i)</b>	0.309	MT	60705.93	18775.74
10	Hire and labour charges for shuttering with centreing and necessary staging upto 4 m. using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams, columns, lintels curved or straight including fitting, fixing and striking out after completion of works. (upto roof of ground				
	(When the height of a particular floor is more than 4 m. the equivalent floor ht. shall be taken as 4 m. and extra for works beyond the initial 4 m. ht. shall be allowed under 12(e) for every 4 m. or part thereof.) <b>SOR, PWD, P-66, T -12(a)</b>				
	25 mm. to 30 mm. thick wooden shuttering as per decision & direction of Engineer-In-charge. Ground Floor	37.063	M <sup>2</sup>	360	13342.68
11	Plaster ( to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints or roughening of concrete surface, including throating, nosing and drip course where necessary . In ground floor	116.94	sq.m.	181	21166.14
	A) With 6:1 cement mortar. a) Inside wall 20 mm thick plaster <b>SOR, PWD, P-151, T -2 (i)(b)</b>				
	b) Out side Wall, 15mm th. <b>SOR, PWD, P-151, I -2 (i)(c)</b>	111.95	sq.m.	156	17464.2
	B)10mm th ceiling plaster (4:1) <b>SOR, PWD, P-151, I -2 (i)(c)</b>	23.33	sq.m.	140	3266.2
12	Neat cement punning about 1.5mm thick in wall, dado, window, sills, floor, drain etc. <b>SOR, PWD, P-152, I -8</b>	26.7	sq.m.	38	1014.6
13	Artificial stone in floor,dado, staircase etc. with cement concrete (4:2:1) with stone chips laid in panels as directed with topping made with ordinary or white cement (as necessary) and marble dust in proportion (2:1) including smooth finishing and rounding off corners and including application of cement slurry before flooring works, using cement @ 1.75 kg./sq.m. all complete including all materials and labour.	26.49	sq.m.	265	7019.85
	In ground floor.				
	3 mm. thick topping (High polishing grinding on this item is not permitted) with ordinary cement.				
	20mm thick <b>SOR, PWD, P-40, I -3 (i)</b>				

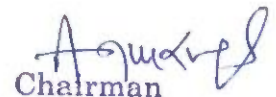
  
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14	Supplying, fitting & fixing MS clamp for fixing door and window frame made of flat bent bar, end bifurcated, fixed in cement concrete with stone chips (4:2:1) fitted and fixed complete as per direction.	34	each	22	748				
	40mm x 6mm x 125 mm length. (Cost of cement concrete will be paid separately)								
	<b>SOR, PWD, P-90, I -18 (c)</b>								
15	Wood work in door and window frame fitted and fixed complete including a protective coat of painting at the contact surface of the frame	0.213	cu.m.	46171	9834.42				
	other Local wood								
	<b>SOR, PWD, P-85, T -1(i)</b>								
16	Panel Shutter of door & Window (each Panel Consisting Of single Plan without Join)	8.52	sq.m.	1567	13350.84				
	25 mm thick shutter with 12 mm thick Panel of size 30 to 45 cm. Other Local wood								
	<b>SOR, PWD, P-105, I -84 (iv)c</b>								
17	Iron butt hinges of approved quality fitted and fixed with steel screws, with ISI mark. a)75mm x 47mm x 1.70mm	32	each	34	1088				
	<b>SOR, PWD, P-91, T -20(iv)</b>								
18	Iron Socket Bolt of approved quality fitted and fixed complete. i) 150 mm long x 10 mm dia	11	each	71	781				
	<b>SOR, PWD P-93, I-25,c</b>								
19	White washing including cleaning and smoothening surface thoroughly (5 parts of stone lime and 1 part of shell lime should be used in the finishing coat).	124.96	%sq.m.	1887	2358				
	Two Coats								
	<b>SOR, PWD, P-155, I -3 (b)</b>								
20	Colour washing with ella with a coat of white wash priming including cleaning and smoothening surface thoroughly external surface One Coat	100.56	%sq.m.	1514	1522.48				
	<b>SOR, PWD, P-155, I - 4(ii)(a)</b>								
21	Priming one coat on timber, plastered or on steel or other metal surface with synthetic enamel/oil bound primer of approved quality including smoothening surfaces by sand papering etc.								
	1) On timber surface <b>SOR, PWD, P - 162, I - 7(a)</b>					21.69	sq.m.	41	889.29
	2) On Steel Surface <b>SOR, PWD, P - 162, I - 7(b)</b>					2.7	sq.m.	31	83.7



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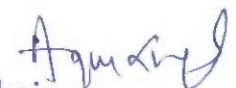
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22	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary :				
	With super gloss (hi-gloss)-With any shade except white.				
	a) On timber or plastered surface Two Coats	21.69	sq.m.	89	1930.41
	b) On Steel surface Two Coats	2.7	sq.m.	86	232.2
<b>SOR, PWD, P - 162, - 8A(ait),(bit)</b>					
23	Iron hasp bolt of approved quality fitted and fixed complete (oxidised) with				
	16 mm diad with center bolt and round fitting. 300 mm long	2	each	193	386
	<b>SOR, PWD, P-93, I - 27c</b>				
24	Precast piered concrete jally work as per design and manufacture's specification including moulding etc. with stone chips and necessary reinforcement shuttering complete including fitting, fixing in position in all floors.(a) 37.5 mm th. panels	1.69	sq.m.	351	593.19
	Cement & steel required for this item <b>will not be</b> issued by deptt.				
	<b>SOR, PWD, P-32, I - 38 (b)</b>				
25	Supplying, fitting and fixing UPVC down pipes A type and fittings conforming to IS 13592-1992 with necessary clamps nails including making holes in walls, etc. and cutting trenches in any soil, through masonry concrete structure etc. if necessary and mending good damages including jointing with jointing materials ( Spun yarn, valamoid / bitumen / M. seal etc ) complete				
	<b>P-173, I-21 A (ii), C(ii), D(ii)</b>				
	<b>SOR, PWD, P173, I - 21 A (ii), C(ii),</b>				
	i) UPVC Pipe 110 mm dia	3	Mtr.	291	873
	ii) UPVC Bend 87.5 degree 110 mm dia	2	each	162	324
iii) UPVC Shoe 110 mm	1	each	128	128	
26	M.S.or W.I. Ornamental grill of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor. Grill weighing 10 kg/sq m to16 kg/m2. <b>SOR, PWD, P - 76, I - 10 (i)</b>	0.284	Qntl	8247	2342.15
	<b>(2.70sqm @ 10.5kg per sqm = 28.35 kg)</b>				
27	Shallow water closet Indian pattern(I.P.W.C.) of approved make in white vitreous chinaware supplied ,fitted and fixed in position (excluding cost of concrete for fixing).450 mm long	1	each	1062	1062
	<b>SOR, PWD, (Sanitary) P - 65, I - 1 (iii)</b>				



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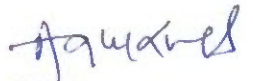


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28	Foot rest for water closet of size 275 mm X 125 mm with Artificial stone(4:2:1) with 6 mm stone chips and chequered including adding colour as necessary.	1	Pair	70	70
<b>SOR, PWD, (Sanitary) P - 66, I - 9</b>					
29	Supplying, fitting and fixing cast iron 'P' or 'S' trap conforming to I.S. 3989 / 1970 and 1729 / 1964 including lead caulked joints and painting two coats to the exposed surface.	1	each	923	923
S Trap 100 mm					
<b>SOR, PWD, (Sanitary) P - 54, I - 14(B-</b>					
30	Supplying, fitting fixing CI Round Gratings	1	Each	100	100
150mm dia.					
<b>SOR, PWD, (Sanitary) P - 55, I - 18(ii)</b>					
	Construction of 2 circular leach pit of inside diameter 1000 mm. & a depth of 1000 mm. With a layer of 250 mm. Thick brick work with cement mortar (6:1) & honeycombed brick wall (4:1) at every alternate layer upto a height of 925 mm. From bottom and then 125 mm. thick brick wall (4:1) for a height of 300 mm. and covered with 75m. RCC slab (4:2:1) with 8mm tor steel @ 150 mm. centre to centre both ways including plustering and neat cement punning on top of the slab and making hooking arrangement on slab for lifting of the slab if require as well as jointing the connection with the inspection pit (450 x 450) covered with 50mm thick RCC slab (4:2:1) with stone chips and necessary reinforcement and connected with 100 mm dia PVC pipe laid over rammed earth and then covered the pipe properly with powder earth including supplying fitting fixing fibre glass pan P-tap & polythene pipe as per requirement to connect with the inspection pit complete with all respect as per direction of	1	Item	7544	7544
<b>TOTAL AMOUNT</b>				<b>Rs.</b>	<b>350000.36</b>
<b>Say</b>				<b>Rs.</b>	<b>350000</b>
<b>Add for Electrical Works (ANNEXURE-I)</b>				<b>Rs.</b>	<b>17858</b>
<b>TOTAL AMOUNT</b>				<b>Rs.</b>	<b>367858</b>
<b>(Rupees Three lakh Sixty seven thousand Eight hundred &amp; Fifty eight only)</b>					



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Cost Estimate for 2 Nos Leach Pit for single unit Dwelling Unit					
P.W.D Schedule of Rates effect from 1st July 2014					
(ANNEXURE-II)					
Sl No	Description of Items	Quantity	Unit	Rate	Amount
1	Earth work in excavation of foundation trenches or drains in all sorts of soil (including mixed soil but excluding or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches leveling dressing and ramming the bottom boiling out water aqs required complete. Depth of excavation not existing 1500mm P.No-1, I-2(a)	2.5	%Cu.M	12047	301.18
2	Cement concrete with graded jhama Khoa ballast (30 mm size) excluding shuttering. In ground floor and foundation (a) 6:3:1 proportion.	0.05	Cu.M	5803.06	290.15
3	Brick work with 1st class bricks in cement mortar (6:1). a) In foundation & Plinth P.no-29, I-21(a)	0.01	Cu.M	5719	57.19
4	125 mm. thick brick work with 1st class bricks in cement mortar (4:1) G.Floor P.no-31, I-29	3	SqM	714	2,142.00
5	Controlled Cement concrete with well graded stone chips (20 - mm nominal size) excluding shuttering and reinforcement with complete design of concrete as per I : 456 and relevant special publications submission of job mix formula after preliminary mix design after testing of concrete cubes as per direction of Engineer-in charge Consumption of cement will not be less than 300 Kg of cement -with Super plasticiser per cubic meter of controlled concrete but actual consumption will be determined on- the basis of preliminary test and job mix formula. -In ground floor and foundation. [Using concrete mixture] M 20 Grade P.no-12, I-6(a)	0.145	Cu.M	6871.54	996.37
6	Reinforcement for reinforced concrete work in all sorts of structures incl. Distribution bars, stirrups, binder etc. incl. supply of rods, initial straightening & removal of loose rust (if necessary), cutting to requisite length, hooking etc P.no-27, I-15(a)(i)	0.01	M.T	68508	685.08
7	Supplying, fitting and fixing UPVC down pipes A type and fittings conforming to IS 13592-1992 with necessary clamps nails including making holes in walls, etc. and cutting trenches in any soil, through masonry concrete structure etc. if necessary and mending good damages including jointing with jointing materials ( Spun yarn, valamoid / bitumen / M. seal etc.) complete.				
	i) UPVC Pipe 110 mm dia P.no-173, I-21(A)(ii)	4	Mtr	291	1,164.00
	ii) UPVC Bend 87.5 degree 110 mm dia P.no-174, I-21(B)C(ii)	2	Each	162	324
8	Jaffri brick work 125 mm. thick with 1st class bricks in cement mortar (4:1) including 12 mm. thick cement plaster (4:1) in all faces in ground floor. P.no-32, I-35	2	SqM	792	1,584.00
<b>Cost of 2 no leach pit</b>					<b>7,543.97</b>
<b>Total</b>					<b>7,544.00</b>

  
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ESTIMATE FOR ELECTRICAL WORKS FOR ONE DWELLING UNIT UNDER PMAY					
(ANNEXURE-I)					
Sl.No.	Item of works	Unit	Rate	Quantity	Amount
1	Supplying & fitting polythene pipe complete with fittings as necessary. Under celing /beam/bound with 22SWG GI wire inclusive S & Drawing 1x18 SWG GI wire as fish wire inside the pipe & fittings and providing 55 mm dia disc of MS sheet (20SWG) having colour paint at one face first ended at the load point end of the polythene pipe with fish wire (synchronizing with roof/beam casting work of building construction) 19 mm dia 3 mm thick polythene pipe	RM	39	25	975
2	Powerckt wiring supplying and drawing 1 ; 1KV grade single core stranded FR PVC insulated & unseathed single core stranded Copper wire (Finolex make) 2 x 2.5 sqmm (PH & N) +1x1.5 sqmm (ECC) per laid polythene pipe and by the pre-laid GI fish wire & making necessary connections as required.	RM	76	50	3800
3	Concealed Distribution wiring in in 2x1.5 sqmm single core standard *FR* insulated and unseathed cop per wire Finolex make & 1x1.5 sq mm single core stranded PVC insulated and unseathed cop per (Finolex make) wire used as ECC in 19 mm bore 3 mm thk. polythene pipe complete with all accessories embedded in wall smooth run to light / fan/call bell point with piano key type switchb (6 Amps) (Anchor make) fixed on sheet metal (16 SWG) Switch Board with bakelite/ perspex (wall maching colour) Top cover (3 mm thick) flushed in wall including mending all good damages to original finish Average per point 6.00 mt.	points	828	10	8280
4	Deistribution concealed wiring with 2x1.5 sq mm (PH & N ) single core stranded FR PVC insulated & unseathed single core stranded 1.1 KV grade Copper Wire (finolex) & 1x1.5 sq mm (ECC) single core stranded (PH & N ) 1.1 KV grade cu wire (finolex) & 1 x 1.5 sq mm single core stranded PVC insulated & unseathed cu wire (finolex) used as ECC in 19 mm bore, 3 mm thick polythene pipe complete with all accessories embedded in wall 250 volt 5 amp 3 pin plug point including S & F 250 Volt 5 amp 3 pin flush type plug socket & piano key type switch (Anchor make) on <b>existing switch board as mentioned sl. no.3</b>	points	76	2	152
5	Supplying & drawing 1.1 KV grade single core stranded FR PVC insulated & unseathed single core stranded cu Wire 3x2.5 sq mm (finolex make) in the pre-laid polythene pipe & by the pre-laid GI fishwire & making necessary connection as required (CESC supply to consumer DP near to CESC & inside the room another DP near CESC & inside the room another DP of dwelling units)	RM	86	15	1290
6	Supplying Delivery & instalation on wall of 30/32 amp DP MCBof Havel's make with enclosed box along with all its necessary   connection complete.(Anchor)	nos	808	2	1616
7	Earthing in soft soil with 50 mm dia GI pipe (TATA make Medium ) 3.64 mm th. X 3.04 Mtr long and 1 x 4 SWG GI ( hot dip) wire (4 m long) 13 mmdia x 80 mm long GI bolts, double nuts, double washer including S & F 15 mm dia GI protection (1 mtr long) to be filled with bitumen partlyunder the ground level & partly above GL driven to an average depth of 3.65 m below the GL & restoring surface duly rammed.	each	1715	1	1715
8	Connecting the equipment to earth BUSbar inlusive S&F 10 SWG (Hot Dip) GI wire on wall /floor with a staples buried inside wall /floor as required & making connection to equipments with bolt, nut, washer, cable lugs etc. as required & mending good damages.	M	6	5	30
				TOTAL	17858
Rupees Seventeen Thousand Eight Hundred Fifty Eight Only					17858

Detailed Estimate for Single Dwelling unit							
	C/L of main outer wall			125 mm Partition wall		Varandah C/L	
		4.65		3.375		1.275	
		0.8		1.15		0.9	
		1.15		1.15	2.3	2.175	
		3.45		2.187			
		1.15		1.9			
		1.7		1.387	5.474		
		3.375		11.149			
		1.275					
		2.825					
		3.125					
		23.5					
	X wall	1.25					
Sl.no.							
I	Earth work in excavation						
	250 mm wall						
	1	23.5	0.75	0.7	12.34		
		0.875	0.75	0.7	0.46		
		24.375			12.8	m	
	125 mm Wall						
		2.625	0.4	0.225	0.24		
	WC	0.4	0.4	0.225	0.04		
	Bath	0.65	0.4	0.225	0.06		
	5.474	0.75		0.225			
		4.724	0.4	0.225	0.43		
	Varanda	1.425	0.4	0.225	0.13		
					0.88		
	Step	0.5	0.9	0.075	0.034		
					13.715	m	
2	Soling						
		24.375	0.75		18.281		
		11.45	0.4		4.58		
					22.861		
3	Polythene sheet						
		2.575	3.125		8.047		
		2.875	2.625		7.547		
		2	1.65		3.3		
	passage	0.625	2.375		1.484		
	Bath&WC	2.7	0.9		2.43		
	Varndah	1.025	0.6		0.615		
	step	0.9	0.5		0.45		
					23.873		
4	Jhama concrete						
			18.28	0.075	1.371		
			4.58	0.075	0.344		
			23.93	0.075	1.795		
					3.51		
5	Earth work in filling 1/5 excavation						
			13.715	5	2.743		
			23.48	0.375	8.805		
					11.548	m	

  
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6	B.W (6:1) in Foundation of plinth							
		23.5	0.625	14.6875				
		23.5	0.5	11.75				
		23.5	0.375	8.8125				
				35.25	0.15	5.288		
		23.5	0.25		0.525	3.084		
	X wall	0.938	0.625	0.586				
		1	0.5	0.5				
		1.063	0.375	0.399				
				1.485	0.15	0.223		
		1.125	0.25		0.525	0.148		
	125mm	3.125	0.25		0.525	0.41		
	Bath&WC	2	0.9	0.25	0.523	0.235		
	Kit	5.224	0.25		0.525	0.686		
	Vard	1.925	0.25		0.525	0.253		
	Steps	0.5	0.9		0.15	0.068		
		0.25	0.9		0.15	0.034		
						10.427	ms	
7	DPC	23.5						
		1.125						
		24.625		0.25		6.156		
		3.125						
		1.8						
		5.224						
		10.149		0.125		1.269		
						7.425		
	Less	0.9		0.25	0.225			
		0.9		0.125	0.113			
	3	0.75		0.125	0.281			
						0.619		
						6.806	sqm	
8	BW in super structure (6:1)							
		23.5						
		1.125						
		24.625	2.75	0.25	16.93			
	Parapet	23.8	0.075	0.25	0.446			
						17.376		
	Less opens							
	1	0.9	2.1	1.89				
	4	0.9	0.9	3.24				
	1	0.75	0.9	0.675				
	3	0.75	0.75	1.688				
				7.493	0.25	1.873		
	Lintel							
	1	1.525	1.525					
	4	1.2	4.8					
	1	1.05	1.05					
			7.375	0.25	0.1	0.184		
	Wo2							
	1	3.05	3.05	0.25	0.1	0.076		
					(-)	2.134		
	Net brick work					15.242	ms	

  
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9	125 th. Brick work (6:1)							
	room		3.125	2.6	8.125			
	kit		2.125	2.75	5.844			
			1.65	2.75	4.5375			
			1.45	2.65	3.8425			
	2		0.9	2.1	3.78			
						26.12875		
	Less opening							
	1	0.9	0.9					
	3	0.75	2.25					
			3.15	2.1	6.615			
	Lintel							
	1	1.3	1.3					
	1	1.025	1.025					
			2.325	0.1	0.2325			
					6.8475			
						19.28125		
	Parapet							
		23.5		0.15	3.525			
					22.806			
	passeege	0.75		0.55	0.4125			
					23.219	sqm		
10	Conc M-20							
	Roof slab							
	32.15	1.1475	31.003		0.1	3.1		
	Beam							
			3.625	0.25	0.15	0.136		
			2.575	0.25	0.1	0.064		
	Lintel						3.301	
	D1	1	1.525	1.525				
	W1	4	1.2	4.8				
	W2	1	1.05	1.05				
	WO2	1	3.05	3.05				
				10.425	0.25	0.1	0.261	
	D1	1	1.39	1.39				
	D2	1	1.025	1.025				
	D2	2	1.4	2.8				
	O2	1	0.875	0.875				
	D2	2		6.09	0.125	0.1	0.076	
	Chaja							
	W1	4	1.2	4.8				
	W2	1	1.03	1.03				
	D1	1	1.275	1.275				
	W02	1	3.05	3.05				
				10.155	0.3	0.075	0.228	
							3.866	m <sup>3</sup>
11	Reinforcement							
		3.866	0.80%	1	7850	0.243	MT	
12	Shuttering							
	31	23.5	1.125					
			24.63	0.25				
	31			6.156	24.844			
	Side beam	2	3.125	0.15	0.9375			
		2	2.325	0.1	0.465			
	side slab	1	25.3	0.1	2.53			

  
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	Lintel	1	0.9	0.25	0.225			
		1	1.525	0.1	0.153			
		1	1.275	0.35	0.446			
		1	0.3	0.05	0.015			
						29.615	sqm	
	4W1	4	0.9	0.25	0.9			
		4	1.2	0.1	0.48			
		4	1.2	0.35	1.68			
	2	4	0.3	0.05	0.12			
	1W2	1	0.75	0.25	0.188			
		1	1.05	0.1	0.105			
		1	1.05	0.35	0.368			
	2	1	0.3	0.05	0.03			
	WO2	3	0.75	0.25	0.563			
	1	1	3.05	0.1	0.305			
		1	3.05	0.35	1.068			
	2	1	0.3	0.05	0.03			
	Lintel 125 Wall							
	D1	1	0.9	0.125	0.113			
		2	1.3	0.1	0.26			
	D2	2	0.75	0.125	0.188			
	2	2	1.15	0.1	0.46			
	D2	2	0.75	0.125	0.188			
		2	1.9	0.1	0.38			
						7.423		
						37.038	sqm	
13	Plaster (6:1)							
	Out side 15 mmth.							
			2.85	1.125	0.45			
		25.3			4.425	111.953	sqm	
	Inside 20 mm th.							
	2	2.7	3.125	2.75	32.038			
	2	2.875	2.625	2.75	30.25			
	2	2	1.65	2.75	20.075			
	2	2.075		2.75	11.413			
	Above lintel							
	1	0.75		0.65	0.488			
	Bath							
	2	0.9		2.75	4.95			
	WC							
	1	2.95		2.75	8.113			
	1	2.25		2.75	6.188			
	4	2.2		0.9	7.92			
	T. 125 wall							
	2	0.9		0.125	0.225			
						121.658		
	Open out side less							
	3	0.75		2.1	4.725			
					(-)	4.725		
						116.933	sqm	
	Celling Plaster				24.47			
	Less				1.14			
						23.33	Sqm	
14	Neat cement punning							
	Out side Plinth							
		25.3	0.45			11.385	Sqm	11.385

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	Inside		2.7	3.125					
		2		5.825	0.1	1.165	Sqm		
			2.875	2.625					
		2		5.5	0.1	1.1	Sqm		
	Kitchen		2	1.65					
		2		3.65	0.45	3.285	Sqm		
		1		1.65	0.45	0.743	Sqm		
		2		2.075	0.1	0.415	Sqm		
	Varanda			1.775	0.1	0.178	Sqm		
	step WC	1		3	0.45	1.35	Sqm		
	Bath			3.5	2	7	Sqm		
				0.75	0.1	0.075	Sqm		
	In side punning						15.31	15.31	
	Total							26.695	Sqm
15	Art. Stone flooring								
	Floor area					25.37	sqm		
	Step	2	0.9	0.25		0.45			
	W1	4	0.9	0.1		0.36			
	W2	1	0.75	0.1		0.075			
	W3	3	0.75	0.1		0.225			
								26.48	Sqm
16	Ms Clamp for door & window								
	D1+D2	4	6			24			
	W1+W2	5	2			10			
								34	nos.
17	Wood work in Door & window frame								
	D1	2	5.1	10.2					
	D2	2	4.95	9.9					
	W1	4	3.6	14.4					
	W2	1	3.3	3.3					
				37.8	0.075	0.075	0.213	ms	
18	Z batten shutler								
	D1	2	0.775	2.025		3.139			
	D2	2	0.625	2.025		2.531			
	W1	4	0.775	0.775		2.403			
	W2	1	0.775	0.625		0.484			
								8.557	sqm
19	Iron Butt Hinges								
	D1+D2					12			
	W1	4	4			16			
	W2	1	4			4			
								32	nos.
20	Iron soket bolt								
	Door			6					
	Window			5					
								11	nos.
21	White wash								
	Inside+Celling Plaster- inside punning								
			116.933	23.33	15.31		124.953	sqm	
22	Colour wash								
	Out side Plaster- out side punning								
			111.953	11.385			100.568	sqm	

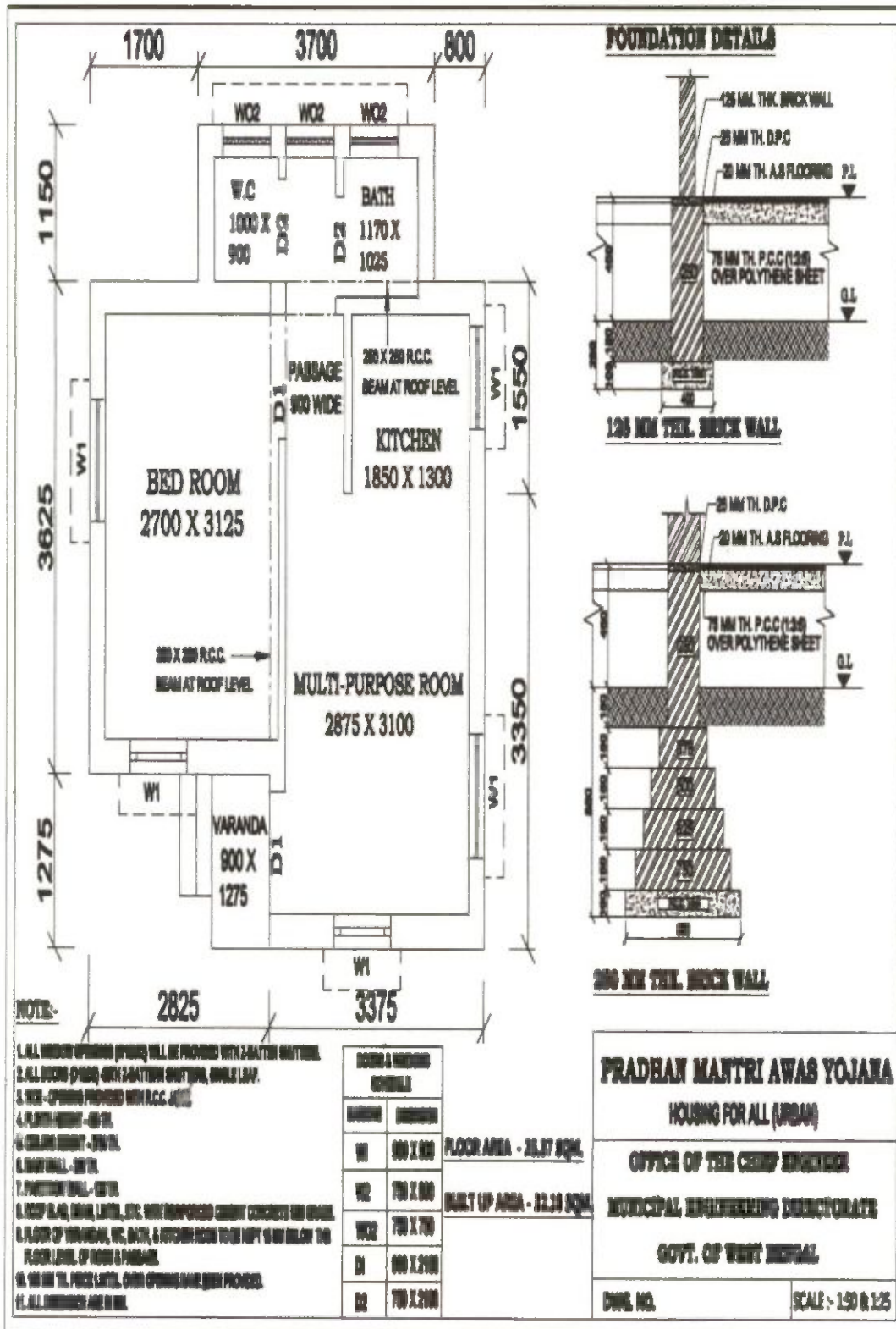
  
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23	Priming on timber sutface							
	2	2	0.9	2.1		7.56		
	2	2	0.75	2.1		6.3		
	4	2	0.9	0.9		6.48		
	1	2	0.75	0.9		1.35		
							21.69	sqm
24	Painting best quality on wooden surface							
	same sl.no. 23						21.69	sqm
25	MS ornamental gril....10Kg-16 Kg							
	W1	4	0.75	0.75	2.25			
	W2	1	0.75	0.6	0.45			
					2.7			
					@12Kg/sqm		32.4	Kg
26	Priming on Steel sutface						2.7	sqm
27	Painting best quality on steel surface						2.7	sqm
	same sl.no. 24							
28	R.C.C. Shelf							
		1.75	0.5				0.875	sqm
29	Roof treatment with cow dang							
							32.18	
	Deduct	1.14	(varanda)	1.14				
	Cornice	25	0.125	3.125				
				27.915			27.915	sqm

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*[Signature]*  
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*[Signature]*  
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ESTIMATE OF CEMENT CONCRETE ROAD UNDER PMAY					
(UNIT LENGTH AND WIDTH 2.5m)					
Sl.No.	Description of item	Quantity	Unit	Rate	Amount
1	Surface Dressing of the ground in any kind of soil including removing vegetation inequalities not exceeding 15 cm depth and disposal of the rubbish within a lead upto 75 m as directed.	2.5	m <sup>2</sup>	11	27.5
Pg.-1,1-1					
2	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches, levelling, dressing and ramming the bottom,	0.312	%m <sup>3</sup>	12047	37.59
pg.-1,1-2	bailing out water as required complete. (a) Depth of excavation not exceeding 1,500 mm.				
3	Single Brick Flat Soling of picked jhama bricks including ramming and dressing bed to proper level and filling joints with local sand.	2.5	m <sup>2</sup>	377	942.5
Pg.-11,1-1					
4	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with				
pg.-26,1-12(f)	required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor)	0.2	m <sup>2</sup>	225	45
	(f) 25 mm to 30 mm shuttering without staging in foundation				
5	Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement,if any, in ground floor as per relevant IS codes. a) Pakur Variety	0.25	m <sup>3</sup>	6111.98	1527.99
Pg.-11,1-5					
6	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete. (Payment to be made on the basis of measurement of finished quantity of work)	0.312	%m <sup>3</sup>	7831	24.43
3(a)	(a) With earth obtained from excavation of foundation.				
<b>TOTAL</b>					<b>2605.01</b>

Engineer  
Bhatpara Municipality

*Agwal*  
Chairman  
Bhatpara Municipality