

## STATE URBAN DEVELOPMENT AGENCY

“ইলগাস ভবন”, এইচ-সি ব্লক, সেক্টর-৩, বিধাননগর, কলকাতা-৭০০ ১০৬, পশ্চিমবঙ্গ

“ILGUS BHAVAN”, H-C Block, Sector - III, Bidhannagar, Kolkata - 700 106, West Bengal

SUDA-480/2019/৭৭১৫

17.02.2020

ক্রমিক নং .....

তারিখ .....

From : Director, SUDA

To : The Branch Manager,  
Axis Bank Ltd.,  
Salt Lake, Sector-II Branch,  
BJ-110, Sector-II  
Salt Lake City, Kolkata – 700 091.

Sub : Electronic Transfer of Fund debiting this office  
Current Account No. 916010072244925.

Capacity Building &amp; A &amp; OE - Swachh Bharat Mission (SBM)

Sir,

You are requested to kindly arrange for electronic transfer of fund as per details given below debiting the amount from this office Current Account No.916010072244925 lying with your branch in respect of Swachh Bharat Mission (SBM).

Sl. No.	Name of Payee	Amount in Rs.	Bank Details
01.	PricewaterhouseCoopers Private Limited	1,53,366.00	Citibank NA, New Delhi Branch, A/C No. 712912006 IFS Code. CITI00000002
(Rupees One Lakh Fifty Three Thousand Three Hundred Sixty Six only)			

Petrus Anuranjan Soreng  
Finance Officer, SUDA

Finance Officer  
State Urban Development Agency  
Salt Lake City, Kolkata

Debarati Datta Gupta,  
Director, SUDA

Director  
State Urban Development Agency

দূরভাষ : ২৩৫৮ ৬৪০৩ / ৫৭৬৭, ফ্যাক্স : ২৩৫৮ ৫৮০০

Tel : 2358 6403/5767, Fax : 2358 5800, E-mail : wbsudadir@gmail.com

Account Section : 2358 6408



Date: 02<sup>nd</sup> December 2019

To:  
The Director  
State Urban Development Authority  
ILGUS Bhawan  
HC Block, Sector-III, Bidhannagar  
Kolkata - 700 106



EE(SD)  
Saf

Dear Ma'am,

**Subject: "APPOINTMENT OF TRANSACTION ADVISOR for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators"**

**Ref:** Your Memo No. SUDA-478/2019/6254, SUDA-479/2019/6255 and SUDA-480/2019/6256 dated 04.09.2019

This is with reference to our Letter of Award of Contract dated 4th September 2019 with respect to the above contract titled "Appointment of Transaction Advisor for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators for Clusters-8,9 and 10"

We are herewith attaching our invoices (Tax Invoice No. 41316009596, 41316009598 and 41316009597) towards professional fee for the submission and acceptance of inception reports. We request you to kindly release the payment at the earliest.

We appreciate the level of cooperation received to date from you and the management of the State Urban Development Authority.

Yours faithfully,

**For: PricewaterhouseCoopers Limited**

*Antara Ray*

**Authorized Signature**

Name and Title of Signatory: Antara Ray, Associate Director

Name of Firm: PricewaterhouseCoopers Pvt. Ltd.

Address: DN 56 & 57, Sector V, Salt Lake, Kolkata 700091

Mobile: +91 9674007555

Email: [antara.ray@pwc.com](mailto:antara.ray@pwc.com)

*AB/S. Chatterjee & AB/S. Ghosh*  
*61.*  
*for 6/12/19*





ORIGINAL FOR RECIPIENT

**TAX INVOICE**

Tax Invoice No : 41316009596  
Date : 28-NOV-19

**Billing Location**

State Urban Development Agency (SUDA), West Bengal  
ILGUS Bhawan, HC Block, Sector-III,  
Bidhannagar  
Kolkata - 700106  
West Bengal  
India

Client's GSTIN : Un-Registered  
Kind Attention : Director, State Urban Development Agency  
Project Code : 4153861  
Bill Partner : Mr. Shivanshu Chauhan  
Project Name : Appointment of Transaction Advisor for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators  
Project Ref : Cluster 8

Passed for Payment Rs. 1,70,728/-  
(Rupees One lakh seventy thousand seven hundred twenty eight only)  
Only to be debited towards Capacity Building - SBM.

Gross Amt. 1,70,728/-  
(-) TDS (10%) 14,468/-  
(-) IGST (2%) 2,894/-  
Net Amt. 1,53,366/-

*[Signature]*  
Finance Officer  
State Urban Development Agency  
Govt of West Bengal

Dear Sir/Madam,

We append a memo of our charge for INR 341456 in connection with professional services rendered for which we shall be glad to receive a remittance at an early date.

For PricewaterhouseCoopers Private Limited

Digitally signed  
Authorised Signatory

Place of supply : West Bengal, 19

Description of Services	HSN Code	Taxable Amount	CGST		SGST	
			Rate	Amount	Rate	Amount
Acceptance of Inception Report	998311	144,684	9%	13,022	9%	13,022
Submission of Inception Report	998311	144,684	9%	13,022	9%	13,022
<b>Grand Total</b>		<b>289,368</b>		<b>26,044</b>		<b>26,044</b>
<b>Total Tax Amount</b>						<b>52,088</b>
<b>Total Amount (Incl. tax)</b>						<b>341,456</b>
<b>Amount of Tax subject to reverse charge</b>						<b>0</b>

Amount in Words : Three Lakh Forty One Thousand Four Hundred Fifty Six Rupees only  
PAN : AABCP9181H  
GSTIN : 19AABCP9181H1Z1  
HSN Code Description : Management consulting and management services including financial management

Passed for Payment Rs. 1,70,728/-  
(Rupees One lakh seventy thousand seven hundred twenty eight only)  
Only to be debited towards Capacity Building - SBM.

PricewaterhouseCoopers Private Limited, Plot No. Y-14, Block-Ep, Sector-V, Salt Lake, Sech Bhavan Kolkata, West Bengal, -700091, 033  
23579260  
CIN: U74140WB1983PTC036093

Registered office : Y-14, Block EP, Sector V, Salt Lake, Kolkata, 700091

Gross Amt. 1,70,728/-  
(-) TDS (10%) 14,468/-  
(-) IGST (2%) 2,894/-  
Net Amt. 1,53,366/-

Signature valid *[Signature]*  
Digitally signed by SANJAY CHATAK  
Date: 28.11.2019 16:55:14 +05:30  
Location: Gurgaon  
Finance Officer  
State Urban Development Agency  
Govt of West Bengal

*[Signature]*  
14/02/2020



- a) Please quote our bill number(s) while effecting payment.
- b) All payment in foreign currency may kindly be advised to us through an e-mail along with a scan copy of MT-103[SWIFT/IT].
- c) This invoice is raised in reference to the engagement letter/agreement we have with you.  
Unless otherwise agreed in the engagement letter/agreement the invoice raised is due on receipt. In case of any non-payment or delay in receipt of payment beyond 30 Days(or any other such time which may be specifically prescribed in the said engagement letter/agreement), we shall be entitled to charge you with interest on all outstanding amounts at the prevailing commercial rate of interest.
- d) Kindly ensure the withholding tax compliances as per the law applicable to you, no adjustment/refund of withholding tax will be done later on.
- e) Please send the TDS/WHT certificate (as applicable) within prescribed timeline.

**Remittance Details:**

Amount for the bill no. <b>41316009596</b> dated <b>28-NOV-19</b> can be wire transferred to:	
<b>Beneficiary Bank Details:</b>	
Beneficiary Account Name	Pricewaterhousecoopers Private Limited
Beneficiary Bank Name	Citibank NA
Beneficiary Account Number	712912006
IFSC	CITI00000002
MICR Code	
Swift Code	CITIINBX



## রাজ্য নগর উন্নয়ন সংস্থা

## STATE URBAN DEVELOPMENT AGENCY

“ইলগাস ভবন”, এইচ-সি ব্লক, সেক্টর-৩, বিধাননগর, কলকাতা-৭০০ ১০৬, পশ্চিমবঙ্গ

“ILGUS BHAVAN”, H-C Block, Sector - III, Bidhannagar, Kolkata - 700 106, West Bengal

ক্রমিক নং SU DA-478/2019/9356

তারিখ 12.02.2020

To  
Mr. Jogesh Daruka  
Pricewaterhouse Coopers (PwC) Pvt. Ltd.  
Plot No - DN 56-57, Sector - V,  
Salt Lake, Kolkata - 700 091

## Subject : Inception Report Approval

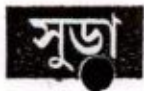
Dear Mr. Sumouleendra Ghosh,

With respect to the Inception report submitted by your office on 11<sup>th</sup> November, 2019 for Cluster - 8 (Kalyani Municipality, Gayespur Municipality, Haringhata Municipality, Kanchrapara Municipality & Halisahar Municipality) the department accords approval on the inception report. You are now requested to initiate the work for Feasibility Report at the earliest and ensure its submission as per timelines mentioned in Contract.

Approver's Name : Debarati Dutta Gupta  
Designation : Director  
Organization : State Urban Development Agency

Approver's Sign : 

Date :



রাজ্য নগর উন্নয়ন সংস্থা

SUDA

STATE URBAN DEVELOPMENT AGENCY

“ইলগাস ভবন”, এইচ-সি ব্লক, সেক্টর-৩, বিধাননগর, কলকাতা-৭০০ ১০৬, পশ্চিমবঙ্গ

“ILGUS BHAVAN”, H-C Block, Sector - III, Bidhannagar, Kolkata - 700 106, West Bengal

SUDA-478/2019/9820

18.02.2020

ক্রমিক নং .....

তারিখ .....

From : Director, SUDA

To : The Branch Manager,  
Axis Bank Ltd.,  
Salt Lake, Sector-II Branch,  
BJ-110, Sector-II  
Salt Lake City, Kolkata – 700 091.


Sub : Electronic Transfer of Fund debiting this office  
Current Account No. 916010072244925.

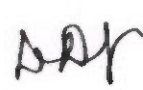
Capacity Building & A & OE - Swachh Bharat Mission (SBM)

Sir,

You are requested to kindly arrange for electronic transfer of fund as per details given below debiting the amount from this office Current Account No.916010072244925 lying with your branch in respect of Swachh Bharat Mission (SBM).

SL No.	Name of Payee	Amount in Rs.	Bank Details
01.	PricewaterhouseCoopers Private Limited	1,53,366.00	Citibank NA, New Delhi Branch, A/C No. 712912006 IFS Code. CITI00000002
(Rupees One Lakh Fifty Three Thousand Three Hundred Sixty Six only)			

  
Petrus Anuranjan Soreng  
Finance Officer, SUDA  
Finance Officer  
State Urban Development Agency  
Govt. of West Bengal

  
Debarati Datta Gupta,  
Director, SUDA

Director  
State Urban Development Agency

দূরভাষ : ২৩৫৮ ৬৪০৩ / ৫৭৬৭, ফ্যাক্স : ২৩৫৮ ৫৮০০

Tel : 2358 6403/5767, Fax : 2358 5800, E-mail : wbsudadir@gmail.com

Account Section : 2358 6408





EE(S.Das)

## Covering Letter

Dated: 21/01/2020

To,  
Director,  
State Urban Development Agency (SUDA),  
ILGUS Bhawan, Block- HC, Sector- III, Salt Lake City,  
Kolkata- 700106

**Subject:** Submission of Bank Guarantee for clusters of Kalyani, Ranaghat and Krishnanagar

Dear Ma'am,

We hereby submit the three separate Bank Guarantees for all the three clusters of Kalyani, Ranaghat and Krishnanagar pertaining to the project "**Transaction Advisory Support for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators**".

We remain,

Yours sincerely,

**Name and Title of Signatory:** Shivanshu Chauhan, Partner

**Name of Firm:** PricewaterhouseCoopers Private Limited

AE/S.Chauhan & AE/S.Mishra  
22/01/2020

**Bank Guarantee Covering Letter**

Date: January 10, 2020

To,  
 DIRECTOR,  
 STATE URBAN DEVELOPMENT AGENCY,  
 ILGUS BHAWAN, HC BLOCK,  
 SECTOR-III, BIDHANNAGAR,  
 KOLKATA- 700106.

Bank Guarantee issued by us

Bank Guarantee Number	PBGI01002000021	BG Issue date	January 10, 2020
Amount (In Figures)	Rs.2,89,368/-		
Amount (in Words)	Rupees Two Lakh Eighty Nine Thousand Three Hundred Sixty Eight Only		
Valid Till Date	September 04, 2020		
Claim Valid Till Date (Final Validity Date)	September 04, 2020		
Applicant Name	PRICEWATERHOUSE COOPERS PRIVATE LIMITED		

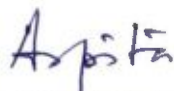
Please find enclosed herewith the original of the above stated bank guarantee issued by us.

Despite our best efforts, since we have not been able to obtain / you have not provided the IFSC of your banker, we are unable to advise this guarantee through SFMS.

We advise you to obtain, in your own interest, confirmation of genuineness of the above stated guarantee from us by contacting us on the address below:

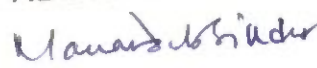
RBL Bank Limited  
 Global Trade Services  
 One Indiabulls Centre, Tower 2B, 20th Floor,  
 841, Senapati Bapat Marg, Lower Parel, Mumbai – 400013.  
 Tel: 022-48809303  
 E-mail: tfu@rblbank.com & tfsolutions@rblbank.com

For RBL Bank Limited

Name:   
 Designation: ARPITA PRAMANIK  
 Emp. Code: 4212

Enclosure: As above.

For RBL BANK LTD.

  
 Authorised Signatory  
 MANAS DEB SIKDER  
 Emp. Code : 05225

[www.rblbank.com](http://www.rblbank.com)

**RBL Bank Ltd.**

Branch Office : Thapar House, 25, Brabourne Road, 1st Floor, Kolkata - 700001.  
 Registered Office : 1st Lane, Shahupuri, Kolhapur - 416001, India | Tel.: +91 2316650214 | Fax : +91 2312657386  
 CIN : L65191PN1943PLC007308 . E-mail: customercare@rblbank.com





পশ্চিমবঙ্গ পশ্চিম বঙ্গাল WEST BENGAL

AC 534199

Bank Guarantee No	: PBGI01002000021
BG Amount	: Rs.2,89,368/- (Rupees Two Lakh Eighty Nine Thousand Three Hundred Sixty Eight Only)
BG Issue Date	: January 10, 2020
BG Expiry Date	: September 04, 2020
BG Claim Expiry Date	: September 04, 2020

Bank Guarantee No. PBGI01002000021  
BG Issue Date: January 10, 2020

Page 1 of 5

For RBL BANK LTD.

*Arpita*  
Authorised Signatory  
ARPITA PRAMANIK  
Emp. Code: 4212

For RBL BANK LTD.

*Manas Deb SIKDER*  
Authorised Signatory  
MANAS DEB SIKDER  
Emp. Code : 05225

61635

100/- (Rupee One Hundred Only)  
LICENSED STAMP VENDOR  
K. MUKHERJEE  
S. India Exchange House  
BANGALORE

RBL BANK LTD.  
THAPAR HOUSE BRANCH  
KOLKATA-700 001

20 NOV 2019



## BANK GUARANTEE

To,  
DIRECTOR,  
STATE URBAN DEVELOPMENT AGENCY,  
ILGUS BHAWAN, HC BLOCK,  
SECTOR-III, BIDHANNAGAR,  
KOLKATA- 700106.

THIS DEED OF GUARANTEE is executed on this 10<sup>th</sup> day of January, 2020 at The RBL Bank Ltd., a Company incorporated and registered under the Indian companies act, 1913 and deemed to exist within the companies Act 1956, and governed by the Banking Regulation Act, 1949 and having its registered office at 1<sup>st</sup> Lane, Shahupuri, Kolhapur- 416001, Maharashtra, and its corporate office at One India Bulls Centre, Tower-2, 6<sup>th</sup> Floor, 841, Senapati Bapat Marg, Lower Parel (W), Mumbai- 400013, India and having one of its Branch Office at RBL BANK LTD., Thapar House, 1st Floor, 25, Brabourne Road, Kolkata- 700001 (hereinafter referred to as "the Bank").

### IN FAVOUR OF:

State Urban Development Agency, Urban Development and Municipal Affairs Department, Government of West Bengal (hereinafter referred to as the "Authority" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and permitted assigns)

### WHEREAS,

A. We understand that the Authority have entered into a contract SUDA-479 /2019/6255 dated September 4, 2019 ("Contract") with PricewaterhouseCoopers Private Limited, having Corporate Identity Number or CIN: U74140WB1983PTC036093, and having its registered office at Plot No. Y-14, Block-EP, Sector-V, Salt Lake, Kolkata - 700091 ("PwC"/ "Consultant"), pursuant to the project involving selection of "Transaction Advisors for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators for the Cluster No.8: Kalyani, Gayeshpur, Halishahar, Haringhata, and Kachrapara Municipalities" ("Project").

B. We understand that the Contract requires the Consultant to furnish a Performance Bank Guarantee to the Authority in a sum of Rs.2,89,368/- (Rupees Two Lakh Eighty Nine Thousand Three Hundred Sixty Eight Only) ("Guarantee Amount"), which is equivalent to 10% of the contract value, to secure its obligation for providing the consultancy services for a period of twelve (12) months from the date of signing of the aforementioned Contract and amendments received thereafter.

C. We, RBL BANK LTD, through our Branch at RBL BANK LTD., Thapar House, 1st Floor, 25, Brabourne Road, Kolkata- 700001 have agreed to furnish this Bank Guarantee by way of Performance Bank Guarantee.

For RBL BANK LTD.

*Arpita*

Authorised Signatory

ARPITA PRAMANIK  
Emp. Code: 4212

For RBL BANK LTD.

*Manas Deb Sarker*

Authorised Signatory  
MANAS DEB SIKDER  
Emp. Code : 05225

Page 2 of 5

Bank Guarantee No. PBGI01002000021  
BG Issue Date: January 10, 2020



NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby expressly, irrevocably and unreservedly undertake and guarantee the due and faithful performance of the Consultant's obligations during the Contract period, under and in accordance with the Contract, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, contest or protest, and without any reference to the Consultant, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.
2. A letter from the Authority, under the hand of an officer not below the rank of Manager has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Contract shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Consultant is in default of due and faithful performance of its obligations during the Contract period and its decision that the Consultant is in default shall be final, and binding on the Bank, notwithstanding any differences between the Authority and the Consultant, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Consultant for any reason whatsoever.
3. Notwithstanding any right, the Consultant may have directly against the Authority or any disputes raised by the Consultant or any suit or proceedings pending in any competent Indian court or before arbitration tribunal, a written demand by the Authority shall be conclusive evidence to the Bank that such payment is payable under the terms of the Contract and shall be binding in all respects.
4. In order to give effect to this Bank Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Consultant and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Bank Guarantee. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Consultant before presenting to the Bank its demand under this Bank Guarantee.
5. This Bank Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Contract or for the fulfilment, compliance and/or performance of all or any of the obligations of the Consultant under the Contract.
6. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Bank Guarantee is restricted to the Guarantee Amount and this Bank Guarantee will remain in force for the period specified in Paragraph 7 below, and unless a demand or claim in writing is made within such time period specified in Paragraph 7, all rights of the Authority under this Bank Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.

Bank Guarantee No. PBGI01002000021  
BG Issue Date: January 10, 2020

For RBL BANK LTD.

*Arpita*  
Authorised Signatory  
ARPITA PRAMANIK  
Emp. Code: 4212

For RBL BANK LTD.

*Manas Deb SIKDER*  
Authorised Signatory  
Page 3 of 5  
MANAS DEB SIKDER  
Emp. Code : 05225



7. This Bank Guarantee shall cease to be in full force and effect till the subsistence of the Contract or till September 04, 2020. whichever is earlier We, the Bank, agree and undertake not to revoke this Bank Guarantee before the same is discharged in writing by the Authority or till the expiry of this Bank Guarantee i.e. up to September 04, 2020, whichever is earlier.

8. The Bank undertakes not to revoke this Bank Guarantee during its currency, except with the previous express consent of the Authority in writing and declares that it has the power to issue this Bank Guarantee and the undersigned has full powers to do so on behalf of the Bank.

9. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred Branch, which shall be deemed to have been duly authorised to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive provided the same is received by the Bank on or before September 04, 2020.

10. This Guarantee shall come into force with immediate effect and shall remain in force and effect for 12 months from the date of signing of the Contract i.e. September 04, 2020, or until it is released earlier by the Authority pursuant to the provisions of the Contract.

11. Payment by the Bank to you, the Authority, will be made within seven (7) working days from receipt of your written request received by us on or before September 04, 2020, making reference to this Bank Guarantee and on demand.

12. This guarantee is non-assignable and non-transferable.

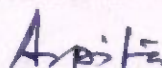
NOTWITHSTANDING ANYTHING CONTAINED HEREIN ABOVE:

I. Our liability under this bank guarantee shall not exceed Rs.2,89,368/- (Rupees Two Lakh Eighty Nine Thousand Three Hundred Sixty Eight Only).

II. This bank guarantee shall be valid up to September 04, 2020.

III. The Bank is liable to pay the Guarantee Amount or any part thereof under this Bank Guarantee only if you, the Authority serve upon us and we receive a written claim or demand and which should be received by us, on or before September 04, 2020 where after it ceases to be in effect in all respects whether or not the original bank guarantee is returned to the Bank.

For RBL BANK LTD.

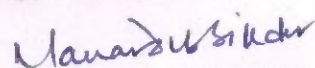


Authorised Signatory

ARPITA PRAMANIK

Emp. Code: 4212

For RBL BANK LTD.



Authorised Signatory

MANAS DEB SIKDER

Emp. Code : 05225

Bank Guarantee No. PBGI01002000021

BG Issue Date: January 10, 2020

In Witness Where Of The Bank Through Its Authorized Officer, Has Set Its Hand And Stamp  
On This January 10, 2020 At Kolkata.

For RBL Bank Limited

For RBL Bank Limited

*Arpita*

Authorized Signatory  
Sign / Emp No. ARPITA PRAMANIK  
Emp. Code: 4212

*Manas Deb Sikder*

Authorized Signatory  
Sign / Emp No. MANAS DEB SIKDER  
Emp. Code : 05225



**CONTRACT FOR CONSULTANT'S SERVICES**

**Project Name: "APPOINTMENT OF TRANSACTION ADVISOR for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators"**

**Project Ref. Cluster 8**

**Memo No. SUDA-478/2019/6254 Dt: 04.09.2019  
(For Cluster No.8: Kalyani, Gayespur, Halisahar, Haringhata and Kanchrapara Municipalities)**

**Memorandum of Agreement for providing service for "Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators"**

**Between**

**State Urban Development Agency (STATE URBAN DEVELOPMENT AGENCY),  
Department of Urban Development & Municipal Affairs, Government of West Bengal**

ILGUS Bhawan, HC Block, Sector-III, Bidhannagar, Kolkata - 700 106

**and**

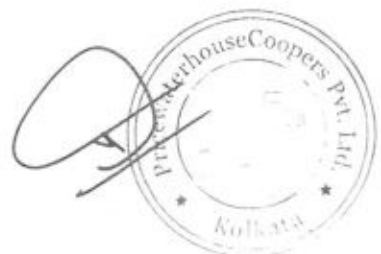
**PricewaterhouseCoopers Private Limited,**

Plot Nos 56 & 57, Block DN -57, Sector V, Salt Lake, Kolkata 700 091

**Dated: 04.09.2019**



**Director**  
State Urban Development Agency





পশ্চিমবঙ্গ পশ্চিম বঙ্গাল WEST BENGAL

Dated: 04-09-2019

AC 029193

MEMORANDUM OF AGREEMENT

This MEMORANDUM OF AGREEMENT is made on this Fourth day of September 2019

BETWEEN

the State Urban Development Agency, Urban Development and Municipal Affairs Department, Government of West Bengal acting through the Director (hereinafter referred to as the "Authority") which expression shall where the context so admits, includes his successors in office and assigns on the One Part,

AND

PricewaterhouseCoopers Private Limited, a Private Limited Company registered under Companies Act 1956 with Corporate Identity Number or CIN: U74140WB1983PTC036093 and having its registered office at Plot Nos 56 & 57, Block DN -57, Sector V, Salt Lake, Kolkata 700091 authorized signatory Yogesh Daruka (hereinafter called the "Consultants") which expression shall where the context so admits, includes his successors in office and assigns on the Other Part.

WHEREAS

(A) STATE URBAN DEVELOPMENT AGENCY had invited tenders for empanelled transaction advisor firms, enlisted by the Finance Department (PPP cell), Government of

2  
Director  
State Urban Development Agency

Yogesh Daruka  
PricewaterhouseCoopers Pvt. Ltd.  
Kolkata



নং- ১৭৬ তাং- ০২/৭/১৭ মূল্য- ১৮৮

ক্রেতার নাম ও সাং.....  
স্ট্যাম্প ভেডার স্বাক্ষর.....  
বিধান নগর (সল্ট লেক সিটি) এ.ডি.এম.আর.ও.  
নোট স্ট্যাম্প করা তাং.....  
ঢালান নং.....মোট কত টাকা খরিদ.....  
ফ্রিজারী-বারাকপুর, ভেডার-মিতা দত্ত

STATE URBAN DEVELOPMENT AGENCY  
Ilgus Bhaban, H.C. Block, Sector-III,  
Salt Lake City, Kolkata- 700 108

21 AUG 2019

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West Bengal, vide no.3738 F(Y) dated 11-06-2018 for Appointment of Transaction Advisor for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers and Operators, through No. STATE URBAN DEVELOPMENT AGENCY-227/2018/1617, dated 31.12.2018 and subsequently revised through RFP No. STATE URBAN DEVELOPMENT AGENCY-227/2018/1760 dated 18.01.2019 and subsequent corrigendum No. STATE URBAN DEVELOPMENT AGENCY -227/2018/1796 dated 25.01.2019 (hereinafter called the "services"). Subsequently, STATE URBAN DEVELOPMENT AGENCY as per approval of Finance Department decided to award all subsequent clusters to the interested empaneled transaction advisor firms based on price discovered during the aforementioned first round of bid process;

(B) **M/s PricewaterhouseCoopers Private Limited**, Plot Nos 56 & 57, Block DN -57, Sector V, Salt Lake, Kolkata 700091 being one of the empaneled transaction advisors evinced interest to undertake Cluster No.8: Kalyani, Gayespur, Halisahar, Haringhata and Kanchrapara Municipalities and have agreed to provide the services for a consideration of **Rs. 28,93,684/-** (Rs. Twenty Eight Lakh Ninety Three Thousand Six hundred and Eighty Four only) by entering into the contract;

(C) the Authority, on acceptance of the aforesaid proposals of the Consultant, and after receiving necessary approval from Finance Department, Government of West Bengal, vide U.O. No. Group-T/2019-2020/0363 dated 29.07.2019, awarded the Consultancy to the Consultant vide its Letter of Award vide no. STATE URBAN DEVELOPMENT AGENCY-227/2018 (Pt/1899 dated 12.02.2019 (the "**LETTER OF ASSOCIATION**"); and

(D) in pursuance of the LETTER OF ASSOCIATION, the parties have agreed to enter into this Agreement.

NOW THEREFORE the parties hereto hereby agree as follows: -

The following documents attached here to (Schedule A and B) shall be deemed to form an integral part of this Agreement:

**Schedule-A:**

1. Main RFP (Annexure – 1)
2. Revised RFP (including the TORs) (Annexure -2)
3. RFP Corrigendum (Annexure -3)
4. LETTER OF ASSOCIATION. (Annexure-4)

**Schedule-B:**

  
**Director**  
State Urban Development Agency






1. Appendix A: COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF AGREEMENT
2. Appendix B: Terms of Reference
3. Appendix C: Key personnel details
4. Appendix D: Time Schedule for Deliverables
5. Appendix E: Working arrangement and items to be provided by STATE URBAN DEVELOPMENT AGENCY
6. Appendix F: Price
7. Appendix G: Payment schedule/arrangement
8. Appendix-H: OBLIGATIONS OF THE CONSULTANT AND AUTHORITY
9. Appendix-I: FAIRNESS AND GOOD FAITH

The mutual rights and obligations of the Authority and the Consultants are set forth in this Agreement; in particular:

- (a) The Consultant shall carry out the Services in accordance with the provisions of the Agreement; and
- (b) The Authority shall make payments to the Consultant in accordance with the provisions of the Agreement.

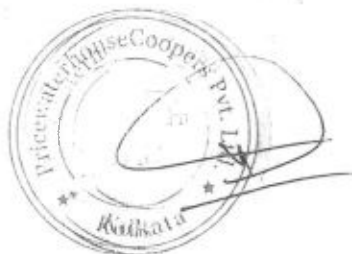
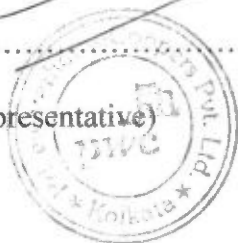
**IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be signed in their respective names as on the day and the year written above.**

FOR AND ON BEHALF OF State Urban Development Agency, Urban Development and Municipal Affairs Department, Government of West Bengal

By .....  
  
 Director  
 (Authorised Representative)  
 State Urban Development Agency

FOR AND ON BEHALF OF  
 (PRICEWATERHOUSE COOPERS PRIVATE LIMITED)

By .....  
  
 (Authorised Representative)



  
 Director  
 State Urban Development Agency

**Witnesses**

1)

Santanu Mukherjee - b-j  
Garima Singh      Garima Singh

2)

CONSULTANT

STATE URBAN DEVELOPMENT AGENCY

  
**Director**  
State Urban Development Agency





## **CONDITIONS OF AGREEMENT**

### **1. GENERAL PROVISIONS**

#### **1.1 Definitions:**

Unless the context otherwise requires, the following term whenever used in this Agreement have following meanings:

- a) "Applicable Law" means the laws and any other instruments having the force of law in the India and the State of West Bengal as they may be issued and in force from time to time;
- b) "Agreement" means the Agreement signed by the Parties, together with all documents/ Appendices attached hereto and includes all modifications made in term of the Provisions of Clause 2 hereof;
- c) "Affiliate(s)" means an individual or an entity that directly or indirectly controls, is controlled by, or is under common control with the Consultant.
- d) "Authority" means "State Urban Development Agency, Urban Development and Municipal Affairs Department, Government of West Bengal";
- e) "Consultant" means and includes sub-consultant and their Personnel, if any, engaged for carrying out of Services under this Agreement;
- f) "Currency" means the Indian Rupees;
- g) "Key personnel" means the personnel referred to in Clause 4.
- h) "Personnel" means persons hired by the Consultants or by any sub-consultant as employees and assigned to the performance of the Services or any part thereof;
- i) "Party" means the Authority or the Consultants, as the case may be, and Parties means both of them;
- j) "Services" shall have the meaning ascribed to it in the RFP and *Term of Reference (TOR)* as set forth in APPENDIX-B hereto;

#### **1.2 Law Governing Agreement**

This Agreement, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

  
Director  
State Urban Development Agency



### 1.3 Language

This Agreement has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Agreement.

### 1.4 Headings

The Headings shall not limit, alter or affect the meaning of this Agreement.

### 1.5 Notices

- 1.5.1 Any notice, request or consent required or permitted to be given or made pursuant to this Agreement shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, speed post, Telegram, facsimile or email to such Party at the addresses specified hereunder: -

Authority:

[..........].

Director  
State Urban Development Agency

Attention: Debarati Dutta Gupta

Phone

E-mail:

Facsimile:

Consultants: 

Attention: Yogesh Daruka

E-mail: yogesh.daruka@in.pwc.com

Telex: + 9133 23572754, 44044288

Facsimile: +9830110790

[Note: Fill in the blanks]

- 1.5.2 Notice will be deemed to be effective as follows:

  
Director  
State Urban Development Agency





The notice shall be deemed to be effective in the manner and at time as specified as follows:

- (a) In the case of personal delivery, speed post or registered mail, on delivery;
- (b) In the case of telexes, telegrams and facsimiles 24 hours following confirmed transmission;

**1.6 Location:**

The Services shall be performed in consultation with State Urban Development Agency, West Bengal to the Urban Local Bodies falling under cluster in State of West Bengal. However, it is not be mandatory for the key personnel of the Consultants to be stationed at the Authority office though it is preferable that the Transaction Advisor should have office setup at Kolkata for ease of interaction and they should be readily available.

**1.7 Authorised Representatives**

Any action required or permitted to be taken, and any document required or permitted to be executed under this Agreement by the Authority or the Consultants may be taken or executed by the officials as under:

For the Authority: Debarati Dutta Gupta

State Urban Development Agency (STATE URBAN DEVELOPMENT AGENCY), Department of Urban Development & Municipal Affairs, Government of West Bengal

ILGUS Bhawan, HC Block, Sector-III, Bidhannagar, Kolkata - 700 106 (West Bengal)..

Phone

E-mail:

Facsimile:

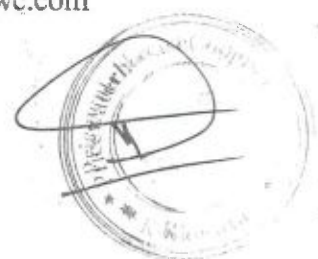
For the Consultant: Yogesh Daruka

PricewaterhouseCoopers Pvt. Ltd., DN 56 &57, Sector V, Salt Lake, Kolkata 700091 (West Bengal)

Phone: + 9133 23572754, 44044288

E-mail: [yogesh.daruka@in.pwc.com](mailto:yogesh.daruka@in.pwc.com)

  
Director  
State Urban Development Agency



### **1.8 Taxes and Duties**

The Consultants and the personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this Agreement and the Authority shall perform such duties in regard to the deduction of such tax as may be lawfully imposed. Irrespective of the aforesaid, the payment to be made hereunder by the Authority shall be made net off applicable GST (at prevailing rates notified under Applicable Laws from time to time), which Authority shall pay over and above the fee payable hereunder.

- 1.9 The conditions shown in letter of invitation, term of reference, and RFP, and financial offers shall be deemed to be incorporated and form part of this Agreement by reference.

## **Schedule-A**

1. Main RFP (Annexure – 1)
2. Revised RFP (including the TORs) (Annexure -2)
3. RFP Corrigendum (Annexure -3)
4. LETTER OF ASSOCIATION. (Annexure-4)

## **Schedule-B**

### **Appendix-A**

#### **1. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF AGREEMENT**

##### **1.1 Effectiveness of Agreement**

This Agreement shall come into force on the date of signing the Agreement.

##### **1.2 Commencement of Services**

  
Director  
State Urban Development Agency





The Consultants shall begin carrying out the Services within 15 days from the date of signing of the Agreement. If the Consultant fails to either acknowledge the LETTER OF ASSOCIATION or commence the assignment as specified herein, save and except for delays caused because of Force Majeure or Authority's breach, the LETTER OF ASSOCIATION shall stand automatically terminated, the earnest money of the bidder shall stand forfeited and in such a situation the authority shall be entitled to proceed with the matter as it deem fit.

### 1.3 Expiration of Agreement

Unless terminated earlier pursuant to Clause 1.9 hereof, the Agreement shall, subject to the conditions of Appendix-G of this Agreement and other terms hereof, expire upon completion of Services by the Consultant.

### 1.4 Liability of Parties

This Agreement contains all covenants, stipulations and provisions agreed by the parties. No agent or representative of either Party has authority to make, and the Parties shall not bound by or be liable for, any statement, representation, promise or Agreement not set forth herein.

### 1.5 Modification

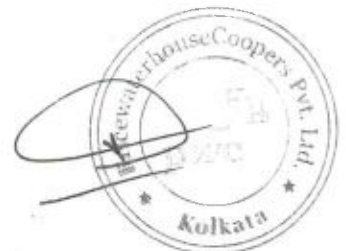
Modifications of the terms and conditions of this Agreement, including any modification of the scope of the Services, may be made only by written Agreement between the parties upon mutual consent.

### 1.6 Force Majeure

#### 1.6.1 Definition: -

- (a) For the purposes of this Agreement, "Force Majeure" means an event which is beyond the reasonable control of a party, and which makes a party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, war, riot, Civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockout or other industrial action are within the power of the party invoking force majeure to prevent, confiscation or any other action by Government agencies.
- (b) Force Majeure shall not include

  
**Director**  
State Urban Development Agency



- (i) Any event which is caused by the negligence or intentional action of a party or such party's sub-consultant or agent or employees, nor
- (ii) Any event which a diligent party could reasonably have been expected to both (a) take into account at the time of the conclusion of this Agreement and (b) avoid or overcome in the carrying out of its obligations hereunder.
- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

#### 1.6.2 No Breach of Agreement

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of or default under, this Agreement insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Agreement.

- a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.
- b) A Party affected by an event of Force Majeure shall notify the other party of such event as soon as possible, and in any event not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
- c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

#### 1.6.3 Consultation

Not later than thirty (30) days after the Consultants, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

#### 1.6.4 Extension of Time

Any period within which a Party shall, pursuant to this Agreement, complete any action or task, shall be extended for a period equal to the time during which such party was unable to perform such action as a result of Force

  
**Director**  
 State Urban Development Agency





Majeure.

#### 1.6.5 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultants shall be entitled to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of Services and in reactivating the Services after the end of such period.

#### 1.7 Suspension

The Authority by written notice of suspension to the Consultants, may suspend all payments to the Consultants hereunder, if the Consultants fail to perform any of their obligations under this Agreement, including the carrying out of the Services provided that such notice of suspension (i) shall specify the nature of the failure and (ii) shall request the Consultants to remedy such failure within a period not exceeding fifteen (15) days after receipt by the Consultants of such notice of suspension.

- 1.8 The Authority for any reasons beyond his reasonable control, may ask the Consultant to suspend whole or part of the Services for such time till the reasons are removed or settled. The extra time period of such duration may be granted as time extension on the original terms and conditions

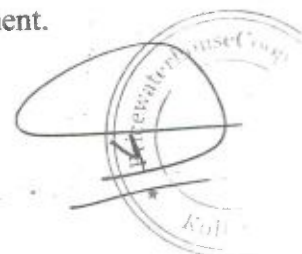
#### 1.9 Termination

##### 1.9.1 By the Authority

The Authority, may by not less than fifteen (15) days written notice of termination to the Consultant, such notice to be given after the occurrence of any of the events specified in paragraphs (a) to (c) of this Clause, terminate this Agreement:

- a) If the Consultants fail to remedy the failure in the performance of their obligations hereunder, as specified in a notice within fifteen (15) days of receipt of such notice of suspension or within such further period as the Authority may have subsequently approved in writing;
- e) If as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
- c) If the Consultants fails to provide Services as per Agreement.

  
**Director**  
State Urban Development Agency



1.9.2 The Consultant may terminate this Agreement, or any particular Services, immediately upon written notice to the Authority if the Consultant reasonably determines that it can no longer provide the Services in accordance with applicable laws or professional obligations. In that case the consultant shall give a notice 30 days before of such termination to the Authority.

1.9.3 Authority, in its sole discretion and for any reason whatsoever, may terminate this Agreement, after giving 15 days of notice to the Consultant..

1.9.4 Cessation of Rights and Obligations

Upon termination of this Agreement pursuant to *Clauses 1.2 or 1.9* hereof, or upon expiration of this Agreement pursuant to concerned provision of this Agreement hereof, all rights and obligations of the Parties hereunder shall cease, except:


- (i) Such rights and obligations as may have accrued on the date of termination or expiration,
- (ii) The obligation of confidentiality set forth in concerned of this Agreement hereof, and
- (v) Any right, which a party may have under the Applicable Law.

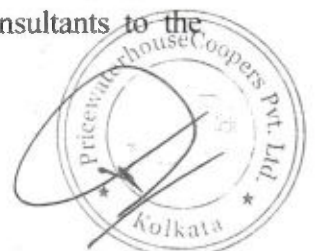
1.9.5 Cessation of Services

Upon termination of this Agreement by notice of either to the other pursuant to Clauses 1.9.1 or 1.9.2 of this Agreement hereof, the Consultants shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum with respect to documents prepared by the Consultants and equipment and materials furnished by the Authority, the Consultants shall proceed as provided, respectively, by concerned provision of this Agreement hereof.

1.9.6 Payment upon Termination

Upon termination of this Agreement pursuant to Clauses 1.9.1 or 1.9.2 of this Agreement hereof, the Authority shall make the payment of Consultant Fee pursuant to Appendix-G of this Agreement hereof for Services performed prior to the effective date of termination to the Consultants (after offsetting against these payments any amount that may be due from the Consultants to the

  
Director  
State Urban ...



Authority).

#### 1.9.7 Disputes about Events of Termination

If Consultant disputes whether an event specified in paragraphs (a) to (c) Clause 1.9.1 of this Agreement has occurred, he may within forty five (45) days after receipt of notice of termination from the employer, refer the matter to arbitration under this Agreement.

## Appendix-B

### Terms of Reference (TOR) for Transaction Adviser

#### (1) Introduction

Government of West Bengal has taken several steps/initiatives for making all the cities Clean, Green and Beautiful with special emphasis on management of Solid Wastes in Municipal Towns of the State. One of the obligatory functions of the Municipal Bodies is to remove solid waste from the cities under Sections 63, 95B, 260, 273 of the West Bengal Municipal Act, 1993 and corresponding provisions of the statute governing Municipal Corporations in West Bengal. A number of initiatives have been taken by the Urban Development & Municipal Affairs Department to ensure that solid waste are collected by the Municipal Bodies and disposed of scientifically by them. Under Mission Nirmal Bangla, a lot of equipment *e.g.* garbage bins, compactors, hydraulic tippers and other vehicles, community bins to Municipal Bodies to assist them in systematic collection of garbage from individual holdings, their transportation and stacking before disposal. Land has also been provided through inter departmental transfer to municipal bodies to set up dumping ground cum solid waste processing plants. In some cases these bodies have been permitted to purchase private land for setting up these facilities. The municipal bodies are required to collect waste from individual holdings systematically and transport them regularly to the solid waste disposal facility and get them recycled/processed scientifically. Efforts has been taken by some municipalities to collect waste and process them to the best of their abilities. It is, however, a fact that most municipal bodies do not have the technical capability, financial capacity and managerial competence to handle disposal of solid waste in a scientific manner. As a result, in spite of best intentions and substantial investments, these efforts have not resulted in significant improvement of situation.

In the light of importance given to scientific collection and disposal of solid waste, a large number of legislations and guidelines have been issued by different authorities from time to time. Some of these are:

- 1) Solid Waste Management Rules 2016 framed by Government of India
- 2) Policy and Strategy on Solid Waste Management for Urban Areas of West Bengal



- made in 2017
- 3) Plastics Waste Management Rules 2016 framed by Government of India
  - 4) Policy and Strategy on Plastics Waste Management for Urban Areas of West Bengal made in 2017
  - 5) Amendment of the West Bengal Municipal Act 1993 incorporating the provisions for banning using plastic bags below 50 microns.
  - 6) State Government Order to all the Urban Local Bodies to regularly remove Solid Wastes from all the Hospitals in their jurisdiction and accordingly make special arrangement for removal of solid waste generated at Hospital.
  - 7) Guideline of Ministry of Housing & Urban Affairs, Government of India on Implementation of Solid Waste Management by Bulk Solid Waste Generators.

The present state of solid waste disposal in urban areas involves awareness generation among the population, expectation of segregation of source, door to door collection by the municipal bodies, intermediate storage of such collected waste, segregation at intermediate storage points, ultimate transportation to the disposal ground and segregation, recycling, processing (Bio-gas, RDF, compost) and finally landfill with the residue. While the municipalities in many cases are able to carry out the first three functions reasonably and effectively given appropriate support, the final steps, viz. collection of solid waste from intermediate transit points to their final processing and landfill may not be effectively carried out by the municipal bodies at their current level of resources and competence.


The Urban Development & Municipal Affairs (UD&MA) Department through Kolkata Metropolitan Development Authority (KMDA) and Municipal Engineering Directorate (MED) are developing landfill sites and solid waste processing facilities (compost plants and Biogas energy plants) in different municipalities based on this model.

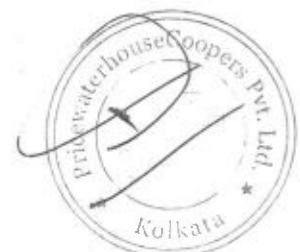
However, segregation of solid waste, their processing to either to produce compost or Refuse Derived Fuel (RDF) or Bio-gas, their marketing, recycling of waste processing of construction and demolition waste, a remediation of legacy waste, management of landfill site, all of these are technically and managerially complex functions. The experience across cities in India and abroad shows that these functions are best carried out by technically and financially competent agencies. Such agencies are seen to be running successful plants in many Indian cities e.g. Hyderabad, Bangalore, Panaji, Indore, Bhopal, Surat etc.

In this light, State Government has decided to appoint **Transaction Advisor for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management** for selection of Developers and Operators

## (2) Objectives

The objective of engaging a Transaction Advisor is for **Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management** for selection of Developers and Operators.

  
Director  
State Urban Development Agency



### (3) Scope of Work/Description of Task

3.1. The broad responsibilities of the Transaction Adviser are summarized as follows:

- a) Carry out **feasibility study of the project** in all respect including techno economic viability of existing cluster /proposed cluster of municipal bodies.
- b) Preparation of **Detailed Feasibility Report** for Integrated Solid Waste Management for the municipal bodies involved in this project. The Feasibility Report must cover all ambits of municipal solid waste management from door to door collection, primary/secondary transportation (if required), requirement of transfer stations (if any), processing facility and disposal of inert. Costing of this will also be included in the report.
- c) Drafting of **Request for Proposal (RFP)** for selection of competent agency for carriage (as required) and processing of waste for the cluster.
- d) Assisting Solid Waste Management (SWM) Cell in managing the bid process including **evaluation of bids** and for selection of successful agency for the cluster.
- e) **Drafting of Tripartite Agreement** between Municipal Bodies in the Cluster, the SWM Cell of the Department and the Selected Agency.

3.2. The Transaction Advisor shall keep the following in view in the discharge of the above responsibilities:

- a) Consultation with Urban Development and Municipal Affairs Department, STATE URBAN DEVELOPMENT AGENCY, URBAN LOCAL BODIES, Development Authorities and other stakeholders to identify and conceptualize/develop projects for Solid Waste Management through cluster/standalone approach.
- b) Detailed Technical Feasibility Report should be developed from the primary collection stage up to the final processing and disposal of all types of solid waste. A comprehensive Technical Feasibility Report indicating each stages of waste management i.e. primary Door to Door collection of segregated waste, mode of transportation, setting up of transfer station wherever feasible and disposal of Solid Waste as per provision of SWM Rules, 2016 are to be followed.
- c) The Detailed Project Report for all ongoing projects should incorporate all capital investment already made and existing infrastructure should be considered optimally.
- d) The Detailed Technical Feasibility Report should be flexible with regard to technology for processing of waste and sanitary landfill. Transaction Advisors should provide the broad contours of the project indicating performance parameters considering land constraints and other limitations, if any, within which concessionaires are free and flexible to choose technology of choice.

  
**Director**  
State Urban Development Agency



- e) It is preferable that the Transaction Advisor should have office setup at Kolkata for ease of interaction and should be available as and when required by the Authority.
- f) Projects should be structured under appropriate Public Private Partnership mode to enable optimum utilization of the investments already made in Solid Waste Management projects. Innovative business and commercial practices such as commercial sale of products, levy of user charges/ fee etc., as appropriate under the applicable laws should be incorporated in the Detailed Technical Feasibility Report.
- g) Transaction Advisor is to undertake visits to acclaim projects in other states and study best practices. In the financial proposal Transaction Advisor may incorporate the travel expenses and related incidental charges for visit to other States to see the best practices considering visit at least in two such cities with two experts from the team.

3.3. The Transaction Advisor shall prepare bid documents (RFP, Concession Agreement *etc.*) and manage bid process upto signing of Concession Agreement; while doing so the following objectives shall have to be addressed.

- a) Optimum utilization of existing infrastructure of Solid Wastes in the URBAN LOCAL BODIES and in conformity with policy of Government of West Bengal.
- b) Optimum utilization of land for processing plant and sanitary landfill site clubbing URBAN LOCAL BODIES in clusters to make the project financially and technically feasible.
- c) While undertaking the feasibility study, the proposed cluster sites should re-visited for suitable modification, if necessary. For finalization of cluster, STATE URBAN DEVELOPMENT AGENCY should be consulted. The cluster-wise Detailed Feasibility Report, Request for Proposal (concession Request for Proposal for implementation) may be prepared accordingly.
- d) Collection, segregation and transportation of wastes shall be the primary responsibility of URBAN LOCAL BODIES. However the Transaction Advisor will give a comprehensive and holistic mechanism in consultation with the URBAN LOCAL BODIES regarding collection at door step to final disposal.
- e) Incentive on performance for all stakeholders.
- f) A flow chart for disposal of all types of wastes from source up to the processing plant/Landfill to be developed. A clear pictorial representation of the plan should be developed by the TA itself in their report.

  
**Director**  
**State Urban Development Agency**





- g) Necessary clearances to be obtained from the Department of Environment, West Bengal Pollution Control Board and other regulatory bodies, on behalf of operating agency as and when required as per extent of rules, statutory provisions etc. pertaining to the matter.
  - i. Necessary clearances need to be secured by the Concessionaire with assistance from STATE URBAN DEVELOPMENT AGENCY/ other relevant Government Agencies
  - ii. Transaction Advisors are only required to list and specify the clearances required for executing the proposed projects in the given clusters
- h) New technology (i.e. the technology to be adopted in adherence to SWM Rules, 2016) should be backed by necessary certificate/s (Necessary Certification means Pollution Clearance Certificate etc.) from the proper authority (Proper authority means Pollution Control Board and other regulatory authorities.).
- i) Effective Operation & Management System is to be for at least 20 years.
- j) Processing and disposal of Legacy waste and reclamation of land is to be incorporated.
- k) Land for processing plant and sanitary landfill site is to be identified by URBAN LOCAL BODY.
- l) Reclamation of existing Dumping Grounds, scientific development, beautification etc. of the Dumping Grounds.
- m) Segregation and processing of recyclable waste as per Solid Waste Management Rules, 2016 is to be ensured effectively.
- n) Scope of work should be customized on available field data and technology for each cluster/project.
- o) Implementation of effective and viable model based on national and international best practices.
- p) Proposal should be inclusive of institutional structures required for implementation of projects and operation & maintenance thereof with private sector financing.

  
 Director  
 State Urban Development Agency



- q) Key performance indicators to be identified. These are to be linked with schedule of payment to operating agencies.
- r) Principal objective: Achievement of 100 percent disposal and processing of incoming waste and waste as available in existing dumping site, and to maintain its sustainability.

**(4) Assignment for following Proposed Cluster:**

Cluster No.	Proposed URBAN LOCAL BODYs
8	Kalyani, Gayespur, Halisahar, Haringhata and Kanchrapara Municipalities

### Appendix-C

**Key Personnel Details:**

It is envisaged that the assignment will be undertaken by the team proposed by the Transaction Advisor at the time of submission their Bid documents as detailed below:

Sl No.	Position	Name of the Expert
1	Team Leader	Rahul Mallik
2	Solid Waste Management Specialist	Ayan Majumder
3	PPP Specialist	Rahul Singh
4	Financial Analyst	Anjan Kumar Roy
5	Legal Consultant	Santosh Pandey

### Appendix-D

  
 Director  
 State Urban Development Agency



### (1) Deliverables

Stage	Activity	Time Allocated *
Stage 1	Submission of the Inception Report	10 days from the date of commencement.
Stage 2	Submission of Draft Feasibility Report	45 days from the Stage 1
Stage 3	Submission of Final Feasibility Report along with action plan	10 days from approval of Stage 2
Stage 4	Submission of the Draft RFP for selection of Agency	20 days from approval of Stage 3
Stage 5	Submission of the Final RFP for selection of Agency	10 days from approval of Stage 4
Stage 6	Evaluation of the Tender Documents and recommendation for the Selected Agency	10 days from tender closing date
Stage 7	Getting the Concession Agreement signed by the selected Agency	10 days from Stage 6

A Fortnightly meeting will be held where the progress of the assignment will be reviewed against the progress submitted by the Transaction Advisor.

### Appendix-E

#### (1) Working arrangement:

The assignment will be contracted by Director, State Urban Development Agency, West Bengal. URBAN LOCAL BODY/s will nominate an officer to liaison with the Transaction Advisor Team.

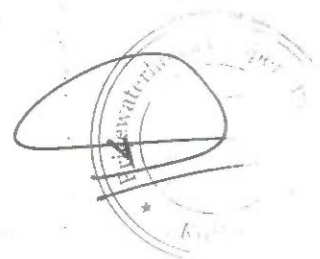
#### (2) Items to be provided by the STATE URBAN DEVELOPMENT AGENCY:

All the data will be provided by STATE URBAN DEVELOPMENT AGENCY and URBAN LOCAL BODY to the Transaction Advisor and for that Transaction Advisor should inform the requirement of requisite data to the office of STATE URBAN DEVELOPMENT AGENCY. However certain datas are to be collected by the Transaction Advisor during their Field Study if it is not readily available with STATE URBAN DEVELOPMENT AGENCY/ URBAN LOCAL BODY.

It is to say that with regards to topographical survey, geotechnical investigation, leachate quality analysis, ground & surface water quality analysis, waste characterization survey etc shall be under the scope of Transaction Advisor consultant where STATE URBAN DEVELOPMENT AGENCY/Kolkata Metropolitan Development Authority/Municipal Engineering Directorate will extend full support.

#### (3) Items to be provided by the Transaction Advisor:

  
**Director**  
State Urban Development Agency





The Transaction Advisor shall organize and provide for:

- Transportation and travelling requirement of their personnel for visit to URBAN LOCAL BODIES, designated sites and any other place for completion of the assignment
- Expenses towards accommodation for various visits mentioned above will also be borne by the Transaction Advisor.
- Any other expenses as required for completion of assignment.

### Appendix-F

The contract price of **Rs. 28,93,684/-** (Rupees Twenty Eight Lakh Ninety Three Thousand and Six hundred and Eighty Four only) shall remain fixed and firm during the period of contract excluding Goods and Service Tax. The Authority shall pay GST in the prevailing rate.

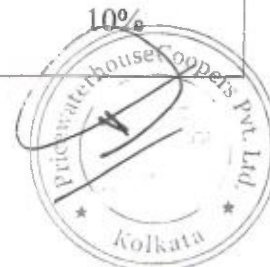
### Appendix-G

#### Payment Schedule/Arrangement

Stage	Details of stages	Percentage
Stage 1A	Submission of the Inception Report	5%
Stage 1B	Acceptance of Inception Report by the Authority within 7 working days from the date of submission	5%
Stage 2A	Submission of Draft Feasibility Report by the TA	5%
Stage 2B	Acceptance of Draft Feasibility Report, by the Authority within 7 working days from the date of submission	5%
Stage 3	Submission of Final Feasibility Report along with action plan by the TA within 7 working days from the date of submission of corrected draft from the Authority	5%
Stage 4A	Submission of Draft RFP by the Agency	5%
Stage 4B	Acceptance of Draft RFP by the Authority within 30 working days of submission	10%

  
Director

State Urban Development Agency

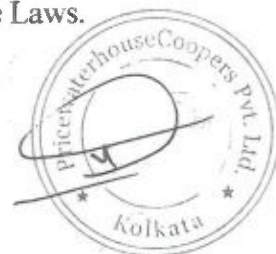


Stage 5A	Submission of the Final RFP for selection of Agency	10%
Stage 5B	Acceptance of the Final RFP by the Authority within 30 working days of submission	10%
Stage 6	Evaluation of the Tender Documents and recommendation for the Selected Agency	20%
Stage 7	Getting the Concession Agreement signed by the selected Agency	20%
	<b>TOTAL</b>	<b>100%</b>

**STATE URBAN DEVELOPMENT AGENCY shall review and monitor the progress of the assignment. On acceptance of the report against each milestone by the Director, STATE URBAN DEVELOPMENT AGENCY, payment will be released subject to deduction of taxes, as applicable.**

- (a) If the Agreement duration gets reduced due to Termination or any other reason that is not attributable to the Consultant, Consultant shall be entitled to:
- (i) the payment of the Consultant Fee for Services performed prior to the effective date of such termination (after offsetting against these payments any amount that may be due from the Consultants to the Authority); and
  - (ii) release of the performance security by the Authority to the Consultant.
- (b) Notwithstanding anything contrary contained in this Agreement, if project gets delayed beyond period of twelve (12) months from commencement date for any reason(s) not attributable to the Consultant, the Consultant shall be entitled to terminate the Agreement without any liability/cost thereof. Upon such exit, the Consultant shall be entitled to:
- (i) the payment of the Consultant Fee for Services performed prior to the effective date of such termination (after offsetting against these payments any amount that may be due from the Consultants to the Authority); and
  - (ii) release of the performance security by the Authority to the Consultant.
- (c) All payments made hereunder shall be net off and be paid by Authority along with applicable GST as per prevailing rates notified under Applicable Laws.

  
 Director  
 State Urban Development Agency



## Currency of Payment

Except as may be otherwise agreed between the Authority and the Consultants all payments under this Agreement shall be made in Indian Rupees only. The payments shall be made by Cheques / Demand Draft or electronic transfer to designated account of Consultant.

## Mode of Billing and Payment

The billing and payment in respect of Services shall be made as follows:

- (a) As soon as practicable and not later than the fifteen (15) days after the completion of each stage, during the period of Services, the Consultant shall submit to Authority in duplicate a bill for payment.
- (b) The Authority shall cause the payment to the Consultant periodically as given above within ten (10) days after the receipt by the Consultant's bills.
- (C) All running payments shall be treated as interim payments subject to adjustment on the finalization of Agreement.

## Recovery

Any sum falling due or any loss caused due to this Agreement shall be recoverable by the Authority from the Consultant's performance security and balance as if it were arrears of land revenue.

Performance Security means 10% of total Consultant Fee in the form of Bank Guarantee of any recognized bank in India in favour of the Authority to be submitted by the Consultant within 15 days from signing of the Agreement. Bank Guarantee should remain valid till the Agreement continues to be in force.

## Appendix-H

### OBLIGATIONS OF THE CONSULTANTS

#### 1.1 General

##### 1.1.1 Standard of Performance

The Consultants shall perform the Services and carry out their obligations hereunder with all due diligence and efficiency, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. The

  
Director  
State Urban Development Agency





Consultants shall always act, in respect of any matter relating to this Agreement or to the Services, as faithful advisers to the Authority, and shall at all times support and safeguard the Authority's legitimate interests in any dealings with Sub-consultants or Third Parties.

#### 1.1.2 Law Governing Services

The Consultants shall perform the Services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub-consultants, as well as any personnel of the Consultant and/or sub-consultants and agents, comply with the Applicable Law time being in force. The Authority shall advise the Consultants in writing of relevant local customs and the Consultants shall, after such notice, respect such customs.

#### 1.2 Conflict of Interests

##### 1.2.1 Consultants not to benefit from Commissions, discounts etc.

The remuneration of the Consultants pursuant to Appendix-G of this Agreement hereof shall constitute the Consultant's sole remuneration in connection with this Agreement or the Services and subject to relevant provision of this Agreement hereof, the Consultants shall not accept for their own benefit any commission, discount or similar payment in connection with activities pursuant to this Agreement or to the Services or in the discharge of their obligations hereunder, and the Consultants shall use their best efforts to ensure that any of the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.

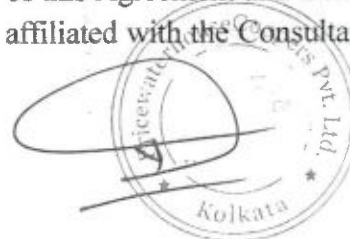
##### 1.2.2 Procurement Rules

If the Consultants, as part of the Services, have the responsibility of advising the Authority on the procurement of goods, works or services, the Consultants shall comply with any applicable procurement guidelines applicable in the State of West Bengal and shall at all times perform such responsibility in the best interest of the Authority. Any discounts or commissions obtained by the Consultants in the exercise of such procurement responsibility shall be for the account of the Authority.

##### 1.2.3 Consultants and Affiliates not to engage in certain activities

The Consultants agree that, during the term of this Agreement and after its termination, the Consultants and any entity affiliated with the Consultants,

  
Director  
State Urban Development Agency



as well as any sub-consultant and any entity affiliated with such sub-consultant, shall be disqualified from providing goods, works or Services (other than the Services and any continuation thereof) for any Project resulting to the Services.

#### 1.2.4 Prohibition of Conflicting Activities

The Consultants shall not engage and shall cause their personnel as well as Sub-consultants and their Personnel not to engage, either directly or indirectly during the term of this Agreement, any business or professional activities in the State of West Bengal, which would conflict, with the activities assigned to them under this Agreement.

### 1.3 Confidentiality

The Consultants, their sub-consultants and the personnel of either of them shall not, either during the term or within 6 (six) months after the expiration of this Agreement, disclose any proprietary or confidential information relating to the project, the Services, this Agreement or the Authority's business or operations without the prior written consent of the Authority.

### 1.4 Liability of the Consultants

1.4.1 Subject to additional provisions, if any, set forth in this Agreement, Consultant's liability under this Agreement shall be as provided by the Applicable Law.

1.4.2 The Consultant shall, subject to the limitation specified provisions of this agreement, be liable to the Authority for any direct loss or damage accrued or likely to accrue due to deficiency in Services rendered by it.

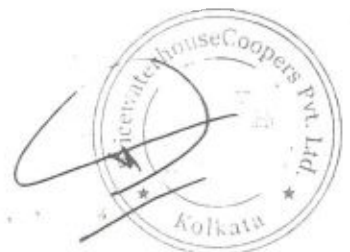
1.4.3 The Parties hereto agree that in case of negligence or willful misconduct on the part of the Consultant or on the part of any person or firm acting on behalf of the Consultant in carrying out the Services, the Consultant, with respect to damage caused to the Authority, shall not be liable to the Authority:

(i) for any indirect or consequential loss or damage; and

(ii) for any direct loss or damage that exceeds the Consultant Fee actually paid for the Services.

### 1.5 Accounting, Inspection and Auditing

  
Director  
State Urban Corporation



The Consultants (i) shall keep accurate and systematic accounts and records in respect of the Services, hereunder, in accordance with accepted accounting principles and in such form and detail as will clearly identify all relevant time charges and cost, and the bases thereof.

#### **1.6 Consultant's Actions requiring Authority's prior Approval**

The Consultants shall obtain the Authority's prior approval in writing before changing key personnel. The key personnel shall be available as per the requirement of fulfilment of Services. However, it shall not be mandatory for the key personnel of the Consultants to be stationed at the Authority location but will be available before the Authority as and when required.

#### **1.7 Reporting Obligations**

The Consultants shall submit to the Authority the reports and documents specified in the Terms of Reference as set forth in Appendix-B, and perform the Services as per terms set forth in the Terms of Reference.

Documents prepared by the Consultants to be the Property of the Authority. All plans, drawings, specifications, designs, reports, other documents and software prepared by the Consultants for the Authority under this Agreement shall become and remain the property of the Authority. The Consultants shall, not later than upon termination or expiration of this Agreement, deliver all such documents etc. to the Authority, together with a detailed inventory thereof. The Consultants may retain a copy of such documents and software.

The Authority shall constitute a Committee for periodic review of the documents/reports specified in the Terms of Reference as set forth in Appendix-B on a fortnightly basis.

### **OBLIGATIONS OF THE AUTHORITY**

#### **2. Assistance and Exemptions**

2.1. The Authority will assist to Consultant in grant of following from Government:

2.2. Provide the Consultants, the sub-consultants and Personnel with work permits and such other documents as shall be necessary to enable the Consultants, sub-Consultants and Personnel to perform the Services (if applicable);

2.3. Assist the Consultants, sub-Consultants and the Personnel employed by them for the Services from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity according to the Applicable Law;

2.4. Grant to the Consultants, any sub-Consultants and the Personnel of either of them the

  
**Director**  
**State Urban Development Agency**





privilege, pursuant to the Applicable Law, of bringing into State of West Bengal reasonable amount of currency for the purposes of the Services or use of the personnel and their dependent and of withdrawing any such amounts as may be earned therein by the Personnel in the execution of the Services;

2.5. The Authority shall nominate an officer to liaison with the Consultant.

2.6. The Authority shall provide all the data to the Consultant and for that Consultant should inform the requirement of requisite data to the office of the Consultant. However certain data are to be collected by the Consultant during their Field Study if it is not readily available with the Authority and the Authority will assist the Consultant in such endeavours. However, with regard to topographical survey, geotechnical investigation, leachate quality analysis, ground and surface water quality analysis, waste characterization survey etc shall be under the scope of Consultant to consult where the Authority will extend full support.

## **Appendix-I**

### **1. FAIRNESS AND GOOD FAITH**

#### **1.1. Good Faith**

The Parties undertake to act in good faith with respect to each other's rights under this Agreement and to adopt all reasonable measures to ensure the realization of the objectives of this Agreement.

#### **1.2. Operation of the Agreement**

The parties recognize that it is impractical in this Agreement to provide for every contingency which may arise during the life of the Agreement, and the parties hereby agree that it is their intention that this Agreement shall operate fairly as between them, and without detriment to the interest of either of them and that if during the term of this Agreement either party believes that this Agreement is operating unfairly, the parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but on failure to agree on any action pursuant to this clause shall give rise to a dispute subject to arbitration in accordance with terms hereof.

### **2. INTELLECTUAL PROPERTY RIGHTS**

  
Director  
State Urban Development Agency



The Consultant may use data, software, designs, utilities, tools, models, systems and other methodologies and know-how ("Materials") that the Consultants own in performing the Services. Notwithstanding the delivery of any Reports, the Consultants retain all intellectual property rights in the materials (including any improvements or knowledge developed while performing the Services), and in any working papers that Consultants compile and retain in connection with the Services (but not Authority Information reflected in them). Upon payment for the Services, the Authority may use any materials included in the Reports, as well as the Reports themselves as permitted by this Agreement.

### 3. INDEMNITY

To the fullest extent permitted by applicable law and professional regulations, the Authority shall indemnify the Consultants, against all claims by third parties (including the Authority's affiliates) and resulting liabilities, losses, damages, costs and expenses (including reasonable external and internal legal costs) arising out of the third party's use of or reliance on any Report disclosed to it by or through the Authority or at the Authority's request. The Authority shall have no obligation hereunder to the extent that the Consultant have specifically authorized, in writing, the third party's reliance on the Services.

### 4. MISCELLANEOUS

- a. This Agreement constitutes the entire agreement as to the Services and the other matters it covers, and supersedes all prior agreements, understandings and representations with respect thereto, including any confidentiality agreements previously delivered.
- b. Both the Parties may execute this Agreement (including TOR and RFP), as well as any modifications to it by electronic means and each of us may sign a different copy of the same document. Both of us must agree in writing to modify this Agreement or any Statement of Work hereunder.
- c. The Consultant shall be liable for defects, discrepancies and disorders etc. in works executed under his supervision.
- d. Both the Authority and Consultant represents that the person signing this Agreement and any Statement of Work hereunder on its behalf is expressly authorized to execute them and to bind each of us to their terms.
- e. Neither of the Parties may assign any of their rights, obligations or claims under this Agreement;
- f. If any provision of this Agreement (in whole or part) is held to be illegal, invalid or otherwise unenforceable, the other provisions shall remain in full force and effect;

  
Director  
State Urban Development Agency



- g. If there is any inconsistency between provisions in different parts of this Agreement, those parts shall have precedence as follows (unless expressly agreed otherwise): (a) the Cover Letter, (b) the applicable Statement of Work and any annexes thereto, (c) these General Terms and Conditions, and (d) other annexes to this Agreement;
- h. Neither of the Parties may use or reference the other's name, logos or trademarks without its prior written consent, provided that the Consultant may use the Authority's name publically to identify the Authority as a Authority in connection with specific Services or otherwise.

## **5. SETTLEMENT OF DISPUTES**

### **5.1. Amicable Settlement**

The parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Agreement or the interpretation thereof.

### **5.2 Dispute Redressal System**


- 5.2.1 In the event of any Dispute between the Parties, either Party may call upon [Director, State Urban Development Agency, Government of West Bengal] and the Senior Management of the Consultant or a substitute thereof for amicable settlement, and upon such reference, the said persons shall meet not later than 10 (ten) days from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 10 (ten) day period or the Dispute is not amicably settled within 15 (fifteen) days of the meeting or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 30 (thirty) days of the notice in writing or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions hereof.

#### **5.2.2 Arbitration:-**

Any Dispute which is not resolved amicably pursuant to resolution mechanism as provided in Clause above, shall be finally decided by reference to arbitration by an Arbitral Tribunal appointed in accordance with this clause, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996 (as amended from time to time). The place of such arbitration shall be at Kolkata and the language of arbitration proceedings shall be English.

The Arbitral Tribunal shall constitute of the sole arbitrator to be mutually appointed by parties.

This Agreement and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder.

  
Director  
State Urban Development Agency





### 5.3 Jurisdiction –

The contract has been entered within the State of West Bengal and its validity, construction, interpretation and legal effect shall be to the exclusive jurisdiction of the appropriate court in State of West Bengal.

*IN WITNESS THEREOF*, the parties hereto have caused this Agreement to be signed in their respective names of the day and year first above written.

FOR AND ON BEHALF OF THE AUTHORITY

BY

Authorised Representative **Director**  
State Urban Development Agency  
Witness:

FOR AND ON BEHALF OF THE CONSULTANTS

BY

Authorised Representative  
Witness:



Santanu Mukherjee  
Gaurima Singh

Gaurima Singh





Director, SUDA <wbsudadir@gmail.com>

## Requesting a meeting in presence of PS-UD of Nadia cluster ULBs- for TA

1 message

Antara Ray (IN) <antara.ray@pwc.com>

Tue, Nov 26, 2019 at 10:08 AM

To: wbsudadir@gmail.com, debarati.dattagupta@gmail.com

Cc: Ayan Majumder <am@ess.ind.in>, "Rupayan Dutta (IN)" <rupayan.dutta@pwc.com>

Dear Ma'am,

While we are working on the Cluster 8, 9 and 10 TFRs, we feel a meeting of all the ULBs in presence of the PS UD will help in freezing the mass balance for these clusters. In particular, we would like to address a two-pronged agenda at this meeting:

- 1) Finalising no. of decentralised locations for OWCs and biomethanation
- 2) Finalising the centralised SLF sites

Request if a date could be proposed next week for this.

Regards,  
Antara

Antara Ray  
PwC | Associate Director- Public Sector and Governance, GRID  
Mobile: +91 9674007555  
Email: antara.ray@pwc.com  
PricewaterhouseCoopers Private Limited  
Plot No. 56 & 57, Block DN, Sector-V, Salt Lake,  
Kolkata - 700091, West Bengal | India

AD(SM)  
SDF

EE,SLM  
PI. L  
26.11.19

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**CONTRACT FOR CONSULTANT'S SERVICES**

**Project Name: "APPOINTMENT OF TRANSACTION ADVISOR for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators"**

**Project Ref.No. STATE URBAN DEVELOPMENT AGENCY-227/2018/1617 Dated:  
31.12.2018**

**(For Cluster No.8: Kalyani, Gayespur, Halisahar, Haringhata and Kanchrapara  
Municipalities)**

**Memorandum of Agreement for providing service for "Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators"**

**Between**

**State Urban Development Agency (STATE URBAN DEVELOPMENT AGENCY),  
Department of Urban Development & Municipal Affairs, Government of West Bengal  
ILGUS Bhawan, HC Block, Sector-III, Bidhannagar, Kolkata - 700 106**

**and**

**PricewaterhouseCoopers Private Limited,**

**Plot Nos 56 & 57, Block DN -57, Sector V, Salt Lake, Kolkata 700 091**

**Dated: 27.08.2019**





## MEMORANDUM OF AGREEMENT

This MEMORANDUM OF AGREEMENT is made on this Twenty Seventh day of August, 2019

BETWEEN

the **State Urban Development Agency, Urban Development and Municipal Affairs Department, Government of West Bengal** acting through the Director (hereinafter referred to as the “**Authority**”) which expression shall where the context so admits, includes his successors in office and assigns on the One Part,

AND

**PricewaterhouseCoopers Private Limited**, a Private Limited Company registered under Companies Act 1956 with Corporate Identity Number or CIN: U74140WB1983PTC036093 and having its registered office at Plot Nos 56 & 57, Block DN -57, Sector V, Salt Lake, Kolkata 700091 authorized signatory Yogesh Daruka (hereinafter called the “**Consultants**”) which expression shall where the context so admits, includes his successors in office and assigns on the Other Part.

## WHEREAS

(A) STATE URBAN DEVELOPMENT AGENCY has invited tenders for empanelled transaction advisor firms, enlisted by the Finance Department (PPP cell), Government of West Bengal, vide no.3738 F(Y) dated 11-06-2018 for Appointment of Transaction Advisor for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers and Operators, through No. STATE URBAN DEVELOPMENT AGENCY-227/2018/1617, dated 31.12.2018 and subsequently revised through RFP No. STATE URBAN DEVELOPMENT AGENCY-227/2018/1760 dated 18.01.2019 and subsequent corrigendum No. STATE URBAN DEVELOPMENT AGENCY - 227/2018/1796 dated 25.01.2019 (hereinafter called the “**services**”); followed by

for a consideration of **Rs. 28,93,684/-** (Rs. Twenty Eight Lakh Ninety Three Thousand Six hundred and Eighty Four only) by entering into the contract;

(C) the Authority, on acceptance of the aforesaid proposals of the Consultant, awarded the Consultancy to the Consultant vide its Letter of Award vide no. STATE URBAN DEVELOPMENT AGENCY-227/2018/1899 dated 12.02.2019 (the "**LETTER OF ASSOCIATION**"); and

(D) in pursuance of the **LETTER OF ASSOCIATION**, the parties have agreed to enter into this Agreement.

NOW THEREFORE the parties hereto hereby agree as follows: -

The following documents attached here to (Schedule A and B) shall be deemed to form an integral part of this Agreement:

**Schedule-A:**

1. Main RFP
2. Revised RFP (including the TORs)
3. RFP Corrigendum
4. **LETTER OF ASSOCIATION**.

**Schedule-B:**

5. Appendix A: COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF AGREEMENT
6. Appendix B: Terms of Reference
7. Appendix C: Key personnel details
8. Appendix D: Time Schedule for Deliverables
9. Appendix E: Working arrangement and items to be provided by STATE URBAN DEVELOPMENT AGENCY
10. Appendix F: Price
11. Appendix G: Payment schedule/arrangement
12. Appendix-H: OBLIGATIONS OF THE CONSULTANT AND AUTHORITY
13. Appendix-I: FAIRNESS AND GOOD FAITH

The mutual rights and obligations of the Authority and the Consultants are set forth in this Agreement; in particular:

- (a) The Consultant shall carry out the Services in accordance with the provisions of the Agreement; and
- (b) The Authority shall make payments to the Consultant in accordance with the provisions of the Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be signed in their respective names as on the day and the year written above.

(Authorised Representative)

FOR AND ON BEHALF OF

(PRICEWATERHOUSE COOPERS PRIVATE LIMITED)

By.....

(Authorised Representative)

**Witnesses**

1)

2)

CONSULTANT

STATE URBAN DEVELOPMENT AGENCY



## **CONDITIONS OF AGREEMENT**

### **1. GENERAL PROVISIONS**

#### **1.1 Definitions:**

Unless the context otherwise requires, the following term whenever used in this Agreement have following meanings:

- a) "Applicable Law" means the laws and any other instruments having the force of law in the India and the State of West Bengal as they may be issued and in force from time to time;
- b) "Agreement" means the Agreement signed by the Parties, together with all documents/ Appendices attached hereto and includes all modifications made in term of the Provisions of Clause 2 hereof;
- c) "Affiliate(s)" means an individual or an entity that directly or indirectly controls, is controlled by, or is under common control with the Consultant.
- d) "Authority" means "State Urban Development Agency, Urban Development and Municipal Affairs Department, Government of West Bengal" ;
- e) "Consultant" means and includes sub-consultant and their Personnel, if any, engaged for carrying out of Services under this Agreement;
- f) "Currency" means the Indian Rupees;
- g) "Key personnel" means the personnel referred to in Clause 4.
- h) "Personnel" means persons hired by the Consultants or by any sub-consultant as employees and assigned to the performance of the Services or any part thereof;
- i) "Party" means the Authority or the Consultants, as the case may be, and Parties means both of them;
- j) "Services" shall have the meaning ascribed to it in the RFP and *Term of Reference (TOR)* as set forth in APPENDIX-B hereto;

#### **1.2 Law Governing Agreement**

This Agreement, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

#### **1.3 Language**

This Agreement has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Agreement.

#### **1.4 Headings**

pursuant to this Agreement shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, speed post, Telegram, facsimile or email to such Party at the addresses specified hereunder: -

Authority:

[.....].

Attention: [.....] (West Bengal)..

Phone

E-mail:

Facsimile:

Consultants: -----

-----

Attention: -----

E-mail

-----

Telex:

-----

Facsimile:

-----

*[Note: Fill in the blanks]*

**1.5.2 Notice will be deemed to be effective as follows:**

The notice shall be deemed to be effective in the manner and at time as specified as follows:

- (a) In the case of personal delivery, speed post or registered mail, on delivery;
- (b) In the case of telexes, telegrams and facsimiles 24 hours following confirmed transmission;

**1.6 Location:**

The Services shall be performed in consultation with State Urban Development Agency, West Bengal to the Urban Local Bodies falling under cluster in State of West Bengal. However, it is not be mandatory for the key personnel of the Consultants to be stationed at the Authority office though it is preferable that the Transaction Advisor should have office setup at Kolkata for ease of interaction and they should be readily available.

For the Authority: .....,

[.....] (West Bengal)..

Phone

E-mail:

Facsimile:

For the Consultant: .....,

[.....] (West Bengal)..

Phone

E-mail:

Facsimile:

#### **1.8 Taxes and Duties**

The Consultants and the personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this Agreement and the Authority shall perform such duties in regard to the deduction of such tax as may be lawfully imposed. Irrespective of the aforesaid, the payment to be made hereunder by the Authority shall be made net off applicable GST (at prevailing rates notified under Applicable Laws from time to time), which Authority shall pay over and above the fee payable hereunder.

- 1.9 The conditions shown in letter of invitation, term of reference, and RFP, and financial offers shall be deemed to be incorporated and form part of this Agreement by reference.

#### **Schedule-A**

1. Main RFP (Annexure-1)
2. Revised RFP (including the TORs) (Annexure-2)
3. RFP Corrigendum(Annexure-3)
4. LETTER OF ASSOCIATION. (Annexure-4)



## **Appendix-A**

### **1. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF AGREEMENT**

#### **1.1 Effectiveness of Agreement**

This Agreement shall come into force on the date of signing the Agreement.

#### **1.2 Commencement of Services**

The Consultants shall begin carrying out the Services within 15 days from the date of signing of the Agreement. If the Consultant fails to either acknowledge the LETTER OF ASSOCIATION or commence the assignment as specified herein, save and except for delays caused because of Force Majeure or Authority's breach, the LETTER OF ASSOCIATION shall stand automatically terminated, the earnest money of the bidder shall stand forfeited and in such a situation the authority shall be entitled to proceed with the matter as it deem fit.

#### **1.3 Expiration of Agreement**

Unless terminated earlier pursuant to Clause 1.9 hereof, the Agreement shall, subject to the conditions of Appendix-G of this Agreement and other terms hereof, expire upon completion of Services by the Consultant.

#### **1.4 Liability of Parties**

This Agreement contains all covenants, stipulations and provisions agreed by the parties. No agent or representative of either Party has authority to make, and the Parties shall not bound by or be liable for, any statement, representation, promise or Agreement not set forth herein.

#### **1.5 Modification**

Modifications of the terms and conditions of this Agreement, including any modification of the scope of the Services, may be made only by written Agreement between the parties upon mutual consent.

#### **1.6 Force Majeure**

##### **1.6.1 Definition: -**

- (a) For the purposes of this Agreement, "Force Majeure" means an event which is beyond the reasonable control of a party, and which makes a party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, war, riot, Civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockout or other industrial action are within the

- (i) Any event which is caused by the negligence or intentional action of a party or such party's sub-consultant or agent or employees, nor
- (ii) Any event which a diligent party could reasonably have been expected to both (a) take into account at the time of the conclusion of this Agreement and (b) avoid or overcome in the carrying out of its obligations hereunder.
- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

#### 1.6.2 No Breach of Agreement

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of or default under, this Agreement insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Agreement.

- a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.
- b) A Party affected by an event of Force Majeure shall notify the other party of such event as soon as possible, and in any event not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
- c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

#### 1.6.3 Consultation

Not later than thirty (30) days after the Consultants, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

#### 1.6.4 Extension of Time

Any period within which a Party shall, pursuant to this Agreement, complete any action or task, shall be extended for a period equal to the time during which such party was unable to perform such action as a result of Force Majeure.

#### 1.6.5 Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultants shall be entitled to be reimbursed for

## 1.7 **Suspension**

The Authority by written notice of suspension to the Consultants, may suspend all payments to the Consultants hereunder, if the Consultants fail to perform any of their obligations under this Agreement, including the carrying out of the Services provided that such notice of suspension (i) shall specify the nature of the failure and (ii) shall request the Consultants to remedy such failure within a period not exceeding fifteen (15) days after receipt by the Consultants of such notice of suspension.

- 1.8 The Authority for any reasons beyond his reasonable control, may ask the Consultant to suspend whole or part of the Services for such time till the reasons are removed or settled. The extra time period of such duration may be granted as time extension on the original terms and conditions

## 1.9 **Termination**

### 1.9.1 By the Authority

The Authority, may by not less than fifteen (15) days written notice of termination to the Consultant, such notice to be given after the occurrence of any of the events specified in paragraphs (a) to (c) of this Clause, terminate this Agreement:

- a) If the Consultants fail to remedy the failure in the performance of their obligations hereunder, as specified in a notice within fifteen (15) days of receipt of such notice of suspension or within such further period as the Authority may have subsequently approved in writing;
- e) If as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days;
- c) If the Consultants fails to provide Services as per Agreement.

- 1.9.2 The Consultant may terminate this Agreement, or any particular Services, immediately upon written notice to the Authority if the Consultant reasonably determines that it can no longer provide the Services in accordance with applicable laws or professional obligations. In that case the consultant shall give a notice 30 days before of such termination to the Authority.

- 1.9.3 Authority, in its sole discretion and for any reason whatsoever, may terminate this Agreement, after giving 15 days of notice to the Consultant..

### 1.9.4 Cessation of Rights and Obligations

Upon termination of this Agreement pursuant to *Clauses 1.2 or 1.9* hereof, or upon expiration of this Agreement pursuant to concerned provision of this Agreement hereof, all rights and obligations of the Parties hereunder shall cease, except:

- (i) Such rights and obligations as may have accrued on the date of termination or expiration,



#### 1.9.5 Cessation of Services

Upon termination of this Agreement by notice of either to the other pursuant to Clauses 1.9.1 or 1.9.2 of this Agreement hereof, the Consultants shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum with respect to documents prepared by the Consultants and equipment and materials furnished by the Authority, the Consultants shall proceed as provided, respectively, by concerned provision of this Agreement hereof.

#### 1.9.6 Payment upon Termination

Upon termination of this Agreement pursuant to Clauses 1.9.1 or 1.9.2 of this Agreement hereof, the Authority shall make the payment of Consultant Fee pursuant to Appendix-G of this Agreement hereof for Services performed prior to the effective date of termination to the Consultants (after offsetting against these payments any amount that may be due from the Consultants to the Authority).

#### 1.9.7 Disputes about Events of Termination

If Consultant disputes whether an event specified in paragraphs (a) to (c) Clause 1.9.1 of this Agreement has occurred, he may within forty five (45) days after receipt of notice of termination from the employer, refer the matter to arbitration under this Agreement.

## Appendix-B

### Terms of Reference (TOR) for Transaction Adviser

#### (1) Introduction

Government of West Bengal has taken several steps/initiatives for making all the cities Clean, Green and Beautiful with special emphasis on management of Solid Wastes in Municipal Towns of the State. One of the obligatory functions of the Municipal Bodies is to remove solid waste from the cities under Sections 63, 95B, 260, 273 of the West Bengal Municipal Act, 1993 and corresponding provisions of the statute governing Municipal Corporations in West Bengal. A number of initiatives have been taken by the Urban Development & Municipal Affairs Department to ensure that solid waste are collected by the Municipal Bodies and disposed of scientifically by them. Under Mission Nirmal Bangla, a lot of equipment *e.g.* garbage bins, compactors, hydraulic tippers and other vehicles, community bins to Municipal Bodies to assist them in systematic collection of garbage from individual holdings, their transportation and stacking before disposal. Land has also been provided through inter departmental transfer to municipal bodies to set up dumping ground cum solid waste processing plants. In some cases these bodies have been permitted to purchase private land for setting up these facilities. The municipal bodies are required to collect waste from individual holdings systematically and transport them regularly to the solid waste disposal facility and get them recycled/processed scientifically. Efforts has been taken by some municipalities to collect waste and

In the light of importance given to scientific collection and disposal of solid waste, a large number of legislations and guidelines have been issued by different authorities from time to time. Some of these are:

- 1) Solid Waste Management Rules 2016 framed by Government of India
- 2) Policy and Strategy on Solid Waste Management for Urban Areas of West Bengal made in 2017
- 3) Plastics Waste Management Rules 2016 framed by Government of India
- 4) Policy and Strategy on Plastics Waste Management for Urban Areas of West Bengal made in 2017
- 5) Amendment of the West Bengal Municipal Act 1993 incorporating the provisions for banning using plastic bags below 50 microns.
- 6) State Government Order to all the Urban Local Bodies to regularly remove Solid Wastes from all the Hospitals in their jurisdiction and accordingly make special arrangement for removal of solid waste generated at Hospital.
- 7) Guideline of Ministry of Housing & Urban Affairs, Government of India on Implementation of Solid Waste Management by Bulk Solid Waste Generators.

The present state of solid waste disposal in urban areas involves awareness generation among the population, expectation of segregation of source, door to door collection by the municipal bodies, intermediate storage of such collected waste, segregation at intermediate storage points, ultimate transportation to the disposal ground and segregation, recycling, processing (Bio-gas, RDF, compost) and finally landfill with the residue. While the municipalities in many cases are able to carry out the first three functions reasonably and effectively given appropriate support, the final steps, viz. collection of solid waste from intermediate transit points to their final processing and landfill may not be effectively carried out by the municipal bodies at their current level of resources and competence.

The Urban Development & Municipal Affairs (UD&MA) Department through Kolkata Metropolitan Development Authority (KMDA) and Municipal Engineering Directorate (MED) are developing landfill sites and solid waste processing facilities (compost plants and Biogas energy plants) in different municipalities based on this model.

However, segregation of solid waste, their processing to either to produce compost or Refuse Derived Fuel (RDF) or Bio-gas, their marketing, recycling of waste processing of construction and demolition waste, a remediation of legacy waste, management of landfill site, all of these are technically and managerially complex functions. The experience across cities in India and abroad shows that these functions are best carried out by technically and financially competent agencies. Such agencies are seen to be running successful plants in many Indian cities e.g. Hyderabad, Bangalore, Panaji, Indore, Bhopal, Surat etc.

In this light, State Government has decided to appoint **Transaction Advisor for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management** for selection of Developers and Operators

## **(2) Objectives**

The objective of engaging a Transaction Advisor is for **Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management** for selection of Developers and Operators.



### (3) Scope of Work/Description of Task

3.1. The broad responsibilities of the Transaction Adviser are summarized as follows:

- a) Carry out **feasibility study of the project** in all respect including techno economic viability of existing cluster /proposed cluster of municipal bodies.
- b) Preparation of **Detailed Feasibility Report** for Integrated Solid Waste Management for the municipal bodies involved in this project. The Feasibility Report must cover all ambits of municipal solid waste management from door to door collection, primary/secondary transportation (if required), requirement of transfer stations (if any), processing facility and disposal of inert. Costing of this will also be included in the report.
- c) Drafting of **Request for Proposal (RFP)** for selection of competent agency for carriage (as required) and processing of waste for the cluster.
- d) Assisting Solid Waste Management (SWM) Cell in managing the bid process including **evaluation of bids** and for selection of successful agency for the cluster.
- e) **Drafting of Tripartite Agreement** between Municipal Bodies in the Cluster, the SWM Cell of the Department and the Selected Agency.

3.2. The Transaction Advisor shall keep the following in view in the discharge of the above responsibilities:

- a) Consultation with Urban Development and Municipal Affairs Department, STATE URBAN DEVELOPMENT AGENCY, URBAN LOCAL BODIES, Development Authorities and other stakeholders to identify and conceptualize/develop projects for Solid Waste Management through cluster/standalone approach.
- b) Detailed Technical Feasibility Report should be developed from the primary collection stage up to the final processing and disposal of all types of solid waste. A comprehensive Technical Feasibility Report indicating each stages of waste management i.e. primary Door to Door collection of segregated waste, mode of transportation, setting up of transfer station wherever feasible and disposal of Solid Waste as per provision of SWM Rules, 2016 are to be followed.
- c) The Detailed Project Report for all ongoing projects should incorporate all capital investment already made and existing infrastructure should be considered optimally.
- d) The Detailed Technical Feasibility Report should be flexible with regard to technology for processing of waste and sanitary landfill. Transaction Advisors should provide the broad contours of the project indicating performance parameters considering land constraints and other limitations, if any, within which concessionaires are free and flexible to choose technology of choice.
- e) It is preferable that the Transaction Advisor should have office setup at Kolkata for ease of interaction and should be available as and when required by the Authority.
- f) Projects should be structured under appropriate Public Private Partnership mode to enable optimum utilization of the investments already made in Solid Waste Management projects. Innovative business and commercial practices such as commercial sale of products, levy of user charges/ fee etc., as appropriate under the applicable laws should be incorporated in the Detailed Technical Feasibility Report.
- g) Transaction Advisor is to undertake visits to acclaim projects in other states and study best practices. In the financial proposal Transaction Advisor may incorporate the travel expenses and related incidental charges for visit to other States to see the



- a) Optimum utilization of existing infrastructure of Solid Wastes in the URBAN LOCAL BODIES and in conformity with policy of Government of West Bengal.
- b) Optimum utilization of land for processing plant and sanitary landfill site clubbing URBAN LOCAL BODIES in clusters to make the project financially and technically feasible.
- c) While undertaking the feasibility study, the proposed cluster sites should re-visited for suitable modification, if necessary. For finalization of cluster, STATE URBAN DEVELOPMENT AGENCY should be consulted. The cluster-wise Detailed Feasibility Report, Request for Proposal (concession Request for Proposal for implementation) may be prepared accordingly.
- d) Collection, segregation and transportation of wastes shall be the primary responsibility of URBAN LOCAL BODIES. However the Transaction Advisor will give a comprehensive and holistic mechanism in consultation with the URBAN LOCAL BODIES regarding collection at door step to final disposal.
- e) Incentive on performance for all stakeholders.
- f) A flow chart for disposal of all types of wastes from source up to the processing plant/Landfill to be developed. A clear pictorial representation of the plan should be developed by the TA itself in their report.
- g) Necessary clearances to be obtained from the Department of Environment, West Bengal Pollution Control Board and other regulatory bodies, on behalf of operating agency as and when required as per extent of rules, statutory provisions etc. pertaining to the matter.
  - i. Necessary clearances need to be secured by the Concessionaire with assistance from STATE URBAN DEVELOPMENT AGENCY/ other relevant Government Agencies
  - ii. Transaction Advisors are only required to list and specify the clearances required for executing the proposed projects in the given clusters
- h) New technology (i.e. the technology to be adopted in adherence to SWM Rules, 2016) should be backed by necessary certificate/s (Necessary Certification means Pollution Clearance Certificate etc.) from the proper authority (Proper authority means Pollution Control Board and other regulatory authorities.).
- i) Effective Operation & Management System is to be for at least 20 years.
- j) Processing and disposal of Legacy waste and reclamation of land is to be incorporated.
- k) Land for processing plant and sanitary landfill site is to be identified by URBAN LOCAL BODY.

- m) Segregation and processing of recyclable waste as per Solid Waste Management Rules, 2016 is to be ensured effectively.
- n) Scope of work should be customized on available field data and technology for each cluster/project.
- o) Implementation of effective and viable model based on national and international best practices.
- p) Proposal should be inclusive of institutional structures required for implementation of projects and operation & maintenance thereof with private sector financing.
- q) Key performance indicators to be identified. These are to be linked with schedule of payment to operating agencies.
- r) Principal objective: Achievement of 100 percent disposal and processing of incoming waste and waste as available in existing dumping site, and to maintain its sustainability.

**(4) Assignment for following Proposed Cluster:**

Cluster No.	Proposed URBAN LOCAL BODYs
8	Kalyani, Gayespur, Halisahar, Haringhata and Kanchrapara Municipalities

### Appendix-C

**Key Personnel Details:**

It is envisaged that the assignment will be undertaken by the team proposed by the Transaction Advisor at the time of submission their Bid documents as detailed below:

Sl No.	Position	Name of the Expert
1	Team Leader	Rahul Mallik
2	Solid Waste Management Specialist	Ayan Majumder
3	PPP Specialist	Rahul Singh
4	Financial Analyst	Anjan Kumar Roy

## Appendix-D

### (1) Deliverables

Stage	Activity	Time Allocated *
Stage 1	Submission of the Inception Report	10 days from the date of commencement.
Stage 2	Submission of Draft Feasibility Report	45 days from the Stage 1
Stage 3	Submission of Final Feasibility Report along with action plan	10 days from approval of Stage 2
Stage 4	Submission of the Draft RFP for selection of Agency	20 days from approval of Stage 3
Stage 5	Submission of the Final RFP for selection of Agency	10 days from approval of Stage 4
Stage 6	Evaluation of the Tender Documents and recommendation for the Selected Agency	10 days from tender closing date
Stage 7	Getting the Concession Agreement signed by the selected Agency	10 days from Stage 6

A Fortnightly meeting will be held where the progress of the assignment will be reviewed against the progress submitted by the Transaction Advisor.

## Appendix-E

### (1) Working arrangement:

The assignment will be contracted by Director, State Urban Development Agency, West Bengal. URBAN LOCAL BODY/s will nominate an officer to liaison with the Transaction Advisor Team.

### (2) Items to be provided by the STATE URBAN DEVELOPMENT AGENCY:

All the data will be provided by STATE URBAN DEVELOPMENT AGENCY and URBAN LOCAL BODY to the Transaction Advisor and for that Transaction Advisor should inform the requirement of requisite data to the office of STATE URBAN DEVELOPMENT AGENCY. However certain datas are to be collected by the Transaction Advisor during their Field Study if it is not readily available with STATE URBAN DEVELOPMENT AGENCY/ URBAN LOCAL BODY.

It is to say that with regards to topographical survey, geotechnical investigation, leachate quality analysis, ground & surface water quality analysis, waste characterization survey etc shall be under the scope of Transaction Advisor consultant where STATE URBAN DEVELOPMENT AGENCY/Kolkata Metropolitan Development Authority/Municipal Engineering Directorate will extend full support.

### (3) Items to be provided by the Transaction Advisor:

The Transaction Advisor shall organize and provide for:



borne by the Transaction Advisor.

- Any other expenses as required for completion of assignment.

### Appendix-F

The contract price of **Rs. 28,93,684/-** (Rupees Twenty Eight Lakh Ninety Three Thousand and Six hundred and Eighty Four only) shall remain fixed and firm during the period of contract excluding Goods and Service Tax. The Authority shall pay GST in the prevailing rate.

### Appendix-G

#### Payment Schedule/Arrangement

Stage	Details of stages	Percentage
Stage 1A	Submission of the Inception Report	5%
Stage 1B	Acceptance of Inception Report by the Authority within 7 working days from the date of submission	5%
Stage 2A	Submission of Draft Feasibility Report by the TA	5%
Stage 2B	Acceptance of Draft Feasibility Report, by the Authority within 7 working days from the date of submission	5%
Stage 3	Submission of Final Feasibility Report along with action plan by the TA within 7 working days from the date of submission of corrected draft from the Authority	5%
Stage 4A	Submission of Draft RFP by the Agency	5%
Stage 4B	Acceptance of Draft RFP by the Authority within 30 working days of submission	10%
Stage 5A	Submission of the Final RFP for selection of Agency	10%
Stage 5B	Acceptance of the Final RFP by the Authority within 30 working days of submission	10%
Stage 6	Evaluation of the Tender Documents and recommendation for the Selected Agency	20%
Stage 7	Getting the Concession Agreement signed by the selected Agency	20%
	<b>TOTAL</b>	<b>100%</b>

**STATE URBAN DEVELOPMENT AGENCY shall review and monitor the progress of the assignment. On acceptance of the report against each milestone by the Director, STATE URBAN DEVELOPMENT AGENCY, payment will be released subject to deduction of taxes, as applicable.**

- (a) If the Agreement duration gets reduced due to Termination or any other reason that is not attributable to the Consultant, Consultant shall be entitled to:
  - (i) the payment of the Consultant Fee for Services performed prior to the effective date of such termination (after offsetting against these payments any amount that may be due from the Consultants to the Authority); and
  - (ii) release of the performance security by the Authority to the Consultant.
- (b) Notwithstanding anything contrary contained in this Agreement, if project gets delayed beyond period of twelve (12) months from commencement date for any reason(s) not attributable to the Consultant, the Consultant shall be entitled to terminate the Agreement without any liability/cost thereof. Upon such exit, the Consultant shall be entitled to:
  - (i) the payment of the Consultant Fee for Services performed prior to the effective date of such termination (after offsetting against these payments any amount that may be due from the Consultants to the Authority); and
  - (ii) release of the performance security by the Authority to the Consultant.
- (c) All payments made hereunder shall be net off and be paid by Authority along with applicable GST as per prevailing rates notified under Applicable Laws.

#### **Currency of Payment**

Except as may be otherwise agreed between the Authority and the Consultants all payments under this Agreement shall be made in Indian Rupees only. The payments shall be made by Cheques / Demand Draft or electronic transfer to designated account of Consultant.

#### **Mode of Billing and Payment**

The billing and payment in respect of Services shall be made as follows:

- (a) As soon as practicable and not later than the fifteen (15) days after the completion of each stage, during the period of Services, the Consultant shall submit to Authority in duplicate a bill for payment.
- (b) The Authority shall cause the payment to the Consultant periodically as given above within ten (10) days after the receipt by the Consultant's bills.
- (C) All running payments shall be treated as interim payments subject to adjustment on the finalization of Agreement.

Performance Security means 10% of total Consultant Fee in the form of Bank Guarantee of any recognized bank in India in favour of the Authority to be submitted by the Consultant within 15 days from signing of the Agreement. Bank Guarantee should remain valid till the Agreement continues to be in force.

## **Appendix-H**

### **OBLIGATIONS OF THE CONSULTANTS**

#### **1.1 General**

##### **1.1.1 Standard of Performance**

The Consultants shall perform the Services and carry out their obligations hereunder with all due diligence and efficiency, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods. The Consultants shall always act, in respect of any matter relating to this Agreement or to the Services, as faithful advisers to the Authority, and shall at all times support and safeguard the Authority's legitimate interests in any dealings with Sub-consultants or Third Parties.

##### **1.1.2 Law Governing Services**

The Consultants shall perform the Services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub-consultants, as well as any personnel of the Consultant and/or sub-consultants and agents, comply with the Applicable Law time being in force. The Authority shall advise the Consultants in writing of relevant local customs and the Consultants shall, after such notice, respect such customs.

#### **1.2 Conflict of Interests**

##### **1.2.1 Consultants not to benefit from Commissions, discounts etc.**

The remuneration of the Consultants pursuant to Appendix-G of this Agreement hereof shall constitute the Consultant's sole remuneration in connection with this Agreement or the Services and subject to relevant provision of this Agreement hereof, the Consultants shall not accept for their own benefit any commission, discount or similar payment in connection with activities pursuant to this Agreement or to the Services or in the discharge of their obligations hereunder, and the Consultants shall use their best efforts to ensure that any of the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.

##### **1.2.2 Procurement Rules**



Consultants in the exercise of such procurement responsibility shall be for the account of the Authority.

**1.2.3 Consultants and Affiliates not to engage in certain activities**

The Consultants agree that, during the term of this Agreement and after its termination, the Consultants and any entity affiliated with the Consultants, as well as any sub-consultant and any entity affiliated with such sub-consultant, shall be disqualified from providing goods, works or Services (other than the Services and any continuation thereof) for any Project resulting to the Services.

**1.2.4 Prohibition of Conflicting Activities**

The Consultants shall not engage and shall cause their personnel as well as Sub-consultants and their Personnel not to engage, either directly or indirectly during the term of this Agreement, any business or professional activities in the State of West Bengal, which would conflict, with the activities assigned to them under this Agreement.

**1.3 Confidentiality**

The Consultants, their sub-consultants and the personnel of either of them shall not, either during the term or within 6 (six) months after the expiration of this Agreement, disclose any proprietary or confidential information relating to the project, the Services, this Agreement or the Authority's business or operations without the prior written consent of the Authority.

**1.4 Liability of the Consultants**

1.4.1 Subject to additional provisions, if any, set forth in this Agreement, Consultant's liability under this Agreement shall be as provided by the Applicable Law.

1.4.2 The Consultant shall, subject to the limitation specified provisions of this agreement, be liable to the Authority for any direct loss or damage accrued or likely to accrue due to deficiency in Services rendered by it.

1.4.3 The Parties hereto agree that in case of negligence or willful misconduct on the part of the Consultant or on the part of any person or firm acting on behalf of the Consultant in carrying out the Services, the Consultant, with respect to damage caused to the Authority, shall not be liable to the Authority:

(i) for any indirect or consequential loss or damage; and

(ii) for any direct loss or damage that exceeds the Consultant Fee actually paid for the Services.

**1.5 Accounting, Inspection and Auditing**

The Consultants (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with accepted accounting principles and in such a manner as to enable the Authority to audit the same at any time during the term of this Agreement.

personnel. The key personnel shall be available as per the requirement of fulfilment of Services. However, it shall not be mandatory for the key personnel of the Consultants to be stationed at the Authority location but will be available before the Authority as and when required.

## **1.7 Reporting Obligations**

The Consultants shall submit to the Authority the reports and documents specified in the Terms of Reference as set forth in Appendix-B, and perform the Services as per terms set forth in the Terms of Reference.

Documents prepared by the Consultants to be the Property of the Authority. All plans, drawings, specifications, designs, reports, other documents and software prepared by the Consultants for the Authority under this Agreement shall become and remain the property of the Authority. The Consultants shall, not later than upon termination or expiration of this Agreement, deliver all such documents etc. to the Authority, together with a detailed inventory thereof. The Consultants may retain a copy of such documents and software.

The Authority shall constitute a Committee for periodic review of the documents/reports specified in the Terms of Reference as set forth in Appendix-B on a fortnightly basis.

## **OBLIGATIONS OF THE AUTHORITY**

### **2. Assistance and Exemptions**

2.1. The Authority will assist to Consultant in grant of following from Government:

2.2. Provide the Consultants, the sub-consultants and Personnel with work permits and such other documents as shall be necessary to enable the Consultants, sub-Consultants and Personnel to perform the Services (if applicable);

2.3. Assist the Consultants, sub-Consultants and the Personnel employed by them for the Services from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity according to the Applicable Law;

2.4. Grant to the Consultants, any sub-Consultants and the Personnel of either of them the privilege, pursuant to the Applicable Law, of bringing into State of West Bengal reasonable amount of currency for the purposes of the Services or use of the personnel and their dependent and of withdrawing any such amounts as may be earned therein by the Personnel in the execution of the Services;

2.5. The Authority shall nominate an officer to liaison with the Consultant.

2.6. The Authority shall provide all the data to the Consultant and for that Consultant should inform the requirement of requisite data to the office of the Consultant. However certain data are to be collected by the Consultant during their Field Study if it is not readily available with the Authority and the Authority will assist the Consultant in such endeavours. However, with regard to topographical survey, geotechnical investigation, leachate quality analysis, ground and surface water quality analysis, waste characterization survey etc shall be under the scope

## **1. FAIRNESS AND GOOD FAITH**

### **1.1. Good Faith**

The Parties undertake to act in good faith with respect to each other's rights under this Agreement and to adopt all reasonable measures to ensure the realization of the objectives of this Agreement.

### **1.2. Operation of the Agreement**

The parties recognize that it is impractical in this Agreement to provide for every contingency which may arise during the life of the Agreement, and the parties hereby agree that it is their intention that this Agreement shall operate fairly as between them, and without detriment to the interest of either of them and that if during the term of this Agreement either party believes that this Agreement is operating unfairly, the parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but on failure to agree on any action pursuant to this clause shall give rise to a dispute subject to arbitration in accordance with terms hereof.

## **2. INTELLECTUAL PROPERTY RIGHTS**

The Consultant may use data, software, designs, utilities, tools, models, systems and other methodologies and know-how ("Materials") that the Consultants own in performing the Services. Notwithstanding the delivery of any Reports, the Consultants retain all intellectual property rights in the materials (including any improvements or knowledge developed while performing the Services), and in any working papers that Consultants compile and retain in connection with the Services (but not Authority Information reflected in them). Upon payment for the Services, the Authority may use any materials included in the Reports, as well as the Reports themselves as permitted by this Agreement.

## **3. INDEMNITY**

To the fullest extent permitted by applicable law and professional regulations, the Authority shall indemnify the Consultants, against all claims by third parties (including the Authority's affiliates) and resulting liabilities, losses, damages, costs and expenses (including reasonable external and internal legal costs) arising out of the third party's use of or reliance on any Report disclosed to it by or through the Authority or at the Authority's request. The Authority shall have no obligation hereunder to the extent that the Consultant have specifically authorized, in writing, the third party's reliance on the Services.

## **4. MISCELLANEOUS**

- a. This Agreement constitutes the entire agreement as to the Services and the other matters it covers, and supersedes all prior agreements, understandings and representations with respect thereto, including any confidentiality agreements previously delivered.



- c. The Consultant shall be liable for defects, discrepancies and disorders etc. in works executed under his supervision.
- d. Both the Authority and Consultant represents that the person signing this Agreement and any Statement of Work hereunder on its behalf is expressly authorized to execute them and to bind each of us to their terms.
- e. Neither of the Parties may assign any of their rights, obligations or claims under this Agreement;
- f. If any provision of this Agreement (in whole or part) is held to be illegal, invalid or otherwise unenforceable, the other provisions shall remain in full force and effect;
- g. If there is any inconsistency between provisions in different parts of this Agreement, those parts shall have precedence as follows (unless expressly agreed otherwise): (a) the Cover Letter, (b) the applicable Statement of Work and any annexes thereto, (c) these General Terms and Conditions, and (d) other annexes to this Agreement;
- h. Neither of the Parties may use or reference the other's name, logos or trademarks without its prior written consent, provided that the Consultant may use the Authority's name publically to identify the Authority as a Authority in connection with specific Services or otherwise.

## **5. SETTLEMENT OF DISPUTES**

### **5.1. Amicable Settlement**

The parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Agreement or the interpretation thereof.

### **5.2 Dispute Redressal System**

- 5.2.1 In the event of any Dispute between the Parties, either Party may call upon [Director, State Urban Development Agency, Government of West Bengal] and the Senior Management of the Consultant or a substitute thereof for amicable settlement, and upon such reference, the said persons shall meet not later than 10 (ten) days from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 10 (ten) day period or the Dispute is not amicably settled within 15 (fifteen) days of the meeting or the Dispute is not resolved as evidenced by the signing of written terms of settlement within 30 (thirty) days of the notice in writing or such longer period as may be mutually agreed by the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions hereof.

#### **5.2.2 Arbitration:-**

Any Dispute which is not resolved amicably pursuant to resolution mechanism as provided in Clause above, shall be finally decided by reference to arbitration by an Arbitral Tribunal appointed in accordance with this clause, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996 (as amended from time to time). The place of such arbitration shall be at Kolkata and the language of arbitration proceedings shall be English.

The Arbitral Tribunal shall constitute of the sole arbitrator to be mutually appointed by parties.

This Agreement and the rights and obligations of the Parties shall remain in full force and

interpretation and legal effect shall be to the exclusive jurisdiction of the appropriate court in State of West Bengal.

*IN WITNESS THEREOF*, the parties hereto have caused this Agreement to be signed in their respective names of the day and year first above written.

FOR AND ON BEHALF OF THE AUTHORITY

BY

Authorised Representative

Witness:

FOR AND ON BEHALF OF THE CONSULTANTS

BY

Authorised Representative

Witness:

# রাজ্য নগর উন্নয়ন সংস্থা

## STATE URBAN DEVELOPMENT AGENCY

“ইলগাস ভবন”, এইচ-সি ব্লক, সেক্টর-৩, বিধাননগর, কলকাতা-৭০০ ১০৬, পশ্চিমবঙ্গ  
 “ILGUS BHAVAN”, H-C Block, Sector - III, Bidhannagar, Kolkata - 700 106, West Bengal

ক্রমিক নং ..... SUDA-227/2018(Pt.II)/ 5509

তারিখ 13.08.2019

To  
 Mr. Yogesh Daruka,  
 Pricewaterhouse Coopers (PwC) Pvt. Ltd.  
 Plot No. DN56-57, Sector-V  
 Salt Lake, Kolkata - 700091

**Sub: Work Order for providing Transaction Advisory Services**

**Ref: Finance Department U.O. No. Group-T/2019-2020/0277 dated 04.07.2019**

Sir,

With reference to above, I would like to inform you that your proposed rate of Rs.28,93,684/- (Inclusive of all expenses excluding GST) with regard to 'Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators' has been accepted for each of the following Clusters:

Cluster No.	Proposed Cluster
8	Kalyani, Gayeshpur, Halisahar, Haringhata and Kanchrapara Municipalities
9	Ranaghat Municipality, Birnagar Municipality, Taherpur NAA and Coopers Camp NAA,
10	Krishnagar, Nabadwip and Santipur Municipalities

The broad responsibilities of you as a Transaction Adviser for all these Clusters are as follows:

- Carry out feasibility study of the project in all respect including techno economic viability of existing cluster /proposed cluster of municipal bodies.
- Preparation of Detailed Project Report for Integrated Solid Waste Management for the municipal bodies involved in this project.
- Drafting of Request for Proposal (RFP) for selection of competent agency for carriage (as required) and processing of waste for the cluster.
- Assisting Solid Waste Management (SWM) Cell in managing the bid process including evaluation of bids and for selection of successful agency for the cluster.
- Drafting of Concession Agreement to be executed with the selected agency.

The work will have to be executed as per Terms of Reference enclosed herewith adhering to the following stipulated conditions:

দূরভাষ : ২৩৫৮ ৬৪০৩ / ৫৭৬৭, ফ্যাক্স : ২৩৫৮ ৫৮০০

Tel : 2358 6403/5767, Fax : 2358 5800, E-mail : wbsudadir@gmail.com

Account Section : 2358 6408



1. Deliverables:

Stage	Activity	Time Allocated
Stage 1	Submission of the Inception Report	10 days from the date of signing of contract.
Stage 2	Submission of Draft Feasibility Report	45 days from the Stage 1
Stage 3	Submission of Final Feasibility Report along with action plan	10 days from approval of Stage 2
Stage 4	Submission of the Draft RFP for selection of Agency	20 days from approval of Stage 3
Stage 5	Submission of the Final RFP for selection of Agency	10 days from approval of Stage 4
Stage 6	Evaluation of the Tender Documents and recommendation for the Selected Agency	10 days from tender closing date
Stage 7	Getting the Concession Agreement signed by the selected Agency	10 days from Stage 6

2. Payment Schedule:

Stage	Details of stages	Percentage
Stage 1A	Submission of the Inception Report	5%
Stage 1B	Acceptance of Inception Report by the Authority within 7 working days from the date of submission	5%
Stage 2A	Submission of Draft Feasibility Report by the TA	5%
Stage 2B	Acceptance of Draft Feasibility Report, by the Authority within 7 working days from the date of submission	5%
Stage 3	Submission of Final Feasibility Report along with action plan by the TA within 7 working days from the date of submission of corrected draft from the Authority	5%
Stage 4A	Submission of Draft RFP by the Agency	5%
Stage 4B	Acceptance of Draft RFP by the Authority within 30 working days of submission	10%
Stage 5A	Submission of the Final RFP for selection of Agency	10%
Stage 5B	Acceptance of the Final RFP by the Authority within 30 working days of submission	10%
Stage 6	Evaluation of the Tender Documents and recommendation for the Selected Agency	20%
Stage 7	Getting the Concession Agreement signed by the selected Agency	20%
	<b>TOTAL</b>	<b>100%</b>

3. The Manpower support that you have to put in place for timely execution of the assignment has to be maintained appropriately.

Subject to acceptance of abovementioned conditions, you are hereby requested to execute a formal agreement with the undersigned within 15 days from the date of issue of this letter of acceptance cum work order, failing which it will be presumed that you are not interested to execute the offer and in that case the work order will be treated as cancelled.

Yours faithfully

*[Signature]* 12/8/19  
(Director)

Encl: Terms of Reference

SUDA-227/2018(Pt.I)/ 5509/1(1)

Date: 13.08.2019

Copy forwarded for kind information to:

The Principal Secretary, UD & MA Department, GoWB

*[Signature]* 13/8/19  
(Director)

## Terms of Reference (TOR) for Transaction Adviser

### (1) Introduction

Government of West Bengal has taken several steps/initiatives for making all the cities Clean, Green and Beautiful with special emphasis on management of Solid Wastes in Municipal Towns of the State. One of the obligatory functions of the Municipal Bodies is to remove solid waste from the cities under Sections 63, 95B, 260, 273 of the West Bengal Municipal Act, 1993 and corresponding provisions of the statute governing Municipal Corporations in West Bengal. A number of initiatives have been taken by the Urban Development & Municipal Affairs Department to ensure that solid waste are collected by the Municipal Bodies and disposed of scientifically by them. Under Mission Nirmal Bangla, a lot of equipment e.g. garbage bins, compactors, hydraulic tippers and other vehicles, community bins to Municipal Bodies to assist them in systematic collection of garbage from individual holdings, their transportation and stacking before disposal. Land has also been provided through inter departmental transfer to municipal bodies to set up dumping ground cum solid waste processing plants. In some cases these bodies have been permitted to purchase private land for setting up these facilities. The municipal bodies are required to collect waste from individual holdings systematically and transport them regularly to the solid waste disposal facility and get them recycled/processed scientifically. Efforts has been taken by some municipalities to collect waste and process them to the best of their abilities. It is, however, a fact that most municipal bodies do not have the technical capability, financial capacity and managerial competence to handle disposal of solid waste in a scientific manner. As a result, in spite of best intentions and substantial investments, these efforts have not resulted in significant improvement of situation.

In the light of importance given to scientific collection and disposal of solid waste, a large number of legislations and guidelines have been issued by different authorities from time to time. Some of these are:

- 1) Solid Waste Management Rules 2016 framed by Government of India
- 2) Policy and Strategy on Solid Waste Management for Urban Areas of West Bengal made in 2017
- 3) Plastics Waste Management Rules 2016 framed by Government of India
- 4) Policy and Strategy on Plastics Waste Management for Urban Areas of West Bengal made in 2017
- 5) Amendment of the West Bengal Municipal Act 1993 incorporating the provisions for banning using plastic bags below 50 microns.
- 6) State Government Order to all the Urban Local Bodies to regularly remove Solid Wastes from all the Hospitals in their jurisdiction and accordingly make special arrangement for removal of solid waste generated at Hospital.
- 7) Guideline of Ministry of Housing & Urban Affairs, Government of India on Implementation of Solid Waste Management by Bulk Solid Waste Generators.

The present state of solid waste disposal in urban areas involves awareness generation among the population, expectation of segregation of source, door to door collection by the



municipal bodies, intermediate storage of such collected waste, segregation at intermediate storage points, ultimate transportation to the disposal ground and segregation, recycling, processing (Bio-gas, RDF, compost) and finally landfill with the residue. While the municipalities in many cases are able to carry out the first three functions reasonably and effectively given appropriate support, the final steps, viz. collection of solid waste from intermediate transit points to their final processing and landfill may not be effectively carried out by the municipal bodies at their current level of resources and competence.

The Urban Development & Municipal Affairs (UD&MA) Department through Kolkata Metropolitan Development Authority (KMDA) and Municipal Engineering Directorate (MED) are developing landfill sites and solid waste processing facilities (compost plants and Biogas energy plants) in different municipalities based on this model.

However, segregation of solid waste, their processing to either to produce compost or Refuse Derived Fuel (RDF) or Bio-gas, their marketing, recycling of waste processing of construction and demolition waste, a remediation of legacy waste, management of landfill site, all of these are technically and managerially complex functions. The experience across cities in India and abroad shows that these functions are best carried out by technically and financially competent agencies. Such agencies are seen to be running successful plants in many Indian cities e.g. Hyderabad, Bangalore, Panaji, Indore, Bhopal, Surat etc.

In this light, State Government has decided to appoint **Transaction Advisor for Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management** for selection of Developers and Operators

## **(2) Objectives**

The objective of engaging a Transaction Advisor is for **Assisting the State Government for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management** for selection of Developers and Operators.

### (3) Scope of Work/Description of Task

3.1. The broad responsibilities of the Transaction Adviser are summarized as follows:

- a) Carry out **feasibility study of the project** in all respect including techno economic viability of existing cluster /proposed cluster of municipal bodies.
- b) Preparation of **Detailed Feasibility Report** for Integrated Solid Waste Management for the municipal bodies involved in this project. The Feasibility Report must cover all ambits of municipal solid waste management from door to door collection, primary/secondary transportation (if required), requirement of transfer stations (if any), processing facility and disposal of inert. Costing of this will also be included in the report.
- c) Drafting of **Request for Proposal (RFP)** for selection of competent agency for carriage (as required) and processing of waste for the cluster.
- d) Assisting Solid Waste Management (SWM) Cell in managing the bid process including **evaluation of bids** and for selection of successful agency for the cluster.
- e) **Drafting of Tripartite Agreement** between Municipal Bodies in the Cluster, the SWM Cell of the Department and the Selected Agency.

3.2. The Transaction Advisor shall keep the following in view in the discharge of the above responsibilities:

- a) Consultation with Urban Development and Municipal Affairs Department, STATE URBAN DEVELOPMENT AGENCY, URBAN LOCAL BODIES, Development Authorities and other stakeholders to identify and conceptualize/develop projects for Solid Waste Management through cluster/standalone approach.
- b) Detailed Technical Feasibility Report should be developed from the primary collection stage up to the final processing and disposal of all types of solid waste. A comprehensive Technical Feasibility Report indicating each stages of waste management i.e. primary Door to Door collection of segregated waste, mode of transportation, setting up of transfer station wherever feasible and disposal of Solid Waste as per provision of SWM Rules, 2016 are to be followed.
- c) The Detailed Project Report for all ongoing projects should incorporate all capital investment already made and existing infrastructure should be considered optimally.
- d) The Detailed Technical Feasibility Report should be flexible with regard to technology for processing of waste and sanitary landfill. Transaction Advisors should provide the broad contours of the project indicating performance parameters considering land constraints and other limitations, if any, within which concessionaires are free and flexible to choose technology of choice.
- e) It is preferable that the Transaction Advisor should have office setup at Kolkata for ease of interaction and should be available as and when required by the Authority.

- f) Projects should be structured under appropriate Public Private Partnership mode to enable optimum utilization of the investments already made in Solid Waste Management projects. Innovative business and commercial practices such as commercial sale of products, levy of user charges/ fee etc., as appropriate under the applicable laws should be incorporated in the Detailed Technical Feasibility Report.
- g) Transaction Advisor is to undertake visits to acclaim projects in other states and study best practices. In the financial proposal Transaction Advisor may incorporate the travel expenses and related incidental charges for visit to other States to see the best practices considering visit at least in two such cities with two experts from the team.

3.3. The Transaction Advisor shall prepare bid documents (RFP, Concession Agreement etc.) and manage bid process upto signing of Concession Agreement; while doing so the following objectives shall have to be addressed.

- a) Optimum utilization of existing infrastructure of Solid Wastes in the URBAN LOCAL BODIES and in conformity with policy of Government of West Bengal.
- b) Optimum utilization of land for processing plant and sanitary landfill site clubbing URBAN LOCAL BODIES in clusters to make the project financially and technically feasible.
- c) While undertaking the feasibility study, the proposed cluster sites should re-visited for suitable modification, if necessary. For finalization of cluster, STATE URBAN DEVELOPMENT AGENCY should be consulted. The cluster-wise Detailed Feasibility Report, Request for Proposal (concession Request for Proposal for implementation) may be prepared accordingly.
- d) Collection, segregation and transportation of wastes shall be the primary responsibility of URBAN LOCAL BODIES. However the Transaction Advisor will give a comprehensive and holistic mechanism in consultation with the URBAN LOCAL BODIES regarding collection at door step to final disposal.
- e) Incentive on performance for all stakeholders.
- f) A flow chart for disposal of all types of wastes from source up to the processing plant/Landfill to be developed. A clear pictorial representation of the plan should be developed by the TA itself in their report.
- g) Necessary clearances to be obtained from the Department of Environment, West Bengal Pollution Control Board and other regulatory bodies, on behalf of operating agency as and when required as per extent of rules, statutory provisions etc. pertaining to the matter.



- i. Necessary clearances need to be secured by the Concessionaire with assistance from STATE URBAN DEVELOPMENT AGENCY/ other relevant Government Agencies
  - ii. Transaction Advisors are only required to list and specify the clearances required for executing the proposed projects in the given clusters
- h) New technology (i.e. the technology to be adopted in adherence to SWM Rules, 2016) should be backed by necessary certificate/s (Necessary Certification means Pollution Clearance Certificate etc.) from the proper authority (Proper authority means Pollution Control Board and other regulatory authorities.).
  - i) Effective Operation & Management System is to be for at least 20 years.
  - j) Processing and disposal of Legacy waste and reclamation of land is to be incorporated.
  - k) Land for processing plant and sanitary landfill site is to be identified by URBAN LOCAL BODY.
  - l) Reclamation of existing Dumping Grounds, scientific development, beautification etc. of the Dumping Grounds.
  - m) Segregation and processing of recyclable waste as per Solid Waste Management Rules, 2016 is to be ensured effectively.
  - n) Scope of work should be customized on available field data and technology for each cluster/project.
  - o) Implementation of effective and viable model based on national and international best practices.
  - p) Proposal should be inclusive of institutional structures required for implementation of projects and operation & maintenance thereof with private sector financing.
  - q) Key performance indicators to be identified. These are to be linked with schedule of payment to operating agencies.
  - r) Principal objective: Achievement of 100 percent disposal and processing of incoming waste and waste as available in existing dumping site, and to maintain its sustainability.

**(4) Assignment for following Proposed Clusters:**

Cluster No.	Proposed Cluster
8	Kalyani, Gayeshpur, Halisahar, Haringhata and Kanchrapara Municipalities
9	Ranaghat Municipality, Birnagar Municipality, Taherpur NAA and Coopars Camp NAA,
10	Krishnagar, Nabadwip and Santipur Municipalities



## Covering Letter

EE(SD)  
104

To,  
Director,  
State Urban Development Agency (SUDA),  
ILGUS Bhawan, Block- HC, Sector- III, Salt Lake City,  
Kolkata- 700106

**Subject:** Submission of Inception report for Cluster 8, 9 and 10

Dear Ma'am,

We hereby submit the **Inception Reports** of "Transaction Advisory Support for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators" for **Cluster 8** comprising of Municipalities of Kalyani, Gayespur, Haringhata, Kachrapara and Halisahar, **Cluster 9** comprising of Ranaghat Municipality, Birnagar Municipality, Taherpur NAA and Coopers Camp NAA and **Cluster 10** comprising of Municipalities of Krishnanagar, Nabadwip and Santipur.

We remain,

Yours sincerely,

Antara Ray

S. Chatterjee, AB / S. Misra, AB  
Pd. check Inception Report for Cluster - 8, 9, & 10.  
12/11/19



pwc



## Covering Letter

RE (SD)  
LST

To,  
Director,  
State Urban Development Agency (SUDA),  
ILGUS Bhawan, Block- HC, Sector- III, Salt Lake City,  
Kolkata- 700106

**Subject:** Submission of Inception report for Cluster 8, 9 and 10

Dear Ma'am,

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We remain,

Yours sincerely,

Antara Ray

S. Chatterjee, AB / S. Misra, AB  
Pd. check Inception Report for Cluster - 8, 9, & 10.  
LST  
13/11/19



# ***Inception Report***

## ***Transaction Advisory Support for Planning of Scientific Solid Waste Management through Cluster Approach and Bid Process Management for selection of Developers & Operators***

**Kalyani, Gayespur, Haringhata, Kachrapara and  
Halisahar Municipalities  
(Cluster 8)**

**Submitted to – State Urban Development Authority,  
Department of Urban Development & Municipal Affairs**

**Government of West Bengal**

**Submitted by – PricewaterhouseCoopers Private Limited**

**November 2019**



# Abbreviations

Abbreviation	Paraphrase
AE/Asst. Engg.	Assistant Engineer
C & T	Collection and Transportation
C&D	Construction & Demolition
C/N Ratio	Carbon Nitrogen Ratio
CAD	Computer Aided Design
CBD	Central Business Districts
CE	Chief Engineer
CEO	Chief Executive Officer
CPHEEO	Central Public Health and Environmental Engineering Organization
DBFOT	Design, Build, Finance, Operate and Transfer
DBOT	Design, Build, Operate and Transfer
DPR	Detailed Project Report
EE	Executive Engineer
EO	Executive Officer
FO	Finance Officer
GIS	Geographic Information System
GoWB	Government of West Bengal
IRR	Internal Rate of Return
IS	Indian Standard
IT	Information Technology
ITES	Information Technology Enabled Services
LFG	Land Fill Gas
LOI	Letter of Intent
MED	Municipal Engineering Directorate
MSWM	Municipal Solid Waste Management
NGO	Non-Governmental Organization
NGT	National Green Tribunal
NPV	Net Present Value
O&M	Operation & Maintenance
PCB	Pollution Control Board
PPP	Public Private Partnership
RDF	Refuse Derived Fuel
RfP	Request for Proposal
SHG	Self Help Group
SI	Sanitary Inspector
Sq. Km	Square Kilometers
Sub. Asst. Engg.	Sub Assistant Engineer
SUDA	State Urban Development Agency
SWM	Solid Waste Management

TA	Transaction Advisor
TBM	Temporary Bench Mark
UD & MA	Urban Development & Municipal Affairs
ULB	Urban Local Body
VTs	Vehicular Tracking System
WACC	Weighted Average Cost of Capital
WBPCB	West Bengal Pollution Control Board



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# 1. Introduction

## 1.1. Project Background

### 1.1.1 General Background of SWM in India

Rapid urbanization in the last few decades has led to significant increase in municipal solid waste generation in India. Municipal Solid Waste Management (MSWM) has always been a great challenge for the urban local bodies (ULBs) in India. Public health, environment and quality of life in urban areas have a direct bearing on the efficiency with which the SWM service is provided by ULBs. In most cities of India, solid waste management is inefficient as systems adopted are primary, tools and equipment outdated, and inadequate & manpower productivity is low. A significant portion of the population does not have access to primary waste collection service and only 50 to 70% of waste collected is transported for disposal. Processing and treatment of waste is limited, and final disposal is in unscientific dumpsites, posing problems of soil, water contamination and air pollution.

### 1.1.2 General Background of SWM in West Bengal

There is a total of 125 ULBs within the State of West Bengal, of which seven are Municipal Corporations, while the remaining are large to small categories of municipalities. Some of the areas (particularly Corporations) are also part of larger developmental areas, governed by the Development Authorities, constituted under the West Bengal Town and Country (Planning & Development) Act, 1979. State Government in its endeavour has taken several steps/initiatives for making all the cities clean, green and beautiful with special emphasis on management of solid wastes across all municipal towns of the State. All the ULBs have been provided with movable/ stationary compactors for proper transportation and subsequent primary management of solid wastes to the dump sites. In some ULBs, battery operated hydraulic tippers have been provided for easy collection of waste from areas having narrow roads.

### 1.1.3 Conceptualizing of Cluster based SWM in the state

The State Government has started preparation of DPRs for Integrated Solid Waste Management of the municipal towns either in Stand-alone Mode or in Cluster Mode, considering the Components – i) Waste segregation at source into bio degradable & non bio degradable waste, ii) Door-to-door collection of segregated waste, iii) Transportation of waste to dumping ground through compactor or other means, and iv) Segregation of Waste at Dumping Ground (if required) and Processing of Bio degradable Waste either to compost or energy. Special emphasis is being given on the sustainability of the projects by way of generating revenue through composting and energy (Bio-Gas or other form of fuel) generation from the Bio-degradable waste. Maintaining hygienic operational procedure in solid waste management and beautification of the dumping sites are also being taken care of. Over and above these, awareness campaign along with ICT-enabled interventions have been planned to trigger citizens' participation in these initiatives.

State Urban Development Agency (SUDA), Government of West Bengal has identified clusters comprising a number of municipalities to develop & implement a scientific and integrated municipal solid waste management system. In this inception report, the cluster mentioned below is the study area:

*Cluster 8: Kalyani, Gayespur, Haringhata, Kachrapara, Halisahar and Chakdah Municipalities*

### 1.1.4. Need for Transaction Advisory Services

The existing waste management system in this cluster has deficiencies in terms of primary collection, secondary collection, treatment process and disposal. The system lacks synchronization between collection, storage & safe transportation of waste. To maximize efficiency and effectiveness of municipal management system in this cluster, it is necessary to address different dimensions of MSWM and devise cost-effective systems which would be viable in the available socio-economic and politico-environmental setting.

Therefore, to provide technical assistance to the ULBs in this cluster for preparation of detailed feasibility report, M/s PricewaterhouseCoopers Pvt. Ltd has been appointed as the Transaction Advisor.



## 1.2 Objectives

The project seeks to improve and develop a socially and environmentally sustainable system of solid waste management that reduces the associated environmental and public health risks. The overall objectives of the project are to:

- ✓ Prepare detail techno-economic feasibility reports for scientific municipal solid waste management for the ULBs in the cluster in compliance with the MSWM Rule 2016 and other statutory norms of CPHEEO & Central and State Pollution Control Board. This would include;
  - Propose most viable technology options and corresponding cost-benefit analysis to evolve a zero-waste solution.
  - Propose institutional structures required for implementation of projects and operation & maintenance thereof with private sector financing for the purpose of ensuring that the project is structured and executed in line with the specifications as stipulated in the DFR.
  - Propose IEC/BCC interventions for effective citizen engagement.
  - Suggesting key performance indicators linked with payment schedule for evaluation of private agencies
  - To recommend suitable measures for capacity building and institutional development of the concerned ULBs in the cluster in order to sustain the proposed investments in SWM.
  - To recommend suitable IEC measures for effective citizen engagement in the concerned ULBs in the cluster to sustain the proposed investments in SWM.
  - To facilitate bid process management for selection of right technology partners and operators.

## 1.3 Scope of Work for Transaction Advisory Services

The scope of work for PricewaterhouseCoopers Pvt. Ltd. to provide the Transaction Advisory services includes the following:

- Carry out feasibility study of the project in all respect including techno economic viability of existing cluster /proposed cluster of municipal bodies.
- Preparation of Technical Feasibility Report for integrated solid waste management for the municipal bodies involved in this project.
- Structure projects under PPP mode to enable recovery of the investments made in SWM projects through innovative business and commercial practices such as commercial sale of products, levy of user charges/ fee etc., as appropriate under the applicable laws.
- Prepare bid documents (RfP, Concession Agreement etc.) and manage bid process till signing of Concession Agreement considering the above issues covered under feasibility study report.
- Assist Solid Waste Management (SWM) Cell in managing the bid process including evaluation of bids and for selection of successful agency for the cluster.
- Drafting of Tripartite Agreement between Municipal Bodies in the Cluster, the SWM Cell of the Department and the Selected Agency.

## 1.4 Structure of this Inception Report

The contents and chapters of this particular Inception Report has been framed as per the following:

### Chapter 1: Introduction

This chapter gives a general over view of the project and explains in detail the objective and scope of work for the transaction advisor.

### Chapter 2: Approach & Methodology of the Study

This chapter provides a detailed report on the approach and methodology undertaken to achieve the objectives of the project.

### Chapter 3: Project Inception and Progress

This chapter provides an exhaustive account of the work that has been done so far and the activities that have been undertaken in that regard.

### Chapter 4 : Work Plan and Way Forward

This chapter explains in detail the future course of action in terms of the deliverables and timelines for the same.



## ***2. Approach and Methodology***

### ***2.1 Approach Adopted***

#### ***2.1.1. Primary Considerations***

The objective of the next deliverable is preparation of a feasibility study, the approach of PwC team to address the project, shall be based upon the following primary considerations or criteria:

- Integration of existing infrastructure & investment made into the proposed system.
- Synchronization of existing master plan or any future schemes into the proposed system.
- Optimization of land utilization (minimum disposal).
- Reduction of manual handling.
- Compliance of rules, environmental & social safeguard.
- Technological flexibility and options.
- Defined performance parameters.
- Robust monitoring & tracking system.

#### ***2.1.2. Team Mobilization***

PwC has deployed a strong team of highly qualified professional with experiences in the relevant fields. PwC's team comprises urban planner, civil engineer, SWM expert, environmental professional, financial expert, PPP expert, legal expert and competent support staff. The team has already visited the study area and commenced interactions with the client & different stakeholders.

#### ***2.1.3. Coordination with the Client***

PwC would be carrying out the study in close consultation with SUDA and other related line departments including respective ULBs for the requirement of data collection, procurement of maps and drawings etc. as well as to seek technical views of the client on PwC's project approach and outcome.

#### ***2.1.4. Adoption of State-of-the-Art Tools and Techniques***

Based on previous experience, the study team will adopt a robust methodology to carry out the assignment. For purpose of the study, GIS-based survey techniques, different software packages, such as – AUTOCAD etc. would be utilized.

## ***2.2. Methodology Statement for the Feasibility Study***

The broad roadmap to carry out the feasibility study includes the following:

- Review and compliance of regulatory framework
- Collection of secondary data
- Site visit & reconnaissance survey
- Existing waste collection transportation and disposal practices
- Situation analysis and gap identification
- Baseline survey and investigations
- Population projection and waste quantification
- Planning/ need assessment for integrated waste management
- Stakeholders consultation
- Design of processing and treatment facility (model case studies)
- Project financials
- Formulation of project implementation mechanism
- Information, Education & Communication component
- Preparation of bid documents including concession agreement.
- Bid Process Management from initiation of release of Tender notice to signing of Concession Agreement with the selected Bidder. These have been discussed below in further detail:

### ***2.2.1 Project Kick-Off***

A project initiation meeting was held on 4<sup>th</sup> September 2019, between the PwC team and the Project Team of SUDA as well as associated ULBs of relevant clusters. The agenda for that initiation discussion included:

- Introduction of the project team;
- Identifying a single contact person at the Client end;
- Project management and communication protocols;
- Deliverable, timelines, approach & methodology of the study

This meeting focused on ensuring a shared understanding of inputs and expected outputs from PwC, identifying contacts, responsibility centres and any data and/or other information that will need to be supplied by ULBs and government counterparts to PwC for carrying out the assignment.

### ***2.2.2 Review of existing Data, Information, Maps***

The team would review all existing reports, data, information, drawings and maps available from different sources. This would help the consultants to understand the nature of the study area, existing infrastructure, conservancy strength, different ongoing projects and planned activities of ULBs.

### ***2.2.3 Review of Policy and Regulatory Frameworks***

The team will gain a thorough understanding of MSW Rules 2016, Plastic Waste Management Rules 2016, central and state PCB's norms & regulations, including latest updates from NGT guidelines pertaining to SWM, which are applicable for designing of the proposed waste management system vis-à-vis treatment and disposal facility for cluster II ULBs. The team shall also discuss with different stakeholders regarding ULB level by-laws that have been framed for the implementation of SWM system.

### ***2.2.4 Review of Successful Models of other Cities***

PwC team shall be reviewing the best practices adopted in different model cities, which have already ranked higher in the Swachh Sarvekshan 2018 and 2019 in last few years. The applicable model may be adopted based on its relevance to the context. Few of the cities, from where examples would be reviewed are shown below.



Figure 1 Swachh Survekshan 2019

## RANKING OF 100 ULBS ON BASIS OF TOTAL SCORE (More than 1 Lakh Population)

SS2019 Ranking	Name of the ULB	Name of the State/ UT	PART-1: Service Level Progress (1250 M)	PART-2: Certification (1250 M)	PART-3: Direct Observation (1250M)	PART-4: Citizens Feedback & Swachhta App (1250 M)	Overall Marks (5000 M)
1	Indore	Madhya Pradesh	1239	1050	1241	1129	4659
2	Ambikapur	Chhattisgarh	1194	1050	1133	1017	4394
3	Mysuru	Karnataka	1195	1000	1211	972	4379
4	Ujjain	Madhya Pradesh	1223	750	1222	1050	4244
5	New Delhi (NDMC)	Delhi	1194	750	1198	1049	4191
6	Amdavad	Gujarat	1167	750	1248	972	4137
7	Navi Mumbai	Maharashtra	1064	750	1236	1079	4129
8	Tirupati	Andhra Pradesh	1028	750	1141	1106	4025
9	Rajkot	Gujarat	989	750	1200	1061	4000
10	Dewas	Madhya Pradesh	1105	750	1151	962	3968
11	Bhilai Nagar	Chhattisgarh	1035	750	1093	1052	3929
12	Vijayawada	Andhra Pradesh	968	750	1097	1067	3882
13	Ghaziabad	Uttar Pradesh	983	700	1201	993	3877
14	Surat	Gujarat	914	750	1223	974	3861
15	Jamshedpur	Jharkhand	894	600	1249	1062	3806
16	Kolhapur	Maharashtra	1005	650	1090	1058	3803
17	Khargone	Madhya Pradesh	808	750	1172	1069	3798
18	Nagda	Madhya Pradesh	979	600	1167	1048	3794
19	Bhopal	Madhya Pradesh	986	600	1145	1062	3794
20	Chandigarh	Chandigarh	1129	500	1120	1038	3787
21	Singrauli	Madhya Pradesh	980	750	1058	975	3763
22	Gandhinagar	Gujarat	862	750	1229	916	3757
23	Visakhapatnam (GVMC)	Andhra Pradesh	914	600	1193	1037	3744
24	Karnal	Haryana	781	750	1204	1001	3736
25	Jabalpur	Madhya Pradesh	973	600	1080	1014	3667
26	Chhindwara	Madhya Pradesh	754	600	1184	1098	3636
27	Mira-Bhayandar	Maharashtra	817	700	1138	967	3622

Source: MoHUA

### 2.2.5 Reconnaissance Survey & Situation Analysis

The PwC Team will undertake reconnaissance survey of the study area, site visits and stakeholders consultation to get access to all relevant information related to the development and operation of solid waste management system. Thereafter the assessment of the existing system will be undertaken to understand the following aspects:

- Existing environmental, physical, social and economic conditions;
- Information on the planned lifetime of existing facilities and any plans for their replacement/ best use
- Existing waste management practices in the ULBs in terms of information on the planned lifetime of existing facilities and any plans for their replacement/ best use. Some of them are as follows:
  - ✓ Segregation & storage;
  - ✓ Primary collection & street sweeping;



- ✓ Secondary collection and transportation system;
- ✓ Waste collection efficiency and logistic optimization;
- ✓ Current waste processing and disposal arrangements at site;
- ✓ Waste recycling & recovery activities;
- ✓ Manpower adequacy and institutional set up for waste management (separately for collection, transportation and disposal)
- ✓ Assessment of cost incurred for provision of SWM services from municipal budgets and audited documents, user charge, current service level and targeted benchmark etc.

Based on the above information, PwC will develop understanding of existing solid waste management system in the municipalities and will identify information gaps and overall system deficiencies, which would help the team to devise potential solutions.

### **2.2.6 Primary Studies and Surveys**

Primary studies and surveys would be conducted to collect baseline information in the relevant urban areas of the cluster. Surveys would comprise – topographical survey, waste sampling & analysis, geotechnical survey etc. with a reasonable number of samples and within the area of proposed facilities. The detailed location (**provided in section: Rehabilitation of Dumpsites**), numbers of samples, extend of site investigation/survey etc. shall be decided upon the site visit during the time of feasibility study.

### **2.2.7 Waste Quantification & Characterization**

Estimation of quantum of solid waste generated and its characteristics assume great significance for identifying the most suitable waste treatment and disposal options. To assess the waste generation trends of the project, a comprehensive desk research will be undertaken. Population data will be collected from secondary sources, census reports and shall be extrapolated (arithmetical progress, geometrical progress, incremental method and decadal growth method) as far as possible, for the design period. Applicable per capita waste generation factor shall be applied to estimate the quantity of waste generated in the study area.

Waste characterization survey will be done to understand their physical composition of the waste and its chemical characteristics as well.

### **2.2.8 Stakeholders' consultation**

Based upon the concept plan, stakeholders' consultation will be carried out in the feasibility study. Stakeholders' consultation would include meeting with different Govt. agencies, NGOs, community representatives, community organizers and various institutions in the vicinity. The stakeholder's consultation would give a fair idea and realistic pictures of different issues, needs etc. of the city, present gaps in the SWM implementation.

Stakeholders' consultation would be also required to share the idea, views of the consultants while developing the concept plan of the development. The brainstorming session during the consultation with different Nodal authorities, such as – SUDA, KMDA, Kalyani, Gayespur, Haringhata, Halisahar, Kachrapara, Chakdah and WBPCB would enrich the quality of the study output.

### **2.2.9 Development of Concept Plan**

Reconnaissance survey will lead to assessment of the existing situation, the concept plan would be developed which primarily will be in line with the terms of reference of the TA assignment. The plan would be designed for short term and long-term horizon, in phased manner. The concept plan would entail need assessment, capacity estimation, population projection and accordingly the estimation proposed infrastructural requirement.

Key activities that will be undertaken include:

- Planning of source segregation and primary collection including street sweeping;
- Roadmap for involving NGO's, SHG's and private sector for transfer of solid waste management staff and carry out cost benefit analysis.
- Study of various treatment options available;
- Based on waste characterization and road map of source segregation, land requirement for both treatment and disposal facility will be assessed;
- Assessment of landfill volume and life will be carried out based on waste segregation
- Assessment of capacity of waste processing facility & other pertinent details, e.g. the general market for recyclable items, materials from processing (manure), gas or electricity (if from waste to energy) shall be



understood from the concerned ULB officials and accordingly a tentative road map for forward market linkages will be proposed

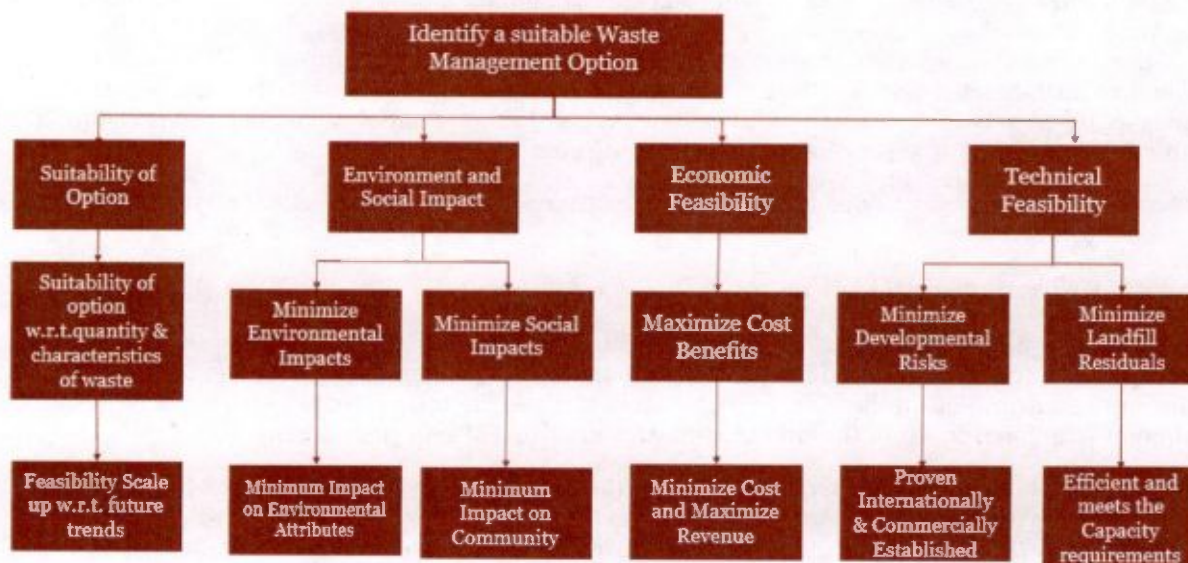
- Assess the existing service conditions of all SWM employees and suggest the improvements needed for enhancing up efficiency and effectiveness;
- Development of operating standards, service delivery, project costing in terms of both capital, O&M and other costs

### 2.2.10 Selection of Technology

Based on the assessment of waste quantity, category, and characteristics of waste, various disposal options shall be evaluated for suitability. Considering the fact that there is minimum land designated for waste treatment and disposal, techno-economic analysis shall be carried out for collection, transportation, treatment and disposal of waste. A list of options shall be developed keeping in mind a list of other important guiding options like climatic conditions, waste quantity and quality along with successful case studies in Indian scenario. The outline of list of options is as under.

- Composting (vermi-composting, aerobic composting, package composting plant, organic waste converters etc with both manual and mechanical options)
- Energy recovery options (power generation) such as anaerobic digestion (bio-methanation), RDF
- Off-site/ On-site waste disposal - land filling (engineered and secured landfills)

Figure 2 Framework for Selection of Right Technology



Once the above noted Decision Matrix is completed and information on how the various waste management system options perform in terms of financial, environmental, social, socio economic and practical implications are available, it will be appraised on how each option performs. Before proceeding to the appraisal, PwC shall consider whether there are any constraints that must be applied, which the options cannot meet, and it may well be appropriate to drop the option that does not address this constraint at this stage. PwC will have close consultation with Kalyani, Gayespur, Haringhata, Kachrapara, Halisahar, Chakdah & SUDA before finalizing the technology for the purposes of appraising each of the options against the Decision Criteria.

### 2.2.11 Waste Minimization Strategy

Based on the quantity of waste generated by different sources and categorization, various waste minimization options would be analysed and a feasible strategy would be recommended. This exercise is required to minimize the waste generating from the household and commercial establishments.

### 2.2.12 Waste Recycling Strategy

Waste recycling strategy would reduce the quantum of waste reaching, treatment facility and disposal facility and thereby reducing the burden on land and infrastructure, which ultimately saves the cost. Further assessment will also be made on the current market potential and market rates of the recyclable that is expected from the project



### 2.2.13 Rehabilitation of Dumpsites

PwC study team will evaluate different closure technology, such as – simple closure, bioremediation, biomining as per the NGT guidelines which will lead to closure with land reclamation and landfill gas (LFG) extraction technologies pertaining to the closure of the dumpsites in each of the municipalities of the cluster, as applicable. The PwC study team has visited all the ULBs and their existing disposal sites. The list of the site visited, their respective locations and area are given in the following table

<b>Site</b>	<b>Tentative Area (in acres)</b>	<b>Ward/Location</b>
<b>Kalyani ULB</b>		
Site 1	3	Ward 14
Site 2	10	Ward 6- Panchayat UDAM
<b>Halisahar ULB</b>		
Site 1	13.5	
<b>Kachrapara ULB</b>		
Site 1	5	Ward 12-13, Bidhanpally
<b>Gayeshpur ULB</b>		
Disposal Site		Ward 14
<b>Haringhata ULB</b>	No Disposal site	
<b>Chakdah ULB</b>		
Identified SWM site	6	Ward 19

The quantity of the waste will be assessed from the topographical survey and accordingly the technical feasibility of the closure system shall be designed.

### 2.2.14 Design of the Infrastructural Components

Based upon the need assessment and the infrastructural planning, the engineering design of different components, such as – source segregation, C&T, processing options, biological treatment facility, recycling facility, energy generation option, disposal technology & mechanism, with revenue model shall be carried out.

A comprehensive site layout plan for waste processing and disposal facility will be prepared. The plan will include site layout indicating waste processing and disposal facility, location plan, material flow plan, land requirement, buffer zones, and service areas. In the layout, suitable site access system will be shown.

The various components of the treatment & disposal facility that may be proposed, are listed down below, which will be taken into consideration in due course of the feasibility study.

- Collection & transportation mechanism
- Aerobic Composting Facility
- Biomethanation
- Refused Derived Fuel
- Material Recovery Facility
- Engineered Landfill

### 2.2.15 Design of support facilities

Integrated municipal solid waste processing and disposal facility also requires supporting facilities like maintenance building, unloading area, storage area, equipment, leachate treatment, etc. This task primarily comprises assessment of requirements towards:

- Development of necessary supporting facilities such as maintenance building, reception area, storage facility, etc.
- Provision of facilities like on-site packing, loading and storage facilities, power supply, water supply, sewerage, lighting and electrical works.



### **2.2.16 Schematic Drawings**

The design planning and assessment will lead to the schematic representative drawing, layout etc. of different components and the same would be developed by the team.

### **2.2.17 Project Costing and Financial**

Block costing will be done for different infrastructural components. The project financial analysis would be done to develop the strategic investment plan for the cluster. The investment plan may be depicted over a short term and long-term horizon.

The financial model will be developed considering all capital and operation cost with the objective to develop a tariff structure for end users so that the operations can be self-sustainable. The Financial Model shall also take into consideration, incentives and converting informal recycling sector into formal waste management taskforce, Revenue generation model – sale of products (compost, RDF, recyclables etc.), tipping fees and analysis for the cost recovery, breakeven period etc.

The team will also carry out viability assessment of the project and will ascertain whether project is economically and financially viable. It is essential for the success of the SWM PPP Projects to be economically feasible, Economic Rate of Return, with greater impact on the society and the environment in terms of employment generation and improving the health of the citizens.

The Financial viability shall be ascertained to ensure sufficient income for the projects to meet the O&M and financial obligations with future growth and sustainability of the project. The financial viability shall ascertain returns, Internal rate of return (IRR), weighted average cost of capital (WACC), Sensitivity Analysis, Net present value (NPV), from the project to give an indication of positive returns for the financial partners to invest in the project.

### **2.2.18 Operation & Maintenance Plan**

The team will prepare an operation and maintenance plan for the proposed system. The operation and maintenance plan shall cover detail of collection and transportation systems (e.g. vehicle maintenance plan, operation schedule, interim storage stations, man power requirement, treatment facility (relevant units of treatment system, vehicle and equipment operation and maintenance with man power requirements) and disposal facility if in purview of operation under the proponent. The O&M framework shall be typically covering the following aspects:

- Develop organization structure for effective implementation of the project
- Approach and methodology for implementation during construction and operation phase
- System to monitor and control activities and meet regulatory requirements
- Prepare project implementation schedule for execution and contract packaging plan.

The team shall develop the Operation and Maintenance Plan for the Integrated Waste Management Facility and the same will be mentioned in the RfP document, for the purpose of bidding. At the initial period of this phase (Operation and Maintenance phase), it has to be ensured that the contractor will maintain the facility as per the mandates mentioned in the document. Consultant would also develop an Operation and Maintenance manual as a guideline for the contractor during the operational and maintenance phase.

### **2.2.19 Development of Environmental Safeguard Mechanism**

In due course of the feasibility study, PwC shall take in to account of all plausible environmental and social safeguards mechanism, which are necessary for operation of the processing and disposal facility. A systematic assessment of environmental impacts due to the landfill operation will be identified and required environmental management plan will be devised.

An Environmental and Health & Safety Management Plan will be developed to monitor and evaluate the effectiveness of the mitigation measures and the impacts of the project.

Environment safeguard mechanism, post closure maintenance plan and emergency response protocol along with environmental monitoring plan would include the following environmental parameters to be monitored on a regular basis and will be developed as per the MSW Rules.

- Quality of Leachate after Treatment
- Surface Water Quality
- Ground Water Quality
- Quantity and Quality of Gas Generated



- Ambient Air Quality

### **2.2.20 Implementation Structure for Public Private Participation**

The team will assess various PPP options based on the financial viability of the project. Some of the options could be Design-Built-Finance-Operate-Transfer (DBFOT), Design-Built-Operate-Transfer (DBOT) and Hybrid Annuity Model.

The structure shall ensure the development of infrastructure as well as operation for the Authority on one side and value for money to the private partner on the other side. The following activities will form part of the processes to be followed by the TA as mentioned below:

- Relevance and appropriateness of implementing the waste collection, transfer and disposal system
- Whether components of the waste collection, transportation and disposal system can be implemented as whole or in sub-divided manner
- Whether contestable and competitive solid waste collection and/or transfer services should be provided through multi-year service contracts or franchises with private companies?
- Risk identification and address, tipping fees estimate, reporting structure and monitoring mechanism.
- Incentives and converting informal recycling sector into formal waste management taskforce
- Revenue generation model – sale of products (compost, RDF, recyclables etc.), tipping fees.

Depending upon the proposed technology options and O&M plan, the project structuring under suitable PPP model will be structured. Different types of the PPP models will be reviewed and based upon the successful case studies of similar nature of the city, suitable model shall be adopted in consultation with SUDA and related stakeholders.

### **2.2.21 Capacity Building**

As mentioned earlier, PwC will carry out the studies in close association with the engineering staff of the SUDA, Government of West Bengal and the relevant municipalities within the cluster and enhance their understanding on the concept design, implementation and recommendations. Technical sessions with the commissioner or authorized officer in charge shall be conducted, as required for necessary capacity building of ULB officials on various methods of waste diversion and waste management techniques.

#### **2.2.1 Preparation of Tender Documents**

The team will prepare the bid documents for inviting proposals from potential bidders. The technical and financial qualification criteria would be developed to assess their experience in the sector and suitability to the project and financial capability for managing the project including operation and maintenance of the project facilities. The bidding process, which include single stage bidding process or two stage bidding process, would be decided in consultation with SUDA/ MED and the TA engagement will be from release of tender notice to signing of concession agreement with the prospective bidder. The team would also prepare the Concession Agreement on PPP model to be executed between the implementing agency (SUDA/ MED) and the private operator after identification and address of all the associated project risk indicating the following:

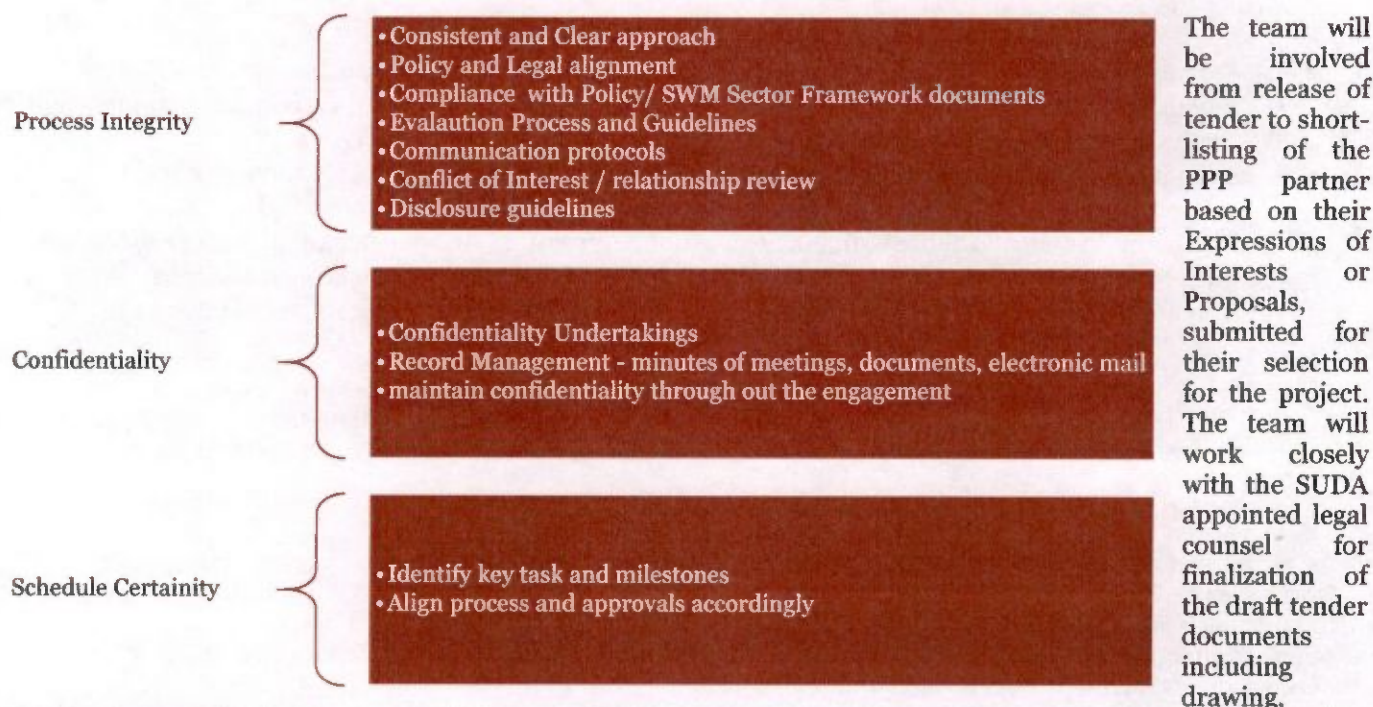
- Clear Scope of the Project
- Defined Roles & responsibilities and obligations of the both the parties;
- Design and construction requirements;
- Broad standard and specification of material used;
- Performance standards;
- Service Level Agreement
- Payment terms& penalties;
- Grant / Revenue sharing mechanism, if any
- Safety and Security of the projects including protection of Human
- Insurance
- Operation and maintenance requirement;
- Escrow mechanism for fair and transparent financial transaction
- Post closure monitoring; and
- Third party monitoring mechanism (Independent Engineer or Internal Officio designate)
- Environmental norms for disposal.



### 2.2.2 Issuance of Bids, Evaluation of Bids, Contract Agreement & Award of Tender

The team shall ensure, the three consideration for the PPP procurement, i.e. Fair, Open and Transparent with utmost sincerity and shall follow procurement principles as below:

Figure 3 Principles of procurement to be followed by the PwC



specifications, detailed estimates, and bill of quantities, bid evaluation criteria and Concession Agreement, complete in all respect for a successful tender process. The team shall assist SUDA in holding pre-tender meeting and offer clarifications if any, sought by the potential bidders. The team shall also prepare reply to the queries received to the Authority from prospective bidders, participated in the pre-bid meeting and the draft minutes of the pre-tender meeting shall be prepared by PwC team for approval by SUDA. The team will diligently evaluate the bid based on the criteria set out in the Request for Proposal document for contractors and if required will also provide inputs to the bid evaluation criteria based on our experience on providing transaction advisory to waste management projects.

The evaluation would be undertaken based on the set of parameters or guidelines already set or decided by the evaluation committee. Successful bidder would be selected after the technical and financial evaluation as detailed in the RfP document.



## 3. Project Inception & Progress

### 3.1. Reconnaissance Survey of the Study Area

PwC study team has undertaken reconnaissance survey of the study area and obtained onsite information and understanding. Six ULBs which have been considered in this cluster (Cluster 8) are:

- Kalyani Municipality
- Gayespur Municipality
- Haringhata Municipality
- Halisahar Municipality
- Kachrapara Municipality
- Chakdah Municipality

As an outcome of the preliminary site visits following understanding will be developed by the PwC study team:

#### 3.1.1. Kalyani Municipality

Kalyani is a planned town under the Lok Sabha constituency of Bongaon, West Bengal. The Municipality of Kalyani is situated within the Nadia District, around 48 Km from the city of Kolkata and is 45 Km from Dum Dum Airport, Kolkata. Connected with the Barrackpore-Kalyani expressway and NH34, it is located 1.50 km from river Ganga. The population (as per census 2011) is just over one lakh (~100623) and generates a daily waste quantity of 55-60 Tonnes. This ULB is divided into 21 wards and 6 zones with establishment of various industries, market and commercial places, hospitals, engineering and medical college, university, training institutes, stadium, parks, schools, etc.

##### 3.1.1.1. Kalyani snapshot

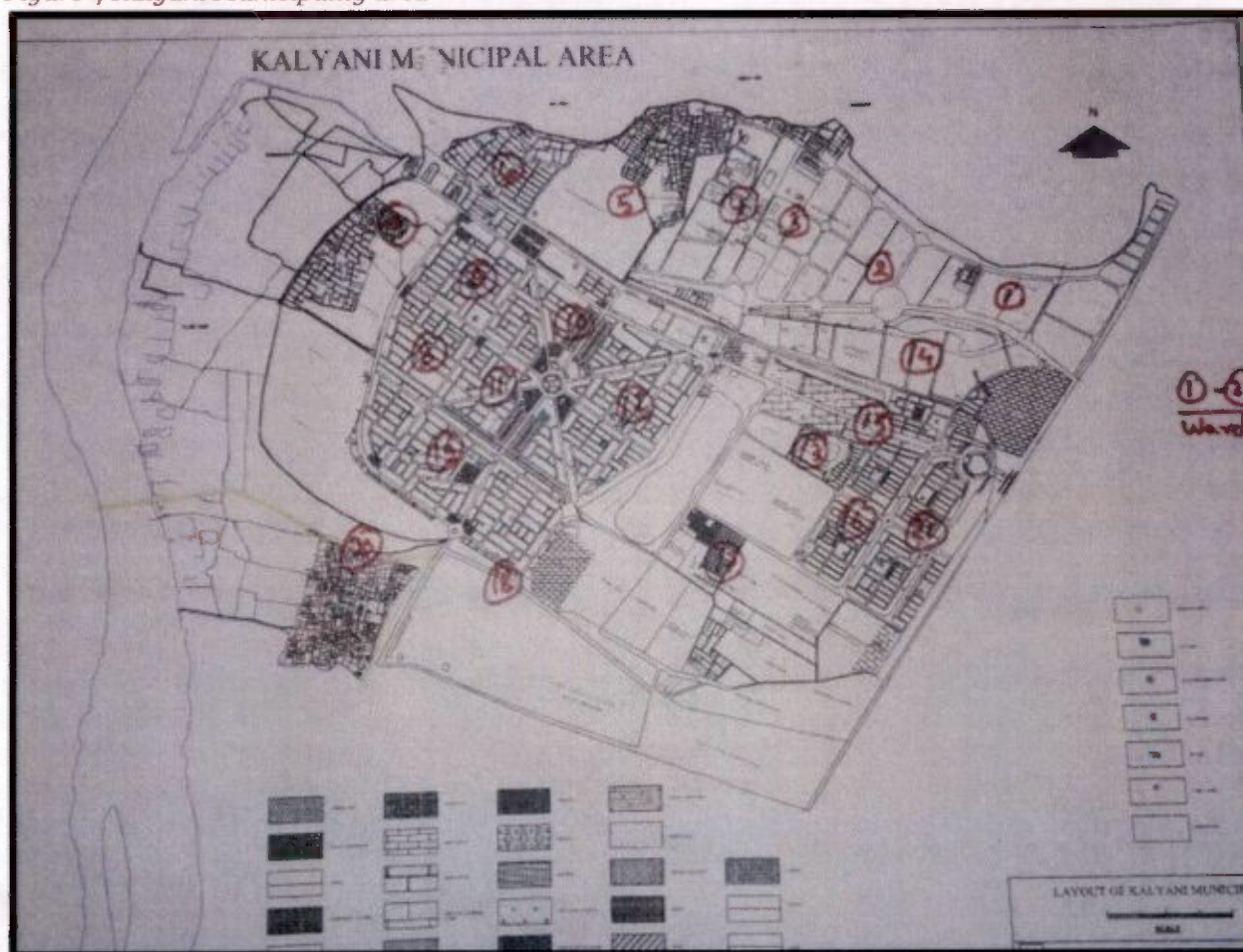
Table 1 Snapshot of Kalyani Municipality

<b>Demography</b>	
<b>Head Office</b>	Kalyani Municipality, City Centre, Kalyani, Nadia District
<b>No of wards</b>	Twenty-One (21)
<b>Geographical Area</b>	Total area of the ULB: 29.24 Sq. Km.
<b>Population- 100623 (1 Lakhs+)</b>	
<b>Density</b>	Three thousand nine hundred and ninety-two (3992) per sq. km.
<b>Number of Households</b>	Twenty-five thousand (25000)
<b>Establishment</b>	
<b>Year of Formation</b>	May, 1995
<b>Board of Council Formation</b>	May, 1995
<b>Administrative Jurisdiction</b>	Sub-division Kalyani,
<b>District</b>	Nadia
<b>Police Jurisdiction</b>	Kalyani Police Station
<b>Total waste generated</b>	<b>55-60 TPD</b>



The study area map of the Kalyani Municipality has been shown in the following figure:

Figure 4 Kalyani Municipality area



Source – Official hardcopy from Kalyani Municipality

### 3.1.1.1.1. Primary collection

There are total 21 wards. Each ward has a Ward Committee (comprising of Ward Councillor, Ward Secretary and Ward supervisor) which monitors the mechanism of primary collection from individual households and commercial areas. Collection is done by tri-cycle van puller and is classified separately for slum and non-slum wards. In case of Slum wards: Ward 1- 7, 17 and 18 (partially), on an average 4-5 tri-cycle van pullers are dedicated separately for each of the wards and with 4-5 man-power respectively and for non-slum wards: Ward 8-16, 19- 21, on an average 8- 10 tri-cycle van pullers are dedicated separately for each of the wards and with equal number of manpower respectively.

Figure 5 Primary collection in Kalyani



### 3.1.1.1.2. Secondary transportation

Post-primary collection, the tri-cycle van pullers transfer the waste to the existing compactors (both stationary and mobile) and covered bins/vat.



Stationary compactor station is installed in ward 13, opposite JNM Medical college hospital. With a capacity of 8 Tonnes per day, mixed waste from ward 15, 21, 13, 16 and 17 and biodegradable waste from JNM and ESI Hospital are collected in this compactor. From here, everyday around 5pm, hook-loader collects and transports this waste to dumping site.

Out of the two mobile compactors of capacity 5-6 tonnes per day, one caters to ward 10, 9, 12(partially), 11(partially) and 5. The second one caters to ward 19, 12(partially), 11(partially) and 8(partially). These mobile compactors directly transport the waste to the dumping ground, which is 2.5 km from the city. These compactors generally cover 2-3 trips daily. One of the mobile compactors has an RFID tag and is being tracked during operation.

There are 6-7 nos. of covered bins with capacity 300-400 Kg each installed Wards 1, 2, 3, 4, 6, 7, 18 and 20. Out of the total 8 existing tractors, 4 are dedicatedly transporting this waste collected from covered bins to the dumping ground. The remaining 4 collects waste from road sweeping, garden and community Halls. These tractors generally cover 2-3 trips daily and two of them have RFID tags.

*Figure 6 Secondary collection points and transportation system in Kalyani*



### **3.1.1.1.3. Disposal site**

In accordance to the existing system, there are currently two unscientific disposal sites for the ULB to dispose off their waste:

- Ward 10- beside the Highway – the primary one
- Ward 6- under Panchayat UDAM, and

**Ward 10-** this is the primary disposal site of the ULB, where majority of the waste is being dumped on daily basis. The dumping happens along the highway and because of the increasing quantum of disposal, this has created a severe concern for the ULB to address the issue on immediate basis. Dumping to this site needs to be stopped immediately, as it is contaminating the soil and the ground water. In addition to this the site is close to the school and 30% of the road is covered with this waste. The primary assessment from fields reconnaissance survey identifies



the aesthetic and environmental degradation of the area due to dumping of untreated mixed waste in this particular location.

*Figure 7 Disposal Site along the Highway in Ward 10- Kalyani*



**Ward 6-** This additional site spans around 10 acre of area and is encroached by slum settlements. In the recent past, despite multiple attempts have been made by the ULB to demarcate the land parcel with concrete walls and set up treatment facilities, the local slum dwellers have resisted to any such implementation plans.

*Figure 8 Disposal site at Ward 6- under Panchayat UDAM- Kalyani*



#### **3.1.1.1.4. Proposed Disposal site**

There are two selected disposal sites that the ULB has identified as options for constructing future SLF:

- Ward 14
- Ward 10- beside the fodder firm

**Ward 14-** in the recent past, a compost plant was installed and operated by a German waste management company. This plant was maintained to treat organic waste from selected bulk generation points like markets. After several months of operation, owing to financial non-feasibility, the company pulled out its infrastructure from the Municipality. Currently the site is vacant and is demarcated as one the potential proposed sanitary disposal sites.



*Figure 9 Proposed Site for Decentralized treatment plant*



This site is well maintained with an intention of installation of a waste treatment plant in the future in course of implementing Action plan of the Municipality.

**Ward 10-** the ULB has identified this land parcel adjacent to the fodder firm, spanning across approx. 50 acres for constructing a sanitary land fill site. This land is identified for a long-term purpose, in view of the cluster-based approach to accommodate inert materials of the multiple ULBs included in the cluster. The ULB is yet to get land ownership details and the process is underway.

*Figure 10 Identified site for proposed SLF beside fodder farm- Kalyani*



Further, Kalyani has assured that, several decentralized units, both AOWC and 5TPD Biomethanation plant can be installed at the decentralized level owing to project numbers.

#### **3.1.1.1.5. Street sweeping**

Total bitumen road coverage in Kalyani is around 250Km comprising of major roads as well as collector roads. On an average 20 Safai Karmachari are engaged for street sweeping on a daily basis covering around 10-20 km. There are 20-25 bins (capacity 30 Lt each) are installed in several crucial points within the city: railway station, bus stands, offices, schools, court, etc.

This waste is either collected in tri-cycle van or in mini-dumper. The tri-cycle van transfers the waste to the mobile compactor, which then transports the same to the dumping site, whereas the mini-dumper directly transports the waste to the dump site.

#### **3.1.1.1.6. Biomedical, Hazardous and E-waste Management**

There are 2 main hospitals: JNM and ESI; 15 nursing homes and more than pathology centres within the city. These generate 20 tonnes of waste on daily basis, which are predominantly biomedical in nature. A private agency: "Medicare Environment Management Pvt. Ltd.", is solely responsible for end-to-end solution of the biomedical waste. They collect the waste and transports it directly to the treatment plant, set up in Ward 17. This treatment plant covers biomedical waste of entire districts



of Nadia, Hooghly and North 24 Parganas. The municipal solid waste generated from the hospital is collected by the municipal workers from each healthcare establishments.

### **3.1.1.1.7. Status of Overall Awareness towards Waste Management**

Kalyani has taken several initiatives in creating public awareness towards waste management by engaging 150 SHG workers to trigger people on waste segregation at a household level. The plan intends to cover all the 21 wards and the work has been initiated in wards 12, 15, 21, 11, 19, 9, 10 and 16. Ward Councillor, Ward Secretary and Ward committee members are pro-actively involved in this awareness campaign. Every week on Friday, the Ward Committee conducts a general public meeting at each ward level to influence the awareness program. Furthermore, in every 15 days, the Chairman conducts a meeting with the Solid waste management Task force in the ULB, to review on the existing system. Recently, two NGOs have joined hands with the ULB for fast paced implementation of public awareness. Furthermore, public road rally and audio aid in various wards have been used to increase the public reach. Earlier, in 2018, the SHG workers conducted similar awareness activity on control of plastic use (below 50 microns) in commercial areas and market places. Provision for penalty at the rate Rs 50/ per individual and- Rs. 3000/- per commercial establishments (shops etc) have already been initiated.

In the proposed system existing self-help group (SHG), women's association, NGO would be integrated during the awareness activities and also during the household level segregation campaigning.

*Figure 11 Public awareness and participation in Kalyani*



**Ward Committee meeting on Waste segregation**

**Roll-out of IEC Activities**



### 3.1.2. Gayeshpur Municipality

Located around 65 Km in north of Kolkata, Gayeshpur ULB is in the northern fringe of the Kolkata Metropolitan Area and northwest of the Kalyani Municipality. The connectivity to this ULB is marked by the NH 34 in the eastern side and Kalyani expressway in the western side. It is linked through suburban railways with two railway stations: Kalyani Railway Station, at its periphery in the north-west, and Kanchrapara railway station in the west. The municipality spans across an area of 22.5 Sq. Km.

#### 3.1.2.1. Gayeshpur snapshot

Table 2 Snapshot of Gayeshpur Municipality

<b>Demography</b>	
<b>Head Office</b>	Gayeshpur Municipality, Kataganj, Nadia
<b>No of wards</b>	Eighteen (18)
<b>Geographical Area</b>	Total area of the ULB: 22.5 Sq. Km.
<b>Population- 55,048</b>	
<b>Density</b>	Fifty-eight thousand nine hundred and ninety-eight (58998) per sq. km.
<b>Number of Households</b>	Seventeen thousand (17000)
<b>Establishment</b>	
<b>Year of Formation</b>	1977-NAA 1995- Municipality
<b>Board of Council Formation</b>	1995
<b>Administrative Jurisdiction</b>	Sub-division Kalyani, Town Gayeshpur
<b>District</b>	Nadia
<b>Police Jurisdiction</b>	Thana Kalyani
<b>Total waste generated</b>	<b>30-40 TPD</b>

#### 3.1.2.1.1. Primary collection

The ULB comprises of 18 wards. Currently the infrastructure includes 18 tri-cycle vans, single tri-cycle van, dedicated for each ward. The ULB charges a monthly user fee of INR 15/household.

#### 3.1.2.1.2. Secondary transportation

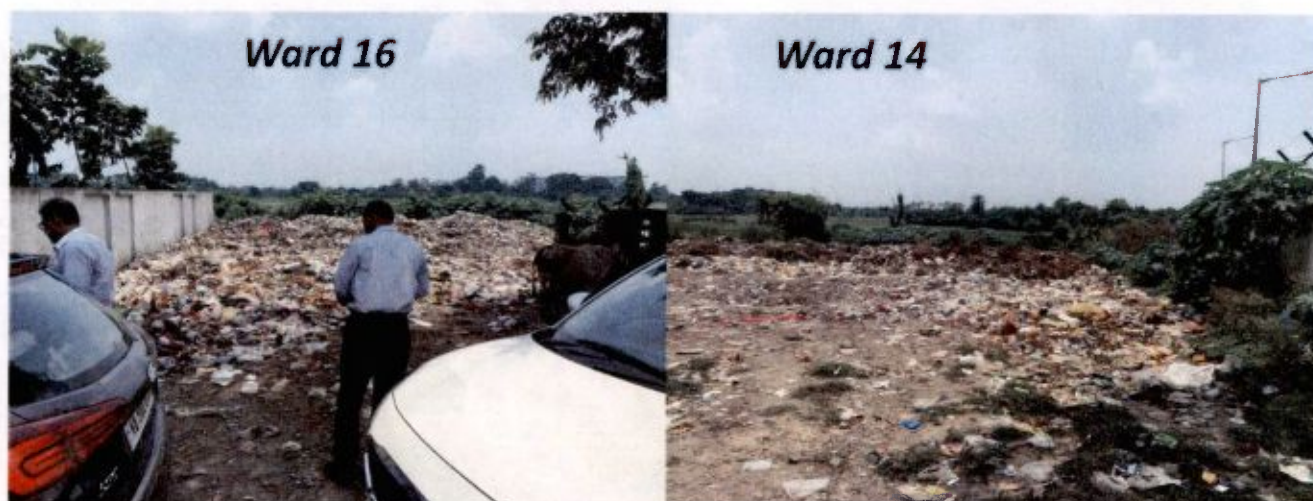
In the current inventory, there are 60 tractor trollies present with the ULB, out of which 30 are dedicated for disposal of accumulated collected household waste from the collection points to the dumpsite, while the other 30 are dedicated for collection of wastes from community, road sweeping and bulk generators like market places, etc. and transporting it to the final disposal site. The ULB also possesses one stationary compactor.

#### 3.1.2.1.3. Disposal site

As per the current situation, the ULB practices to dispose off waste in low-lying area in Ward 16 and in a separate disposal site in ward 14. In case of the disposal site on ward 14, liquid waste or night soil, screened out of the open drains is discharged on the top of the dumped waste mass. This scattered unscientific disposal on a regular basis with a top layer of liquid waste is a major environmental concern for the Municipality. The presence of water body adjacent to the disposal site on ward 16 has flagged a major concern for water pollution.



*Figure 12 Disposal Sites in Gayeshpur*



#### **3.1.2.1.4. Proposed Disposal site**

With an intention of scientific disposal in near future, the ULB has identified a land parcel of 9.98 acre in ward 4. During the preliminary site visit, it has been observed that the identified parcel can also accommodate waste treatment facilities.

*Figure 13 Proposed disposal site- Gayeshpur*



The ULB has assured to explore options of land parcel for decentralized units and as this stage they have specifically considered this site as the primary location for any waste treatment or recycling facility.



### 3.1.3. Haringhata Municipality

This newly born Municipality at Nadia district spans across 36 sq. Km. is about 54km from Kolkata. It has been four years since the ULB has been formed, merging adjoining GPs, mainly comprising of agricultural land. Haringhata dairy farm (a dream project of Dr. Bidhan Chandra Roy), has been established here since 1948-49. Universities: West Bengal University Of Technology, Veterinary University, Indian Institute of Science Education and Research Centre(IISER), West Bengal University of Fishery and Animal Husbandry, Bidhan Chandra Krishi Viswavidyalaya (BCKV) along with a degree college, two private engineering colleges, seven higher secondary schools, 22 numbers of primary school, one B.T training college, six numbers of S.S.K- are also present within the municipality area. A stadium and a bus terminus equipped with modern amenities have been proposed to come up in near future.

#### 3.1.3.1. Haringhata snapshot

Table 3 Snapshot of Haringhata Municipality

<b>Demography</b>	
<b>Head Office</b>	Haringhata Municipality, Subarnapur, Haringhata, Nadia
<b>No of wards</b>	Seventeen (17)
<b>Geographical Area</b>	Total area of the ULB: 36 Sq. Km.
<b>Population- 60,000</b>	
<b>Density</b>	One thousand six hundred (1600)/ sq. km.
<b>Number of Households</b>	Thirteen thousand five hundred and seventy-six (13576)
<b>Establishment</b>	
<b>Year of Formation</b>	June 2015
<b>Board of Council Formation</b>	June 2015
<b>Administrative Jurisdiction</b>	Sub-division Kalyani
<b>District</b>	Nadia
<b>Police Jurisdiction</b>	Thana Haringhata
<b>Total waste generated</b>	<b>30-40 TPD</b>



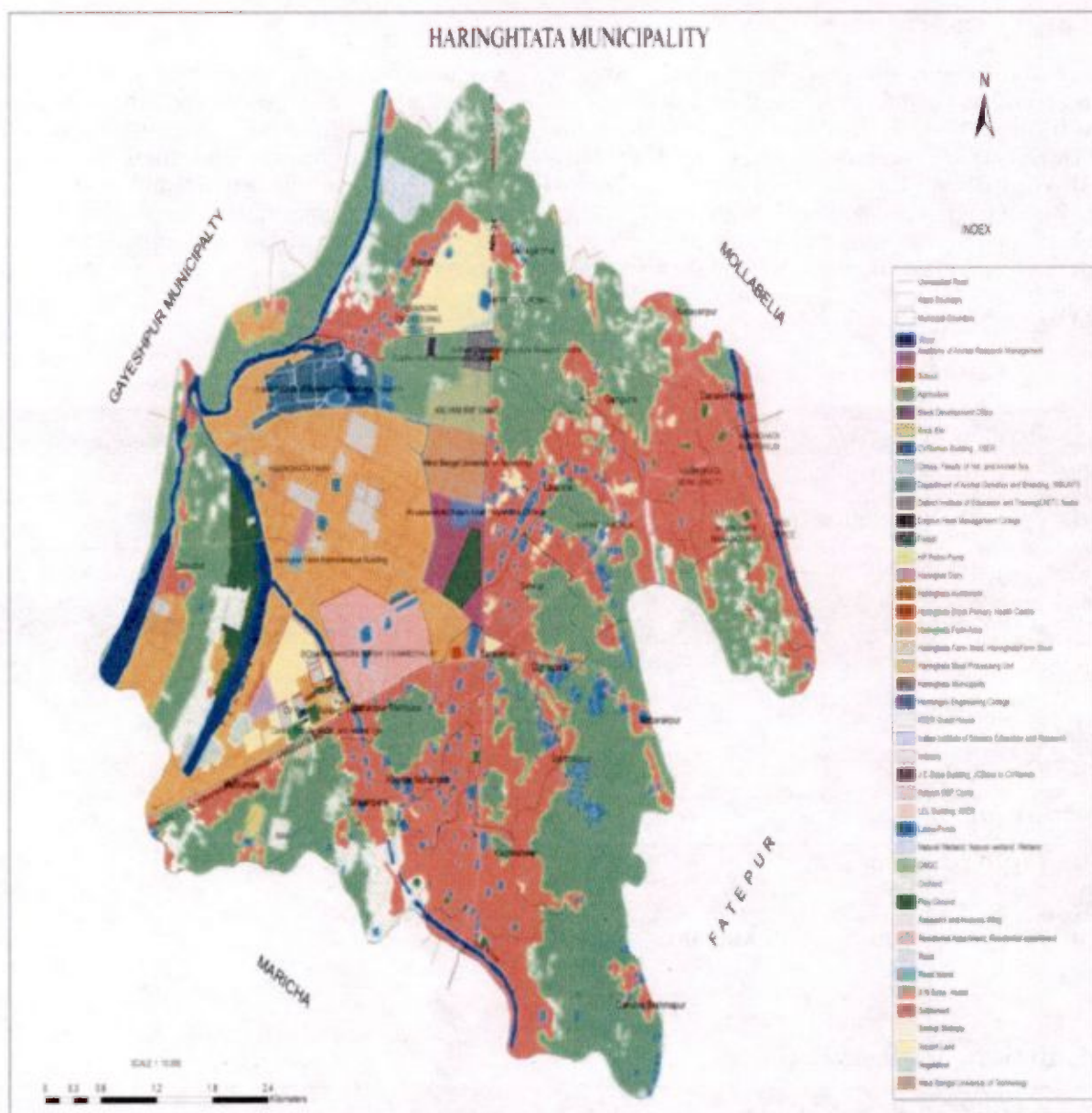


Figure 14 Haringhata Municipality area

### 3.1.3.2. SWM profile

Currently there exists no system of waste collection, although the ULB possesses 2 compactors in its SWM inventory. Total 17 wards comprise of the ULB and catering to a population of only 60 thousand.

As per the existing scenario, waste is either dumped in the open areas or in individual household/community pits. Market waste is collected by “Bazaar samiti” and dump the same in either dedicated pits or in a local flowing water body: Tanuma Canal.

Recently the ULB has identified a disposal site of 4.8 acres, with an intention to set up a proper waste treatment facility and construct a sanitary landfill site for scientific disposal of waste.

#### 3.1.3.2.1. Disposal site

There is no dedicated unscientific disposal site. Habitants dispose their waste in pits. Further, during site visit it has been observed that waste from the markets is also being disposed of in a nearby flowing water stream- Tanuma Canal by the market committee.

### **3.1.3.2.2. Proposed Disposal site**

Recently the ULB has identified a disposal site of 4.8 acres of land along the NH 34. This land parcel is about 3.5 km distant from the ULB office and it has been recently transferred from the Panchayat and Rural Development (P&RD) department, Govt. of West Bengal, with an intention to set up a proper waste treatment facility and construct a sanitary landfill site for scientific disposal of waste.

*Figure 15 Proposed disposal site of Haringhata*





### 3.1.4. Kanchrapara Municipality

Kanchrapara Municipality is located in the North 24 Parganas district, about 50-60 km from Kolkata. Census 2011 records a population of 1.29 lakhs with municipality area covering 9.07 sq. km. The key services extended to the citizens by the ULB are construction and maintenance of roads and drains, water supply, solid waste management, street lights and amenities such as shopping stalls, community hall, playgrounds, parks/gardens, schools, hospital/health centre etc.

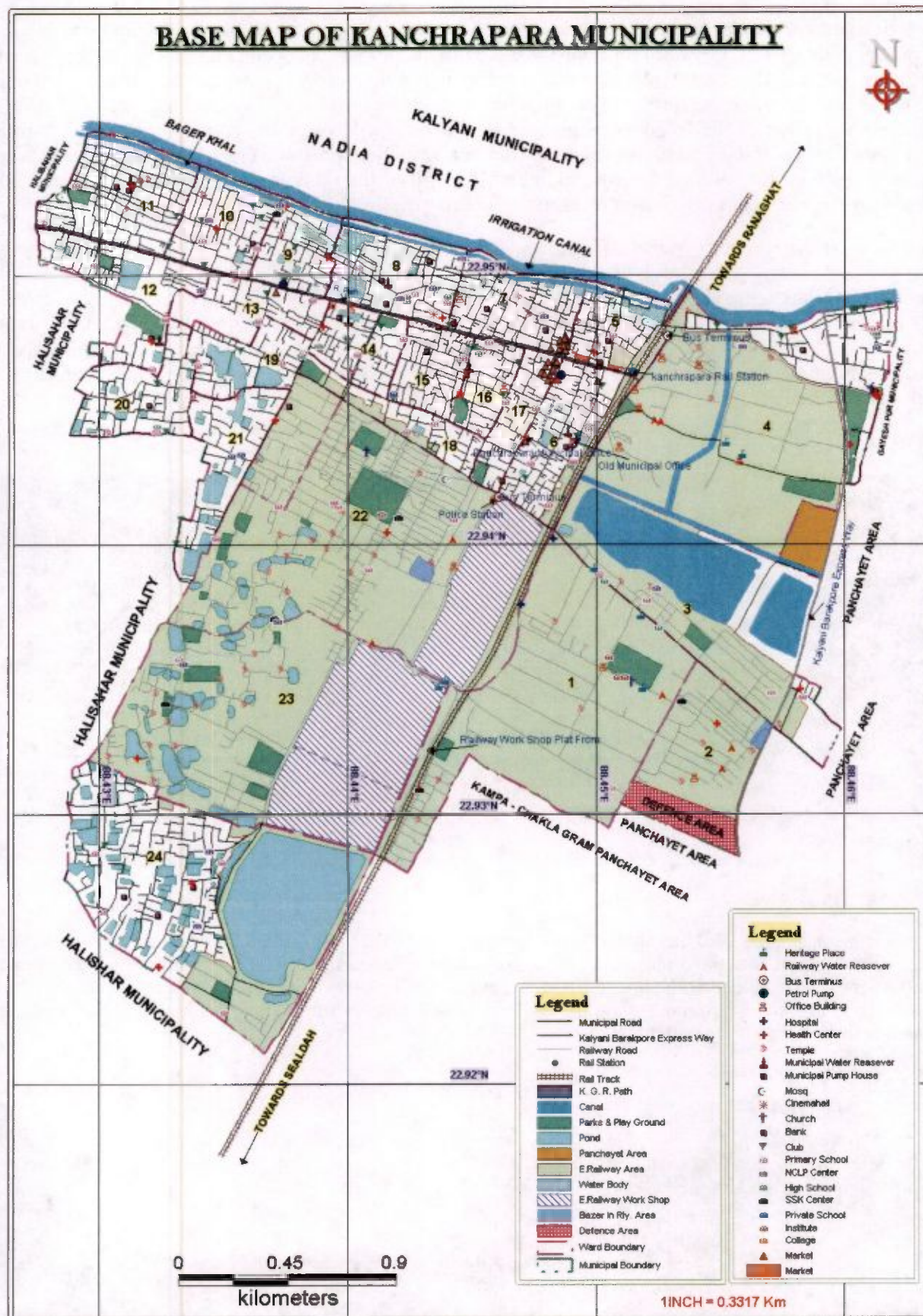
#### 3.1.4.1. Kachrapara snapshot

Table 4 Snapshot of Kachrapara Municipality

<b>Demography</b>	
<b>Head Office</b>	Kachrapara Municipality
<b>No of wards</b>	Twenty-four (24)
<b>Geographical Area</b>	Total area of the ULB: 9.07 Sq. Km.
<b>Population- 1,29,576</b>	
<b>Density</b>	Fourteen thousand two hundred and eighty-six (14,286)
<b>Number of Households</b>	Twenty-nine thousand nine hundred and seventy-six (29976)
<b>Establishment</b>	
<b>Year of Formation</b>	1917
<b>Board of Council Formation</b>	1917
<b>Administrative Jurisdiction</b>	Sub division Barrackpore
<b>District</b>	North 24 Parganas
<b>Police Jurisdiction</b>	Thana Bijpur
<b>Total waste generated</b>	<b>45 TPD</b>



Figure 16 Kachrapara Municipality area



Source: Kachrapara Municipality



### 3.1.4.1.1. Primary collection

The ULB is divided into 24 wards, out of which 19 falls under the jurisdiction of the ULB and 5 fall under railways. 3-4 tricycle vans are dedicated in each ward for door-to-door household waste collection on daily basis. These wastes collected are transported to the several collection points within in the city. As for bulk waste, there are 11-12 markets from where waste is collected by compactor. Specific to the 5 wards under railways, neither any daily based waste collection system is present neither road sweeping is done. A whole sale vegetable market “City Bazaar”, which generates estimated 200kg of daily waste is present in ward 22. In spite of presence of such a bulk generator, there has no initiative taken by the railways for collection and disposal of the waste generated, highlighting the non-compliance of waste management policy 2017 by Ministry of Railways.

### 3.1.4.1.2. Secondary transportation

There are total 44 intermediate collection points in the city. All the household waste collected is transported to these collection points by the dedicated tri-cycle van and from there it is disposed of to the dumping site by refuse trailer/tractor trolley. In case of waste from markets, it is collected by two existing mobile compactors and disposed of directly to the dumping site, whereas from community level or street sweeping, these are collected directly by refuse trailer and disposed of.

*Figure 17 Secondary collection points in Kachrapara*



### 3.1.4.1.3. Disposal site

As per the current scenario, the ULB has an existing disposal site in Bidhanpalli, which falls in the intersection point of ward 12-13. This disposal site spans across an area of 10.5 acres, whereas the existing dumping is only done in 4.5 acres. This 10.5 acre is surrounded with slum settlements and some high rise (G+2) pakka houses. The right of way of the lane leading to this site is around 4-5 mt. and is surrounded on left with the heaping height of the waste and right with the informal slum encroachments.

*Figure 18 Kachrapara Disposal site*





#### **3.1.4.1.4. Proposed Disposal site**

In the remaining 5.5 acres, the ULB planned to install waste-to-energy plant. Concession agreement with a private vendor was also signed for the same but owing to some issues the project did not take off. The intention is to reclaim the existing dumping area and create waste treatment facility in the remaining section.

*Figure 19 Site for Installation of Waste treatment plant in Kanchrapara*



Owing to high population density and scarcity of land, the city officials have confirmed that there is no scope for any of the decentralized units to be installed. The proposed site remains the only option for installing any treatment facility for the city.



### 3.1.5. Halisahar Municipality

Halisahar Municipality is located in the northern end of North 24 Parganas district. It is situated on the eastern bank of the River Hooghly, surrounded by the Municipalities of Kalyani in the north, Naihati in the south, and Kanchrapara in the east. Administratively, the ULB is divided into 23 wards, covering 8.29 sq. Km., with population of 124851 as per 2011 census.

#### 3.1.5.1. Halisahar snapshot

Table 5 Snapshot of Halisahar Municipality

<b>Demography</b>	
<b>Head Office</b>	Halisahar Municipality
<b>No of wards</b>	Twenty-three(23)
<b>Geographical Area</b>	Total area of the ULB: 8.29 Sq. Km.
<b>Population- 1,24,851</b>	
<b>Density</b>	One thousand nine hundred and sixty-five (13965) per sq. km.
<b>Number of Households</b>	Thirty-three thousand six hundred and thirteen (33613)
<b>Establishment</b>	
<b>Year of Formation</b>	May 1903
<b>Board of Council Formation</b>	May, 1903
<b>Administrative Jurisdiction</b>	Sub-division Barrackpore
<b>District</b>	North 24 Parganas
<b>Police Jurisdiction</b>	Thana Naihati and Dijpur
<b>Total waste generated</b>	<b>55 TPD</b>

#### 3.1.5.1.1. Primary collection

There are total 23 wards, out of which major comes under the ULB while few comes under the purview of the existing industries. The ULB has industrial belt comprising of 2 Jute mills and 1 paper mill. The Industrial belt manages its own waste. In context to household collection, the ULB has dedicated van rickshaws for door-to-door collection. The ULB charges a monthly SWM user fee of INR 10/household. These collected wastes are dumped in the cover vats for secondary transportation. As far as collection from markets and road sweeping is concerned, these are collected in trailers.



*Figure 20 Primary collection at Community level and Market in Halisahar*



### **3.1.5.1.2. Secondary transportation**

There are numerous intermediate collection points. Now, the household waste, which are compiled in the cover vats are transported to the dumping ground by tractors. The trailers which collect waste from markets and road sweeping are transported directly to the dumping ground.

*Figure 21 Secondary collection points in Halisahar*





### 3.1.5.1.3. Disposal site

The current disposal site is located in Niranjan Samaj trenching ground in ward 8, covering an area of about 1.05 acres.

*Figure 22 Disposal Site- Halisahar*



### 3.1.5.1.4. Proposed Disposal site

With an intention to implement a proper waste management system throughout the ULB and address the final disposal issues, they have planned to construct Sanitary landfill site. In course of that, they have identified a land parcel of 13.5 acre in the nearby Jetiya gram panchayat. This is a private land and the land ownership transfer formalities are under progress.

*Figure 23 Newly identified site near Jetiya gram panchayat- Halisahar*



The ULB has further confirmed to provide a decentralized land parcel for installation of one (1) Biomethanation plant of 5TPD, which can cater to bulk waste from 2-3 markets.



### 3.1.6. Chakdah Municipality

The municipality of Chakdah is located in Nadia district of West Bengal. The ULB area is spread 15.36 sq. km and is divided in to 21 wards. As per Census 2011, Chakdah had a population of 95,000 and it is estimated that the population has increased over 1 Lakhs recently in 2019.

#### 3.1.6.1. Chakdah snapshot

Table 6 Snapshot of Chakdah Municipality

<b>Demography</b>	
<b>Head Office</b>	Chakdah Municipality
<b>No of wards</b>	Twenty-one (21)
<b>Geographical Area</b>	Total area of the ULB: 15.36 Sq. Km.
<b>Population- 95,000</b>	
<b>Density</b>	Six thousand one hundred and eighty-five (6185) per sq. km.
<b>Number of Households</b>	Twenty-nine thousand four hundred and twenty (29420)
<b>Establishment</b>	
<b>Year of Formation</b>	1986
<b>Board of Council Formation</b>	1986
<b>Administrative Jurisdiction</b>	SDO Kalyani
<b>District</b>	Nadia
<b>Police Jurisdiction</b>	Thana Chakdah, Sub-division Kalyani
<b>Total waste generated</b>	<b>60 TPD</b>

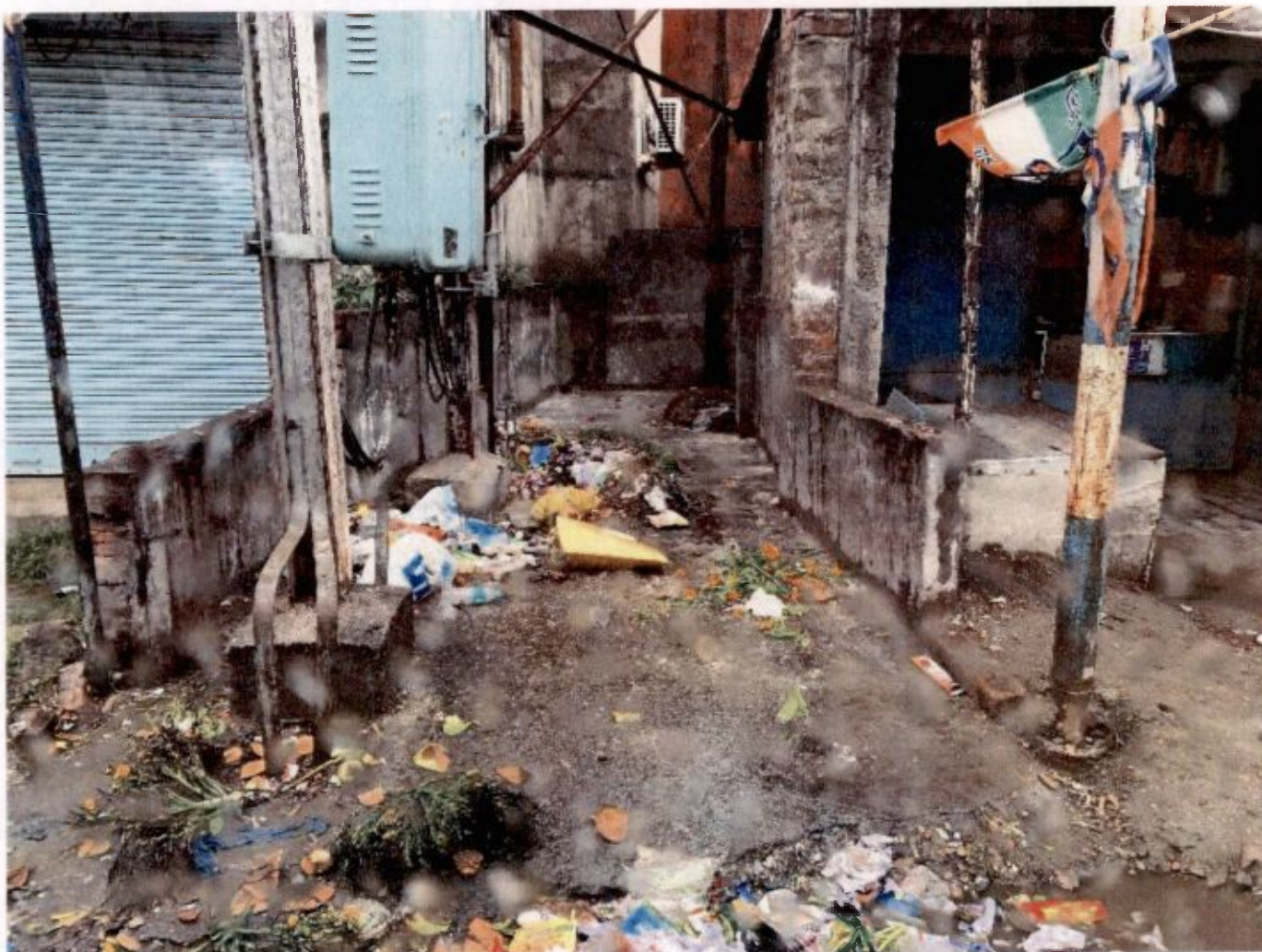
#### 3.1.6.1.1. Primary collection

Wastes from households are collected through VATs which are then emptied in tractor trolleys to transport and dispose the waste at dumping site. From the site visit, it has been observed that even after daily door-to-door collection, household tend to dispose of their waste, openly in the community or in front of their houses.

The municipality has 12 markets (2 major and 10 small markets). The waste generated from these markets are collected through 6 hand trolleys (total) which are then transferred to one of the 3 VATs placed in two collection points i.e. Thanar More and adjoining Basanti Kumari school.



*Figure 24 Secondary collection point near Basanti Kumari school in Chakdah*



*Figure 25 Waste disposed off in open places in Chakdah*





### 3.1.6.1.2. Secondary transportation

The ULB has 2 movable compactors of 15 TPD each which collect waste from these collection points and dispose it to dumping sites. The municipality also owns 2 Dumpers (1 large and 1 small) which are being used for waste transportation from the markets and other community level VATs to dumping site/s.

*Figure 26 Glimpse of available infrastructure in Chakdah*



For collection of waste from educational institutions, the city has placed 1 or 2 VATs of 75-80 litre capacity each in each institution. The municipality has deployed 3-wheeler vans to collect food wastes generated in these institutions from these VATs and transport it to dumping site/s.

### 3.1.6.1.3. Disposal site

The municipality has in total 5-6 informal unscientific disposal sites out of which the two major ones:

- In ICore brick kiln adjoining Ward 2
- Low lying area in Joshra in Ward 5

*Figure 27 Disposal site- ICore Brick bhata in Chakdah*



The current disposal site is located in Niranjana Samaj trenching ground in ward 8, covering an area of about 1.05 acres.

For liquid waste disposal, the municipality has 2 cesspool vehicles available with them of capacity 2,200 ltr and 3,000 ltr respectively and they charge Rs 600 and Rs 800 for providing services. In case of emergency, the Municipality charges Rs. 500 overhead to the standard charges for each unit service. Subsequently, they dispose of their liquid waste in the dedicated land parcel in Thakur colony.



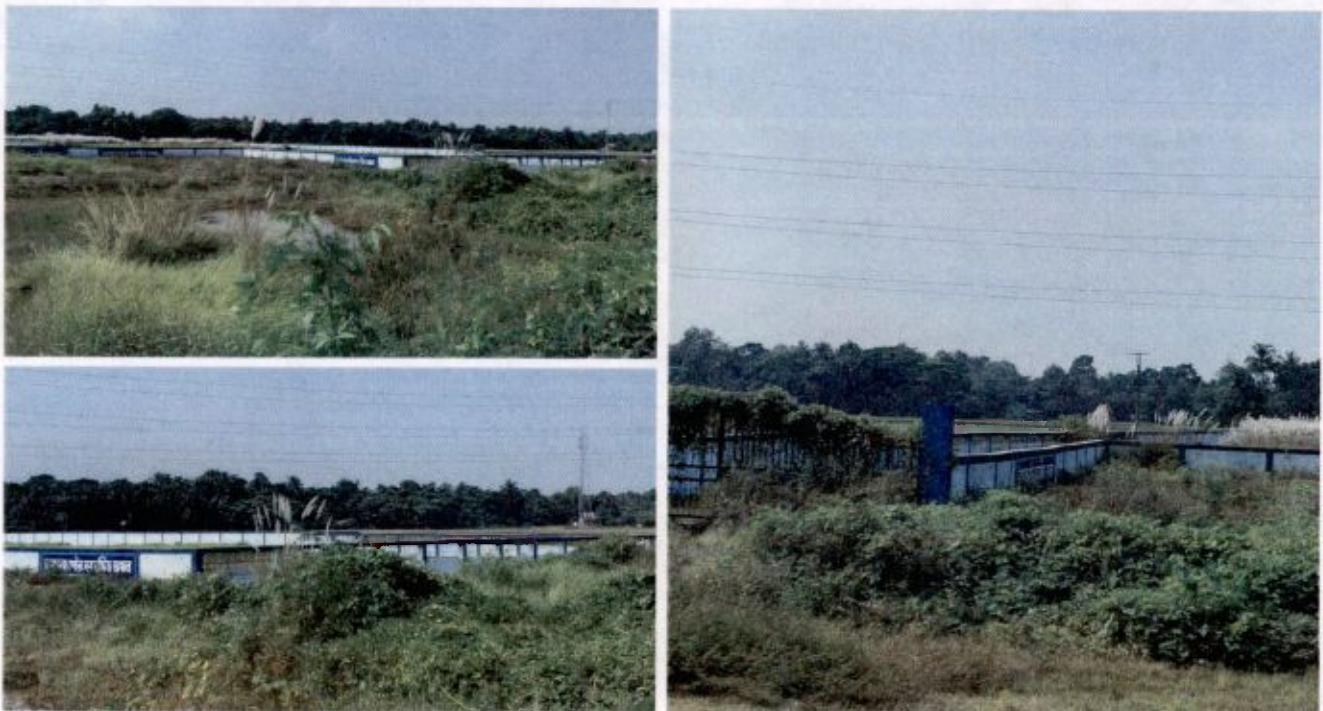
*Figure 28 Land utilized for discharging liquid waste in Chakdah*



#### **3.1.6.1.4. Proposed Disposal site**

Back in 2011, the ULB bought a land parcel of 6 acres to installing waste management facilities along NH 34. But due to local agitation from the adjoining encroached slum habitants, the site remains unutilized and vacant.

*Figure 29 Unutilized vacant SWM site in Chakdah*



The ULB has even identified a land parcel for installation of decentralized Bio-methanation plant. This parcel is adjoining the land utilized for discharging of liquid waste.



*Figure 30 Land identified for decentralized Bio-methanation plant in Chakdah*





### 3.2. Meeting with the Stakeholders

Several meetings have been held with different stakeholders during the inception phase. The details of such meetings are presented in the table below. These meetings were useful to understand the present situation and challenges, which would be addressed in planning & designing of the project.

Figure 31 Stakeholders Meetings & Consultations Held

Activities	Remarks
Detailed site visit to Halisahar and Kachrapara	On 4 <sup>th</sup> Sept, we conducted a detailed site visit covering both the ULBs of <b>Halisahar and Kachrapara</b> . Along with detailed consultation with the ULB officials, we conducted a detailed site visits to the markets, congested areas, industrial areas, residential and society complexes, and other important nodes. We also ensured visits to any points where decentralized solutions can be installed
Detailed site visit to Gayespur, Haringhata and Kalyani	On 6 <sup>th</sup> and 7 <sup>th</sup> of Sept, we conducted a detailed site visit covering both the ULBs of <b>Gayespur, Haringhata and Kalyani</b> . Along with detailed consultation with the ULB officials, we conducted a detailed site visits to the markets, congested areas, industrial areas, residential and society complexes, and other important nodes. We also surveyed potential locations where decentralized solutions can be installed.
Concurrence meeting with Kalyani Municipality	On 23 <sup>rd</sup> Sept, a meeting was held with <b>Kalyani ULB(EO)</b> to discuss on exploring the probable site options for decentralized units and land parcels for Centralized Units and SLF for the entire cluster
Detailed site visit to Chakdah	On 24 <sup>th</sup> of Sept and 22 <sup>nd</sup> of Oct, we conducted two detailed site visits to the ULB of <b>Chakdah</b> . This visit was intended for detailed consultation with the ULB officials and conducting site visits to the important nodes of the city. We also surveyed potential locations where decentralized solutions can be installed.
SUDA	Debriefing to SUDA regarding ULBs visited in this cluster, our observations, understanding and preliminary views on proposed concept plan.



### 3.3. Scope of Surveys and Investigation Planning

Baseline survey will be conducted for the purpose of the feasibility study. The survey will include topographical survey of the disposal sites of all the Municipalities and the proposed site(s), geotechnical survey and waste characterization survey. The scopes of those surveys have been formulated and presented in the following sections mentioned below:

#### 3.3.1. Formulation of Geotechnical Investigation

The scope for geotechnical investigation at site is presented in the table below:

Figure 32 Details of the parameter For Geotechnical Investigation

Item Description
Conducting Standard Penetration Test in the bore holes within the virgin soil strata at 1.5 m interval or at every change of strata whichever is earlier, up to rock bottom/ 10 m depth, whichever comes earlier as per IS: 2131-1981 (and collection of undisturbed soils samples from boreholes for other laboratory tests).
Depth of bedrock
Conducting the following properties on selected soil samples: -
Physical characteristics of soil type and strata, grainsize distribution
Atterburg's limits
Sieve analysis
Hydrometer analysis.
Tri-axial shear test.
Density and moisture content
Shear tests and consolidation tests
Chemical analysis – sulphate, chloride, pH for ground water
Chemical analysis – sulphate, chloride, pH for soil
Soil bearing capacity
Depth of Ground Water

#### 3.3.2. Topographical Survey

The scope for topographical survey at site is as per the following:

- Complete topographical survey with spot levels and preparation of contour plan with 0.5 m interval.
- Level survey with spot level grid of 10 m x 10 m.
- Setting up temporary bench mark (TBM).
- Setting up a local coordinate system with respect to the magnetic North for future identification or reference frame.
- Actual Mean Sea Level of the Temporary bench mark established in the site
- Topographical map - two hardcopies in A0 size and one electronic copy in AUTOCAD Format showing main features of the site and adjoining areas.

#### Main features include:

- Key map
- Total Site boundary and survey area boundary
- Water bodies nearby/ adjacent to the site
- Existing drains/ Nallahs
- Roads inside and outside of the site, access road



- Electric poles & cables
- Water pipe lines
- Nearby houses/ settlements/ permanent structures
- Leachate pit/ water accumulated within the landfill site
- And any other important physical features

In the drawing, the total area of the site which was surveyed, as well as waste confined area shall be clearly marked and mentioned separately, i.e. (Total area of the site in acre or m<sup>2</sup>, and area confined by accumulated waste in acre or m<sup>2</sup>). The volume of accumulated waste shall be represented in the drawing.

### 3.3.3. Waste Characterization Survey

The scope for waste characterization survey at site is as per the following:

#### Collection of municipal solid waste samples:

Collection of waste samples shall be obtained by core sampling method for fresh waste. The collected sample shall be flattened and quadrised into four equal parts. From the four equal parts, two diagonal parts shall be taken out. The same procedure would be followed for a number of times until the weight of the final homogenous sample weighed as 5 kg. A schematic diagram for collection of sample is given below:

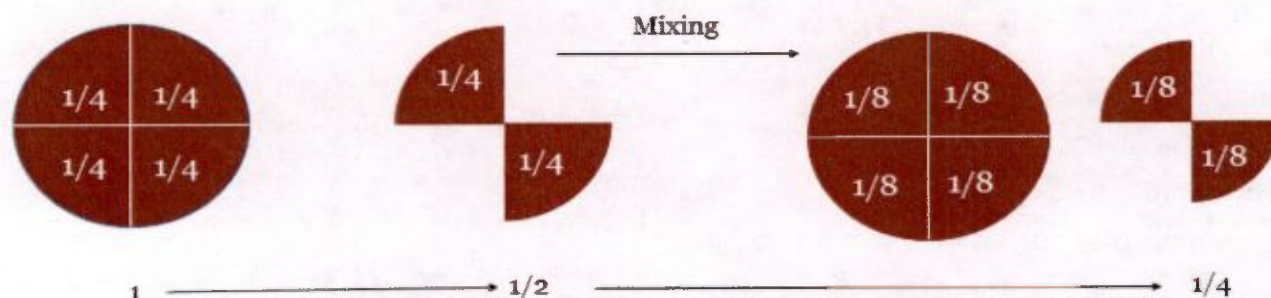


Figure 33 Methodology for waste characterization survey

#### Analysis for following chemical parameters

- Moisture content (%)
- Density (Ton/m<sup>3</sup>)
- Organic content (%)
- Calorific value (kcal/kg)
- C/N ratio

#### Analysis for following physical composition

- All type combustible type wastes (please mention the identified components)
- Food, food waste, vegetable, fruits, Garden, yard & park waste – all sort of organic waste
- Recyclable broken colour glasses, recyclable plastic, metal, paper, card board, thermocols and all other recyclable materials.
- Stone, aggregate (if any) and all types of inert matter.

### 3.4. Key issues observed

The below table highlights the issues for each of the Municipalities:

S.L. NO	ULB	ULB specific issue(s)	Holistic issue of the Cluster
1.	Kalyani	<ul style="list-style-type: none"> <li>Although the ULB intends to develop the disposal site of Ward 6, any attempt by the ULB to develop the site faces public agitation by local slum habitations</li> </ul>	<ul style="list-style-type: none"> <li>Apart from couple of wards in Kalyani, no other wards in any of the ULBs have started source segregation</li> <li>All the municipalities of the cluster face lack in infrastructure for primary collection, secondary collection points and transportation</li> <li>Except for Kalyani, all the ULBs observe irregular road side dumping and in community lanes</li> <li>All the municipalities face lack of conservancy staff</li> <li>Mounting of waste in the disposal sites, unscientific disposal of wastes and spill over of waste are observed in the all municipalities</li> <li>Absence of proper ULB level Byelaw(s) in all the ULBs</li> <li>Except for Kalyani, lack of public awareness and hence participation is observed throughout</li> </ul>
2.	Gayespur	<ul style="list-style-type: none"> <li>There is no fixed unscientific disposal site of the ULB</li> <li>The Chairman has flagged specifically that in the next 8-10 months, there will be literally no engineering cell of the municipality, as the existing engineers are getting retired</li> </ul>	
3.	Haringhata	<ul style="list-style-type: none"> <li>Neither is there any SWM function of the ULB nor there are hardly are staff to carry out the function</li> </ul>	
4.	Kachrapara	<ul style="list-style-type: none"> <li>In spite of public awareness, IEC/BCC activities within the municipality, there is a lack of coordination from the citizens, to dispose of their waste in front of their houses in spite of regular door to door collection</li> <li>Disposal of thermocol is observed to be one of primary components along with plastic</li> <li>Neither waste collection from individual households or large-scale community bulk generator nor street sweeping is done on regular basis for wards under jurisdiction of railways</li> </ul>	
5.	Halisahar	<ul style="list-style-type: none"> <li>Road side waste dumping is visible in the ULB</li> <li>The city is very congested while considering access to movement of vehicles</li> <li>The formality of the land ownership transfer to the ULB transfer, identified for SWM purpose, is still under progress</li> </ul>	
6.	Chakdah	<ul style="list-style-type: none"> <li>At present, the municipality does not own any formal and scientific dumping sites</li> <li>A formal land parcel for dumping of waste dumpsite was allocated to Chakdah but owing to its distance from the city, it was found to be unviable.</li> <li>In 2011 the Municipality had identified and bought a land parcel of 6 acres in Ward 19 for formalized unscientific dumping of waste but due of local agitation they are unable to utilize the site for dumping waste.</li> </ul>	



## 4. Work Plan & Way Forward

PwC study team has formulated a robust work plan to ensure an effective project delivery within stipulated time frame. In this section, the task force, activity schedule, deliverable milestones and key concerns for the project execution have been discussed.

### 4.1. Stakeholders' Task Force

The client has formed task forces which will work closely with the consultant focusing on the facilitation of the processes need for effective delivery of the deliverables. The following is a list of task force members available to us during this phase. Our team would be coordinating with the same during the course of our engagement.

Table 7 Stakeholders' Task Force/persons responsible

Organization	Position/ Designation	Name
<b>Kalyani</b>	Vice Chairman	Mr. Kalyan Das
	Executive Officer	Mr. Chitradeep Sen
	Asst. Engg	Mr. Raghunath Mukherjee
	SI	Mr. Moloy Roy
<b>Kachrapara</b>	Executive Officer	Mr. Tapas Mandal
	CIC Member	Mr. Asoke Kumar Mondal
	A.P.O.	Mr. Abir Majumder
	SI	Mr. Prakash Singh
<b>Halisahar</b>	Executive Officer	Mr. Prafulla Kr. Dey
	Asst. Engg.	Mr. Basudeb Biswas
	SI	Mr. Manik Ch. Das
	Urban Planner	Mr. Rabin Mal
<b>Haringhata</b>	Chairman	Mr. Maniklal Bhatta
	EO	Mr. Adhir Kr. Sarkar
	Sub. Asst. Engg.	Mr. Debasish Dey
<b>Gayespur</b>	EO	Mr. Subrata Dutta
	Asst. Engg.	Mr. Kishore Kr. Bakshi
	Sub. Asst. Engg.	Mr. Ashim Kr. Nath
<b>Chakdah</b>	EO	Mr. Amlan Das
	SI	Mr. Suprakash Biswas
	Urban Planner	Mr. Mithun Sarkar

### 4.2. Project Deliverables

Following project deliverables will be submitted in due course of the study.

- **Inception Report (D1)** - Within 10 days after execution of agreement. The report will cover overall approach and methodology, initial findings, issues and challenges at each site and requests for client assistance.
- **Draft Feasibility Report (D2)** - A draft final feasibility study report outlining the major findings and recommendations of the study proposing a preferred method of closure at legacy wastesites as well as technical details of the proposed treatment & disposal system will be also discussed. An outline of the chapters of draft feasibility report is also being submitted in this Inception report.
- **Final Feasibility Report (D3)** - Final feasibility study report incorporating the comments from the client will be prepared and submitted.

- **Draft RfP (D4)** – It will cover all the scope for contractor, terms of references, tender qualifying criteria, evaluation criteria, draft concession agreement etc.
- **Final RfP (D5)** – Based upon comments from SUDA, the draft RfP will be modified and finalized for floating.
- **Tender Evaluation (D6)** – Submitted tenders will be evaluated by PwC and evaluation report shall be submitted with recommendation for selection of successful bidder.
- **Agreement signing (D7)** – PwC will assist client to execute the concession agreement with the successful bidder, once the final selection will be over.

### ***4.3. Project Timeline and Activity Schedule***

The time period for completion of the entire project activity is 119 days from the date of commencement of the Services. The project timeline, deliverable planning and activity schedule is presented in the following figure. Refer to activity schedule for detailed breakup of stages and assigned plans and deliverables.

However, the deliverables' timeline may be rationally synchronized with respect to the input and requested information, comments, suggestions, feedback etc. received from different ULBs/ client time to time.



## Activity Schedule

S.No.	Description	Duration (days)	September				October				November				December				January	
			Sept 4- Sept 11	Sept 11- Sept 18	Sept 18- Sept 25	Sept 25- Oct 2	Oct 2- Oct 9	Oct 9- Oct 16	Oct 16- Oct 23	Oct 23- Oct 30	Oct 30- Nov 6	Nov 6- Nov 13	Nov 13- Nov 20	Nov 20- Nov 27	Nov 27-Dec 4	Dec 4- Dec 11	Dec 11- Dec 18	Dec 18- Dec 25		Dec 25- Jan 1
Stage 1	Inception Report	10 days from the date of commencement																		Jan 1- Jan 8 Jan 8
Stage 2	Submission of Draft Feasibility Report	45 days from the stage 1																		
Stage 3	Submission of Final Feasibility Report along with action Plan	10 days from approval of stage 2																		
Stage 4	Submission of Draft RFP for selection of agency	20 days from approval of stage 3																		
Stage 5	Submission of Final RFP for selection of agency	10 days from approval of stage 4																		

Stage 6	Evaluation of the tender document and recommendation for the selected agency	10 days from the tender closing date
Stage 7	Getting the Concession Agreement signed by the selected agency	10 days from Stage 6



## 4.4. Indicative Structure of Feasibility Report

An indicative chapterization of the Draft Feasibility Report is presented below, the same is the next deliverable and represents an indicative structuring of the same which may be subject to evolution during the next phase of the assignment.

<b>Chapter 1</b>	: Introduction
<b>Chapter 2</b>	: Policy & regulatory framework
<b>Chapter 3</b>	: The study area profile
<b>Chapter 4</b>	: Present scenario & situation analysis
<b>Chapter 5</b>	: Baseline surveys & investigations
<b>Chapter 6</b>	: Project concept and planning philosophy
<b>Chapter 7</b>	: Design of proposed system
<b>Chapter 8</b>	: Closure of existing disposal site
<b>Chapter 9</b>	: Environmental and sustainability approach of the project
<b>Chapter 10</b>	: Institutional aspects and Capacity building
<b>Chapter 11</b>	: Community awareness and public participation
<b>Chapter 12</b>	: Operation and maintenance aspects
<b>Chapter 13</b>	: Implementation mechanism
<b>Chapter 14</b>	: Cost estimation and project financials

## 4.5. Client's Intervention on the Feasibility Study

Stakeholder collaboration is of utmost importance to carry out the feasibility study with due consultation with the client (SUDA) and other stakeholders. During the inception stage PwC team would like to seek clients' assistance in certain aspects of data collection as well as in some critical aspects. These aspects are discussed below.

### 4.5.1. Checklist of Data Collection Requested

During inception stage, a checklist of information required has been submitted to SUDA, requesting all stakeholders to assist PwC project team with relevant data, information report etc. The checklist of information sought, is presented below:

Quantitative	Qualitative
List of all existing assets, infrastructures, equipment, plant & machineries – Name, make, capacity, purpose, numbers, year of purchase/ installation, present workability condition, utilization status	An overview of the current practices of waste management – generation, source segregation, collection, transportation, processing/ treatment, recovery/ recycling, disposal mechanism etc.
Existing location of different waste collection points	What is the major issues and challenges in their area for waste management
Waste collection mechanism – lift per day of respective vehicles – from generation point to secondary collection point (transfer station or compactor), and then from secondary collection point to disposal from respective wards	All current ongoing projects (or on hold projects), present or future plans which have been consolidated, to integrate into the proposed
Weighbridge data at disposal site or truck count (wrt. vehicle no & capacity)	Land identified for future prospective projects
Strategy of street sweeping – timing, bead, frequency, road length covered by each sweeper, time taken etc; what are the equipment used (automatic)	Completed or scrapped past projects
Drain cleaning mechanism	What is the condition and strategy of other waste management in the study area, such as – biomedical waste, hazardous waste and e-waste
Ward-map (preferably in CAD, if possible)	Name and location of the major waste generators, such as -



	sabzi mandis, commercial establishments, public and community activity areas, eateries (food court, restaurants, roadside food junctions & joints etc.)
Ward-wise decadal population (1981, 1991, 2001, 2011, 2019) and floating population, if available	HIG areas (big society, big residential complex, abashan) and slum areas
Conservancy details – institutional structure, no of staffs at different level, their responsibilities, employment status	Which are the congested areas and colonies, where accessibility and mobility of the vehicle is a big issues
Annual operation and maintenance cost figure of the ULB for SWM	Initiatives taken for IEC/BCC, Capacity building and Community participation
Present year budgetary allocation made for SWM	Issuance of Notifications/Bye-laws
Previously prepared any relevant report, DPR, master plan, study document	
Secondary data on soil test, waste characterization, any other survey etc.	
Status of recycling industry – nos. of units, market rates of different items, demand, etc.	
Status of nurseries and horticultural unit – nos. of unit, compost demand	
Listing/mapping of land identified for future projects	
List of Notifications/Byelaws published	
Events on IEC/BCC, Capacity building and Community participation	
List of Trainers, Trainees and Volunteers	
Formation of Task force/Ward committee- details (in case any)	

#### 4.5.2. Critical Project Parameters for Clients' Intervention

As part of the Inception Report, the team would like to bring to the attention of SUDA, the following important aspects which may play a critical roles and therefore require intervention of the SUDA & other stakeholders during conceptualization of the project:

- The land ownership and legal details of the Kalyani disposal site(s) for considering the same for closure and reclaiming it for future installation of centralized facilities and land ownership and legal details of the identified proposed site for SLF for the entire cluster, if possible (as an alternative to fodder land)
- The land ownership and legal details of all exiting disposal sites of respective ULBs for considering them for ULB level processing & treatment facility.
- Alternative land availability
- Concerns towards the disposal site
- The land declaration (land-use notified as) for the existing disposal and proposed identified sites
- Legal status (administrative & social)
- Environmental clearance requirement (PCB consultation)

However, PwC would request SUDA and other stakeholders to assist our team (during this conceptual stage only) with their discretion/ decision on those wards for inclusion, as identified by project team. Thereafter, the infrastructure planning shall be done accordingly in the feasibility stage for those wards, where concurrence has been received from client.

### 4.5. Way forward

After submission of Inception Report, PwC would undertake the process of detailed situational analysis, development of strategy of collection & transportation, field survey integration of the existing system with the proposed, project overall feasibility study with optional alternatives.

PwC team will be working closely with SUDA and update the concerned official regarding progress of the project on periodic basis.



## **Appendix A. - Appendices**

### **A.1. Minutes of meetings with the Client**

#### **A.1.1. Site visit and meeting with ULBs**

**Venue: Municipalities of Kalyani, Halisahar, Kachrapara, Haringhata and Gayespur**

**Date – 04-09-2019 to 07-09-19**

The meeting commenced with the consultants and the respective Municipalities to note in details the SWM management system of each of the Municipalities and site to important nodes/locations with the city. The objective of the meeting was primarily focused on the as-is solid waste management condition of the Municipality, the issues faced within the city while providing services and lack of assets leading to the current non-efficient system.

In addition to these some of the points that were discussed are as follows:

- Irregular IEC/BCC activities due to absence of any planned event calendar
- Not a single house is segregating waste and mixed waste is collected
- Lack of waste management awareness is even leading residing citizens to dispose of their waste in the neighbourhood in spite of a coordinated way of handing over the waste to the tri-cycle van(s) dedicated for door-to-door collection
- Lack of infrastructure and conservancy staff for collection and transportation of the management chain
- Unavailability of any decentralized land parcel for installing waste treatment facilities
- Over flowing waste at the unscientific disposal site
- Absence of even one fixed unscientific disposal sites

#### **A.1.2. Concurrence from Kalyani in way forward**

**Venue: Municipality of Kalyani**

**Date – 23-10-2019**

The meeting commenced with the consultants and Kalyani ULB, to discuss on the way forward of the Cluster based waste management solution. The objective of the meeting was to finalize the probable site for SLF and shortlist the number of decentralized units of treatment facilities.

In addition to these some of the points that were discussed are as follows:

- Internal discussion within the ULB, will be initiated with the Chairman to finalize on the land parcel to be utilized for construction of SLF
- The Executive officer along with the other of ULB officials will organize a meeting with the University and Railway so as to ensure installation of Decentralized treatment facilities within their premises

#### **A.1.3. Site visit and Interaction with Halisahar**

**Venue: Municipality of Halisahar**

**Date – 23-10-2019**

The meeting commenced with the consultants and Halisahar ULB, to discuss on the existing situation of the ULB in content to governance, institutional structure and operation of the SWM system of the ULB

These are some of the points that were discussed are as follows:

- With regard to draft byelaws, BOC has been approved
- In content charging user fees for SWM services, INR 10 is charged per HH per month. However this fee is not collected from all the wards and wherever the collection is done, its collected by the respective conservancy staff and no such account is maintained for the purpose of recording
- Waste generation is significantly higher in Wards 20, 21, 22, 23, 18 because of the presence of Industries: 2 Jute Mills (Naihati J.M., Hukumchand J.M.) and 1 Paper Mill



- There is a Grievance cell, which operates as complaints are collected in a box kept in the ULB, or are directly received
- The ULB has identified a private land of 22 bigha for SWM and the land transfer mechanism is under process

#### ***A.1.4. Site visit and Interaction with Kachrapara***

***Venue: Municipality of Kachrapara***

***Date – 23-10-2019***

The meeting commenced with the consultants and Kachrapara ULB, to discuss on the existing situation of the ULB in content to governance, institutional structure and operation of the SWM system of the ULB

These are some of the points that were discussed are as follows:

- Regular waste collection mechanism is not followed in the five wards of the railways, while in all the other remaining 19 wards daily waste collection is done by the ULB
- Currently although the ULB charges INR 10 per HH as a monthly SWM user fee, but the collection efficiency is very poor
- Bye-law has been drafted already and is currently under public notification. This bye law has revised monthly SWM user fee as INR 20
- Regarding grievance redressal, issues concerning collection and cleaning are solved addresses within 24 hours
- In context to IEC and Capacity building activities, although there is SWM event calendar prepared by the Municipality, few programs have already been organized as per SUDA directions
- Owing to future plans on improvement of Capacity building and Institutional development, a new training Hall of holding capacity 100, will be ready to use, in the new ULB building by the next 15-20 days.
- Further, the ULB has identified Wards 5, 6, 7, 15, 16, and 17 for kick starting any new interventions within the SWM system on pilot basis

#### ***A.1.5. Site visit and Interaction with Gayespur***

***Venue: Municipality of Gayespur***

***Date – 24-10-2019***

The meeting commenced with the consultants and Gayespur ULB, to discuss on the existing situation of the ULB in content to governance, institutional structure and operation of the SWM system of the ULB

These are some of the points that were discussed are as follows:

- The ULB has identified a 9.98-acre land parcel for waste processing and treatment
- The Municipality, being considered within National Mission for Clean Ganga, is under process in developing Ganga Action Plan
- The ULB has identified Wards 17, 18, 1, 4, 5, 7, 8, 9, 12, 13 and 14 (Wards 8 and 9 are comparatively bigger wards) for kick starting any new interventions within the SWM system on pilot basis
- With an intention to address the waste management issues and implement the project at the earliest, the ULB team along with its Chairman has shown clear aim and has further ensured on the identification of sites for installing decentralized units at the earliest and share the same with the team



### ***A.1.6. Site visit and Interaction with Haringhata***

***Venue: Municipality of Haringhata***

***Date – 24-10-2019***

The meeting commenced with the consultants and Haringhata ULB, to discuss on the existing situation of the ULB in content to governance, institutional structure and operation of the SWM system of the ULB

These are some of the points that were discussed are as follows:

- There is visible lack of staff in the ULB, as there is no conservancy staff or sanitary inspector
- A new land of 5.4 acres has been identified and the land ownership has been transferred to the ULB. The access road to this land parcel is yet to be constructed
- The Institutes within the ULB area manages their waste on their own
- The ULB has decided to have a stakeholder meeting with major institutions within the ULB- Maulana Azad college, Agriculture college (BCKV), Haringhata farms/ meat plant, Hemnalini college of engineering, etc.
- In coordination to that, our team will prepare a letter in this regard requesting the ULB to host a stakeholder's meeting to understand their existing waste management systems, land availability and potential for collaboration on SWM
- It is discussed with the Chairman that the land, which has been abandoned by ONGC can be considered for installing waste management facility and in course of that the ULB will coordinate ONGC

### ***A.1.7. Site visit and Interaction with Chakdah***

***Venue: Municipality of Chakdah***

***Date – 24-10-2019 and 22-11-2019***

The meeting commenced with the consultants and Chakdah ULB to discuss on the existing situation of the ULB in content to governance, institutional structure and operation of the SWM system of the ULB

These are some of the points that were discussed are as follows:

- At present, door to door collection system is ineffective despite the strong demand in the locality. Also, the waste is being collected in unsegregated manner
- Further, even in presence of door-to-door collection, wastes are being disposed indiscriminately in the open including drains resulting in blockages of storm water drainage system. Moreover, the number of VATs has come down to 3-4 VATs per each ward from 10 VATs in 2015
- Due to lack of funds, the municipality is not able to undertake regular repairs and maintenance of vehicles involved in waste management
- A formal land parcel for dumping of waste dumpsite was allocated to Chakdah but owing to its distance from the city, it was found to be unviable. In 2011 the Municipality had identified and bought a land parcel of 15 bigha in Ward 19 for formalized unscientific dumping of waste but due of local agitation they are unable to utilize the site for dumping waste. At present, the municipality does not own any formal and scientific dumping sites.
- The municipality does not have any formalized manner of undertaking training to the municipality officials due to shortage of funds. During the last three years, there have been only three pieces of training on Municipality Service Rule, Swachh Bharat Mission, and ODF related issues



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