



Chennai Metropolitan Water Supply and Sewerage Board

DRAFT CONCESSION AGREEMENT

For

**Selection of Concessionaire for Restoration of Adyar River under Hybrid
Annuity Model (HAM)**

RFP VOLUME –II

July 2023

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CONCESSION AGREEMENT

THIS AGREEMENT is entered into on this the..... day of, 20.....

BETWEEN

1. _____, established under the _____ Act ____, represented by its _____ and having its principal offices at _____ (hereinafter referred to as the “**Authority**” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of One Part

AND

2. _____ LIMITED, a company incorporated under the provisions of the Companies Act, 2013 with CIN _____ represented by its _____ and having its registered office at _____ (hereinafter referred to as the “**Concessionaire**” which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns and substitutes) of the Other Part.

WHEREAS:

1. The Authority had resolved to undertake the development of the Adyar River in to a Class D Water Body, suitable for propagation of wildlife and fisheries, on design, build, finance, operate and transfer (the “**DBFOT Annuity**” or “**Hybrid Annuity**”) basis, which shall be partly financed by the Concessionaire who shall recover its investment and costs through payments to be made by the Authority and any additional revenues the Concessionaire may collect directly from the Users of the Project, in accordance with the terms and conditions to be set forth in this Concession Agreement.
2. The Authority had adopted single stage, two cover bidding process and accordingly invited proposals under its Request for Proposal No. _____ dated _____ (the “**Request for Proposal**” or “**RFP**”) for selection of bidders for undertaking the Project. Pursuant to the terms of the RFP, bids were received by the Authority on or before [***]. The {Selected Bidder/ Consortium comprising _____ and _____ (collectively the “**Consortium**” _____) with _____ as its lead member (the “**Lead Member**”)¹ } was one of the bidders who had submitted its bid for the Project (the “**Bid**”).
3. Following the evaluation of the bids submitted by the bidders, including that of the Selected Bidder, the Authority had accepted the Bid. Subsequently, the Authority had issued the letter of award no. [_____] dated [_____] (the “**Letter of Award**” or “**LOA**”) to the Selected Bidder, *inter alia*, requiring it to incorporate a new private limited company under the Companies Act (as defined hereinafter) and execution of this Agreement within 30 (thirty) days of the date of issue thereof.
4. {The Selected Bidder/ Consortium has since promoted and incorporated the Concessionaire as a limited liability company under the Companies Act 2013, and} has requested the Authority to accept the Concessionaire as the entity which shall undertake

¹ This will be suitably modified in case the bidder being a single entity.

and perform the obligations and exercise the rights of the {Selected bidder/ Consortium under the LOA,} including the obligation to enter into this Concession Agreement pursuant to the LOA for undertaking the Project.

5. {By its letter dated_____ the Concessionaire has also joined in the said request of the Selected Bidder/ Consortium to the Authority to accept it as the entity which shall undertake and perform the obligations and exercise the rights of the selected bidder/ Consortium including the obligation to enter into this Concession Agreement pursuant to the LOA. The Concessionaire has further represented to the effect that it has been promoted by the Selected Bidder/ Consortium for the purposes hereof and has delivered to the Authority a legal opinion with respect to the authority of the Concessionaire to enter into this Concession Agreement and the enforceability of the provisions thereof. }
6. The Authority has {agreed to the said request of the Selected Bidder/ Consortium and the Concessionaire, and has} accordingly agreed to enter into this Concession Agreement with the Concessionaire for implementation of the Project on Hybrid Annuity basis, subject to and on the terms and conditions set forth hereinafter.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Concession Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

ARTICLE 1 DEFINITIONS AND INTERPRETATIONS

1.1 Definitions

The words and expressions beginning with capital letters and defined in this Agreement (including those in Article 42) shall, unless the context otherwise requires, have the meaning ascribed thereto herein, and the words and expressions defined in the Schedules and used therein shall have the meaning ascribed thereto in the Schedules.

1.2 Interpretation

1.2.1 In this Agreement, unless the context otherwise requires,

- A. references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or is capable of applying to any transaction entered into hereunder;
- B. references to laws of India or Indian law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of India and as from time to time may be amended, modified, supplemented, extended or re-enacted;
- C. references to a “person” and words denoting a natural person shall be construed as a reference to any individual, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and shall include successors and assigns;
- D. the table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;
- E. the words “include” and “including” are to be construed without limitation and shall be deemed to be followed by “without limitation” or “but not limited to” whether or not they are followed by such phrases;
- F. references to “construction” or “building” include, unless the context otherwise requires, investigation, design, engineering, procurement, delivery, transportation, installation, processing, fabrication, testing, commissioning and other activities incidental to the construction, and “construct” or “build” shall be construed accordingly;
- G. references to “development” include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, upgradation and other activities incidental thereto, and “develop” shall be construed accordingly;
- H. any reference to any period of time shall mean a reference to that according to Indian Standard Time;

- I. any reference to day shall mean a reference to a calendar day;
- J. Reference to a “business day” shall be construed as reference to a day (other than a Sunday) on which banks in the State are generally open for business;
- K. any reference to month shall mean a reference to a calendar month as per the Gregorian calendar;
- L. references to any date, period or Project Milestone shall mean and include such date, period or Project Milestone as may be extended pursuant to this Agreement;
- M. any reference to any period commencing “from” a specified day or date and “till” or “until” a specified day or date shall include both such days or dates; provided that if the last day of any period computed under this Agreement is not a business day, then the period shall run until the end of the next business day;
- N. the words importing singular shall include plural and vice versa;
- O. References to any gender shall include the other and the neutral gender;
- P. “lakh” means a hundred thousand (100,000) and “crore” means ten million (10,000,000);
- Q. “Indebtedness” shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- R. references to the “winding-up”, “dissolution”, “insolvency”, or “reorganisation” of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganisation, dissolution, arrangement, protection or relief of debtors;
- S. save and except as otherwise provided in this Agreement, any reference, at any time, to any agreement, deed, instrument, license or document of any description shall be construed as reference to that agreement, deed, instrument, license or other document as amended, varied, supplemented, modified or suspended at the time of such reference; provided that this Sub-clause (s) shall not operate so as to increase liabilities or obligations of the Authority hereunder or pursuant hereto in any manner whatsoever;
- T. any agreement, consent, approval, authorization, notice, communication, information report or any other correspondence required under or pursuant to this Agreement from or by any Party or the Independent Engineer shall be valid and effective only if it is routed through _____ (unless the law requires to send such notice, communication, etc, through physical/any other

specified mode only) under the hand of a duly authorized representative of such Party or the Independent Engineer, as the case may be, in this behalf and not otherwise;

- U. the Schedules and Recitals to this Agreement and the Request for Proposals (“**RFP**”) forms an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;
- V. references to Recitals, Articles, Clauses, Sub-clauses, Provisos or Schedules in this Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Clauses, Sub-clauses, Provisos and Schedules of or to this Agreement; reference to an Annex shall, subject to anything to the contrary specified therein, be construed as a reference to an Annex to the Schedule in which such reference occurs; and reference to a Paragraph shall, subject to anything to the contrary specified therein, be construed as a reference to a Paragraph of the Schedule or Annex, as the case may be, in which such reference appears;
- W. the damages payable by either Party to the other of them, as set forth in this Agreement, whether on per diem basis or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party entitled to receive the same and are not by way of penalty (the “**Damages**”); and
- X. Time shall be of the essence in the performance of the Parties’ respective obligations. If any time period specified herein is extended, such extended time shall also be of the essence.

1.2.2 Unless expressly provided otherwise in this Agreement, any Documentation required to be provided or furnished by the Concessionaire to the Authority and/ or the Independent Engineer shall be provided free of cost and in three copies, and if the Authority and/or the Independent Engineer is required to return any such Documentation with their comments and/or approval, they shall be entitled to retain two copies thereof.

1.2.3 The rule of construction, if any, that a contract should be interpreted against the parties responsible for the drafting and preparation thereof, shall not apply.

1.2.4 Any word or expression used in this Agreement shall, unless otherwise defined or construed in this Agreement, bear its ordinary English meaning and, for these purposes, the General Clauses Act 1897 shall not apply.

1.3 Measurements and arithmetic conventions

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down.

1.4 Priority of agreements, clauses and schedules

1.4.1 This Agreement, and all other agreements and documents forming part of or referred to

in this agreement are to be taken as mutually explanatory and, unless otherwise expressly provided elsewhere in this Agreement, the priority of this Agreement and other documents and agreements forming part hereof or referred to herein shall, in the event of any conflict between them, be in the following order:

1. this Agreement; and
2. all other agreements and documents forming part hereof or referred to herein, i.e. the Agreement at (a) above shall prevail over the agreements and documents at (b) above.

1.4.2 Subject to provisions of Clause 1.4.1, in case of ambiguities or discrepancies within this Agreement, the following shall apply:

1. between two or more Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in other Clauses;
2. between the Clauses of this Agreement and the Schedules, the Clauses shall prevail and between Schedules and Annexes, the Schedules shall prevail;
3. between any two Schedules, the Schedule relevant to the issue shall prevail;
4. between the written description on the Drawings and the Specifications and Standards, the latter shall prevail;
5. between the dimension scaled from the Drawing and its specific written dimension, the latter shall prevail; and
6. between any value written in numerals and that in words, the latter shall prevail.

ARTICLE 2 SCOPE OF THE PROJECT

2.1 Scope of the Project

The scope of the Project (the “**Scope of the Project**”) shall mean and include, during the Concession Period:

- i. development of the Project on the Site set forth in Schedule A and as specified in Schedule B, and in conformity with the Specifications and Standards set forth in Schedule D;
- ii. operation and maintenance of the Project in accordance with the provisions of this Agreement and in fulfilment of KPIs specified in Schedule C; and
- iii. performance and fulfilment of all other obligations of the Concessionaire in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all of the obligations of the Concessionaire under this Agreement
- iv. transfer of the Project Assets upon expiry or early termination of this Agreement in accordance with the provisions of this Agreement.

ARTICLE 3 GRANT OF CONCESSION

3.1 The Concession

- 3.1.1 Subject to and in accordance with the provisions of this Agreement, Applicable Laws and Applicable Permits, the Authority hereby grants to the Concessionaire the concession set forth herein including the exclusive right, license and authority to construct, upgrade, operate and maintain the Project (the “**Concession**”) during the Construction Period of 910 (nine hundred and ten) days and Operation Period of 15 (Fifteen) years commencing from COD, and the Concessionaire hereby accepts the Concession and agrees to implement the Project subject to and in accordance with the terms and conditions set forth herein.
- 3.1.2 Subject to and in accordance with the provisions of this Agreement, the Concession hereby granted shall oblige or entitle (as the case may be) the Concessionaire to:
- a. Right of Way, access and license to the Site for the purpose of and to the extent conferred by the provisions of this Agreement;
 - b. part finance the Project in accordance with terms hereof;
 - c. develop the Project;
 - d. operate, maintain and manage the Project;
 - e. perform and fulfill all of the Concessionaire’s obligations under and in accordance with this Agreement;
 - f. save as otherwise expressly provided in this Agreement, bear and pay all costs, expenses and charges in connection with or incidental to the performance of the obligations of the Concessionaire under this Agreement; and
 - g. neither assign, transfer or sublet or create any lien or encumbrance on this Agreement, or the Concession hereby granted or on the whole or any part of the Project nor transfer, lease or part possession thereof, save and except as expressly permitted by this Agreement or the Substitution Agreement.

ARTICLE 4 CONDITIONS PRECEDENT

4.1 Conditions Precedent

- 4.1.1 Save and except as expressly provided in Articles 4, 5, 6, 7, 8, 9, 10, 22, 28,38 and 41, or unless the context otherwise requires, the respective rights and obligations of the Parties under this Agreement shall be subject to the satisfaction in full of the conditions precedent specified in this Clause 4.1 (the “**Conditions Precedent**”)
- 4.1.2 The Concessionaire may, upon providing the Performance Security to the Authority in accordance with Article 9, at any time after 30 (thirty) days from the date of this Agreement or on an earlier day acceptable to the Authority, by notice require the Authority to satisfy all of the Conditions Precedent set forth in this Clause 4.1.2 within a period of 180 (one hundred and eighty) days thereafter. The Conditions Precedent required to be satisfied by the Authority shall be deemed to have been fulfilled when the Authority shall have:
- a) procured for the Concessionaire the Right of Way to the Site limited to only the Essential Land, and Rehabilitation Assets, in accordance with the provisions of Clause 10.3. For the purposes of this Clause 4.1.2(a) Other Land and Post-COD Assets shall not form part of the Site;
 - b) review and approve the Drawings, and Detailed Project Report of the Project;
 - c) execute the Substitution Agreement with the Concessionaire, Lender/s in the agreed form as set out at Schedule- R; and
 - d) execute the Escrow Agreement with the Concessionaire.

Provided that the Authority shall be entitled to an additional period, not exceeding 90 (one hundred and eighty) days beyond the initial period of 90 days without being liable for payment of any damages, for fulfillment of the Conditions Precedent set forth in this Clause.

- 4.1.3 The Conditions Precedent required to be satisfied by the Concessionaire within a period of 180 (one hundred and eighty) days from the date of this Agreement shall be deemed to have been fulfilled when the Concessionaire shall have:
- a) provided Performance Security to the Authority in terms of Clause 9.1 of this Agreement. For the avoidance of doubt it is clarified and agreed that the Concessionaire is required to provide the Performance Security within 30 days of signing of this Agreement;
 - b) submitted to and procured approval of the Authority, for the Drawings and Detailed Project Report of the Project;
 - c) executed and procured execution of the Escrow Agreement;
 - d) executed and procured execution of the Substitution Agreement;
 - e) procured all the Applicable Permits specified in Schedule-E unconditionally or if subject to conditions, then all such conditions required to be fulfilled by the date specified therein shall have been satisfied in full and such Applicable Permits are in full force and effect;

- f) executed the Financing Agreements and delivered to the Authority 3 (three) true copies thereof, duly attested by a Director of the Concessionaire;
 - g) delivered to the Authority 3 (three) true copies of the Financial Package and the Financial Model, duly attested by a Director of the Concessionaire, along with 3 (three) soft copies of the Financial Model in MS Excel version or any substitute thereof, which is acceptable to the Senior Lenders; and
 - h) delivered to the Authority {from the Consortium Members, their respective} confirmation of the correctness of the representations and warranties set forth in Sub-clauses (k), (l) and (m) of Clause 7.1 of this Agreement.
- 4.1.4 Each Party shall make all reasonable endeavours to satisfy the Conditions Precedent within the time stipulated and shall provide the other Party with such reasonable cooperation as may be required to assist that Party in satisfying the Conditions Precedent for which that Party is responsible. Subject only to payment of Damages, it is agreed between the Parties that the obligation to fulfill each parties' Conditions Precedent is an independent obligation of the respective Party.
- 4.1.5 The Parties shall notify each other in writing at least once a month on the progress made in satisfying the Conditions Precedent. Each Party shall promptly inform the other Party when any Condition Precedent for which it is responsible has been satisfied.

4.2 Damages for delay by the Authority

In the event that (i) the Authority does not procure fulfillment of any or all of the Conditions Precedent set forth in Clause 4.1.2 within the period specified in respect thereof, and (ii) the delay has not occurred as a result of breach of this Agreement by the Concessionaire or due to Force Majeure, the Authority shall pay to the Concessionaire Damages in an amount calculated at the rate of 0.2% (zero point two per cent) of the Performance Security for each day's delay until the fulfillment of such Conditions Precedent, subject to the maximum limit equal to the amount of the Bid Security and upon reaching such limit, the Concessionaire may, in its sole discretion terminate the Agreement. The Damages payable hereunder shall be the sole remedy available to the Concessionaire for delay by the Authority.

Provided further that in the event of delay by the Concessionaire in procuring fulfillment of the Conditions Precedent specified in Clause 4.1.3, no Damages shall be due or payable by the Authority under this Clause 4.2 until the date on which the Concessionaire shall have procured fulfillment of the Conditions Precedent specified in Clause 4.1.3.

4.3 Damages for delay by the Concessionaire

In the event that (i) the Concessionaire does not procure fulfillment of any or all of the Conditions Precedent set forth in Clause 4.1.3 within the period specified in respect thereof, and (ii) the delay has not occurred as a result of failure to fulfill the obligations under Clause 4.1.2 or other breach of this Agreement by the Authority, or due to Force Majeure, the Concessionaire shall pay to the Authority, Damages in an amount calculated at the rate of 0.3% (zero point three per cent) of the Performance Security for each day's delay until the fulfillment of such Conditions Precedent. Provided, however, that the Damages payable hereunder shall be subject to the maximum limit equal to the

amount of the Bid Security and upon reaching such limit, the Authority may, in its sole discretion and subject to the provisions of Clause 9.2, terminate the Agreement. Provided further that in the event of delay by the Authority in procuring fulfillment of the Conditions Precedent specified in Clause 4.1.2, no Damages shall be due or payable by the Concessionaire under this Clause 4.3 until the date on which the Authority shall have procured fulfillment of the Conditions Precedent specified in Clause 4.1.2.

4.4 Commencement of Concession Period

The date on which Financial Close is achieved and all the Conditions Precedent specified in Clause 4.1 are satisfied shall be the Appointed Date which shall be the date of commencement of the Concession Period. For the avoidance of doubt, the Parties agree that the Concessionaire may, upon occurrence of the Appointed Date hereunder, by notice convey the particulars thereof to the Authority, and shall thereupon be entitled to commence construction on the Project.

4.5 Deemed Termination upon delay

Without prejudice to the provisions of Clauses 4.2 and 4.3, and subject to the provisions of Clause 9.2, the Parties expressly agree that in the event the Appointed Date does not occur, for any reason whatsoever, before the 1st (first) anniversary of the date of this Agreement or the extended period provided in accordance with this Agreement, all rights, privileges, claims and entitlements of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Concessionaire, and the Concession Agreement shall be deemed to have been terminated by mutual agreement of the Parties. Provided, however, that in the event the non-occurrence of the Appointed Date is for reasons attributable to the Concessionaire, the Bid Security, Performance Security, if any, of the Concessionaire shall be encashed and appropriated by the Authority as Damages thereof.

ARTICLE 5 OBLIGATIONS OF THE CONCESSIONAIRE

5.1 Obligations of the Concessionaire

- 5.1.1 Subject to and on the terms and conditions of this Agreement, the Concessionaire shall, at its own cost and expense, procure finance for and undertake the designing, engineering, procurement, construction, rehabilitation, operation and maintenance of the Project and observe, fulfill, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- 5.1.2 The Concessionaire shall apply for and obtain all Applicable Permits and comply with all Applicable Laws and Applicable Permits (including renewals as required) in the performance of its obligations under this Agreement.
- 5.1.3 Save and except as otherwise provided in this Agreement or Applicable Laws, as the case may be, the Concessionaire shall, in discharge of all its obligations under this Agreement, conform with and adhere to Good Industry Practice at all times.
- 5.1.4 The Concessionaire shall, at its own cost and expense, in addition to and not in derogation of its obligations elsewhere set out in this Agreement:
- a. make, or cause to be made, necessary applications to the relevant Government Instrumentalities with such particulars and details as may be required for obtaining Applicable Permits, other than those set forth in Clause 4.1.2, and obtain and keep in force and effect such Applicable Permits in conformity with Applicable Laws;
 - b. procure, as required, the appropriate proprietary rights, licenses, agreements and permissions for materials, methods, processes, know-how and systems used or incorporated into the Project;
 - c. perform and fulfill its obligations under the Financing Agreements;
 - d. make reasonable efforts to maintain harmony and good industrial relations among the personnel employed by it or its Contractors in connection with the performance of its obligations under this Agreement;
 - e. ensure and procure that its Contractors comply with all Applicable Permits and Applicable Laws in the performance by them of any of the Concessionaire's obligations under this Agreement;
 - f. always act in a manner consistent with the provisions of this Agreement and not cause or fail to do any act, deed or thing, whether intentionally or otherwise, which may in any manner be violative of any of the provisions of this Agreement;
 - g. procure fulfilment of Key Performance Indicators (KPIs) in accordance with Article 20 of this Agreement;
 - h. support, cooperate with and facilitate the Authority in the implementation and operation of the Project in accordance with the provisions of this Agreement; and
 - i. transfer the Project to the Authority upon Termination of this Agreement, in

accordance with the provisions of this Agreement.

5.2 Obligations relating to Project Agreements

- 5.2.1 It is expressly agreed that the Concessionaire shall, at all times, be responsible and liable for all its obligations under this Agreement notwithstanding anything contained in the Project Agreements or any other agreement, and no default under any Project Agreement or any other agreement shall excuse the Concessionaire from its obligations or liability hereunder.
- 5.2.2 The Concessionaire shall submit to the Authority the drafts of all Project Agreements, or any amendments or replacements thereto, for its review and comments, and the Authority shall have the right but not the obligation to undertake such review and provide its comments, if any, to the Concessionaire within 30 (thirty) days of the receipt of such drafts. Within 7 (seven) days of execution of any Project Agreement or amendment thereto, the Concessionaire shall submit to the Authority a true copy thereof, duly attested by a Director of the Concessionaire, for its record. For the avoidance of doubt, it is agreed that the review and comments hereunder shall be limited to ensuring compliance with the terms of this Agreement. It is further agreed that any failure or omission of the Authority to review and/ or comment hereunder shall not be construed or deemed as acceptance of any such agreement or document by the Authority. No review and/ or observation of the Authority and/ or its failure to review and/ or convey its observations on any document shall relieve the Concessionaire of its obligations and liabilities under this Agreement in any manner nor shall the Authority be liable for the same in any manner whatsoever.
- 5.2.3 The Concessionaire shall not make any addition, replacement or amendments to any of the Financing Agreements without the prior written consent of the Authority if such addition, replacement or amendment has, or may have, the effect of imposing or increasing any financial liability or obligation on the Authority, and in the event that any replacement or amendment is made without such consent, the Concessionaire shall not enforce such replacement or amendment nor permit enforcement thereof against the Authority. For the avoidance of doubt, the Authority acknowledges and agrees that it shall not unreasonably withhold its consent for restructuring or rescheduling of the debt of the Concessionaire and shall respond to the request for consent no later than 30 days from the receipt of such request from the Concessionaire.
- 5.2.4 The Concessionaire shall procure that each of the Project Agreements contains provisions that entitle the Authority and / or Lenders Representative to step into such agreement, in its sole discretion, in substitution of the Concessionaire in the event of Termination or Suspension (the "Covenant"). Further, it is clarified that in case both the Authority and Lenders' Representative decide to exercise their right to step-in, the Authority shall have the sole right to step into the Project Agreements. For the avoidance of doubt, it is expressly agreed that in the event the Authority does not exercise such rights of substitution within a period not exceeding 90 (ninety) days from the Transfer Date, the Project Agreements shall be deemed to cease to be in force and effect on the Transfer Date without any liability whatsoever on the Authority and the Covenant shall expressly provide for such eventuality. The Concessionaire expressly agrees to include the Covenant in all its Project Agreements and undertakes that it shall, in respect of each of the Project Agreements, procure and deliver to the Authority an acknowledgment and undertaking, in a form acceptable to the Authority, from the counter party(ies) of each of the Project Agreements, where under such counter

party(ies) shall acknowledge and accept the Covenant and undertake to be bound by the same and not to seek any relief or remedy whatsoever from the Authority in the event of Termination or Suspension.

5.2.5 Notwithstanding anything to the contrary contained in this Agreement, the Concessionaire agrees and acknowledges that selection or replacement of the EPC Contractor and O&M Contractor and execution of the EPC Contract and O&M Contract shall be subject to the following:

- a. The prior approval of the Authority from national security and public interest perspective, the decision of the Authority in this behalf being final, conclusive and binding on the Concessionaire, and undertakes that it shall not give effect to any such selection or contract without prior approval of the Authority; and
- b. The prior approval of the Authority to ensure that the proposed replacements possess necessary qualification and credentials as that of the original EPC Contractor and O&M Contractor, as the case may be.

The Authority shall endeavour to convey its decision thereon expeditiously and no later than 30 days from the date of receipt of the proposal along with the draft agreement by the Authority. It is also agreed that the Authority shall not be liable in any manner on account of grant or otherwise of such approval and that such approval or denial thereof shall not in any manner absolve the Concessionaire or its Contractors from any liability or obligation under this Agreement.

5.3 Obligations relating to Change in Ownership

5.3.1 The Concessionaire shall not undertake or permit any Change in Ownership, except with the prior written approval of the Authority.

5.3.2 Notwithstanding anything to the contrary contained in this Agreement, the Concessionaire agrees and acknowledges that:

- a. all acquisitions of Equity by an acquirer, either by himself or with any person acting in concert, directly or indirectly, including by transfer of the direct or indirect legal or beneficial ownership or control of any Equity, in aggregate of 25% (twenty five per cent) or more of the total Equity of the Concessionaire; or
- b. acquisition of any control directly or indirectly of the Board of Directors of the Concessionaire by any person either by himself or together with any person or persons acting in concert with him, shall constitute a Change in Ownership requiring prior approval of the Authority from national security and public interest perspective, the decision of the Authority in this behalf being final, conclusive and binding on the Concessionaire, and undertakes that it shall not give effect to any such acquisition of Equity or control of the Board of Directors of the Concessionaire without such prior approval of the Authority. For the avoidance of doubt, it is expressly agreed that approval of the Authority hereunder shall be limited to national security and public interest perspective, and the Authority shall endeavor to convey its decision thereon expeditiously. It is also agreed that the Authority shall not be liable in any manner on account of grant or otherwise of such approval and that such approval or denial thereof shall

not in any manner absolve the Concessionaire from any liability or obligation under this Agreement.

For the purposes of this Clause 5.3.2:

- c. the expression “acquirer”, “control” and “person acting in concert” shall have the meaning ascribed thereto in the Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeover) Regulations, 2011 or any statutory re- enactment thereof as in force as on the date of acquisition of Equity, or the control of the Board of Directors, as the case may be, of the Concessionaire;
- d. the indirect transfer or control of legal or beneficial ownership of Equity shall mean transfer of the direct or indirect beneficial ownership or control of any company or companies whether in India or abroad which results in the acquirer acquiring control over the shares or voting rights of shares of the Concessionaire; and
- e. power to appoint, whether by contract or by virtue of control or acquisition of shares of any company holding directly or through one or more companies (whether situate in India or abroad) the Equity of the Concessionaire, not less than half of the directors on the Board of Directors of the Concessionaire or of any company, directly or indirectly whether situate in India or abroad, having ultimate control of 25% (twenty five per cent) or more of the Equity of the Concessionaire shall constitute acquisition of control, directly or indirectly, of the Board of Directors of the Concessionaire.

5.4 Obligations relating to employment of foreign nationals

The Concessionaire acknowledges, agrees and undertakes that employment of foreign personnel by the Concessionaire and/or its contractors and their subcontractors shall be subject to grant of requisite regulatory permits and approvals including employment/residential visas and work permits, if any required, and the obligation to apply for and obtain the same shall and will always be of the Concessionaire and, notwithstanding anything to the contrary contained in this Agreement, refusal of or inability to obtain any such permits and approvals by the Concessionaire or any of its contractors or sub-contractors shall not constitute Force Majeure Event, and shall not in any manner excuse the Concessionaire from the performance and discharge of its obligations and liabilities under this Agreement.

5.5 Obligations relating to employment of trained personnel

The Concessionaire shall ensure that the personnel engaged by it in the performance of its obligations under this Agreement are at all times properly trained for their respective function

5.6 Facilities for differently abled and elderly persons

The Concessionaire shall, in conformity with the guidelines issued from time to time by the Ministry of Social Justice and Empowerment, or a substitute thereof, procure a barrier free environment for the differently abled and for elderly persons using the

Project.

5.7 Branding of Project

The Project or any part thereof shall not be branded in any manner to advertise, display or reflect the name or identity of the Concessionaire or its shareholders. The Concessionaire undertakes that it shall not, in any manner, use the name or entity of the Project to advertise or display its own identity, brand equity or business interests, including those of its shareholders, save and except as may be necessary in the normal course of business. For the avoidance of doubt, it is agreed that the Concessionaire may display its own name at a spot where other public notices are displayed for the Users. It is further agreed that the Project shall be known, promoted, displayed and advertised by the name of _____²

5.8 Sole purpose of the Concessionaire

The Concessionaire having been set up for the sole purpose of exercising the rights and observing and performing its obligations and liabilities under this Agreement, the Concessionaire or any of its subsidiaries shall not, except with the previous written consent of the Authority, be or become directly or indirectly engaged, concerned or interested in any business other than as envisaged herein.

² To be decided by the Authority in consultation with the Concessionaire during the Development Period

ARTICLE 6 OBLIGATIONS OF THE AUTHORITY

6.1 Obligations of the Authority

- 6.1.1 The Authority shall, at its own cost and expense undertake, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- 6.1.2 The Authority agrees to provide support to the Concessionaire and undertakes to observe, comply with and perform, subject to and in accordance with the provisions of this Agreement and Applicable Laws, the following
- A. upon written request from the Concessionaire, and subject to the Concessionaire complying with Applicable Laws, provide reasonable support and assistance to the Concessionaire in procuring Applicable Permits required from any Government Instrumentality for implementation and operation of the Project;
 - B. upon written request from the Concessionaire, provide reasonable assistance to the Concessionaire in obtaining access to all necessary infrastructure facilities and utilities, including water and electricity at rates and on terms no less favorable to the Concessionaire than those generally available to commercial customers receiving substantially equivalent services;
 - C. procure that no barriers are erected or placed on or about the Project by any Government Instrumentality or persons claiming through or under it, except for reasons of Emergency, national security or law and order;
 - D. Subject to and in accordance with Applicable Laws, grant to the Concessionaire the authority to regulate use of the Project;
 - E. Assist the Concessionaire in procuring police assistance for regulation of Users, removal of trespassers and security on or at the Project;
 - F. Not do or omit to do any act, deed or thing which may in any manner be violating of any of the provisions of this Agreement;
 - G. support, cooperate with and facilitate the Concessionaire in the implementation and operation of the Project in accordance with the provisions of this Agreement;
 - H. upon written request from the Concessionaire and subject to the provisions of Clause 5.4, provide reasonable assistance to the Concessionaire and any expatriate personnel of the Concessionaire or its Contractors to obtain applicable visas and work permits for discharging their respective obligations under this Agreement and the Project Agreements; and
 - I. subject to the Concessionaire complying with Applicable Laws, provide reasonable support and assistance to the Concessionaire in procuring approvals;

6.2 Obligations relating to refinancing

Upon request made by the Concessionaire to this effect, the Authority shall, in conformity with any regulations or guidelines that may be notified by the Government or the Reserve Bank of India, as the case may be, permit and enable the Concessionaire to secure refinancing on such terms as may be agreed upon between the Concessionaire

and the entity providing such refinancing; provided, however, that the refinancing hereunder shall always be subject to the prior consent of the Authority, which consent shall not be unreasonably withheld. The Authority shall endeavour to convey its decision on such request of the Concessionaire within 30 days of receipt of the proposal by the Authority.

ARTICLE 7 REPRESENTATION AND WARRANTIES

7.1 Representations and warranties of the Concessionaire.

The Concessionaire represents and warrants to the Authority that:

- a. It is duly organized and validly existing under the laws of India, and has full power and authority to execute and perform its obligations under this Agreement and to carry out the transactions contemplated hereby;
- b. it has taken all necessary corporate and other actions under Applicable Laws to authorise the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- c. {the Selected Bidder/ Consortium Members and its/their} Associates have the financial standing and resources to fund the required Equity and to raise the debt necessary for undertaking and implementing the Project in accordance with this Agreement;
- d. this Agreement constitutes its legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement will be legally valid, binding and enforceable obligations against it in accordance with the terms hereof;
- e. it is subject to the laws of India, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement or matters arising hereunder including any obligation, liability or responsibility hereunder;
- f. The information furnished in the Bid and as updated on or before the date of this Agreement is true and accurate in all respects as on the date of this Agreement;
- g. the execution, delivery and performance of this Agreement will not conflict with, result in the breach of, constitute a default under, or accelerate performance required by any of the terms of its Memorandum and Articles of Association {or those of any member of the Consortium} or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- h. there are no actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its obligations under this Agreement;
- i. it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or Government Instrumentality which may result in any material adverse effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;

- j. it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have a material adverse effect on its ability to perform its obligations under this Agreement;
- k. it shall at no time undertake or permit any Change in Ownership except in accordance with the provisions of Clause 5.3 and that the {selected bidder/ Consortium Members}, together with {its/ their} Associates, hold not less than 51% (fifty-one percent) of its issued and paid up Equity as on the date of this Agreement; and that each Consortium Member whose technical and financial capacity was evaluated for the purposes of pre-qualification and short-listing in response to the Request for Proposals shall hold at least 26% (twenty six per cent) of Equity during the Construction Period and 36 (thirty six) months thereafter along with its Associates;

Provided further that any such request made under Clause 7.1(k) and / or Article 42, at the option of the Authority, may be required to be accompanied by a suitable no objection letter from Senior Lenders;

Provided also that the Concessionaire undertakes and agrees that any new entity acquiring Equity stake of 26% and above shall possess the qualification and credentials as that of the original Consortium Member whose Equity stake is proposed to be acquired by the said entity.

- l. {the selected bidder/ each Consortium Member} is duly organized and validly existing under the laws of the jurisdiction of its incorporation or registration, as the case may be, and has requested the Authority to enter into this Agreement with {itself/the Concessionaire} pursuant to the Letter of Award, and has agreed to and unconditionally accepted the terms and conditions set forth in this Agreement;
- m. all its rights and interests in the Project shall pass to and vest in the Authority on the Transfer Date free and clear of all liens, claims and Encumbrances, without any further act or deed on its part or that of the Authority, and that none of the Project Assets shall be acquired by it Subject to any agreement under which a security interest or other lien or Encumbrance is retained by any person, save and except as expressly provided in this Agreement;
- n. no representation or warranty by it contained herein or in any other document furnished by it to the Authority or any Government Instrumentality in relation to Applicable Permits contains or will contain any untrue or misleading statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;
- o. no sums, in cash or kind, have been paid or will be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for securing the Concession or entering into this Agreement or for influencing or attempting to influence any officer or employee of the Authority in connection therewith;
- p. all information provided by the {selected bidder/ Consortium Members} in response to the Request for Proposals or otherwise, is to the best of its knowledge and belief, true and accurate in all material respects; and

- q. All undertakings and obligations of the Concessionaire arising from the Request for Proposals or otherwise shall be binding on the Concessionaire as if they form part of this Agreement.

7.2 Representation and warranties of the Authority

The Authority represents and warrants to the Concessionaire that:

- a. it has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement;
- b. It has taken all necessary actions under Applicable Laws to authorize the execution, delivery and performance of this Agreement;
- c. It has the financial standing and capacity to perform its obligations under this Agreement;
- d. This Agreement constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof;
- e. it has no knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Government Instrumentality which may result in any material adverse effect on the Authority's ability to perform its obligations under this Agreement;
- f. It has complied with Applicable Laws in all material respects;
- g. It has the right, power and authority to manage and operate the Project; and
- h. It shall procure good and valid right to the Site, and has power and authority to grant a license in respect thereto to the Concessionaire;

7.3 Disclosure

In the event that any occurrence or circumstance comes to the attention of either Party that renders any of its aforesaid representations or warranties untrue or incorrect, such Party shall immediately notify the other Party of the same. Such notification shall not have the effect of remedying any breach of the representation or warranty that has been found to be untrue or incorrect nor shall it adversely affect or waive any right, remedy or obligation of either Party under this Agreement.

ARTICLE 8 DISCLAIMER

8.1 Disclaimer

- 8.1.1 The Concessionaire acknowledges that prior to the execution of this Agreement, the Concessionaire has, after a complete and careful examination, made an independent evaluation of the Request for Proposals, Scope of the Project, Specifications and Standards, Site, Existing Assets, local conditions, physical qualities of ground, river channel condition, river bank condition, riverfront condition, technical due diligence, social assessment, environment assessment, bio-diversity assessment, subsoil and geology, and all information provided by the Authority or obtained, procured or gathered otherwise, and has determined to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder. The Authority makes no representation whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumptions, statement or information provided by it and the Concessionaire confirms that it shall have no claim whatsoever against the Authority in this regard
- 8.1.2 The Concessionaire acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Clause 8.1.1 above and hereby acknowledges and agrees that the Authority shall not be liable for the same in any manner whatsoever to the Concessionaire, {the Consortium Members and their} Associates or any person claiming through or under any of them.
- 8.1.3 The Parties agree that any mistake or error in or relating to any of the matters set forth in Clause 8.1.1 above shall not vitiate this Agreement, or render it voidable.
- 8.1.4 In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in Clause 8.1.1 above, that Party shall immediately notify the other Party, specifying the mistake or error; provided, however, that a failure on part of the Authority to give any notice pursuant to this Clause 8.1.4 shall not prejudice the disclaimer of the Authority contained in Clause 8.1.1 and shall not in any manner shift to the Authority any risks assumed by the Concessionaire pursuant to this Agreement.
- 8.1.5 Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Concessionaire and the Authority shall not be liable in any manner for such risks or the consequences thereof.

ARTICLE 9 PERFORMANCE SECURITY

9.1 Performance Security

- 9.1.1 The Concessionaire shall, for the performance of its obligations hereunder, provide to the Authority no later than 30 (thirty) days from the date of this Agreement, an unconditional and irrevocable bank guarantee for an amount equal to _____ (Rupees _____ only) corresponding to 5% of, the Estimated Project Cost or the Bid Project Cost, whichever is higher, (the “**Performance Security**”) in the form set forth in Schedule-F. Until such time the Performance Security is provided by the Concessionaire pursuant hereto and the same comes into effect, the Bid Security shall remain in force and effect, and upon such provision of the Performance Security pursuant hereto, the Authority shall release the Bid Security to the Concessionaire.
- 9.1.2 Notwithstanding anything to the contrary contained in this Agreement, in the event Performance Security is not provided by the Concessionaire within a period of 30(thirty) days from the date of this Agreement, the Authority may encash the Bid Security and appropriate the proceeds thereof as Damages, and thereupon all rights, privileges, claims and entitlements of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Concessionaire, and this Agreement shall be deemed to have been terminated by mutual agreement of the Parties.
- 9.1.3 The Concessionaire shall maintain the Performance Security in full force and effect until the expiry of the Concession Period. The Performance Security shall have an initial validity period of 1 year, which must be renewed on a year-on-year basis, before the expiry of the 11th month in the relevant year, until the expiry of the Concession Period.
- 9.1.4 The Performance Security shall secure the due performance of the Concessionaire's obligations during the Concession Period. The cost of procuring the Performance Security shall be borne solely by the Concessionaire.
- 9.1.5 If the Performance Security is not renewed by the expiry of the 11th month of the relevant year of the Concession Period, then the Authority shall be entitled to drawdown the total amount available under the Performance Security, and retain such amount as cash security until such time that the Concessionaire submits an extension or replacement of the Performance Security.
- 9.1.6 The Authority shall be entitled to utilize such retained amount in the same manner as it would utilise the Performance Security.
- 9.1.7 Upon receipt of a renewed or replacement Performance Security, the authority shall return the unutilized cash security amount for the Performance Security to the Concessionaire. The interest earned on any retained amounts or cash security shall be the property of the Authority and the Authority shall not be required to account to the Concessionaire for any such interest.

9.2 Appropriation of Performance Security

Upon occurrence of a Concessionaire Default or failure to meet any Condition Precedent, the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate from the Performance

Security the amounts due to it for and in respect of such Concessionaire Default or for failure to meet any Condition Precedent. Upon such encashment and appropriation from the Performance Security, the Concessionaire shall, within 15 (fifteen) days thereof, replenish, in case of partial appropriation, to the original level of the Performance Security, and in case of appropriation of the entire Performance Security provide a fresh Performance Security, as the case may be, failing which the Authority shall be entitled to terminate this Agreement in accordance with Article 31.

Provided that upon appropriation on account of Concessionaire's Default the Concessionaire shall replenish the Performance Security and upon such replenishment or furnishing of a fresh Performance Security, as the case may be, the Concessionaire shall be entitled to an additional Cure Period of 120 (one hundred and twenty) days for remedying the Concessionaire Default, save and except as provided in Clause 4.5 of this Agreement, and in the event of the Concessionaire not curing its default within such Cure Period, the Authority shall be entitled to encash and appropriate such Performance Security as Damages, and to terminate this Agreement in accordance with Article 31.

9.3 References to Performance Security

References to Performance Security occurring in this Agreement for and in respect of any period prior to the delivery of the Performance Security by the Concessionaire to the Authority, or in respect of any period subsequent to the expiry or release thereof, as the case may be, shall be construed solely for the purposes of calculating the amount of Damages payable by the Concessionaire.

ARTICLE 10 RIGHT OF WAY

10.1 The Site

The site of the Project shall comprise the assets described in Schedule-A and in respect of which the Right of Way shall be provided and granted by the Authority to the Concessionaire as a licensee under and in accordance with this Agreement (the “**Site**”). For the avoidance of doubt, it is hereby acknowledged and agreed that references to the Site shall be construed as references to the assets required for the Project as set forth in Schedule-A.

10.2 License, Access and Right of Way

- 10.2.1 The Authority hereby grants to the Concessionaire access to the Site for carrying out any surveys, investigations and soil tests that the Concessionaire may deem necessary during the Development Period, it being expressly agreed and understood that the Authority shall have no liability whatsoever in respect of survey, investigations and tests carried out or work undertaken by the Concessionaire on or about the Site pursuant hereto in the event of Termination or otherwise.
- 10.2.2 In consideration of the Project, this Agreement and the covenants and warranties on the part of the Concessionaire herein contained, the Authority, in accordance with the terms and conditions set forth herein, hereby grants to the Concessionaire, commencing from the Appointed Date, leave and license rights in respect of all the land (along with any buildings, constructions or immovable assets, if any, thereon) comprising the Site which is described, delineated and shown in Schedule-A hereto (the “**Licensed Premises**”), on an “as is where is” basis, free of any Encumbrances, to develop, operate and maintain the said Licensed Premises, together with all and singular rights, liberties, privileges, easements and appurtenances whatsoever to the said Licensed Premises, hereditaments or premises or any part thereof belonging to or in any way appurtenant thereto or enjoyed therewith, for the duration of the Concession Period and, for the purposes permitted under this Agreement, and for no other purpose whatsoever.
- 10.2.3 The license, access and right of way granted by this Agreement to the Concessionaire shall always be subject to existing rights of way and the Concessionaire shall perform its obligations in a manner that Rehabilitation Assets as mentioned in Appendix IV of Schedule A are in continuous operations at all times during the Construction Period.
- 10.2.4 It is expressly agreed that the license granted hereunder shall terminate automatically and forthwith, without the need for any action to be taken by the Authority to terminate the license, upon the Termination of this Agreement for any reason whatsoever. For the avoidance of doubt, the Parties expressly agree that notwithstanding any temporary or permanent structures erected on the Site by the Concessionaire or its sub-licensees, the license in respect of the Site shall automatically terminate, without any further act of the Parties, upon Termination of this Agreement.
- 10.2.5 The Concessionaire hereby irrevocably appoints the Authority (acting directly or through a nominee) to be its true and lawful attorney, to execute and sign in the name of the Concessionaire a transfer or surrender of the license granted hereunder at any time after the Concession Period has expired or has been terminated earlier in terms hereof, a sufficient proof of which will be the declaration of any duly authorized officer of the Authority, and the Concessionaire consents to it being registered for this purpose.

10.2.6 It is expressly agreed that trees on the Site are property of the Authority except that the Concessionaire shall be entitled to exercise usufructuary rights thereon during the Concession Period.

10.3 Procurement of the Site

10.3.1 Pursuant to the notice specified in Clause 4.1.2, the Authority Representative and the Concessionaire shall, on a mutually agreed date and time, inspect the Site and prepare a memorandum containing an inventory of the Site including the vacant and unencumbered land, buildings, structures, road works, trees and any other immovable property on or attached to the Site. Such memorandum shall have appended thereto an appendix (the “**Appendix**”) specifying in reasonable detail those parts of the Site to which vacant access and Right of Way has not been granted to the Concessionaire. Signing of the memorandum, in 2 (two) counterparts (each of which shall constitute an original), by the authorized representatives of the Parties shall, subject to the provisions of Clause 10.2.2, be deemed to constitute a valid license and Right of Way to the Concessionaire for free and unrestricted use and development of the vacant and unencumbered Site during the Concession Period under and in accordance with the provisions of this Agreement and for no other purpose whatsoever. For the avoidance of doubt, it is agreed that valid license and Right of Way with respect to the parts of the Site as set forth in the Appendix shall be deemed to have been granted to the Concessionaire upon vacant access thereto being provided by the Authority to the Concessionaire.

10.3.2 Without prejudice to the provisions of Clause 10.3.1, the Parties hereto agree that on or prior to the Appointed Date, the Authority shall have granted vacant access and Right of Way such that the Appendix shall not include any land, which shall in any manner prevent the Concessionaire from undertaking construction of the Project. For the avoidance of doubt, the Authority acknowledges and agrees that the Appendix shall not include any land which may prevent the construction of any critical element of the Project without which the Completion Certificate or Provisional Certificate may not be granted.

10.3.3 On and after signing the memorandum referred to in Clause 10.3.1, and until the Transfer Date, the Concessionaire shall maintain a round-the-clock vigil over the Site and shall ensure and procure that no encroachment thereon takes place, and in the event of any encroachment or occupation on any part thereof, the Concessionaire shall report such encroachment or occupation forthwith to the Authority and undertake its removal at its cost and expenses.

10.3.4 The Authority shall make best efforts to procure and grant, no later than 90 (ninety) days from the Appointed Date, the Right of Way to the Concessionaire in respect of all land included in the Appendix, and in the event of delay for any reason other than Force Majeure or breach of this Agreement by the Concessionaire, the Authority shall, commencing from the 91st (ninety-first) day of the Appointed Date and until such Right of Way is procured or 180 (one hundred and eighty) days from the Appointed Date whichever is earlier, pay to the Concessionaire, penal interest of SBI MCLR plus 2 (two) percent on the value of the delayed Construction Works, and beyond 180 (one hundred and eighty) days from the Appointed Date, pay to the Concessionaire, penal interest of SBI MCLR plus 2 (two) percent on the value of the delayed Construction Works, only if the Concessionaire has mobilized necessary manpower, equipment and construction material required for Construction of the relevant Project Asset(s) that are

affected by delay in procurement of Right of Way by the Authority in accordance with this Clause 10.3.4. The penal interest payable by the Authority in terms of this clause shall be the sole remedy available to the Concessionaire and the Authority shall not be liable for any other consequential loss or damage to the Concessionaire.

- 10.3.5 Upon receiving Right of Way in respect of any land included in the Appendix, the Concessionaire shall complete the Construction Works thereon within a reasonable period to be determined by the Independent Engineer in accordance with Good Industry Practice; provided that the issue of Provisional Certificate shall not be affected or delayed on account of vacant access to any part of the Site not being granted to the Concessionaire or any construction on such part of the Site remaining incomplete on the date of Tests on account of the delay or denial of such access thereto. For the avoidance of doubt, it is expressly agreed that Construction Works on all lands for which Right of Way is granted within 180 (one hundred and eighty) days of the Appointed Date shall be completed on or before the Scheduled Completion Date. It is further agreed that the obligation of the Concessionaire to complete the affected Construction Works shall subsist so long as the Authority continues to pay the penal interest specified herein, and upon the Authority ceasing to pay such penal interest after giving 60 (sixty) days' notice thereof to the Concessionaire, the obligation of the Concessionaire to complete such works on such part of the Site shall cease forthwith. It is also expressly agreed that completion of the respective Construction Works within the time determined by the Independent Engineer hereunder shall be deemed to be Project Milestones for the purposes of levy and recovery of Damages under and in accordance with the provisions of Clause 12.3.2.
- 10.3.6 Notwithstanding anything to contrary contained herein, the provisions of Clauses 10.3.1, 10.3.2, 10.3.3, 10.3.4, and 10.3.5, shall be limited to the Essential Land and Rehabilitation Assets.
- 10.3.7 It is expressly agreed that the Other Land and Post-COD Assets, shall not form part of the Site for the purposes of Clause 4.1.2 and this Clause 10.3 (Procurement of the Site).
- 10.3.8 The Parties hereby acknowledge, agree and undertake that the Concessionaire may at its, discretion, receive Right of Way for Rehabilitation Assets at any time during the Construction Period, but before 90 (ninety) day prior to COD. The Concessionaire shall provide a detailed time schedule for takeover of Rehabilitation Assets as part of the DPR in accordance with Clause 12.2 hereof. The provisions of Clauses 10.3.1, 10.3.2, 10.3.3, 10.3.3, 10.3.3, 10.3.3, & 10.3.3 shall apply, *mutatis mutandis*, to the Rehabilitation Assets handover to the Concessionaire during the Construction Period.

10.4 Site to be free from Encumbrances

Subject to the provisions of Clause 10.3, the Site shall be made available by the Authority to the Concessionaire pursuant hereto free from all Encumbrances and occupations and without the Concessionaire being required to make any payment to the Authority on account of any costs, compensation, expenses and charges for the acquisition and use of such Site for the duration of the Concession Period, except insofar as otherwise expressly provided in this Agreement. For the avoidance of doubt, it is agreed that existing rights of way, easements, privileges, liberties and appurtenances to the Licensed Premises shall not be deemed to be Encumbrances. It is further agreed that the Concessionaire accepts and undertakes to bear any and all risks arising out of the inadequacy or physical condition of the Site.

10.5 Protection of Site from Encumbrances

During the Concession Period, the Concessionaire shall protect the Site from any and all occupations, encroachments or Encumbrances, and shall not place or create nor permit any Contractor or other person claiming through or under the Concessionaire to place or create any Encumbrance or security interest over all or any part of the Site or the Project Assets, or on any rights of the Concessionaire therein or under this Agreement, save and except as otherwise expressly set forth in this Agreement.

10.6 Special/Temporary Right of Way

The Concessionaire shall bear all costs and charges for any special or temporary right of way required by it in connection with access to the Site. The Concessionaire shall obtain at its cost such facilities on or outside the Site as may be required by it for the purposes of the Project and the performance of its obligations under this Agreement.

10.7 Access to the Authority and Independent Engineer

The license, right of way and right to the Site granted to the Concessionaire hereunder shall always be subject to the right of access of the Authority and the Independent Engineer and their employees and agents for inspection, viewing and exercise of their rights and performance of their obligations under this Agreement.

10.8 Geological and archaeological finds

It is expressly agreed that mining, geological or archaeological rights do not form part of the license granted to the Concessionaire under this Agreement and the Concessionaire hereby acknowledges that it shall not have any mining rights or interest in the underlying minerals, fossils, antiquities, structures or other remnants or things either of particular geological or archaeological interest and that such rights, interest and property on or under the Site shall vest in and belong to the Authority or the concerned Government Instrumentality. The Concessionaire shall take all reasonable precautions to prevent its workmen or any other person from removing or damaging such interest or property and shall inform the Authority forthwith of the discovery thereof and comply with such instructions as the Authority or the concerned Government Instrumentality may reasonably give for the removal of such property. For the avoidance of doubt, it is agreed that any reasonable expenses incurred by the Concessionaire hereunder shall be reimbursed by the Authority. It is also agreed that the Authority shall procure that the instructions hereunder are issued by the concerned Government Instrumentality within a reasonable period so as to enable the Concessionaire to continue its Construction Works with such modifications as may be deemed necessary.

10.9 Handover of Other Land and Post-COD Assets to the Concessionaire

- 10.9.1 The Authority shall make best efforts to procure and grant, no later than 90 (ninety) days prior to Scheduled Completion Date, the Right of Way to the Concessionaire in respect of Other Land and Post-COD Assets, and in the event of delay for any reason other than Force Majeure or breach of this Agreement by the Concessionaire, it shall pay to the Concessionaire Damages in a sum calculated at the rate of Rs 20 (Rupees twenty) per day for every 100 (one hundred) square meters or part thereof, commencing

from the 91st (ninety-first) day prior to Scheduled Completion Date and until such Right of Way is procured or 30 (thirty) days from Scheduled Completion Date, whichever is earlier. The Damages payable in terms of this clause shall be the sole remedy available to the Concessionaire and the Authority shall not be liable for any consequential loss or damage to the Concessionaire.

- 10.9.2 The Authority and the Concessionaire hereby acknowledge, agree and undertake that post grant of access and Right of Way to the Other Land and Post-COD Assets to the Concessionaire, the provisions of this Agreement, insofar as they relate to the Project, shall apply, *mutatis mutandis*, to Other Land and Post-COD Assets, save and except where express provisions to the contrary have been made for Other Land and Post-COD Assets.

ARTICLE 11 UTILITIES, ASSOCIATED ROADS AND TREES

11.1 Existing utilities and roads

Notwithstanding anything to the contrary contained herein, the Concessionaire shall ensure that the respective entities owning the existing right of way or utilities on, under or above the Site are enabled by it to keep such utilities in continuous satisfactory use, if necessary, by providing suitable temporary or permanent diversions with the authority of the controlling body of that utility.

11.2 Shifting of obstructing utilities

The Concessionaire shall, subject to Applicable Laws and with assistance of the Authority, undertake shifting of any utility including electric lines, water pipes and telephone cables, to an appropriate location or alignment within or outside the Site if and only if such utility causes or shall cause a material adverse effect on the construction, operation or maintenance of the Project. The cost of such shifting shall be borne by the Authority or by the entity owning such utility, if the Authority so directs, and in the event of any delay in shifting thereof, the Concessionaire shall be excused for failure to perform any of its obligations hereunder if such failure is a direct consequence of delay on the part of the entity owning such electric lines, water pipes or telephone cables, as the case may be.

11.3 New utilities and roads

The Concessionaire shall allow, subject to such conditions as the Authority may specify, access to, and use of the Site for laying telephone lines, water pipes, electric cables or other public utilities. Where such access or use causes any financial loss to the Concessionaire, it may require the user of the Site to pay compensation or damages as per Applicable Laws. For the avoidance of doubt, it is agreed that use of the Site under this Clause 11.3 shall not in any manner relieve the Concessionaire of its obligation to maintain the Project in accordance with this Agreement and any damage caused by such use shall be restored forthwith.

11.4 Felling of trees

The Authority shall assist the Concessionaire in obtaining the Applicable Permits for felling of trees to be identified by the Authority for this purpose if and only if such trees cause a material adverse effect on the construction, operation or maintenance of the Project. The cost of such felling shall be borne by the Authority, and in the event of any delay in felling thereof for reasons beyond the control of the Concessionaire, it shall be excused for failure to perform any of its obligations hereunder if such failure is a direct consequence of delay in the felling of trees. For the avoidance of doubt, the Parties hereto agree that the felled trees shall be deemed to be owned by the Authority and shall be disposed in such manner and subject to such conditions as the Authority may in its sole discretion deem appropriate. For the avoidance of doubt, it is expressly agreed that the Concessionaire is not permitted to undertake felling of trees in any of the existing parks handed over to it for the purposed of O&M in accordance with terms hereof.

ARTICLE 12 CONSTRUCTION OF THE PROJECT

12.1 Obligations prior to commencement of construction

Prior to commencement of Construction Works, the Concessionaire shall:

- a) submit to the Authority or its nominee, and the Independent Engineer its detailed design, construction methodology, quality assurance procedures, and the procurement, engineering and construction time schedule for completion of the Project in accordance with the Project Completion Schedule as set forth in Schedule-G;
- b) Appoint its representative duly authorized to deal with the Authority in respect of all matters under or arising out of or relating to this Agreement;
- c) undertake, do and perform all such acts, deeds and things as may be necessary or required before commencement of construction under and in accordance with this Agreement, Applicable Laws and Applicable Permits; and
- d) Make its own arrangements for quarrying and procurement of materials needed for the Project under and in accordance with Applicable Laws and Applicable Permits.

12.2 Drawings and Detailed Project Report

In respect of the Concessionaire's obligations relating to the Drawings and the Detailed Project Report ("DPR") of the Project as set forth in Schedule-H, the following shall apply:

1. The Concessionaire shall prepare and submit, with reasonable promptness and in such sequence as is consistent with the Project Completion Schedule, 3 (three) copies each of all Drawings and the DPR to the Independent Engineer for review.
2. By submitting the Drawings and the DPR for review to the Independent Engineer, the Concessionaire shall be deemed to have represented that it has determined and verified that the design and engineering, including the field construction criteria related thereto, are in conformity with the Scope of the Project, Specifications and Standards, Applicable Laws and Good Industry Practice.
3. Within 15 (fifteen) days of the receipt of the DPR and the Drawings, the Independent Engineer shall review the same and convey its observations to the Concessionaire with particular reference to their conformity or otherwise with the Scope of the Project and the Specifications and Standards. The Concessionaire shall not be obliged to await the observations of the Independent Engineer on the DPR and the Drawings submitted pursuant hereto beyond the said 15 (fifteen) days period and may begin or continue Construction Works at its own discretion and risk.
4. If the aforesaid observations of the Independent Engineer indicate that the DPR and the Drawings are not in conformity with the Scope of the Project or the Specifications and Standards, the Concessionaire shall revise the DPR and the Drawings and resubmit to the Independent Engineer for review. The Independent Engineer shall give its observations, if any, within 7 (seven) days of receipt of the revised DPR and Drawings.
5. No review and/or observation of the Independent Engineer and/or its failure to review and/or convey its observations on the DPR and Drawings shall relieve the Concessionaire of its obligations and liabilities under this Agreement in any

manner nor shall the Independent Engineer or the Authority be liable for the same in any manner.

6. The Authority may, at its discretion, in addition to the review of the Drawings and DPR by the Independent Engineer, constitute an expert committee (“Expert Committee”) for review and approval of the Drawings and DPR submitted by the Concessionaire. The Concessionaire agrees and undertakes to provide all the information necessary for the review and approval of the Drawings and DPR by the Expert Committee from time to time. No review and/or observation of the Expert Committee and/or its failure to review and/or convey its observations on the DPR and Drawings shall relieve the Concessionaire of its obligations and liabilities under this Agreement in any manner nor shall the Expert Committee or the Authority be liable for the same in any manner.
7. Within 90 (ninety) days of COD, the Concessionaire shall furnish to the Authority and the Independent Engineer a complete set of as-built Drawings, in 2 (two) hard copies and in its editable digital format or in such other medium or manner as may be acceptable to the Authority, reflecting the Project as actually designed, engineered and constructed, including an as- built survey illustrating the layout of the Project and setback lines, if any, of the buildings and structures forming part of Project Assets.

12.3 Construction of the Project

- 12.3.1 On or after the Appointed Date, the Concessionaire shall undertake construction of the Project as specified in the Scope of the Project. The 910th (Nine Hundred and Tenth) day from the Appointed Date shall be the scheduled date for completion of the Project (the “**Scheduled Completion Date**”) and the Concessionaire agrees and undertakes that the Project shall be completed on or before the Scheduled Completion Date.
- 12.3.2 The Concessionaire shall construct the Project in accordance with the Project Completion Schedule set forth in Schedule-G. In the event that the Concessionaire fails to achieve any Project Milestone within a period of 30 (ninety) days from the date set forth for such Project Milestone in Schedule-G, unless such failure has occurred due to Force Majeure or for reasons attributable to the Authority, it shall pay Damages to the Authority in a sum calculated at the rate of 0.1% (zero point one per cent) of the amount of Performance Security for delay of each day until such Project Milestone is achieved; provided that if any or all Project Milestones or the Scheduled Completion Date are extended in accordance with the provisions of this Agreement, the dates set forth in Schedule-G shall be deemed to be modified accordingly and the provisions of this Agreement shall apply as if Schedule-G has been amended as above; provided further that in the event COD is achieved on or before the Scheduled Completion Date, the Damages paid under this Clause 12.3.2 shall be refunded by the Authority to the Concessionaire, but without any interest thereon. For the avoidance of doubt, it is agreed that recovery of Damages under this Clause 12.3.2 shall be without prejudice to the rights of the Authority under this Agreement, including the right of Termination thereof.
- 12.3.3 In the event that the Project is not completed and COD does not occur within 180 (one hundred and eighty) days from the Scheduled Completion Date, unless the delay is on account of reasons attributable to the Authority or due to Force Majeure, the Authority shall be entitled to terminate this Agreement.

12.4 Maintenance during Construction Period

- 12.4.1 During the Construction Period, the Concessionaire shall continue to operate and maintain, at its cost, the Rehabilitation Assets and shall undertake the necessary repair, rehabilitation, and maintenance works simultaneously for this purpose; provided that the Concessionaire may, at its cost, interrupt the operation of the Rehabilitation Assets if such interruption is necessary for the efficient progress of Construction Works and conforms to Good Industry Practice; provided further that such interruption shall be undertaken by the Concessionaire only with the prior written approval of the Authority which approval shall not be unreasonably withheld. It is agreed that the Concessionaire shall at all times be responsible for ensuring safe operation of the Project.
- 12.4.2 In the event of default by the Concessionaire in discharging the obligations specified in Clause 12.4.1, the Authority may levy and recover Damages equal to 0.2% (zero point two per cent) of the Performance Security for each day of default hereunder.
- 12.4.3 The Parties expressly agree that pursuant to the provisions of Clause 12.4.1, the Concessionaire shall, about 7 (seven) days prior to the date of this Agreement and with prior notice to the Authority and along with the Authority's Representative, undertake video recording of the condition and status of the Project, which recording shall be compiled into a 3 (three)-hour digital video disc or any substitute thereof, and shall provide 3 (three) copies of such recording to the Authority within 2 (two) days of the date of this Agreement. The Authority may, in its discretion, undertake another video recording in the presence of the Concessionaire's representative, within 7 (seven) days of the date of this Agreement, and substitute its video recording for the video recording undertaken by the Concessionaire. The Parties further agree that such video recording shall constitute evidence of the status and condition of the Project as on the date of such recording.

12.5 Rehabilitation Works Post COD

- 12.5.1 The Concessionaire hereby acknowledges, agrees and undertakes that it shall be responsible for the continued operation of all the Existing Assets (including Post-COD Asset after its handover) during Operation Period in compliance with Specifications and Standards, Applicable Laws and Applicable Permits, and in fulfilment of the KPIs (as described in Article 20)
- 12.5.2 The Parties hereby agree that the Concessionaire shall undertake necessary rehabilitation of all the Post COD Assets during the Concession Period to ensure that the Post COD Assets are in compliance with Specifications and Standards, Applicable Laws and Applicable Permits, and in fulfilment of the KPIs ("**Rehabilitation Works Post COD**").
- 12.5.3 The Authority and the Concessionaire hereby acknowledge, agree and undertake that the Rehabilitation Works Post COD shall be treated as Change of Scope in accordance with the Article 16.
- 12.5.4 The provisions of this Agreement, insofar as they relate to the Project, shall apply, mutatis mutandis, to Rehabilitation Works Post COD, save and except where express provisions to the contrary have been made for Rehabilitation Works Post COD.
- 12.5.5 For the avoidance of doubt, the provisions of this Clause 12.5 shall be limited to one time rehabilitation of the Post COD Assets alone, and shall not be applicable to other Project Assets.

ARTICLE 13 MONITORING OF CONSTRUCTION

13.1 Monthly progress reports

During the Construction Period, the Concessionaire shall, no later than 7 (seven) days after the close of each month, furnish to the Authority and the Independent Engineer a monthly report on physical progress and financial progress of the Construction Works and shall promptly give such other relevant information as may be required by the Independent Engineer.

13.2 Inspection

During the Construction Period, the Independent Engineer shall inspect the Project at least once a month and make a report of such inspection (the “**Inspection Report**”) stating in reasonable detail the defects or deficiencies, if any, with particular reference to the DPR, Drawings, Project Completion Schedule, Scope of the Project, and Specifications and Standards. It shall send a copy of the Inspection Report to the Authority and the Concessionaire within 7 (seven) days of such inspection and upon receipt thereof, the Concessionaire shall rectify and remedy the defects or deficiencies, if any, stated in the Inspection Report. Such inspection or submission of Inspection Report by the Independent Engineer shall not relieve or absolve the Concessionaire of its obligations and liabilities hereunder in any manner whatsoever.

13.3 Tests

13.3.1 For determining that the Construction Works conform to the Specifications and Standards, the Independent Engineer shall require the Concessionaire to carry out or cause to be carried out tests, at such time and frequency and in such manner as may be specified by the Independent Engineer from time to time, in accordance with Good Industry Practice for quality assurance. The size of sample for such tests shall, to the extent possible, not exceed 10% (ten per cent) of the quantity and/or number of tests required by Good Industry Practice for the construction works undertaken by the Authority through their contractors. The Concessionaire shall, with due diligence, carry out or cause to be carried out all the tests in accordance with the instructions of the Independent Engineer and furnish the results thereof to the Independent Engineer. One half of the costs incurred on such tests, and to the extent certified by the Independent Engineer as reasonable, shall be reimbursed by the Authority to the Concessionaire. Provided, however, that the Independent Engineer may, instead of carrying out the tests specified hereunder, at its option decide to witness, or participate in, any of the tests to be undertaken by the Concessionaire for its own quality assurance in accordance with Good Industry Practice, and in such an event, the Concessionaire shall cooperate with, and provide the necessary assistance to, the Independent Engineer for discharging its functions hereunder. For the avoidance of doubt, the costs to be incurred on any test which is undertaken for determining the rectification of any defect or deficiency in construction shall be borne solely by the Concessionaire.

13.3.2 In the event that results of any tests conducted under this Clause 13.3 establish any defects or deficiencies in the Construction Works, the Concessionaire shall carry out remedial measures and furnish a report to the Independent Engineer in this behalf. The Independent Engineer shall require the Concessionaire to carry out or cause to be carried out tests to determine that such remedial measures have brought the Construction Works into compliance with the Specifications and Standards, and the procedure set forth in this Clause 13.3 shall be repeated until such Construction Works

conform to the Specifications and Standards. For the avoidance of doubt, it is agreed that tests pursuant to this Clause 13.3 shall be undertaken in addition to and independent of the tests that shall be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice. It is also agreed that a copy of the results of such tests shall be sent by the Concessionaire to the Independent Engineer forthwith.

13.4 Delays during construction

Without prejudice to the provisions of Clause 12.3.2, if the Concessionaire does not achieve any of the Project Milestones or the Independent Engineer shall have reasonably determined that the rate of progress of Construction Works is such that the Project is not likely to be completed by the Scheduled Completion Date, it shall notify the Concessionaire to this effect, and the Concessionaire shall, within 15 (fifteen) days of such notice, by a communication inform the Independent Engineer in reasonable detail about the steps it proposes to take to expedite progress and the period within which it shall achieve COD.

13.5 Suspension of unsafe Construction Works

- 13.5.1 Upon recommendation of the Independent Engineer to this effect, the Authority may by notice require the Concessionaire to suspend forthwith the whole or any part of the Construction Works if, in the reasonable opinion of the Authority, such work threatens the safety of the Existing Assets, persons related to the Project, Users and general public. Provided, however, that in case of an emergency, the Authority may suo moto issue the notice referred to hereinabove.
- 13.5.2 The Concessionaire shall, pursuant to the notice under Clause 13.5.1, suspend the Construction Works or any part thereof for such time and in such manner as may be specified by the Authority and thereupon carry out remedial measures to secure the safety of suspended works. The Concessionaire may by notice require the Independent Engineer to inspect such remedial measures forthwith and make a report to the Authority recommending whether or not the suspension hereunder may be revoked. Upon receiving the recommendations of the Independent Engineer, the Authority shall either revoke such suspension or instruct the Concessionaire to carry out such other and further remedial measures as may be necessary in the reasonable opinion of the Authority, and the procedure set forth in this Clause 13.5 shall be repeated until the suspension hereunder is revoked.
- 13.5.3 Subject to the provisions of Article 28, all reasonable costs incurred for maintaining and protecting the Construction Works or part thereof during the period of suspension (the “**Preservation Costs**”) shall be borne by the Concessionaire; provided that if the suspension has occurred as a result of any breach of this Agreement by the Authority, the Preservation Costs shall be borne by the Authority.
- 13.5.4 If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Independent Engineer shall determine any extension of the dates set forth in the Project Completion Schedule to which the Concessionaire is reasonably entitled, and shall notify the Authority accordingly whereupon the Authority shall extend such Project Completion Schedule dates in accordance with the recommendations of the Independent Engineer.

13.6 Video recording During Construction Period

During the Construction Period, the Concessionaire shall provide to the Authority for every calendar quarter, a video recording, which will be compiled into a 3 (three)-hour digital video disc or any substitute thereof, covering the status and progress of Construction Works in that quarter. The first such video recording shall be provided to the Authority within 7 (seven) days of the Appointed Date and thereafter, no later than 15 (fifteen) days after the close of each quarter.

13.7 IT Dashboard for Construction Progress

During the Construction Period, the Concessionaire shall develop an internet based software interface comprising a project progress dashboard that can integrate seamlessly with the IT infrastructure of the Authority. The Concessionaire shall update construction progress in to the dashboard on a daily basis, enabling the Authority (and its officers) and the Independent Engineer to undertake virtual review of Project Construction progress in a periodic manner.

ARTICLE 14 COMPLETION CERTIFICATE

14.1 Tests

- 14.1.1 No later than 30 (thirty) days prior to the likely completion of the Project, the Concessionaire shall notify the Independent Engineer of its intent to subject the Project to Tests. The date and time of each of the Tests shall be determined by the Independent Engineer in consultation with the Concessionaire, and notified to the Authority who may designate its representative to witness the Tests. The Concessionaire shall provide such assistance as the Independent Engineer may reasonably require for conducting the Tests. In the event of the Concessionaire and the Independent Engineer failing to mutually agree on the dates for conducting the Tests, the Concessionaire shall fix the dates by not less than 10 (ten) days' notice to the Independent Engineer, and in the event the Independent Engineer delays the Tests hereunder, the Authority shall impose exemplary penalties on the Independent Engineer and shall ensure that Tests are completed in time either by the Independent Engineer or any substitute thereof.
- 14.1.2 All Tests shall be conducted in accordance with Schedule-I at the cost and expense of the Concessionaire. The Independent Engineer shall observe, monitor and review the results of the Tests to determine compliance of the Project with Specifications and Standards and if it is reasonably anticipated or determined by the Independent Engineer during the course of any Test that the performance of the Project or any part thereof does not meet the Specifications and Standards, it shall have the right to suspend or delay such Test and require the Concessionaire to remedy and rectify the defects or deficiencies. Upon completion of each Test, the Independent Engineer shall provide to the Concessionaire and the Authority copies of all Test data including detailed Test results. For the avoidance of doubt, it is expressly agreed that the Independent Engineer may require the Concessionaire to carry out or cause to be carried out additional Tests, in accordance with Good Industry Practice, for determining the compliance of the Project with Specifications and Standards.

14.2 Completion Certificate

Upon completion of Construction Works and the Independent Engineer determining the Tests to be successful, it shall forthwith issue to the Concessionaire and the Authority a certificate substantially in the form set forth in Schedule-J (the "**Completion Certificate**").

14.3 Provisional Certificate

- 14.3.1 Subject to the provisions of Clause 14.3.2, the Independent Engineer may, at the request of the Concessionaire, issue a provisional certificate of completion substantially in the form set forth in Schedule-J (the "**Provisional Certificate**") if the Tests are successful and the Project can be safely and reliably placed in commercial operation though certain works or things forming part thereof are outstanding and not yet complete. In such an event, the Provisional Certificate shall have appended thereto a list of outstanding items signed jointly by the Independent Engineer and the Concessionaire (the "**Punch List**"); provided that the Independent Engineer shall not withhold the Provisional Certificate for reason of any work remaining incomplete if the delay in completion thereof is attributable to the Authority; provided further that the Punch List shall also include the cost of completion for each of the outstanding items.

14.3.2 The Parties hereto expressly agree that a Provisional Certificate under this Clause 14.3 may, upon request of the Concessionaire to this effect, be issued for operating part of the Project, if the Concessionaire has completed construction of 100% (Hundred per cent) of the Site made available to the Concessionaire up to 360 days from the Appointed Date. Upon issue of such Provisional Certificate, the provisions of Article 15 shall apply to such completed part, and the rights and obligations of the Concessionaire for and in respect of such completed part of the Project shall be construed accordingly.

14.4 Completion of Punch List items

14.4.1 All items in the Punch List shall be completed by the Concessionaire within 90 (ninety) days of the date of issue of the Provisional Certificate and for any delay thereafter, other than for reasons solely attributable to the Authority or due to Force Majeure, the Authority shall be entitled to recover Damages from the Concessionaire to be calculated and paid for each day of delay until all items are completed, at the lower of (a) 0.1% (zero point one per cent) of the Performance Security, and (b) 0.2% (zero point two per cent) of the cost of completing such items as estimated by the Independent Engineer. Subject to payment of such Damages, the Concessionaire shall be entitled to a further period not exceeding 120 (one hundred and twenty) days for completion of the Punch List items. For the avoidance of doubt, it is agreed that if completion of any item is delayed for reasons solely attributable to the Authority or due to Force Majeure, the completion date thereof shall be determined by the Independent Engineer in accordance with Good Industry Practice, and such completion date shall be deemed to be the date of issue of the Provisional Certificate for the purposes of Damages, if any, payable for such item under this Clause 14.4.1.

14.4.2 Upon completion of all Punch List items, the Independent Engineer shall issue the Completion Certificate. Failure of the Concessionaire to complete all the Punch List items within the time set forth in Clause 14.4.1 for any reason, other than conditions constituting Force Majeure or for reasons solely attributable to the Authority, shall entitle the Authority to terminate this Agreement.

14.5 Withholding of Provisional or Completion Certificate

14.5.1 If the Independent Engineer determines that the Project or any part thereof does not conform to the provisions of this Agreement and cannot be safely and reliably placed in commercial operation, it shall forthwith make a report in this behalf and send copies thereof to the Authority and the Concessionaire. Upon receipt of such a report from the Independent Engineer and after conducting its own inspection, if the Authority is of the opinion that the Project is not fit and safe for commercial service, it shall, within 7 (seven) days of receiving the aforesaid report, notify the Concessionaire of the defects and deficiencies in the Project and direct the Independent Engineer to withhold issuance of the Provisional Certificate or Completion Certificate, as the case may be. Upon receipt of such notice, the Concessionaire shall remedy and rectify such defects or deficiencies and thereupon Tests shall be undertaken in accordance with this Article 14. Such procedure shall be repeated as necessary until the defects or deficiencies are rectified.

14.5.2 Notwithstanding anything to the contrary contained in Clause 14.5.1, the Authority may, at any time after receiving a report from the Independent Engineer under that Clause, direct the Independent Engineer to issue a Provisional Certificate under Clause

14.3, and such direction shall be complied forthwith.

14.6 Rescheduling of Tests

If the Independent Engineer certifies to the Authority and the Concessionaire that it is unable to issue the Completion Certificate or Provisional Certificate, as the case may be, because of events or circumstances on account of which the Tests could not be held or had to be suspended, the Concessionaire shall be entitled to re-schedule the Tests and hold the same as soon as reasonably practicable

ARTICLE 15 ENTRY INTO COMMERCIAL SERVICE

15.1 Commercial Operation Date (COD)

- 15.1.1 The Project shall be deemed to be complete when the Completion Certificate or the Provisional Certificate, as the case may be, is issued under the provisions of Article 14, and accordingly the commercial operation date of the Project shall be the date on which such Completion Certificate or the Provisional Certificate is issued (the “**COD**”). The Project shall enter into commercial service on COD whereupon the Concessionaire shall be entitled to demand and collect Annuity Payments in accordance with the provisions of this Agreement.

15.2 Damages for delay

Subject to the provisions of Clause 12.3, if COD does not occur prior to the 91st (ninety first) day after the Scheduled Completion Date, unless the delay is on account of reasons attributable to the Authority or due to Force Majeure, the Concessionaire shall pay Damages to the Authority in a sum calculated at the rate of 0.2% (zero point two per cent) of the amount of Performance Security for delay of each day until COD is achieved. Upon failure of the Concessionaire to pay the said Damages, the same shall be paid along with interest of Bank Rate plus 3% and shall be deducted from the 1st (first) Annuity Payment. In case the Damages and the interest thereof are more than the 1st Annuity Payment then the balance Damages along with interest thereof shall be recovered from any further amount due and payable to the Concessionaire excluding O&M Payments but including interest to be paid on reducing balance of the Completion Cost remaining to be paid along with the 1st Annuity or from further Annuity Payments.

ARTICLE 16 CHANGE OF SCOPE

16.1 Change of Scope

- 16.1.1 The Authority may, notwithstanding anything to the contrary contained in this Agreement, require the provision of additional works and services which are not included in the Scope of the Project as contemplated by this Agreement (the “Change of Scope”). Any such Change of Scope shall be made in accordance with the provisions of this Article 16 and the costs thereof shall be expended by the Concessionaire and reimbursed to it by the Authority in accordance with Clause 16.3.
- 16.1.2 If the Concessionaire determines at any time that a Change of Scope is necessary to ensure, that the Project is in compliance with the Specifications and Standards, Applicable Laws, Applicable Permits, and KPIs, it shall by notice in writing require the Authority to consider such Change of Scope. The Authority shall, within 15 (fifteen) days of receipt of such notice, either accept such Change of Scope with modifications, if any, and initiate proceedings therefor in accordance with this Article 16 or inform the Concessionaire in writing of its reasons for not accepting such Change of Scope, which decision of the Authority shall be final and binding.
- 16.1.3 Any works or services which are provided under and in accordance with this Article 16 shall form part of the Project and the provisions of this Agreement shall apply mutatis mutandis to such works or services.

16.2 Procedure for Change of Scope

- 16.2.1 In the event of the Authority determining that a Change of Scope is necessary, it shall issue to the Concessionaire a notice specifying in reasonable detail the works and services contemplated thereunder (the “**Change of Scope Notice**”).
- 16.2.2 Upon receipt of a Change of Scope Notice, the Concessionaire shall, with due diligence, provide to the Authority such information as is necessary, together with preliminary Documentation in support of:
- a. the impact, if any, which the Change of Scope is likely to have on the Project Completion Schedule if the works or services are required to be carried out during the Construction Period, and
 - b. the options for implementing the proposed Change of Scope and the effect, if any, each such option would have on the costs and time thereof, including a detailed breakdown by work classifications specifying the material and labour costs calculated in accordance with the schedule of rates applicable to the works assigned by the Authority to its contractors, along with the proposed premium/discount on such rates; provided that the cost incurred by the Concessionaire in providing such information shall be reimbursed by the Authority to the extent such cost is certified by the Independent Engineer as reasonable.
- 16.2.3 Upon receipt of information set forth in Clause 16.2.2, if the Authority decides to proceed with the Change of Scope, it shall convey its preferred option to the Concessionaire, and the Parties shall, with assistance of the Independent Engineer, thereupon make good faith efforts to agree upon the time and costs for implementation thereof. Upon reaching an agreement, the Authority shall issue an order (the “**Change of Scope Order**”) requiring the Concessionaire to proceed with the performance

thereof. In the event that the Parties are unable to agree, the Authority may, by issuing a Change of Scope Order, require the Concessionaire to proceed with the performance thereof pending resolution of the Dispute, or carry out the works in accordance with Clause 16.5.

- 16.2.4 The provisions of this Agreement, insofar as they relate to Construction Works and Tests, shall apply *mutatis mutandis* to the works undertaken by the Concessionaire under this Article 16.

16.3 Payment for Change of Scope

Within 7 (seven) days of issuing a Change of Scope Order, the Authority shall make an advance payment to the Concessionaire in a sum equal to 20% (twenty per cent) of the cost of Change of Scope as agreed hereunder, and in the event of a Dispute, 20% (twenty per cent) of the cost assessed by the Independent Engineer. The Concessionaire shall, after commencement of work, present to the Authority bills for payment in respect of the works in progress or completed works, as the case may be, supported by such Documentation as is reasonably sufficient for the Authority to determine the accuracy thereof. Within 30 (thirty) days of receipt of such bills, the Authority shall disburse to the Concessionaire such amounts as are certified by the Independent Engineer as reasonable and after making a proportionate deduction for the advance payment made hereunder, and in the event of any Dispute, final adjustments thereto shall be made under and in accordance with the Dispute Resolution Procedure.

16.4 Restrictions on certain works

- 16.4.1 Notwithstanding anything to the contrary contained in this Article 16, but subject to the provisions of Clause 16.4.2, the Authority shall not require the Concessionaire to undertake any works or services if such works or services are likely to delay completion of the Project by the Scheduled Completion Date; provided that in the event that the Authority considers such works or services to be essential, it may issue a Change of Scope Order, subject to the condition that the works forming part of or affected by such Change of Scope Order shall not be reckoned for purposes of determining completion of the Project and issuing the Provisional Certificate.
- 16.4.2 Notwithstanding anything to the contrary contained in this Article 16, the Concessionaire shall be entitled to nullify any Change of Scope Order if it causes the cumulative costs relating to all the Change of Scope Orders to exceed 10% (ten per cent) of the Bid Project Cost in any continuous period of 3 (three) years immediately preceding the date of such Change of Scope Order or if such cumulative costs exceed 25% (twenty five per cent) of the Bid Project Cost at any time during the Concession Period.

16.5 Power of the Authority to undertake works

- 16.5.1 Notwithstanding anything to the contrary contained in Clauses 16.1.1, 16.2 and 16.3, the Authority may, after giving notice to the Concessionaire and considering its reply thereto, award any works or services, contemplated under Clause 16.1.1, to any person on the basis of open competitive bidding; provided that the Concessionaire shall have the option of matching the first ranked bid in terms of the selection criteria, subject to payment of 2% (two per cent) of the bid amount to the Authority³ and thereupon

³ The Authority shall transfer 75% (seventy five percent) of the amount so received to the first ranked bidder

securing the award of such works or services. For the avoidance of doubt, it is agreed that the Concessionaire shall be entitled to exercise such option only if it has participated in the bidding process and its bid does not exceed the first ranked bid by more than 10% (ten per cent) thereof. It is also agreed that the Concessionaire shall provide access, assistance and cooperation to the person who undertakes the works or services hereunder. For the avoidance of doubt, the Authority acknowledges and agrees that it shall not undertake any works or services under this Clause 16.5.1 if such works or services cause a Material Adverse Effect on the Concessionaire.

- 16.5.2 The works undertaken in accordance with this Clause 16.5 shall conform to the Specifications and Standards, and shall be carried out in a manner that minimizes disruption in operation of the Project. The provisions of this Agreement, insofar as they relate to Construction Works (including Performance Security) and Tests, shall apply mutatis mutandis to the works carried out under this Clause 16.5.

16.6 Reduction in Scope of the Project

- 16.6.1 In the event of the Concessionaire failing to complete any Construction Works on account of Force Majeure or for reasons attributable to the Authority or under the provision of Clause 10.3.4 of this Agreement, the Authority shall follow the following process for calculation of total cost of reduced scope:

- a. On direction by the Authority, the Independent Engineer to assess the cost of the reduced Scope of the Project, as per the schedule of rates applicable on the Bid Due Date.
- b. The cost of the reduced Scope shall be multiplied by the 1.05 to arrive at the estimated cost of reduced Scope.
- c. The estimated cost of reduced Scope shall then be multiplied by the ratio of Bid Project Cost to Estimated Project Cost to arrive at the total cost of reduced scope (“**Total Cost of Reduced Scope**”).

On or before a Payment Milestone immediately succeeding the date of finalization of such reduction in the Scope of Work, the Bid Project Cost shall be reduced by the Total Cost of Reduced Scope and all payments made or to be made to the Concessionaire shall be suitably adjusted and recoveries, if any, shall be made from the payment to be released on that Payment Milestone immediately succeeding the date of finalization of Reduction in Scope.

For the avoidance of doubt, it is agreed that upon the reduction of the Scope of the Project and revision of Bid Project Cost, all references to Bid Project Cost would mean the revised Bid Project Cost and all the payments would be calculated as per the revised Bid Project Cost.

- 16.6.2 For determining the obligations of the Concessionaire under this Clause 16.6, the provisions of Clauses 16.1, 16.2 and 16.4 shall apply mutatis mutandis, and upon issue of Change of Scope Order by the Authority hereunder, the Concessionaire shall pay forthwith the sum specified therein.

16.7 Effect of Change of Scope on the O&M Costs

- 16.7.1 Pursuant to the provisions if this Article 16, if the Change of Scope leads to a reduction

whose bid has been matched by the Concessionaire.

or increase in the Bid Project Cost, the O&M Payments as provided in Clause 23.7 shall be reduced or increased in proportion to the reduction or increase of the Bid Project Cost.

ARTICLE 17 OPERATION AND MAINTENANCE

17.1 O&M obligations of the Concessionaire

During the Operation Period, the Concessionaire shall operate and maintain the Project in accordance with this Agreement either by itself, or through the O&M Contractor and if required, modify, repair or otherwise make improvements to the Project to comply with the provisions of this Agreement, Applicable Laws and Applicable Permits, and conform to Specifications and Standards, and Good Industry Practice. The obligations of the Concessionaire hereunder are elaborated in Schedule- K.

17.2 Maintenance Requirements

The Concessionaire shall procure that at all times during the Operation Period the Project conforms to the Maintenance Requirements set forth in Schedule-K (the “**Maintenance Requirements**”) including any O&M obligations therein.

17.3 Maintenance Manual

- 17.3.1 No later than 90 (ninety) days prior to the Scheduled Completion Date, the Concessionaire shall, in consultation with the Independent Engineer, evolve a repair and maintenance manual (the “**Maintenance Manual**”) for the regular and preventive maintenance of the Project in conformity with the Specifications and Standards, Maintenance Requirements, EHS Requirements and Good Industry Practice, and shall provide 5 (five) copies thereof to the Authority and 2 (two) copies to the Independent Engineer. The Maintenance Manual shall be revised and updated once every 3 (three) years and the provisions of this Clause shall apply, mutatis mutandis, to such revision.
- 17.3.2 Without prejudice to the provision of Clause 17.3.1, the Maintenance Manual shall, in particular, include provisions for maintenance of Project Assets and shall provide for life cycle maintenance, routine maintenance and reactive maintenance which may be reasonably necessary for maintenance and repair of The Project Assets, including replacement thereof, such that their overall condition conforms to Good Industry Practice.

17.4 Maintenance Program

- 17.4.1 On or before COD and no later than 45 (forty five) days prior to the beginning of each Accounting Year during the Operation Period, as the case may be, the Concessionaire shall provide to the Authority and the Independent Engineer, its proposed annual program of preventive, urgent and other scheduled maintenance (the “**Maintenance Program**”) to comply with the Maintenance Requirements, Maintenance Manual and EHS Requirements. Such Maintenance Program shall include:
- a. preventive maintenance schedule;
 - b. arrangements and procedures for carrying out urgent repairs;
 - c. Criteria to be adopted for deciding maintenance needs;
 - d. Intervals and procedures for carrying out inspection of all elements of the Project;
 - e. Intervals at which the Concessionaire shall carry out periodic maintenance;
 - f. Arrangements and procedures for carrying out safety related measures; and

g. Intervals for major maintenance works and the scope thereof.

17.4.2 Within 15 (fifteen) days of receipt of the Maintenance Program, the Independent Engineer shall review the same and convey its comments to the Concessionaire with particular reference to its conformity with the Maintenance Requirements, Maintenance Manual, and EHS Requirements.

17.4.3 The Concessionaire may modify the Maintenance Program as may be reasonable in the circumstances, and the procedure specified in Clauses 17.4.1 and 17.4.2 shall apply mutatis mutandis to such modifications.

17.5 Safety, breakdowns and accidents

17.5.1 The Concessionaire shall ensure safe conditions for the Users, all related persons and general public, and in the event of unsafe conditions, it shall follow the relevant operating procedures in accordance with the provisions of this Agreement, Specifications and Standards, Applicable Laws, Applicable Permits and Good Industry Practice.

17.6 De-commissioning due to Emergency

17.6.1 If, in the reasonable opinion of the Concessionaire, there exists an Emergency which warrants de-commissioning of the whole or any part of the Project, the Concessionaire shall be entitled to de-commission and close the whole or any part of the Project for so long as such Emergency and the consequences thereof warrant; provided that such de-commissioning and particulars thereof shall be notified by the Concessionaire to the Authority without any delay, and the Concessionaire shall diligently carry out and abide by any reasonable directions that the Authority may give for dealing with such Emergency.

17.6.2 The Concessionaire shall re-commission the Project or the affected part thereof as quickly as practicable after the circumstances leading to its de-commissioning and closure have ceased to exist or have so abated as to enable the Concessionaire to re-commission the Project and shall notify the Authority of the same without any delay.

17.7 Project Closure

17.7.1 Save and except as provided in Clause 17.6, the Concessionaire shall not close any part of the Project for undertaking maintenance or repair works not forming part of the Maintenance Program, except with the prior written approval of the Independent Engineer. Such approval shall be sought by the Concessionaire through a written request to be made to the Independent Engineer, and a copy thereof furnished to the Authority, at least 7 (seven) days before the proposed closure and shall be accompanied by particulars thereof. Within 3 (three) days of receiving such request, the Independent Engineer shall grant permission with such modifications as it may deem reasonable and necessary in conformity with the Maintenance Manual and Maintenance Program and a copy of such permission shall be sent to the Authority.

17.7.2 The provisions of Clause 17.7.1 shall not apply to de-commissioning under Clause 17.6.1 or to any closure for a period not exceeding 2 (two) hours in a day at any time of the day and 6 (six) hours in a day at a time specified by the Independent Engineer as off-peak

17.7.3 Upon receiving the permission pursuant to Clause 17.7.1, the Concessionaire shall be entitled to close the designated part of the Project for the period specified therein, and

in the event of any delay in re-opening such part, the Concessionaire shall pay Damages to the Authority calculated at the rate of 0.5 % (zero point Five per cent) of the Performance Security, for each day of delay until that part of the Project has been re-opened for use.

17.8 Damages for breach of maintenance obligations

- 17.8.1 In the event that the Concessionaire fails to repair or rectify any defect or deficiency within 3 (three) days of identification of the said defect or deficiency by the Independent Engineer, it shall be deemed to be in breach of this Agreement and the Authority shall be entitled to recover Damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of (a) 2% (two per cent) of the Performance Security, and (b) 0.1% (zero point one per cent) of the cost of such repair or rectification as estimated by the Independent Engineer. Recovery of such Damages shall be without prejudice to the rights of the Authority under this Agreement, including the right of Termination thereof.
- 17.8.2 The Damages set forth in Clause 17.8.1 may be assessed and specified forthwith by the Independent Engineer; provided that the Authority may, in its discretion, demand a smaller sum as Damages, if in its opinion, the breach has been cured promptly and the Concessionaire is otherwise in compliance with its obligations hereunder. The Concessionaire shall pay such Damages forthwith and in the event that it contests such Damages, the Dispute Resolution Procedure shall apply.
- 17.8.3 For the avoidance of doubt, the Damages payable hereunder by the Concessionaire shall be in addition to the Damages, penalty or deductions in O&M Payment, if any, due and payable under the provisions of Article 20 and Schedule C.

17.9 Authority's Right to take Remedial Measures

- 17.9.1 If after the COD, the Concessionaire ceases to operate the Project for a period of 48 consecutive hours other than in accordance with the Maintenance Program, without the prior written consent of the Authority, the Authority shall be entitled to step-in and undertake O&M of the Project until the Concessionaire demonstrates to the satisfaction of the Authority that it can and will resume normal operation and maintenance of the Project. The exercise of the Authority's rights under this Clause shall be at the cost, risk and expense of the Concessionaire. The Concessionaire shall not be entitled to receive any O&M Payments for the duration that the Authority steps-in to operate and maintain the Project.
- 17.9.2 In the event the Concessionaire does not maintain and/or repair the Project or any part thereof in conformity with the Maintenance Requirements, the Maintenance Manual, and the Maintenance Program, as the case may be, and fails to commence remedial works within 15 (fifteen) days of receipt of the O&M Inspection Report or a notice in this behalf from the Authority or the Independent Engineer, as the case may be, the Authority shall, without prejudice to its rights under this Agreement including Termination thereof, be entitled to undertake such remedial measures at the risk and cost of the Concessionaire, and to recover its cost from the Concessionaire.
- 17.9.3 The Authority shall have the right, and the Concessionaire hereby expressly grants to the Authority the right, to recover the costs specified in Clauses 17.9.1 & 17.9.2 directly from the Escrow Account (or deduct from O&M Payments payable to the Concessionaire) as if such costs were O&M Expenses, and for that purpose, the Concessionaire hereby agrees to give irrevocable instructions to the Escrow Bank to

make payment from the Escrow Account in accordance with the instructions of the Authority under this Clause 17.9.3 and debit the same to O&M Expenses.

- 17.9.4 In addition to the recovery of costs specified in Clause 17.9.3, the Authority shall have the right, and the Concessionaire hereby expressly grants to the Authority the right, to recover the Damages to be estimated as 20% of the costs specified in Clauses 17.9.1 & 17.9.2 directly from the Escrow Account (or deduct from O&M Payments payable to the Concessionaire) as if such Damages were O&M Expenses, and for that purpose, the Concessionaire hereby agrees to give irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the Authority under this Clause 17.9.4 and debit the same to O&M Expenses. For the avoidance of doubt, the right of the Authority under this Clause 17.9.4 shall be without prejudice to its rights and remedies provided under Clause 17.8.

17.10 Overriding powers of the Authority

- 17.10.1 If in the reasonable opinion of the Authority, the Concessionaire is in material breach of its obligations under this Agreement and, in particular, the Maintenance Requirements, and such breach is causing or likely to cause material hardship or danger to the Users, the Authority may, without prejudice to any of its rights under this Agreement including Termination thereof, by notice require the Concessionaire to take reasonable measures immediately for rectifying or removing such hardship or danger, as the case may be.
- 17.10.2 In the event that the Concessionaire, upon notice under Clause 17.10.1, fails to rectify or remove any hardship or danger within a reasonable period, the Authority may exercise overriding powers under this Clause 17.10.2 and take over the performance of any or all the obligations of the Concessionaire to the extent deemed necessary by it for rectifying or removing such hardship or danger; provided that the exercise of such overriding powers by the Authority shall be of no greater scope and of no longer duration than is reasonably required hereunder; provided further that any costs and expenses incurred by the Authority in discharge of its obligations hereunder shall be deemed to be O&M Expenses, and the Authority shall be entitled to recover them from the Concessionaire in accordance with the provisions of Clause 17.9 along with the Damages specified therein.
- 17.10.3 In the event of a national emergency, civil commotion or any other act specified in Clause 34.3, the Authority may take over the performance of any or all the obligations of the Concessionaire to the extent deemed necessary by it or as directed by the Government, and exercise such control over the Project or give such directions to the Concessionaire as may be deemed necessary; provided that the exercise of such overriding powers by the Authority shall be of no greater scope and of no longer duration than is reasonably required in the circumstances which caused the exercise such overriding powers by the Authority. For the avoidance of doubt, it is agreed that the consequences of such action shall be dealt in accordance with the provisions of Article 28. It is also agreed that the Concessionaire shall comply with such instructions as the Authority may issue in pursuance of the provisions of this Clause 17.10, and shall provide assistance and cooperation to the Authority, on a best effort basis, for performance of its obligations hereunder.

17.11 Restoration of loss or damage to the Project

Save and except as otherwise expressly provided in this Agreement, in the event that

the Project or any part thereof suffers any loss or damage during the Concession Period from any cause whatsoever, the Concessionaire shall, at its cost and expense, rectify and remedy such loss or damage forthwith so that the Project conforms to the provisions of this Agreement.

17.12 Modifications to the Project

The Concessionaire shall not carry out any material modifications to the Project, save and except where such modifications are necessary for the Project to operate in conformity with the Specifications and Standards, Maintenance Requirements, Good Industry Practice and Applicable Laws; provided that the Concessionaire shall not carry out undertake any such modifications to the Project without prior written approval of the Authority; provided also that the Concessionaire shall notify the Authority and the Independent Engineer of the proposed modifications along with particulars thereof at least 15 (fifteen) days before commencing work on such modifications and shall reasonably consider any suggestions that the Independent Engineer may make within 15 (fifteen) days of receiving the Concessionaire's proposal. For the avoidance of doubt, all modifications made hereunder shall comply with the EHS Requirements, Specifications and Standards, Applicable Laws, Good Industry Practice and the provisions of this Agreement.

17.13 Excuse from performance of obligations

The Concessionaire shall not be considered in breach of its obligations under this Agreement if any part of the Project is not Available on account of any of the following for the duration thereof:

- i. an event of Force Majeure;
- ii. measures taken to ensure the safe use of the Project except when unsafe conditions occurred because of failure of the Concessionaire to perform its obligations under this Agreement; or
- iii. compliance with a request from the Authority or the directions of any Government Instrumentality, the effect of which is to close all or any part of the Project:

Provided, that any such non-availability and particulars thereof shall be notified by the Concessionaire to the Authority and the Independent Engineer without any delay:

Provided further that the Concessionaire shall continue to operate all unaffected parts of the Project, provided they can be operated safely.

17.14 Barriers and diversions

The Authority shall procure that during the Operation Period, no barriers are erected or placed by any Government Instrumentality on the Project except for reasons of Emergency or national security.

17.15 Installation and operation of CCTV

The Concessionaire shall install and operate a closed circuit television system to monitor such parts of the Project as may be necessary and expedient for a safe, secure and smooth operation thereof.

17.16 Advertising on the Site

The Concessionaire shall not undertake or permit any form of commercial advertising, display or hoarding at any place on the Site except with prior written approval of the Authority.

17.17 Traffic regulation by the Concessionaire

The Concessionaire shall regulate traffic on the Project in accordance with Applicable Laws, and subject to the supervision and control of a competent authority empowered in this behalf under Applicable Laws.

17.18 Sale of Treated Effluents and STF By-Products

- 17.18.1 The Concessionaire shall, subject to compliance with Applicable Laws and Applicable Permits, be free to sell the STF By-Products, at such price and to such Persons as it may deem fit.
- 17.18.2 The Concessionaire shall, subject to compliance with Applicable Laws and Applicable Permits, be free to sell the Treated Effluent, at such price and to such Persons as it may deem fit. Provided, however, that the cumulative volume of Treated Effluent sold shall not exceed 22 MLD on daily basis. Provided also that upon written request from the Concessionaire, the Authority may, at its discretion, increase the aforesaid limited to 40 MLD during the Operation Period subject to any water requirement to maintain minimum ecological flow in Adyar River.
- 17.18.3 The Concessionaire shall maintain proper records of sale of Treated Effluent and STF By-Products generated from the Project (including the revenues earned by the Concessionaire from such sale) and make them available to the Authority for its review.

17.19 Operation of Public Amenities

- 17.19.1 The Concessionaire may, subject to Applicable Laws and in accordance with Good Industry Practice, collect user charges/ fee for use of recreational amenities of the Project by general public, with prior written approval of the Authority. For the avoidance of doubt, the tariff for use of such amenities shall be determined and notified by the Government or the Authority from time to time.

17.20 Gross Revenue Share

- 17.20.1 The Concessionaire shall, subject to terms hereof, pay to the Authority, revenue share of its Gross Revenue, which shall be equivalent to 10% (ten percent) of the Gross Revenue (“**Gross Revenue Share**”) payable on a monthly basis commencing from the Appointed Date.
- 17.20.2 The Gross Revenue Share for a particular month shall be payable by the Concessionaire to the Authority by the seventh day of the next month and shall be subject to verification and reconciliation on a quarterly, semi -annual or annual basis, as required by the Authority in its discretion. For this purpose, the Parties hereto agree as follows:-
- i. Authority and its representatives shall be permitted to inspect at any

reasonable time the books, records and other material kept by or on behalf of the Concessionaire to check or audit any information related to the calculation of Gross Revenue Share as paid/reported to Authority. Concessionaire shall make available to the Authority and its representatives such information and grant such access as they shall reasonably require in connection therewith.

- ii. The applicable Gross Revenue used for final verification/reconciliation shall be the revenue as certified by Statutory Auditor in accordance with Clause 27.3. Pursuant to such certification, if it is established that previous reporting of Gross Revenue is inaccurate then Concessionaire shall, notwithstanding anything to the contrary contained in this Agreement pay the differential amount with interest at the rate of SBI MCLR plus 5 (five) percent and also fully bear the cost of the completed audit.

17.21 Unauthorized Use of Project Assets

17.21.1 During the Operation Period, the Concessionaire shall be responsible for the following:

- (a) preventing, with the assistance of concerned law enforcement agencies, any unauthorised use of the Project; and
- (b) preventing, with the assistance of the concerned law enforcement agencies, any encroachments on, or unauthorised entry to the Project and / or the Project Assets;

17.22 Disposal of STP By-Products and the Treated Effluent

The Concessionaire shall be required to store, handle and dispose the STP By-Products and the Treated Effluent in the manner set out in this Clause 17.22 during the Operation Period:

a) Waste Disposal Site

- (i) Within 90 days from the date of this Agreement, the Authority shall inform the Concessionaire of waste disposal sites at which the Concessionaire shall be required to dispose the STP By-Products, resulting from the treatment of the sewage, and any other waste materials resulting from the construction of the Project Assets during the Construction Period (including silt).
- (ii) The Authority may shift any waste disposal site from time to time during the Operation Period provided that, the waste disposal site(s) will always be within a radius of 25 km from the boundary of the relevant STF and any shifting of a waste disposal site will be with at least 30 days' prior written notice to the Concessionaire.
- (iii) If, at any time during the Operation Period, the Authority shifts a waste disposal site to a location beyond a radius of 25 km from the boundary of the relevant STF, then, the Authority shall compensate the Concessionaire for any additional transportation costs incurred by the Concessionaire in transporting the STP By-Products, to such waste disposal site.

- (iv) Any approval for disposal of the STP By-Products at the waste disposal sites will be obtained by the Authority at its cost. Further, all costs and charges in connection with the setting up and maintaining the waste disposal sites (including any tipping fee for the disposal of the STP By-Products) will be borne by the Authority. The Concessionaire shall only be responsible for transporting the STP By-Products to the waste disposal sites and subject to Clause 17.22 (a) above, bearing the costs for transportation and unloading of the STP By-Products at the waste disposal sites.

b) Disposal of Residual Grit and Screenings

- (i) The Concessionaire shall, at its cost and expense, be required to transfer the Residual Grit and the Screenings to the relevant waste disposal site and shall make adequate transportation arrangements for this purpose.
- (ii) The Concessionaire shall ensure that the Residual Grit and the Screenings are neither disposed at any place on or about the Site, other than the waste disposal sites, nor discharged into Adyar River. The disposal of the Residual Grit and the Screenings at the waste disposal sites must be strictly in accordance with all Applicable Laws. The Concessionaire shall indemnify the Authority against any costs or liabilities that may arise due to the Concessionaire's failure to comply with this Clause 17.22 (b) and all Applicable Laws in disposal of the Residual Grit and the Screenings.

c) Disposal of Digested Sludge

- (i) As part of each of the STPs, the Concessionaire shall be required to set up and maintain a sludge handling facility at the relevant STP Site, where the Concessionaire can dry the Digested Sludge during the Operation Period.
- (ii) The Concessionaire shall, at its cost and expense, provide for a storage facility within the relevant STP Site to temporarily store the dried Digested Sludge until such Digested Sludge is sold or disposed in accordance with this Concession Agreement.
- (iii) The Concessionaire shall, subject to compliance with Applicable Laws and Applicable Permits, be free to sell the Digested Sludge, at such price and to such Persons as it may deem fit or dispose the Digested Sludge at the waste disposal sites.
- (iv) The Concessionaire shall maintain proper records of sale of any Digested Sludge generated from the Project (including the revenues earned by the Concessionaire from such sale) and make them available to the Authority for its review.
- (v) The Concessionaire shall ensure that the Digested Sludge is neither disposed at any place on or about the Site, except the identified waste disposal sites, nor discharged into Adyar River. The Concessionaire shall

indemnify the Authority against any costs or liabilities that may arise due to the Concessionaire's failure to comply with this Clause 17.22 (c) and all Applicable Laws in disposal of the Digested Sludge.

ARTICLE 18 ENVIRONMENT, HEALTH, SAFETY

18.1 Environment, Health and Safety Plan

- i. Within 45 days from the execution of this Agreement, the Concessionaire shall prepare and submit 4 hard copies and 1 soft copy in a compact disc of a detailed EHS Plan prepared in accordance with EHS Requirements (Schedule L) to the Authority. The EHS Plan shall set out the health, safety and environment policies, guidelines and procedures to be followed by the Concessionaire in undertaking the Project and shall include a comprehensive Site safety assurance plan, developed in accordance with Applicable Laws, Applicable Permits, the Standards and Specifications, and Good Industry Practices.
- ii. The Authority shall forward a copy of the EHS Plan to the Independent Engineer for its review and comments.
- iii. The Authority shall provide comments, if any, on the draft EHS Plan (including any comments from the Independent Engineer) to the Concessionaire or notify the Concessionaire of its approval of the draft EHS Plan within 30 days from the date of receipt of the draft EHS Plan from the Concessionaire. The Authority/ may require the Concessionaire to amend or modify the draft EHS Plan if the Authority identifies any deficiencies or shortcomings in the draft EHS Plan. If the Concessionaire receives any comments, suggestions or instructions to modify the draft EHS Plan from the Authority, then the Concessionaire shall modify the draft EHS Plan to address any such comments, shortcomings or deficiencies identified by the Authority. Thereafter, the Concessionaire shall submit the revised EHS Plan to the Authority for its approval. The process set out in this Clause shall continue until the EHS Plan is approved by the Authority in accordance with this Clause.
- iv. The Concessionaire shall ensure that its Subcontractors comply with and conform in all aspects to the EHS Plan, approved in accordance with this Clause 18.1, in executing the Project. Any failure of the Concessionaire or the Subcontractors to comply with the EHS Plan shall constitute a Concessionaire Event of Default. The Concessionaire shall indemnify the Authority against all costs, expenses, penalties and liabilities incurred/suffered by the Authority due to the Concessionaire's or any Subcontractor's failure to comply with the EHS Plan in the course of execution of the Project. The Concessionaire shall not deviate from or make any subsequent modification or amendment to the approved EHS Plan without the prior written approval of the Authority.
- v. Neither any approval of the EHS Plan by the Authority, nor any failure to review and provide comments on the EHS Plan shall excuse any failure by the Concessionaire to adopt proper and recognized safety and environment friendly practices during the execution of the Project. The Concessionaire shall bear all risk, responsibility and liability for the accuracy and adequacy of the final EHS Plan in ensuring compliance with all Applicable Laws, Applicable Permits and Good Industry Practices in the execution of the Project. The Concessionaire shall not be entitled to any extension of time and/or costs incurred in preparation of the EHS Plan and complying with the requirements of this Clause 18.1.

18.2 Expenditure on EHS Requirements

All costs and expenses arising out of or relating to implementation and operation of the

Project in compliance with the EHS Plan shall be borne by the Concessionaire to the extent such costs and expenses form part of the works and services included in the Scope of the Project, and works and services, if any, not forming part of the Scope of the Project shall be undertaken and funded in accordance with the provisions of Article 16.

ARTICLE 19 MONITORING OF OPERATION AND MAINTENANCE

19.1 Metering, Monitoring and Reporting

19.1.1 Metering:

- a. The Concessionaire shall install flow measurement meters in accordance with Applicable Laws, Specifications and Standards, and Good Industry Practice, at the rising main, the Inlet Point, the Outlet Point, and at any other point as set out in Annexure III of Schedule A or required as per Applicable Laws, to measure the volume of Sewage delivered to the STFs forming part of the Project, and the Treated Effluent discharged from the STFs forming part of the Project.
- b. The Concessionaire shall also install meters and gauges at the DG Sets to measure the total number of energy units (in kWh) consumed from the DG Sets in each month of the Operation Period.
- c. The Concessionaire shall also install rain gauges along the entire length of Adyar, at an interval of 4km between two rain gauges.
- a. The meters shall be calibrated periodically during the Operation Period in accordance with Applicable Laws, Specifications and Standards and Good Industry Practice, and the meters shall be jointly tested by the Authority and the Concessionaire, to ensure the accuracy of the installed meters.
- b. The Concessionaire shall record and transmit all data collected from the meter reading of the volume of the incoming Sewage and the Treated Effluent. The Concessionaire shall furnish a summary report to the Authority (with a copy to the Independent Engineer) on a daily basis, which shall indicate: (A) the volume of the Sewage received at the STFs and the volume of the Treated Effluent discharged from the STFs during each hour of the relevant day; and (B) the periods during which the volume of Sewage received at the STF(s) exceeded the rated operating capacity of the respective STF(s).
- c. The Concessionaire shall also record and transmit all data collected with respect to river quality, rainfall and fuel consumptions by DG Sets and furnish a summary report to the Authority (with a copy to the Independent Engineer) on a weekly basis.
- d. The Concessionaire shall maintain the meters at its own cost and expense for the entire Operation Period.

19.1.2 Online Monitoring:

- a) The Concessionaire shall install and maintain an online monitoring system (SCADA) as part of the Project, in accordance with the Schedule B and Applicable Laws to monitor the volume, specifications and characteristics of the incoming Sewage, the Treated Effluent, Digested Sludge, river quality parameters, STF By-Products, rainfall, fuel consumption by the DG Sets, and the water quality parameters at Designated Points in the Adyar River.
- b) The online monitoring device should be capable of measuring and analyzing the flow rate and characteristics of the Sewage at the Inlet Point and of the Treated Effluent at the Outlet Point, the water quality parameters at Designated Points in the Adyar River. Such monitoring shall be conducted in accordance with

Applicable Laws and Good Industry Practices.

- c) The Concessionaire shall record and transmit all data collected from the online monitoring system of the grade and characteristics of the incoming Sewage and the Treated Effluent, and water quality parameters at Designated Points in the Adyar River. The Concessionaire shall furnish a summary report to the Authority (with a copy to the Independent Engineer) on a daily basis, which shall indicate the periods during which the quality of the Treated Effluent was beyond the Discharge Standards.
- d) The Concessionaire shall establish and maintain, at its own cost and expense for the entire Concession Period, an online monitoring system that can provide real time data updates remotely to the Authority as part of a central command and control center.

19.1.3 Records and Reporting Requirements:

- a. The Concessionaire shall maintain:
 - a. records of the volume and characteristics of the Sewage received, and the STF By-Products, Digested Sludge, and the Treated Effluent discharged from the STFs;
 - b. River water quality parameters;
 - c. record fuel consumption by the DG Sets;
 - d. rainfall data as recorded by the rain gauges installed by the Concessionaire; and
 - e. books of accounts recording all payments received from Authority and other revenues derived/collected by it from the Project or resulting from its use.
- b. The Concessionaire shall deliver to the Authority, with a copy to the Independent Engineer, the following during the Operation Period within the specified timelines:
 - a. reports relating to any activity, problem, incident or circumstance that threatens or may threaten public health, safety, the environment or the safety and security of the Project, and any action taken to mitigate the effect of such incident or problem, as soon as reasonably practicable but no later than 12 hours after the occurrence of such event or circumstance;
 - b. reports on any critical breakdowns or failures in the Project, within 12 hours of such occurrence;
 - c. reports on accidents or other incidents in relation to the O&M personnel or any third party, along with statements on actions taken to minimize recurrence, within 2 days of such occurrence;
 - d. daily reports with the data collected from the metering system, the online monitoring system and the tests conducted by the Concessionaire in accordance with the provisions of this agreement on the characteristics and volume of Sewage treated at the Project, the STF By-Products, the Treated Effluent discharged and river water quality parameters, at the end of each day (i.e., on or before 1500 hours every day);

- e. monthly progress reports relating to the performance of O&M services (including on compliance with the KPIs, details of disposal or sale of the STF By-Products and the Treated Effluent, and details of any Emergency during the relevant month), on or before the 7th day of the following month. The progress report must be certified by the Independent Engineer before it is submitted to the Authority;
- f. copies of any reports, notices or responses submitted for compliance/non-compliance with Applicable Laws or Applicable Permits, within 2 days of making such submissions to the relevant Government Authority; and
- g. reports on any material litigation, including any winding-up proceedings or notice to commence winding-up proceedings or material disputes to which the Concessionaire is a party, appointment of a receiver or administrator in relation to the business or assets of the Concessionaire and any adverse orders or judgments passed by any Government Authorities that affects or is likely to affect the performance of the O&M services, as soon as reasonably possible after the occurrence of any such event.

19.2 Inspection

The Independent Engineer shall inspect the Project at least once a month. It shall make a report of such inspection (the “**O&M Inspection Report**”) stating in reasonable detail the defects or deficiencies, if any, with particular reference to the Maintenance Requirements, Maintenance Manual, the Maintenance Program, EHS Requirements, and send a copy thereof to the Authority and the Concessionaire within 7 (seven) days of such inspection.

19.3 Tests

For determining that the Project conforms to the Maintenance Requirements, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests specified by it in accordance with Good Industry Practice. The Concessionaire shall, with due diligence, carry out or cause to be carried out all such tests in accordance with the instructions of the Independent Engineer and furnish the results of such tests forthwith to the Independent Engineer. One half of the costs incurred on such tests, and to the extent certified by the Independent Engineer as reasonable, shall be reimbursed by the Authority to the Concessionaire.

19.4 Remedial measures

- 19.4.1 The Concessionaire shall repair or rectify the defects or deficiencies, if any, set forth in the O&M Inspection Report or in the test results referred to in Clause 19.3 and furnish a report in respect thereof to the Independent Engineer and the Authority within 15 (fifteen) days of receiving the O&M Inspection Report or the test results, as the case may be; provided that where the remedying of such defects or deficiencies is likely to take more than 15 (fifteen) days, the Concessionaire shall submit progress reports of the repair works once every week until such works are completed in conformity with this Agreement.
- 19.4.2 The Independent Engineer shall require the Concessionaire to carry out or cause to be carried out tests, at its own cost, to determine that such remedial measures have brought the Project into compliance with the Maintenance Requirements and the procedure set forth in this Clause 19.4 shall be repeated until the Project conforms to the Maintenance

Requirements. In the event that remedial measures are not completed by the Concessionaire in conformity with the provisions of this Agreement, the Authority shall be entitled to recover Damages from the Concessionaire under and in accordance with the provisions of Clause 17.8.

19.5 Reports of unusual occurrence

The Concessionaire shall, prior to the close of each day, send to the Authority and the Independent Engineer, by facsimile or e-mail, a report stating accidents and unusual occurrences on the Project relating to the safety and security of the Users and the Project. A weekly and monthly summary of such reports shall also be sent within 3 (three) days of the closing of each week and month, as the case may be. For the purposes of this Clause 19.5, accidents and unusual occurrences on the Project shall include:

- a. Death or injury to any person;
- b. Damaged or dislodged fixed equipment;
- c. Any damage or obstruction on the Project, which hampers the quality of the services being provided by the Concessionaire;
- d. Disablement of any equipment during operation;
- e. Communication failure affecting the operation of the Project;
- f. Smoke or fire;
- g. Flooding of the Project; and
- h. Such other relevant information as may be required by the Authority or the Independent Engineer.

ARTICLE 20 KEY PERFORMANCE INDICATORS

20.1 Fulfillment of KPIs

20.1.1 The Concessionaire acknowledges, agrees and undertakes that it shall comply with the Key Performance Indicators (“**KPIs**”) specified in Schedule C. The KPIs shall serve as measurable targets to assess and monitor the effectiveness of the Concessionaire's efforts in improving and sustaining the quality of Adyar River as a Class D Water Body suitable for propagation of wildlife and fisheries.

20.1.2 The Concessionaire shall make reasonable and diligent efforts to achieve and fulfill the specified KPIs within the agreed-upon timeframes including, but not limited to, implementing appropriate strategies, conducting regular monitoring, and taking necessary actions to address any identified gaps or issues affecting the Project.

20.2 Penalty for shortfall in performance

20.2.1 The Concessionaire shall ensure and procure compliance of the key performance indicators specified in this Article 21 and for any shortfall in average performance during a quarter, it shall pay penalty to the Authority within 30 (thirty) days of the quarter in which the shortfall occurred subject to a maximum of 30% of quarterly O&M Payment. The penalty/damages due and payable under this Clause 20.2 shall be determined in accordance with Schedule C; provided, however, that the Authority may waive the Damages, in part or full, if it is satisfied that the Concessionaire has been carrying out its obligations diligently and efficiently and that the shortfall to be waived was on account of reasons beyond the control of the Concessionaire.

20.2.2 The Authority shall have the right, and the Concessionaire hereby expressly grants to the Authority the right, to recover the penalty/ damages specified in Clause 20.2.1 directly from the Escrow Account (or deduct from O&M Payments payable to the Concessionaire) as if such costs were O&M Expenses, and for that purpose, the Concessionaire hereby agrees to give irrevocable instructions to the Escrow Bank to make payment from the Escrow Account in accordance with the instructions of the Authority under this Clause 17.9.3 and debit the same to O&M Expenses. Alternatively, the Authority may also claim aforesaid damages by appropriating and encashing the Performance Security submitted by the Concessionaire in terms of Article 9 hereof.

20.3 Termination of Non-fulfillment of KPIs

In the event, the Concessionaire consistently fails to meet the agreed-upon KPIs and the cumulative penalty/ Damages collected in accordance with Clause 20.2 exceed 25% of the quarterly O&M Payments continuously for 3 (three) quarters, or the cumulative penalty/ Damages collected in accordance with Clause 20.2 exceed 25% of the quarterly O&M Payments for 8 (eight) quarters in a 3 (three) year period, then such failure shall be treated as a Concessionaire Event of Default and the consequences set out at Article 31 shall follow.

ARTICLE 21 INDEPENDENT ENGINEER

21.1 Appointment of Independent Engineer

The Authority shall appoint a consulting engineering firm, with experience in water resources, water supply and wastewater management sector, substantially in accordance with the selection criteria set forth in Schedule-M, to be the independent consultant under this Agreement (the “**Independent Engineer**”). The appointment shall be made no later than 60 (sixty) days from the date of this Agreement and shall be for a period of Construction Period plus six (6) months). On expiry or termination of the aforesaid appointment, the Authority shall appoint an Independent Engineer for a further term of 3 (three) years in accordance with the provisions of Schedule-M, and such procedure shall be repeated after expiry of each appointment.

21.2 Duties and functions

- 21.2.1 The Independent Engineer shall discharge its duties and functions substantially in accordance with the terms of reference set forth in Schedule-N.
- 21.2.2 The Independent Engineer shall submit regular periodic reports (at least once every month) to the Authority in respect of its duties and functions set forth in Schedule-N.
- 21.2.3 A true copy of all communications sent by the Authority to the Independent Engineer and by the Independent Engineer to the Authority shall be sent forthwith by the Independent Engineer to the Concessionaire.
- 21.2.4 A true copy of all communications sent by the Independent Engineer to the Concessionaire and by the Concessionaire to the Independent Engineer shall be sent forthwith by the Independent Engineer to the Authority.

21.3 Remuneration

The remuneration, cost and expenses of the Independent Engineer shall be paid by the Authority and subject to the limits set forth in Schedule-M, one-half of such remuneration, cost and expenses shall be reimbursed by the Concessionaire to the Authority within 15 (fifteen) days of receiving a statement of expenditure from the Authority.

21.4 Termination of appointment

- 21.4.1 The Authority may, in its discretion, terminate the appointment of the Independent Engineer at any time, but only after appointment of another Independent Engineer in accordance with Clause 21.1.
- 21.4.2 If the Concessionaire has reason to believe that the Independent Engineer is not discharging its duties and functions in a fair, efficient and diligent manner, it may make a written representation to the Authority and seek termination of the appointment of the Independent Engineer. Upon receipt of such representation, the Authority shall hold a tripartite meeting with the Concessionaire and Independent Engineer for an amicable resolution of the Dispute, and if any difference or disagreement between the Authority and the Concessionaire remains unresolved, the Dispute shall be settled in accordance with the Dispute Resolution Procedure. In the event that the appointment of the Independent Engineer is terminated hereunder, the Authority shall appoint forthwith another Independent Engineer in accordance with Clause 21.1.

21.5 Authorized signatories

The Authority shall require the Independent Engineer to designate and notify to the Authority and the Concessionaire up to 2 (two) persons employed in its firm to sign for and on behalf of the Independent Engineer, and any communication or document required to be signed by the Independent Engineer shall be valid and effective only if signed by any of the designated persons; provided that the Independent Engineer may, by notice in writing, substitute any of the designated persons by any of its employees.

21.6 Dispute resolution

If either Party disputes any advice, instruction, decision, direction or award of the Independent Engineer, or, as the case may be, the assertion or failure to assert jurisdiction, the Dispute shall be resolved in accordance with the Dispute Resolution Procedure.

21.7 Interim arrangement

In the event that the Authority does not appoint an Independent Engineer, or the Independent Engineer so appointed has relinquished its functions or defaulted in discharge thereof, the Authority may, in the interim, designate and authorize any person to discharge the functions of the Independent Engineer in accordance with the provisions of this Agreement, save and except that such person shall not exercise any functions relating to review, comment, approval or inspection as specified in this Agreement for and in respect of the Independent Engineer, and such functions shall be discharged as and when an Independent Engineer is appointed in accordance with the provisions of this Agreement. Provided, however, that nothing contained in this Clause 21.7 shall in any manner restrict the rights of the Authority to enforce compliance of the provisions of this Agreement.

ARTICLE 22 FINANCIAL CLOSE

22.1 Financial Close

- 22.1.1 The Concessionaire hereby agrees and undertakes that it shall achieve Financial Close for an amount not lower than either: i. Total Project Cost; or ii. 10% less than (Estimated Project Cost minus 50% of Bid Project Cost) within 150 (one hundred and fifty) days from the date of this Agreement. In the event of delay in achieving the Financial Close, the Concessionaire shall be entitled to a further period not exceeding 120 (one hundred twenty) days, subject to payment of Damages to the Authority in a sum calculated at the rate of 0.05% (zero point zero five per cent) of the Performance Security for each day of delay, provided that the Damages specified herein shall be payable every week in advance and the period beyond the said 150 (one hundred and fifty) days shall be granted only to the extent of Damages so paid. In the event of delay in achieving the Financial Close beyond 270 (two hundred and seventy) days from the date of this Agreement, the Concessionaire shall be entitled to a further period not exceeding 95 (ninety five) days, subject to payment of Damages to the Authority in a sum calculated at the rate of 0.1% (zero point one per cent) of the Performance Security for each day of delay, provided that the Damages specified herein shall be payable every week in advance and the period beyond the said 270 (two hundred and seventy) days shall be granted only to the extent of Damages so paid; provided further that no Damages shall be payable if such delay in Financial Close has occurred due to Force Majeure. For the avoidance of doubt, the Damages payable hereunder by the Concessionaire shall be in addition to the Damages, if any, due and payable under the provisions of Clause 4.3.
- 22.1.2 The Concessionaire shall, upon occurrence of Financial Close, notify the Authority forthwith, and shall have provided to the Authority, at least 2 (two) days prior to the Financial Close, 3 (three) true copies of the Financial Package and the Financial Model, duly attested by a Director of the Concessionaire, along with 3 (three) soft copies of the Financial Model in MS Excel version or any substitute thereof, which is acceptable to the Senior Lenders.

22.2 Termination due to failure to achieve Financial Close

- 22.2.1 Notwithstanding anything to the contrary contained in this Agreement, but subject to Clause 28.6.1, in the event that Financial Close does not occur, for any reason whatsoever, within the period set forth in Clause 22.1.1 or the extended period provided thereunder, all rights, privileges, claims and entitlements of the Concessionaire under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased with the concurrence of the Concessionaire, and the Concession Agreement shall be deemed to have been terminated by mutual agreement of the Parties.
- 22.2.2 Upon Termination under Clause 22.2.1, the Authority shall be entitled to encash the Bid Security and appropriate the proceeds thereof as Damages; provided, however, that if Financial Close has not occurred due to Force Majeure, it shall, upon Termination, release the Bid Security or Performance Security, as the case may be. For the avoidance of doubt, it is expressly agreed that if the Bid Security shall have been substituted by the Performance Security, the Authority shall be entitled to encash there from an amount equal to the Bid Security.

ARTICLE 23 PAYMENT OF BID PROJECT COST

23.1 Bid Project Cost⁴

The Parties expressly agree that the cost of construction of the Project, as on the Bid Date, which is due and payable by the Authority to the Concessionaire, shall be deemed to be Rs.....(Rupees.....) (The “ **Bid Project Cost** ”). The Parties further agree that the Bid Project Cost specified hereinabove for payment to the Concessionaire shall be inclusive of the cost of construction, interest during construction, working capital, physical contingencies and all other costs, expenses and charges for and in respect of construction of the Project, save and except any additional costs arising on account of variation in Price Index, Change of Scope, Change in Law, Force Majeure or breach of this Agreement, which costs shall be due and payable to the Concessionaire in accordance with the provisions of the Agreement. The Bid Project Cost shall be exclusive of GST, which shall be paid to the Concessionaire by the Authority at the applicable rates. For the avoidance of doubt, the Bid Project Cost specified herein represents the amount due and payable by the Authority to the Concessionaire and may be less than, equal to, or more than the Estimated Project Cost.

23.2 Adjusted Bid Project Cost

23.2.1 The Bid Project Cost specified in Clause 23.1 shall be revised from time to time in accordance with the provisions of this Clause 23.2 to reflect the variation in Price Index occurring after the Reference Index Date immediately preceding the Bid Date.

23.2.2 The Bid Project Cost adjusted for variation between the Price Index occurring between the Reference Index Date preceding the Bid Date and the Reference Index Date immediately preceding the Appointed Date shall be deemed to be the Bid Project Cost at commencement of construction.

23.2.3 For every month occurring after the Appointed Date, the Authority shall compute the variation in Price Index occurring between the Reference Index Date preceding the Bid Date and the Reference Index Date preceding the date of Invoice, and shall express the latter as a multiple of the former (the “**Price Index Multiple**”). All Invoices to be submitted by the Concessionaire to the Authority for and in respect of the Construction Period shall be the product of the relevant proportion of the Bid Project Cost and the Price Index Multiple applicable on the date of Invoice. For the avoidance of doubt and by way of illustration, if (a) the Price Index on the Reference Index Date preceding the Bid Date, say January 31, 2024, is 200 (two hundred); (b) the Invoice is submitted on October 15, 2025; and (c) the Price Index as on September 30, 2025 is 210 (two hundred and ten), then the Price Index Multiple for determination of the amount due in respect of such Invoice shall be 1.05 (one point zero five).

23.3 Payment of Bid Project Cost

23.3.1 50% (fifty per cent) of the Bid Project Cost , adjusted for the Price Index Multiple, shall be due and payable to the Concessionaire in 10 (ten) equal instalments of 5% (five per cent) each during the Construction Period in accordance with the provisions of Clause

⁴ Bid Project Cost shall be the amount specified in the Bid of the selected Bidder

23.4.

23.3.2 The remaining Bid Project Cost, adjusted for the Price Index Multiple, shall be due and payable in 60 (sixty) quarterly instalments commencing from the 90th (ninetieth) day of COD in accordance with the provisions of Clause 23.6.

23.4 Payment during Construction Period

Upon receiving a report from the Independent Engineer certifying the achievement of the below mentioned Payment Milestones, the Authority shall issue a payment advice to the Escrow Bank, within 15 (fifteen) days of receipt of each such report, for release of an instalment equal to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of that report.

For the purpose of this Clause 23.4, the Payment Milestone for release of payment during Construction Period shall be as under:

S.No.	Payment Milestone	Physical Progress	Payment Due to the Concessionaire
a.	I (first) Payment Milestone	On achievement of 5% Physical Progress	5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
b.	II (second) Payment Milestone	On achievement of 10% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
c.	III (third) Payment Milestone	On achievement of 20% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
d.	IV (fourth) Payment Milestone	On achievement of 30% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
e.	V (fifth) Payment Milestone	On achievement of 40% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
f.	VI (sixth) Payment Milestone	On achievement of 50% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
g.	VII (seventh) Payment Milestone	On achievement of 60% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
h.	VIII (eighth) Payment Milestone	On achievement of 70% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
i.	IX (ninth) Payment Milestone	On achievement of 80% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable

j.	X (tenth) Payment Milestone	On achievement of 90% Physical Progress	to 5% (five per cent) of the Bid Project Cost, adjusted for the Price Index Multiple as applicable
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Provided that in case of Change of Scope, the Physical Progress shall be recalculated to account for the changed scope.

23.5 Bonus on early completion

In the event that the Concessionaire shall achieve COD on or more than 30 (thirty) days prior to the Scheduled Completion Date, the Authority shall pay to the Concessionaire a bonus equal to 0.5% (Zero point five per cent) of 60 % (Sixty per cent) of the Bid Project Cost for the first 30 (thirty) days by which COD shall precede the Scheduled Completion Date and thereafter the said bonus shall be calculated on the pro-rata basis for each day preceding the said 30 (thirty) days period. The Bonus shall be due and payable to the Concessionaire along with the 1st (first) Annuity Payment.

23.6 Annuity Payments during Operation Period

23.6.1 The “**Completion Cost**” shall be the summation of A, B, C, D, E, F, G, H, I, J, and K below:

- A. 5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 5% Physical Progress.
- B. 5% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 10% Physical Progress.
- C. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 20% Physical Progress.
- D. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 30% Physical Progress.
- E. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 40% Physical Progress.
- F. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 50% Physical Progress.
- G. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 60% Physical Progress.
- H. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 70% Physical Progress.
- I. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 80% Physical Progress.

J. 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the date of report confirming 90% Physical Progress.

K. Another 10% of the Bid Project Cost adjusted for the Price Index Multiple as applicable on the Reference Index Date preceding the COD.

The Parties acknowledge and agree that the Authority has paid a portion of the Completion Cost as payments during Construction Period pursuant to Clause 23.4 of this Agreement. The balance Completion Cost remaining shall be due and payable during the Operation Period in accordance with the provisions of Clause 23.6.2.

23.6.2 The Completion Cost remaining to be paid in pursuance of the provisions of Clause 23.6.1 shall be due and payable in quarterly payments over a period of 15 (fifteen) years commencing from COD, (the “**Annuity Payments**”). The 1st (first) instalment of Annuity Payments shall be due and payable within 15 (fifteen) days of the 90th (ninetieth) day of COD and the remaining instalments shall be due and payable within 15 (fifteen) days of completion of each of the successive three months (“the **Annuity Payment Date**”). For the avoidance of doubt, the last Annuity Payment Date would be adjusted to in such a way that it falls at the end of the Operations Period.

23.6.3 Each of the Annuity Payments due and payable during the years following the COD shall be as under:

Annuity following the COD	Percentage of Completion Cost remaining to be paid on COD
1st Annuity	1.00%
2nd Annuity	1.00%
3rd Annuity	1.00%
4th Annuity	1.00%
5th Annuity	1.00%
6th Annuity	2.00%
7th Annuity	2.00%
8th Annuity	2.00%
9th Annuity	2.00%
10th Annuity	2.00%
11th Annuity	2.00%
12th Annuity	2.00%
13th Annuity	2.00%
14th Annuity	2.00%
15th Annuity	2.00%
16th Annuity	2.00%
17th Annuity	2.00%
18th Annuity	2.00%
19th Annuity	2.00%
20th Annuity	2.00%
21st Annuity	2.00%
22nd Annuity	2.00%
23rd Annuity	2.00%

24th Annuity	2.00%
25th Annuity	2.00%
26th Annuity	2.00%
27th Annuity	2.00%
28th Annuity	2.00%
29th Annuity	2.00%
30th Annuity	2.00%
31st Annuity	2.00%
32nd Annuity	2.00%
33rd Annuity	2.00%
34th Annuity	2.00%
35th Annuity	2.00%
36th Annuity	2.00%
37th Annuity	2.00%
38th Annuity	2.00%
39th Annuity	2.00%
40th Annuity	2.00%
41th Annuity	2.00%
42th Annuity	2.00%
43th Annuity	2.00%
44th Annuity	2.00%
45th Annuity	2.00%
46th Annuity	1.00%
47th Annuity	1.00%
48th Annuity	1.00%
49th Annuity	1.00%
50th Annuity	1.00%
51st Annuity	1.00%
52nd Annuity	1.00%
53rd Annuity	1.00%
54th Annuity	1.00%
55th Annuity	1.00%
56th Annuity	1.00%
57th Annuity	1.00%
58th Annuity	1.00%
59th Annuity	1.00%
60th Annuity	1.00%

Each of the quarterly instalments payable hereunder shall be paid along with interest as specified in Clause 23.6.4.

23.6.4 Interest shall be due and payable on the reducing balance of Completion Cost at an interest rate equal to the average of SBI MCLR plus 2%. Such interest shall be due and payable every quarter along with each instalment specified in Clause 23.6.3. For the avoidance of doubt and by way of illustration, the Parties agree that interest on the

Completion Cost remaining to be paid, calculated from COD and until the 90th (ninetieth) day of COD, shall be due and payable to the Concessionaire along with the first Annuity Payment and interest on ** (** cent)⁵ of the Percentage of Completion Cost remaining to be paid on COD, calculated from first Annuity payment date and until the 180th (one hundred and eightieth) day of COD, shall be due and payable along with the second Annuity Payment due and payable under this Agreement. The Parties further agree that interest shall be calculated based on the number of days a particular average of SBI MCLR was applicable during the period of calculation. For the purpose of illustration, assuming that the balance capital cost remaining to be paid is Rs 100 crores on the 1st Annuity Payment Date, the applicable average of SBI MCLR for the first 75 days is 8% and thereafter it is revised to 7.5% and remains unchanged till the 2nd Annuity Payment Date, the interest would be calculated as $((100*9.25%*75)/365)+((100*8.75%*105)/365)$. For the avoidance of doubt, the Interest would be calculated on simple interest basis and no compounding of the same would be undertaken.

23.7 O&M Payment and Energy Charges

23.7.1 O&M Payment

- (i) The Parties acknowledge and agree that all O&M Expenses shall be borne by the Concessionaire and in lieu thereof; a lump sum financial support of Rs..... (Rupees.....)⁶ in the form of quarterly payments shall be due and payable by the Authority (the “**First Quarter O&M Cost**”), in accordance with the provisions of this Clause 23.7 (i) (the “**O&M Payments**”). The Parties further acknowledge and agree that any O&M Expenses in excess of the O&M Payments shall be borne solely by the Concessionaire, save and except as expressly provided in this Agreement. For avoidance of doubt it is clarified that the O&M Payments will be subject to any Change in Scope of the Project of the Concessionaire under Article 16 of this Agreement.
- (ii) Subject to the Provisions of Clause 23.7.1 (iii), the O&M Payments due and payable to the Concessionaire shall be paid in quarterly instalments and disbursed by the Authority together with the corresponding instalments of Annuity Payments.
- (iii) Each instalment of O&M Payment shall be the product of the amount determined in accordance with Clause 23.7.1 and the Price Index Multiple on the Reference Index Date preceding the due date of payment thereof.

23.7.2 Reimbursement of Power Charges

- (i) The Power Charges for the Project shall initially be borne by the Concessionaire, which shall be reimbursed by Authority to the Concessionaire, subject to a cap of the Power Charges based on Maximum Energy Consumption.
- (ii) The Power Charges for any given quarter of the Operation Period will be calculated as follows:

(A) For the units of energy consumed from the grid (as evidenced by a copy of

⁵ To be finalized on the basis of the outstanding Completion Cost Annuity pursuant to the payment of 1st Annuity as provided in the Annuity payment schedule in Clause 23.6.3

⁶ As quoted by the selected Bidder

the bill issued by the distribution licensee), the Power Charges will be calculated by multiplying the number of units consumed in such quarter (subject to the Maximum Energy Consumption) with the Power Unit Rate.

- (B) If there is any interruption in the supply of power from the grid, the Concessionaire will use backup power supply from the DG Sets. In such cases,
- a. the Concessionaire's Representative and the Authority/Independent Engineer shall jointly take readings from the meters installed at the DG Sets to determine the number of units of energy consumed from the DG Sets for O&M of the Project (the “**DG Set Units**”);
 - b. the quantity of diesel consumed to generate the DG Set Units in the relevant quarter shall be calculated by the Authority/Independent Engineer based on the rated specific fuel consumption of the DG Sets specified by the manufacturers of the DG Sets; and
 - c. the power charges for the DG Set Units will be calculated by multiplying the quantity of diesel consumed (determined as per (b) above) with the Fuel Price (“**DG Fuel Cost**”).
- (C) The Concessionaire shall be liable to pay liquidated damages to the Authority for any units of energy consumed beyond the Maximum Energy Consumption (whether from the grid or from the DG Sets) (“**Power Consumption Liquidated Damages**”), which will be calculated as follows:
- a. For excess power consumption up to 5% of the Maximum Energy Consumption:
Power Consumption Liquidated Damages: (Number of power units consumed in the relevant quarter – Guaranteed Energy Consumption for such quarter) * [Power Unit Rate] * 0.25
 - b. For excess power consumption between 5% and 10% of the Maximum Energy Consumption:
Power Consumption Liquidated Damages: (Number of power units consumed in the relevant quarter – Guaranteed Energy Consumption for such quarter) * [Power Unit Rate] * 0.50
 - c. For excess power consumption above 10% of the Maximum Energy Consumption:
Power Consumption Liquidated Damages: (Number of power units consumed in the relevant quarter – Guaranteed Energy Consumption for such quarter) * [Power Unit Rate]

The Power Consumption Liquidated Damages payable by the Concessionaire in any quarter of the Operation Period will be deducted from the O&M Payments payable to the Concessionaire for such quarter. If the Power Consumption Liquidated Damages for a quarter exceed the O&M Payments for such quarter, then the excess amounts shall, at the

discretion of the Authority, either be adjusted against the O&M Payments for the subsequent quarter or recovered from the Performance Security.

Provided that in case the actual power consumption exceeds the Maximum Energy Consumption, the Authority shall reimburse Power Charges upto the Maximum Energy Consumption subject to a price ceiling of Rs. 8.15 per kWh of electricity. However if the actual power consumption is less than the Maximum Energy Consumption, the Authority shall reimburse Power Charges at prevailing electricity tariff as evidenced by the electricity bills issued by the distribution licensee.

- 23.7.3 The O&M Payments and Power Charges shall be paid by Authority to the Concessionaire on a quarterly basis. The Concessionaire shall submit an Invoice to the Authority for each quarter on or before the 7th day of the first month of the following quarter, which should set out: (i) the O&M Payments due to the Concessionaire in such period; and (iii) Reimbursement of Power Charges in such period. Any Invoice raised by the Concessionaire for Operation Period Payments shall be accompanied with a copy of the: (A) KPI Adherence Report for each month of the relevant period, and (B) copy of the bill(s) issued by the state distribution utility for the Power Charges, and if relevant, copy of the joint meter reading for consumption of power from the DG Sets.
- 23.7.4 If the Invoice is not accompanied with the necessary supporting documents as specified in Clause 23.7.4, the Authority shall not be required to process such Invoice. For avoidance of doubt, it is clarified that the O&M Payments shall be subject to Change of Scope under Article 16 of this Agreement.

23.8 Mobilization Advance

The Authority shall, on request of the Concessionaire, make an advance payment in a sum not exceeding 10% (ten per cent) of the Bid Project Cost (the “**Mobilization Advance**”). This advance payment shall be made in two equal instalments. The Concessionaire may request the Authority for the first instalment of the advance payment at any time after the Appointed Date, along with furnishing a Bank Guarantee for an equivalent amount in a form satisfactory to the Authority. The Concessionaire may request the Authority for the second instalment of the advance payment at any time, after 60(sixty) days from the Appointed Date, along with furnishing a Bank Guarantee for an equivalent amount in a form satisfactory to the Authority. The first and second instalments of the Mobilization Advance shall be paid by the Authority within 30 (thirty) days of receipt of the respective requests in this behalf from the Concessionaire. The rate of interest on the Mobilization Advance shall be equal to the average of SBI MCLR plus 2%, compounded annually. The Mobilization Advance shall be deducted by the Authority in 6 (six) equal instalments from each of the payments to be made by the Authority to the Concessionaire in accordance with the provisions of Clause 23.4 and the interest thereon shall be recovered from the 7th (seventh) and 8th (eighth) instalments. As the advance get recovered from the running bills/ stage payments, the Bank Guarantee for the amount equivalent to the amount of advance recovered may be released on the request of the Concessionaire. The Concessionaire would be at liberty to either submit a substitute Bank Guarantee for the residual amount or multiple Bank Guarantees for such residual amount in replacement of the existing Bank Guarantee.

ARTICLE 24 DELETED

ARTICLE 25 ESCROW ACCOUNT

25.1 Escrow Account

- 25.1.1 The Concessionaire shall, prior to the Appointed Date, open and establish an Escrow Account with a Bank (the “**Escrow Bank**”) in accordance with this Agreement read with the Escrow Agreement.
- 25.1.2 The nature and scope of the Escrow Account are fully described in the agreement (the “**Escrow Agreement**”) to be entered into amongst the Concessionaire, the Authority, the Escrow Bank and the Senior Lenders through the Lenders’ Representative, which shall be substantially in the form set forth in Schedule-O.

25.2 Deposits into Escrow Account

- 25.2.1 The Concessionaire shall deposit or cause to be deposited the following inflows and receipts into the Escrow Account:
- i. All funds constituting the Financial Package;
 - ii. All revenues from or in respect of the Project, including the proceeds of any rentals, deposits, capital receipts or insurance claims; and
 - iii. All payments made by the Authority, after deduction of any outstanding payments.
- 25.2.2 Minimum Escrow Balance:
- i. The Authority shall deposit an amount equivalent to the first two Payment Milestone within 60 (sixty) days from the Appointed Date. During the remainder of the Construction Period, the Authority shall ensure that the Escrow Account is funded with an amount equivalent to the next Payment Milestone (the “**Construction Period Minimum Escrow Balance**”); and
 - ii. on and from COD and during the Operation Period, the Authority shall deposit into the Escrow Account, by an agreed date, an amount equivalent to the sum of the following: (a) Annuity Payments for two quarters, (b) O&M Payments for two quarters, and (c) Power Charges for two quarters considering the Maximum Energy Consumptions (the “**Operation Period Minimum Escrow Balance**”).

If at any time during the Construction Period or the Operation Period, the balance in the Escrow Account falls below the Construction Period Minimum Escrow Balance or the Operation Period Minimum Escrow Balance, as the case may be, the Authority shall promptly, and in any event, no later than 120 days of such occurrence, fund the Escrow Account such that the Construction Period Minimum Escrow Balance or the Operation Period Minimum Escrow Balance (as applicable) is maintained. A failure to maintain the Construction Period Minimum Escrow Balance or the Operation Period Minimum Escrow Balance for a period exceeding 180 days will be treated as an Authority Default and the consequences set out in Article 31 shall follow.

Any interest earned on the amounts deposited by Authority in the Escrow Account shall be counted towards the Construction Period Minimum Escrow Balance/ Operation Period Minimum Escrow Balance and the abovementioned deposit into the Escrow Account.

25.3 Withdrawals during Concession Period

- 25.3.1 The Concessionaire shall, at the time of opening the Escrow Account, give irrevocable instructions, by way of an Escrow Agreement, to the Escrow Bank instructing, *inter alia*, that deposits in the Escrow Account shall be appropriated in the following order every month, or at shorter intervals as necessary, and if not due in a month then appropriated proportionately in such month and retained in the Escrow Account and paid out therefrom in the month when due:
- i. All taxes due and payable by the Concessionaire for and in respect of the Project;
 - ii. All payments relating to construction of the Project, subject to and in accordance with the conditions, if any, set forth in the Financing Agreements;
 - iii. O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;
 - iv. O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of this Agreement, and certified by the Authority/Independent Engineer as due and payable to it;
 - v. Gross Revenue Share and any other amounts due and payable to the Authority (other than under Article 25);
 - vi. Monthly proportionate provision of Debt Service due in an Accounting Year;
 - vii. All payments and Damages certified by the Authority as due and payable to it by the Concessionaire;
 - viii. Monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;
 - ix. Any reserve requirements set forth in the Financing Agreements; and
 - x. Balance, if any, in accordance with the instructions of the Concessionaire.
- 25.3.2 The Concessionaire shall not in any manner modify the order of payment specified in Clause 25.3.1, except with the prior written approval of the Authority.

25.4 Withdrawals upon Termination

- 25.4.1 Notwithstanding anything to the contrary contained in this Agreement, all amounts standing to the credit of the Escrow Account shall, upon Termination, be appropriated in the following order:
- i. All taxes due and payable by the Concessionaire for and in respect of the Project;
 - ii. Percentage of Debt Due excluding Subordinated Debt if required to be as per the terms of this Agreement;
 - iii. Outstanding payments due to the Authority including Gross Revenue Share;
 - iv. All payments and Damages certified by the Authority as due and payable to it by the Concessionaire;
 - v. Retention and payments relating to the liability for defects and deficiencies set forth in Article 33;

- vi. Outstanding Debt Service including the balance of Debt Due;
- vii. Outstanding Subordinated Debt;
- viii. Incurred or accrued O&M Expenses;
- ix. Any other payments required to be made under this Agreement; and
- x. Balance, if any, in accordance with the instructions of the Concessionaire:

Provided that no appropriations shall be made under Sub-clause (x) of this Clause 25.4.1 until a Vesting Certificate has been issued by the Authority under the provisions of Article 32.

- 25.4.2 The provisions of this Article 25 and the instructions contained in the Escrow Agreement shall remain in full force and effect until the obligations set forth in Clause 25.4.1 have been discharged.

ARTICLE 26 INSURANCE

26.1 Insurance during Concession Period

The Concessionaire shall effect and maintain at its own cost, during the Construction Period and the Operation Period, such insurances (for Project Assets including the Existing Assets) for such maximum sums as may be required under the Financing Agreements and Applicable Laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice. The Concessionaire shall also effect and maintain such insurances as may be necessary for mitigating the risks that may devolve on the Authority as a consequence of any act or omission of the Concessionaire during the Construction Period. The Concessionaire shall procure that in each insurance policy, the Authority shall be a co-insured and that the insurer shall pay the proceeds of insurance into the Escrow Account. For the avoidance of doubt, the level of insurance to be maintained by the Concessionaire after repayment of Senior Lenders' dues in full shall be determined on the same principles as applicable for determining the level of insurance prior to such repayment of Senior Lenders' due.

26.2 Insurance Cover

Without prejudice to the provisions contained in Clause 26.1, the Concessionaire shall, during the Operation Period, procure and maintain Insurance Cover including but not limited to the following:

- (a) Loss, damage or destruction of the Project Assets (including Existing Assets), at replacement value;
- (b) Comprehensive third party liability insurance including injury to or death of personnel of the Authority or others caused by the Project;
- (c) The Concessionaire's general liability arising out of the Concession;
- (d) Liability to third parties for goods or property damage;
- (e) Workmen's compensation insurance; and
- (f) any other insurance that may be necessary to protect the Concessionaire and its employees, including all Force Majeure Events that are insurable at commercially reasonable premiums and not otherwise covered in items(i) to (v) above.

26.3 Notices to the Authority

No later than 45 (forty five) days prior to commencement of the Construction Period or the Operation Period, as the case may be, the Concessionaire shall by notice furnish to the Authority, in reasonable detail, information in respect of the insurances that it proposes to effect and maintain in accordance with this Article 26. Within 30 (thirty) days of receipt of such notice, the Authority may require the Concessionaire to effect and maintain such other insurances as may be necessary pursuant hereto, and in the event of any difference or disagreement relating to any such insurance, the Dispute Resolution Procedure shall apply.

26.4 Evidence of Insurance Cover

All insurances obtained by the Concessionaire in accordance with this Article 26 shall be maintained with insurers on terms consistent with Good Industry Practice. Within 15 (fifteen) days of obtaining any insurance cover, the Concessionaire shall furnish to the Authority, notarized true copies of the certificate(s) of insurance, copies of insurance policies and premium payment receipts in respect of such insurance, and no such insurance shall be cancelled, modified, or allowed to expire or lapse until the expiration of at least 45 (forty five) days after notice of such proposed cancellation, modification or nonrenewal has been delivered by the Concessionaire to the Authority.

26.5 Remedy for failure to insure

If the Concessionaire shall fail to effect and keep in force all insurances for which it is responsible pursuant hereto, the Authority shall have the option to either keep in force any such insurances, and pay such premier and recover the costs thereof from the Concessionaire, or in the event of computation of a Termination Payment, treat an amount equal to the Insurance Cover as deemed to have been received by the Concessionaire.

26.6 Waiver of subrogation

All insurance policies in respect of the insurance obtained by the Concessionaire pursuant to this Article 26 shall include a waiver of any and all rights of subrogation or recovery of the insurers thereunder against, inter alia, the Authority, and its assigns, successors, undertakings and their subsidiaries, affiliates, employees, insurers and underwriters, and of any right of the insurers to any set-off or counterclaim or any other deduction, whether by attachment or otherwise, in respect of any liability of any such person insured under any such policy or in any way connected with any loss, liability or obligation covered by such policies of insurance.

26.7 Concessionaire's waiver

The Concessionaire hereby further releases, assigns and waives any and all rights of subrogation or recovery against, inter alia, the Authority and its assigns, undertakings and their subsidiaries, affiliates, employees, successors, insurers and underwriters, which the Concessionaire may otherwise have or acquire in or from or in any way connected with any loss, liability or obligation covered by policies of insurance maintained or required to be maintained by the Concessionaire pursuant to this Agreement (other than third party liability insurance policies) or because of deductible clauses in or inadequacy of limits of any such policies of insurance.

26.8 Application of insurance proceeds

The proceeds from all insurance claims, except life and injury, shall be paid to the Concessionaire by credit to the Escrow Account and it shall, notwithstanding anything to the contrary contained in Clause 25.3, apply such proceeds for any necessary repair, reconstruction, reinstatement, replacement, improvement or delivery of the Project, and the balance remaining, if any, shall be applied in accordance with the provisions contained in this behalf in the Financing Agreements.

26.9 Compliance with conditions of insurance policies

The Concessionaire expressly acknowledges and undertakes to fully indemnify the

Authority from and against all losses and claims arising from the Concessionaire's failure to comply with conditions imposed by the insurance policies affected in accordance with this Agreement.

ARTICLE 27 ACCOUNTS AND AUDIT

27.1 Audited accounts

- 27.1.1 The Concessionaire shall maintain books of accounts recording all its receipts (including all revenues derived/collected by it from or on account of the Project and/or its use), income, expenditure, payments (including payments from the Escrow Account), assets and liabilities, in accordance with this Agreement, Good Industry Practice, Applicable Laws and Applicable Permits. The Concessionaire shall provide 2 (two) copies of its Balance Sheet, Cash Flow Statement and Profit and Loss Account, along with a report thereon by its Statutory Auditors, within 180 (one hundred and eighty) days of the close of the Accounting Year to which they pertain and such audited accounts, save and except where expressly provided to the contrary, shall form the basis of payments by either Party under this Agreement. The Authority shall have the right to inspect the records of the Concessionaire during office hours and require copies of relevant extracts of books of accounts, duly certified by the Statutory Auditors, to be provided to the Authority for verification of basis of payments, and in the event of any discrepancy or error being found, the same shall be rectified and such rectified account shall form the basis of payments by either Party under this Agreement.
- 27.1.2 The Concessionaire shall, within 30 (thirty) days of the close of each quarter of an Accounting Year, furnish to the Authority its unaudited financial results in respect of the preceding quarter, in the manner and form prescribed by the Securities and Exchange Board of India for publication of quarterly results by the companies listed on a stock exchange.
- 27.1.3 On or before the thirty-first day of May each Year, the Concessionaire shall provide to the Authority, for the preceding Accounting Year, a statement duly audited by its Statutory Auditors giving summarized information on revenues derived from the Project, and such other information as the Authority may reasonably require.

27.2 Appointment of auditors

- 27.2.1 The Concessionaire shall appoint, and have during the subsistence of this Agreement as its Statutory Auditors, a firm chosen by it from the mutually agreed list of 5 (five) reputable firms of chartered accountants (the "Panel of Chartered Accountants"), such list to be prepared substantially in accordance with the criteria set forth in Schedule-P. All fees and expenses of the Statutory Auditors shall be borne by the Concessionaire.
- 27.2.2 The Concessionaire may terminate the appointment of its Statutory Auditors after a notice of 45 (forty five) days to the Authority, subject to the replacement Statutory Auditors being appointed from the Panel of Chartered Accountants.
- 27.2.3 Notwithstanding anything to the contrary contained in this Agreement, the Authority shall have the right, but not the obligation, to appoint at its cost from time to time and at any time, another firm (the "**Additional Auditors**") from the Panel of Chartered Accountants to audit and verify all those matters, expenses, costs, realizations and things which the Statutory Auditors are required to do, undertake or certify pursuant to this Agreement.

27.3 Certification of claims by Statutory Auditors

Any claim or document provided by the Concessionaire to the Authority in connection

with or relating to receipts, income, payments, costs, expenses, accounts or audit, and any matter incidental thereto shall be valid and effective only if certified by its Statutory Auditors. For the avoidance of doubt, such certification shall not be required for exchange of information in the normal course of business including the submission of any periodic information in pursuance of the provisions of this Agreement, save and except where such certification is expressly provided.

27.4 Set-off

In the event any amount is due and payable by the Authority to the Concessionaire, it may set-off any sums payable to it by the Concessionaire and pay the balance remaining. Any exercise by the Authority of its rights under this Clause 27.4 shall be without prejudice to any other rights or remedies available to it under this Agreement or otherwise.

27.5 Dispute resolution

In the event of there being any difference between the findings of the Additional Auditors or the Concurrent Auditors, as the case may be, and the certification provided by the Statutory Auditors, such Auditors shall meet to resolve the differences and if they are unable to resolve the same, such Dispute shall be resolved by the Authority by recourse to the Dispute Resolution Procedure.

ARTICLE 28 FORCE MAJEURE

28.1 Force Majeure

As used in this Agreement, the expression “Force Majeure” or “Force Majeure Event” shall, save and except as expressly provided otherwise, mean occurrence in India of any or all of Non-Political Event, Indirect Political Event and Political Event, as defined in Clauses 28.2, 28.3 and 28.4 respectively, if it affects the performance by the Party claiming the benefit of Force Majeure (the “Affected Party”) of its obligations under this Agreement and which act or event (a) is beyond the reasonable control of the Affected Party, and (b) the Affected Party could not have prevented or overcome by exercise of due diligence and following Good Industry Practice, and (c) has Material Adverse Effect on the Affected Party.

28.2 Non-Political Event

A Non-Political Event shall mean one or more of the following acts or events:

- a) act of God, epidemic, extremely adverse weather conditions, lightning, earthquake, landslide, cyclone, flood, volcanic eruption, chemical or radioactive contamination or ionizing radiation, fire or explosion (to the extent of contamination or radiation or fire or explosion originating from a source external to the Site);
- b) strikes or boycotts (other than those involving the Concessionaire, Contractors or their respective employees/representatives, or attributable to any act or omission of any of them) interrupting supplies and services to the Project for a continuous period of 24 (twenty four) hours and an aggregate period exceeding 7 (seven) days in an Accounting Year, and not being an Indirect Political Event set forth in Clause 28.3;
- c) any failure or delay of a Contractor but only to the extent caused by another Non-Political Event and which does not result in any offsetting compensation being payable to the Concessionaire by or on behalf of such Contractor;
- d) any judgment or order of any court of competent jurisdiction or statutory authority made against the Concessionaire in any proceedings for reasons other than (i) failure of the Concessionaire to comply with any Applicable Law or Applicable Permit, or (ii) on account of breach of any Applicable Law or Applicable Permit or of any contract, or (iii) enforcement of this Agreement, or (iv) exercise of any of its rights under this Agreement by the Authority;
- e) The discovery of geological conditions, toxic contamination or archaeological remains on the Site that could not reasonably have been expected to be discovered through a site inspection; or
- f) Any event or circumstances of a nature analogous to any of the foregoing.

28.3 Indirect Political Event

An Indirect Political Event shall mean one or more of the following acts or events:

- i. An act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, riot, insurrection, terrorist or military action,

civil commotion or politically motivated sabotage;

- ii. any political or economic upheaval, disturbance, movement, struggle or similar occurrence which could not have been anticipated or foreseen by a prudent person and which causes the construction or operation of the Project to be financially unviable or otherwise not feasible;
- iii. industry-wide or State-wide strikes or industrial action for a continuous period of 24 (twenty four) hours and exceeding an aggregate period of 7 (seven) days in an Accounting Year;
- iv. any civil commotion, boycott or political agitation which prevents collection of revenues by the Concessionaire for an aggregate period exceeding 30 (thirty) days in an Accounting Year;
- v. failure of the Authority to permit the Concessionaire to continue its Construction Works, with or without modifications, in the event of stoppage of such works after discovery of any geological or archaeological finds or for any other reason;
- vi. Any failure or delay of a Contractor to the extent caused by any Indirect Political Event and which does not result in any offsetting compensation being payable to the Concessionaire by or on behalf of such Contractor;
- vii. Any Indirect Political Event that causes a Non-Political Event; or
- viii. Any event or circumstances of a nature analogous to any of the foregoing.

28.4 Political Event

A Political Event shall mean one or more of the following acts or events by or on account of any Government Instrumentality:

- i. Change in Law, only if consequences thereof cannot be dealt with under and in accordance with the provisions of Article 35 and its effect, in financial terms, exceeds the sum specified in Clause 35.1;
- ii. Compulsory acquisition in national interest or expropriation of any Project Assets or rights of the Concessionaire or of the Contractors;
- iii. unlawful or unauthorized or without jurisdiction revocation of, or refusal to renew or grant without valid cause, any clearance, license, permit, authorization, no objection certificate, consent, approval or exemption required by the Concessionaire or any of the Contractors to perform their respective obligations under this Agreement and the Project Agreements; provided that such delay, modification, denial, refusal or revocation did not result from the Concessionaire's or any Contractor's inability or failure to comply with any condition relating to grant, maintenance or renewal of such clearance, license, authorization, no objection certificate, exemption, consent, approval or permit;
- iv. any failure or delay of a Contractor but only to the extent caused by another Political Event and which does not result in any offsetting compensation being payable to the Concessionaire by or on behalf of such Contractor; or
- v. Any event or circumstance of a nature analogous to any of the foregoing.

28.5 Duty to report Force Majeure Event

- 28.5.1 Upon occurrence of a Force Majeure Event, the Affected Party shall by notice report such occurrence to the other Party forthwith. Any notice pursuant hereto shall include full particulars of:
- i. The nature and extent of each Force Majeure Event which is the subject of any claim for relief under this Article 28 with evidence in support thereof;
 - ii. The estimated duration and the effect or probable effect which such Force Majeure Event is having or will have on the Affected Party's performance of its obligations under this Agreement;
 - iii. the measures which the Affected Party is taking or proposes to take for alleviating the impact of such Force Majeure Event; an
 - iv. Any other information relevant to the Affected Party's claim.
- 28.5.2 The Affected Party shall not be entitled to any relief for or in respect of a Force Majeure Event unless it shall have notified the other Party of the occurrence of the Force Majeure Event as soon as reasonably practicable, and in any event no later than 7 (seven) days after the Affected Party knew, or ought reasonably to have known, of its occurrence, and shall have given particulars of the probable material effect that the Force Majeure Event is likely to have on the performance of its obligations under this Agreement.
- 28.5.3 For so long as the Affected Party continues to claim to be materially affected by such Force Majeure Event, it shall provide the other Party with regular (and not less than weekly) reports containing information as required by Clause 28.5.1, and such other information as the other Party may reasonably request the Affected Party to provide.

28.6 Effect of Force Majeure Event on the Concession

- 28.6.1 Upon the occurrence of any Force Majeure Event prior to the Appointed Date, the period set forth in Clause 4.1 for fulfillment of Conditions Precedent and in Clause 22.1.1 for achieving Financial Close shall be extended by a period equal in length to the duration of the Force Majeure Event.
- 28.6.2 at any time after the Appointed Date, if any Force Majeure Event occurs:
- i. before COD, the Construction Period and the dates set forth in the Project Completion Schedule shall be extended by a period equal in length to the duration for which such Force Majeure Event subsists; or
 - ii. After COD, the Concessionaire shall be entitled to receive Annuity Payments plus interest due and payable under this Agreement. Provided any payment to be made under this clause shall be subject to deduction of outstanding dues of the Authority, if any.

28.7 Allocation of costs arising out of Force Majeure

- 28.7.1 Upon occurrence of any Force Majeure Event prior to the Appointed Date, the Parties shall bear their respective costs and no Party shall be required to pay to the other Party any costs thereof.

- 28.7.2 Upon occurrence of a Force Majeure Event after the Appointed Date, the costs incurred and attributable to such event and directly relating to the Project (the “Force Majeure Costs”) shall be allocated and paid as follows:
- i. upon occurrence of a Non-Political Event, the Parties shall bear their respective Force Majeure Costs and neither Party shall be required to pay to the other Party any costs thereof;
 - ii. upon occurrence of an Indirect Political Event, all Force Majeure Costs attributable to such Indirect Political Event, and not exceeding the Insurance Cover for such Indirect Political Event, shall be borne by the Concessionaire, and to the extent Force Majeure Costs exceed such Insurance Cover, one half of such excess amount shall be reimbursed by the Authority to the Concessionaire; and
 - iii. Upon occurrence of a Political Event, all Force Majeure Costs attributable to such Political Event shall be reimbursed by the Authority to the Concessionaire. For the avoidance of doubt, Force Majeure Costs may include interest payments on Debt Due, O&M Expenses, any increase in the cost of Construction Works on account of inflation and all other costs directly attributable to the Force Majeure Event, but shall not include any costs which are expressly covered under any provision of this Agreement or debt repayment obligations, and for determining such costs, information contained in the Financial Package may be relied upon to the extent that such information is relevant.
- 28.7.3 Save and except as expressly provided in this Article 28, neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, cost, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereto.

28.8 Termination Notice for Force Majeure Event

If a Force Majeure Event subsists for a period of 180 (one hundred and eighty) days or more within a continuous period of 365 (three hundred and sixty five) days, either Party may in its discretion terminate this Agreement by issuing a Termination Notice to the other Party without being liable in any manner whatsoever, save as provided in this Article 28, and upon issue of such Termination Notice, this Agreement shall, notwithstanding anything to the contrary contained herein, stand terminated forthwith; provided that before issuing such Termination Notice, the Party intending to issue the Termination Notice shall inform the other Party of such intention and grant 15 (fifteen) day’s time to make a representation, and may after the expiry of such 15 (fifteen) days period, whether or not it is in receipt of such representation, in its sole discretion issue the Termination Notice.

28.9 Termination Payment for Force Majeure Event

- 28.9.1 If Termination is on account of a Non-Political Event, the Authority shall make a Termination Payment to the Concessionaire in an amount to be calculated as under:
- (i) In case termination occurs prior to COD:
 1. Construction Payments due to the Concessionaire for Project Milestones completed and certified by the Authority on the date of the Termination Notice

under Article 28;

2. Debt Due as on date of the Termination Notice;

LESS

3. any insurance proceeds received and retained by the Concessionaire.

For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of termination payment, the milestone achieved would only be considered.

(ii) In case termination occurs post COD:

a) Construction Payments if not paid already as on date of the Termination Notice;

b) the O&M Payments due to the Concessionaire as on the date of the Termination Notice under Article 28;

c) Debt Due as on date of the Termination Notice;

LESS

d) any insurance proceeds received and retained by the Concessionaire

28.9.2 If Termination is on account of an Indirect Political Event, the Authority shall make a Termination Payment to the Concessionaire in an amount equal to:

(i) In case Termination occurs prior to COD:

a) Construction Payments due to the Concessionaire for Payment Milestones completed and certified by the Authority as on the date of the Termination Notice under Article 28;

b) Debt Due as on date of the Termination Notice; provided that if any insurance claims forming part of the Insurance Cover are not admitted and paid, then 80% (eighty per cent) of such unpaid claims shall be included in the computation of Debt Due. For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of Debt Due, the milestone achieved would only be considered ; and

c) 110% (one hundred and ten per cent) of the Adjusted Equity;

LESS

d) any unadjusted Mobilization Advance (and interest if any);

e) any insurance proceeds received and retained by the Concessionaire; and

f) any amounts due and payable by the Concessionaire under this Agreement.

(ii) In case termination occur post COD

a) Construction Payments if not paid already as on date of the Termination Notice;

b) the O&M Payments due to the Concessionaire as on the date of the

Termination Notice under Article 28;

c) Capex Annuity for the unexpired portion of the Operation Period;

LESS

d) any insurance proceeds received and retained by the Concessionaire; and

e) any amounts due and payable by the Concessionaire under this Agreement

28.9.3 If Termination is on account of a Political Event, the Authority shall make a Termination Payment to the Concessionaire in an amount that would be payable under Clause 31.3.3 as if it were an Authority Default.

28.10 Dispute resolution

In the event that the Parties are unable to agree in good faith about the occurrence or existence of a Force Majeure Event, such Dispute shall be finally settled in accordance with the Dispute Resolution Procedure; provided that the burden of proof as to the occurrence or existence of such Force Majeure Event shall be upon the Party claiming relief and/or excuse on account of such Force Majeure Event

28.11 Excuse from performance of obligations

If the Affected Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure Event, it shall be excused from performance of such of its obligations to the extent it is unable to perform on account of such Force Majeure Event; provided that:

(a) The suspension of performance shall be of no greater scope and of no longer duration than is reasonably required by the Force Majeure Event;

(b) the Affected Party shall make all reasonable efforts to mitigate or limit damage to the other Party arising out of or as a result of the existence or occurrence of such Force Majeure Event and to cure the same with due diligence; and

(c) When the Affected Party is able to resume performance of its obligations under this Agreement, it shall give to the other Party notice to that effect and shall promptly resume performance of its obligations hereunder.

28.12 Restoration of Project Assets

28.12.1 The Parties agree and undertake that in the event of floods, cyclone and other similar natural calamities in the region, the relevant Government Instrumentalities responsible for disaster management in the State may assume operational control of the Project Assets.

28.12.2 In the event of damages to the Project Assets due to the aforesaid assumption of the operational control of the Project Assets by any Government Instrumentality, the Authority shall pay to the Concessionaire the cost of restoration of the affected Project Assets, as estimated and certified by the Independent Engineer. For the avoidance of doubt, in the event of dispute in this regard, the Dispute Resolution Procedure shall apply.

ARTICLE 29 COMPENSATION FOR BREACH OF AGREEMENT

29.1 Compensation for default by the Concessionaire

Subject to the provisions of Clause 29.4, in the event of the Concessionaire being in material breach or default of this Agreement, it shall pay to the Authority by way of compensation, all direct costs suffered or incurred by the Authority as a consequence of such material breach or default, within 30 (thirty) days of receipt of the demand supported by necessary particulars thereof; provided that no compensation shall be payable under this Clause 29.1 for any material breach or default in respect of which Damages are expressly specified and payable under this Agreement or for any consequential losses incurred by the Authority.

29.2 Compensation for default by the Authority

Subject to the provisions of Clause 29.4, in the event of the Authority being in material breach or default of this Agreement at any time after the Appointed Date, it shall pay to the Concessionaire by way of compensation, all direct costs suffered or incurred by the Concessionaire as a consequence of such material breach or default within 30 (thirty) days of receipt of the demand supported by necessary particulars thereof; provided that no such compensation shall be payable for any material breach or default in respect of which Damages have been expressly specified in this Agreement. For the avoidance of doubt, compensation payable may include interest payments on debt, O&M Expenses, any increase in capital costs on account of inflation and all other costs directly attributable to such material breach or default but shall not include loss of Annuity Payments, debt repayment obligations or other consequential losses, loss of profit, EPC Contractors claims, and for determining such compensation, information contained in the Financial Package and the Financial Model may be relied upon to the extent it is relevant.

29.3 Mitigation of costs and damage

The Affected Party shall make all reasonable efforts to mitigate or limit the costs and damage arising out of or as a result of breach of Agreement by the other Party.

ARTICLE 30 SUSPENSION OF CONCESSIONAIRE’S RIGHTS

30.1 Suspension upon Concessionaire Default

Upon occurrence of a Concessionaire Default, the Authority shall be entitled, without prejudice to its other rights and remedies under this Agreement including its rights of Termination hereunder, to (a) suspend all rights of the Concessionaire under this Agreement, and pursuant hereto, and (b) exercise such rights itself and perform the obligations hereunder or authorize any other person to exercise or perform the same on its behalf during such suspension (the “**Suspension**”). Suspension hereunder shall be effective forthwith upon issue of notice by the Authority to the Concessionaire and may extend up to a period not exceeding 180 (one hundred and eighty) days from the date of issue of such notice; provided that upon written request from the Concessionaire and the Lenders’ Representative, the Authority shall extend the aforesaid period of 180 (one hundred and eighty) days by a further period not exceeding 90 (ninety) days.

30.2 Authority to act on behalf of Concessionaire

- 30.2.1 During the period of Suspension, the Authority shall, on behalf of the Concessionaire, collect all revenues under and in accordance with this Agreement and deposit the same in the Escrow Account. The Authority shall be entitled to make withdrawals from the Escrow Account for meeting the O&M Expenses and for meeting the costs incurred by it for remedying and rectifying the cause of Suspension, and thereafter for defraying the expenses specified in Clause 25.3.
- 30.2.2 During the period of Suspension hereunder, all rights and liabilities vested in the Concessionaire in accordance with the provisions of this Agreement shall continue to vest in the Concessionaire and all things done or actions taken, including expenditure incurred by the Authority for discharging the obligations of the Concessionaire under and in accordance with this Agreement and the Project Agreements, shall be deemed to have been done or taken for and on behalf of the Concessionaire and the Concessionaire undertakes to indemnify the Authority for all costs incurred- during such period. The Concessionaire hereby licenses and sub-licenses respectively, the Authority or any other person authorized by it under Clause 30.1 to use during Suspension, all Intellectual Property belonging to or licensed to the Concessionaire with respect to the Project and its design, engineering, construction, operation and maintenance, and which is used or created by the Concessionaire in performing its obligations under the Agreement.

30.3 Revocation of Suspension

- 30.3.1 In the event that the Authority shall have rectified or removed the cause of Suspension within a period not exceeding 90 (ninety) days from the date of Suspension, it shall revoke the Suspension forthwith and restore all rights of the Concessionaire under this Agreement. For the avoidance of doubt, the Parties expressly agree that the Authority may, in its discretion, revoke the Suspension at any time, whether or not the cause of Suspension has been rectified or removed hereunder.
- 30.3.2 Upon the Concessionaire having cured the Concessionaire Default within a period not exceeding 90 (ninety) days from the date of Suspension, the Authority shall revoke the Suspension forthwith and restore all rights of the Concessionaire under this Agreement.

30.4 Substitution of Concessionaire

At any time during the period of Suspension, the Lenders' Representative, on behalf of Senior Lenders, shall be entitled to substitute the Concessionaire under and in accordance with the Substitution Agreement, and upon receipt of notice thereunder from the Lenders' Representative, the Authority shall withhold Termination for a period not exceeding 180 (one hundred and eighty) days from the date of Suspension, and any extension thereof under Clause 30.1, for enabling the Lenders' Representative to exercise its rights of substitution on behalf of Senior Lenders.

30.5 Termination

- 30.5.1 At any time during the period of Suspension under this Article 30, the Concessionaire may by notice require the Authority to revoke the Suspension and issue a Termination Notice. Subject to the rights of the Lenders' Representative to undertake substitution in accordance with the provisions of this Agreement and within the period specified in Clause 30.4, the Authority shall, within 15 (fifteen) days of receipt of such notice, terminate this Agreement under and in accordance with Article 31 as if it is a Concessionaire Default under Clause 31.1.
- 30.5.2 Notwithstanding anything to the contrary contained in this Agreement, in the event that Suspension is not revoked within 180 (one hundred and eighty) days from the date of Suspension hereunder or within the extended period, if any, set forth in Clause 30.1, the Concession Agreement shall, upon expiry of the aforesaid period, be deemed to have been terminated by mutual agreement of the Parties and all the provisions of this Agreement shall apply, mutatis mutandis, to such Termination as if a Termination Notice had been issued by the Authority upon occurrence of a Concessionaire Default.

ARTICLE 31 TERMINATION

31.1 Termination for Concessionaire Default

31.1.1 Save as otherwise provided in this Agreement, in the event that any of the defaults specified below shall have occurred, and the Concessionaire fails to cure the default within the Cure Period set forth below, or where no Cure Period is specified, then within a Cure Period of 60 (sixty) days, the Concessionaire shall be deemed to be in default of this Agreement (the “**Concessionaire Default**”), unless the default has occurred as a result of any breach of this Agreement by the Authority or due to Force Majeure. The defaults referred to herein shall include the following:

- a. The Performance Security has been encashed and appropriated in accordance with Clause 9.2 and the Concessionaire fails to replenish or provide fresh Performance Security within a Cure Period of 15 (fifteen) days;
- b. subsequent to the replenishment or furnishing of fresh Performance Security in accordance with Clause 9.2, the Concessionaire fails to meet any Condition Precedent or cure the Concessionaire Default, as the case may be, for which whole or part of the Performance Security was appropriated, within a Cure Period of 120 (one hundred and twenty) days;
- c. the Concessionaire does not achieve the latest outstanding Project Milestone due in accordance with the provisions of Schedule G and continues to be in default for 120 (one hundred and twenty) days;
- d. The Concessionaire abandons or manifests intention to abandon the construction or operation of the Project without the prior written consent of the Authority;
- e. COD does not occur within the period specified in Clause 12.3.3;
- f. the Punch List items have not been completed within the period set forth in Clause 14.4.1;
- g. the Concessionaire has failed to fulfil the Key Performance Indicators (KPIs) that has led to a Concessionaire Event of Default in accordance with Schedule C
- h. the Concessionaire is in breach of the Maintenance Requirement, Maintenance Manual or the EHS Plan, as the case may be;
- i. the Concessionaire has failed to make any payment to the Authority within the period specified in this Agreement;
- j. an Escrow Default has occurred and the Concessionaire fails to cure the default within a Cure Period of 15 (fifteen) days;
- k. upon occurrence of a Financial Default, the Lenders’ Representative has by notice required the Authority to undertake Suspension or Termination, as the case may be, in accordance with the Substitution Agreement and the Concessionaire fails to cure the default within the Cure Period specified hereinabove;
- l. a breach of any of the Project Agreements by the Concessionaire has caused a Material Adverse Effect;

- m. the Concessionaire creates any Encumbrance in breach of this Agreement;
- n. the Concessionaire repudiates this Agreement or otherwise takes any action or evidences or conveys an intention not to be bound by the Agreement;
- o. a Change in Ownership has occurred in breach of the provisions of Clause 5.3;
- p. there is a transfer, pursuant to law either of (i) the rights and/or obligations of the Concessionaire under any of the Project Agreements, or of (ii) all or part of the assets or undertaking of the Concessionaire, and such transfer causes a Material Adverse Effect;
- q. an execution levied on any of the assets of the Concessionaire has caused a Material Adverse Effect;
- r. the Concessionaire is adjudged bankrupt or insolvent, or if a trustee or receiver is appointed for the Concessionaire or for the whole or material part of its assets that has a material bearing on the Project;
- s. the Concessionaire has been, or is in the process of being liquidated, dissolved, wound-up, amalgamated or reconstituted in a manner that would cause, in the reasonable opinion of the Authority, a Material Adverse Effect;
- t. a resolution for winding up of the Concessionaire is passed, or any petition for winding up of the Concessionaire is admitted by a court of competent jurisdiction and a provisional liquidator or receiver is appointed and such order has not been set aside within 90 (ninety) days of the date thereof or the Concessionaire is ordered to be wound up by a court except for the purpose of amalgamation or reconstruction; provided that, as part of such amalgamation or reconstruction, the entire property, assets and undertaking of the Concessionaire are transferred to the amalgamated or reconstructed entity and that the amalgamated or reconstructed entity has unconditionally assumed the obligations of the Concessionaire under this Agreement and the Project Agreements; and provided that:
 - (i) the amalgamated or reconstructed entity has the capability and operating experience necessary for the performance of its obligations under this Agreement and the Project Agreements;
 - (ii) the amalgamated or reconstructed entity has the financial standing to perform its obligations under this Agreement and the Project Agreements and has a credit worthiness at least as good as that of the Concessionaire as at the Appointed Date; and
 - (iii) Each of the Project Agreements remains in full force and effect;
- u. any representation or warranty of the Concessionaire herein contained which is, as of the date hereof, found to be materially false, incorrect or misleading or the Concessionaire is at any time hereafter found to be in breach thereof;
- v. the Concessionaire submits to the Authority any statement, notice or other document, in written or electronic form, which has a material effect on the Authority's rights, obligations or interests and which is false in material particulars;

- w. the Concessionaire has failed to fulfill any obligation, for which failure Termination has been specified in this Agreement;
- x. the Concessionaire issues a Termination Notice in violation of this Agreement;
- y. the Concessionaire commits a default in complying with any other provision of this Agreement if such default causes a Material Adverse Effect on the Authority.

31.1.2 Without prejudice to any other rights or remedies which the Authority may have under this Agreement, upon occurrence of a Concessionaire Default, the Authority shall be entitled to terminate this Agreement by issuing a Termination Notice to the Concessionaire; provided that before issuing the Termination Notice, the Authority shall by a notice inform the Concessionaire of its intention to issue such Termination Notice and grant 15 (fifteen) days to the Concessionaire to make a representation, and may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice, subject to the provisions of Clause 31.1.3.

31.1.3 The Authority shall, if there be Senior Lenders, send a copy of its notice of intention to issue a Termination Notice referred to in Clause 31.1.2 to inform the Lenders' Representative and grant 15 (fifteen) days to the Lenders' Representative, for making a representation on behalf of the Senior Lenders stating the intention to substitute the Concessionaire in accordance with the Substitution Agreement. In the event the Authority receives such representation on behalf of Senior Lenders, it shall, in its discretion, either withhold Termination for a period not exceeding 180 (one hundred and eighty) days from the date of such representation or exercise its right of Suspension, as the case may be, for enabling the Lenders' Representative to exercise the Senior Lenders' right of substitution in accordance with the Substitution Agreement:

Provided that the Lenders' Representative may, instead of exercising the Senior Lenders' right of substitution, procure that the default specified in the notice is cured within the aforesaid period of 180 (one hundred and eighty) days, and upon such curing thereof, the Authority shall withdraw its notice referred to above and restore all the rights of the Concessionaire.

Provided further that upon written request from the Lenders' Representative and the Concessionaire, the Authority shall extend the aforesaid period of 180 (one hundred and eighty) days by such further period not exceeding 90 (ninety) days, as the Authority may deem appropriate.

31.2 Termination for Authority Default

31.2.1 In the event that any of the defaults specified below shall have occurred, and the Authority fails to cure such default within a Cure Period of 90 (ninety) days or such longer period as has been expressly provided in this Agreement, the Authority shall be deemed to be in default of this Agreement (the "**Authority Default**") unless the default has occurred as a result of any breach of this Agreement by the Concessionaire or due to Force Majeure. The defaults referred to herein shall include the following:

- i. The Authority commits a material default in complying with any of the provisions of this Agreement and such default has a Material Adverse Effect on the Concessionaire;
- ii. The Authority has failed to make any payment to the Concessionaire within the

period specified in this Agreement;

- iii. The Authority fails to provide, within a period of 180 (one hundred and eighty days) from the Appointed Date, statutory clearances required for construction of the Project; or
- iv. The Authority repudiates this Agreement or otherwise takes any action that amounts to or manifests an irrevocable intention not to be bound by this Agreement.

31.2.2 Without prejudice to any other right or remedy which the Concessionaire may have under this Agreement, upon occurrence of an Authority Default, the Concessionaire shall, subject to the provisions of the Substitution Agreement, be entitled to terminate this Agreement by issuing a Termination Notice to the Authority; provided that before issuing the Termination Notice, the Concessionaire shall by a notice inform the Authority of its intention to issue the Termination Notice and grant 15 (fifteen) days to the Authority to make a representation, and may after the expiry of such 15 (fifteen) days, whether or not it is in receipt of such representation, issue the Termination Notice.

31.3 Termination Payment

31.3.1 Upon Termination on account of a Concessionaire Default during the Operation Period, the Authority shall pay to the Concessionaire, by way of Termination Payment, an amount equal to 65% (sixty five per cent) of the sum of Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date.

31.3.2 Notwithstanding to the provisions of Clause 31.3.1, upon Termination on account of a Concessionaire Default during the Construction Period (prior COD), the Authority shall pay to the Concessionaire, by way of Termination Payment, the aggregate of:

- a. Construction Payments due to the Concessionaire for Payment Milestones completed and certified by the Authority as on the date of the Termination Notice;
 - b. 85% of Debt Due;
- LESS
- c. unadjusted Mobilization Advance;
 - d. any amounts due and payable by the Concessionaire under this Agreement.

For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of Termination Payment, the milestone achieved would only be considered.

31.3.3 Upon Termination on account of an Authority Default, the Authority shall pay to the Concessionaire, by way of Termination Payment, an amount equal to:

- i. In case the termination occurs prior to COD
 - a. Construction Payments due to the Concessionaire for Payment Milestones completed and certified by the Authority as on the date of the Termination Notice;

b. Debt Due as on the date of Termination Notice less insurance cover; provided that if any insurance claims forming part of the Insurance Cover are not admitted and paid, then 80% (eighty per cent) of such unpaid claims shall be included in the computation of Debt Due;

c. 150% (one hundred and fifty per cent) of the Adjusted Equity;

LESS

d. any unadjusted Mobilization Advance;

e. any amounts due and payable by the Concessionaire under this Agreement.

For the avoidance of doubt, it is clarified that in case of termination happening in between two Payment Milestones, for the purpose of calculation of Debt Due, the milestone achieved would only be considered.

ii. In case the termination occurs on or after COD, the Authority shall pay to the Concessionaire, by way of Termination Payment, an amount equal to

a. Construction Payments if not already paid as on the date of the Termination Notice;

b. O&M Payments due to the Concessionaire as on the date of the Termination Notice;

c. Annuity Payments remaining unpaid for and in respect of the Concession Period, including interest thereon up to the Transfer Date ;

LESS

d. any amounts due and payable by the Concessionaire under this Agreement.

31.3.4 Termination Payment shall become due and payable to the Concessionaire within 15 (fifteen) days of a demand being made by the Concessionaire to the Authority with the necessary particulars, and in the event of any delay, the Authority shall pay interest at a rate equal to 3% (three per cent) above the daily average Bank Rate on the amount of Termination Payment remaining unpaid; provided that such delay shall not exceed 90 (ninety) days. For the avoidance of doubt, it is expressly agreed that Termination Payment shall constitute full discharge by the Authority of its payment obligations in respect thereof hereunder.

31.3.5 The Concessionaire expressly agrees that Termination Payment under this Article 31 shall constitute a full and final settlement of all claims of the Concessionaire on account of Termination of this Agreement for any reason whatsoever and that the Concessionaire or any shareholder thereof shall not have any further right or claim under any law, treaty, convention, contract or otherwise.

31.4 Certain limitations on Termination Payment

31.4.1 During the Construction Period, Termination Payment due and payable under this Agreement shall be computed with reference to the Debt Due in accordance with the provisions of this Agreement. The Parties also agree that for the purposes of computing Termination Payment, the Debt Due shall at no time exceed 85% (eighty five per cent) of the Total Project Cost.

31.4.2 The amount payable in respect of any Debt Due expressed in foreign currency shall be computed at the Reference Exchange Rate for conversion into the relevant foreign currency as on the date of Termination Payment. Provided further that all borrowings in foreign currency shall be restricted to the financing of Total Project Cost and any borrowings in excess thereof shall not qualify for computation of Termination Payment. It is clarified that the rate of conversion of such foreign currency shall be calculated on the date on which the Agreement is terminated.

31.5 Other rights and obligations of the Authority

Upon Termination for any reason whatsoever, the Authority shall:

- i. Be deemed to have taken possession and control of the Project forthwith;
- ii. Take possession and control of all materials, stores, implements, construction plants and equipment on or about the Site;
- iii. Be entitled to restrain the Concessionaire and any person claiming through or under the Concessionaire from entering upon the Site or any part of the Project;
- iv. Require the Concessionaire to comply with the Divestment Requirements set forth in Clause 32.1; and
- v. succeed upon election by the Authority, without the necessity of any further action by the Concessionaire, to the interests of the Concessionaire under such of the Project Agreements as the Authority may in its discretion deem appropriate, and shall upon such election be liable to the Contractors only for compensation accruing and becoming due and payable to them under the terms of their respective Project Agreements from and after the date the Authority elects to succeed to the interests of the Concessionaire. For the avoidance of doubt, the Concessionaire acknowledges and agrees that all sums claimed by such Contractors as being -due and owing for works and services performed or accruing on account of any act, omission or event prior to such date shall constitute debt between the Concessionaire and such Contractors, and the Authority shall not in any manner be liable for such sums. It is further agreed that in the event the Authority elects to cure any outstanding defaults under such Project Agreements, the amount expended by the Authority for this purpose shall be deducted from the Termination Payment.

31.6 Survival of rights

Notwithstanding anything to the contrary contained in this Agreement, but subject to the provisions of Clause 31.3.5, any Termination pursuant to the provisions of this Agreement shall be without prejudice to the accrued rights of either Party including its right to claim and recover money damages, insurance proceeds, security deposits, and other rights and remedies, which it may have in law or contract. All rights and obligations of either Party under this Agreement, including Termination Payments and Divestment Requirements, shall survive the Termination to the extent such survival is necessary for giving effect to such rights and obligations.

ARTICLE 32 DIVESTMENT OF RIGHTS AND INTEREST

32.1 Divestment Requirements

32.1.1 Upon Termination, the Concessionaire shall comply with and conform to the following Divestment Requirements:

- a) Notify to the Authority forthwith the location and particulars of all Project Assets;
- b) deliver forthwith the actual or constructive possession of the Project, free and clear of all Encumbrances, save and except to the extent set forth in the Substitution Agreement;
- c) cure all Project Assets, of all defects and deficiencies so that the Project is compliant with the Maintenance Requirements; provided that in the event of Termination during the Construction Period, all Project Assets shall be handed over on 'as is where is' basis after bringing them to a safe condition;
- d) deliver and transfer relevant records, reports, Intellectual Property and other licenses pertaining to the Project and its design, engineering, construction, operation and maintenance, including all programmers and manuals pertaining thereto, and complete 'as built' Drawings as on the Transfer Date. For the avoidance of doubt, the Concessionaire represents and warrants that the Intellectual Property delivered hereunder shall be adequate and complete for the design, engineering, construction, operation and maintenance of the Project and shall be assigned to the Authority free of any Encumbrance;
- e) Transfer and/or deliver all Applicable Permits to the extent permissible under Applicable Laws;
- f) execute such deeds of conveyance, documents and other writings as the Authority may reasonably require for conveying, divesting and assigning all the rights, title and interest of the Concessionaire in the Project Assets, including manufacturers' warranties in respect of any plant or equipment and the right to receive outstanding insurance claims to the extent due and payable to the Authority, absolutely unto the Authority or its nominee; and.
- g) Comply with all other requirements as may be prescribed or required under Applicable Laws for completing the divestment and assignment of all rights, title and interest of the Concessionaire in the Project, free from all Encumbrances, absolutely unto the Authority or to its nominee.

32.1.2 Subject to the exercise by the Authority of its rights under this Agreement or under any of the Project Agreements to perform or procure the performance by a third party of any of the obligations of the Concessionaire, the Parties shall continue to perform their obligations under this Agreement, notwithstanding the issuance of any Termination Notice, until the Termination of this Agreement becomes effective in accordance with its terms.

32.2 Inspection and cure

Not earlier than 90 (ninety) days prior to Termination but not later than 15 (fifteen)

days prior to the effective date of such Termination, the Independent Engineer shall verify, after giving due notice to the Concessionaire specifying the time, date and place of such verification and/or inspection, compliance by the Concessionaire with the Maintenance Requirements, and if required, cause appropriate tests to be carried out at the Concessionaire's cost for this purpose. Defaults, if any, in the Maintenance Requirements shall be cured by the Concessionaire at its cost and the provisions of Article 33 shall apply, mutatis mutandis, in relation to curing of defects or deficiencies under this Article 32.

32.3 Cooperation and assistance on transfer of Project

- 32.3.1 The Parties shall cooperate and take all necessary measures, in good faith, to achieve a smooth transfer of the Project in accordance with the provisions of this Agreement so as to protect the safety of and avoid undue delay or inconvenience to the Users, other members of the public or the lawful occupiers of any part of the Site.
- 32.3.2 The Parties shall provide to each other, 9 (nine) months prior to the Transfer Date in the event of Termination by efflux of time and immediately in the event of either Party conveying to the other Party its intent to issue a Termination Notice, as the case may be, as much information and advice as is reasonably practicable regarding the proposed arrangements for operation of the Project following the Transfer Date. The Concessionaire shall further provide such reasonable advice and assistance as the Authority, its concessionaire or agent may reasonably require for operation of the Project until the expiry of 6 (six) months after the Transfer Date.
- 32.3.3 The Authority shall have the option to purchase or hire from the Concessionaire at a fair market value and free from any encumbrance all or any part of the plant and machinery used in connection with the Project but which does not form part of the assets specified in Clause 32.1.1 and is reasonably required in connection with operation of the Project. For the avoidance of doubt, in the event of dispute or difference relating to fair market value, the Dispute Resolution Procedure shall apply.

32.4 Vesting Certificate

The divestment of all rights, title and interest in the Project shall be deemed to be complete on the date when all of the Divestment Requirements have been fulfilled, and the Authority shall, without unreasonable delay, thereupon issue a certificate substantially in the form set forth in Schedule-Q (the "**Vesting Certificate**"), which will have the effect of constituting evidence of divestment by the Concessionaire of all of its rights, title and interest in the Project, and their vesting in the Authority pursuant hereto. It is expressly agreed that any defect or deficiency in the Divestment Requirements shall not in any manner be construed or interpreted as restricting the exercise of any rights by the Authority or its nominee on, or in respect of, the Project on the footing that all Divestment Requirements have been complied with by the Concessionaire.

32.5 Divestment costs etc.

- 32.5.1 The Concessionaire shall bear and pay all costs incidental to divestment of all of the rights, title and interest of the Concessionaire in the Project Assets in favor of the Authority upon Termination, save and except that all stamp duties payable on any

deeds or Documents executed by the Concessionaire in connection with such Divestment shall be borne by the Authority.

32.5.2 In the event of any Dispute relating to matters covered by and under this Article 32, the Dispute Resolution Procedure shall apply.

ARTICLE 33 DEFECTS LIABILITY AFTER TERMINATION

33.1 Liability for defects after Termination

The Concessionaire shall be responsible for all defects and deficiencies in the Project for a period of 120 (one hundred and twenty) days after Termination, and it shall have the obligation to repair or rectify, at its own cost, all defects and deficiencies observed by the Independent Engineer in the Project during the aforesaid period. In the event that the Concessionaire fails to repair or rectify such defect or deficiency within a period of 15 (fifteen) days from the date of notice issued by the Authority in this behalf, the Authority shall be entitled to get the same repaired or rectified at the Concessionaire's risk and cost so as to make the Project conform to the Maintenance Requirements. All costs incurred by the Authority hereunder shall be reimbursed by the Concessionaire to the Authority within 15 (fifteen) days of receipt of demand thereof, and in the event of default in reimbursing such costs, the Authority shall be entitled to recover the same from the funds retained in the Escrow Account under the provisions of Clause 33.2 or from the Performance Guarantee provided thereunder. For the avoidance of doubt, the provisions of this Article 33 shall not apply if Termination occurs prior to COD.

33.2 Retention in Escrow Account

- 33.2.1 Notwithstanding anything to the contrary contained in this Agreement, but subject to the provisions of Clause 33.2.3, a sum equal to 15% (fifteen per cent) of the Annuity Payment due and payable immediately preceding the Transfer Date shall be retained in the Escrow Account for a period of 120 (one hundred and twenty) days after Termination for meeting the liabilities, if any, arising out of or in connection with the provisions of Clause 33.1.
- 33.2.2 Without prejudice to the provisions of Clause 33.2.1, the Independent Engineer shall carry out an inspection of the Project at any time between 210 (two hundred and ten) and 180 (one hundred and eighty) days prior to the Termination and if it recommends that the status of the Project is such that a sum larger than the amount stipulated in Clause 33.2.1 should be retained in the Escrow Account and for a period longer than the aforesaid 120 (one hundred and twenty) days, the amount recommended by the Independent Engineer shall be retained in the Escrow Account for the period specified by it.
- 33.2.3 The Concessionaire may, for the performance of its obligations under this Article 33, provide to the Authority in the form of Account Payee Demand Draft, Banker's Cheque or e - Bank Guarantee from a Bank for a sum equivalent to the amount determined under Clause 33.2.1 or 33.2.2, as the case may be, and for the period specified therein, substantially in the form set forth in Schedule-F (the "**Performance Guarantee**"), to be modified, mutatis mutandis, for this purpose, and the Authority shall, without prejudice to its other rights and remedies hereunder or in law, be entitled to encash and appropriate the required amounts from the Performance Guarantee for undertaking the repairs or rectification at the Concessionaire's risk and cost in accordance with the provisions of this Article 33. Upon furnishing of a Performance Guarantee under this Clause 33.2.3, the retention of funds in the Escrow Account in terms of Clause 33.2.1 or 33.2.2, as the case may be, shall be dispensed with.

ARTICLE 34 ASSIGNMENT AND CHARGES

34.1 Restrictions on assignment and charges

- 34.1.1 Subject to Clauses 34.2 and 34.3, this Agreement shall not be assigned by the Concessionaire to any person, save and except with the prior consent in writing of the Authority, which consent the Authority shall be entitled to decline without assigning any reason.
- 34.1.2 Subject to the provisions of Clause 34.2, the Concessionaire shall not create nor permit to subsist any Encumbrance, or otherwise transfer or dispose of all or any of its rights and benefits under this Agreement or any Project Agreement to which the Concessionaire is a party, except with prior consent in writing of the Authority, which consent the Authority shall be entitled to decline without assigning any reason.

34.2 Permitted assignment and charges

The restraints set forth in Clause 34.1 shall not apply to:

- i. liens arising by operation of law (or by an agreement evidencing the same) in the ordinary course of business of the Project;
- ii. mortgages/pledges/hypothecation of goods/assets other than Project Assets and their related documents of title, arising or created in the ordinary course of business of the Project, and as security only for indebtedness to the Senior Lenders under the Financing Agreements and/or for working capital arrangements for the Project. For the avoidance of doubt, the Senior Lenders would be entitled to create a lien on the Escrow Account, subject to and without prejudice to the rights of the Authority under this Agreement;
- iii. assignment of rights, interest and obligations of the Concessionaire to or in favor of the Lenders' Representative as nominee and for the benefit of the Senior Lenders, to the extent covered by and in accordance with the Substitution Agreement as security for financing provided by Senior Lenders under the Financing Agreements; and
- iv. Liens or encumbrances required by any Applicable Law.

34.3 Substitution Agreement

- 34.3.1 The Lenders' Representative, on behalf of Senior Lenders, may exercise the right to substitute the Concessionaire pursuant to the agreement for substitution of the Concessionaire (the "Substitution Agreement") to be entered into amongst the Concessionaire, the Authority and the Lenders' Representative, on behalf of Senior Lenders, substantially in the form set forth in Schedule-R.
- 34.3.2 Upon substitution of the Concessionaire under and in accordance with the Substitution Agreement, the Nominated Company substituting the Concessionaire shall be deemed to be the Concessionaire under this Agreement and shall enjoy all rights and be responsible for all obligations of the Concessionaire under this Agreement as if it were the Concessionaire; provided that where the Concessionaire is in breach of this Agreement on the date of such substitution, the Authority shall by notice grant a Cure Period of 120 (one hundred and twenty) days to the Concessionaire for curing such

breach.

34.4 Assignment by the Authority

Notwithstanding anything to the contrary contained in this Agreement, the Authority may, after giving 60 (sixty) days' notice to the Concessionaire, assign and/ or transfer any of its rights and benefits and/or obligations under this Agreement to an assignee who is, in the reasonable opinion of the Authority, capable of fulfilling all of the Authority's then outstanding obligations under this Agreement.

ARTICLE 35 CHANGE IN LAW

35.1 Increase in costs

If as a result of Change in Law, the Concessionaire suffers an increase in costs or reduction in net after-tax return or other financial burden, the aggregate financial effect of which exceeds the higher of Rs. 3,00,00,000/- (Rupees three crores only) or 2% (two per cent) of the total Annuity Payments in any Accounting Year, the Concessionaire may so notify the Authority and propose amendments to this Agreement so as to place the Concessionaire in the same financial position as it would have enjoyed had there been no such Change in Law resulting in increased costs, reduction in return or other financial burden as aforesaid. Upon notice by the Concessionaire, the Parties shall meet, as soon as reasonably practicable as but no later than 30 (thirty) days from the date of notice and either agree on amendments to this Agreement or on any other mutually agreed arrangement:

Provided that if no agreement is reached within 90 (ninety) days of the aforesaid notice, the Concessionaire may by notice require the Authority to pay an amount that would place the Concessionaire in the same financial position that it would have enjoyed had there been no such Change in Law, and within 15 (fifteen) days of receipt of such notice, along with particulars thereof, the Authority shall pay the amount specified therein; provided that if the Authority shall dispute such claim of the Concessionaire, the same shall be settled in accordance with the Dispute Resolution Procedure. For the avoidance of doubt, it is agreed that this Clause 35.1 shall be restricted to changes in law directly affecting the Concessionaire's costs of performing its obligations under this Agreement.

35.2 Reduction in costs

If as a result of Change in Law, the Concessionaire benefits from a reduction in costs or increase in net after-tax return or other financial gains, the aggregate financial effect of which exceeds the higher of Rs. 3,00,00,000/- (Rupees three crore only) or 2% (two per cent) of the total Annuity Payments in any Accounting Year, the Authority may so notify the Concessionaire and propose amendments to this Agreement so as to place the Concessionaire in the same financial position as it would have enjoyed had there been no such Change in Law resulting in decreased costs, increase in return or other financial gains as aforesaid. Upon notice by the Authority, the Parties shall meet, as soon as reasonably practicable as but no later than 30 (thirty) days from the date of notice and either agree on such amendments to this Agreement or on any other mutually agreed arrangement:

Provided that if no agreement is reached within 90 (ninety) days of the aforesaid notice, the Authority may by notice require the Concessionaire to pay an amount that would place the Concessionaire in the same financial position that it would have enjoyed had there been no such Change in Law, and within 15 (fifteen) days of receipt of such notice, along with particulars thereof, the Concessionaire shall pay the amount specified therein to the Authority; provided that if the Concessionaire shall dispute such claim of the Authority, the same shall be settled in accordance with the Dispute Resolution Procedure. For the avoidance of doubt, it is agreed that this Clause 35.2 shall be

restricted to changes in law directly affecting the Concessionaire's costs of performing its obligations under this Agreement.

35.3 Protection of NPV

Pursuant to the provisions of Clauses 35.1 and 35.2 and for the purposes of placing the Concessionaire in the same financial position as it would have enjoyed had there been no Change in Law affecting the costs, returns or other financial burden or gains, the Parties shall rely on the Financial Model to establish a net present value (the "NPV") of the net cash flow and make necessary adjustments in costs, revenues, compensation or other relevant parameters, as the case may be, to procure that the NPV of the net cash flow is the same as it would have been if no Change in Law had occurred. For the avoidance of doubt, the Parties expressly agree that for determination of NPV, the discount rate to be used shall be equal to the weighted average rate of interest at which the Concessionaire has raised the Debt Due under its Financing Agreements.

35.4 Restriction on cash compensation

The Parties acknowledge and agree that the demand for cash compensation under this Article 35 shall be restricted to the effect of Change in Law during the respective Accounting Year and shall be made at any time after commencement of such year, but no later than one year from the close of such Accounting Year. Any demand for cash compensation payable for and in respect of any subsequent Accounting Year shall be made after the commencement of the Accounting Year to which the demand pertains, but no later than 2 (two) years from the close of such Accounting Year.

ARTICLE 36 LIABILITY AND INDEMNITY

36.1 General indemnity

- 36.1.1 The Concessionaire shall indemnify, defend, save and hold harmless the Authority and its officers, servants, agents, Government Instrumentalities and Government owned and/or controlled entities/enterprises, (the “**Authority Indemnified Persons**”) against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by the Concessionaire of any of its obligations under this Agreement or any related agreement or on account of any defect or deficiency in the provision of services by the Concessionaire to the Authority or to any User, or from any negligence of the Concessionaire under contract or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of this Agreement on the part of the Authority Indemnified Persons.
- 36.1.2 The Authority shall indemnify, defend, save and hold harmless the Concessionaire against any and all suits, proceedings, actions, demands and claims from third parties for any loss, damage, cost and expense of whatever kind and nature arising out of (a) defect in title and/or the rights of the Authority in the land comprised in the Site, and/or (b) breach by the Authority of any of its obligations under this Agreement or any related agreement, which materially and adversely affect the performance by the Concessionaire of its obligations under this Agreement, save and except that where any such claim, suit, proceeding, action, and/or demand has arisen due to a negligent act or omission, or breach of any of its obligations under any provision of this Agreement or any related agreement, and/or breach of its statutory duty on the part of the Concessionaire, its subsidiaries, affiliates, contractors, servants or agents, the same shall be the liability of the Concessionaire.

36.2 Indemnity by the Concessionaire

- 36.2.1 Without limiting the generality of Clause 36.1, the Concessionaire shall fully indemnify, hold harmless and defend the Authority and the Authority Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:
- i. Failure of the Concessionaire to comply with Applicable Laws and Applicable Permits;
 - ii. Payment of taxes required to be made by the Concessionaire in respect of the income or other taxes of the Concessionaire’s contractors, suppliers and representatives; or
 - iii. Non-payment of amounts due as a result of materials or services furnished to the Concessionaire or any of its contractors which are payable by the Concessionaire or any of its contractors.
- 36.2.2 Without limiting the generality of the provisions of this Article 36, the Concessionaire shall fully indemnify, hold harmless and defend the Authority Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the Authority Indemnified Persons may hereafter suffer, or pay by

reason of any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with respect to any materials, information, design or process used by the Concessionaire or by the Concessionaire's Contractors in performing the Concessionaire's obligations or in any way incorporated in or related to the Project. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Concessionaire shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the Project, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, the Concessionaire shall promptly make every reasonable effort to secure for the Authority a license, at no cost to the Authority, authorizing continued use of the infringing work. If the Concessionaire is unable to secure such license within a reasonable time, the Concessionaire shall, at its own expense, and without impairing the Specifications and Standards, either replace the affected work, or part, or process thereof with non-infringing work or part or process, or modify the same so that it becomes non infringing.

36.3 Notice and contest of claims

In the event that either Party receives a claim or demand from a third party in respect of which it is entitled to the benefit of an indemnity under this Article 36 (the "**Indemnified Party**") it shall notify the other Party (the "**Indemnifying Party**") within 15 (fifteen) days of receipt of the claim or demand and shall not settle or pay the claim without the prior approval of the Indemnifying Party, which approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim or demand, it may conduct the proceedings in the name of the Indemnified Party, subject to the Indemnified Party being secured against any costs involved, to its reasonable satisfaction.

36.4 Defense of claims

36.4.1 The Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate any claim, action, suit or proceeding by any third party alleged or asserted against such Party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder, and reasonable costs and expenses thereof shall be indemnified by the Indemnifying Party. If the Indemnifying Party acknowledges in writing its obligation to indemnify the Indemnified Party in respect of loss to the full extent provided by this Article 36, the Indemnifying Party shall be entitled, at its option, to assume and control the defense of such claim, action, suit or proceeding, liabilities, payments and obligations at its expense and through the counsel of its choice; provided it gives prompt notice of its intention to do so to the Indemnified Party and reimburses the Indemnified Party for the reasonable cost and expenses incurred by the Indemnified Party prior to the assumption by the Indemnifying Party of such defense. The Indemnifying Party shall not be entitled to settle or compromise any claim, demand, action, suit or proceeding without the prior written consent of the Indemnified Party, unless the Indemnifying Party provides such security to the Indemnified Party as shall be reasonably required by the Indemnified Party to secure the loss to be indemnified hereunder to the extent so compromised or settled.

36.4.2 If the Indemnifying Party has exercised its rights under Clause 36.3, the Indemnified

Party shall not be entitled to settle or compromise any claim, action, suit or proceeding without the prior written consent of the Indemnifying Party (which consent shall not be unreasonably withheld or delayed).

- 36.4.3 If the Indemnifying Party exercises its rights under Clause 36.3, the Indemnified Party shall nevertheless have the right to employ its own counsel, and such counsel may participate in such action, but the fees and expenses of such counsel shall be at the expense of the Indemnified Party, when and as incurred, unless:
- i. The employment of counsel by such party has been authorized in writing by the Indemnifying Party;
 - ii. The Indemnified Party shall have reasonably concluded that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defense of such action;
 - iii. the Indemnifying Party shall not, in fact, have employed independent counsel reasonably satisfactory to the Indemnified Party, to assume the defense of such action and shall have been so notified by the Indemnified Party; or
 - iv. The Indemnified Party shall have reasonably concluded and specifically notified the Indemnifying Party either:
 1. that there may be specific defenses available to it which are different from or additional to those available to the Indemnifying Party; or
 2. That such claim, action, suit or proceeding involves or could have a material adverse effect upon it beyond the scope of this Agreement: Provided that if Sub-clauses (b), (c) or (d) of this Clause 36.4.3 shall be applicable, the counsel for the Indemnified Party shall have the right to direct the defense of such claim, demand, action, suit or proceeding on behalf of the Indemnified Party, and the reasonable fees and disbursements of such counsel shall constitute legal or other expenses hereunder.

36.5 No consequential claims

Notwithstanding anything to the contrary contained in this Article 36, the indemnities herein provided shall not include any claim or recovery in respect of any cost, expense, loss or damage of an indirect, incidental or consequential nature, including loss of profit, except as expressly provided in this Agreement.

36.6 Survival on Termination

The provisions of this Article 36 shall survive Termination.

ARTICLE 37 RIGHTS AND TITLE OVER THE SITE

37.1 Licensee rights

For the purpose of this Agreement, the Concessionaire shall have rights to the use of the Site as a licensee subject to and in accordance with this Agreement, and to this end; it may regulate the entry and use of the Project by third parties in accordance with and subject to the provisions of this Agreement.

37.2 Access rights of the Authority and others

- 37.2.1 The Concessionaire shall allow free access to the Site at all times for the authorized representatives and vehicles of the Authority and/or its contractors, Senior Lenders, and the Independent Engineer, and for the persons and vehicles duly authorized by any Government Instrumentality to inspect the Project and to investigate any matter within their authority, and upon reasonable notice, the Concessionaire shall provide to such persons reasonable assistance necessary to carry out their respective duties and functions.
- 37.2.2 The Concessionaire shall, for the purpose of operation and maintenance of any utility or road specified in Article 11, allow free access to the Site at all times for the authorized persons and vehicles of the controlling body of such utility or road.

37.3 Property taxes

All property taxes on the Site shall be payable by the Authority as owner of the Site; provided, however, that any such taxes payable by the Concessionaire under Applicable Laws for use of the Site shall not be reimbursed or payable by the Authority. For the avoidance of doubt, the Parties agree that stamp duties, if any, due and payable on the grant of license comprising this Agreement shall be paid by the Authority. Provided, however, that the Authority may require the Concessionaire to pay such stamp duties, which shall be reimbursed by the Authority to the Concessionaire within 15 (fifteen) days of receiving the demand thereof.

37.4 Restriction on sub-letting

The Concessionaire shall not sub-license or sub-let the whole or any part of the Site, save and except as may be expressly set forth in this Agreement; provided that nothing contained herein shall be construed or interpreted as restricting the right of the Concessionaire to appoint Contractors for the performance of its obligations hereunder including for operation and maintenance of all or any part of the Project.

ARTICLE 38 DISPUTE RESOLUTION

38.1 Dispute Resolution

- 38.1.1 Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the “Dispute”) shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure set forth in Clause 38.2.
- 38.1.2 The Parties agree to use their best efforts for resolving all Disputes arising under or in respect of this Agreement promptly, equitably and in good faith, and further agree to provide each other with reasonable access during normal business hours to all non privileged records, information and data pertaining to any Dispute.

38.2 Conciliation

In the event of any Dispute between the Parties, either Party may call upon the Independent Engineer to mediate and assist the Parties in arriving at an amicable settlement thereof. Failing mediation by the Independent Engineer or without the intervention of the Independent Engineer, either Party may require such Dispute to be referred to the Principal Secretary of the Authority and the Chairman of the Board of Directors of the Concessionaire for amicable settlement, and upon such reference, the said persons shall meet no later than 7 (seven) days from the date of reference to discuss and attempt to amicably resolve the Dispute. If such meeting does not take place within the 7 (seven) 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 referred to in Clause 38.1.1 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 of Clause 38.3.

38.3 Arbitration

- 38.3.1 Any Dispute which is not resolved amicably by conciliation, as provided in Clause 38.2, shall be finally decided by reference to arbitration by a Board of Arbitrators appointed in accordance with Clause 38.3.2 Such arbitration shall be held in accordance with the Rules of Nani Palkhivala Arbitration Centre, Chennai (the “**Rules**”), or such other rules as may be mutually agreed by the Parties and shall be subject to the provisions of the Arbitration Act. The venue of such arbitration shall be Chennai, and the language of arbitration proceedings shall be English.
- 38.3.2 There shall be a Board of three arbitrators, of whom each Party shall select one, and the third arbitrator shall be appointed by the two arbitrators so selected, and in the event of disagreement between the two arbitrators, the appointment shall be made in accordance with the Rules.
- 38.3.3 The arbitrators shall make a reasoned award (the "**Award**"). Any Award made in any arbitration held pursuant to this Article 38 shall be final and binding on the Parties as from the date it is made, and the Concessionaire and the Authority agree and undertake to carry out such Award without delay.

38.3.4 The Concessionaire and the Authority agree that an Award may be enforced against the Concessionaire and/or the Authority, as the case may be, and their respective assets wherever situated.

38.3.5 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. Further, the parties unconditionally acknowledge and agree that notwithstanding any dispute between them, each party shall proceed with the performance of its respective obligations, pending resolution of Dispute in accordance with this Article.

38.4 Adjudication by Regulatory Authority, Tribunal or Commission

In the event of constitution of a statutory regulatory authority, tribunal or commission, as the case may be, with powers to adjudicate upon disputes between the Concessionaire and the Authority, all Disputes arising after such constitution shall, instead of reference to arbitration under Clause 38.3, be adjudicated upon by such regulatory authority, tribunal or commission in accordance with the Applicable Law and all references to Dispute Resolution Procedure shall be construed accordingly. For the avoidance of doubt, the Parties hereto agree that the adjudication hereunder shall not be final and binding until an appeal against such adjudication has been decided by an appellate tribunal or court of competent jurisdiction, as the case may be, or no such appeal has been preferred within the time specified in the Applicable Law.

ARTICLE 39 DISCLOSURE

39.1 Disclosure of Specified Documents

The Concessionaire shall make available for inspection by any person, copies of this Concession Agreement, the Maintenance Manual, Maintenance Program, the EHS Plan, the DPR, the detailed Drawings and any other related documents (hereinafter collectively referred to as the “**Specified Documents**”), free of charge, during normal business hours on all working days at the Site and the Concessionaire’s Registered Office. The Concessionaire shall prominently display at the Site, public notices stating the availability of the Specified Documents for such inspection, and shall provide copies of the same to any person upon payment of copying charges on a ‘no profit no loss’ basis.

39.2 Disclosure of Documents relating to safety

The Concessionaire shall make available for inspection by any person copies of all Documents and data relating to safety of the Project, free of charge, during normal business hours on all working days, at the Concessionaire’s Registered Office. The Concessionaire shall make copies of the same available to any person upon payment of copying charges on a ‘no profit no loss’ basis.

Notwithstanding the provisions of Clauses 39.1 and 39.2, the Authority shall be entitled to direct the Concessionaire, from time to time, to withhold the disclosure of Protected Documents (as defined herein below) to any person in pursuance of the aforesaid Clauses.

Explanation:

The expression Protected Documents shall mean such of the Specified Documents or documents referred to in Clauses 39.1 and 39.2, or portions thereof, the disclosure of which the Authority is entitled to withhold under the provisions of the Right to Information Act, 2005.

ARTICLE 40 REDRESSAL OF PUBLIC GRIEVANCES

40.1 Complaints Register

- 40.1.1 The Concessionaire shall maintain a public relations office at the Site where it shall keep a register (the “**Complaint Register**”) open to public access at all times for recording of complaints by any person (the “**Complainant**”). Information relating to the availability of and access to the Complaint Register shall be prominently displayed by the Concessionaire at each the Site so as to bring it to the attention of all Users.
- 40.1.2 The Complaint Register shall be securely bound and each page thereof shall be duly numbered. It shall have appropriate columns including the complaint number, date, name and address of the Complainant, substance of the complaint and the action taken by the Concessionaire. Immediately after a complaint is registered, the Concessionaire shall give a receipt to the Complainant stating the date and complaint number.
- 40.1.3 Without prejudice to the provisions of Clauses 40.1.1 and 40.1.2, the Authority may, in consultation with the Concessionaire, specify the procedure for making complaints in electronic form and for responses thereto.

40.2 Redressal of complaints

- 40.2.1 The Concessionaire shall inspect the Complaint Register every day and take prompt and reasonable action for redressed of each complaint. The action taken shall be briefly noted in the Complaint Register and a reply stating the particulars thereof shall be sent by the Concessionaire to the Complainant under a certificate of posting.
- 40.2.2 Within 7 (seven) days of the close of each month, the Concessionaire shall send to the Authority and to the Independent Engineer a true photocopy each of all the pages of the Complaint Register on which any entry has been recorded during the course of such month, and upon perusal thereof, the Authority may, in its discretion, advise the Concessionaire to take such further action as the Authority may deem appropriate for a fair and just redressal of any grievance. The Concessionaire shall consider such advice and inform the Authority of its decision thereon, and if the Authority is of the opinion that the Complainant is entitled to further relief, the Authority may advise the Complainant to seek appropriate remedy under the Consumer Protection Act, 1986, at his own risk and cost.

ARTICLE 41 MISCELLANEOUS

41.1 Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in Chennai shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

41.2 Waiver of immunity

Each Party unconditionally and irrevocably:

- i. Agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
- ii. agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Party with respect to its assets;
- iii. waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- iv. consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

41.3 Depreciation

For the purposes of depreciation under Applicable Laws, the property representing the capital investment made by the Concessionaire in the Project shall be deemed to be acquired and owned by the Concessionaire. For the avoidance of doubt, the Authority shall not in any manner be liable in respect of any claims for depreciation to be made by the Concessionaire under Applicable Laws.

41.4 Delayed payments

41.4.1 The Parties hereto agree that payments due from one Party to the other Party under the provisions of this Agreement shall be made within the period set forth therein, and if no such period is specified, within 30 (thirty) days of receiving a demand along with the necessary particulars. Unless otherwise specified in this Agreement, in the event of delay beyond such period, the defaulting Party shall pay interest for the period of delay calculated at a rate equal to 4% (four per cent) above the Bank Rate, and recovery thereof shall be without prejudice to the rights of the Parties under this Agreement including Termination thereof.

41.4.2 Unless otherwise specified, any interest payable under this Agreement shall accrue on a daily outstanding basis and shall be compounded on the basis of quarterly rests.

41.5 Waiver

- 41.5.1 Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:
- i. Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
 - ii. Shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
 - iii. Shall not affect the validity or enforceability of this Agreement in any manner.
- 41.5.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

41.6 Liability for review of Documents and Drawings

Except to the extent expressly provided in this Agreement

- a) no review, comment or approval by the Authority or the Independent Engineer of any Project Agreement, Document or Drawing submitted by the Concessionaire nor any observation or inspection of the construction, operation or maintenance of the Project nor the failure to review, approve, comment, observe or inspect hereunder shall relieve or absolve the Concessionaire from its obligations, duties and liabilities under this Agreement, Applicable Laws and Applicable Permits; and
- b) The Authority shall not be liable to the Concessionaire by reason of any review, comment, approval, observation or inspection referred to in Sub-clause (a) above.

41.7 Exclusion of implied warranties etc.

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

41.8 Survival

41.8.1 Termination shall:

- i. Not relieve the Concessionaire or the Authority, as the case may be, of any obligations hereunder which expressly or by implication survive Termination hereof; and
- ii. except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such Termination or arising out of such Termination.

41.8.2 All obligations surviving Termination shall only survive for a period of 3 (three) years following the date of such Termination.

41.9 Entire Agreement

This Agreement and the Schedules together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Concessionaire arising from the Request for Proposals, as the case may be, shall be deemed to form part of this Agreement and treated as such.

41.10 Severability

If for any reason whatsoever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to the Dispute Resolution Procedure set forth under this Agreement or otherwise.

41.11 No partnership

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

41.12 Third parties

This Agreement is intended solely for the benefit of the Parties and their respective successors and permitted assigns, and nothing in this Agreement shall be construed to create any duty to, standard of care with reference to, or any liability to, any person not a Party to this Agreement including any Concessionaire's Contractor.

41.13 Successors and assigns

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns.

41.14 Notices

Unless the law requires to follow the specified mode of communication only as prescribed therein, any notice or other communication to be given by one contracting Party to the other Party under or in connection with the matters contemplated by this Agreement shall be routed through _____ under the hand of the authorized

representative and shall:

1. in the case of the Concessionaire, be given through _____ and marked for attention of the person set out below or to such other person as the Concessionaire may from time to time designate by notice to the Authority.

{Attention:

Designation:

Address:

Fax No:

Email ;}

2. in the case of the Authority, be given through _____ and be addressed to the person named below with a copy delivered to the Authority Representative or such other person as the Authority may from time to time designate by notice to the Concessionaire;

{Attention:

Designation:

Address:

Fax No:

Email :}; and

3. any notice or communication by one contracting Party to the other Party, given in accordance herewith, shall be deemed to have been delivered when given through or made on the _____.

41.15 Language

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

41.16 Counterparts

This Agreement may be executed in two counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

ARTICLE 42 DEFINITIONS

42.1 Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

“**Accounting Year**” means the financial year commencing from the first day of April of any calendar year and ending on the thirty-first day of March of the next calendar year;

“**Additional Auditors**” shall have the meaning as set forth in Clause 27.2.3;

“**Rehabilitation Works Post COD**” shall have the meaning as set forth in Clause 27.2.3;

“**Adjusted Equity**” means the Equity funded in Indian Rupees and adjusted on the first day of the current month (the “**Reference Date**”), in the manner set forth below, to reflect the change in its value on account of depreciation and variations in WPI, and for any Reference Date occurring on or before COD, the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and the Reference Date;

“**Adyar River**” means the main channel of Adyar river and its associated right-of-way, which includes the land, water and other existing assets within the defined boundaries of the river as described in Schedule A. The existing assets within the main channel of the Adyar River comprise of various components and infrastructure that are present at the time of the handover of the Right of Way (RoW) of the Site to the Concessionaire. These assets include, but not limited to, the following:

- (a) **Land:** The land within the right-of-way of the Adyar River, including the riverbanks, floodplains, and any other designated areas associated with the river channel.
- (b) **Fencing Wall:** Existing fencing or boundary walls that demarcate and protect the Adyar River channel or its adjacent areas.
- (c) **Bunds:** Embankments or levees constructed along the river channel to prevent flooding and manage water flow.
- (d) **Sewage Treatment Facilities:** Existing infrastructure or facilities for the treatment of sewage or wastewater that are located within the main channel of the Adyar River.
- (e) **River Channel Assets:** Any existing structures, embankments, or features within the river channel that have been specifically constructed or designed for the management or regulation of the river flow.
- (f) **Riverfront Assets:** Existing infrastructure or amenities located along the riverfront, such as walkways, parks, recreational areas, seating arrangements, or viewing platforms.
- (g) **Flood Management Assets:** Existing structures, barriers, or systems designed to mitigate flood risks and manage water levels within the Adyar River, including flood protection walls, flood gates, or drainage infrastructure.
- (h) **Solid Waste Management Assets:** Existing infrastructure or facilities related to the management, collection, treatment, or disposal of solid waste located within the main

channel of the Adyar River.

- (i) **Recreational Amenities and Parks:** Existing recreational facilities, parks, or amenities developed for public use and enjoyment along the Adyar River channel.
- (j) **Structures:** Existing structures, including buildings, road works, equipments, machinery, or other infrastructure situated within the RoW of the Adyar River.
- (k) **Environmental Protection Assets:** Existing measures, infrastructure, or initiatives aimed at protecting and preserving the environmental integrity and quality of the Adyar River, such as erosion control measures, riparian vegetation, or wildlife conservation initiatives.
- (l) **Ecology and Biodiversity Protection Assets:** Existing infrastructure, features, or initiatives specifically implemented for the protection and conservation of the river's ecology and biodiversity, including habitat restoration areas, nesting sites, or ecological corridors.
- (m) **Safety and Security Assets:** Existing infrastructure, measures, or systems related to safety and security within the Adyar River channel, such as safety fences, surveillance systems, or emergency response equipment.
- (n) **Other Assets:** Any other existing assets within the main channel of the Adyar River that are relevant to the Project

“**Affected Party**” shall have the meaning as set forth in Clause 28.1;

“**Agreement**” or “**Concession Agreement**” means this Agreement, its Recitals, and the Schedules hereto and any amendments thereto made in accordance with the provisions contained in this Agreement;

“**Annuity Payments**” shall have the meaning as set forth in Clause 23.6.2;

“**Annuity Payment Date**” shall have the meaning as set forth in Clause 23.6.2;

“**Appendix**” shall have the meaning as set forth in Clause 10.3.1;

“**Applicable Laws**” means all laws, brought into force and effect by GOI or the State Government including rules, regulations and notifications made thereunder, and judgments, decrees, injunctions, writs and orders of any court of record, applicable to this Agreement and the exercise, performance and discharge of the respective rights and obligations of the Parties hereunder, as may be in force and effect during the subsistence of this Agreement;

“**Applicable Permits**” means all clearances, licenses, permits, authorizations, no objection certificates, consents, approvals and exemptions required to be obtained or maintained under Applicable Laws in connection with the construction, operation and maintenance of the Project during the subsistence of this Agreement;

“**Appointed Date**” means the date on which Financial Close is achieved and every Condition Precedent is satisfied, in accordance with the provisions of this Agreement, and such date shall be the date of commencement of the Concession Period;

“**Approved Capacity**” means the rated operating capacity of the Project Assets as described in the Detailed Project Report (DPR) approved by the Authority;

“**Associate**” or “**Affiliate**” means, in relation to either Party {and/or Consortium Members},

a person who controls, is controlled by, or is under the common control with such Party {or Consortium Member} (as used in this definition, the expression “control” means, with respect to a person which is a company or corporation, the ownership, directly or indirectly, of more than 50% (fifty per cent) of the voting shares of such person, and with respect to a person which is not a company or corporation, the power to direct the management and Policies of such person, whether by operation of law or by contract or otherwise);

“**Authority**” shall have the meaning attributed thereto in the array of Parties as set forth in the Recitals;

“**Authority Default**” shall have the meaning as set forth in Clause 31.2.1;

“**Authority Indemnified Persons**” shall have the meaning set forth in Clause 36.1.1;

“**Authority Representative**” means such person or persons as may be authorized in writing by the Authority to act on its behalf under this Agreement and shall include any person or persons having authority to exercise any rights or perform and fulfill any obligations of the Authority under this Agreement;

“**Availability**” means the availability of the Project Assets to function at 100% of its Approved Capacity at any point of time as defined in Schedule C and the term '**Available**' shall be construed accordingly;

“**Award**” shall have the meaning set forth in Clause 38.3.3;

“**Bank**” means a bank incorporated in India and having a minimum net worth of Rs. 1,000 crore (Rupees one thousand crore) or any other bank acceptable to Senior Lenders, but does not include a bank in which any Senior Lender has an interest;

“**Bank Rate**” means the rate of interest specified by the Reserve Bank of India from time to time in pursuance of section 49 of the Reserve Bank of India Act, 1934 or any replacement of such Bank Rate for the time being in effect;

“**Bid**” means the documents in their entirety comprised in the bid submitted by the {selected bidder/Consortium} in response to the Request for Proposals in accordance with the provisions thereof and “Bids” shall mean the bids submitted by any and all prequalified bidders;

“**Bid Date**” means the last date on which the Bid may have been submitted in accordance with the provisions of the Request for Proposals;

“**Bid Project Cost**” shall have the meaning as set forth in Clause 23.1;

“**Bid Security**” means the security provided by the Concessionaire to the Authority along with the Bid, in accordance with the Request for Proposals, and which is to remain in force until substituted by the Performance Security;

“**COD**” or “**Commercial Operation Date**” shall have the meaning as set forth in Clause 15.1.1;

“**CPI (IW)**” means the Consumer Price Index for Industrial Workers as published by the Labour Bureau, Government of India and shall include any index which substitutes the CPI (IW), and any reference to CPI (IW) shall, unless the context otherwise requires, be construed

as a reference to the CPI (IW) published for the period ending with the preceding quarter;

"Capex Annuity" or "Annuity Payments" shall have the same meaning unless repugnant to the context or meaning;

"Change in Law" means the occurrence of any of the following after the Bid Date:

- (a) The enactment of any new Indian law;
- (b) The repeal, modification or re-enactment of any existing Indian law;
- (c) The commencement of any Indian law which has not entered into effect until the Bid Date;
- (d) a change in the interpretation or application of any Indian law by a judgment of a court of record which has become final, conclusive and binding, as compared to such interpretation or application by a court of record prior to the Bid Date; or
- (e) Any change in the rates of any of the Taxes that have a direct effect on the Project;

"Change in Ownership" means a transfer of the direct and/or indirect legal or beneficial ownership of any shares, or securities convertible into shares, that causes the aggregate holding of the {selected bidder/ Consortium Members}, together with {its/their} Associates, in the total Equity to decline below 51% (fifty one per cent) thereof during Construction Period and three years thereafter; provided that any material variation (as compared to the representations made by the Concessionaire during the bidding process for the purposes of meeting the minimum conditions of eligibility or for evaluation of its Bid) in the proportion of the equity holding of {the selected bidder/ any Consortium Member} to the total Equity, if it occurs prior to completion of a period three years after COD, shall constitute Change in Ownership;

"Change of Scope" shall have the meaning as set forth in Clause 16.1.1;

"Change of Scope Order" shall have the meaning as set forth in Clause 16.2.3;

"Class D Water Body" means a water body suitable for propagation of wildlife and fisheries as defined in the Guidelines for Water Quality Management, issued by Central Pollution Control Board (CPCB), Government of India, as revised, amended, supplemented, replaced from time to time;

"Coastal Regulation Zone Clearance" or "CRZ Clearance" shall have the meaning as ascribed thereto in the notification issued by Ministry of Environment, Forest and Climate Change (MoEFCC) under Environmental Protection Act 1986 or subsequent amendment thereto;

"Company" means the company acting as the Concessionaire under this Agreement;

"Completion Certificate" shall have the meaning as set forth in Clause 14.2;

"Completion Cost" shall have the meaning as set forth in Clause 23.6.1;

"Concession" shall have the meaning as set forth in Clause 3.1.1;

"Concessionaire" shall have the meaning attributed thereto in the array of Parties as set forth

in the Recitals;

“Concession Period” means the period starting on and from Appointed Date and ending on the Transfer Date. For avoidance of doubt it is clarified that the Concession Period shall include the Construction Period plus a fixed period of 15 years of Operation & Maintenance Period from the COD;

“Concessionaire Default” or “Concessionaire Event of Default” shall have the meaning as set forth in Clause 31.1.1;

“Conditions Precedent” shall have the meaning as set forth in Clause 4.1.1;

{**“Consortium”** shall have the meaning as set forth in Recital (D) ;}

{**“Consortium Member”** means a company specified in Recital (D) as a member of the Consortium ;}

“Construction Period” means the period beginning from the Appointed Date and ending on COD;

“Construction Works” means all works and things necessary to complete the Project in accordance with this Agreement;

“Construction Payments” means the payments to be made to the Concessionaire during the Construction Period, upon satisfactory completion of the Payment Milestones, which shall, in aggregate, be equivalent to 50% of the Bid Project Cost, as adjusted from time to time to reflect the variation in the Construction Price Index;

“Contractor” means the person or persons, as the case may be, with whom the Concessionaire has entered into any of the EPC Contract, the O&M Contract or any other material agreement or contract for construction, operation and/or maintenance of the Project or matters incidental thereto, but does not include a person who has entered into an agreement for providing financial assistance to the Concessionaire;

“Concessionaire's Representative” means the Person nominated by the Concessionaire to act on its behalf and liaise with the Authority for the purposes of this Agreement and notified as such in writing to the Authority;

“Cure Period” means the period specified in this Agreement for curing any breach or default of any provision of this Agreement by the Party responsible for such breach or default and shall:

(a) Commence from the date on which a notice is delivered by one Party to the other Party asking the latter to cure the breach or default specified in such notice;

(b) Not relieve any Party from liability to pay Damages or compensation under the provisions of this Agreement; and

(c) Not in any way be extended by any period of Suspension under this Agreement; provided that if the cure of any breach by the Concessionaire requires any reasonable action by the Concessionaire that must be approved by the Authority or the Independent Engineer hereunder, the applicable Cure Period shall be extended by the period taken by the Authority or the Independent Engineer to accord their approval;

“**DBFOT Annuity**” or “**Hybrid Annuity**” shall have the meaning as set forth in Recital (A);

“**Damages**” shall have the meaning as set forth in Sub-clause (w) of Clause 1.2.1;

“**Debt Due**” means the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date:

(a) the principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the “principal”) but excluding any part of the principal that had fallen due for repayment two years prior to the Transfer Date;

(b) all accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in Sub-clause (a) above until the Transfer Date but excluding (i) any interest, fees or charges that had fallen due one year prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, and (iii) any pre-payment charges in relation to accelerated repayment of debt except where such charges have arisen due to Authority Default; and

(c) any Subordinated Debt which is included in the Financial Package and disbursed by lenders for financing the Total Project Cost;

provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the purposes of this Agreement be deemed to be Debt Due even after such conversion and the principal thereof shall be dealt with as if such conversion had not been undertaken;

“**Debt Service**” means the sum of all payments on account of principal, interest, financing fees and charges due and payable in an Accounting Year to the Senior Lenders for and in respect of Debt Due under the Financing Agreements;

“**Designated Points**” means the designated points in Adyar River for collection and testing of water samples to ensure compliance with Specific Standards of River Quality (defined Schedule D) identified and described in Annexure III of Schedule A;

“**Detailed Project Report**” or “**DPR**” means the detailed project report prepared by the Concessionaire during the Development Period in accordance Annexure I of Schedule H and approved by the Authority in accordance with Clause 12.2 hereof.

“**Development Period**” means the period from the date of this Agreement until the Appointed Date;

“**Drawings**” means the detailed 'good for construction' drawings, technical information, plans, samples, patterns, models and specifications prepared by the Concessionaire for the Project, on the basis of the Specifications and Standards, Technical Specifications and which are approved by the Authority in accordance with the provisions of the Agreement.

“**DG Sets**” means the backup diesel generators set maintained by the Concessionaire at the Site, to ensure continuous supply of power for the operation of the Project, when the supply of power from the grid is not available;

“**DG Set Units**” shall have the meaning as set forth in Clause 23.7.2;

“**DG Fuel Cost**” shall have the meaning as set forth in Clause 23.7.2;

"Digested Sludge" means the sludge which is obtained after the treatment and digestion of the Sewage at the STFs;

"Dispute" shall have the meaning as set forth in Clause 38.1.1;

"Dispute Resolution Procedure" means the procedure for resolution of Disputes as set forth in Article 38;

"Divestment Requirements" means the obligations of the Concessionaire for and in respect of Termination as set forth in Clause 32.1;

"Document" or **"Documentation"** means documentation in printed or written form, or in tapes, discs, drawings, computer programmes, writings, reports, photographs, films, cassettes, or expressed in any other written, electronic, audio or visual form;

"EPC Contract" means the engineering, procurement and construction contract or contracts entered into by the Concessionaire with one or more Contractors for, inter alia, engineering and construction of the Project in accordance with the provisions of this Agreement;

"EPC Contractor" means the person with whom the Concessionaire has entered into an EPC Contract;

"EHS plan" means the environment management and health and safety plan prepared by the Concessionaire and approved by the Authority;

"EHS Requirements" means the environmental, social, labour, health and safety related requirements, including any requirements, which the Concessionaire is required to comply with in developing, operating and maintaining the Project, in accordance with the provision of Schedule L;

"Emergency" means a condition or situation that is likely to endanger the security of the individuals on or about the Project, including Users thereof, or which poses an immediate threat of material damage to any of the Project Assets;

"Encumbrances" means, in relation to the Project, any encumbrances such as mortgage, charge, pledge, lien, hypothecation, security interest, assignment, privilege or priority of any kind having the effect of security or other such obligations, and shall include any designation of loss payees or beneficiaries or any similar arrangement under any insurance policy pertaining to the Project, where applicable herein but excluding utilities referred to in Clause 11.1;

"Equity" means the sum expressed in Indian Rupees representing the paid up equity share capital of the Concessionaire for meeting the equity component of the Total Project Cost, and for the purposes of this Agreement shall include convertible instruments or other similar forms of capital, which shall compulsorily convert into equity share capital of the Company, and any interest-free funds advanced by any shareholder of the Company for meeting such equity component;

"Escrow Account" means an Account which the Concessionaire shall open and maintain with a Bank in which all inflows and outflows of cash on account of capital and revenue receipts and expenditures shall be credited and debited, as the case may be, in accordance with the provisions of this Agreement, and includes the Sub-Accounts of such Escrow

Account;

“Escrow Agreement” shall have the meaning as set forth in Clause 25.1.2;

“Escrow Bank” shall have the meaning as set forth in Clause 25.1.1;

“Escrow Default” shall have the meaning as set forth in Schedule-O;

“Essential Land” shall mean and include the following:

- a) The land earmarked for the development of STPs as identified in Annexure I of Schedule A;
- b) The land earmarked for the development of Parks as identified in Annexure I of Schedule A;
- c) The necessary land required to fulfil the Specific KPIs for Riverfront Development as specified in Schedule C;
- d) The designated land within the RoW of Adyar River for construction of interception and diversion works and laying of trunk sewers where alternative means of interception & diversion such as pipe carrying bridges are not viable; and
- e) Any other land, available within the right-of-way of Adyar River, required to ensure that Adyar River is transformed and made functional as a Class D Water Body;

“Estimated Project Cost” shall be the cost estimated by the Authority for development of the Project and provided in the Request for Proposal Volume I – Instructions to Bidders.

“Existing Assets” shall have the meaning as set forth in Annexure II of Schedule A;

“Financial Close” means the fulfillment of all conditions precedent to the initial availability of funds under the Financing Agreements which shall be communicated by the Lender’s Representative to the Authority in writing. Such communication from Lender’s Representative shall be treated as date on which the Financial Close is achieved;

“Financial Default” shall have the meaning as set forth in Schedule-R;

“Financial Model” means the financial model adopted by Senior Lenders, setting forth the capital and operating costs of the Project and revenues therefrom on the basis of which financial viability of the Project has been determined by the Senior Lenders, and includes a description of the assumptions and parameters used for making calculations and projections therein;

“Financial Package” means the financing package indicating the total capital cost of the Project and the means of financing thereof, as set forth in the Financial Model and approved by the Senior Lenders, and includes Equity, all financial assistance specified in the Financing Agreements and Subordinated Debt, if any;

“Financial Progress” means the schedule of construction costs to be incurred by the Concessionaire to achieve the Project Milestones in compliance with the Project Completion Schedule, defined in the Financial Package and / or the Financial Model as approved by the Senior Lenders;

“Financing Agreements” means the agreements executed by the Concessionaire in respect

of financial assistance to be provided by the Senior Lenders by way of loans, guarantees, subscription to non-convertible debentures and other debt instruments including loan agreements, guarantees, notes, debentures, bonds and other debt instruments, security agreements, and other documents relating to the financing (including refinancing) of the Total Project Cost, and includes amendments or modifications made in accordance with Clause 5.2.3;

“**Force Majeure**” or “**Force Majeure Event**” shall have the meaning ascribed to it in Clause 28.1;

“**Force Majeure Costs**” shall have the meaning ascribed to it in Clause 28.7.2;

“**Fuel Price**” means the prevailing price of diesel at Indian Oil Corporation or Hindustan Petroleum Corporation Limited's retail outlets in Chennai, as determined on the 15th day of a month;

“**GOI**” means the Government of India;

“**Good Industry Practice**” means the practices, methods, techniques, designs, standards, skills, diligence, efficiency, reliability and prudence which are generally and reasonably expected from a reasonably skilled and experienced operator engaged in the same type of undertaking as envisaged under this Agreement and which would be expected to result in the performance of its obligations by the Concessionaire in accordance with this Agreement, Applicable Laws and Applicable Permits in reliable, safe, economical and efficient manner and for providing safe, economical, reliable and efficient use of the Project;

“**Government**” means the Government of Tamil Nadu;

“**Government Instrumentality**” means any department, division or sub-division of the Government or the State Government and includes any commission, board, authority, agency or municipal and other local authority or statutory body, including Panchayat, under the control of the Government or the State Government, as the case may be, and having jurisdiction over all or any part of the Project or the performance of all or any of the services or obligations of the Concessionaire under or pursuant to this Agreement;

“**Gross Revenue**” means all gross revenues and receipts earned by the Concessionaire (before interest, depreciation, amortization and corporate income tax) from the operations of the Project Assets in accordance with terms hereof and shall include any monies received from sub-licensees and other persons by the Concessionaire as deposits (refundable or otherwise), but shall exclude the following:

- a) any insurance proceeds received by the Concessionaire relating to : (i) third party liability insurance paid or to be paid to the person whose claim(s) constitute(s) the risk or liability insured against; and (ii) any form of physical damage of assets, received for repair, reinstatement or otherwise, replacement, of such assets;
- b) any monies received by the Concessionaire, for or on behalf of any Government Instrumentality, as an authorized agent of such Government Instrumentality; and
- c) any deposit amounts refunded to the relevant sub-licensee or any other person authorized by the Authority in a particular Concession year provided these pertain

to past deposits on which Gross Revenue Share has been paid to the Authority

It is expressly clarified that:

- i. insurance proceeds referred to in exclusion (a) above, shall not include any exclusion of insurance proceeds received for loss of revenues and/or business interruption
- ii. monies referred to in exclusion (b) above, shall be excluded only if the same has been credited or will be credited by the Concessionaire to the relevant Government Instrumentality promptly and diligently and any fine, penalty or other amounts of similar nature that may accrue as a result of non-payment or delayed payment of such monies under the Applicable Laws, will not be excluded;

For the avoidance of doubt, Gross Revenues shall not include the monies paid by the Authority to the Concessionaire including Bid Project Cost, O&M Payment, and reimbursement of Power Charges

“Gross Revenue Share” shall have the meaning as set forth in Clause 17.20;

“Indemnified Party” means the Party entitled to the benefit of an indemnity pursuant to Article 36;

“Indemnifying Party” means the Party obligated to indemnify the other Party pursuant to Article 36;

“Independent Engineer” shall have the meaning as set forth in Clause 21.1;

“Indirect Political Event” shall have the meaning as set forth in Clause 28.3;

“Inspection Report” shall have the meaning as set forth in Clause 13.2;

“Insurance Cover” means the aggregate of the maximum sums insured under the insurances taken out by the Concessionaire pursuant to Article 26, and includes all insurances required to be taken out by the Concessionaire under Clause 26.2 but not actually taken, and when used in the context of any act or event, it shall mean the aggregate of the maximum sums insured and payable or deemed to be insured and payable in relation to such act or event;

“Intellectual Property” means all patents, trademarks, service marks, logos, get-up, trade names, internet domain names, rights in designs, blue prints, programs and manuals, drawings, copyright (including rights in computer software), database rights, semiconductor, topography rights, utility models, rights in know-how and other intellectual property rights, in each case whether registered or unregistered and including applications for registration, and all rights or forms of protection having equivalent or similar effect anywhere in the world;

“Inlet Point” means the point mutually agreed to between the Authority and the Concessionaire at the STFs where meters shall be installed for the purpose of determining the volume and concentration of the Sewage delivered at the Project;

“Invoice” means an invoice for payment of:

(a) the Construction Payments during the Construction Period; or

(b) the Capex Annuity and /or Annuity Payments, the O&M Payment and the DG Fuel Cost during the Operation Period, submitted by the Concessionaire to the Authority in accordance with provision of the Agreement;

"KPI" or Key Performance Indicators" means the key performance indicators set out in Schedule C, which the Project must achieve during the Operation Period;

"LOA" or "Letter of Award" means the letter of award referred to in Recital (D);

"Lead Member" shall have the meaning set forth in Recital (D);

"Lenders' Representative" means the person duly authorized by the Senior Lenders to act for and on behalf of the Senior Lenders with regard to matters arising out of or in relation to this Agreement, and includes his successors, assigns and substitutes;

"Licensed Premises" shall have the meaning as set forth in Clause 10.2.2;

"Maintenance Manual" shall have the meaning as set forth in Clause 17.3.1;

"Maintenance Program" shall have the meaning as set forth in Clause 17.4.1;

"Maintenance Requirements" shall have the meaning as set forth in Clause 17.2;

"Material Adverse Effect" means a material adverse effect of any act or event on the ability of either Party to perform any of its obligations under and in accordance with the provisions of this Agreement and which act or event causes a material financial burden or loss to either Party;

"Maximum Energy Consumption" means the maximum energy consumption per quarter quoted by the Selected Bidder as part of its Bid;

"Mobilization Advance" shall have the meaning as set forth in Clause 23.8;

"Nominated Company" means a company selected by the Lenders' Representative and proposed to the Authority for substituting the Concessionaire in accordance with the provisions of the Substitution Agreement;

"New Assets" shall mean and includes tangible or intangible assets that are procured or developed by the Concessionaire exclusively for the purposes of the Project in accordance with terms hereof.

"Non-Political Event" shall have the meaning as set forth in Clause 28.2;

"NPV" shall have the meaning as set forth in Clause 35.3;

"O&M" means the operation and maintenance of the Project and includes all matters connected with or incidental to such operation and maintenance, and provision of services and facilities, in accordance with the provisions of this Agreement;

"O&M Contract" means the operation and maintenance contract that may be entered into between the Concessionaire and the O&M Contractor for performance of all or any of the O&M obligations;

"O&M Contractor" means the person, if any, with whom the Concessionaire has entered into an O&M Contract for discharging O&M obligations for and on behalf of the

Concessionaire;

“O&M Expenses” means expenses incurred by or on behalf of the Concessionaire or by the Authority, as the case may be, for all O&M including (a) cost of salaries and other compensation to employees, (b) cost of materials, supplies, utilities and other services including electricity payments, and DG Fuel Cost (c) premia for insurance, (d) all taxes, duties, cess and fees due and payable for O&M, (e) all repair, replacement, reconstruction, reinstatement, improvement and maintenance costs, (f) payments required to be made under the O&M Contract, or any other contract in connection with or incidental to O&M, and (g) all other expenditure required to be incurred under Applicable Laws, Applicable Permits or this Agreement;

“O&M Payments” shall have the meaning as set forth in Clause 23.7.1;

“Operation Period” means the operation and maintenance period of 15 (fifteen) years commencing from COD and ending on the Transfer Date;

“Operation Period Payments” means, collectively the:

- (a) Capex Annuity and/or Annuity Payments;
- (b) O&M Payments; and
- (c) Reimbursement of Power Charges

“Online Monitoring System” means the monitoring system to be set up by the Concessionaire as part of the Project for continuous monitoring of the Project;

“Other Land” shall mean and include all other land other than the Essential Land as part of the right-of-way of Adyar River

“Outlet Point” means the outlet of the STFs where the sample of the Treated Effluent shall be drawn periodically to test compliance with the KPIs;

“Parties” means the parties to this Agreement collectively and “Party” shall mean any of the parties to this Agreement individually;

“Payment Milestone” shall have the meaning as set forth in Clause 23.4;

“Performance Guarantee” shall have the meaning as set forth in Clause 33.2.3

“Performance Security” shall have the meaning as set forth in Clause 9.1.1;

“Physical Progress” shall mean the actual construction progress of any of the Project Asset compared against the proposed physical progress as part of the DPR, which shall be determined by the Independent Engineer by quantifiable measures, including completed work quantities, milestones achieved, and installed elements. The Independent Engineer shall undertake periodic inspections according to an agreed schedule (as part of the DPR), serving as the basis for monitoring, evaluation, and payment purposes.

“Political Event” shall have the meaning as set forth in Clause 28.4;

“Post-COD Assets” means the Existing Assets other than the Rehabilitation Assets;

“Power Charges” means the cost of the power consumed by the Concessionaire to operate

and maintain the Project Assets during the Operation Period, which will be calculated on the basis of the prevailing Power Unit Rate, the Fuel Price, to the extent applicable and such other applicable charges as per the guidelines of the relevant Government Instrumentalities.

“Power Unit Rate” means the cost per unit of power drawn from the grid (through the relevant distribution licensee for the Site, which will be the prevailing tariff per unit of power charged by the relevant distribution licensee in the relevant month during the relevant Operation Period.

“Price Index” shall comprise:

- (a) 70% (seventy per cent) of WPI; and
- (b) 30% (thirty per cent) of CPI (IW),

Which constituents may be substituted by such alternative index or indices as the Parties may by mutual consent determine;

“Price Index Multiple” shall have the meaning set forth in 23.2.3;

“Project” means the construction, operation and maintenance of the Project Assets in accordance with the provisions of this Agreement, and includes all works, services and equipment relating to or in respect of the Scope of the Project in Site comprising all Project Assets, and its subsequent development, rehabilitation and augmentation in accordance with this Agreement;

“Project Agreements” means this Agreement, the Financing Agreements, EPC Contract, O&M Contract, and any other material agreements or contracts that may be entered into by the Concessionaire with any person in connection with matters relating to, arising out of or incidental to the Project, but does not include the Escrow Agreement, Substitution Agreement, or any agreement for procurement of goods and services;

“Project Assets” means all physical and other assets relating to and forming part of the Site including (a) rights over the Site in the form of licence, Right of Way or otherwise; (b) tangible assets such as civil works and equipment including foundations, embankments, pavements, road surface, retaining walls, trunk sewers, fencing, bank protection works, landscaping, recreational amenities, bridges, drainage works, sign boards, electrical systems, communication systems, administrative offices, etc.; (c) Project Equipment situated on the Site including sewage treatment plant (STP), pumping stations, boom systems, etc.; (d) buildings and immovable fixtures or structures forming part of the Project, including project experience centre; (e) all rights of the Concessionaire under the Project Agreements; (f) financial assets, such as receivables, security deposits etc.; (g) insurance proceeds; and (h) Applicable Permits and authorisations relating to or in respect of the Project;

For the avoidance of doubt, Project Assets shall include the Existing Assets, the Rehabilitation Assets, the Essential Land, the Post-COD Assets, and the Other Land, unless the context requires otherwise

“Project Completion Schedule” means the progressive Project Milestones set forth in Schedule-G for completion of the Project on or before the Scheduled Completion Date;

“Provisional Certificate” shall have the meaning as set forth in Clause 14.3;

“**Punch List**” shall have the meaning ascribed to it in Clause 14.3.1;

“**RBI**” means the Reserve Bank of India, as constituted and existing under the Reserve Bank of India Act, 1934, including any statutory modification or replacement thereof, and its successors;

“**Re.**”, “**Rs .**” or “**Rupees**” or “**Indian Rupees**” means the lawful currency of the Republic of India;

“**Reference Exchange Rate**” means, in respect of any one currency that is to be converted into another currency in accordance with the provisions of this Agreement, the exchange rate as of 12.00 (twelve) noon on the relevant date quoted in Delhi by the State Bank of India, and in the absence of such rate, the average of similar rates quoted in Delhi by the Bank of India and the Bank of Baroda;

“**Reference Index Date**” means, in respect of the specified date or month, as the case may be, that last day of the preceding month with reference to which the Price Index or any constituent thereof is revised and in the event such revision has not been notified, the last such Price Index or any constituent thereof shall be adopted provisionally and used until the Price Index or such constituent thereof is revised and notified;

“**Rehabilitation Assets**” shall mean and include all the existing sewerage treatment plants (STPs) to be handed over to the Concessionaire as identified in Annexure II of Schedule A;

“**Request for Proposals**” or “**RFP**” shall have the meaning as set forth in Recital (B);

“**Right of Way**” means the constructive possession of the Site, together with all way leaves, easements, unrestricted access and other rights of way, howsoever described, necessary for construction, operation and maintenance of the Project in accordance with this Agreement;

“**Residual Grit**” means the grit which is obtained as residual matter after the treatment of the Sewage at the STFs;

“**SBI MCLR**” means the prevailing marginal cost of fund based lending rate for a tenor of 1 year, notified by the State Bank of India;

“**Scheduled Completion Date**” shall have the meaning as set forth in Clause 12.3.1;

“**Scope of the Project**” shall have the meaning as set forth in Clause 2.1;

“**Screenings**” means solids such as fibres, plastic and other products or things, which need to be removed from the Sewage, prior to the treatment of Sewage at the STFs;

“**Senior Lenders**” means the financial institutions, banks, multilateral lending agencies, trusts, funds and agents or trustees of debenture holders, including their successors and assignees, who have agreed to guarantee or provide finance to the Concessionaire under any of the Financing Agreements for meeting all or any part of the Total Project Cost and who hold pari passu charge on the assets, rights, title and interests of the Concessionaire;

“**Sewage**” means the sewage that is in liquid, solid or semi-solid form and brought for treatment to the STFs;

“**Site**” shall have the meaning as set forth in Clause 10.1;

“Specifications and Standards” means the specifications and standards relating to the quality, quantity, capacity and other requirements for the Project, as set forth in Schedule- D including Technical Specifications and any modifications thereof, or additions thereto, as included in the design and engineering for the Project submitted by the Concessionaire to, and expressly approved by, the Authority;

“Specific Standards for River Quality” shall have the meaning as set forth in Schedule D;

“State” means the State of Tamil Nadu and **“State Government”** means the government of that State;

“Statutory Auditors” means a reputable firm of chartered accountants acting as the statutory auditors of the Concessionaire under the provisions of the Companies Act, 2013, including any re-enactment or amendment thereof, for the time being in force, and appointed in accordance with Clause 27.2.1;

“STF” shall have the meaning as set forth in Schedule B;

“STF By-Products” means the by-products of the treatment process after the Sewage has passed through the STF comprising the Digested Sludge, the Residual Grit and the Screenings;

“Selected Bidder” means the Bidder selected by the Authority for award of the Project;

“Subordinated Debt” means the aggregate of the following sums expressed in Indian Rupees or in the currency of debt, as the case may be, outstanding as on the Transfer Date:

(a) the principal amount of debt provided by lenders or the Concessionaire’s shareholders for meeting the Total Project Cost and subordinated to the financial assistance provided by the Senior Lenders; and

(b) all accrued interest on the debt referred to in Sub-clause (a) above but restricted to the lesser of actual interest rate and a rate equal to 5% (five per cent) above the Bank Rate in case of loans expressed in Indian Rupees and lesser of the actual interest rate and 6 (six) month LIBOR (London Inter-Bank Offer Rate) plus 2% (two per cent) in case of loans expressed in foreign currency, but does not include any interest that had fallen due 1 (one) year prior to the Transfer Date; provided that if all or any part of the Subordinated Debt is convertible into Equity at the option of the lenders and/or the Concessionaire’s shareholders, it shall for the purposes of this Agreement be deemed to be Subordinated Debt even after such conversion and the principal thereof shall be dealt with as if such conversion had not been undertaken;

“Subcontract” means a contract entered into by the Concessionaire to subcontract any part of its scope of work in relation to the Project under this Agreement;

“Subcontractor” means the Concessionaire's counterparty under any Subcontract;

“Substitution Agreement” shall have the meaning as set forth in Clause 34.3.1;

“Suspension” shall have the meaning as set forth in Clause 30.1;

“Taxes” means any Indian taxes including GST, excise duties, customs duties, value added tax, sales tax, local taxes, cess and any impost or surcharge of like nature (whether Central, State or local) on the goods, materials, equipment and services incorporated in and forming

part of the Project charged, levied or imposed by any Government Instrumentality, but excluding any interest, penalties and other sums in relation thereto imposed on any account whatsoever. For the avoidance of doubt, Taxes shall not include taxes on corporate income;

“Termination” means the expiry or termination of this Agreement and the Concession hereunder;

“Termination Notice” means the communication issued in accordance with this Agreement by one Party to the other Party terminating this Agreement;

“Termination Payment” means the amount payable by the Authority to the Concessionaire, under and in accordance with the provisions of this Agreement, upon Termination;

“Tests” means the tests set forth in Schedule-I to determine the completion of the Project in accordance with the provisions of this Agreement;

“Total Project Cost” means 50 % (fifty percent) of the Bid Project Cost specified in Clause 23.1;

provided that in the event WPI increases, on an average, by more than 3% (three per cent) per annum for the period between the Bid Date and COD, the amount hereinbefore specified shall be increased such that the effect of increase in WPI, in excess of such 3% (three per cent), is reflected in the Total Project Cost;

provided further that in the event of Termination, the Total Project Cost shall be deemed to be modified to the extent of variation in WPI or Reference Exchange Rate occurring in respect of Debt Due, as the case may be, in accordance with the provisions of this Agreement;

Provided also that the Total Project Cost shall not exceed 60% of the actual capital expenditure on the Project and capitalized in the books of accounts of the Concessionaire as certified by the Statutory Auditor. ;

“Treated Effluent” means the water which is obtained after the treatment of the Sewage at the STFs;

“Transfer Date” means the date on which this Agreement and the Concession hereunder expires pursuant to the provisions of this Agreement or is terminated by a Termination Notice;

“User” means a person who uses or intends to use the Project or any part thereof in accordance with the provisions of this Agreement and Applicable Laws;

“Vesting Certificate” shall have the meaning as set forth in Clause 32.4;

“WPI” means the Wholesale Price Index for all commodities as published by the Ministry of Industry, GOI and shall include any index which substitutes the WPI, and any reference to WPI shall, unless the context otherwise requires, be construed as a reference to the latest monthly WPI published no later than 30 (thirty) days prior to the date of consideration hereunder; and

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DAY, MONTH AND YEAR FIRST ABOVE

SCHEDULE A: SITE OF THE PROJECT

1 The Site

The Site shall mean and include the Adyar River as identified and described in this Schedule A (including its annexures and appendices) along with all land, building and structures described therein.

ANNEXURE I: SITE MAP

(Schedule-A)

The River Adyar originates from Guduvanchery in Chengalpattu district. The total length of the river is 43.9 km from the Guduvanchery Tank flow regulator (zero point) to the River mouth. The river flows through Thiruneermalai, Tambaram, Manapakkam, Alandur, Saidapet and finally confluences into Bay of Bengal between Santhome beach in the north and Elliots beach in Chennai city. Before joining the sea, the Adyar River forms an estuary.

The estuary attracts a wide variety of birds and covers about 300 acres. Backwater near the river mouth is, known as the Adyar creek, this creek is a natural channel which discharges the tidal water back into sea. There is a formation of sand bar at the river mouth. The index map of Adyar sub basin is shown in below Figure:

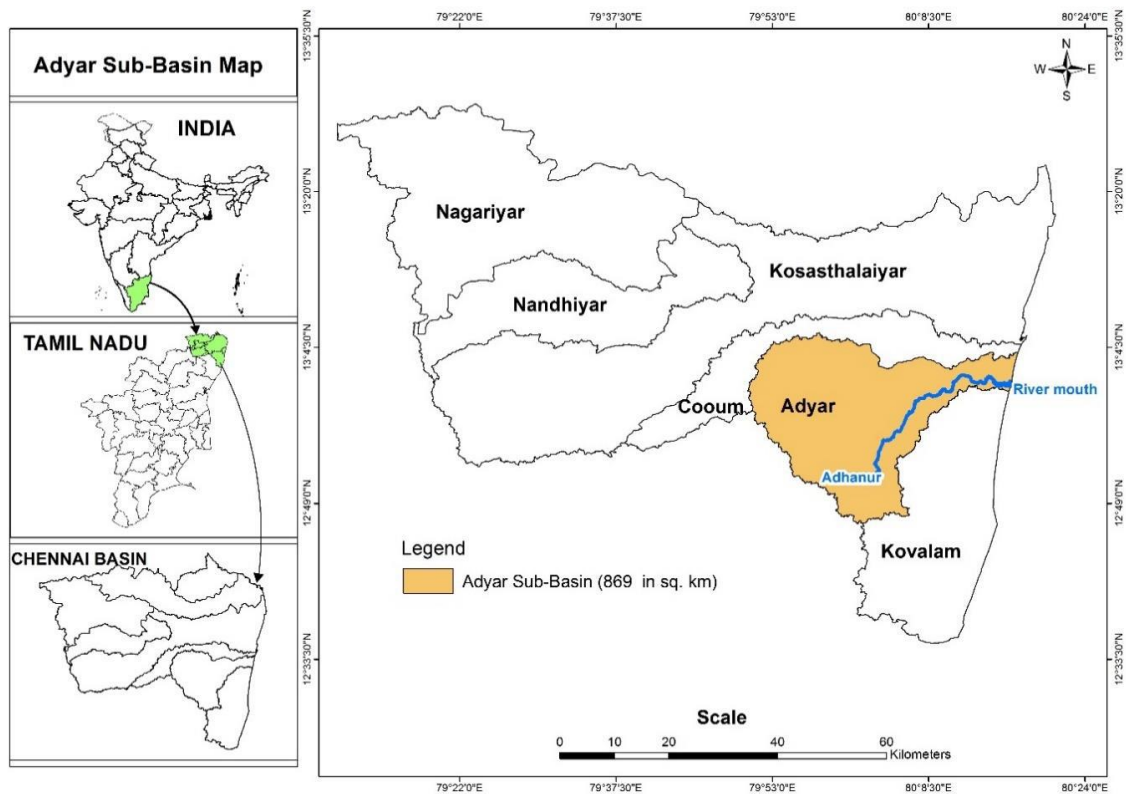


Figure 1: Index Map of Adyar Basin

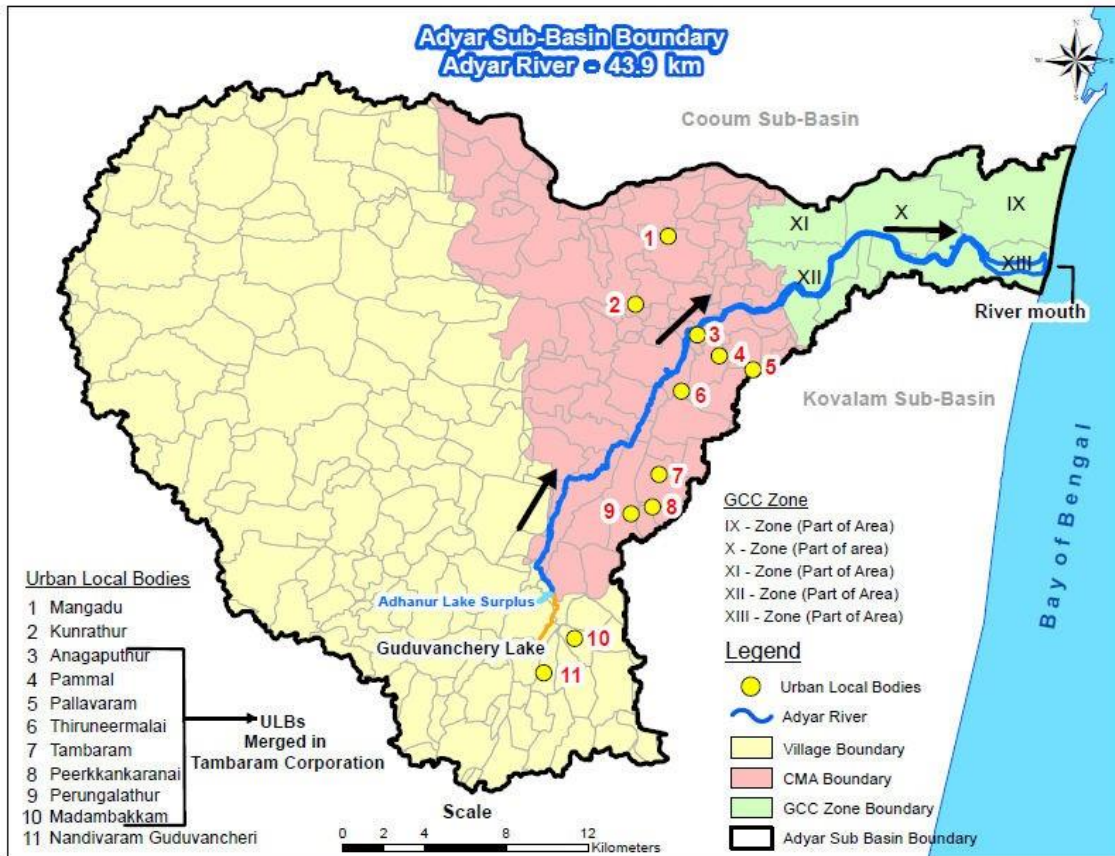


Figure 2: Adyar River & Administrative Boundaries

The project area is from Adhanur lake to the point jointing the Adyar River (0.7 km) will be considered as a lake surplus channel to the Adyar River. The zero point for the River will be the Guduvanchery flow regulator and the total length is 43.9 km, from the zero point upto the River mouth.

The regulator discharges flow into two channels, one leading into the Adhanur Lake and the other bye-passing it. It is understood that there is no major pollution from this point up to the confluence of the Adhanur lake overflow. The Water Resources Department, GoTN, has also desilted and made embankments along this stretch. Fencing wall without iron railings have been constructed for about 1 km on one side of the river out of the total 2.6 KM stretch.

However, before implementation the concessionaire shall assess and decide requirements towards components for the river restoration as suggested, if required, detailed topography, bathymetry, water quality testing and outfall survey needs to be done.

RoW Map of Adyar River

Refer RoW Maps Available in the Feasibility Report

Details of Land Earmarked for Development of STPs

Proposed STP Details in Adyar River							
Sl. No	Tag	Stretch	Chainage	STP Location/ Name	Land Source	Tentative Capacity in MLD	Land Area available (acres)
Left Bank							
1	L1	1	37.6	Varatharajapuram	With in RoW	1	0.2
2	L2	1	29.4	Tambaram - LB	With in RoW	3	0.6
3	L3	1	20.5	Tharapakkam	With in RoW	9	1.8
4	L4	2	13.9	Manapakkam	With in RoW	6	1.3
5	L5	2	11.5	Nesapakkam (STP area)	Nesapakkam STP Area	20	5
6	L6	3	7.3	Thideer Nagar, KK Nagar	Thideer Nagar	11	1.69
7	L7	3	6.7	Old jothiammal Nagar	Old jothiammal Nagar	11	2.2
Right Bank							
8	R1	1	29.1	Tambaram - RB	With in RoW	9	1.8
9	R2	1	22.9	Anakaputhur	Anakaputhur	25	14.4
10	R3	1	17.6	Meenambakkam	With in RoW	1	0.4
11	R4	2	10.7	Burma colony, Jafferkhanpet	Burma colony, Jafferkhanpet	2	5.53
12	R5	3	4.9	Chitra Nagar	Chitra Nagar	7	1.44
Sub Total STP Capacity						105	
B Canal STP (B Canal confluence point in Adyar River)							
1	B-L1	3	3.3	Dr. Rathakrishna puram - B canal	Dr. Rathakrishna puram	3	1.18
2	B-R1	3	3.3	S Lock street - B canal	With in RoW	2	0.5
Sub Total STP Capacity						5	
Total STP Capacity						110	

Note: Concessionaire to carryout detailed field investigation to ascertain capacity requirement of each proposed STPs, land requirement, technology suitable to achieve the desired outlet standards. Extent of land available for STPs is tentative only, Land compatibility need to be verified by the Concessionaire at site.

Details of Land Earmarked for Development of Public Parks

Sl. No	ID	Stretch	Chainage (km)	Location/ Name	Land within RoW	Area (acres)
1	Left	3	3.48- 3.52	Bughs Road, Greenways Road, Mylapore	Yes	0.4
2	Right	3	5.49- 6.09	Soorya Nagar, Kotturpuram	Yes	0.7
3	Right	3	7.18 - 7.3	Old Anusuya Mandapam, Alandur	Yes	0.3
4	Left	2	11.4 - 1.65	Kanu Nagar, Ramapuram	Yes	0.9

Note: Concessionaire to carryout detailed field investigation to ascertain the extent of land available, Land compatibility need to be verified by the Concessionaire at site.

Details of Land Earmarked for Development of Project Experience Centre & Blue Green Center

Multiple sites (as provided below) are available for construction of Project Experience Centre and Blue Green Center, the Concessionaire may select appropriate site subject to technical feasibility

S. No.	Location Name	Actual area at site in Sq.m	Chainage (m)	Co- ordinates	
				Latitude	Longitude
1	Mallipoo Nagar-R&R	13500	2000-2400	13.01075	80.25611
2	Mallipoo Nagar-RoW	2550	2400	13..01055	80.25781
3	Jothi Ammal Nagar, Saidapet.	5000	6750-6950	13.01933	80.22846
4	Opp. to Puthiya Thalaimurai TV, I E, Guindy.	5522	9500-9800	13.02571	80.20910
5	MGR Nagar, Nesapakkam.	12400	12000-12430	13.02422	80.19071
6	Adjacent to Solid Waste Compost Yard & Burial Ground, Near Nandambakkam Bridge.	1650	12400	13.02056	80.18853

7	Adjacent to Manapakkam Main Road, Near Nandambakkam Bridge.	4835	12700- 12800	13.01856	80.18612
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Note: Concessionaire to carryout detailed field investigation to ascertain the extent of land available, land compatibility need to be verified by the Concessionaire at Site.

ANNEXURE II: EXISTING ASSETS

(Schedule-A)

1. Assets of Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) to be handed over to the Concessionaire for O&M Purposes

1.1. Nesapakkam Sewage Treatment Plant (STP)

STP	Nesapakkam STP			Remarks
Modules	23	40	54	
Design Capacity	23	40	54	
General information of STP				
Location	No.68,Anna Main Road,MGR Nagar,Nesapakkam	No.68,Anna Main Road,MGR Nagar,Nesapakkam	No.68,Anna Main Road,MGR Nagar,Nesapakkam	
Zone Details	Zone-10	Zone-10	Zone-10	
Wards Covered	137	137	137	
Year of Construction	1974	2006	2014	
Operating Capacity	14MLD	40MLD	54MLD	
Treatment Technology	Activated Sludge Process	MBBR Technology	MBBR Technology	
Inlet Quantity	13	40	54	
Inlet Parameter	<ul style="list-style-type: none"> • PH- 7.-7.5 • BOD-350 mg/l 			

	<ul style="list-style-type: none"> • COD-450 mg/l • TSS-400mg/l • T.Nitrogen-50mg/l • Ammonical Nitrogen-37 mg/l • Phospate-8mg/l 			
Outlet Quantity	13	40	54	
Outlet Parameter	<ul style="list-style-type: none"> • PH- 7.-7.5 • BOD-10 mg/l • COD-50 mg/l • TSS-25mg/l • FaecalColiform-10000MPN/100 ML 	<ul style="list-style-type: none"> • PH- 7.-7.5 • BOD-10 mg/l • COD-50 mg/l • TSS-25mg/l • T.Nitrogen-10mg/l • Ammonical Nitrogen-5 mg/l • Phospate-2mg/l • Faecal Coliform-10000MPN/100 ML 	<ul style="list-style-type: none"> • PH- 7.-7.5 • BOD-10 mg/l • COD-50 mg/l • TSS-25mg/l • T.Nitrogen-10mg/l • Ammonical Nitrogen-5 mg/l • Phospate-2mg/l • Faecal Coliform-10000MPN/100 ML 	
Operation Efficiency	50%	100%	100%	
Details of inlet pumping main / Gravity main of STP				
Pumping Main / Gravity Main	Gravity Main	Gravity Main	Gravity Main	Sewage from Pumping stations are collected in
Length of main	30m	430m	300m	

Type of Material	DI	PSC	PSC	Common UDC and its distributed to each STP through Pipeline
Size of main	500mm	1100mm	1200mm	
Year of laying of main		2006	2014	
Depth of laying of main	Above GL	2.0m	1m	
Details of Pumps				
Type of Pump				
No. of Pumps				
Capacity of pump				
Make of Pumps				
Hrs of pump working in a day				
Efficiency of pumps				
Year of Installation of pump				
Recent Updation/ Rehabilitation				
Operation and Maintenance Cost of STP				
Cost of Power consumption per annum	Rs.0.9 Cr	Rs.1.20Cr	Rs.1.80Cr	
O&M Cost per annum including manpower/ materials/ equipment's	Rs.0.53Cr(Manpower only)	Rs.1.21Cr	Rs.1.52Cr	
Details for repair expenses in last 3 years	Rs.0.75 Cr	Under Rehabilitation works	Under Rehabilitation works	
Manpower in STP				

O&M Manpower	17Nos	36 Nos	36 Nos	
Status of Employee				
O&M by CMWSSB or Contract	Contract	Contract	Contract	
Name of Organization (if contract)	M/s.Sree Venkateshwara Enterprises	M/s.P&C Projects (P) Ltd.	M/s.P&C Projects (P) Ltd	
Contract Details	Short tender	Operation & Maintenance for 10 years	Operation & Maintenance for 10 years	
Disposal Treated Water and Sludge				
Usage of treated water	Gardening Purpose	NIL	NIL	
Quantity of treated water	13MLD	40MLD	54MLD	
Location of Disposal	Adayar River			
Disposal Method of treated water	Letting out of treated water into Adayar river through open drain	Letting out of treated water into Adayar river through open drain	Letting out of treated water into Adayar river through Pipeline	
Sludge Disposal Method	NA	Landfill	Landfill	
Location of disposal		Inside the STP Premises	Inside the STP Premises	
Quantity of Sludge generated				

Quantity of sludge disposed				
Recent Updation/ Rehabilitation				
Details of Rehabilitated or Upgraded work		Rehabilitation works includes 1.Process Modification of ASP to MBBR technology to achieve the revised treatment standards prescribed by TNPCB. 2.Replacement, Repair & Rehabilitation works in Primary treatment units, Power Supply units, and Sludge management units.		
Tentative Time of completion (if any construction or rehabilitation is in progress)		31.07.2023	Completed and Partially Commissioned	
Cost of rehabilitation work undertaken		Rs. 28,01,88,800/- (For 40MLD & 54MLD)		
Contract Details				
Miscellaneous				
List of equipment				
Sewer System Appurtenances				
Power supply (HT/LT)	HT	HT	HT	
DG Sets	1 no. of 250 KVA	2 nos. of 300 KVA	1 nos. of 1500 KVA	
List of Supporting Tools				

Collection Well and its Pumps

Description	Modules				Remarks
	23	40	54		
Inlet Collection Well of STP					
Dimension	8.2 MX3.4MX2.2M				
Capacity					
Material of Construction	RCC				
Year of construction of well	2005				
Method of flow					
Type of pump					
No of Pumps					
Pumps on operation & Standby					
Capacity of pump					
Head of Pumps					
Flow Measurement					
Year of installation					
Size of inlet pipe					
Pump House details					
Collection well for treated water					
Dimension				24m dia x 4.90m Depth	
Capacity					
Material of Construction				RCC	

Year of construction of well			2014	
Method of flow				
Type of pump			Submersible pumps	
No of Pumps			6	
Pumps on operation & Standby			4 working & 2 stand by	
Capacity of pump			80HP	
Head of Pumps			10M	
Flow Measurement				
Year of installation			2014	
Size of inlet pipe				
Pump House details				

1.1.1. Treatment Units of Nesapakkam STP

Treatment Units	Factors required	Module		
		23	40	54
Inlet Chamber	Type	RCC	RCC tank	RCC tank
	Size of Unit	3mX2mX6m(SWD)	6.3M x 3.0M x 2.70M, SWD + 0.3M FB – 1no	4.40 m x 4.00 m x 2.10 m
	Capacity in MLD	0.036	0.051	0.037
	Make and Model of equipment	-	-	-
	Year of establishment	1974	2006	2014

	Operational efficiency	100%	75%	75%
Screen Chamber	Type	manual	Manual screen	Manual screen
	Size and No. of Unit	(a)course screen 1.07mX1.37m -2Nos (b)medium screen- 1.45mX1.37m 2Nos(c)fine screen - 1.30mX1.20m2Nos	2.79WM x 1.3M SWD x 9M LG	3.65 m x 1.85 m x 1.05 m
	Working & Standby	6 Working 1 no	1 no nil	
	Material of Screen	Stainless steel	SS 304	SS 304
	Capacity in MLD	-	0.032	0.007
	Make and Model of equipment	-	SS 304	SS 304
	No. of inlet & outlet gate	2 1 nos	1 nos nil	
	Year of establishment	1974	2006	2014
	Operational efficiency	100%	75%	75%
Primary Clarifier	Type	RCC	Central Drive mechanism	Central Drive mechanism
	Size and No. of Unit	21.4mdiaX2.4m(SWD) And 2Nos	42.5M x 3.52M SWD – 1no	33.50 m dia x 3.50 m x 0.3FB – 2 nos
	Capacity in MLD	0.863	4.96	3.34
	Make and Model of equipment	Motor: 3 H.P Kirloskar Gear: complex gearbox and radicon make	Greaves Cotton Ltd.	Crompton Greaves & ND90L

	Year of establishment	1974	2006	2014
	Operational efficiency	50%	80%	80%
Secondary Clarifier	Type	RCC	Central Drive mechanism	Central Drive mechanism
	Size and No. of Unit	24.4m diaX2.4m(SWD)	50.0M x 3.52M SWD + 0.3 FB – 1 no	42.00 m dia x 3.50 m x 0.3FB – 2 nos
	Capacity in MLD	1.449	6.90	4.84
	Make and Model of equipment	Motor:3 H. P Kirloskar Gear: complex gearbox and radicon make	Greaves Cotton Ltd.	Crompton Greaves & ND90S
	Year of establishment	1974	2006	2014
	Operational efficiency	50%	90%	80%
Feed Chamber	Type	RCC	RCC tank	
	Size and No. of Unit	2.7m dia X 3m depth and 1Nos	5.0M x 3.0M x 2.0M SWD – 1 no	
	Capacity in MLD	0.0172	0.030	
	Make and Model of equipment	-	-	
	Year of establishment	1974	2006	
	Operational efficiency	100%	75%	
Aeration Tanks	Type	RCC	MBBR Technology	MBBR Technology
	Size and No. of Unit	40mX10mX3.8(swd)	45.0M x 45.0M x 4.53M	77M X 40M X 4.5LD X

		And 12Nos	SWD – 1 no	0.5M FB
	Capacity in MLD	4.560	9.17	13.86
	Make and Model of equipment	Motor:ABB,Kirloskar Gear box: compex gear box And surface aerators	Make: USHA NEUROS TURBO LLP(Turboblower)	Make: USHA NEUROS TURBO LLP(Turboblower)
	Year of establishment	1974		2006
	Operational efficiency	33.33%	95%	95%
Raw Sludge Pump House	Type	RCC	Horizontal centrifugal	Submersible pump
	Size and No. of Unit	3Nos	8.5M x 2.85M x 3.0M SWD + 0.8 M FB – 1 no	5.00m dia x 5.90m [including Free board of 0.40 m]
	Working & Standby	2+1	1+1	2+1
	Capacity in MLD	-	60 M3 / hr	70m3/m3
	Make and Model of equipment	Motor: Crompton Pump: Denvor	ANALA PUMPS&CSP14-8B Mather & Platt Pumps Ltd	
	Year of establishment	1974	2006	
Primary Sludge Digester	Type		Anaerobic Digester	Anaerobic Digester
	Size and No. of Unit		31.5M x 9.9M SWD + 0.5 FB – 1 no	24.00 m dia x 9.20 m [including Free board of 0.50 Mj – 2 nos

	Capacity in MLD		-	3.93 each
	Make and Model of equipment	NA	-	-
	Year of establishment		2006	2006
	Operational efficiency		90%	90%
Blower room	Type	NA	TURBO BLOWER	TURBO BLOWER
	Size and No. of Unit		7.0m x 11.0m x 5.0m	20.00 x 10.00 x 7.00 m
	Air Discharge in m3		10000m3/h	10000m3/h
	Working & Standby		2+1	2 +1no
	Make and Model of equipment		USHA NEUROS & NX200-1050	USHA NEUROS & NX200-1050
	Year of establishment		2023	2023
Return Sludge Pump House	Operational efficiency		95%	95%
	Type			Submersible pump
	Size and No. of Unit	4Nos	9.0M x 7.0M x 3.5M – 1no	5.00m dia x 5.90m [including Free board of 0.40 m]
	Capacity in MLD	-	450 M3/H	608m3/h
	Working & stand by	2+2	2 +1	2+1 nos
	Make and Model of equipment	Motor: kirloskar Pump: mather and platt	KEERTHI PUMPS & PSX650, Mather & Platt	6.30 m dia x 7.10 m [including F-ree board of

			Pumps Ltd	0.30 m]
	Year of establishment	WW1974	2023	2014
	Operational efficiency	50%	75%	80%
Digester Feed Pump house	Type		Horizontal centrifugal	Submersible pump
	Size and No. of Unit		8.6M x 7.0M x 3.5M – 1 no	3.6 m x 2 10 m x 5.75 m (Including of 0.75 Free board) – 1 no
	Discharge in m3		50M3/H	40m3/h
	Working & Standby		1+1	2+1no
	Make and Model of equipment		ANALA PUMPS & Mather & Platt Pumps Ltd	Kishore
	Year of establishment		2023	2014
	Operational efficiency		75%	80%
Digester sludge mixing Pump house	Type		Horizontal centrifugal	Vertical centrifugal
	Size and No. of Unit		20.0M x 12.0M x 3.5M – 1no	3.6 m x 2 10 m x 5.75 m (Including of 0.75 Free board) – 1 no
	Discharge in m3		965M3/H	410m3/h
	Working & Standby		2+1	1 no
	Make and Model of equipment		KEERTHI PUMPS & MF350/600, Mather &	Kishore

			Platt Pumps Ltd	
	Year of establishment			2014
	Operational efficiency		75%	80%
Supernatant Pump house	Type		Vertical Centrifugal	Submersible pump
	Size and No. of Unit		5.0M x 4.0M x 2.0M SWD + 0.5 FB – 1no	10.00 m dia x 4.30 m including FB Free board of 0.30 m] – 1 no
	Discharge in m3		20M3/H	142m3/h
	Working & Standby		1+1 no	2 +1no
	Make and Model of equipment		KEERTHI PUMPS & Mather & Platt Pumps Ltd	Kishore
	Year of establishment		2006	2014
	Operational efficiency		75%	80%
	Centrifuge feed pump	Type		Horizontal centrifugal
Size and No. of Unit			11.1M x 6.5M x 4.0M	7.70 m x 7.70 m x 4.30 m (Including free board of 0.30 m) – 1 no
Discharge in m3			20m3/h	25m3/h
Working & Standby			1+1	2+1 nos
Make and Model of			ANALA SCREW	Kishore

	equipment		PUMP&SLAB59, Make : Tushaco Pvt. Ltd.& TISB- 380.1	
	Year of establishment			2014
	Operational efficiency		75%	80%
Chlorination unit	Type		Horizontal centrifugal	Horizontal centrifugal
	Size and No. of Unit		38.0M x 12.0M x 3.04M SWD + 0.5 FB – 1 no	35.50 m x 8 m x 5.00 m including FB of 0.50 mJ – 1 no
	Discharge in kg/h		50M ³ /h (Dosage:25kg/h)	(Dosage:25kg/h)
	Working & Standby		1 +1	1+1 no
	Make and Model of equipment		KIRLOSKAR BROTHER LTD	KISHORE
	Year of establishment		2006	2014
	Operational efficiency		80%	80%
Gas Holding tank	Type		Bell type water sealed type	Bell type water sealed type
	Size and No. of Unit		26.50M dia x 6.30M ht – Tank 25.0M dia x 6.30M ht - Bell	27.20 m dia x 6.00 m

	Capacity in m3		3000 m3	3500 m3
	Make and Model of equipment		Combustion Research Associates	Combustion Research Associates
	Year of establishment		2006	2014
	Operational efficiency		85%	85%
Dilution pump house	Type		Submersible with Integral Motor	Submersible with Integral Motor
	Size and No. of Unit		8.0M x 3.0M x 2.21M SWD + 0.5 FB – 1 no	5.00 m dia x 4.95 m {including Free board of 0.45 m] – 1 no
	Capacity in m3		600m3/h	112m3/h
	Working & Standby		1 no	2 +1no
	Make and Model of equipment		Flowmore Ltd.	Kishore
	Year of establishment		2006	2014
	Operational efficiency		80%	80%
	Centrifuge	Type		Centrifugal
Size and No. of Unit			11.1M x 6.5M x 4.0M	11.1M x 6.5M x 4.0M
Capacity in m3			25m3/h	25m3/h
Make and Model of equipment			Humboldt Wedag India Pvt. Ltd.& S2 - 11	Humboldt Wedag India Pvt. Ltd.& S2 - 11

	Working & Standby		1 no	1 no
	Year of establishment		2006	2014
	Operational efficiency		80%	80%
Chemical Scrubber	Type		Chemical scrubber	
	Size and No. of Unit		Agitator-1 no, chemical circulation pump-2, water circulation pump-2 nos, Chemical transfer pump-2nos, Gas blower-2 nos	11 .41 m x 7.86 m x 4.50 mx2Floors, Agitator-1 no, chemical circulation pump-2, water circulation pump-2 nos, Chemical Dosing pump-2nos, Gas blower-2 nos
	Capacity		10000 ppm/h	10000 ppm/h
	Make and Model of equipment		-	-
	Year of establishment		2006	2014
	Operational efficiency		80%	80%
	Balancing tank pump	Type		
Size and No. of Unit				31.25 x 30 x 4.50 m [including Free board of 0.50 m] – 2 nos
Discharge in m3				75HP (883m3/h) – 3 nos

			95HP(1125m3/H) – 3 nos
	Working & Standby		4 nos
	Make and Model of equipment		Kishore
	Year of establishment		2014
Treated Effluent pump	Type		Submersible pump(80HP)
	Size and No. of Unit		24.00 m dia x 4.90 m (including Free board of 0.30 mj)
	Discharge in m3		1410m3/h
	Working & Standby		4 nos
	Make and Model of equipment		kishore
	Year of establishment		2014
	Operational efficiency		80%
Primary scum pump	Type		Submersible pump(80HP)
	Size and No. of Unit		4.00 m dia x 3.3 m (Including 0.30 m Free board)
	Discharge in m3		12.50m3/h
	Working & Standby		1 no

	Make and Model of equipment			Kishore
	Year of establishment			2014
	Operational efficiency			70%
Excess sludge wasting pump	Type			Submersible pump
	Size and No. of Unit			
	Discharge in m ³			12.50m ³ /h
	Working & Standby			2 nos
	Make and Model of equipment			Kishore
	Year of establishment			2014
	Operational efficiency			80%

1.2. Pumping Stations

Pumping Stations	Area	Details of Pumping		No of Units	D.G set Capacity in KVA	Average qty pumped in mld	Max.q ty that could be pumped in mld	Max Demand in KVA	Disposal point	Serving Division	Type HT / LT or others	LT or others Maintenance Board / Private	Automation available
		HP	Q in lps/second in m										

Nesapakkam Relay	Area X	430 215	1250/ 18 583/ 18	1	625	67	108	410	Nesapakkam STP	128,137,138	HT relay	Private	No
CIT Nagar	X	75 100	120/ 26 138/ 24	2 1	300	4	16	175	Nesapakkam SPS	141	HT3 Shifts	Private	Yes
Kodambakkam B	X	100 75	138/ 34 120/ 26	1 1	160	9	12	115	Nesapakkam STP	139(P),112(P), 134(P)	HT3 Shifts	Private	Yes
Saidapet – A	X	70 75	125/ 26 125/ 26	1 2	100	3.5	11		Nesapakkam SPS	133(P),135(P), 135(P)	LT3 Shifts	Private	Yes
Saidapet – B	X	150 75	270/ 25 125/ 26	2 1	250	6.5	23	130	Nesapakkam SPS	140, 141(P),	HT3 Shifts	Private	Yes
Saidapet D	XII	25(C)	25	1	160	4.5	12.5	100	Saidapet B	171	HT/	Private	Yes

	I	80(S) 40(S)	186 100	1 1					SPS		3		
Ekkattuthan gal	XII I	60(S) 50(S) 40(S) 12.5(Si lt)	112 60 40 25	1 1 2 1	110	5.5	7.75	63	Nesapakka m SPS	170	HT3	Private	Yes
Jafferkhanpe t	X	120 60	400/1 4 200/1 4	1 2	160	3.5	19		Nesapakka m SPS	138(P) 139(P)	LT3	Private	Yes
Saidapet C	X	70(S) 40(S) 30(S)	219 120 50	1 1 1	100	3.5	15.15	65	Nesapakka m SPS	170	LT3	Private	Yes
Jai Balaji Nagar	X	40 20	52/23 26/23	2 2	75	1.7	7		Nesapakka m STP	137	LT3	Private	Yes
KK Nagar – B	X	50	160/1 2.5	2	62.5	4.75	15		Nesapakka m SPS	131 129(P)	LT3	Private	Yes
Ashok Nagar	X	12	65/7	2	30	1.25	5.5		Nesapakka m SPS	132 & 133(P)	LT 3 Shift s	Private	Yes

Sathiya Murthy Block	X	25	30/18	2	63	1.2	2.5		Nesapakka m SPS	138(P)	LT 2 Shifts	Private	Yes
Bharatidasan Colony	X	25	50/17	2	45	1	2.5		Nesapakka m SPS	138(P)	LT 2 Shifts	Private	Yes
Sarathy Nagar	X	30	73/14	1	35	1	4		Jafferkhanpet SPS	138(P) 139(P)	LT 2 Shifts	Private	Yes
Thiru Nagar	X	30	50/20	1	30	1.3	2.5		Nesapakka m SPS	138(P)	LT 2 Shifts	Private	Yes
Gothamedu	X	15	11/20	2	25	1	2		Saidapet D SPS	128(P)	LT 2 Shifts	Private	Yes
Nagiretty Thottam	XII I	7(S)	25	2	Nil	0.02	1.75	9.50	Sidco Main SPS	170	LT	Private	No
SIDCO Guindy	XII I	35(S) 20(S)	100 50	1 2	40	1.5	7	65	Nesapakka m SPS	170	LT3	Private	Yes
Amudham Colony	IX	25(S) 40(S)	56/20 47.50/	1 1	62.5	1.3	6	49	Saidapet B SPS	117 112(P)	LT	Private	Yes

		75(S)	28 94.40/ 28	1									
Puliyapuram	IX	10(S) 15(S)	7/15 39/15	1 1	35	1.5	0.8	15	Kod B PS	112, 130(P)	LT	Private	Yes
Valasarapak kam South- I													
Valasarapak kam South - II													
Valasarapak kam North - I													
Annai Sathya Nagar	X	15	25/20	2	Nil	0.01	1		Nesapakka m SPS	138(P)	LT Roa d side	Private	No
Abith Colony	X	10	10/8	2	Nil	0.15	1		Saidapet C SPS	140(P)	LT Roa d	Private	No

											side		
Samiyar Thottam	X	7	10/8	2	Nil	0.15	1		Saidapet C SPS	140(P)	LT Road side	Private	No
VOC Nagar	VI	7	10/11	2	Nil	0.4	1.5		Puraisaivakam Collection System	72(P)	Road side	Board	Nil
SIDCO Lift	XII I	10(S) 5(S)	24 10	3 1	15	0.8	1.75	27	Ekkattuthan gal SCS	170	LT/2	Private	Yes
Maancholai	XII I	7(S) 5(S)	11 8	1 1	Nil	0.02	0.75	11	Ekkattuthan gal SCS	170	Road Side	Private	No
Neruppumedu	XII I	7(S)	25	1	7.5	0.02	1.75	6	Saidapet C SCS	170	Road side	Private	No
Panagal Building													
Todd Hunter Nagar	XII I	10(C) 7(C)	11 11	2 1	Nil	0.3	0.75	15	Saidapet D SPS	171	LT	Private	No

Anbu Colony	IX	7.5(S)	20/8	1		0.4	7	5	Amudham Colony PS	122(P)	Road Side	Private	No
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1.3. Pumping Main

Sl. No.	From SPS	To SPS	Size of Main (mm)	Length (M)	Year of Construction	Level of Installation	Manholes			Material of Pipe
							No.	Size	Depth	
1	Amudham Colony	Saidapet 'D'	400	2193.00						CI
2	Puliyurpuram	Kodambakkam"A"	150	1249.00						CI
3	Anbu Colony RS	Amudham Colony	150	750.00						CI
4	Nesapakkam	Nesapakkam STP	1400	50.00						PSC
5	CIT Nagar	Nesapakkam PS	600	3387.00						CI
6	Kodambakkam B	Nesapakkam STP	500	4373.00						CI
7	Saidapet-B	Nesapakkam PS	525&700	3835.00						CI
8	Jaffakanpet	Nesapakkam PS	600	1200.00						CI
9	Saidapet-A	Nesapakkam PS	450	961.00						CI
10	Jai Balaji Nagar	Nesapakkam STP	300	870.00						DI

11	KK Nagar-B	Nesapakkam PS	400	1200.00						DI
12	Ashok Nagar	Nesapakkam PS	350	580.00						CI
13	Sathiya Murthy Block	Nesapakkam PS	150	300.00						CI
14	Bharatidasan Colony	Nesapakkam PS	200	500.00						CI
15	Sarathy Nagar	jafferkhanpet	300	700.00						DI
16	Thiru Nagar	Nesapakkam PS	400	625.00						PSC
17	Gothamedu	Saidapet"D"	150	1000.00						CI
18	Abith Colony	Saidapet"C"	150	300.00						CI
19	VOC Nagar	Saidapet"C"	150	550.00						CI
20	Annai Sathya Nagar	Nesapakkam PS	150	850.00						CI
21	Samiyar Thottam	Saidapet"C"	150	300.00						CI
22	Meenakshi Nagar (Kadamban Street)	Thiru Nagar	350	1600.00						CI
23	Thiru Nagar	Nesapakkam PS	200	1700.00						DI
24	Ramakrishna	Thiru Nagar	350	400.00						CI

	Nagar (Kambar Street)									
25	Ekkattuthangal	Nesapakkam PS	400	3203.00						CI
26	Saidapet 'D'	Saidapet"B"	400	260.00						CI
27	Saidapet - C	Nesapakkam PS	300	3023.00						CI
28	Sidco Main	Ekkaduthangal	400	1000.00						DI
29	Sidco Lift	Ekkaduthangal	200	400.00						DI
30	Todhunter Nagar	Saidapet"D"	150	1000.00						CI
31	Nerruppumedu	Saidapet"C"	150	90.00						CI
32	Nagi Reddy Thottam	SIDCO MAIN	200	500.00						DI
33	Manjolai	Ekkattuthangal	100	500.00						CI

1.4. Modular STPs

STP	Kotturpuram	Todhunder Nagar	Remarks
Modules	0.6	4.0	
Design Capacity	0.6	4.0	
General information of STP			
Location	Kotturpuram	Saidapet	

Zone Details	XIII	XIII	
Wards Covered	170	171	
Year of Construction	2022	2022	
Operating Capacity	0.6 MLD	4 MLD	
Treatment Technology	MBBR	MBBR	
Inlet Quantity	0.6	4 MLD	
Inlet Parameter	<ul style="list-style-type: none"> • pH- 6.8-8.5 • BOD -350 mg/L • COD -700 mg/L • TSS -450 mg/L • TN -45 mg/L • TP -5 mg/L • Coliform -1000000 	<ul style="list-style-type: none"> • pH- 6.8-8.5 • BOD -350 mg/L • COD -700 mg/L • TSS -450 mg/L • TN -45 mg/L • TP -5 mg/L • Coliform -1000000 	
Outlet Quantity			
Outlet Parameter	<ul style="list-style-type: none"> • pH – 6.5-8.5 • BOD < 10 • TSS < 10 • COD < 50 mg/L • Total Nitrogen < 10 mg/L • Ammoniacal Nitrogen < 5 mg/L 	<ul style="list-style-type: none"> • pH – 6.5-8.5 • BOD < 10 • TSS < 10 • COD < 50 mg/L • Total Nitrogen < 10 mg/L • Ammoniacal Nitrogen < 5 mg/L 	

	<ul style="list-style-type: none"> Total Phosphorous < 2 mg/L Faecal coliform < 100 	<ul style="list-style-type: none"> Total Phosphorous < 2 mg/L Faecal coliform < 100 	
Operation Efficiency	100%	100%	
Details of inlet pumping main / Gravity main of STP			
Pumping Main / Gravity Main	Pumping and Gravity	Gravity	
Length of main	850m / 1396m	10m/11m	
Type of Material	CI	Trough (Civil Structure)/CI	
Size of main	150mm dia / 400 mm dia, 500mm dia & 800mm dia CI	850mm (Civil Structure)/350mm CI	
Year of laying of main	2021	2021	
Depth of laying of main	1.25m	10.5m	
Details of Pumps			
Type of Pump	Non Clog Sub Sewage pump	Non Clog Sub Sewage pump	
No. of Pumps	2nos	2nos	
Capacity of pump	5 HP, 500lpm, 10m head	15 HP,	
Make of Pumps	Aqua		
Hrs of pump working in a day	12hrs		
Efficiency of pumps	32.6 / 40 / 81.4		
Year of Installation of pump	2022	2022	
Recent Updation/ Rehabilitation			
Operation and Maintenance Cost of STP			

Cost of Power consumption per annum	14,00,000	21,00,000	
O&M Cost per annum including manpower/ materials/ equipment's	Rs.2,75,996.37	Rs.4,85,496.84	
Details for repair expenses in last 3 years	Nil		
Manpower in STP			
O&M Manpower	9	12	
Status of Employee			
O&M by CMWSSB or Contract	Contract	Contract	
Name of Organization (if contract)	ENSYS Technologies (I) Pvt. Ltd.,	ENSYS Technologies (I) Pvt. Ltd.,	
Contract Details	LOA No.: CMWSSB / CNT / SEW / NCB / CRRT / ADYAR / 079 / 2020-21 dated 19-10-2020	LOA No.: CMWSSB / CNT / SEW / NCB / CRRT / ADYAR / 030B / 2019-20 dated 07-02-2020	
Disposal Treated Water and Sludge			
Usage of treated water	Gardening and to Adyar River	Gardening and to Mambalam Canal	
Quantity of treated water	600 KLD / Day	4 MLD/Day	

Location of Disposal	Adyar River	Mambalam Canal	
Disposal Method of treated water	Pumped Flow into Adyar River	Pumped Flow into Mambalam Canal	
Sludge Disposal Method	Filter Press	Centrifuge	
Location of disposal	Garden	Garden and excess shall be disposed as advised by Engineer-in-Charge	
Quantity of Sludge generated	550 Kgs / Month	3600 Kgs / Month	
Quantity of sludge disposed	550 Kgs / Month	3400 Kgs / Month	
Recent Updation/ Rehabilitation			
Details of Rehabilitated or Upgraded work			
Tentative Time of completion (if any construction or rehabilitation is in progress)			
Cost of rehabilitation work undertaken			
Contract Details			
Miscellaneous			
List of equipment	<ul style="list-style-type: none"> • Raw sewage transfer pump (1W +1S) • Raw sewage feed pump (1W +1S) 		

	<ul style="list-style-type: none"> • Air blower-3 • Sludge transfer pump • Filter feed pump (1W +1S) • Filter press feed pump • PLC and SCADA • Dosing pump • DG set 		
Sewer System Appurtenances			
Power supply (HT/LT)	LT	LT	
DG Sets	1 No. of 62.5 KVA capacity	1 No. of 200 KVA capacity	
List of Supporting Tools			

1.4.1. Collection Well and its Pumps of Modular STPs

Description	Kotturpuram	Todhunder Nagar	Remarks
	0.6	4.0	
Inlet Collection Well of STP			
Dimension	2.5 dia x 8m Depth	6m dia x 10.65m Depth	
Capacity	32 KL	95.85 KL	
Material of Construction	RCC	RCC	
Year of construction of well	2022	2022	
Method of flow	Gravity	Gravity	

Type of pump	NA	NA	
No of Pumps	NA	NA	
Pumps on operation & Standby			
Capacity of pump	NA	NA	
Head of Pumps	NA	NA	
Flow Measurement	NA	NA	
Year of installation	NA	NA	
Size of inlet pipe	NA	NA	
Pump House Details	NA	NA	
Collection well for treated water			
Dimension	2.8m x 2m x 4.2m	3m x 3.5m x 3m	
Capacity	23.52 KL	31.50 KL	
Material of Construction	RCC	MS	
Year of construction of well	2022	2022	
Method of flow	Pumped Flow	Pumped Flow	
Type of pump	Open Well Pump	Open Well Pump	
No of Pumps	2 Nos.	4 Nos.	
Pumps on operation & Standby	1W 1S	1W 1S	
Capacity of pump	30 m3/hr	90 m3/hr	
Head of Pumps	30m	30m	
Flow Measurement			

Year of installation	2022	2022	
Size of inlet pipe	2"	4"	
Pump House details			

1.4.2. Treatment Units of Modular STPs

Treatment Units	Factors required	Kotturpuram	Todhunder Nagar	Remarks
		0.6	4.0	
Inlet Chamber	Type	RCC	RCC	
	Size of Unit	6m Dia x 8.5m depth	6m Dia x 10.65 m depth	
	Capacity in ML	0.24	0.30	
	Make and Model of equipment	Kirloskar, Eterna	Kirloskar, Eterna	
	Year of establishment	2022	2022	
	Operational efficiency	100%	100%	
Equalization tank	Type	RCC	RCC	
	Size and No. of Unit	7m Dia x 5.5m depth	5*5*6.8m – 4 Nos	
	Working & Standby			
	Material of Screen in Equalization tank	MS Epoxy	MS Epoxy	
	Capacity in ML	0.21	0.68	
	Make and Model of equipment	Pump (1W+ 1S)	Pump (3W+ 1S)	

		Kirloskar, Eterna	Kirloskar, Eterna	
	No. of inlet & outlet gate			
	Year of establishment		2022	
	Operational efficiency			
MBBR and Tube settler	Type	MS Epoxy	MS Epoxy	
	Size and No. of Unit	3.5*3*3.5 – 4 Nos	4*3*4- 20 Nos	
	Capacity in MLD	0.15	0.96	
	Make and Model of equipment	MS Epoxy	MS Epoxy	
	Year of establishment	2022	2022	
	Operational efficiency			
Dual Media Filter	Type			
	Size and No. of Unit	1.7 m dia * 2 m depth 2 Nos (1W+1S)	2.8 m dia*2m depth 3 Nos (2W+1S)	
	Capacity in MLD			
	Make and Model of equipment			
	Year of establishment			
	Operational efficiency			

1.5. Interception and Diversion

I&D	Location	Ward No.	Capacity	Year of Const.	Details of Work Carried Out	Parameters
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						Inlet	Outlet
Adyar & Kotturpuram.	XIII	170 & 172		2022	1) Laying of gravity main for a length of 1396 m with varying sizes from 400mm dia to 800mm dia CI main. 2) Construction of 51nos of Machine holes. 3) Laying of Force main of size 150mm dia CI pipe for a length of 850m. 4) Construction of Storm Water Tank and Equalization Tank. 5) Construction of Leaping Weir in Storm Water Drain 7 nos.		
Nandanam Extension (Turn Bulls Road & Radhakrishnapuram slum							
Mambalam Canal	XIII	171		2022	1)Leaping Weir (nos)/ Diversion Arrangement 1.5 m x 0.5 m x 0.8 m 2)Construction of Precast circular RCC		

					Machine hole-1 No 2)Construction of collection well 3)Construction of Equalisation Tank		
Guindy & Ekkattuthangal.							
Samiyar Thottam, Jafferkhanpet & MGR Drain.							
Manapakkam & Nandambakkam							
Jafferkhanpet Canal							
MGR Drain							

2. Assets of Greater Chennai Corporation (GCC) to be handed over to the Concessionaire for O&M Purposes

2.1. Parks in Adyar River Basin

General Information – I

Name of Parks	Name of Area	Location (as specific to River Bank)	Latitude and Longitude	Ward No.	Area of Park	Facilities for first Aid (Availability & its Condition)	No. of fire extinguisher	Source of Water	Drinking water facilities	Details of Sign / Warn / Info Boards
Kotturpuram Park	Kotturpuram	Adyar	CHAPTER 1 13°00' '57.4"N CHAPTER 2 80°14' '56.8"E	175	18825 m ² (Park-6025m ² , balance 12800 m ² ground)	-	-	Borewell	Nil	41 Park name sign board (1200*900)-1No Plant names sign board (600*150)-30Nos Park direction sign board (600*600)-5No. Information sign board (1000*900)

Name of Parks	Sports		No. of covered play area	Children Play Area					Green Space		Remarks (if any)
	Type of sport courts	Area		Area covered	Year of inst.	Equipment / items for children			Area covered by grasses	No. of Plantations	
						Items	Nos.	Status			
Kotturpuram Park	Hockey court LxB 55x90m	4950m ²	12800m ²	250m ²	21/11/2022 By CM Video Conference	Swing	13 equipments	Operational	Grass area- 70m ²	2500 Nos (Tree saplings & Plants)	
						Slides					
						Climbers					
						Spinners					
						Riders					

Other facilities in parks

Name of Parks	Food Court			Open Gym		Availability of River View Point	Toilet Facilities				
	Area	Seating Capacity	No of Shops	Area	Details of Equipment		No. of Toilets	No. of Seats	Source of Water	Method of disposal	Concrete / PVC /FRP Covered Structure
Kotturpuram Park	-	-	-	100m ²	16 Equipments	81m Compound wall (Situating in river view)	2Toilets	2Seats	Ground water	STP Plant	Sump underground, Compound wall, Security room, Toilet)

Electrification in Parks

Parks	No. of posts	No. of posts with lights	No. of lights for aesthetic purpose (near fountains/ another side of walkway)	Pump set for withdrawal of GW		Power Consumption	
				Capacity	Status	Units	Cost Incurred

Kotturpuram Park	27park +6 Highmast		27park +6 Highmast	Bore 150 feet, 1.5HP		1550W	
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O&M and Rehabilitation Works in Parks

Parks	Entry fees (if any)	Upgradation / Rehabilitation Carried out	Cost incurred for rehabilitation	Cost of Maintenance (in last 1 years)	Status of Work (if anything in Progress)	Tentative completion date (if any work is under progress)	Discrepancies in Completion (if any)	Remarks
Kotturpuram Park	-	-	-	11,47,191.94 with GST	Completed	30/03/2022	-	-

2.2. Plantation in Adyar River Basin

General Information

Sl.no	Location	Location (As specific to river bank)	Name of the Area	Ward no.	Width of Walkway	Length Covered along River Bank	Type of surface	No. of entry Gates	LOA	Total no of plants planted	Contract Details	Estimate Cost in Cr.	Remarks
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1	THIRU-VI-KA BRIDGE TO MRTS BRIDGE ADYAR RIVER PACKAGE -1	Adyar river both banks	Adyar river bund	Z-13, Ward - 172,173, 175	Mud Walk way Appro.3.0m	Left bank - 1050m Right bank - 1464m	Sandy surface	No gate	03.11.2021	Trees - 11681 Shrubs - 9916 Herbs- 6738 Mangrove - 7450	One year plantation period from LOA 2years maintenance period after plantation period	5.40	Plantation work completed. Maintenance under progress
2	MRTS TO KOTTURPURAM BRIDGE ADYAR RIVER PACKAGE -2	Adyar river both banks	Adyar river bund	Z-13, Ward - 172,173, 175	Mud Walk way Appro.3.0m	Right bank 1170-m	Sandy surface		03.11.2021	Trees - 13730 Shrubs - 4304 Herbs- 4996 Mangrove - 6166	One year plantation period from LOA 2years maintenance period after plantation period	5.80	Plantation work completed. Maintenance under progress
3	AIRPORT RUNWAY BRIDGE TO NANDAMBAKAM BRIDGE (RIVER FLOW DIRECTION -	Adyar river both banks	Adyar river bund	Z-12 Ward no 157	Mud Walk way Appro.3.0m	1760m	Sandy surface		30.06.2022	7536	One year plantation period from LOA 2years maintenance	1.17	Plantation work completed. Maintenance under progress

	LEFT SIDE) IN DN-157,UNIT-35,Z-12(INCLUDING TWO YEARS MAINTENANCE PERIOD FOR PLANTATION)										nce period after plantation period		
4	AIRPORT RUNWAY BRIDGE TO NANDAMBAKAM BRIDGE(RIVER FLOW DIRECTION - RIGHT SIDE) IN DN-157,UNIT-35,Z-12(INCLUDING TWO YEARS MAINTENANCE PERIOD FOR PLANTATION)	Adyar river both banks	Adyar river bund	Z-12 Ward no 157	Mud Walk way Appro.3.0m	1780m	Sandy surface		30.06.2022	5920	One year plantation period from LOA 2years maintenance period after plantation period	1.41	Plantation work completed. Maintenance under progress

2.3. Fencing along banks on both sides for (29.10) km

General information

Fencing Work	Phases of Work	Name of Area	Location (as specific to River Bank)	Ward No.	Zone Covered	Year of Const.	Type of Structure (Permanent / temporary)	Details of Repair Work	Cost of repair work in last 3
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									years
From Thiru.vi.ka Bridge to Kotturpuram Bridge (Both Side) ch.2000m to 4350m – (Package -1)		Adyar	Right & Left	172, 173, 175	13	From 2018 upto 2023	Permanent		
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -1) (Both Side) ch.4350m to 5825m (Package -2)		Adyar	Right & Left	171, 172	13	From 2018 upto 2023	Permanent		
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -2) (Both Side) ch.5825m to 7300m (Package -3)		Adyar	Right & Left	171, 172	13	From 2018 upto 2023	Permanent		
From Maraimalai Adigalar Bridge to Alandur Bridge (Both Side) ch.7300m to 8200m (Package -4)		Adyar	Right & Left	170	13				
From Alandur Bridge to Jafferghanpet low Bridge (Both Side) ch.8200m to 9830m (Package -5)		Adyar	Right & Left	170	13	From 2018 upto 2019	Permanent		
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach-1) (Both Side) ch.9830m to 11265 (Package -6)		Adyar	Right & Left	155, 157, 158, 170	11,12&13				
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach - 2) (Both Side) ch.11265m to 12700m (Package -7)		Adyar	Right & Left	155, 158, 170	11,12&13	From 2018 upto 2023	Permanent		

From Nandambakkam Bridge to Army Bridge (Both Side) ch.12700m to 14450 m (Package -8)		Adyar	Right & Left	157, 158	12	From 2018 upto 2023	Permanent		
From Army Bridge to Airport Runway Bridge (Both Side) ch.14450m to 16750 m (Package -9)		Adyar	Right & Left	157	12	From 2018 upto 2023	Permanent		

Structural Details

Fencing Work	Phases of Work	Length of fence in M	Height of Fence	Posts in Fence			Structure of fence	
				Total No. of constructed Post (Appr.)	Interval b/w posts (Appr.)	Type of Materials	Type of Fencing	Materials used
From Thiru.vi.ka Bridge to Kotturpuram Bridge (Both Side) ch.2000m to 4350m – (Package -1)		Total -4700 Completed - 2830	2.25m	Right – 315 Left - 315	4.5m bay width	Concrete for post and steel for M/s Grill	Permanent	Concrete & Steel
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -1) (Both Side) ch.4350m to 5825m (Package - 2)		Total -2950 Completed- 1750	2.25m	Right – 195 Left - 195	4.5m bay width	Concrete for post and steel for M/s Grill	Permanent	Concrete & Steel
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -2) (Both Side) ch.5825m to		Total -2950 Completed- 1510	3m	Right – 195 Left - 195	4.5m bay width	Concrete for post and steel for M/s Grill	Permanent	Concrete & Steel

7300m (Package - 3)								
From MaraimalaiAdigalar Bridge to Alandur Bridge (Both Side) ch.7300m to 8200m (Package -4)		Total -1800 Completed -						
From Alandur Bridge to Jafferghanpet low Bridge (Both Side) ch.8200m to 9830m (Package -5)		Total -3260 Completed -1630	2.25m	Right – 181 Left - 181	4.5m bay width	Concrete for post and steel for M/s Grill	Permanent	Concrete & Steel
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach-1) (Both Side) ch.9830m to 11265 (Package -6)		Total -2870						
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach - 2) (Both Side) ch.11265m to 12700m (Package - 7)		Total -2870 Completed-310	2.25m	Right – 69	4.5m bay width	Concrete for post and steel for M/s Grill	Permanent	Concrete & Steel
From Nandambakkam Bridge to Army		Total -3500 Completed-2770	0.50km-4m ht 1.77km	Right – 308 Left - 308	4.5m bay width	Concrete for post and steel for M/s Grill	Permanent	Concrete & Steel

Bridge (Both Side) ch.12700m to 14450 m (Package - 8)			- 2.4m ht					
From Army Bridge to Airport Runway Bridge (Both Side) ch.14450m to 16750 m (Package - 9)		Total -4200 Completed- 2670	1.9km- 4m ht 0.77km - 2.4m ht	Right – 296 Left - 296	4.5m bay width	Concrete for post and steel for M/s Grill	Permanent	Concrete & Steel

Fencing - Status of Work

Fencing Work	Phases of Work	Status of work	Details of works to be completed	Tentative date of completion	Remarks (if any)
From Thiru.vi.ka Bridge to Kotturpuram Bridge (Both Side) ch.2000m to 4350m – (Package -1)		Out of total length of 4700m, Completed for a length of 2830m.	No work is pending Completed upto workfront available	-	Balance length can't be completed due to R&R Issues & also existing compound wall is available.
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -1) (Both Side) ch.4350m to 5825m (Package -2)		Out of total length of 2950m, Completed for a length of 1750m	No work is pending Completed upto workfront available	-	Balance length can't be completed due to R&R Issues & also existing compound wall is available.
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -2) (Both Side) ch.5825m to 7300m (Package -3)		Out of total length of 2950m, Completed for a length of 1510m	No work is pending Completed upto workfront available	-	Balance length can't be completed due to R&R Issues & also existing compound wall is available.
From Maraimalai Adigalar Bridge to Alandur Bridge (Both Side) ch.7300m to 8200m (Package -4)		No work front is available	Work pending		No work front is available due to R&R Issues & also existing compound wall is available.
From Alandur Bridge to		Out of total length of	No work is pending		Balance length can't be

Jafferghanpet low Bridge (Both Side) ch.8200m to 9830m (Package -5)		3260m, Completed for a length of 1630m	Completed upto workfront available		completed due to R&R Issues & also existing compound wall is available.
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach-1) (Both Side) ch.9830m to 11265 (Package -6)		No work front is available	Work pending		No work front is available due to R&R Issues & also existing compound wall is available.
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach - 2) (Both Side) ch.11265m to 12700m (Package -7)		Out of total length of 2870m, Completed for a length of 310m	No work is pending Completed upto workfront available		Balance length can't be completed due to R&R Issues & also existing compound wall is available.
From Nandambakkam Bridge to Army Bridge (Both Side) ch.12700m to 14450 m (Package -8)		Out of total length of 3500m, Completed for a length of 2770m	No work is pending Completed upto workfront available		Balance length can't be completed due to R&R Issues & also existing compound wall is available.
From Army Bridge to Airport Runway Bridge (Both Side) ch.14450m to 16750 m (Package -9)		Out of total length of 4200m, Completed for a length of 2670m	No work is pending Completed upto workfront available		Balance length can't be completed due to R&R Issues & also existing compound wall is available.

Additional components in fences


Fencing Work	No. of Post	No. of Post with lights	Security Camera (if Any)	Gates			Additional parts (if Any)	Details of Walkways (if Present)
				No	Size	Chainage		
From Thiru.vi.ka Bridge to Kotturpuram Bridge (Both Side) ch.2000m to 4350m – (Package -1)	-	-	-	3	6X2.7m	ch.2000m to 4350m	-	-
From Kotturpuram Bridge to Maraimalai Adigalar Bridge				1	6X2.7m	ch.4350m to 5825m		

(Reach -1) (Both Side) ch.4350m to 5825m (Package -2)							
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -2) (Both Side) ch.5825m to 7300m (Package -3)			0		ch.5825m to 7300m		
From Maraimalai Adigalar Bridge to Alandur Bridge (Both Side) ch.7300m to 8200m (Package -4)			0		ch.7300m to 8200m		
From Alandur Bridge to Jafferghanpet low Bridge (Both Side) ch.8200m to 9830m (Package -5)			2	6X2.7m	ch.8200m to 9830m		
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach-1) (Both Side) ch.9830m to 11265 (Package -6)			0		ch.9830m to 11265		
From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach - 2) (Both Side) ch.11265m to 12700m (Package -7)			0		ch.11265m to 12700m		
From Nandambakkam Bridge to Army Bridge (Both Side) ch.12700m to 14450 m (Package -8)			3	6X2.7m	ch.12700m to 14450 m		
From Army Bridge to Airport Runway Bridge (Both Side) ch.14450m to 16750 m			2	6X2.7m	ch.14450m to 16750 m		

(Package -9)

Photographs of Fences

Fencing Work (Stretches)	Photographs
From Thiru.vi.ka Bridge to Kotturpuram Bridge (Both Side) ch.2000m to 4350m – (Package -1)	
From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -1) (Both Side) ch.4350m to 5825m (Package -2)	

<p>From Kotturpuram Bridge to Maraimalai Adigalar Bridge (Reach -2) (Both Side) ch.5825m to 7300m (Package -3)</p>	
<p>From Maraimalai Adigalar Bridge to Alandur Bridge (Both Side) ch.7300m to 8200m (Package -4)</p>	
<p>From Alandur Bridge to Jafferghanpet low Bridge (Both Side) ch.8200m to 9830m (Package -5)</p>	
<p>From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach-1) (Both Side) ch.9830m to 11265 (Package -6)</p>	
<p>From Jafferghanpet low Bridge to Nandambakkam Bridge (Reach - 2) (Both Side) ch.11265m to 12700m (Package -7)</p>	

From Nandambakkam Bridge to Army Bridge
(Both Side) ch.12700m to 14450 m (Package -
8)



From Army Bridge to Airport Runway Bridge
(Both Side) ch.14450m to 16750 m (Package -
9)



2.4. Boom Systems of Adyar River

General Information of Boom System

Location of Boom Systems	Zone	Division	Ward No.	Span of Boom in m	Debris collected			Quantity of Debris collected in last 3 years	Location of disposal	Year of Installation
					Quantity	Frequency	Duration			

Downstream of Kasi Theatre Bridge (Jafferkhanpet Bridge)	13 & 10	168 & 139	168 & 139	150	160 T / Year	Every Quarter		480	PDG	2020
Downstream of Maraimali Adigalar Bridge	13	169	169	294					PDG	2020
Upstream of Kotturpuram Bridge	13	170	170	192					PDG	2020
Upstream of Manapakkam Bridge	12	157	157	90					PDG	2020

Features of Boom System

Location of Boom Systems	Type of Boom	Floats		Details of Materials of float	Other features of Float	Debris Screen		Deflector Plates
		Nos	Size			Nos	Size	
Downstream of Kasi Theatre Bridge (Jafferkhanpet Bridge)	Debris screen							
Downstream of Maraimali Adigalar Bridge	Debris screen							
Upstream of Kotturpuram Bridge	Debris screen							

Upstream of Manapakkam Bridge	Debris screen							
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2.5. TECHNICAL SPECIFICATIONS

Sl.NO.	Description	
1	Location Type	Cooum & Adyar River
2	Purpose	Arrest floating Debris and floating Trash
3	Depth of water at the boom location	02 Meters (avg)
4	Average water operating level	02 Meters (avg)
5	Design surface water velocity at waterway barrier boom	1.25 m/s
6	Design Low Water Level	1.0m (min)
7	Design High Water Level	3.8m (avg)
8	Water type (Select one)	brackish water
9	Design Wind Velocity	15 m/s
10	Seasonal or Permanent	Permanent Installation
11	Position of the boom to flow	30 degree at angle to the flow

12	Distance between shoreline and anchors (avg)	3 meter at all locations appx.
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O&M and Rehabilitation of Boom System

Location of Boom Systems	Cost of Maintenance & up gradation work in last 3 years	Details of up gradation work in last 3 year
Downstream of Kasi Theatre Bridge (Jafferkhanpet Bridge)	64.63 lakhs	Replacement of damaged booms
Downstream of Maraimali Adigalar Bridge		
Upstream of Kotturpuram Bridge		
Upstream of Manapakkam Bridge		

3. Assets of Tambaram City Municipal Corporation (TCMC) to be handed over to the Concessionaire for O&M Purposes

3.1. Sewage Treatment Plant

STP	Tambaram STP	Pammal & Anakaputhur (Likely to be completed in 2024)	Remarks
Design Capacity	30	27 MLD, STP, SBR Process (under construction)	
General information of STP			
Location	Mannuran Kulam	Kalmaduvu, TNEB Colony, Anakaputhur	
Zone Details	4	Zone - 1	
Wards Covered		Anakaputhur ward no 1,2,3,4&5 part, Pammal ward 5 part, 6,7,8 10,11,12	
Year of Construction	Construction Under Progress	Construction is Under Progress	
Operating Capacity	30 mld	27 MLD	
Treatment Technology	SBR	SBR process	
Inlet Quantity	30 mld	27 MLD	
Inlet Parameter	BOD-350mg/l, COD-700mg/l, TSS-450mg/l, Total Kjeldahl Nitrogen (N)-45 mg/l, Total Phosphorous (P)-5 mg/l	BOD- 300 mg /l, COD -650 mg/l, TSS – 250mg /l, TN- 45 mg/l, TP- 7.10 mg /l	
Outlet Quantity	30mld	27 MLD	

Outlet Parameter	BOD \leq 10mg/l, COD \leq 50mg/l, TSS \leq 10mg/l, TN \leq 10 mg/l, Ammonical Nitrogen \leq 2 mg/l Phosphorous (P) \leq 2 mg/l	BOD < 10 mg /l, COD < 50 mg/l, TSS < 10mg /l, TN < 10 mg/l, TP < 1 mg /l	
Operation Efficiency	100%	27 MLD, STP under construction	
Details of inlet pumping main / Gravity main of STP			
Pumping Main / Gravity Main	Pumping Main	Pumping Main	
Length of main	East Tambaram (Adhi Nagar PS – STP) – 5.95 Km. West Tambaram (i) Compost Yard – STP-0.782 Km. (ii) Sai Nagar – STP- 1.03 Km.	12.82Km (6.35+6.47)	
Type of Material	DI-K9	CI	
Size of main	300mm,600mm, 700mm dia	200mm to 600mm CI	
Year of laying of main	i.Adhi Nagar PS – STP – 2015 (ii)Compost Yard – STP-2018 (iii) Sai Nagar – STP- 2018	To be laid	
Depth of laying of main	1.5m	2.0m	
Details of Pumps			

Type of Pump	Submersible pump	Vertical shaft submersible motor (VSSM)	
No. of Pumps	4	27 MLD STP under construction	
Capacity of pump	100 HP	-	
Make of Pumps	Kishore	-	
Hrs of pump working in a day	24 Hrs.	-	
Efficiency of pumps	80%	-	
Year of Installation of pump	2020	-	
Recent Updation/ Rehabilitation		-	
Operation and Maintenance Cost of STP			
Cost of Power consumption per annum	24,00,000/-	27 MLD STP under construction	
O&M Cost per annum including manpower/ materials/ equipment's	1,00,00,000/-	-	
Details for repair expenses in last 3 years		-	
Manpower in STP			
O&M Manpower	4	-	
Status of Employee	Contract Labour	-	

O&M by CMWSSB or Contract	Contract	-	
Name of Organization (if contract)	M/s Sheekardeepak Construction Ltd.,	-	
Contract Details	CNT/SEW/NCB/JNNURM/121/2010-11,dt. 10.05.2012	-	
Disposal Treated Water and Sludge			
Usage of treated water	Disposed	-	
Quantity of treated water	30 MLD	27MLD	
Location of Disposal	Pappan Channel	Adayar River, Srinivasapuram, Anakaputhur	
Disposal Method of treated water	Gravity	Pumping to Adayar River	
Sludge Disposal Method	Sale as Manure	STP under construction	
Location of disposal	Tambaram 30 MLD STP	-	
Quantity of Sludge generated	7956 kg/day	-	
Quantity of sludge disposed	7956 kg/day	-	
Recent Updation/ Rehabilitation			
Details of Rehabilitated or Upgraded work		STP under construction	

Tentative Time of completion (if any construction or rehabilitation is in progress)		-	
Cost of rehabilitation work undertaken		-	
Contract Details		-	
Miscellaneous			
List of equipment		27 MLD STP under construction	
Sewer System Appurtenances		-	
Power supply (HT/LT)		-	
DG Sets	HT	-	
List of Supporting Tools	500KVA	-	

Collection Well and its Pumps

Description	STPs and Modular STPs		Remarks
	Tambaram STP	Pammal & Anakaputhur (Likely to be completed in 2024)	
Inlet Collection Well of STP			
Dimension	10.75m dia x 3.7m depth	4.5x2.45x2.5m, to be constructed	

Capacity	336 cu.m	27 MLD	
Material of Construction	RCC	R.C.C	
Year of construction of well	2017	-	
Method of flow	Pumping	-	
Type of pump	Submersible Pump	Vertical shaft submersible motor (VSSM)	
No of Pumps	4	-	
Pumps on operation & Standby	2	2	2 W 1 S
Capacity of pump	100Hp	-	
Head of Pumps	15 m	-	
Flow Measurement		-	
Year of installation		-	
Size of inlet pipe	700mm,600mm,300mm dia	-	
Pump House details	1.Adhi Nagar 2.Compost Yard 3.Sai Nagar	-	
Collection well for treated water			
Dimension	11.35m dia x 6.2m depth	15.5 m inner dia., Depth 3.9m -	
Capacity	628 cu.m	2260 cum	
Material of Construction	RCC	-	
Year of construction of well	2017	Under construction	
Method of flow	decanting	Pumping	

Type of pump		Submersible Pump	
No of Pumps		3	
Pumps on operation & Standby		2 W	1 S
Capacity of pump		562.50 cum /hour	
Head of Pumps		-	
Flow Measurement	Electromagnetic flowmeter	27 MLD	
Year of installation	2023	Under construction	
Size of inlet pipe	800mm dia	1000 mm dia., RCC Pipe	
Pump House details		-	

Treatment Units of STP & Modular STPs

Treatment Units	Factors required	STPs	
		Tambaram STP	Pammal & Anakaputhur (Likely to be completed in 2024)
Inlet Chamber	Type	Rectangular	-
	Size of Unit	3.4 x 3.73 x 2.0 m	4.5x2.45x2.5m
	Capacity in MLD	0.3	27 MLD
	Make and Model of equipment	RCC	-
	Year of establishment	2017	-
	Operational efficiency	100%	-
Screen Chamber	Type	Manual & Mechanical	Mechanical coarse screen, Manual coarse screen,

				Mechanical fine screen, Manual fine screen	
	Size and No. of Unit	5.13x 0.63 x 1 – 1 No. (Manual) 5.13 x 0.53 x 1 – 2 Nos (Mechanical)		4.5 m x 1.25 m x 1.7m – 1no – mechanical screen 4.5 m x 0.9 m x 11.7 m – 1 no – manual screen	
	Working & Standby	2 W	1 S	1 W	1 S
	Material of Screen	SS		SS	
	Capacity in MLD	43 mld		0.733 cum /sec	
	Make and Model of equipment	Pico Puro Technologies		To be constructed	
	No. of inlet & outlet gate	3	3	-	-
	Year of establishment	2017		-	
	Operational efficiency	100%		-	
Primary Clarifier	Type	N/A		Not applicable	
	Size and No. of Unit				
	Capacity in MLD				
	Make and Model of equipment				
	Year of establishment				
	Operational efficiency				
Secondary Clarifier	Type	N/A		Not applicable	
	Size and No. of Unit				
	Capacity in MLD				

	Make and Model of equipment		
	Year of establishment		
	Operational efficiency		
Feed Chamber	Type	Rectangle	Not applicable
	Size and No. of Unit	1	
	Capacity in MLD	30mld	
	Make and Model of equipment	RCC	
	Year of establishment	2017	
	Operational efficiency	100%	
Aeration Tanks	Type	N/A	SBR Process
	Size and No. of Unit		4 nos, each 34.7m x 23 m x 6m
	Capacity in MLD		27 MLD
	Make and Model of equipment		To be constructed
	Year of establishment		
	Operational efficiency		
Sludge Pump House	Type	N/A	
	Size and No. of Unit		
	Capacity in MLD		
	Make and Model of equipment		
	Year of establishment		
	Operational efficiency		
Primary Sludge	Type	N/A	

Digester	Size and No. of Unit		
	Capacity in MLD		
	Make and Model of equipment		
	Year of establishment		
	Operational efficiency		
Secondary Sludge Digester	Type	N/A	
	Size and No. of Unit		
	Capacity in MLD		
	Make and Model of equipment		
	Year of establishment		
	Operational efficiency		
Any Other Units	Type	SBR	
	Size and No. of Unit	30m dia x 6.5m LD - 4 Units	
	Capacity in MLD	7.5 mld each	
	Make and Model of equipment	RCC	
	Year of establishment	2017	
	Operational efficiency	100%	
Any Other Units	Type	Sludge Sump	
	Size and No. of Unit	7.5m dia x 4.0m LD	
	Capacity in MLD	0.16	
	Make and Model of equipment	RCC	
	Year of establishment	2017	

	Operational efficiency	100%	
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Pumping Stations

3.2. Pumping Stations – Tambaram STP

General Information

Pumping Stations	Location	Ward No	Capacity	Year of Const.	LT/HT	No. of Pumps		Type of Pump station	Class of pumps	Direction of Flow	
						Duty	Standby	Dry/Wet		From	To
	East Tambaram										
Zone-I	Indira Nagar					4	1				
Zone-IA	Agaram Road					1	1				
Zone-II	Bharathi Nagar	4.30			LT	4	1	Wet			
Zone-III	Ganesh Nagar	1.20			LT	4	1	Wet			
Zone-IV	Adhi Nagar	2.20			LT	4	1	Wet			
Zone –V	Selaiyur Burial Ground	4.20			LT	4	1	Wet			
Zone-VI	Arul Nagar	1.60			LT	4	1	Wet			
Zone-VIA	Irubuliyur (Arulmigu Kamatchi Amman Koil Kulam)	0.80			LT	1	1	Wet			
	West Tambaram										

Zone - VII	Vetri Nagar (MPS)		0.55	2014	LT	3	1	Wet	Impulse	Vetri Nagar	Sri Sai Nagar
	Krishna Nagar (Road side Lift Station)		0.05	2014	LT	1	1	Wet	Impulse	Krishna Nagar	Vetri Nagar
Zone - VIII	Sri Sai Nagar (MPS)		0.42	2014	LT	3	1	Wet	Impulse	Sri Sai Nagar	Tambaram 30mld STP
Zone - IX	Mullai Nagar (MPS)		0.23	2014	LT	3	1	Wet	Impulse	Mullai Nagar	Compost Yard,
Zone - IXA	Nithyanandam Nagar (Lift Satation)		0.09	2014	LT	1	1	Wet	Impulse	Nithyanandam	Mullai Nagar – MH(102)
	Perumal Koil Street (Road Side lift station)		0.053	2014	LT	1	1	Wet	Impulse	Perumal Koil Street	Nithyanandam Nagar – MH-(50)
Zone - X	Compost Yard (MPS)		0.33	2014	LT	3	1	Wet	Impulse	Compost Yard,	Tambaram 30mld STP
Zone - XI	Arputham Nagar (MPS)		0.2	2014	LT	3	1	Wet		Arputham Nagar	Reddiyar Palayam – MH(193)
Zone - XIA	Burma Colony (Lift Station)		0.91	2014	LT	1	1	Wet		Burma Colony	Arputham Nagar – MH (490)
Zone - XIB	Kadhar Basha Street (Road Side lift Station)		0.053	2014	LT	1	1	Wet		Kadhar Basha Street	Kalagal Street - MH(23)

Zone - XIC	Kalagal Street (Road Side lift Station)		0.053	2014	LT	1	1	Wet		Kalagal Street	Arputham Nagar
Zone - XII	Reddiyar Palayam		0.20	2014	LT	3	1	Wet		Reddiyar Palayam	Mullai Nagar
Zone- XIIB	Gandhi Road (Road Side Lift Station)		0.067	2018	LT	1	1	Wet		Gandhi Road	Reddiyar Palayam
Zone- XIIC	GST (Road Side Lift Station)		0.053	2014	LT	1	1	Wet		GST	Reddiyar Palayam - MH(326)
Zone – XIID	Brindhavan Colony (Road Side Lift Station)		0.053	2014	LT	1	1	Wet		Brindhavan Colony	Reddiyar Palayam – MH(200)
Zone –XII E	Patel Nagar (Road Side Lift Station)		0.053	2014	LT	1	1	Wet		Patel Nagar	Reddiyar Palayam – MH (329)
Zone –XII F	Well Street (Road Side Lift station)		0.036	2023	LT	1	1	Wet		Well Street	Reddiyar Palayam
Zone XIII	Moulanan Nagar (MPS)		0.091	2014	LT	3	1	Wet		Moulanan Nagar	Gandhi Road –MH (281)
Zone – XIII A	Southkula karai Street (Road Side lift Station)		0.053	2014	LT	1	1	Wet		Southkula karai Street	Moulanan Nagar – MH(45)

Pumping Station – Structural Details

Pumping Stations	Inlet Chamber Size	Class of Inlet Material	Size of Well/sump	Screen			Grit Removal			Size of Pump House	Delivery Pipes			
				Size	Type	Year of Inst.	Size	Shape	Year of Inst.		Diameter	Class of Material	Length	Year of Const.
Zone VII (MPS)		RCC	8.6m dia 9.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014	9.0 x 4.2m	250mm	DI-K9	646.8m	2014
Zone VII (Road Side Lift Station)		RCC	3.0m dia 7.5m depth	50mm x10mm	SS Flat	2018		Semi Circular	2018		250mm	DI-K9	342.0m	2018
Zone VIII (MPS)		RCC	7.5 m dia 9.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014	9.0 x 4.2m	300mm	DI-K9	1026.3m	2018
Zone IX (MPS)		RCC	5.5 dia x 9.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014	9.0 x 9.0m	600mm	DI-K9	961.0m	2014
Zone IXA (Lifting Station)		RCC	3.5m dia x 9.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		200mm	DI-K9	1236.0m	2014
Zone IXB (Road Side Lift		RCC	3.0m dia x 7.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		250mm	DI-K9	125.0m	2014

Station														
Zone X		RCC	6m dia x 11.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014	9.0m x 9.0m	600mm	DI-K9	856.0m	2014
Zone XI		RCC	5.5m dia x 9.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014	9.0m x 9.0m	300mm	DI-K9	1925.4m	2014
Zone XIA		RCC	3.5m dia x 9.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		150mm	DI-K9	1344.5m	2014
Zone- XIB		RCC	3.0m dia x7.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		150mm	DI-K9	64.0m	2014
Zone- XIC		RCC	3.0m dia x7.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		200mm	DI-K9	298.4m	2014
Zone-XII		RCC	5.5m dia x8.6 m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014	9.0m x 9.0m	600mm	DI-K9	422.0m	2014
Zone- XIIB		RCC	3.0m dia x9.5m depth	50mm x10mm	SS Flat	2018		Semi Circular	2018		250mm	DI-K9	391.6m	2018
Zone- XIIC		RCC	3.0m dia x7.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		200mm	DI-K9	368.8m	2014
Zone-		RCC	3.0m dia	50mm	SS	2014		Semi	2014		200mm	DI-K9	88.9m	2014

XIID			x7.5m depth	x10mm	Flat			Circular						
Zone- XIII E		RCC	3.0m dia x7.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		200mm	DI-K9	27.5m	2014
Zone- XIII F		RCC	3.0m dia x7.5m depth	50mm x10mm	SS Flat	2023		Semi Circular	2023		200mm	DI-K9	193.0m	2023
Zone- XIII		RCC	3.5m dia x9.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		200mm	DI-K9	1828.6m	2014
Zone- XIII A		RCC	3.5m dia x7.5m depth	50mm x10mm	SS Flat	2014		Semi Circular	2014		200mm	DI-K9	339.6m	2014

Pumping Station – Other Components

Pumping Stations	Control Room	Transformer Room	Stand By Generator	Pressure Pipes	Valves		Fence	
					No.	Type	Type	Year of Const.
Zone VII (MPS)			30 KVA-1 No		4	Sluice & Gate Valve	RR	2014
Zone VII (Road Side Lift Station)					2	Sluice & Gate Valve	RR	2018
Zone VIII (MPS)			30KVA-1 No.		4	Sluice & Gate Valve	RR	2014
Zone IX (MPS)			63 KVA-		4	Sluice & Gate Valve	RR	2014

			1No.					
Zone IXA (Lifting Station)			30KVA-1 No.		2	Sluice & Gate Valve	RR	2014
Zone IXB (Road Side Lift Station)					2	Sluice & Gate Valve	RR	2014
Zone X			63 KVA- 1 No.		4	Sluice & Gate Valve	RR	2014
Zone XI			50 KVA- 1 No.		4	Sluice & Gate Valve	RR	2014
Zone XIA			30KVA- 1 No.		2	Sluice & Gate Valve	RR	2014
Zone-XIB					2	Sluice & Gate Valve	RR	2014
Zone-XIC					2	Sluice & Gate Valve	RR	2014
Zone-XII			63KVA-1 No.		4	Sluice & Gate Valve	RR	2014
Zone-XIIB			63KVA-1 No.		2	Sluice & Gate Valve	RR	2018
Zone-XIIC					2	Sluice & Gate Valve	RR	2014
Zone-XIID					2	Sluice & Gate Valve	RR	2014
Zone-XIIE					2	Sluice & Gate Valve	RR	2014
Zone-XIIF					2	Sluice & Gate Valve	RR	2023
Zone-XIII			63 KVA-1 No.		4	Sluice & Gate Valve	RR	2014
Zone-XIII A					2	Sluice & Gate Valve	RR	2014

3.3. Pumping Station of Pammal & Anakaputhur STP

General Information

Pumping Stations	Location	Ward No	Capacity	Year of Const.	LT/HT	No. of Pumps		Type of Pump station	Class of pumps	Direction of Flow	
						Duty	Standby	Dry/Wet		From	To
Zone-1	Kalmaduva		2.98	To be constructed		2	1			1	STP
Zone-2	J.N road Near bus terminus		0.94	To be constructed		2	1			2	1
Zone-3	Gowri avenue		0.98	To be constructed		2	1			3	1
Zone-4	Kasthuribai nagar		4.07	To be constructed		2	1			4	3
Zone-1A	Lakshmi nagar		0.21	To be constructed		2	1			1A	1B
Zone-1B	Srinivasapuram		0.55	To be constructed		2	1			1B	MH-720(Zone-1)
Zone-1C	Thendral nagar		0.33	To be constructed		2	1			1C	MH-721(Zone-1)
Zone-1D	Vijaya lakshmi pandit street		0.11	To be constructed		2	1			1D	MH-48(Zone-2)

3.4. Pumping Main – Pammal & Anakaputhur STP

S. No.	From SPS	To SPS	Size of Main (mm)	Length (M)	Year of Construction	Level of Installation	Manholes			Material of Pipe
							No.	Size	Depth	
1	1	STP	200	1050						CI
2	2	1	400	1750						CI
3	3	1	350	680						CI
4	4	3	500	250						CI

3.5. Details of Fencing

General information

Fencing Work	Phases of Work	Name of Area	Location (as specific to River Bank)	Ward No.	Year of Const.	Type of Structure (Permanent / temporary)	Details of Repair Work	Cost of repair work in last 3 years
Anakaputhur Municipality	I	Adayar River Banks	Pump House	1	2023	Permanent	-	-
Anakaputhur Municipality	II							
Kundrathur Municipality	I							
Thiruneermalai Town Panchayat	I	Adayar River Bank	Thiruneermalai	29	2023	Permanent	-	-

Perungalathur Town Panchayat	I	Adayar River Bank	Perungalathur	55	2023	Permanent	-	-
Perungalathur Town Panchayat	III	Samuthuva Periyar Nagar						
Kundrathur Town Panchayat	II							
Thiruneermalai Town Panchayat	II							
Perungalathur Town Panchayat	II	Sasi Vardhan Nagar	Perungalathur	55	-	-	-	-

Structural details

Fencing Work	Phases of Work	Length of fence	Height of Fence	Posts in Fence			Structure of fence	
				No. of Post	Interval b/w posts	Type of Materials	Type of Fencing	Materials used
Anakaputhur Municipality	I	1.52 km	2.80	503	3	RCC Column	Permanent	RCC Structure
Anakaputhur Municipality	II	1.72 km						
Kundrathur Municipality	I	1.2 km						
Thiruneermalai Town Panchayat	I	2.382 km	2.80	794	3	RCC Column	Permanent	RCC Structure

Perungalathur Town Panchayat	I	5.132 km	2.80	1710	3	RCC Column	Permanent	RCC Structure
Perungalathur Town Panchayat	III	1.256 km	2.80	-	-	-	-	-
Kundrathur Town Panchayat	II	1.390 km						
Thirunermalai Town Panchayat	II	0.7 km						
Perungalathur Town Panchayat	II	1 km						

4. Assets of Department of Rural Development and Panchayat Raj (DRDP) to be handed over to the Concessionaire for O&M Purposes

The Concessionaire will be handed over existing fencing of approximately 27km (considering both banks of the river outside of the Chennai Metropolitan Area limits)

5. Assets of other Water Resources Department (WRD) to be handed over to the Concessionaire for O&M Purposes

The Adyar River shall remain under the operational/ administrative control of WRD from Flood Management standpoint and the Concessionaire will only have license rights to enter upon and undertake necessary Construction Works and O&M with respect to Used Water Management, River Channel Works, River Front Works and Solid Waste Management in accordance with the terms hereof. All of the existing civil structures (including existing retaining walls, access ramps, culverts, etc.) and equipment (including inlet arrangements, gates, valves, etc.) meant for water resources management and flood risk management (owned by WRD) are to be operated and maintained by WRD throughout the Concession Period.

ANNEXURE III: DESIGNATED POINTS

(Schedule-A)

S.No	Instruments
I	Existing Sewage Pumping Stations and STP
A.	Online Instruments at all the existing Sewage Pumping Stations / Lifting Stations- number of sets as required for all existing pumping stations
B.	Online Instruments at Nesapakkam STPs - 3 sets
C.	Online Instruments at Tambaram STP - 1 set
D.	Online Instruments at Pammal/Anakaputhur STP - 1 set
E.	Online Instruments at Kundrathur STP - 1 set
F.	Online Instruments at Kotturpuram STP - 1 set
G.	Online Instruments at Todhunter Nagar STP - 1 set
H.	Online Instruments at all the existing I&D works- number of instruments as required
II	Proposed I&D System, P.S and STPs
I.	Online Instruments at Interception and Diversion (I&D)- number of instruments as required
J.	Online Instruments at Sewage Pumping Stations- number of instruments as required
K.	Online Instruments at Proposed STPs- number of instruments as required
L.	Online Instruments at Adyar River (at 2 km interval)
III	Rain Gauges across the length of the rivers (at 4 km interval)

Proposed Instruments for Online Monitoring

1. Flow meters at all of the pumping stations along with GPRS based transmitters and smart electricity meters
2. Instruments at STPs (both at existing & proposed STPs)
 - a. Level Transmitter cum Transceiver at collection chamber
 - b. Open channel Ultrasonic Flowmeter for inlet
 - c. Smart Energy meter in Mains Receiving Sub-Station (MRSS)
 - d. Outlet line

- i. Electromagnetic Flowmeter (EMF);
 - ii. TDS analyser,
 - iii. pH analyser,
 - iv. ORP analyser,
 - v. COD analyser.
 - vi. BOD analyser,
 - vii. Turbidity analyser,
 - viii. Chlorine analyser,
 - ix. DO analyser
 - e. RTU Panel with 7” Local Touch Display in the appropriate location in the STP as per site conditions.
3. Online instruments for River quality monitoring:
 - a. TDS analyser,
 - b. pH analyser,
 - c. Ammonia Nitrogen analyser,
 - d. DO analyser.
 - e. Temperature
4. Rain gauges to sense and measure the instance and quantum of precipitation in the project vicinity
5. Other instruments required for overall quality, safety and security of the River
 - a.

SCHEDULE B: DEVELOPMENT REQUIREMENTS

1 Project Development Requirements

The primary objective of this Project is to restore Adyar River to function as a Class D Water Body, suitable for the propagation of wildlife and fisheries. The Adyar River is highly polluted due to discharge of untreated sewage and other pollutants from various sources. The scope of work includes, but not limited to, the following:

- a) Take necessary steps to ensure that Adyar River meets the required water quality standards for propagation of wildlife and fisheries.
- b) Improve the overall ecological health of the river by implementing measures to intercept, divert, and treat polluting outfalls.
- c) Undertake rehabilitation and development of sewage treatment facilities (STFs) comprising of traditional sewage treatment plants (STPs) of appropriate size, capacity and technology, and other innovative means of sewage treatment in accordance with Good Industry Practice;
- d) Undertake river channel management works to enhance water flow, reduce erosion, and improve the overall stability of the river system.
- e) Implement flood protection measures to mitigate the risk of flooding in the surrounding areas.
- f) Develop riverfront areas to enhance public access, recreational opportunities, and aesthetic value. Riverfront development to include landscaping, construction of pedestrian walkways, cycle tracks, public parks, and other such recreational amenities;
- g) Establish efficient solid waste management systems to prevent pollution and maintain the cleanliness of the river and its surroundings. Solid waste management to include, but limited to, the following: collection, transportation, and disposal of waste generated within the right-of-way of the Adyar River (including removal and disposal of waste and debris collected from the surface of Adyar River);
- h) Implement environmental protection measures to safeguard the river ecosystem and adjacent habitats;
- i) Undertake ecological and biodiversity protection works to enhance the natural habitats and promote sustainable wildlife and fisheries propagation;
- j) Development an IOT based (SCADA) system for monitoring and supervision of the Project; and
- k) Develop ancillary infrastructure such as access roads, trails, utilities, and other necessary facilities to support the river restoration efforts.

2 Scope of Concessionaire

The concessionaire shall be responsible for the following:

- a) Planning, designing and engineering of the Project
- b) Financing of the Project
- c) Procurement of equipment and materials required for the Project
- d) Construction and commissioning of the Project:
 - (i) The Concessionaire shall assess the existing infrastructure/ assets.
 - (ii) Identify gaps in terms of quality/ condition of the existing assets and capacity of the existing assets.
 - (iii) Undertake rehabilitation of existing assets to ensure compliance with Specifications and Standards, and Applicable Laws, and to ensure fulfilment of KPIs in accordance with Schedule C.
 - (iv) Propose and develop new infrastructure to meet capacity gaps
- e) Operation and maintenance of the Project during the Operation Period
- f) Compliance with all Applicable Laws
- g) Fulfillment of the KPIs
- h) Transfer of the Project Assets upon expiry or early termination of the Concession Agreement

3 Specific Requirements

3.1 Rehabilitation and Operation of Existing Assets

- a) Conduct a comprehensive assessment of existing pumping stations, sewage treatment plants (STPs), and other assets to identify necessary rehabilitation and maintenance requirements.
- b) Upgrade existing assets as needed to meet Applicable Laws, and Specifications and Standards; improve operational efficiency to ensure fulfilment of KPIs specified in Schedule C.
- c) Develop and implement a regular operation and maintenance plan for the pumping stations, STPs, and other assets to ensure their efficient functioning.

3.2 Development and Operation of New Assets

3.2.1 Intercepting, Diverting, and Treating Polluting Outfalls:

a. Outfall Inventory and Assessment

- 3.2.1.a.1 Conduct a detailed inventory of existing outfalls along the river, including their locations, discharge points, and characteristics.
- 3.2.1.a.2 Assess the types and sources of pollutants or wastewater being discharged through these outfalls.
- 3.2.1.a.3 Evaluate the potential impact of these outfalls on the river's water quality and ecological health.

b. Diversion Planning and Design

- 3.2.1.b.1 Develop a comprehensive diversion plan for all the outfalls.
- 3.2.1.b.2 Determine the appropriate diversion methods based on the characteristics of each outfall and its associated pollutants.
- 3.2.1.b.3 Design and prepare Drawings for the necessary infrastructure for diversion, which may include, but not limited to, the following: trunk sewer, rising mains, pipe-carrying bridges, pipelines, pumping stations, sewage treatment facilities, pipeline for discharge of Treated Effluent in to the river.
- 3.2.1.b.4 During the design process, ensure compliance with the Specifications and Standards, Applicable Laws and Good Industry Practice.
- 3.2.1.b.5 The diameter of trunk sewers should not be less than 400mm

c. Construction and Installation

- 3.2.1.c.1 Execute the construction and installation of the diversion infrastructure as per the approved Drawings and DPR.
- 3.2.1.c.2 Coordinate with relevant contractors, subcontractors, and suppliers to ensure timely completion.
- 3.2.1.c.3 Monitor construction activities to ensure compliance with Specifications and Standards.
- 3.2.1.c.4 Obtain necessary permits, licenses, and approvals for construction and installation.
- 3.2.1.c.5 The Concessionaire is expected to intercept, divert, treat a minimum of 76 wet outfalls as identified in the Feasibility Report

d. Water Quality Monitoring and Compliance

- 3.2.1.d.1 Establish a monitoring program to assess the effectiveness of the diversion measures.
- 3.2.1.d.2 Define the parameters to be monitored, such as pollutant concentrations, dissolved oxygen levels, or biological indicators.
- 3.2.1.d.3 Implement regular monitoring and sampling schedules to gather data on water quality.
- 3.2.1.d.4 Analyze and interpret monitoring results to evaluate the success of the diversion activities.
- 3.2.1.d.5 Ensure compliance with applicable KPIs.

e. Operation and Maintenance

- 3.2.1.e.1 Develop an operation and maintenance plan for the diversion infrastructure as part of the Maintenance Manual.
- 3.2.1.e.2 Define the responsibilities for ongoing operation, maintenance, and monitoring.
- 3.2.1.e.3 Establish regular inspections and maintenance schedules to ensure the continued effectiveness of the diversion measures.
- 3.2.1.e.4 Address any repairs or modifications needed to maintain optimal performance.

f. Reporting and Documentation

- 3.2.1.f.1 Prepare regular progress reports detailing the status of the diversion activities in line with Articles 17, 18, and 19 of the Concession Agreement.
- 3.2.1.f.2 Compile monitoring data, analysis, and assessments into comprehensive reports.
- 3.2.1.f.3 Document all project-related activities, including designs, permits, contracts, and compliance records.
- 3.2.1.f.4 Provide documentation required for regulatory reporting or audits.

3.2.2 Sewage Treatment Facilities (STFs)

a. Planning of STFs

- 3.2.2.a.1 Conduct an initial assessment of the sewage treatment needs and requirements.
- 3.2.2.a.2 Evaluate the existing sewage treatment infrastructure, if any, and determine its capacity and effectiveness.
- 3.2.2.a.3 Define the goals and objectives for the new sewage treatment infrastructure.
- 3.2.2.a.4 Conduct detailed studies and investigations to identify the most suitable treatment technologies, potential location for development of STFs and design capacity of STFs.

b. Design and Engineering

- 3.2.2.b.1 Develop detailed engineering plans and designs for the sewage treatment infrastructure.
- 3.2.2.b.2 Specify the treatment processes and technologies to be used, such as activated sludge, anaerobic digestion, or membrane filtration.
- 3.2.2.b.3 Determine the treatment capacity required based on the projected wastewater volume and quality.
- 3.2.2.b.4 Consider energy efficiency, odor control, and environmental sustainability in the design.
- 3.2.2.b.5 Ensure compliance with Applicable Laws, and the Specifications and Standards.

c. Construction and Installation

- 3.2.2.c.1 Execute the construction and installation of the sewage treatment infrastructure.
- 3.2.2.c.2 Oversee the construction activities, ensuring adherence to project specifications and timelines.
- 3.2.2.c.3 Monitor construction progress, quality control, and safety compliance.
- 3.2.2.c.4 Coordinate with utility providers, suppliers, and contractors for timely delivery of materials and equipment.
- 3.2.2.c.5 The cumulative capacity of all the STPs put together should not be less than 110 MLD

d. Commissioning and Start-up

- 3.2.2.d.1 Develop a commissioning plan to ensure proper functionality of the sewage treatment infrastructure.

- 3.2.2.d.2 Conduct performance tests and inspections to verify compliance with DPR.
- 3.2.2.d.3 Fine-tune the treatment processes and make adjustments as needed.
- 3.2.2.d.4 Develop operating procedures and training programs for plant personnel.
- 3.2.2.d.5 Conduct comprehensive start-up procedures to transition to full operation smoothly.

e. Operation and Maintenance

- 3.2.2.e.1 Develop an operation and maintenance plan for the sewage treatment infrastructure.
- 3.2.2.e.2 Establish routine maintenance schedules for equipment, instrumentation, and systems.
- 3.2.2.e.3 Monitor and optimize treatment processes to meet the KPIs.
- 3.2.2.e.4 Implement regular inspections, calibration, and performance monitoring.
- 3.2.2.e.5 Develop protocols for emergency response, troubleshooting, and repairs.
- 3.2.2.e.6 Ensure compliance with environmental regulations and permit requirements.
- 3.2.2.e.7 Provide ongoing training and professional development for plant personnel.

f. Monitoring and Reporting

- 3.2.2.f.1 Establish a monitoring program to assess the performance of the sewage treatment infrastructure.
- 3.2.2.f.2 Collect and analyse data to evaluate the effectiveness and efficiency of the treatment processes.
- 3.2.2.f.3 Prepare regular reports summarizing the operational performance and compliance status.
- 3.2.2.f.4 Share relevant information and reports with the Authority and the Independent Engineer.

g. Upgrades and Expansion

- 3.2.2.g.1 Anticipate future needs and plan for potential upgrades or expansions of the sewage treatment infrastructure.
- 3.2.2.g.2 Conduct periodic assessments of the treatment capacity and evaluate the need for infrastructure modifications.
- 3.2.2.g.3 Develop plans for scaling up the treatment facility based on potential increase in sewage generation.
- 3.2.2.g.4 For the avoidance of doubt, the Concessionaire shall not undertake any expansion or augmentation activities, except with the prior written approval of the Authority.

h. Environmental Monitoring and Compliance

- 3.2.2.h.1 Establish protocols for environmental monitoring around the sewage treatment infrastructure.
- 3.2.2.h.2 Monitor and report on the impacts of treated effluent on the Adyar River.

3.2.3 River Channel Works (RCW)

a. Planning

- 3.2.3.a.1 Conduct an initial assessment of the river's condition, including its hydrological characteristics, sediment dynamics, and ecological health.
- 3.2.3.a.2 Identify the specific challenges and issues associated with the river channel, such as erosion, sedimentation, or channelization.
- 3.2.3.a.3 Define the goals and objectives for the river channel works, considering both ecological and engineering perspectives.
- 3.2.3.a.4 Conduct feasibility studies and hydraulic modelling to determine the appropriate design approaches.

b. Design and Engineering

- 3.2.3.b.1 Develop detailed engineering plans and designs for the river channel works.
- 3.2.3.b.2 Determine the optimal channel alignment, cross-section, and slope to restore natural flow patterns and improve sediment transport.
- 3.2.3.b.3 Consider hydraulic structures, such as weirs, riffles, or pools, to enhance habitat diversity and connectivity.
- 3.2.3.b.4 Incorporate erosion control measures, such as bank stabilization techniques, bund profiling, river training and other bioengineering solutions.
- 3.2.3.b.5 Consider the integration of floodplain reconnection and natural flood management approaches, if applicable.
- 3.2.3.b.6 Ensure compliance with Applicable Laws, Specifications and Standards, and KPIs

c. Construction and Installation

- 3.2.3.c.1 Execute the construction and installation of the river channel works.
- 3.2.3.c.2 Oversee the construction activities, ensuring adherence to project specifications and timelines.
- 3.2.3.c.3 Monitor construction progress, quality control, and safety compliance.
- 3.2.3.c.4 Coordinate with utility providers, suppliers, and contractors for timely delivery of materials and equipment.

d. Sediment Management

- 3.2.3.d.1 Assess the sediment dynamics of the river and develop a sediment management plan.
- 3.2.3.d.2 Consider sediment-trapping mechanisms, such as sediment basins or check dams, to reduce downstream sedimentation.
- 3.2.3.d.3 Develop strategies for sediment transport and deposition to restore natural geomorphological processes.
- 3.2.3.d.4 Implement measures to address sediment contamination or excessive sedimentation, if applicable.

- 3.2.3.d.5 Monitor and evaluate the effectiveness of sediment management techniques during and after construction.
- 3.2.3.d.6 For avoidance of doubt, the Concessionaire shall not undertake desilting of the Adyar River, except with prior written approval of the Authority.

e. Ecological Considerations

- 3.2.3.e.1 Assess the ecological requirements of the river and develop strategies to enhance habitat quality and connectivity.
- 3.2.3.e.2 Incorporate measures to create or restore habitats, such as riffles, pools, or side channels.
- 3.2.3.e.3 Integrate vegetation planting, bank reprofiling, or habitat creation techniques to enhance biodiversity.
- 3.2.3.e.4 Consider fish passage solutions, such as fish ladders or bypass channels, to improve connectivity.
- 3.2.3.e.5 Monitor and evaluate the ecological response to the channel works, including changes in habitat quality and species abundance.

f. Flood Protection Works

- 3.2.3.f.1 Conduct a comprehensive flood risk assessment, considering historical data, topography, hydrology, and climate change projections.
- 3.2.3.f.2 Develop a flood management plan that includes structural and non-structural measures for flood mitigation.
- 3.2.3.f.3 Implement flood protection measures, such as levees, floodwalls, embankments, floodplain zoning, and retention ponds.
- 3.2.3.f.4 Where necessary, construct flood control structures, such as weirs and floodgates, to manage water levels and reduce the risk of flooding in adjacent areas.

g. Monitoring and Reporting

- 3.2.3.g.1 Establish a monitoring program to assess the performance of the river channel works.
- 3.2.3.g.2 Collect and analyze data to evaluate the effectiveness of the channel works in achieving KPIs
- 3.2.3.g.3 Prepare regular reports summarizing the performance, ecological outcomes, and any necessary adjustments.
- 3.2.3.g.4 Share relevant information and reports with the Authority and Independent Engineer

h. Ongoing Maintenance and Management

- 3.2.3.h.1 Develop a maintenance and management plan for the river channel works.
- 3.2.3.h.2 Undertake ongoing maintenance, as required

3.2.4 River Water Quality Management

a. Purpose & Objective

The overall objective of the Project is to restore, develop and operationalize the Adyar River to function as a Class D Water Body capable of propagating wildlife and fisheries.

b. Water Quality Assessment

- 3.2.4.b.1 Conduct comprehensive water quality monitoring to assess the current status of the river.
- 3.2.4.b.2 Identify the key parameters to be measured, such as temperature, dissolved oxygen, pH, nutrients, turbidity, and contaminants.
- 3.2.4.b.3 Determine the frequency and locations for sampling to capture spatial and temporal variations. For the purpose of KPIs, quality of the river will be tested at the Designated Points.
- 3.2.4.b.4 Analyze the collected data to evaluate the water quality characteristics and identify potential pollution sources or concerns.

c. Pollution Source Identification and Control

- 3.2.4.c.1 Identify the major sources of pollution impacting the river, such as point sources (industrial discharges, sewage treatment plants) and non-point sources (agricultural runoff, urban stormwater).
- 3.2.4.c.2 Implement measures to control and mitigate pollution sources, such as wastewater treatment upgrades, best management practices for agriculture, or stormwater management strategies.
- 3.2.4.c.3 Implement pollution prevention measures to minimize the introduction of pollutants into the river system.
- 3.2.4.c.4 Coordinate with relevant stakeholders and regulatory agencies to enforce compliance with pollution control measures.

d. Water Quality Improvement Measures

- 3.2.4.d.1 Design and implement targeted measures to improve water quality parameters that do not meet desired standards.
- 3.2.4.d.2 Develop strategies for nutrient management, sediment control, and erosion prevention.
- 3.2.4.d.3 Implement measures to reduce or eliminate contaminants, including pollutants from industrial sources or harmful algal blooms.
- 3.2.4.d.4 Where possible consider the implementation of natural treatment systems, such as constructed wetlands, bioremediation, and phytoremediation to enhance water quality through natural processes.
- 3.2.4.d.5 Incorporate restoration activities, such as riparian buffer establishment, to reduce pollutant inputs and improve water quality.

e. Regulatory Compliance and Permitting

- 3.2.4.e.1 Ensure compliance with local, regional, and national regulations pertaining to water quality and pollution control.

- 3.2.4.e.2 Identify the necessary permits and approvals required for specific activities and ensure their timely acquisition.
- 3.2.4.e.3 Develop and implement a monitoring program to meet regulatory requirements and reporting obligations.
- 3.2.4.e.4 Provide documentation and reports to regulatory agencies as required by permits and regulations.

f. Monitoring and Reporting

- 3.2.4.f.1 Establish a comprehensive monitoring program to track the effectiveness of water quality management measures.
- 3.2.4.f.2 Regularly collect and analyze water quality data to evaluate the success of implemented measures.
- 3.2.4.f.3 Prepare reports summarizing the monitoring results, progress, and any necessary adjustments or recommendations.
- 3.2.4.f.4 Share relevant information and reports with the Authority, and the Independent Engineer.

g. Long-Term Planning and Adaptive Management

- 3.2.4.g.1 Develop a long-term management plan for sustained river water quality improvement.
- 3.2.4.g.2 Incorporate adaptive management strategies to account for changing environmental conditions and emerging water quality challenges from time-to-time.
- 3.2.4.g.3 Evaluate the effectiveness of implemented measures periodically and adjust management strategies as needed.
- 3.2.4.g.4 Plan for ongoing monitoring, maintenance, and management activities to ensure the continued improvement and protection of river water quality.

3.2.5 Solid waste Management

a. Waste Assessment and Monitoring

- 3.2.5.a.1 Conduct an initial assessment of the types, quantities, and sources of solid waste within the RoW of the Adyar River (including debris and waste collected from the surface of the river).
- 3.2.5.a.2 Define the key parameters to be monitored, such as waste composition, volume, and distribution.
- 3.2.5.a.3 Establish a monitoring program to track the accumulation and movement of solid waste over time.
- 3.2.5.a.4 Analyze the collected data to identify hotspots, patterns, and trends in solid waste generation and accumulation.

b. Waste Collection and Removal

- 3.2.5.b.1 Design and implement an effective waste collection and removal system.

- 3.2.5.b.2 Determine the most appropriate methods for collecting solid waste, such as manual collection, skimming, or using specialized equipment.
- 3.2.5.b.3 Establish a regular schedule and routes for waste collection within the river and from boom systems.
- 3.2.5.b.4 Coordinate with local authorities, waste management agencies, and relevant stakeholders to ensure proper disposal of collected waste.
- 3.2.5.b.5 Implement strategies to minimize the potential release of waste during collection and transportation.

c. Boom System

- 3.2.5.c.1 Design and install boom systems at appropriate locations to ensure collection of solid waste being dumped in to the Adyar River.
- 3.2.5.c.2 Develop a maintenance plan for the boom systems, including regular inspections and cleaning.
- 3.2.5.c.3 Monitor the condition and effectiveness of boom systems in capturing and retaining solid waste.
- 3.2.5.c.4 Conduct repairs or replacements as necessary to ensure the proper functioning of the boom systems.
- 3.2.5.c.5 Coordinate with responsible parties for boom system deployment, maintenance, and retrieval.

d. Data Management and Reporting

- 3.2.5.d.1 Establish a system for data management and reporting to track solid waste management activities and outcomes.
- 3.2.5.d.2 Collect and analyze data on waste collection, disposal, recycling rates, and cost-effectiveness.
- 3.2.5.d.3 Prepare regular reports summarizing the progress, challenges, and recommendations for improving solid waste management.
- 3.2.5.d.4 Share relevant information and reports with the Authority and the Independent Engineer.

e. Regulatory Compliance

- 3.2.5.e.1 Ensure compliance with local, regional, and national regulations pertaining to solid waste management, including waste disposal and recycling requirements.
- 3.2.5.e.2 Obtain necessary permits and approvals for waste collection, transportation, and disposal activities.
- 3.2.5.e.3 Maintain accurate records and documentation to demonstrate compliance with regulatory obligations.

f. Continuous Improvement and Evaluation

- 3.2.5.f.1 Continuously evaluate the effectiveness of solid waste management strategies and practices.

- 3.2.5.f.2 Identify opportunities for improvement and implement appropriate measures.
- 3.2.5.f.3 Regularly review and update the scope of services based on new findings, technologies, or regulatory changes.

3.2.6 Riverfront Works

a. Preliminary Assessment and Planning

- 3.2.6.a.1 Conduct an initial assessment of the riverfront area, including its current state, features, and potential.
- 3.2.6.a.2 Identify the goals and objectives of the riverfront development project, considering social, economic, and environmental factors.
- 3.2.6.a.3 Conduct stakeholder engagement and community consultation to gather input and incorporate local preferences.
- 3.2.6.a.4 Develop a comprehensive master plan for the riverfront area, outlining the vision, design principles, and development guidelines.

b. Design and Architecture

- 3.2.6.b.1 Engage landscape architects, urban designers, and architects to develop a conceptual and detailed design for the riverfront development.
- 3.2.6.b.2 Design public spaces, such as parks, plazas, promenades, and waterfront access points.
- 3.2.6.b.3 Incorporate elements of sustainability, including green infrastructure, energy-efficient lighting, and stormwater management systems.
- 3.2.6.b.4 Integrate cultural, historical, or thematic elements that reflect the local context and enhance the sense of place.
- 3.2.6.b.5 Consider accessibility features to ensure inclusivity for people of all abilities.
- 3.2.6.b.6 Where possible greenbelt and plantations to be provided across the length of the river; Parks to be developed in the designated areas as identified in the Feasibility Report

c. Infrastructure Development

- 3.2.6.c.1 Develop infrastructure plans for utilities, transportation, parking, and public amenities required to support the riverfront development.
- 3.2.6.c.2 Construct or upgrade roads, bridges, and pedestrian/cycling paths to improve connectivity within the riverfront area and with surrounding neighbourhoods.
- 3.2.6.c.3 Install lighting, signage, seating, waste management systems, and other necessary amenities.
- 3.2.6.c.4 Implement sustainable drainage systems, such as bio-retention areas or permeable pavements, to manage stormwater runoff.

d. Environmental and Ecological Considerations

- 3.2.6.d.1 Conduct an environmental impact assessment to identify potential impacts on natural habitats, water quality, and wildlife.

- 3.2.6.d.2 Incorporate ecological design principles to protect and enhance the natural environment.
- 3.2.6.d.3 Restore or create habitats, such as wetlands or riparian buffers, to support biodiversity and ecological functions.
- 3.2.6.d.4 Implement measures to reduce pollution and improve water quality, such as stormwater treatment systems or shoreline stabilization techniques.

e. Recreational and Cultural Facilities

- 3.2.6.e.1 Identify and design recreational facilities that enhance the riverfront experience, such as playgrounds, sports courts, or marinas.
- 3.2.6.e.2 Integrate cultural and artistic elements, such as public art installations, sculptures, or performance spaces.
- 3.2.6.e.3 Develop visitor centre/ project information centre, interpretive signage, or educational facilities to promote awareness and understanding of the river's significance.

f. Stakeholder Engagement and Community Participation

- 3.2.6.f.1 Engage and involve stakeholders, including residents, businesses, community organizations, and government agencies, throughout the riverfront development process.
- 3.2.6.f.2 Conduct public consultations, workshops, and open houses to gather input and feedback.
- 3.2.6.f.3 Foster collaboration and partnerships with local organizations and institutions to enhance community ownership and long-term sustainability.

g. Project Management and Implementation

- 3.2.6.g.1 Develop a project management plan to oversee the riverfront development, including timelines, budgeting, and resource allocation.
- 3.2.6.g.2 Coordinate with various stakeholders, including contractors, consultants, and regulatory agencies, to ensure smooth project implementation.
- 3.2.6.g.3 Monitor and manage construction activities to ensure compliance with design specifications, safety standards, and environmental regulations.

3.2.7 Flood Protection Works

a. Flood Risk Assessment

- 3.2.7.a.1 Conduct a comprehensive flood risk assessment to determine the flood-prone areas, flood levels, and potential impacts.
- 3.2.7.a.2 Analyze historical flood data, hydrological studies, and topographical surveys to understand the river's flood behavior.
- 3.2.7.a.3 Assess the vulnerability of infrastructure, properties, and communities to flooding.

b. Engineering Design

- 3.2.7.b.1 Develop engineering designs for flood protection works based on the flood risk

assessment findings.

- 3.2.7.b.2 Design flood protection structures, such as embankments, levees, floodwalls, or flood barriers, to mitigate floodwater ingress.
- 3.2.7.b.3 Incorporate natural flood management techniques, such as floodplain restoration, river channel realignment, or retention basins (only as approved by the Authority or relevant Government Instrumentalities).
- 3.2.7.b.4 Consider hydraulic modelling to simulate and optimize the effectiveness of flood protection measures.
- 3.2.7.b.5 Design drainage systems, culverts, or pumping stations to manage stormwater runoff during flood events.

c. Construction and Installation

- 3.2.7.c.1 Execute the construction and installation of flood protection works.
- 3.2.7.c.2 Monitor construction progress, quality control, and safety compliance.
- 3.2.7.c.3 Coordinate with utility providers, suppliers, and contractors for timely delivery of materials and equipment.

d. Early Warning Systems

- 3.2.7.d.1 Design and implement early warning systems to provide timely information about impending floods.
- 3.2.7.d.2 Install and maintain river level gauges, rainfall monitoring stations, and telemetry systems.
- 3.2.7.d.3 Develop protocols and communication channels for issuing flood alerts and evacuation orders.

e. Environmental Considerations

- 3.2.7.e.1 Conduct environmental assessments to identify potential impacts of flood protection works on natural habitats, water quality, and wildlife.
- 3.2.7.e.2 Incorporate ecological design principles to minimize negative impacts and enhance ecosystem services.
- 3.2.7.e.3 Implement measures to preserve or enhance natural features, such as riparian vegetation, wetlands, or fish habitats.
- 3.2.7.e.4 Consider the use of sustainable and environmentally friendly materials and construction techniques.

f. Monitoring and Evaluation

- 3.2.7.f.1 Establish a monitoring and evaluation program to assess the effectiveness of flood protection works.
- 3.2.7.f.2 Monitor and analyze data on flood events, floodwater levels, and post-flood impacts.
- 3.2.7.f.3 Regularly review and update flood protection strategies based on monitoring results and lessons learned.

3.2.8 Environment Protect Works

a. Water Quality Monitoring and Assessment

- 3.2.8.a.1 Establish a comprehensive water quality monitoring program to assess the current state of the river.
- 3.2.8.a.2 Identify key parameters to measure, such as temperature, dissolved oxygen, pH, nutrients, turbidity, and contaminants.
- 3.2.8.a.3 Determine (in consultation with the Authority) sampling locations (if different from Designated Points) and frequencies to capture spatial and temporal variations.
- 3.2.8.a.4 Analyze collected data to evaluate water quality characteristics and identify pollution sources or concerns.

b. Pollution Source Identification and Control

- 3.2.8.b.1 Identify and assess pollution sources impacting the river, such as point sources (industrial discharges, sewage treatment plants) and non-point sources (agricultural runoff, urban stormwater).
- 3.2.8.b.2 Develop and implement measures to control and mitigate pollution sources.
- 3.2.8.b.3 Coordinate with relevant stakeholders and regulatory agencies to enforce compliance with pollution control measures.

c. Riparian and Wetland Conservation

- 3.2.8.c.1 Identify and protect riparian zones and wetlands along the river.
- 3.2.8.c.2 Develop restoration plans and implement measures to enhance riparian vegetation and wetland habitats.
- 3.2.8.c.3 Establish buffer zones to reduce sediment and pollutant inputs from adjacent land uses.
- 3.2.8.c.4 Conduct invasive species management and promote the planting of native vegetation.
- 3.2.8.c.5 Monitor and manage erosion and sedimentation to maintain the stability and health of riparian areas.

d. Biodiversity Conservation

- 3.2.8.d.1 Identify key habitats and species within the river ecosystem.
- 3.2.8.d.2 Develop and implement biodiversity conservation plans to protect and enhance the diversity and abundance of flora and fauna.
- 3.2.8.d.3 Implement measures to preserve or restore fish spawning areas, nesting sites, and other critical habitats.
- 3.2.8.d.4 Collaborate with conservation organizations and experts to promote the recovery and protection of endangered or threatened species.
- 3.2.8.d.5 Conduct regular monitoring of biodiversity indicators to assess the effectiveness of conservation efforts.

e. Sustainable Land and Water Management

- 3.2.8.e.1 Promote sustainable land management practices in the river's catchment area.
- 3.2.8.e.2 Develop and implement erosion control measures to reduce sedimentation in the river.
- 3.2.8.e.3 Encourage responsible agricultural practices to minimize pesticide and fertilizer runoff.
- 3.2.8.e.4 Implement sustainable stormwater management strategies to reduce urban runoff and pollution.
- 3.2.8.e.5 Promote water conservation and efficient water use practices among stakeholders.

f. Collaboration and Stakeholder Engagement

- 3.2.8.f.1 Engage and involve stakeholders, including local communities, businesses, environmental organizations, and government agencies.
- 3.2.8.f.2 Foster collaboration and partnerships to implement environmental protection measures.
- 3.2.8.f.3 Facilitate dialogue and participation in decision-making processes related to river management.
- 3.2.8.f.4 Coordinate with regulatory agencies to ensure compliance with environmental regulations and guidelines.

g. Monitoring and Reporting

- 3.2.8.g.1 Establish a monitoring program to track the effectiveness of environmental protection measures.
- 3.2.8.g.2 Regularly collect and analyze data on water quality, biodiversity, and habitat conditions.
- 3.2.8.g.3 Prepare reports summarizing monitoring results, progress, and recommendations.

3.2.9 Works Related to Safety and Security

a. Security Assessment

- 3.2.9.a.1 Conduct a comprehensive security assessment of the river area to identify potential risks, vulnerabilities, and security concerns.
- 3.2.9.a.2 Evaluate the need for security measures based on factors such as the location, surrounding environment, and potential threats.
- 3.2.9.a.3 Consider existing security infrastructure and systems in the vicinity of the river.

3.2.10 Design and Engineering

- 3.2.10.a.1 Develop designs and engineering plans for security measures, including boundary walls and fencing.
- 3.2.10.a.2 Determine the height, material, and specifications of the boundary walls based on security requirements.
- 3.2.10.a.3 Incorporate security features such as access control systems, gates, surveillance

cameras, and lighting where necessary.

3.2.10.a.4 Ensure compliance with local building codes and regulations.

3.2.11 Boundary Wall Construction

3.2.11.a.1 Execute the construction of boundary walls according to the approved designs and engineering plans.

3.2.11.a.2 Prepare the site for construction activities, including clearing vegetation, grading, and excavation as required.

3.2.11.a.3 Procure necessary construction materials and coordinate deliveries to the site.

3.2.11.a.4 Implement construction techniques that ensure structural integrity and longevity of the boundary walls.

3.2.11.a.5 Ensure adherence to safety regulations and standards during construction.

3.2.12 Access Control Systems

3.2.12.a.1 Install access control systems to regulate entry and exit points along the boundary walls, if necessary.

3.2.12.a.2 Select and install appropriate access control mechanisms such as gates, turnstiles, or barriers.

3.2.12.a.3 Integrate the access control systems with surveillance cameras, alarm systems, or security personnel monitoring.

3.2.13 Surveillance and Monitoring

3.2.13.a.1 Install surveillance cameras at strategic locations along the river and boundary walls to monitor and deter potential security threats.

3.2.13.a.2 Establish a monitoring system to capture and record surveillance footage.

3.2.13.a.3 Consider the integration of advanced technologies such as video analytics, motion sensors, or remote monitoring capabilities.

3.2.13.a.4 Ensure compliance with privacy regulations and secure storage of surveillance data.

3.2.14 Lighting

3.2.14.a.1 Install appropriate lighting systems to enhance visibility and deter unauthorized access or activities during night-time.

3.2.14.a.2 Determine the placement and type of lighting fixtures considering safety, energy efficiency, and minimal light pollution.

3.2.14.a.3 Ensure proper illumination of access points, vulnerable areas, and along the boundary walls.

3.2.15 Signage and Markings

3.2.15.a.1 Install clear and visible signage to indicate the boundaries of the river area and communicate any security regulations or restrictions.

3.2.15.a.2 Mark boundaries with appropriate markers, posts, or paint to demarcate the river

area and the adjacent land.

3.2.16 Maintenance and Inspection

- 3.2.16.a.1 Develop a maintenance and inspection plan for the security infrastructure.
- 3.2.16.a.2 Regularly inspect the boundary walls, access control systems, surveillance cameras, and lighting to ensure proper functioning.
- 3.2.16.a.3 Conduct necessary repairs or replacements as required.
- 3.2.16.a.4 Establish protocols for reporting and addressing security incidents or breaches.

3.2.17 Collaboration and Coordination

- 3.2.17.a.1 Collaborate with relevant stakeholders, including local authorities, law enforcement agencies, and river management entities, to ensure alignment with security plans and protocols.
- 3.2.17.a.2 Coordinate with neighboring property owners or land managers to establish consistent security measures along shared boundaries.
- 3.2.17.a.3 Foster community engagement and awareness regarding security measures and encourage reporting of any suspicious activities.

3.2.18 Compliance and Regulatory Requirements

- 3.2.18.a.1 Ensure compliance with relevant security regulations, building codes, and environmental guidelines.
- 3.2.18.a.2 Obtain necessary permits and approvals from the appropriate authorities for the construction and installation of security measures.

3.2.19 Security Training and Emergency Response

- 3.2.19.a.1 Provide security training and awareness programs for staff members responsible for monitoring, managing, and responding to security incidents.
- 3.2.19.a.2 Develop emergency response plans and procedures to address security threats or incidents

3.2.20 Other Works

a. Riparian Vegetation Restoration

- 3.2.20.a.1 Conduct riparian vegetation surveys to identify areas requiring restoration or rehabilitation.
- 3.2.20.a.2 Develop a planting plan to reintroduce native plant species along the riverbanks.
- 3.2.20.a.3 Implement erosion control measures, such as bioengineering techniques or soil stabilization, to promote vegetation growth.
- 3.2.20.a.4 Establish a long-term maintenance plan to ensure the survival and growth of planted vegetation.

b. Bank Stabilization

- 3.2.20.b.1 Identify areas along the riverbanks that require stabilization due to erosion or instability.

3.2.20.b.2 Implement bank stabilization techniques such as bioengineering methods, riprap, or gabion walls.

3.2.20.b.3 Incorporate natural materials and erosion control vegetation to stabilize banks and prevent further erosion.

c. Wetland Creation or Restoration

3.2.20.c.1 Identify suitable areas for wetland creation or restoration within the river corridor.

3.2.20.c.2 Develop designs and engineering plans to recreate or restore wetland habitats.

3.2.20.c.3 Implement grading, excavation, and planting of wetland vegetation to establish functional wetland ecosystems.

3.2.20.c.4 Monitor and maintain water levels, hydrology, and vegetation to support wetland health and biodiversity.

d. In-stream Habitat Enhancement

3.2.20.d.1 Assess the quality and diversity of in-stream habitats and identify areas for enhancement.

3.2.20.d.2 Implement measures to improve aquatic habitat conditions, such as the installation of habitat structures, creation of riffles or pools, or removal of barriers to fish passage.

3.2.20.d.3 Conduct regular monitoring of aquatic species and habitat indicators to evaluate the effectiveness of habitat enhancement efforts.

e. Streambank and Riparian Erosion Control

3.2.20.e.1 Identify areas prone to streambank erosion and develop erosion control measures.

3.2.20.e.2 Implement bioengineering techniques such as vegetative stabilization, soil bioengineering, or biodegradable erosion control materials.

3.2.20.e.3 Install erosion control structures, such as revetments, gabion baskets, or vegetated retaining walls, to prevent further erosion.

f. Stormwater Management

3.2.20.f.1 Develop and implement stormwater management strategies to reduce the impact of runoff on the river.

3.2.20.f.2 Design and construct stormwater management infrastructure such as detention ponds, bioswales, or permeable pavements to capture and treat runoff before it enters the river.

3.2.20.f.3 Promote green infrastructure practices, such as rain gardens or green roofs, to manage stormwater at the source.

g. Fish and Wildlife Monitoring

3.2.20.g.1 Conduct fish and wildlife surveys to assess the abundance, diversity, and health of aquatic and terrestrial species.

3.2.20.g.2 Implement monitoring programs to track changes in fish populations, bird species, or other indicator species.

3.2.20.g.3 Evaluate the effectiveness of restoration efforts in improving habitat conditions for fish and wildlife.

h. Cultural and Historical Preservation

3.2.20.h.1 Identify and protect cultural and historical sites within the river corridor.

3.2.20.h.2 Conduct surveys and assessments to document and preserve archaeological or historical artefacts.

3.2.20.h.3 Develop interpretive signage or educational programs to highlight the cultural and historical significance of the river and its surroundings.

3.2.21 Supervisory Control and Data Acquisition (SCADA) system

The Concessionaire shall design, install, commission, integrate and operationalize a SCADA system for monitoring and supervision of the Project. Broad scope of work for the SCADA system is provided hereunder:

a. System Requirement Analysis

3.2.21.a.1 Conduct a detailed assessment of the project requirements for interception and diversion works, sewage treatment infrastructure, water quality management, solid waste management, river channel works, riverfront development, flood management, environmental protection, safety and security, and other related activities.

3.2.21.a.2 Identify the specific monitoring and control needs for each activity, such as water levels, flow rates, water quality parameters, equipment statuses, gate positions, pump operations, etc.

3.2.21.a.3 Determine the desired functionalities, including remote control capabilities, alarm management, historical data analysis, and reporting requirements for each activity.

b. System Design

3.2.21.b.1 Develop a comprehensive system design, taking into consideration the unique requirements of each activity under river restoration.

3.2.21.b.2 Design the network architecture, communication protocols, and data flow between different components of the SCADA system, ensuring seamless integration.

3.2.21.b.3 Consider scalability, redundancy, and security aspects in the system design to accommodate the diverse range of activities.

c. Hardware Installation

3.2.21.c.1 Procure and install necessary hardware components, such as SCADA servers, data acquisition devices, remote terminal units (RTUs), and communication devices.

3.2.21.c.2 Ensure proper integration of the hardware components with the existing infrastructure.

3.2.21.c.3 Test and validate the hardware installations for functionality and reliability.

d. Software Development and Configuration

- 3.2.21.d.1 Develop or customize SCADA software to meet the specific requirements of the Project.
- 3.2.21.d.2 Configure the software to monitor and control various components of the restoration activities, such as pumps, gates, sensors, and alarms.
- 3.2.21.d.3 Implement data logging and archiving mechanisms for historical data analysis and reporting.
- 3.2.21.d.4 Integrate the SCADA system with other relevant systems, such as the sewage treatment infrastructure, water quality monitoring systems, flood management systems, etc.

e. Real-time Monitoring and Control

- 3.2.21.e.1 Set up real-time monitoring of key parameters specific to each activity, such as water levels, flow rates, water quality parameters, equipment statuses, gate positions, pump operations, etc.
- 3.2.21.e.2 Configure alarm systems and define threshold values for triggering alerts in case of abnormal conditions, equipment failures, or non-compliance with set standards.
- 3.2.21.e.3 Implement remote control capabilities to operate and control the infrastructure associated with each activity, including gates, pumps, valves, etc.
- 3.2.21.e.4 Ensure secure and reliable communication between the SCADA system and field devices for all the activities.

f. Data Visualization and Reporting

- 3.2.21.f.1 Develop user-friendly graphical interfaces to visualize real-time data, trends, and historical information.
- 3.2.21.f.2 Generate reports and dashboards to provide insights into the performance of the restoration activities, water quality trends, and operational efficiency.
- 3.2.21.f.3 Customize the reporting features to meet the specific reporting requirements of the project stakeholders.

g. Training and Support

- 3.2.21.g.1 Provide training sessions to the project staff on the operation, maintenance, and troubleshooting of the SCADA system.
- 3.2.21.g.2 Procure technical support and maintenance services to ensure the continuous and reliable operation of the SCADA system.
- 3.2.21.g.3 Conduct regular system audits, performance evaluations, and compliance checks for each activity to identify areas of improvement, optimize performance, and ensure adherence to relevant standards and regulations.

3.2.22 Project Experience Center & Blue Green Center

The Concessionaire shall construct a Project Experience Center and a Blue Green Center of appropriate scale & size, and comprising of appropriate features & elements as further elaborated in the Feasibility Report. All installations and demonstrations within the Project Experience Center and Blue Green Center shall be in both English

and Tamil.

SCHEDULE C: KEY PERFORMANCE INDICATORS

The Concessionaire shall ensure and procure compliance of the below Key Performance Indicators (KPIs) in a diligent manner:

A. KPIs with respect to Availability of all the Project Assets

S.No.	Parameter	KPIs	Penalty & Damages
1.	<p>Availability of STFs & Pumping Stations</p> <p>The Availability of each Project Asset will be determined as a ratio of the number of hours in a day during which such Project Asset was available to function at its rated capacity, to the total number of operating hours in a day as identified in the DPR or the Maintenance Manual as approved by the Authority, and the term 'Available' shall be construed accordingly.</p>	Minimum Availability of 95%	<p>For a shortfall of one percentage point below the target, a penalty of 0.2% of the O&M Payment of the relevant quarter will be charged per day, for each of the Project Asset that is not Available in accordance with terms hereof.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>
2.	<p>Availability of other Project Assets</p> <p>The Availability of each Project Asset will be determined as a ratio of the number of hours in a quarter during which such Project Asset was available to function at its rated capacity, to the total number of operating hours in a day as identified in the DPR or the Maintenance Manual as approved by the Authority, and the term 'Available' shall be construed accordingly.</p>	Minimum Availability of 90%	<p>For a shortfall of one percentage point below the target, a penalty of 0.02% of the O&M Payment of the relevant quarter will be charged per day, for each of the Project Asset that is not Available in accordance with terms hereof.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>
3.	<p>Planned Maintenance Compliance</p> <p>This KPI measures the percentage of planned maintenance activities that are successfully completed as scheduled for any Project Asset.</p> <p>This KPI will be estimated as follows on a quarterly basis</p> <p>Planned Maintenance Compliance = (Number of</p>	Minimum compliance of 95%	<p>For a shortfall of one percentage point below the target, a penalty of 0.05% of the O&M Payment of the relevant quarter will be charged per quarter.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>

	planned maintenance tasks completed within schedule ÷ Total number of planned maintenance tasks) * 100		
4.	<p>Reliability Index</p> <p>This KPI calculates the ratio of reactive maintenance activities (unplanned repairs) to the total maintenance activities for the Project Assets.</p> <p>This KPI will be estimated as follows on a quarterly basis</p> <p>Reliability Index = (Number of hours a Project Facility was under reactive maintenance (including any downtime) ÷ Total number of hours a Project Facility was under maintenance, including both planned and unplanned maintenance) * 100</p>	Maximum of 15%	<p>For each percentage point above the target, a penalty of 0.02% of the O&M Payment of the relevant quarter will be charged per quarter separately for each of the Project Asset.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>
5.	<p>Mean Time Between Failures (MTBF)</p> <p>This KPI measures the average time between failures of the Project Assets. This shall be monitored on a quarterly basis</p>	Minimum of 180 days	<p>For each day below the target, a penalty of 0.01% of the O&M Payment of the relevant quarter will be charged per quarter separately for each of the Project Asset.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>
6.	<p>Mean Time to Repair (MTTR)</p> <p>This KPI measures the average time required to repair the Project Asset after occurrence of a failure. This shall be monitored on a quarterly basis</p>	Maximum of 18 hours	<p>For each hour above the target, a penalty of 0.01% of the O&M Payment of the relevant quarter will be charged separately for each of the Project Asset.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>
7.	<p>Response Time to Failures</p> <p>This KPI measures the average time taken by the Concessionaire to respond to</p>	Maximum of 30 minutes	<p>For each 30 minutes above the target, a penalty of 0.01% of the O&M Payment of the relevant quarter will be charged separately for each of the</p>

	any issue, failure of the Project Assets identified on its own or as notified by the Authority (or Independent Engineer)		Project Asset (for each incident). The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)
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B. Specific KPIs for the Performance of I&D Works

S.No.	Parameter	KPIs	Penalty & Damages
1.	<p>Diversion Efficiency</p> <p>This KPI focuses solely on the objective of diverting all sewage outfalls from the river, ensuring that none of the outfalls are discharging untreated sewage directly into the river. This KPI means that all the outfalls must be effectively intercepted and diverted to an appropriate sewage treatment infrastructure or treated and disposed through alternate means in accordance with Good Industry Practice, Applicable Permits and Applicable Laws.</p> <p>This KPI is monitored and enforced based on the Operation Period reports submitted by the Concessionaire and O&M Inspection Report submitted by the Independent Engineer.</p> <p>This KPI will be estimated as follows:</p> <p>Diversion Efficiency= (Number of undiverted wet outfalls ÷ Total number wet outfalls) * 100</p> <p>This KPI is limited to the 76 wet outfalls identified in the Feasibility Report. In the event, the Concessionaire Identifies new wet outfalls- the Concessionaire will have a period of upto 12 months to intercept, divert, and treat the newly formed wet outfall and KPIs for the specific relevant new outfall shall trigger after completion of construction of I&D works or 12 months, whichever is earlier.</p>	0.02%	<p>For each percentage point above the target, a penalty of 0.1 % of the quarterly O&M Payment will be charged per day till the time 100% diversion is achieved.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>

Note: the Authority may consider waiver of the above criteria (duly certified by the Engineer) in the event of rainfall in the project influence area evidenced by necessary data from rain gauges installed for the said purpose in accordance with the Concession Agreement

C. Specific KPIs for the Performance of Sewage Treatment Facilities (STFs)

S.No.	Parameter	KPIs	Penalty & Damages
1.	Treated Effluent Quality Compliance	100% (to be measured and	For a shortfall of one percentage point below the target, a penalty of

	<p>This KPI measures the compliance of the treated effluent with the specified water quality standards and regulatory requirements. It ensures that the treated wastewater meets the required quality standards before being discharged into the river or reused.</p> <p>Quality of Treated Effluent tested at the outlet of STFs</p> <p>BOD of 10 mg/l TKN of 10 mg/l TSS of 10 mg/l Dissolved Oxygen of 4 mg/l</p> <p>This KPI to be measured as a ratio of volume Treated Effluent in compliance with the aforesaid parameters to the total volume of Treated Effluent discharged from the outlet of STFs</p>	<p>monitored on a daily basis)</p>	<p>0.15 % of the quarterly O&M Payment will be charged per day.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>
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Note: the Authority may consider waiver of the above criteria (duly certified by the Engineer) in the event of rainfall in the project influence area evidenced by necessary data from rain gauges installed for the said purpose in accordance with the Concession Agreement

D. Specific KPIs to Ensure River Quality

S.No.	Parameter	KPIs	Penalty & Damages				
1.	<p>Compliance with River Quality Standards</p> <p>This KPI measures the actual quality of the river in compliance with River Quality Standards.</p> <p>River Quality Standards</p> <p>The Concessionaire shall ensure that the Adyar River is restored and made functional in compliance with the below standards of CPCB applicable for a Class D Water Body:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Criteria</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>6.5 to 8.5</td> </tr> </tbody> </table>	Parameter	Criteria	pH	6.5 to 8.5	<p>Minimum of 80% (to be measure and monitored on a daily basis)</p>	<p>For a shortfall of one percentage point below the target, a penalty of 0.15 % of the quarterly O&M Payment will be charged per day.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>
Parameter	Criteria						
pH	6.5 to 8.5						

	Dissolved Oxygen	>4		
	Free Ammonia as N	1.2		
<p>The quality of the river shall be tested at Designated Points against the aforesaid River Quality Standards</p> <p>This KPI to be measured as a ratio of number Designated Points in compliance with the River Quality Standards to the total number of designated Points</p>				

E. Specific KPIs for River Channel Works

S.No.	Parameter	KPIs	Penalty & Damages
1.	<p>River Bank Protection Works</p> <p>This KPIs intends to assess the stability and integrity of the bank protection structures, such as bunds, revetments, gabion walls, riprap, etc.</p> <p>This KPI shall be measured based on monthly inspections undertaken by the Independent Engineer</p>	<p>The Concessionaire to ensure that all protection structures remain intact and structurally sound, with no signs of damage or failure in compliance with Applicable Laws, Applicable Permits, and Specifications & Standards</p>	<p>The Concessionaire will be charged a penalty of 0.01 % of the quarterly O&M Payment per damaged or structurally weak river bank of 5 sqmt or more per month</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance Security)</p>

F. Specific KPIs for Riverfront Works

S.No.	Parameter	KPIs	Penalty & Damages
1.	<p>Landscaping Coverage</p> <p>This KPIs intends to assess the extent landscaping and green spaces along the riverfront and it is estimated as percentage of the riverfront area covered by landscaping, including trees, shrubs, flowers, and other vegetation</p> <p>This KPI shall be measured based on monthly inspections</p>	<p>Achieve and maintain a minimum landscaping coverage of 30% of the total riverfront area at all times</p>	<p>For a shortfall of one percentage point below the target, a penalty of 0.01 % of the quarterly O&M Payment will be charged per month.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance</p>

	<p>undertaken by the Independent Engineer</p> <p>For the purpose of this KPI riverfront shall mean the land area available between the edge of the river water and boundary of the RoW of the river</p>		Security)
2.	<p>Maintenance and Health of Vegetation</p> <p>This KPI is to assess the condition and health of the vegetation in the riverfront landscaping and it is estimated as percentage of healthy and well-maintained vegetation in the landscaped areas</p> <p>This KPI shall be measured based on monthly inspections undertaken by the Independent Engineer</p>	<p>Maintain a minimum of 75% of the vegetation in a healthy and thriving condition</p>	<p>For a shortfall of one percentage point below the target, a penalty of 0.01 % of the quarterly O&M Payment will be charged per month.</p> <p>The aforesaid penalty shall be deducted by the Authority from the O&M Payments payable to the Concessionaire, or withdrawn directly from the Escrow Account, or claimed from the Performance)</p>

E. Deemed KPIs

S.No.	Parameter	KPIs	Penalty & Damages
1.	<p>Deemed KPIs</p> <p>If the Independent Engineer during routine inspections (or as part of the O&M Inspection Report) identifies Project Asset(s) / Project Facility(ies) that are not in compliance with the Applicable Laws, Applicable Permits, Specifications and Standards, and specific provisions of the Concession Agreement, the Independent Engineer shall inform of such infractions to the Authority</p> <p>The Authority reserves the right, but not obligation, to impose penalty of upto 10% of the quarterly O&M Payments for each such identified infraction depending on the severity of the identified infraction.</p>		

SCHEDULE D: SPECIFICATION AND STANDARDS

1. Interception and Diversion Works:

- (i) BIS IS 8407:1994 - Guidelines for the construction of weirs and barrages
- (ii) BIS IS 4969:2004 - Code of practice for construction and maintenance of gates for irrigation and water supply projects
- (iii) BIS IS 11227:1995 - Code of practice for design and construction of diversion structures for canals
- (iv) BIS IS 11624:1986 - Code of practice for design and construction of weirs and barrages for diversion
- (v) BIS IS 15884:2009 - Guidelines for design of off-take structures for canals

2. Sewage Treatment Infrastructure:

- (i) BIS IS 12255:2003 - Code of practice for design, installation, and maintenance of septic tanks
- (ii) BIS IS 12288:1987 - Code of practice for design, installation, and maintenance of septic tanks for single houses
- (iii) BIS IS 15778:2007 - Code of practice for design and construction of public toilets
- (iv) BIS IS 7328:1992 - Code of practice for selection, installation, and maintenance of solid waste handling equipment in sewerage systems
- (v) BIS IS 15462:2004 - Code of practice for construction of sewers and drains

3. Water Quality Management Works:

- (i) BIS IS 10500:2012 - Drinking Water Specification
- (ii) BIS IS 2296:1982 - Code of practice for preparation of water samples for chemical analysis
- (iii) BIS IS 3025:1964 - Methods of sampling and test (physical and chemical) for water and wastewater
- (iv) BIS IS 1172:1993 - Code of basic requirements for water supply, drainage, and sanitation
- (v) BIS IS 16007:2012 - Guidelines for sampling of water and wastewater from rivers, lakes, and estuaries

4. Solid Waste Management Works:

- (i) Solid Waste Management Rules, 2016
- (ii) BIS IS 12334:1988 - Code of practice for management of municipal solid wastes

- (iii) BIS IS 12402:1988 - Code of practice for handling of solid wastes in hotels, restaurants, and other places of public interest
- (iv) BIS IS 7908:1995 - Code of practice for handling, treatment, and disposal of solid waste in municipal and industrial water supply systems
- (v) BIS IS 14035:1997 - Code of practice for handling and transportation of municipal solid waste

5. River Channel Works:

- (i) BIS IS 14482:2017 - Guidelines for river training and protection works
- (ii) BIS IS 14986:2001 - Guidelines for construction and maintenance of embankments of canals and reservoirs
- (iii) BIS IS 13263:1991 - Guidelines for stabilization of riverbanks
- (iv) BIS IS 11630:1986 - Code of practice for canal lining with cement concrete lining
- (v) BIS IS 13042:1991 - Guidelines for planning and construction of farm ponds for groundwater recharge

6. Riverfront Development Works:

- (i) BIS IS 14434:1997 - Guidelines for development of riverfront areas
- (ii) National Building Code (NBC) of India
- (iii) Indian Roads Congress (IRC) SP: 55:2018 - Guidelines for planning and design of urban road drainage
- (iv) BIS IS 15900:2011 - Design and construction of public toilets
- (v) BIS IS 1893:2016 - Criteria for earthquake-resistant design of structures
- (vi) BIS IS 3764:1992 - Code of practice for outdoor illumination

7. Flood Management Works:

- (i) BIS IS 15638:2006 - Guidelines for flood estimation
- (ii) BIS IS 13286:1992 - Guidelines for design and construction of levees
- (iii) BIS IS 13418:1992 - Guidelines for flood forecasting
- (iv) BIS IS 14401:2005 - Code of practice for design and construction of temporary soil structures for flood protection
- (v) BIS IS 15445:2004 - Code of practice for construction of earthen embankments for flood protection

8. Environmental Protection Works:

- (i) Environment (Protection) Act, 1986
- (ii) BIS IS 14489:2018 - Guidelines for ecological restoration of degraded river

ecosystems

(iii) National Mission for Clean Ganga (NMCG) Guidelines for Environmental Flows

(iv) BIS IS 15714:2007 - Guidelines for ecological flow assessment in river systems

(v) BIS IS 16103:2012 - Guidelines for environmental management of river valleys

(vi) BIS IS 16890:2017 - Guidelines for environmental flows assessment in rivers

9. Safety and Security Works:

(i) Bureau of Police Research and Development (BPRD) Guidelines for Security of Public Spaces

(ii) BIS IS 15667:2006 - Code of practice for safety precautions in construction and maintenance of large dams

(iii) National Disaster Management Authority (NDMA) Guidelines for Flood Safety

(iv) BIS IS 875:2015 - Code of practice for design loads (other than earthquake) for buildings and structures

(v) BIS IS 1893:2016 - Criteria for earthquake-resistant design of structures

(vi) BIS IS 3036:1965 - Recommendations for safety provisions in case of floods

10. Buildings and Public Amenities:

(i) National Building Code (NBC) of India

(ii) BIS IS 15900:2011 - Design and construction of public toilets

(iii) BIS IS 4991:1974 - Guidelines for the design of water supply and drainage systems in buildings

(iv) BIS IS 16201:2014 - Guidelines for public toilets

(v) BIS IS 11817:2018 - Guidelines for design and installation of modular sewerage treatment plant

11. Specific Standards for River Quality:

The Concessionaire shall ensure that the Adyar River is restored and made functional in compliance with the below standards of CPCB applicable for a Class D Water Body:

Parameter	Criteria
pH	6.5 to 8.5
Dissolved Oxygen	>4
Free Ammonia as N	1.2

SCHEDULE E: APPLICABLE PERMITS

Indicative list of approval is mentioned below, Concessionaire shall have to make assessment of applicable permits, approvals, clearances:

1. Environmental Clearance (EC):
 - Applicable Legislation: Environmental Impact Assessment (EIA) Notification, 2006, under the Environment (Protection) Act, 1986.
 - Regulatory Authority: Tamil Nadu State Environmental Impact Assessment Authority (TNSEIAA).
2. Consent to Establish (CTE) and Consent to Operate (CTO) from Tamil Nadu Pollution Control Board (TNPCB):
 - Applicable Legislation: Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.
 - Regulatory Authority: Tamil Nadu Pollution Control Board (TNPCB).
3. Water Use Permit/Water Allocation Permit:
 - Applicable Legislation: Environment (Protection) Act (EPA) of 1986 and relevant state water laws and regulations.
 - Regulatory Authority: Central Ground Water Authority or Tamil Nadu Water Resources Organisation or Water Regulatory Authority.
4. Construction Permit/Building Permit:
 - Applicable Legislation: Tamil Nadu Town and Country Planning Act, 1971 and local building bylaws.
 - Regulatory Authority: Urban Local Bodies or Directorate of Town and Country Planning Department or Chennai Metropolitan Development Authority.
5. Effluent Discharge Consent:
 - Applicable Legislation: Water (Prevention and Control of Pollution) Act, 1974 and Rules, and relevant state water pollution control regulations.
 - Regulatory Authority: Tamil Nadu Pollution Control Board (TNPCB).
6. Hazardous Waste Authorization:
 - Applicable Legislation: Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
 - Regulatory Authority: Tamil Nadu Pollution Control Board (TNPCB).
7. Forest Clearances:
 - Applicable Legislation: Forest (Conservation) Act, 1980, and relevant state

forest laws and regulations.

- Regulatory Authority: Tamil Nadu Forest Department or Forest Clearance Committee.

8. Coastal Regulation Zone (CRZ) Clearances:

- Applicable Legislation: Coastal Regulation Zone (CRZ) Notification, 2019, under the Environment (Protection) Act, 1986.
- Regulatory Authority: Tamil Nadu Coastal Zone Management Authority.

9. Archaeological Clearance:

- Applicable Legislation: Ancient Monuments and Archaeological Sites and Remains Act, 1958.
- Regulatory Authority: Archaeological Survey of India (ASI) or Tamil Nadu State Archaeology Department.

10. Land Use Permits/Zoning Clearances:

- Applicable Legislation: Tamil Nadu Town and Country Planning Act, 1971 and local development control regulations.
- Regulatory Authority: Directorate of Town and Country Planning Department or Chennai Metropolitan Development Authority.

11. Coastal Zone Management Plan (CZMP) Clearance:

- Applicable Legislation: Coastal Zone Management Plan (CZMP) regulations and guidelines.
- Regulatory Authority: Tamil Nadu Coastal Zone Management Authority.

12. Fisheries Clearance:

- Applicable Legislation: Indian Fisheries Act and relevant state fisheries regulations.
- Regulatory Authority: Tamil Nadu Fisheries Department.

13. Wildlife Clearance:

- Applicable Legislation: Wildlife Protection Act, 1972, and relevant state wildlife regulations.
- Regulatory Authority: Tamil Nadu Forest Department or Wildlife Conservation Authority.

14. Geotechnical Investigation Permit:

- Applicable Legislation: Tamil Nadu State-specific geotechnical investigation guidelines and regulations.
- Regulatory Authority: Tamil Nadu Engineering Research Institute (TNERI) or relevant state geotechnical or engineering department.

15. Heritage Conservation Clearances:

- Applicable Legislation: Tamil Nadu State-specific heritage conservation regulations.
- Regulatory Authority: Tamil Nadu State Archaeology Department or Heritage Conservation Authority.

16. Coastal and Marine Biodiversity Management Plan (CMBMP) Clearance:

- Applicable Legislation: Coastal Regulation Zone (CRZ) Notification, 2019, under the Environment (Protection) Act, 1986.
- Regulatory Authority: Ministry of Environment, Forest and Climate Change (MoEFCC) and State Coastal Zone Management Authority.

17. Noise Pollution Clearance:

- Applicable Legislation: Noise Pollution (Regulation and Control) Rules, 2000.
- Regulatory Authority: State Pollution Control Board (SPCB).

18. Cultural Impact Assessment Clearance:

- Applicable Legislation: State-specific cultural impact assessment regulations.
- Regulatory Authority: State Cultural Department or Cultural Impact Assessment Authority.

19. Air Quality Clearance:

- Applicable Legislation: Air (Prevention and Control of Pollution) Act, 1981, and relevant state air pollution control regulations.
- Regulatory Authority: Tamil Nadu Pollution Control Board (TNPCB).

20. Water Sampling and Analysis Approvals:

- Applicable Legislation: Tamil Nadu Pollution Control Board (TNPCB) guidelines for water sampling and analysis.
- Regulatory Authority: Tamil Nadu Pollution Control Board (TNPCB).

21. Soil Testing and Analysis Approvals:

- Applicable Legislation: Tamil Nadu State-specific guidelines for soil testing and analysis.
- Regulatory Authority: Tamil Nadu Agricultural University or relevant state agriculture department.

22. Geophysical Survey Permits:

- Applicable Legislation: Tamil Nadu State-specific regulations for geophysical surveys.
- Regulatory Authority: Tamil Nadu Geological and Mining Department or

relevant state geology department.

23. Water Well Drilling Permits:

- Applicable Legislation: Tamil Nadu State-specific regulations for water well drilling.
- Regulatory Authority: Tamil Nadu Water Resources Department or Central Ground Water Authority.

24. Ecological Impact Assessment Clearance:

- Applicable Legislation: State-specific ecological impact assessment regulations.
- Regulatory Authority: Tamil Nadu State Environmental Impact Assessment Authority (TNSEIAA) or relevant state environmental authority.

25. Traffic Management Plan Approval:

- Applicable Legislation: Tamil Nadu State-specific traffic management guidelines and regulations.
- Regulatory Authority: Tamil Nadu State Traffic Police Department.

26. Fire Safety Clearance:

- Applicable Legislation: Tamil Nadu Fire Service Act and relevant state fire safety regulations.
- Regulatory Authority: Tamil Nadu Fire and Rescue Services Department.

27. Coastal Aquaculture Authority (CAA) Clearance:

- Applicable Legislation: Coastal Aquaculture Authority Act, 2005.
- Regulatory Authority: Coastal Aquaculture Authority (CAA).

28. National Monuments Authority (NMA) Clearance:

- Applicable Legislation: Ancient Monuments and Archaeological Sites and Remains Act, 1958.
- Regulatory Authority: National Monuments Authority (NMA).

29. Electrical Safety Clearance:

- Applicable Legislation: Tamil Nadu Electricity Board (TNEB) regulations and safety guidelines.
- Regulatory Authority: Tamil Nadu Electricity Board (TNEB).

30. Explosives and Blasting Permit:

- Applicable Legislation: Explosives Act, 1884, and relevant state explosives regulations.
- Regulatory Authority: Tamil Nadu Explosives Department.

31. Other Permits & Clearances

- Compliance under the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
- No-Objection certificate from relevant panchayat in whose territorial limits the project is located, if applicable.
- Clearance of fire safety standards and protection apparatus and system under the Factories Act, 1948, and standards mandated by the local fire department, if applicable from Chief Inspector of Factories or any other designated authority appointed.
- Compliance under Maternity Benefit Act, 1961.
- License for usage and storage of fuel oil storage tank, pressurized vessels, explosive and inflammable liquids, gases and chemicals under (a) Explosives Act, 1884 read with Explosives Rules, 2008 and Gas Cylinder Rules, 2004; and (b) Petroleum Act, 1934 read with Petroleum Rules, 2002, if applicable from Chief Controller of Explosives, GoI, if applicable.
- Approval under the Electricity Act 2003 for electrical installations and works form Chief Electrical Inspector
- Certificate of Registration from the labour department issued under the Interstate Migrant Workmen (Regulations of Employment and Conditions of Services) Act, 1979 in relation to employment of migrant workmen
- Registration under Section 7 of Contract Labour (Regulation and Abolition) Act, 1970
- Registration under Employees Provident Fund and Miscellaneous Provisions Act, 1952.
- Registration under Employee State Insurance Act, 1948
- Approval under Ancient Monuments and Archaeological Sites and Remains Act, 1958 with subsequent amendments
- Registration under GST Act

SCHEDULE F: PERFORMANCE SECURITY

.....

.....

.....

WHEREAS:

- A. (the “**Concessionaire**”) and (the “**Authority**”) have entered into a Concession Agreement dated (the “**Agreement**”) whereby the Authority has agreed to the Concessionaire undertaking the development of basis (the “**Project**”), subject to and in accordance with the provisions of the Agreement.
- B. The Agreement requires the Concessionaire to furnish a Performance Security to the Authority in a sum of Rs.....cr. (Rupees crore) (the “**Guarantee Amount**”) as security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the Construction Period (as defined in the Agreement).
- C. We, through our Branch at (the “**Bank**”) have agreed to furnish this Bank Guarantee by way of Performance Security.

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

- 1. The Bank hereby unconditionally and irrevocably guarantees and undertakes to pay to the Authority upon occurrence of any failure or default in due and faithful performance of all or any of the Concessionaire’s obligations, under and in accordance with the provisions of the Agreement, on its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Concessionaire, such sum or sums upto 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 Deputy Secretary in the Authority, that the Concessionaire has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement 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 Concessionaire is in default in due and faithful performance of its obligations during the Construction Period under the Agreement and its decision that the Concessionaire is in default shall be final, and binding on the Bank, notwithstanding any differences between the Authority and the Concessionaire, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Concessionaire for any reason whatsoever.
- 3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Concessionaire

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 Guarantee.

4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Concessionaire before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/or performance of all or any of the obligations of the Concessionaire contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Concessionaire, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Concessionaire or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.
6. This 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 Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Concessionaire under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force in accordance with Article 9 of the Agreement.
8. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this 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.
10. This Guarantee shall come into force with immediate effect and shall remain in force and effect for a period of two years from the date hereof or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

Signed and sealed this day of, 20..... at

SIGNED, SEALED AND DELIVERED

For and on behalf of
the BANK by:

(Signature)
(Name)
(Designation)
(Code Number)
(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch should be mentioned on the covering letter of issuing Branch.

SCHEDULE G: PROJECT COMPLETION SCHEDULE

1. Project Completion Schedule

During Construction Period, the Concessionaire shall comply with the requirements set forth in this Schedule-G for each of the Project Milestones and the Scheduled Completion Date (the “Project Completion Schedule”). Within 15 (fifteen) days of the date of each Project Milestone, the Concessionaire shall notify the Authority of such compliance along with necessary particulars thereof.

2. Project Milestone-I

- 2.1. Project Milestone-I shall occur on the date falling on the 225th (two hundred and twenty-fifth) day from the Appointed Date (the “Project Milestone-I”).
- 2.2. Prior to the occurrence of Project Milestone-I, the Concessionaire shall have expended not less than 20% (twenty per cent) of the total capital cost set forth in the Financial Package. Provided, however, that at least 60% (sixty percent) of the expenditure referred to hereinabove shall have been incurred on physical works which shall not include advances of any kind to any person or expenditure of any kind on plant and machinery.
- 2.3. Prior to the occurrence of Project Milestone –I, the Concessionaire shall have:
 - i. Commenced construction of the Project
 - ii. Achieved 20% Physical Progress considering the entire stretch of Adyar River
 - iii. Achieved 50% Physical Progress considering Construction Works to be undertaken between Saidapet Bridge (CH-7+200) to Tiru Vi. Ka Bridge (CH-2+000)

3. Project Milestone-II

- 3.1. Project Milestone-II shall occur on the date falling on the 450th (four hundred and fiftieth) day from the Appointed Date (the “Project Milestone-II”).
- 3.2. Prior to the occurrence of Project Milestone-II, the Concessionaire shall have expended not less than 55% (fifty five per cent) of the total capital cost set forth in the Financial Package. Provided, however, that at least 70% (seventy percent) of the expenditure referred to hereinabove shall have been incurred on physical works which shall not include advances of any kind to any person or expenditure of any kind on plant and machinery.
- 3.3. Prior to the occurrence of Project Milestone –II, the Concessionaire shall have:
 - iv. Commenced construction of the Project
 - v. Achieved 55% Physical Progress considering the entire stretch of Adyar River
 - vi. Achieved 100 % Physical Progress considering Construction Works to be undertaken between Saidapet Bridge (CH-7+200) to Tiru Vi. Ka Bridge (CH-2+000)

4. Project Milestone-III

- 4.1. Project Milestone-III shall occur on the date falling on the 730th (seven hundred and thirtieth) day from the Appointed Date (the “Project Milestone-III”).
- 4.2. Prior to the occurrence of Project Milestone-III, the Concessionaire shall have commenced construction of all Project Facilities and expended not less than 80% (eighty per cent) of the total capital cost set forth in the Financial Package. Provided, however, that at least 80% (eighty per cent) of the expenditure referred to hereinabove shall have been incurred on physical works which shall not include advances of any kind to any person or expenditure of any kind on plant and machinery.
- 4.3. Prior to the occurrence of Project Milestone –III, the Concessionaire shall have:
 - vii. Commenced construction of the Project
 - viii. Achieved 100 % Physical Progress considering Construction Works to be undertaken between Saidapet Bridge (CH-7+200) to Tiru Vi. Ka Bridge (CH-2+000)
 - ix. Achieved 80% Physical Progress considering the entire stretch of Adyar River

5. Scheduled Completion Date

- 5.1. The Scheduled Completion Date shall be the 910th (nine hundred and tenth)] day from the Appointed Date.
- 5.2. On or before the Scheduled Completion Date, the Concessionaire shall have completed the Project in accordance with this Agreement.

6. Extension of period

Upon extension of any or all of the aforesaid Project Milestones or the Scheduled Completion Date, as the case may be, under and in accordance with the provisions of this Agreement, the Project Completion Schedule shall be deemed to have been amended accordingly.

SCHEDULE H: DRAWINGS

1 Drawings

In compliance of the obligations set forth in Clause 12.2 of this Agreement, the Concessionaire shall furnish to the Independent Engineer, free of cost, all Drawings listed in Para 3 of this Schedule-H.

2 Additional drawings

If the Independent Engineer determines that for discharging its duties and functions under this Agreement, it requires any drawings other than those listed in Para, it may by notice require the Concessionaire to prepare and furnish such drawings forthwith. Upon receiving a requisition to this effect, the Concessionaire shall promptly prepare and furnish such drawings to the Independent Engineer, as if such drawings formed part of Para 3 of this Schedule-H.

3 List of Drawings

A broad list of the drawings of the various components/elements of the River Restoration and other project facilities required to be submitted by the Concessionaire is given below:

- a. Topographic Survey Drawings of Adyar river corridor from origin to mouth covering LS and CS at regular intervals showing bed level, bund level, retaining walls, fences, revetments, existing utilities, RoW etc.
- b. Drawings of drainage plan, outfalls (both wet and dry), profile of connecting SWD, channels, etc.
- c. Drawing of cross drainage works – Culverts, Major Bridge, Minor Bridges, Cross Road Culverts.
- d. Drawing of typical details of bund slope protection measures.
- e. Drawing of proposed Interception and Diversion works along the entire river stretch
- f. Detailed Drawings of proposed lighting, CCTV, water quality sensors, monitoring stations, flow meters, SCADA etc.
- g. General arrangement drawings of parks, walkways, cycle tracks, fencing, control room, Project Experience centre with Blue Green Centre
- h. Detailed Drawings of modernisation of existing STPs, used water collection system, maintenance hole, pumping main, gravity mains, pump stations, surface water drains, storm water treatment and drainage layout plan
- i. The concessionaire shall prepare and submit structural, RCC detailed working drawing showing plan, elevation, section etc for each unit of the used water treatment plant /sump and pump house / wet well with overhead pump house and reinforcement at every junction for RCC work.
- j. Detailed drawings of flora, Riparian planting with plantation strategy

k. Any other drawings which Independent's Engineer may require

ANNEXURE I: INDICATIVE TABLE OF CONTENTS FOR DETAILED PROJECT REPORT (DPR)

The indicative table of contents for the Detailed Project Report is provided hereunder:

- **INDEX**
 - **TABLE OF CONTENT FOR DPR – RIVER RESTORATION**
 - LIST OF PICTURES
 - LIST OF FIGURES
 - LIST OF TABLES
 - ABBREVIATIONS
- **EXECUTIVE SUMMARY**
- **Volume I – Main Report/Detailed Project Report**
 - Chapter 1 – Introduction
 - Chapter 2 – Adyar River & its Environment
 - Chapter 3 – Approach & Methodology
 - Chapter 4 – Legislative, Policy and Institutional Context
 - Chapter 5 – Current Situation Assessment
 - Chapter 6 – The objective & Strategies
 - Chapter 7 – Proposed Interventions/ Development Works
 - Chapter 8 – Guidelines and Standards
 - Chapter 9 – Preliminary Designs
 - Chapter 10 – Detailed Designs of Proposed Interventions
 - Chapter 11 – Environmental & Social Aspects
 - Chapter 12 – Ecology & Bio-Diversity
 - Chapter 13 – Project Costing
 - Chapter 14 – Implementation Schedule
 - Chapter 15 - Economic and Financial Analysis
 - Chapter 16 - Conclusion
- **Annexures**
 - Annexure I – Abstract and Detailed Cost Estimate & BoQ
 - Annexure II – Construction Schedule
- **Volume II – Detailed GFC Drawings**

- **Volume III – Topographic Survey**
- **Volume IV – Hydrographic Survey**
 - Volume IIIA - Hydrographic Survey Report & Flood Modelling
 - Volume IIIB - Hydrographic Survey Charts
- **Volume V- Geotechnical Investigation Report**
- **Volume VI- Traffic Studies**
- **Volume VII- EIA Report**
- **Volume VIII- SIA Report**

SCHEDULE I: TESTS

1. Schedule of Tests

- 1.1. The Concessionaire shall, no later than 30 (thirty) days prior to the likely completion of the Project, notify the Independent Engineer and the Authority of its intent to subject the Project to Tests, and no later than 7 (seven) days prior to the actual date of Tests, furnish to the Independent Engineer and the Authority detailed inventory and particulars of all works and equipment forming part of the Project.
- 1.2. The Concessionaire shall notify the Independent Engineer of its readiness to subject the Project to Tests at any time after 7 (seven) days from the date of such notice, and upon receipt of such notice, the Independent Engineer shall, in consultation with the Concessionaire, determine the date and time for each Test and notify the same to the Authority who may designate its representative to witness the Tests. The Independent Engineer shall thereupon conduct the Tests itself or cause any of the Tests to be conducted in accordance with Article 14 and this Schedule-I.

2. Tests

- 2.1. In pursuance of the provisions of Clause 14.1.2 of this Agreement, the Independent Engineer shall conduct, or cause to be conducted, the Tests specified in this Paragraph 2.
- 2.2. Visual and physical Test: The Independent Engineer shall conduct a visual and physical check of the Project to determine that all works and equipment forming part thereof conform to the provisions of this Agreement.
- 2.3. Asset or Equipment Specific Tests: The Independent Engineer may require the Concessionaire to carry out or cause to be carried additional Tests, in accordance with Good Industry Practice, for determining the compliance of the Project with Specifications and Standards.
- 2.4. Environmental audit: The Independent Engineer shall carry out a check to determine conformity of the Project with the environmental requirements set forth in Applicable Laws and Applicable Permits.

3. Agency for conducting Tests

All Tests set forth in this Schedule-I shall be conducted by the Independent Engineer or such other agency or person as it may specify in consultation with the Authority.

4. Completion/Provisional Certificate

Upon successful completion of Tests, the Independent Engineer shall issue the Completion Certificate or the Provisional Certificate, as the case may be, in accordance with the provisions of Article 14.

5. Tests during construction

Without prejudice to the provisions of this Schedule-I, tests during construction shall be conducted In accordance with the provisions of Clause 13.3.1.

SCHEDULE J: COMPLETION CERTIFICATE

COMPLETION CERTIFICATE

- 1 I/We,..... (Name of the Independent Engineer), acting as Independent Engineer, under and in accordance with the Concession Agreement dated(the “Agreement”), for _____ on Hybrid Annuity Mode Project (the “Project”) on design, build, operate and transfer (the “DBFOT Annuity or Hybrid Annuity”) basis, through.....(Name of Concessionaire), hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been successfully undertaken to determine compliance of the Project with the provisions of the Agreement, and I/We am/are satisfied that the Project can be safely and reliably placed in commercial service of the Users thereof.

- 2 It is certified that, in terms of the aforesaid Agreement, all works forming part of the Project have been completed, and the Project is hereby declared fit for entry into commercial operation on this the day of 20

SIGNED, SEALED AND DELIVERED

For and on behalf of

INDEPENDENT ENGINEER by:

(Signature)

(Name)

(Designation)

(Address)

PROVISIONAL CERTIFICATE

- 1 I/We,..... (Name of the Independent Engineer), acting as Independent Engineer, under and in accordance with the Concession Agreement Dated..... (the “Agreement”), for development and operation of the _____ on Hybrid Annuity Mode (the “Project”) on design, build, operate and transfer (the “DBFOT Annuity or Hybrid Annuity”) basis through.....(Name of Concessionaire), hereby certify that the Tests specified in Article 14 and Schedule-I of the Agreement have been undertaken for the Project/section..... of the Project to determine compliance thereof with the provisions of the Agreement.

- 2 Construction Works forming part of the Project/section of the Project that were found to be incomplete and/or deficient have been specified in the Punch List appended hereto, and the Concessionaire has agreed and accepted that it shall complete and/or rectify all such works in the time and manner set forth in the Agreement. Some of the incomplete works have been delayed as a result of reasons attributable to the Authority or due to Force Majeure and the Provisional Certificate cannot be withheld on this account. Though the remaining incomplete works have been delayed as a result of reasons attributable to the Concessionaire,⁷ I/We am/are satisfied that having regard to the nature and extent of such incomplete works, it would not be prudent to withhold commercial operation of the Project/section..... of the Project, pending completion thereof.

- 3 In view of the foregoing, I/We am/are satisfied that the Project/section of the Project can be safely and reliably placed in commercial service of the Users thereof, and in terms of the Agreement, the Project/section of the Project is hereby provisionally declared fit for entry into commercial operation on this the day of..... 20

**ACCEPTED, SIGNED, SEALED
DELIVERED**

FOR AND ON BEHALF OF

CONCESSIONAIRE by:

(Signature)

(Name and Designation)

(Address)

**SIGNED, SEALED AND AND
DELIVERED**

FOR AND ON BEHALF OF

INDEPENDENT ENGINEER by:

(Signature)

(Name and Signature)

(Address)

⁷ May be struck out if not applicable. Also strike out other parts which are not applicable.

SCHEDULE K: MAINTENANCE REQUIREMENTS

1 Interception & Diversion Works (I&D Works)

1.1 Regular Inspections:

- 1.1.1 Conduct weekly visual inspections of the interception and diversion structures to identify any signs of damage, erosion, or sediment accumulation.
- 1.1.2 Inspect gates, barriers, weirs, or other control mechanisms for proper alignment, functioning, and structural integrity.
- 1.1.3 Check for signs of wear, corrosion, or mechanical issues in control mechanisms and components.
- 1.1.4 Assess the condition of seals, gaskets, and valves for leaks or deterioration.

1.2 Sediment and Debris Management:

- 1.2.1 Implement a sediment management plan to prevent sediment buildup and maintain the operational capacity of the structures.
- 1.2.2 Regularly remove accumulated sediment and debris from the diversion channels, gates, and screens.
- 1.2.3 Use appropriate equipment, such as sediment traps, silt curtains, or dredging machinery, for efficient sediment removal.
- 1.2.4 Dispose of the collected sediment in accordance with local regulations and guidelines.

1.3 Flow Control and Regulation:

- 1.3.1 Monitor flow rates and water levels upstream and downstream of the diversion structures.
- 1.3.2 Regularly calibrate and maintain flow measurement devices for accurate flow data collection.
- 1.3.3 Adjust gates, valves, or other control mechanisms as needed to maintain the desired flow rates and regulate water levels.
- 1.3.4 Implement automated control systems or telemetry for remote monitoring and control of the diversion works.

1.4 Emergency Response and Flood Management:

- 1.4.1 Develop a comprehensive emergency response plan that includes protocols for activating and operating the interception and diversion works during flood events or emergencies.
- 1.4.2 Conduct regular training sessions and drills to ensure the readiness and coordination of the operational team.
- 1.4.3 Establish communication channels with relevant authorities, such as local flood control agencies or emergency services, for effective emergency response.
- 1.4.4 Maintain emergency backup power sources, such as generators, to ensure continuous operation during power outages.

1.5 Gate and Valve Operation:

- 1.5.1 Regularly inspect gates, valves, or control mechanisms for smooth operation and proper sealing.
- 1.5.2 Lubricate moving parts and replace worn-out or damaged components to ensure reliable and efficient operation.
- 1.5.3 Conduct periodic testing of gates and valves to verify their response time, closing/opening speed, and accuracy.
- 1.5.4 Implement preventive maintenance measures, such as regular greasing, cleaning, and adjustment of gate guides or bearings.

1.6 Vegetation Management:

- 1.6.1 Implement a vegetation management plan to control the growth of vegetation around the interception and diversion structures.
- 1.6.2 Regularly trim or remove vegetation that obstructs the flow, interferes with gate or valve operation, or poses a safety risk.
- 1.6.3 Use appropriate herbicides or non-chemical methods to control invasive or unwanted vegetation.
- 1.6.4 Replant native vegetation where necessary to stabilize banks, prevent erosion, and enhance ecological functions.

1.7 Water Quality Monitoring:

- 1.7.1 Establish a water quality monitoring program to assess the effectiveness of the interception and diversion works in maintaining water quality standards.
- 1.7.2 Regularly collect water samples at predetermined locations upstream and downstream of the structures.
- 1.7.3 Analyze key water quality parameters, including turbidity, pH, dissolved oxygen, nutrient concentrations, and pollutant levels.
- 1.7.4 Keep accurate records of monitoring data, conduct trend analysis, and compare the results with regulatory standards or project goals.

1.8 Safety and Security:

- 1.8.1 Ensure the safety of personnel and the public by implementing appropriate safety measures and signage around the interception and diversion structures.
- 1.8.2 Conduct regular safety inspections to identify and address any potential hazards.
- 1.8.3 Secure access points and implement fencing or barriers to prevent unauthorized entry or vandalism.
- 1.8.4 Install security cameras or surveillance systems, if necessary, to monitor the infrastructure and deter illegal activities.

1.9 Documentation and Record-Keeping:

- 1.9.1 Maintain detailed records of all maintenance activities, inspections, repairs, and incidents related to the interception and diversion works.

- 1.9.2 Document any modifications or upgrades made to the infrastructure, including design changes or equipment replacements.
- 1.9.3 Keep records of operational data, such as flow rates, water levels, gate positions, maintenance schedules, and costs.
- 1.9.4 Maintain an up-to-date inventory of spare parts, tools, and equipment required for maintenance and repair tasks.

1.10 Regular Maintenance and Repairs:

- 1.10.1 Develop a comprehensive maintenance schedule that outlines routine tasks, frequencies, and responsibilities.
- 1.10.2 Conduct preventive maintenance activities, such as lubrication, cleaning, and equipment checks, as recommended by manufacturers or industry best practices.
- 1.10.3 Promptly address any identified maintenance or repair needs to prevent further damage or operational disruptions.
- 1.10.4 Maintain a supply of spare parts and necessary equipment to minimize downtime during repairs.

1.11 Stakeholder Communication:

- 1.11.1 Provide regular updates on the operation and maintenance activities of the interception and diversion works.
- 1.11.2 Address any concerns or feedback from the Authority and Independent Engineer in a timely and transparent manner.
- 1.11.3 Conduct periodic meetings or workshops to engage stakeholders and gather input for continuous improvement.

2 Sewage Treatment Facilities (STFs)

2.1 Routine Inspections and Monitoring:

- 2.1.1 Conduct daily visual inspections of the sewage treatment infrastructure, including treatment units, tanks, pumps, and pipes, to identify any signs of damage, leaks, or malfunctioning equipment.
- 2.1.2 Regularly monitor influent and effluent flow rates, levels, and quality parameters, such as pH, biochemical oxygen demand (BOD), total suspended solids (TSS), and nutrient concentrations.
- 2.1.3 Use appropriate instrumentation and testing methods to ensure accurate measurement and monitoring of key parameters.

2.2 Preventive Maintenance:

- 2.2.1 Develop and implement a preventive maintenance program that includes scheduled maintenance tasks and intervals for each component of the sewage treatment infrastructure.
- 2.2.2 Perform routine cleaning, lubrication, and inspection of equipment, such as pumps, blowers, mixers, and aerators, according to manufacturer guidelines.

2.2.3 Replace worn-out or damaged parts, seals, gaskets, and filters to maintain optimal performance and prevent equipment failure.

2.3 Sludge Management:

2.3.1 Establish a sludge management plan to handle and dispose of sewage sludge generated during the treatment process.

2.3.2 Regularly remove accumulated sludge from settling tanks, clarifiers, or digesters using appropriate sludge removal equipment.

2.3.3 Implement sludge dewatering processes, such as mechanical dewatering or drying beds, to reduce sludge volume and facilitate proper disposal or reuse.

2.4 Chemical Handling and Storage:

2.4.1 Follow strict protocols for the safe handling, storage, and dosing of chemicals used in the treatment process, such as disinfectants, coagulants, and pH adjusters.

2.4.2 Train staff on proper chemical handling procedures, including personal protective equipment (PPE) requirements and spill response measures.

2.4.3 Regularly inspect and maintain chemical storage areas, ensuring compliance with safety and environmental regulations.

2.5 Odor Control:

2.5.1 Implement measures to control and mitigate odors associated with the sewage treatment process.

2.5.2 Install and maintain odor control systems, such as activated carbon filters, biofilters, or chemical dosing systems, as necessary.

2.5.3 Regularly monitor and adjust odor control systems to ensure their effectiveness and prevent nuisance odors.

2.6 Emergency Response:

2.6.1 Develop and regularly update an emergency response plan that includes procedures for handling spills, equipment failures, power outages, or other unforeseen incidents.

2.6.2 Conduct periodic drills and training exercises to ensure staff readiness and familiarity with emergency protocols.

2.6.3 Establish communication channels with local authorities, emergency services, and regulatory agencies to facilitate coordination during emergencies.

2.7 Energy Efficiency:

2.7.1 Implement energy management practices to optimize energy consumption within the sewage treatment infrastructure.

2.7.2 Conduct energy audits to identify areas of improvement and implement energy-saving measures, such as variable frequency drives (VFDs), energy-efficient motors, or process optimization.

2.7.3 Regularly monitor energy usage and track energy performance indicators to assess the effectiveness of energy-saving initiatives.

2.8 Instrumentation and Control Systems:

- 2.8.1 Maintain and calibrate instrumentation and control systems, such as level sensors, flow meters, pressure gauges, and programmable logic controllers (PLCs), to ensure accurate and reliable data collection and control.
- 2.8.2 Implement remote monitoring and control systems to enable real-time monitoring and proactive management of the sewage treatment process.

2.9 Regulatory Compliance:

- 2.9.1 Ensure compliance with local, regional, and national regulations governing wastewater treatment and discharge.
- 2.9.2 Stay updated on regulatory requirements and permit conditions related to effluent quality, reporting, and monitoring.
- 2.9.3 Keep detailed records of operational data, maintenance activities, laboratory testing results, and regulatory compliance documentation.

2.10 Staff Training and Development:

- 2.10.1 Provide regular training and professional development opportunities for O&M staff to enhance their technical knowledge and skills.
- 2.10.2 Promote a culture of safety, environmental stewardship, and continuous improvement among the O&M team.
- 2.10.3 Encourage staff involvement in industry associations and knowledge-sharing networks to stay abreast of emerging trends and best practices.

2.11 Documentation and Record-Keeping:

- 2.11.1 Maintain comprehensive records of all O&M activities, including maintenance schedules, work orders, inspection reports, calibration records, and laboratory test results.
- 2.11.2 Document any modifications or upgrades made to the sewage treatment infrastructure, including design changes or equipment replacements.
- 2.11.3 Keep an inventory of spare parts, tools, and equipment required for maintenance and repair tasks.
- 2.11.4 Maintain historical data on operational performance, such as effluent quality, energy consumption, and maintenance costs, to facilitate performance analysis and benchmarking.

3 Maintenance Requirements with Regard to River Quality

3.1 Water Quality Monitoring:

- 3.1.1 Establish a comprehensive water quality monitoring program that includes regular sampling and analysis of key parameters, such as dissolved oxygen, pH, temperature, turbidity, nutrient concentrations, and pollutant levels.
- 3.1.2 Select appropriate monitoring locations along the river to capture representative data.
- 3.1.3 Follow standardized sampling protocols and ensure proper calibration of monitoring

equipment.

- 3.1.4 Document and analyze monitoring results to identify trends, potential issues, and the effectiveness of river quality management measures.

3.2 Nutrient and Pollutant Control:

- 3.2.1 Implement measures to control and reduce nutrient and pollutant inputs into the river.
- 3.2.2 Develop and enforce regulations or guidelines for industries, agriculture, and urban areas to minimize pollutant discharges and promote best management practices.
- 3.2.3 Monitor and enforce compliance with water quality standards and discharge limits.
- 3.2.4 Implement strategies to mitigate point and non-point source pollution, such as erosion control measures, stormwater management, and wastewater treatment.

3.3 Aquatic Vegetation Management:

- 3.3.1 Monitor and manage aquatic vegetation to maintain a healthy ecological balance in the river.
- 3.3.2 Implement strategies to control invasive species that can negatively impact water quality and ecosystem health.
- 3.3.3 Conduct regular surveys to assess the abundance and distribution of aquatic vegetation.
- 3.3.4 Employ manual or mechanical methods, such as cutting or harvesting, to control excessive vegetation growth when necessary.

3.4 Sediment and Erosion Control:

- 3.4.1 Implement erosion control measures to minimize sediment inputs into the river.
- 3.4.2 Promote land management practices that reduce erosion, such as contour plowing, vegetative buffer strips, and soil stabilization techniques.
- 3.4.3 Monitor and mitigate sedimentation in areas prone to erosion, such as construction sites, agricultural fields, or riverbanks.
- 3.4.4 Implement sediment retention structures, such as sediment basins or vegetated swales, to capture and treat sediment-laden runoff before it enters the river.

3.5 Riparian Zone Management:

- 3.5.1 Protect and restore riparian zones along the riverbanks to enhance water quality and ecological functions.
- 3.5.2 Implement measures to prevent encroachment, unauthorized access, or destructive activities within the riparian areas.
- 3.5.3 Establish buffer zones with native vegetation to filter pollutants, stabilize banks, and provide habitat for wildlife.
- 3.5.4 Conduct regular inspections and maintenance to control invasive species, control erosion, and ensure the health of riparian vegetation.

3.6 Stormwater Management:

- 3.6.1 Develop and implement stormwater management strategies to minimize the impacts of runoff on river water quality.
- 3.6.2 Implement best management practices, such as retention ponds, biofiltration systems, or permeable pavements, to capture and treat stormwater runoff before it reaches the river.
- 3.6.3 Monitor and enforce compliance with stormwater regulations, including construction site runoff controls, industrial stormwater permits, and municipal stormwater management plans.
- 3.6.4 Conduct regular inspections and maintenance of stormwater management infrastructure to ensure proper functioning.

3.7 Environmental Education and Outreach:

- 3.7.1 Develop and implement educational programs to raise awareness about river quality issues, the importance of responsible river use, and the role of individuals and communities in river conservation.
- 3.7.2 Engage with stakeholders, including local communities, schools, businesses, and recreational users, to promote sustainable practices and behavior change.
- 3.7.3 Provide educational materials, workshops, and guided tours to enhance public understanding of river ecosystems, water quality, and the impacts of human activities.

3.8 Regulatory Compliance and Reporting:

- 3.8.1 Stay updated on relevant environmental regulations and permits related to river water quality management.
- 3.8.2 Maintain accurate records of compliance activities, including monitoring results, corrective actions, and any incidents or violations.
- 3.8.3 Prepare and submit regular reports to regulatory agencies detailing water quality monitoring data, compliance status, and progress in achieving water

River Channel Works

- 1. Regular Inspection and Maintenance:
 - (i) Conduct regular inspections of the river channel, banks, bed, and structures to identify signs of erosion, sedimentation, or structural damage.
 - (ii) Repair or reinforce riverbank protections, such as revetments, gabions, or riprap, to prevent erosion and maintain stability.
 - (iii) Remove fallen trees, debris, and accumulated sediments from the river channel to maintain proper flow capacity.
- 2. Vegetation Management:
 - (iv) Monitor and manage vegetation growth within the river channel to prevent obstruction and maintain proper flow.
 - (v) Implement vegetation control measures, such as cutting, trimming, or selective removal of invasive species, to ensure unobstructed flow and prevent bank

erosion.

(vi) Promote the planting of native vegetation along the riverbanks to enhance biodiversity and improve ecological health.

3. Water Control Structures:

(vii) Regularly inspect and maintain water control structures, such as weirs, sluice gates, or regulators, to ensure proper functioning.

(viii) Lubricate moving parts, check for leaks, and repair or replace damaged components.

(ix) Operate and adjust water control structures according to water flow conditions, flood events, or specific management requirements.

4. Ecosystem Monitoring and Restoration:

(x) Implement monitoring programs to assess the ecological health of the river channel and its associated habitats.

(xi) Monitor water quality, biodiversity, and key indicators of ecosystem health, such as fish populations, macroinvertebrates, or bird species.

(xii) Develop and implement restoration plans to enhance and restore natural habitats within the river channel, including the reintroduction of native species, habitat creation, or riverbank re-naturalization.

Riverfront Development Works

1. Maintenance of Riverfront Amenities:

(xiii) Regular cleaning and maintenance of riverfront amenities, such as walkways, seating areas, lighting, and landscaping.

(xiv) Repair or replace damaged infrastructure, such as such as embankments, retaining walls, and recreational amenities.

(xv) Regular inspection and maintenance of safety equipment, such as barriers, signage, and life-saving devices.

2. Waterfront Safety and Security:

(xvi) Implement safety measures, such as installing safety barriers, handrails, and lifebuoys, to ensure public safety along the riverfront.

(xvii) Install adequate lighting and surveillance systems to enhance security and deter vandalism or illegal activities.

(xviii) Coordinate with local authorities and law enforcement agencies to enforce safety regulations and respond to emergency situations.

3. Environmental Protection:

(xix) Develop and enforce regulations and guidelines to protect the riverfront area from pollution, encroachment, or inappropriate development.

- (xx) Implement erosion control measures, such as vegetative stabilization or riparian buffers, to prevent soil erosion and protect water quality.
- (xxi) Conduct regular inspections and assessments to identify potential environmental risks or non-compliance issues and take appropriate actions to mitigate them.

4. Community Engagement and Education:

- (xxii) Organize community outreach programs and educational campaigns to raise awareness about the importance of riverfront protection, responsible use, and environmental stewardship.
- (xxiii) Involve local communities and stakeholders in the planning and management of riverfront development projects to ensure their active participation and support.

Flood Management Works

1. Inspection and Maintenance of Flood Protection Structures:

- (xxiv) Regular inspection of embankments, levees, flood walls, and floodgates to identify and repair any damage or potential weaknesses.
- (xxv) Clear vegetation, debris, or sediment buildup that may obstruct the flow or compromise the integrity of flood protection structures.
- (xxvi) Reinforce or strengthen flood protection infrastructure, as necessary, to meet design standards and address evolving flood risks.

2. Flood Forecasting and Monitoring:

- (xxvii) Implement a flood forecasting system to monitor weather conditions, river levels, and rainfall patterns.
- (xxviii) Install and maintain river gauges, rain gauges, or water level sensors to provide real-time data for flood forecasting and early warning systems.
- (xxix) Regularly calibrate and validate monitoring equipment to ensure accuracy and reliability.

3. Emergency Preparedness and Response:

- (xxx) Develop and regularly update an emergency response plan for flood events, including protocols for evacuation, communication, and resource mobilization.
- (xxxi) Conduct drills and training sessions to familiarize staff with emergency procedures and roles.
- (xxxii) Coordinate with local authorities, emergency services, and community organizations to ensure effective coordination and response during flood events.

4. Floodplain Management and Land Use Planning:

- (xxxiii) Implement floodplain management strategies, such as land use zoning, flood-resistant building design, or floodplain restoration, to minimize flood risks.
- (xxxiv) Review and update land use plans and regulations to avoid encroachments into flood-prone areas and promote resilient development practices.
- (xxxv) Collaborate with relevant agencies and stakeholders to address issues related to upstream runoff, watershed management, or river basin planning.

Environmental Protection Works:

1. Ecological Monitoring and Conservation:

- (xxxvi) Establish monitoring programs to assess the health of ecosystems, including water quality, biodiversity, and habitat conditions.
- (xxxvii) Conduct regular surveys, sampling, and data collection to track ecological indicators and identify changes or threats to the environment.
- (xxxviii) Implement conservation measures, such as habitat restoration, invasive species control, or wetland protection, to enhance ecosystem resilience and biodiversity.

2. Wildlife Protection and Management:

- (xxxix) Identify and protect critical habitats and nesting areas for endangered or threatened species.
- (xl) Implement measures to minimize human-wildlife conflicts, such as wildlife-friendly fencing, habitat corridors, or educational programs.
- (xli) Collaborate with wildlife management agencies and conservation organizations to ensure effective wildlife protection and management.

3. Water Resource Management:

- (xlii) Implement water resource management strategies, such as water conservation measures, sustainable water use practices, or groundwater protection measures.
- (xliii) Monitor and manage water allocation and use to balance the needs of ecosystems, agriculture, industry, and communities.
- (xliv) Collaborate with water management authorities and stakeholders to ensure sustainable and equitable water resource management.

4. Environmental Education and Awareness:

- (xlv) Develop environmental education programs and initiatives to raise public awareness about the importance of environmental protection, conservation, and sustainable river management.
- (xlvi) Organize educational campaigns, workshops, or outreach events to

promote responsible behaviors, such as waste reduction, water conservation, or pollution prevention.

- (xlvi) Engage schools, universities, community organizations, and other stakeholders to participate in environmental education and awareness activities.

Safety and Security Works:

1. Infrastructure Safety Inspections:

- (xlviii) Conduct regular inspections of all infrastructure within the river restoration project, including structures, buildings, and amenities, to identify potential safety hazards.

- (xlix) Address any identified safety hazards promptly through repair, replacement, or mitigation measures.

- (l) Keep accurate records of safety inspections, findings, and actions taken.

2. Emergency Response Preparedness:

- (li) Develop an emergency response plan that outlines procedures for various emergency scenarios, including natural disasters, accidents, or security threats.

- (lii) Train staff on emergency response protocols, evacuation procedures, and first aid techniques.

- (liii) Conduct periodic drills and simulations to test the effectiveness of the emergency response plan and ensure staff readiness.

3. Security Measures:

- (liv) Implement appropriate security measures, such as surveillance cameras, fencing, lighting, and access control systems, to deter unauthorized access and vandalism.

- (lv) Collaborate with local law enforcement agencies to enhance security presence and response along the river restoration project area.

- (lvi) Establish a communication protocol with relevant authorities for reporting security incidents or suspicious activities.

Online Monitoring and SCADA Works:

1. Equipment Maintenance and Calibration:

- (i) Regularly inspect, calibrate, and maintain online monitoring equipment, such as sensors, probes, data loggers, or SCADA systems.

- (ii) Perform routine checks to ensure accurate data collection, transmission, and monitoring.

- (iii) Promptly repair or replace faulty equipment components to avoid data gaps or inaccuracies.

2. Data Validation and Analysis:

- (i) Implement quality control measures to validate and verify online monitoring data for accuracy, consistency, and completeness.
- (ii) Develop data analysis protocols to interpret and analyze the collected data to identify trends, anomalies, or potential issues.
- (iii) Regularly review and assess the effectiveness of the online monitoring system, making necessary improvements or upgrades as technology advances.

3. System Maintenance and Upgrades:

- (i) Conduct regular maintenance of the online monitoring and SCADA system, including hardware, software, communication networks, and servers.
- (ii) Ensure proper backups and data storage to prevent data loss or system failures.
- (iii) Stay updated with technological advancements and industry best practices to identify opportunities for system upgrades or enhancements.

Other Works

1. Stakeholder Engagement:

- (i) Establish a stakeholder engagement plan to involve and communicate with relevant stakeholders, including local communities, government agencies, NGOs, and businesses.
- (ii) Organize regular meetings, workshops, or public forums to gather feedback, address concerns, and foster collaboration.
- (iii) Maintain transparent and open communication channels to keep stakeholders informed about the progress, challenges, and outcomes of the river restoration project.

2. Financial Management:

- (i) Develop a financial management plan to ensure adequate funding for the operation and maintenance of the river restoration activities.
- (ii) Monitor project expenditures, prepare budgets, and track financial performance to ensure cost-effectiveness and accountability.
- (iii) Seek opportunities for funding through grants, partnerships, or sustainable financing mechanisms to support ongoing maintenance and future improvements.

3. Regulatory Compliance:

- (i) Stay updated with relevant environmental regulations, permits, and standards applicable to river restoration projects.
- (ii) Ensure compliance with all applicable laws, regulations, and permits throughout the project lifecycle.

- (iii) Maintain accurate records of permits, inspections, and compliance activities for documentation and reporting purposes.

Building and Public Amenities:

1. Building Maintenance:

- (i) Conduct regular inspections of buildings, structures, and facilities within the river restoration project area to identify maintenance needs or repairs.
- (ii) Address any structural, electrical, plumbing, or safety issues promptly to ensure the functionality and safety of buildings.
- (iii) Implement a preventive maintenance program to schedule routine maintenance tasks, such as cleaning, painting, or equipment servicing.

2. Public Amenity Management:

- (i) Regularly clean and maintain public amenities, such as parks, picnic areas, restrooms, playgrounds, or recreational facilities.
- (ii) Inspect and repair benches, tables, waste bins, lighting, and signage to ensure their proper functionality and safety.
- (iii) Provide adequate waste management infrastructure, including trash bins, recycling bins, or composting facilities, to maintain cleanliness and promote responsible waste disposal.

3. Accessibility and Inclusivity:

- (i) Ensure that all buildings and public amenities within the river restoration project area are accessible and inclusive for people with disabilities.
- (ii) Implement appropriate infrastructure, such as ramps, handrails, or accessible restrooms, to accommodate diverse user needs.
- (iii) Engage with accessibility organizations or experts to ensure compliance with accessibility guidelines and standards.

SCHEDULE L: EHS REQUIREMENTS

The Concessionaire shall undertake the implementation operation, maintenance and management of the Project in accordance with the EHS Requirements, which includes, but not limited to, the following:

1. Environmental Impact Assessment (EIA):
 - Conduct a comprehensive EIA as per the Environmental Impact Assessment Notification, 2006, issued by the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India.
 - Include detailed studies on air quality, noise, water quality, biodiversity, and socio-economic aspects.
 - Prepare an Environmental Management Plan (EMP) incorporating measures to mitigate identified environmental impacts.
2. Water Pollution Control:
 - Comply with the Water (Prevention and Control of Pollution) Act, 1974, and Water (Prevention and Control of Pollution) Rules, 1975.
 - Obtain necessary permits, licenses, and consents from the Tamil Nadu Pollution Control Board (TNPCB) for the construction and operation of sewage treatment facilities and other activities impacting water quality.
 - Implement effluent treatment measures to meet TNPCB standards for discharge.
3. Air Pollution Control:
 - Adhere to the Air (Prevention and Control of Pollution) Act, 1981, and Air (Prevention and Control of Pollution) Rules, 1982.
 - Implement measures to control dust emissions, vehicular emissions, and construction-related air pollution.
 - Obtain necessary approvals and consents from the TNPCB for air pollution control measures and regular monitoring of emissions.
4. Hazardous Waste Management:
 - Comply with the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
 - Identify and segregate hazardous wastes generated during construction and operation.
 - Obtain necessary authorizations from the TNPCB for the handling, storage, transportation, and disposal of hazardous wastes.
5. Solid Waste Management:

- Follow the Solid Waste Management Rules, 2016, issued by the MoEFCC.
- Develop and implement a comprehensive solid waste management plan, including waste segregation, recycling, treatment, and disposal.
- Establish waste collection, storage, and transportation systems in compliance with Tamil Nadu Solid Waste Management Rules.

6. Noise Pollution Control:

- Adhere to the Noise Pollution (Regulation and Control) Rules, 2000.
- Implement measures to control construction-related noise and ensure compliance with prescribed noise limits.
- Conduct regular noise monitoring and implement noise mitigation measures where necessary.

7. Occupational Health and Safety:

- Comply with the provisions of the Factories Act, 1948, and Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
- Ensure adequate safety measures, including personal protective equipment (PPE), training programs, and regular safety inspections.
- Establish emergency response plans and evacuation procedures.

8. Coastal Regulation Zone (CRZ) Management:

- If the project involves coastal areas, adhere to the Coastal Regulation Zone Notification, 2019.
- Obtain necessary approvals and clearances from the Tamil Nadu Coastal Zone Management Authority (TNCZMA) for activities within the CRZ, including construction, dredging, and habitat protection.
- Implement measures to protect and restore coastal ecosystems, including dunes, mangroves, and wetlands.

9. Biodiversity Conservation:

- Comply with the Biological Diversity Act, 2002, and Biological Diversity Rules, 2004.
- Conduct biodiversity assessments, including flora and fauna surveys, and develop a biodiversity management plan.
- Implement measures to conserve and restore native habitats, protect endangered species, and promote biodiversity conservation.

10. Building and Construction Regulations:

- Follow the Tamil Nadu Town and Country Planning Act and applicable building codes and regulations for the design, construction, and safety of

buildings and structures.

- Obtain necessary building permits, clearances, and certifications from the concerned authorities.

11. Fire Safety:

- Comply with the Tamil Nadu Fire and Rescue Services Act and Rules.
- Install fire suppression systems, emergency exits, and fire alarms as per fire safety standards.
- Conduct regular fire drills, train staff in fire safety procedures, and maintain firefighting equipment.

12. Waste Water Management:

- Comply with the Tamil Nadu Water Supply and Drainage Board (TWAD) regulations and guidelines for the design, construction, and operation of sewage treatment plants and waste water management systems.
- Obtain necessary approvals and permits from the TWAD Board for waste water management activities.
- Monitor effluent quality and ensure compliance with discharge standards.

13. Occupational Safety and Health Standards:

- Follow the Occupational Safety, Health, and Working Conditions Code, 2020, and applicable Tamil Nadu labor laws.
- Establish a robust occupational health and safety management system, conduct regular safety audits, and provide appropriate training and personal protective equipment to workers.
- Implement measures to prevent accidents, occupational diseases, and exposure to hazardous substances.

14. Public Safety and Security:

- Incorporate appropriate safety and security measures, including fencing, lighting, and surveillance systems, to protect project assets and ensure public safety.
- Comply with relevant local laws and regulations related to public safety and security.
- Conduct periodic safety inspections and drills, and maintain emergency response capabilities.

15. Ecology and Biodiversity Protection:

- Conduct detailed ecological surveys to identify and protect sensitive ecosystems, habitats, and species.
- Develop and implement an ecological management plan to mitigate project

impacts and enhance biodiversity.

- Implement measures to control the spread of invasive species and promote the restoration of degraded ecosystems.

16. Emergency Response and Preparedness:

- Develop and implement an Emergency Response Plan (ERP) to address potential emergencies and incidents.
- Conduct regular drills and training programs to ensure preparedness and efficient response.
- Coordinate with local authorities, emergency services, and communities for effective emergency management.

17. Sustainability and Green Practices:

- Adopt sustainable construction practices, including energy-efficient design, use of recycled materials, and renewable energy technologies.
- Promote green infrastructure, such as rainwater harvesting, natural drainage systems, and green spaces.
- Monitor and report on key sustainability indicators, such as carbon emissions, water consumption, and waste generation.

SCHEDULE M: INDEPENDENT ENGINEER

1. Selection of Independent Engineer

- 1.1.** The provisions of the Model Request for Proposals for Selection of Technical Consultants, issued by the Ministry of Finance, GOI vide OM 24(23)/PF-II/ 2008 dated 21 May 2009, or any substitute thereof shall apply for selection of an experienced firm to discharge the functions and duties of an Independent Engineer. Provided, however, that no entity which is owned or controlled by the Authority shall be eligible for appointment as the Independent Engineer hereunder.
- 1.2.** In the event of termination of an Independent Engineer appointed in accordance with the provisions of Paragraph 1.1, the Authority shall appoint another firm of Technical Consultants forthwith or may engage a government-owned entity in accordance with the provisions of Paragraph 5 of this Schedule-H.
- 1.3.** The Concessionaire may, in its discretion, nominate a representative to participate in the process of selection to be undertaken by the Authority under this Schedule-H.

2. Terms of Reference

The Terms of Reference for the Independent Engineer shall substantially conform to Appendix-I of Schedule-H.

3. Fee and expenses

- 3.1.** In determining the nature and quantum of duties and services to be performed by the Independent Engineer during the Development Period and Construction Period, the Authority shall endeavor that payments to the Independent Engineer on account of fee and expenses do not exceed 3% (three per cent) of the Bid Project Cost. Payments not exceeding such 3% (three per cent) shall be borne equally by the Authority and the Concessionaire in accordance with the provisions of this Agreement and any payments in excess thereof shall be borne entirely by the Authority.
- 3.2.** The nature and quantum of duties and services to be performed by the Independent Engineer during the Operation Period shall be determined by the Authority in conformity with the provisions of this Agreement and with due regard for economy in expenditure. All payments made to the Independent Engineer on account of fee and expenses during the Operation Period shall be borne equally by the Authority and the Concessionaire.

4. Selection every three years

No later than 3 (three) years from the date of appointment of Independent Engineer pursuant to the provisions of Paragraph 1 of this Schedule-H, and every 3 (three) years thereafter, the Authority shall engage another firm in accordance with the criteria set forth in this Schedule-H.

5. Appointment of government entity as Independent Engineer

Notwithstanding anything to the contrary contained in this Schedule, the Authority may in its discretion appoint a government-owned entity as the Independent Engineer;

provided that such entity shall be a body corporate having as one of its primary function the provision of consulting, advisory and supervisory services for engineering projects; provided further that a government- owned entity which is owned or controlled by the Authority shall not be eligible for appointment as Independent Engineer.

SCHEDULE N: TERMS OF REFERENCE FOR INDEPENDENT ENGINEER

1. Scope

These Terms of Reference for the Independent Engineer (the “TOR”) are being specified pursuant to the Concession Agreement dated (the “Agreement”), which has been entered into between the Authority and the “Concessionaire”) for _____ on HAM mode in the state of Tamil Nadu on design, build, operate and transfer (the “DBFOT Annuity or Hybrid Annuity”) basis, and a copy of which is annexed hereto and marked as Annex-A to form part of this TOR.

2. Definitions and interpretation

- 2.1.** The words and expressions beginning with or in capital letters used in this TOR and not defined herein but defined in the Agreement shall have, unless repugnant to the context, the meaning respectively assigned to them in the Agreement.
- 2.2.** References to Articles, Clauses and Schedules in this TOR shall, except where the context otherwise requires, be deemed to be references to the Articles, Clauses and Schedules of the Agreement, and references to Paragraphs shall be deemed to be references to Paragraphs of this TOR.
- 2.3.** The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Agreement shall apply, mutatis mutandis, to this TOR.

3. Role and functions of Independent Engineer

- 3.1.** The role and functions of the Independent Engineer shall include the following:
 - i. review of the detailed Drawings, DPR and other documents as set forth in Paragraph 4;
 - ii. Review, inspection and monitoring of Construction Works as set forth in Paragraph 5; conducting Tests on completion of construction and issuing Completion/ Provisional Certificate as set forth in Paragraph 5
 - iii. Review, inspection and monitoring of O&M as set forth in Paragraph 6;
 - iv. review, inspection and monitoring of Divestment Requirements as set forth in Paragraph 7;
 - v. determining, as required under the Agreement, the costs of any works or services and/or their reasonableness;
 - vi. determining, as required under the Agreement, the period or any extension thereof, for performing any duty or obligation;
 - vii. Assisting the Parties in resolution of Disputes as set forth in Paragraph 9; and
 - viii. Undertaking all other duties and functions in accordance with the Agreement.

4. Development Period

- 4.1.** During the Development Period, the Independent Engineer shall undertake a detailed review of the detailed Drawings and DPR to be furnished by the Concessionaire along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys and traffic surveys. The Independent Engineer shall complete such review and send its comments/ observations to the Authority and the Concessionaire within 15 (fifteen) days of receipt of such Drawings and DPR. In particular, such comments shall specify the conformity or otherwise of such Drawings and DPR with the Scope of the Project and Specifications and Standards.
- 4.2.** The Independent Engineer shall review any modified Drawings and DPR or supporting Documents sent to it by the Concessionaire and furnish its comments within 7 (seven) days of receiving such Drawings or DPR.
- 4.3.** The Independent Engineer shall review the detailed Drawings and DPR comprising construction methodology, quality assurance procedures and the procurement, engineering and construction time schedule sent to it by the Concessionaire and furnish its comments within 15 (fifteen) days of receipt thereof.
- 4.4.** Upon reference by the Authority, the Independent Engineer shall review and; comment on the EPC Contract or any other contract for construction, operation and maintenance of the Project, and furnish its comments within 7 (seven) days from receipt of such reference from the Authority.

5. Construction Period

- 5.1.** In respect of the detailed Drawings and DPR received by the Independent Engineer for its review and comments during the Construction Period, the provisions of Paragraph 4 shall apply, mutatis mutandis.
- 5.2.** The Independent Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receipt of such report
- 5.3.** The Independent Engineer shall inspect the Construction Works and the Project once every month, preferably after receipt of the monthly progress report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out a report of such inspection (the "Inspection Report") setting forth an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project. The Inspection Report shall also contain a review of the maintenance of the existing lanes in conformity with the provisions of the Agreement. The Independent Engineer shall send a copy of its Inspection Report to the Authority and the Concessionaire within 7 (seven) days of the inspection.
- 5.4.** The Independent Engineer may inspect the Project more than once in a month if any lapses, defects or deficiencies require such inspections.

- 5.5.** For determining that the Construction Works conform to Specifications and Standards, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Independent Engineer in accordance with Good Industry Practice for quality assurance. The Independent Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a fair and efficient manner, and shall monitor and review the results thereof.
- 5.6.** The sample size of the tests, to be specified by the Independent Engineer under Paragraph 5.5, shall comprise 10% (ten per cent) of the quantity or number of tests prescribed for each category or type of tests in the Quality Control Manuals; provided that the Independent Engineer may, for reasons to be recorded in writing, increase the aforesaid sample size by up to 10% (ten per cent) for certain categories or types of tests.
- 5.7.** The timing of tests referred to in Paragraph 5.5, and the criteria for acceptance/ rejection of their results shall be determined by the Independent Engineer in accordance with the Quality Control Manuals. The tests shall be undertaken on a random sample basis and shall be in addition to, and independent of, the tests that may be carried out by the Concessionaire for its own quality assurance in accordance with Good Industry Practice.
- 5.8.** In the event that the Concessionaire carries out any remedial works for removal or rectification of any defects or deficiencies, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests to determine that such remedial works have brought the Construction Works into conformity with the Specifications and Standards, and the provisions of this Paragraph 5 shall apply to such tests
- 5.9.** In the event that the Concessionaire fails to achieve any of the Project Milestones, the Independent Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Independent Engineer shall determine that completion of the Project is not feasible within the time specified in the Agreement, it shall require the Concessionaire to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which COD shall be achieved. Upon receipt of a report from the Concessionaire, the Independent Engineer shall review the same and send its comments to the Authority and the Concessionaire forthwith.
- 5.10.** If at any time during the Construction Period, the Independent Engineer determines that the Concessionaire has not made adequate arrangements for the safety of workers and Users in the zone of construction or that any work is being carried out in a manner that threatens the safety of the workers and the Users, it shall make a recommendation to the Authority forthwith, identifying the whole or part of the Construction Works that should be suspended for ensuring safety in respect thereof .
- 5.11.** In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and Users, it may, by notice in writing, require the Independent Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Independent Engineer shall inspect the suspended works and make a report to the Authority forthwith, recommending whether or not such suspension may be revoked by the Authority.
- 5.12.** If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Independent Engineer shall determine the extension of dates set forth in the Project

Completion Schedule, to which the Concessionaire is reasonably entitled, and shall notify the Authority and the Concessionaire of the same.

- 5.13. The Independent Engineer shall carry out, or cause to be carried out, all the Tests specified in Schedule-I and issue a Completion Certificate or Provisional Certificate, as the case may be. For carrying out its functions under this Paragraph 5.13 and all matters incidental thereto, the Independent Engineer shall act under and in accordance with the provisions of Article 14 and Schedule-I.
- 5.14. Upon reference from the Authority, the Independent Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services as set forth in Article 16 and certify the reasonableness of such costs for payment by the Authority to the Concessionaire
- 5.15. The Independent Engineer shall aid and advise the Concessionaire in preparing the Operation and Maintenance Manual
- 5.16. Upon reference from the Authority, the Independent Engineer shall undertake the assessment of cost of civil works, as per applicable schedule of rates, for the reduction of Scope of work as provided in Clause 16.6.1 of the Concession Agreement.

6. Operations Period

- 6.1. In respect of the Drawings, Documents and Safety Report received by the Independent Engineer for its review and comments during the Operation Period, the provisions of Paragraph 4 shall apply, mutatis mutandis.
- 6.2. The Independent Engineer shall review the annual Maintenance Program furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 15 (fifteen) days of receipt of the Maintenance Program.
- 6.3. The Independent Engineer shall review the monthly status report furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receipt of such report.
- 6.4. The Independent Engineer shall inspect the Project once every month, preferably after receipt of the monthly status report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out an O&M Inspection Report setting forth an overview of the status, quality and safety of O&M including its conformity with the Maintenance Requirements and EHS Requirements. In a separate section of the O&M Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in O&M of the Project. The Independent Engineer shall send a copy of its O&M Inspection Report to the Authority and the Concessionaire within 7 (seven) days of the inspection.
- 6.5. The Independent Engineer may inspect the Project more than once in a month, if any lapses, defects or deficiencies require such inspections.
- 6.6. The Independent Engineer shall in its O&M Inspection Report specify the tests, if any, that the Concessionaire shall carry out, or cause to be carried out, for the purpose of determining that the Project is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Concessionaire in this behalf.

- 6.7. In respect of any defect or deficiency referred to in Paragraph 3 of Schedule- K, the Independent Engineer shall, in conformity with Good Industry Practice, specify the permissible limit of deviation or deterioration with reference to the Specifications and Standards and shall also specify the time limit for repair or rectification of any deviation or deterioration beyond the permissible limit.
- 6.8. The Independent Engineer shall determine if any delay has occurred in completion of repair or remedial works in accordance with the Agreement, and shall also determine the Damages, if any, payable by the Concessionaire to the Authority for such delay.
- 6.9. The Independent Engineer shall examine the request of the Concessionaire for closure of any lane(s) of the carriageway for undertaking maintenance/repair thereof, keeping in view the need to minimize disruption in traffic and the time required for completing such maintenance/repair in accordance with Good Industry Practice. It shall grant permission with such modifications, as it may deem necessary, within 3 (three) days of receiving a request from the Concessionaire. Upon expiry of the permitted period of closure, the Independent Engineer shall monitor the re-opening of such lane(s), and in case of delay, determine the Damages payable by the Concessionaire to the Authority under Clause 17.7
- 6.10. The Independent Engineer shall monitor and review the curing of defects and deficiencies by the Concessionaire as set forth in Clause 19.4
- 6.11. In the event that the Concessionaire notifies the Independent Engineer of any modifications that it proposes to make to the Project, the Independent Engineer shall review the same and send its comments to the Authority and the Concessionaire within 15 (fifteen) days of receiving the proposal.
- 6.12. The Independent Engineer shall undertake traffic sampling, as and when required by the Authority, under and in accordance with the provisions of this Agreement.

7. Termination

- 7.1. At any time, not earlier than 90 (ninety) days prior to Termination but not later than 15 (fifteen) days prior to such Termination, the Independent Engineer shall, in the presence of a representative of the Concessionaire, inspect the Project for determining compliance by the Concessionaire with the Divestment Requirements set forth in Clause 32.1 and, if required, cause tests to be carried out at the Concessionaire's cost for determining such compliance. If the Independent Engineer determines that the status of the Project is such that its repair and rectification would require a larger amount than the sum set forth in Clause 33.2, it shall recommend retention of the required amount in the Escrow Account and the period of retention thereof.
- 7.2. The Independent Engineer shall inspect the Project once in every 15 (fifteen) days during a period of 90 (ninety) days after Termination for determining the liability of the Concessionaire under Article 33, in respect of the defects or deficiencies specified therein. If any such defect or deficiency is found by the Independent Engineer, it shall make a report in reasonable detail and send it forthwith to the Authority and the Concessionaire.

8. Determination of costs and time

- 8.1. The Independent Engineer shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Agreement.

8.2. The Independent Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Agreement.

9. Assistance in Dispute resolution

9.1. When called upon by either Party in the event of any Dispute, the Independent Engineer shall mediate and assist the Parties in arriving at an amicable settlement.

9.2. In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Agreement, the Independent Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

10. Other duties and functions

The Independent Engineer shall perform all other duties and functions specified in the Agreement.

11. Miscellaneous

11.1. The Independent Engineer shall notify its programmer of inspection to the Authority and to the Concessionaire, who may, in their discretion, depute their respective representatives to be present during the inspection.

11.2. A copy of all communications, comments, instructions, Drawings or Documents sent by the Independent Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Independent Engineer thereon shall be furnished by the Independent Engineer to the Authority forthwith.

11.3. The Independent Engineer shall obtain, and the Concessionaire shall furnish in 2 (two) Copies thereof, all communications and reports required to be submitted, under this Agreement, by the Concessionaire to the Independent Engineer, whereupon the Independent Engineer shall send 1 (one) of the copies to the Authority along with its comments thereon.

11.4. The Independent Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings, and keep them in its safe custody

11.5. Upon completion of its assignment hereunder, the Independent Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records, and hand them over to the Authority or such other person as the Authority may specify, and obtain written receipt thereof. Two copies of the said documents shall also be furnished in their editable digital format or in such other medium or manner as may be acceptable to the Authority.

11.6. Wherever no period has been specified for delivery of services by the Independent Engineer, the Independent Engineer shall act with the efficiency and urgency necessary for discharging its functions in accordance with Good Industry Practice.

SCHEDULE O: ESCROW AGREEMENT

THIS ESCROW AGREEMENT is entered into on this the day of 20__ AMONGST

1.Limited, a company incorporated under the provisions of the Companies Act, 2013 and having its registered office at..... (hereinafter referred to as the “Concessionaire” which expression shall, unless repugnant to the context or meaning thereof, include its successors, permitted assigns and substitutes);
2.(insert name and particulars of Lenders’ Representative) and having its registered office at..... acting for and on behalf of the Senior Lenders as their duly authorized agent with regard to matters arising out of or in relation to this Agreement (hereinafter referred to as the “Lenders’ Representative” which expression shall, unless repugnant to the context or meaning thereof, include its successors and substitutes);
3.(insert name and particulars of the Escrow Bank) and having its registered office at..... (hereinafter referred to as the “Escrow Bank” which expression shall, unless repugnant to the context or meaning thereof, include its successors and substitutes); and
4. The _____, established under the _____, represented by its _____ and having its principal offices at _____ (hereinafter referred to as the “Authority” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns).

WHEREAS:

- A. The Authority has entered into a Concession Agreement dated_____ with the Concessionaire (the “Concession Agreement”) for the _____ on HAM mode in the state of Tamil Nadu. Project (the “Project”) on design, build, operate and transfer (the “DBFOT Annuity or Hybrid Annuity”) basis, and a copy of which is annexed hereto and marked as Annex-A to form part of this Agreement.
- B. Senior Lenders have agreed to finance the Project in accordance with the terms and conditions set forth in the Financing Agreements.
- C. The Concession Agreement requires the Concessionaire to establish an Escrow Account, inter alia, on the terms and conditions stated therein.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as

follows:

1. DEFINITIONS AND INTERPRETATION

1.1. Definitions

In this Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them:

“Agreement” means this Escrow Agreement and any amendment thereto made in accordance with the provisions contained herein;

“Concession Agreement” means the Concession Agreement referred to in Recital (A) above and annexed hereto as Annex-A, and shall include all of its Recitals and Schedules and any amendments made thereto in accordance with the provisions contained in this behalf therein;

“Cure Period” means the period specified in this Agreement for curing any breach or default of any provision of this Agreement by the Concessionaire, and shall commence from the date on which a notice is delivered by the Authority or the Lenders’ Representative, as the case may be, to the Concessionaire asking the latter to cure the breach or default specified in such notice;

“Escrow Account” means an escrow account established in terms of and under this Agreement, and shall include the Sub-Accounts;

“Escrow Default” shall have the meaning ascribed thereto in Clause 6.1;

“Lenders’ Representative” means the person referred to as the Lenders’ Representative in the foregoing Recitals;

“Parties” means the parties to this Agreement collectively and “Party” shall mean any of the Parties to this Agreement individually;

“Payment Date” means, in relation to any payment specified in Clause 4.1, the date(s) specified for such payment; and

“Sub-Accounts” means the respective sub-accounts of the Escrow Account, into which the monies specified in Clause 4.1 would be credited every month and paid out if due, and if not due in a month then appropriated proportionately in such month and retained in the respective sub-accounts and paid out therefrom on the Payment Date(s).

1.2. Interpretation

1.2.1. References to Lenders’ Representative shall, unless repugnant to the context or meaning thereof, mean references to the Lenders’ Representative, acting for and on behalf of Senior Lenders.

1.2.2. The words and expressions beginning with capital letters and defined in this Agreement shall have the meaning ascribed thereto herein, and the words and expressions used in this Agreement and not defined herein but defined in the Concession Agreement shall, unless repugnant to the context, have the meaning ascribed thereto in the Concession Agreement.

- 1.2.3. References to Clauses are, unless stated otherwise, references to Clauses of this Agreement.
- 1.2.4. The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Concession Agreement shall apply, mutatis mutandis, to this Agreement.

2. ESCROW ACCOUNT

2.1. Escrow Bank to act as trustee

- 2.1.1. The Concessionaire hereby appoints the Escrow Bank to act as trustee for the Authority, the Lenders' Representative and the Concessionaire in connection herewith and authorizes the Escrow Bank to exercise such rights, powers, authorities and discretion as are specifically delegated to the Escrow Bank by the terms hereof together with all such rights, powers, authorities and discretion as are reasonably incidental hereto, and the Escrow Bank accepts such appointment pursuant to the terms hereof.
- 2.1.2. The Concessionaire hereby declares that all rights, title and interest in and to the Escrow Account shall be vested in the Escrow Bank and held in trust for the Authority, the Lenders' Representative and the Concessionaire, and applied in accordance with the terms of this Agreement. No person other than the Authority, the Lenders' Representative and the Concessionaire shall have any rights hereunder as the beneficiaries of or as third party beneficiaries under this Agreement.

2.2. Acceptance of Escrow Bank

The Escrow Bank hereby agrees to act as such and to accept all payments and other amounts to be delivered to and held by the Escrow Bank pursuant to the provisions of this Agreement. The Escrow Bank shall hold and safeguard the Escrow Account during the term of this Agreement and shall treat the amount in the Escrow Account as monies deposited by the Concessionaire, Senior Lenders or the Authority with the Escrow Bank. In performing its functions and duties under this Agreement, the Escrow Bank shall act in trust for the benefit of, and as agent for, the Authority, the Lenders' Representative and the Concessionaire or their nominees, successors or assigns, in accordance with the provisions of this Agreement.

2.3. Establishment and operation of Escrow Account

- 2.3.1. Within 30 (thirty) days from the date of this Agreement, and in any case prior to the Appointed Date, the Concessionaire shall open and establish the Escrow Account with the (name of Branch) Branch of the Escrow Bank. The Escrow Account shall be denominated in Rupees.
- 2.3.2. The Escrow Bank shall maintain the Escrow Account in accordance with the terms of this Agreement and its usual practices and applicable regulations, and pay the maximum rate of interest payable to similar customers on the balance in the said account from time to time.
- 2.3.3. The Escrow Bank and the Concessionaire shall, after consultation with the Lenders' Representative, agree on the detailed mandates, terms and conditions, and operating procedures for the Escrow Account, but in the event of any conflict or inconsistency between this Agreement and such mandates, terms and conditions, or procedures, this Agreement shall prevail.

- 2.4.** Escrow Bank's fee The Escrow Bank shall be entitled to receive its fee and expenses in an amount, and at such times, as may be agreed between the Escrow Bank and the Concessionaire. For the avoidance of doubt, such fee and expenses shall form part of the O&M Expenses and shall be appropriated from the Escrow Account in accordance with Clause 4.1.
- 2.5.** Rights of the Parties Save and except as otherwise provided in the Concession Agreement, the rights of the Authority, the Lenders' Representative and the Concessionaire in the monies held in the Escrow Account are set forth in their entirety in this Agreement and the Authority, the Lenders' Representative and the Concessionaire shall have no other rights against or to the monies in the Escrow Account.
- 2.6.** Substitution of the Concessionaire The Parties hereto acknowledge and agree that upon substitution of the Concessionaire with the Nominated Company, pursuant to the Substitution Agreement, it shall be deemed for the purposes of this Agreement that the Nominated Company is a Party hereto and the Nominated Company shall accordingly be deemed to have succeeded to the rights and obligations of the Concessionaire under this Agreement on and with effect from the date of substitution of the Concessionaire with the Nominated Company.

3. DEPOSITS INTO ESCROW ACCOUNT

3.1. Deposits by the Concessionaire

- 3.1.1. The Concessionaire agrees and undertakes that it shall deposit into and/or credit the Escrow Account with:
- a. All monies received in relation to the Project from any source, including the Senior Lenders, lenders of Subordinated Debt and the Authority;
 - b. All funds received by the Concessionaire from its shareholders, in any manner or form;
 - c. Any other revenues; rentals, deposits or capital receipts, as the case may be, from or in respect of the Project; and
 - d. All proceeds received pursuant to any insurance claims
- 3.1.2. The Concessionaire may at any time make deposits of its other funds into the Escrow Account, provided that the provisions of this Agreement shall apply to such deposits.

3.2. Deposits by the Authority

- 3.2.1. The Authority agrees and undertakes that, as and when due and payable, it shall deposit into and/or credit the Escrow Account with:
- a. Grant and any other monies disbursed by the Authority to the Concessionaire;
 - b. All revenues collected by the Authority in exercise of its rights under the Concession Agreement; and
 - c. Termination Payments

Provided that, notwithstanding the provisions of Clause 4.1.1, the Authority shall be entitled to appropriate from the aforesaid amounts, any amounts due and payable to it

by the Concessionaire, and the balance remaining shall be deposited into the Escrow Account.

3.3. Deposits by Senior Lenders

The Lenders' Representative agrees, confirms and undertakes that the Senior Lenders shall deposit into and/or credit the Escrow Account with all disbursements made by them in relation to or in respect of the Project; provided that notwithstanding anything to the contrary contained in this Agreement, the Senior Lenders shall be entitled to make direct payments to the EPC Contractor under and in accordance with the express provisions contained in this behalf in the Financing Agreements.

3.4. Interest on deposits

The Escrow Bank agrees and undertakes that all interest accruing on the balances of the Escrow Account shall be credited to the Escrow Account; provided that the Escrow Bank shall be entitled to appropriate therefrom the fee and expenses due to it from the Concessionaire in relation to the Escrow Account and credit the balance remaining to the Escrow Account.

4. WITHDRAWALS FROM ESCROW ACCOUNT

4.1. Withdrawals during Concession Period

4.1.1. At the beginning of every month, or at such shorter intervals as the Lenders' Representative and the Concessionaire may by written instructions determine, the Escrow Bank shall withdraw amounts from the Escrow Account and appropriate them in the following order by depositing such amounts in the relevant Sub-Accounts for making due payments, and if such payments are not due in any month, then retain such monies in such Sub-Accounts and pay out therefrom on the Payment Date(s):

- a. All taxes due and payable by the Concessionaire for and in respect of the Project;
- b. Deleted;
- c. All payments relating to construction of the Project, subject to and in accordance with the conditions, if any, set forth in the Financing Agreements;
- d. O&M Expenses, subject to the ceiling, if any, set forth in the Financing Agreements;
- e. O&M Expenses and other costs and expenses incurred by the Authority in accordance with the provisions of the Concession Agreement, and certified by the Authority as due and payable to it;
- f. Any amounts due and payable to the Authority;
- g. Monthly proportionate provision of Debt Service due in an Accounting Year;
- h. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire pursuant to the Concession Agreement;
- i. Monthly proportionate provision of debt service payments due in an Accounting Year in respect of Subordinated Debt;

- j. any reserve requirements set forth in the Financing Agreements; and
 - k. Balance, if any, in accordance with the instructions of the Concessionaire.
- 4.1.2. No later than 60 (sixty) days prior to the commencement of each Accounting Year, the Concessionaire shall provide to the Escrow Bank, with prior written approval of the Lenders' Representative, details of the amounts likely to be required for each of the payment obligations set forth in this Clause 4.1; provided that such amounts may be subsequently modified, with prior written approval of the Lenders' Representative, if fresh information received during the course of the year makes such modification necessary.
- 4.2. Withdrawals upon Termination upon Termination of the Concession Agreement, all amounts standing to the credit of the Escrow Account shall, notwithstanding anything in this Agreement, be appropriated and dealt with in the following order:**
- a. All taxes due and payable by the Concessionaire for and in respect of the Project;
 - b. Deleted;
 - c. 90% (ninety per cent) of Debt Due excluding Subordinated Debt;
 - d. all payments and Damages certified by the Authority as due and payable to it by the Concessionaire pursuant to the Concession Agreement, including any claims in connection with or arising out of Termination;
 - e. Retention and payments arising out of, or in relation to, liability for defects and deficiencies set forth in Article 33 of the Concession Agreement;
 - f. Outstanding Debt Service including the balance of Debt Due;
 - g. Outstanding Subordinated Debt;
 - h. Incurred or accrued O&M Expenses;
 - i. Any other payments required to be made under the Concession Agreement; and
 - j. Balance, if any, in accordance with the instructions of the Concessionaire:

Provided that the disbursements specified in Sub-clause (i) of this Clause 4.2 shall be undertaken only after the Vesting Certificate has been issued by the Authority.

4.3. Application of insufficient funds:

Funds in the Escrow Account shall be applied in the serial order of priority set forth in Clauses 4.1 and 4.2, as the case may be. If the funds available are not sufficient to meet all the requirements, the Escrow Bank shall apply such funds in the serial order of priority until exhaustion thereof.

4.4. Application of insurance proceeds

Notwithstanding anything in this Agreement, the proceeds from all insurance claims, except life and injury, shall be deposited into and/or credited to the Escrow Account and utilized for any necessary repair, reconstruction, reinstatement, replacement, improvement, delivery or installation of the Project, and the balance remaining, if any, shall be applied in accordance with the provisions contained in this behalf in the

Financing Agreements.

4.5. Withdrawals during Suspension

Notwithstanding anything to the contrary contained in this Agreement, the Authority may exercise all or any of the rights of the Concessionaire during the period of Suspension under Article 30 of the Concession Agreement. Any instructions given by the Authority to the Escrow Bank during such period shall be complied with as if such instructions were given by the Concessionaire under this Agreement and all actions of the Authority hereunder shall be deemed to have been taken for and on behalf of the Concessionaire.

5. OBLIGATIONS OF THE ESCROW BANK

5.1. Segregation of funds

Monies and other property received by the Escrow Bank under this Agreement shall, until used or applied in accordance with this Agreement, be held by the Escrow Bank in trust for the purposes for which they were received, and shall be segregated from other funds and property of the Escrow Bank.

5.2. Notification of balances

7 (Seven) business days prior to each Payment Date (and for this purpose the Escrow Bank shall be entitled to rely on an affirmation by the Concessionaire and/or the Lenders' Representative as to the relevant Payment Dates), the Escrow Bank shall notify the Lenders' Representative of the balances in the Escrow Account and Sub-Accounts as at the close of business on the immediately preceding business day.

5.3. Communications and notices

In discharge of its duties and obligations hereunder, the Escrow Bank:

- a. May, in the absence of bad faith or gross negligence on its part, rely as to any matters of fact which might reasonably be expected to be within the knowledge of the Concessionaire upon a certificate signed by or on behalf of the Concessionaire;
- b. may, in the absence of bad faith or gross negligence on its part, rely upon the authenticity of any communication or document believed by it to be authentic;
- c. shall, within 5 (five) business days after receipt, deliver a copy to the Lenders' Representative of any notice or document received by it in its capacity as the Escrow Bank from the Concessionaire or any other person hereunder or in connection herewith; and
- d. shall, within 5 (five) business days after receipt, deliver a copy to the Concessionaire of any notice or document received by it from the Lenders' Representative in connection herewith.

5.4. No set off

The Escrow Bank agrees not to claim or exercise any right of set off, banker's lien or other right or remedy with respect to amounts standing to the credit of the Escrow

Account. For the avoidance of doubt, it is hereby acknowledged and agreed by the Escrow Bank that the monies and properties held by the Escrow Bank in the Escrow Account shall not be considered as part of the assets of the Escrow Bank and being trust property, shall in the case of bankruptcy or liquidation of the Escrow Bank, be wholly excluded from the assets of the Escrow Bank in such bankruptcy or liquidation.

5.5. Regulatory approvals

The Escrow Bank shall use its best efforts to procure, and thereafter maintain and comply with, all regulatory approvals required for it to establish and operate the Escrow Account. The Escrow Bank represents and warrants that it is not aware of any reason why such regulatory approvals will not ordinarily be granted to the Escrow Bank.

6. ESCROW DEFAULT

6.1. Escrow Default

6.1.1. Following events shall constitute an event of default by the Concessionaire (an “Escrow Default”) unless such event of default has occurred as a result of Force Majeure or any act or omission of the Authority or the Lenders’ Representative:

- a. the Concessionaire commits breach of this Agreement by failing to deposit any receipts into the Escrow Account as provided herein and fails to cure such breach by depositing the same into the Escrow Account within a Cure Period of 5 (five) business days;
- b. the Concessionaire causes the Escrow Bank to transfer funds to any account of the Concessionaire in breach of the terms of this Agreement and fails to cure such breach by depositing the relevant funds into the Escrow Account or any SubAccount in which such transfer should have been made, within a Cure Period of 5 (five) business days; or
- c. the Concessionaire commits or causes any other breach of the provisions of this Agreement and fails to cure the same within a Cure Period of 5 (five) business days.

6.1.2. Upon occurrence of an Escrow Default, the consequences thereof shall be dealt with under and in accordance with the provisions of the Concession Agreement.

7. Termination of Escrow Agreement

7.1. Duration of Escrow Agreement

This Agreement shall remain in full force and effect so long as any sum remains to be advanced or is outstanding from the Concessionaire in respect of the debt, guarantee or financial assistance received by it from the Senior Lenders, or any of its obligations to the Authority remain to be discharged, unless terminated earlier by consent of all the Parties or otherwise in accordance with the provisions of this Agreement.

7.2. Substitution of Escrow Bank

The Concessionaire may, by not less than 45 (forty five) days prior notice to the Escrow Bank, the Authority and the Lenders’ Representative, terminate this Agreement and appoint a new Escrow Bank, provided that the new Escrow Bank is acceptable to the Lenders’ Representative and arrangements are made satisfactory to the Lenders’

Representative for transfer of amounts deposited in the Escrow Account to a new Escrow Account established with the successor Escrow Bank.

The termination of this Agreement shall take effect only upon coming into force of an Escrow Agreement with the substitute Escrow Bank.

7.3. Closure of Escrow Account

The Escrow Bank shall, at the request of the Concessionaire and the Lenders' Representative made on or after the payment by the Concessionaire of all outstanding amounts under the Concession Agreement and the Financing Agreements including the payments specified in Clause 4.2, and upon confirmation of receipt of such payments, close the Escrow Account and Sub- Accounts and pay any amount standing to the credit thereof to the Concessionaire. Upon closure of the Escrow Account hereunder, the Escrow Agreement shall be deemed to be terminated.

8. SUPPLEMENTARY ESCROW AGREEMENT

8.1. Supplementary escrow agreement

The Lenders' Representative and the Concessionaire shall be entitled to enter into a supplementary escrow agreement with the Escrow Bank providing, inter alia, for detailed procedures and documentation for withdrawals from Sub- Accounts pursuant to Clause 4.1.1 and for matters not covered under this Agreement such as the rights and obligations of Senior Lenders and lenders of Subordinated Debt, investment of surplus funds, restrictions on withdrawals by the Concessionaire in the event of breach of this Agreement or upon occurrence of an Escrow Default, procedures relating to operation of the Escrow Account and withdrawal therefrom, reporting requirements and any matters incidental thereto; provided that such supplementary escrow agreement shall not contain any provision which is inconsistent with this Agreement and in the event of any conflict or inconsistency between provisions of this Agreement and such supplementary escrow agreement, the provisions of this Agreement shall prevail.

9. INDEMNITIES

9.1. General indemnity

- 9.1.1. The Concessionaire will indemnify, defend and hold the Authority, Escrow Bank and the Senior Lenders, acting through the Lenders' Representative, harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of any breach by the Concessionaire of any of its obligations under this Agreement or on account of failure of the Concessionaire to comply with Applicable Laws and Applicable Permits.
- 9.1.2. The Authority will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Authority to fulfil any of its obligations under this Agreement materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement or this Agreement other than any loss, damage, cost and expense arising out of acts done in discharge of their lawful functions by the Authority, its officers, servants and agents.

9.1.3. The Escrow Bank will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Escrow Bank to fulfil its obligations under this Agreement materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Escrow Bank, its officers, servants and agents.

9.2. Notice and contest of claims

In the event that any Party hereto receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under Clause 9.1 or in respect of which it is entitled to reimbursement (the "Indemnified Party"), it shall notify the other Party responsible for indemnifying such claim hereunder (the "Indemnifying Party") within 15 (fifteen) days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, which approval shall not be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim, it may conduct the proceedings in the name of the Indemnified Party and shall bear all costs involved in contesting the same. The Indemnified Party shall provide all cooperation and assistance in contesting any claim and shall sign all such writings and documents as the Indemnifying Party may reasonably require.

10. DISPUTE RESOLUTION

10.1. Dispute resolution

10.1.1. Any dispute, difference or claim arising out of or in connection with this Agreement, which is not resolved amicably, shall be decided finally by reference to arbitration to a Board of Arbitrators comprising one nominee of each Party to the dispute, and where the number of such nominees is an even number, the nominees shall elect another person to such Board. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the "Rules") or such other rules as may be mutually agreed by the Parties, and shall be subject to the provisions of the Arbitration and Conciliation Act, 1996.

10.1.2. The Arbitrators shall issue a reasoned award and such award shall be final and binding on the Parties. The place of arbitration shall be the capital of the State and the language of arbitration shall be English.

11. MISCELLANEOUS PROVISIONS

11.1. Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in the State shall have jurisdiction over all matters arising out of or relating to this Agreement.

11.2. Waiver of sovereign immunity The Authority unconditionally and irrevocably:

- a.** agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
- b.** agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction

contemplated by this Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of the Authority with respect to its assets;

- c. waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- d. consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

11.3. Priority of agreements

In the event of any conflict between the Concession Agreement and this Agreement, the provisions contained in the Concession Agreement shall prevail over this Agreement.

11.4. Alteration of term

All additions, amendments, modifications and variations to this Agreement shall be effectual and binding only if in writing and signed by the duly authorized representatives of the Parties.

11.5. Waiver

11.5.1. Waiver by any Party of a default by another Party in the observance and performance of any provision of or obligations under this Agreement:

- a. Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- b. shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- c. shall not affect the validity or enforceability of this Agreement in any manner

11.5.2. Neither the failure by any Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by any Party to another Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

11.6. No third party beneficiaries This Agreement is solely for the benefit of the Parties and no other person or entity shall have any rights hereunder.

11.7. Survival

11.7.1. **Termination of this Agreement**

- a. shall not relieve the Parties of any obligations hereunder which expressly or by implication survive termination hereof; and
- b. except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any

obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such termination or arising out of such termination.

11.7.2. All obligations surviving the cancellation, expiration or termination of this Agreement shall only survive for a period of 3 (three) years following the date of such termination or expiry of this Agreement.

11.8. Severability

If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to dispute resolution under Clause 10.1 of this Agreement or otherwise.

11.9. Successors and assigns

This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective successors and permitted assigns.

11.10. Notices

All notices or other communications to be given or made under this Agreement shall be in writing and shall either be delivered personally or sent by courier or registered post with an additional copy to be sent by facsimile or e-mail. The address for service of each Party, its facsimile number and e-mail are set out under its name on the signing pages hereto. A notice shall be effective upon actual receipt thereof, save that where it is received after 5.30 (five thirty) p.m. on a business day, or on a day that is not a business day, the notice shall be deemed to be received on the first business day following the date of actual receipt. Without prejudice to the foregoing, a Party giving or making a notice or communication by facsimile or e-mail shall promptly deliver a copy thereof personally, or send it by courier or registered post to the addressee of such notice or communication. It is hereby agreed and acknowledged that any Party may by notice change the address to which such notices and communications to it are to be delivered or mailed. Such change shall be effective when all the Parties have notice of it.

11.11. Language

All notices, certificates, correspondence and proceedings under or in connection with this Agreement shall be in English.

11.12. Authorized representatives

Each of the Parties shall, by notice in writing, designate their respective authorized representatives through whom only all communications shall be made. A Party hereto

shall be entitled to remove and/or substitute or make fresh appointment of such authorized representative by similar notice.

11.13. Original Document

This Agreement may be executed in four counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.

THE COMMON SEAL OF CONCESSIONAIRE has been affixed pursuant to the resolution passed by the Board of Directors of the Concessionaire at its meeting held on the _____ day of 20 _____ hereunto affixed in the presence of _____, Director, who has signed these presents in token thereof and Company Secretary / Authorized Officer who has countersigned the same in token thereof⁸.

SIGNED SEALED AND DELIVERED
For and on behalf of SENIOR LENDERS by the Lender's representative:

(Signature)

(Signature)

(Name)

(Name)

(Designation)

(Designation)

(Address)

(Address)

(Fax No.)

(Fax No.)

(E-mail address)

(E-mail address)

⁸ To be affixed in accordance with the articles of association of the Concessionaire and the resolution passed by its Board of Directors

SIGNED, SEALED AND
DELIVERED

SIGNED, SEALED AND
DELIVERED

For and on behalf of
THE ESCROW BANK by

for and on behalf of
THE AUTHORITY by:

(Signature)

(Signature)

(Name)

(Name)

(Designation)

(Designation)

(Address)

(Address)

(Fax No.)

(Fax No.)

(E-mail address)

(E-mail address)

SIGNED, SEALED In the presence of:

SCHEDULE P: PANEL OF CHARTERED ACCOUNTANTS

1 Panel of Chartered Accountants

Pursuant to the provisions of Clause 27.2.1 of the Agreement, the Authority and the Concessionaire shall prepare a mutually agreed panel of 5 (five) reputable firms of Chartered Accountants having their registered offices in India (the "Panel of Chartered Accountants"). The criteria for preparing such Panel and the procedure to be adopted in this behalf shall be as set forth in this Schedule-J.

2 Invitation for empanelment

2.1 The Authority shall invite offers from all reputed firms of Chartered Accountants who fulfil the following eligibility criteria, namely:

- a) the firm should have conducted statutory audit of the annual accounts of at least one hundred companies registered under the Companies Act, 1956, including any re-enactment or amendment thereof, of which at least ten should have been public sector undertakings;
- b) The firm should have at least 5 (five) practicing Chartered Accountants on its rolls, each with a minimum experience of ten years in the profession;
- c) The firm or any of its partners should not have been disqualified or black-listed by the Comptroller and Auditor General of India or the Authority; and
- d) The firm should have an office in the State or in an adjacent State with at least 2 (two) practicing Chartered Accountants on its rolls in such State.

2.2 Interested firms meeting the eligibility criteria shall be required to submit a statement of their capability including the bio-data of all the practicing Chartered Accountants on its rolls. In particular, each firm shall be required to furnish year-wise information relating to the names of all the companies with an annual turnover exceeding Rs. 25,00,00,000 (Rs. twenty five crore) whose annual accounts were audited by such firm in any of the preceding 5 (five) Accounting Years

3 Evaluation and selection

3.1 The information furnished by each firm shall be scrutinized and evaluated by the Authority and 1 (one) point shall be awarded for each annual audit of the companies specified in Paragraph 2.2 above. (For the avoidance of doubt and by way of illustration, a firm which has conducted audit of the annual accounts of any such company for 5 (five) years shall be awarded 5 (five) points).

3.2 The Authority shall prepare a list of all the eligible firms along with the points scored by each such firm and 5 (five) firms scoring the highest points shall be identified and included in the draft Panel of Chartered Accountants.

4 Consultation with the Concessionaire

The Authority shall convey the aforesaid panel of firms to the Concessionaire for scrutiny and comments, if any. The Concessionaire shall be entitled to scrutinize the

relevant records of the Authority to ascertain whether the selection of firms has been undertaken in accordance with the prescribed procedure and it shall send its comments, if any, to the Authority within 15 (fifteen) days of receiving the aforesaid panel.

5 Mutually agreed panel

- 5.1 The Authority shall, after considering all relevant factors including the comments, if any, of the Concessionaire, finalize and constitute a panel of 5 (five) firms which shall be deemed to be the mutually agreed Panel of Chartered Accountants.
- 5.2 After completion of every 5 (five) years from the date of preparing the mutually agreed Panel of Chartered Accountants, or such earlier period as may be agreed between the Authority and the Concessionaire, a new panel shall be prepared in accordance with the provisions of this Schedule-J.

SCHEDULE Q: VESTING CERTIFICATE

1. The _____, _____ (the “Authority”) refers to the Concession Agreement dated (the “Agreement”) entered into between the Authority and (the “Concessionaire”) for _____ on HAM mode in the state of Tamil Nadu. (the “Project”) on design, build, operate and transfer (“DBFOT Annuity or Hybrid Annuity”) basis.
2. The Authority hereby acknowledges compliance and fulfilment by the Concessionaire of the Divestment Requirements set forth in Clause 32.1 of the Agreement on the basis that upon issue of this Vesting Certificate, the Authority shall be deemed to have acquired, and all title and interest of the Concessionaire in or about the Project shall be deemed to have vested unto the Authority, free from any encumbrances, charges and liens whatsoever.
3. Notwithstanding anything to the contrary contained hereinabove, it shall be a condition of this Vesting Certificate that nothing contained herein shall be construed or interpreted as waiving the obligation of the Concessionaire to rectify and remedy any defect or deficiency in any of the Divestment Requirements and/or relieving the Concessionaire in any manner of the same.

Signed this..... day of....., 20.....
At.....

AGREED, ACCEPTED AND SIGNED AGREED, ACCEPTED AND SIGNED

For and on behalf of for and on behalf of For and on behalf of for and on behalf of

CONCESSIONAIRE by: AUTHORITY by:

(Signature) (Signature)

(Name) (Name)

(Designation) (Designation)

(Address) (Address)

In the presence of:

- 1.
- 2

SCHEDULE R: SUBSTITUTION AGREEMENT

THIS SUBSTITUTION AGREEMENT is entered into on this the.....day of.....20.....

AMONGST

1 The _____, established under the _____ Act _____, represented by its _____ and having its principal offices at _____ (Hereinafter referred to as the “Authority” which expression shall unless repugnant to the context or meaning thereof include its administrators, successors and assigns);

2Limited, a company incorporated under the provisions of the Companies Act, 2013 and having its registered office at (Hereinafter referred to as the “Concessionaire” which expression shall unless repugnant to the context or meaning thereof include its successors and permitted assigns and substitutes);

3 (insert name and particulars of Lenders’ Representative) and having its registered office at....., acting for and on behalf of the Senior Lenders as their duly authorized agent with regard to matters arising out of or in relation to this Agreement (hereinafter referred to as the “Lenders’ Representative”, which expression shall unless repugnant to the context or meaning thereof include its successors and substitutes);

WHEREAS:

- A. The Authority has entered into a Concession Agreement dated..... With the Concessionaire (the “Concession Agreement”) for _____ on HAM mode in the state of Tamilnadu. (the “Project”) on design, build, operate and transfer basis (the “DBFOT Annuity or Hybrid Annuity”), and a copy of which is annexed hereto and marked as Annex-A to form part of this Agreement.
- B. Senior Lenders have agreed to finance the Project in accordance with the terms and conditions set forth in the Financing Agreements.
- C. Senior Lenders have requested the Authority to enter into this Substitution Agreement for securing their interests through assignment, transfer and substitution of the Concession to a Nominated Company in accordance with the provisions of this Agreement and the Concession Agreement.
- D. In order to enable implementation of the Project including its financing, construction, operation and maintenance, the Authority has agreed and undertaken to transfer and assign the Concession to a Nominated Company in accordance with the terms and conditions set forth in this Agreement and the Concession Agreement.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

1. DEFINITIONS AND INTERPRETATION

1.1. Definitions

In this Substitution Agreement, the following words and expressions shall, unless repugnant to the context or meaning thereof, have the meaning hereinafter respectively assigned to them: “Agreement” means this Substitution Agreement and any amendment thereto made in accordance with the provisions contained in this Agreement;

“Financial Default” means occurrence of a material breach of the terms and conditions of the Financing Agreements or a continuous default in Debt Service by the Concessionaire for a minimum period of 3 (three) months;

“Lenders’ Representative” means the person referred to as the Lenders’ Representative in the foregoing Recitals;

“Nominated Company” means a company, incorporated under the provisions of the Companies Act, 1956, including any re-enactment or amendment thereof, selected by the Lenders’ Representative, on behalf of Senior Lenders, and proposed to the Authority for assignment/transfer of the Concession as provided in this Agreement;

“Notice of Financial Default” shall have the meaning ascribed thereto in Clause 3.2.1; and

“Parties” means the parties to this Agreement collectively and “Party” shall mean any of the Parties to this Agreement individually.

1.2. Interpretation

- 1.2.1. References to Lenders’ Representative shall, unless repugnant to the context or meaning thereof, mean references to the Lenders’ Representative, acting for and on behalf of Senior Lenders.
- 1.2.2. References to Clauses are, unless stated otherwise, references to Clauses of this Agreement.
- 1.2.3. The words and expressions beginning with capital letters and defined in this Agreement shall have the meaning ascribed thereto herein, and the words and expressions used in this Agreement and not defined herein but defined in the Concession Agreement shall, unless repugnant to the context, have the meaning ascribed thereto in the Concession Agreement.
- 1.2.4. The rules of interpretation stated in Clauses 1.2, 1.3 and 1.4 of the Concession Agreement shall apply, mutatis mutandis, to this Agreement.

2. ASSIGNMENT

2.1. Assignment of rights and title

The Concessionaire hereby agrees to assign the rights, title and interest in the Concession to, and in favor of, the Lenders’ Representative pursuant to and in

accordance with the provisions of this Agreement and the Concession Agreement by way of security in respect of financing by the Senior Lenders under the Financing Agreements.

3. SUBSTITUTION OF THE CONCESSIONAIRE

3.1. Rights of substitution

- 3.1.1. Pursuant to the rights, title and interest assigned under Clause 2.1, the Lenders' Representative shall be entitled to substitute the Concessionaire by a Nominated Company under and in accordance with the provisions of this Agreement and the Concession Agreement.
- 3.1.2. The Authority hereby agrees to substitute the Concessionaire by endorsement on the Concession Agreement in favor of the Nominated Company selected by the Lenders' Representative in accordance with this Agreement. For the avoidance of doubt, the Senior Lenders or the Lenders' Representative shall not be entitled to operate and maintain the Project as Concessionaire either individually or collectively.

3.2. Substitution upon occurrence of Financial Default

- 3.2.1. Upon occurrence of a Financial Default, the Lenders' Representative may issue a notice to the Concessionaire (the "Notice of Financial Default") along with particulars thereof, and send a copy to the Authority for its information and record. A Notice of Financial Default under this Clause 3 shall be conclusive evidence of such Financial Default and it shall be final and binding upon the Concessionaire for the purposes of this Agreement.
- 3.2.2. Upon issue of a Notice of Financial Default hereunder, the Lenders' Representative may, without prejudice to any of its rights or remedies under this Agreement or the Financing Agreements, substitute the Concessionaire by a Nominated Company in accordance with the provisions of this Agreement.
- 3.2.3. At any time after the Lenders' Representative has issued a Notice of Financial Default, it may by notice require the Authority to suspend all the rights of the Concessionaire and undertake the operation and maintenance of the Project in accordance with the provisions of Article 30 of the Concession Agreement, and upon receipt of such notice, the Authority shall undertake Suspension under and in accordance with the provisions of the Concession Agreement. The aforesaid Suspension shall be revoked upon substitution of the Concessionaire by a Nominated Company, and in the event such substitution is not completed within 180 (one hundred and eighty) days from the date of such Suspension, the Authority may terminate the Concession Agreement forthwith by issuing a Termination Notice in accordance with the provisions of the Concession Agreement; provided that upon written request from the Lenders' Representative and the Concessionaire, the Authority may extend the aforesaid period of 180 (one hundred and eighty) days by a period not exceeding 90 (ninety) days. For the avoidance of doubt, the Authority expressly agrees and undertakes to terminate the Concession Agreement forthwith, upon receipt of a written request from the Lenders' Representative at any time after 240 (two hundred and forty) days from the date of Suspension hereunder.

3.3. Substitution upon occurrence of Concessionaire Default

- 3.3.1. Upon occurrence of a Concessionaire Default, the Authority shall by a notice inform the Lenders' Representative of its intention to issue a Termination Notice and grant 15 (fifteen) days' time to the Lenders' Representative to make a representation, stating the intention to substitute the Concessionaire by a Nominated Company.
- 3.3.2. In the event that the Lenders' Representative makes a representation to the Authority within the period of 15 (fifteen) days specified in Clause 3.3.1, stating that it intends to substitute the Concessionaire by a Nominated Company, the Lenders' Representative shall be entitled to undertake and complete the substitution of the Concessionaire by a Nominated Company in accordance with the provisions of this Agreement within a period of 180 (one hundred and eighty) days from the date of such representation, and the Authority shall either withhold Termination or undertake Suspension for the aforesaid period of 180 (one hundred and eighty) days; provided that upon written request from the Lenders' Representative and the Concessionaire, the Authority shall extend the aforesaid period of 180 (one hundred and eighty) days by a period not exceeding 90 (ninety) days; provided further that the Lenders' Representative may at any time withdraw its representation hereunder and upon such withdrawal, the Authority may terminate this Agreement in accordance with the provisions hereof.

3.4. Procedure for substitution

- 3.4.1. The Authority and the Concessionaire hereby agree that on or after the date of Notice of Financial Default or the date of representation to the Authority under Clause 3.3.2, as the case may be, the Lenders' Representative may, without prejudice to any of the other rights or remedies of the Senior Lenders, invite, negotiate and procure offers, either by private negotiations or public auction or tenders for the take over and transfer of the Project including the Concession to the Nominated Company upon such Nominated Company's assumption of the liabilities and obligations of the Concessionaire towards the Authority under the Concession Agreement and towards the Senior Lenders under the Financing Agreements.
- 3.4.2. To be eligible for substitution in place of the Concessionaire, the Nominated Company shall be required to fulfil the eligibility criteria that were laid down by the Authority for short listing the bidders for award of the Concession; provided that the Lenders' Representative may represent to the Authority that all or any of such criteria may be waived in the interest of the Project, and if the Authority determines that such waiver shall not have any material adverse effect on the Project, it may waive all or any of such eligibility criteria.
- 3.4.3. Upon selection of a Nominated Company, the Lenders' Representative shall request the Authority to:
- a. Accede to transfer to the Nominated Company the right to construct, operate and maintain the Project in accordance with the provisions of the Concession Agreement;
 - b. Endorse and transfer the Concession to the Nominated Company, on the same terms and conditions, for the residual Concession Period; and
 - c. Enter into a Substitution Agreement with the Lenders' Representative and the Nominated Company on the same terms as are contained in this Agreement.

- 3.4.4. If the Authority has any objection to the transfer of Concession in favor of the Nominated Company in accordance with this Agreement, it shall within 15 (fifteen) days from the date of proposal made by the Lenders' Representative, give a reasoned order after hearing the Lenders' Representative. If no such objection is raised by the Authority, the Nominated Company shall be deemed to have been accepted. The Authority shall thereupon transfer and endorse the Concession within 15 (fifteen) days of its acceptance/deemed acceptance of the Nominated Company; provided that in the event of such objection by the Authority, the Lenders' Representative may propose another Nominated Company whereupon the procedure set forth in this Clause 3.4 shall be followed for substitution of such Nominated Company in place of the Concessionaire.
- 3.4.5. The transfer of Concession hereunder to a Nominated Company may, notwithstanding anything to the contrary in this Agreement and the Concession Agreement, be undertaken by transfer of no less than 75% (seventy five per cent) of the equity of the Concessionaire to the Nominated Company, and upon such transfer hereunder, the Concessionaire shall be deemed to be the Nominated Company under and in accordance with the provisions of this Agreement and the Concession Agreement.

3.5. Selection to be binding

The decision of the Lenders' Representative and the Authority in selection of the Nominated Company shall be final and binding on the Concessionaire. The Concessionaire irrevocably agrees and waives any right to challenge the actions of the Lenders' Representative or the Senior Lenders or the Authority taken pursuant to this Agreement including the transfer/assignment of the Concession in favor of the Nominated Company. The Concessionaire agrees and confirms that it shall not have any right to seek revaluation of assets of the Project or the Concessionaire's shares. It is hereby acknowledged by the Parties that the rights of the Lenders' Representative are irrevocable and shall not be contested in any proceedings before any court or Authority and the Concessionaire shall have no right or remedy to prevent, obstruct or restrain the Authority or the Lenders' Representative from effecting or causing the transfer by substitution and endorsement of the Concession as requested by the Lenders' Representative.

4. PROJECT AGREEMENTS

4.1. Substitution of Nominated Company in Project Agreements

The Concessionaire shall ensure and procure that each Project Agreement contains provisions that entitle the Nominated Company to step into such Project Agreement, in its discretion, in place and substitution of the Concessionaire in the event of such Nominated Company's assumption of the liabilities and obligations of the Concessionaire under the Concession Agreement.

5. TERMINATION OF CONCESSION AGREEMENT

5.1. Termination upon occurrence of Financial Default

At any time after issue of a Notice of Financial Default, the Lenders' Representative may by a notice in writing require the Authority to terminate the Concession Agreement forthwith, and upon receipt of such notice, the Authority shall undertake

Termination under and in accordance with the provisions of Article 31 of the Concession Agreement.

5.2. Termination when no Nominated Company is selected

In the event that no Nominated Company acceptable to the Authority is selected and recommended by the Lenders' Representative within the period of 180 (one hundred and eighty) days or any extension thereof as set forth in Clause 3.3.2, the Authority may terminate the Concession Agreement forthwith in accordance with the provisions thereof.

5.3. Realization of Debt Due

The Authority and the Concessionaire hereby acknowledge and agree that, without prejudice to their any other right or remedy, the Lenders' Representative is entitled to receive from the Concessionaire, without any further reference to or consent of the Concessionaire, the Debt Due upon Termination of the Concession Agreement. For realization of the Debt Due, the Lenders' Representative shall be entitled to make its claim from the Escrow Account in accordance with the provisions of the Concession Agreement and the Escrow Agreement.

6. DURATION OF THE AGREEMENT

6.1. Duration of the Agreement

This Agreement shall come into force from the date hereof and shall expire at the earliest to occur of the following events:

- A. Termination of the Agreement; or
- B. No sum remains to be advanced and no sum are outstanding to the Senior Lenders, under the Financing Agreements.

7. INDEMNITY

7.1. General indemnity

- 7.1.1. The Concessionaire will indemnify, defend and hold the Authority and the Lenders' Representative harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense of whatever kind and nature arising out of any breach by the Concessionaire of any of its obligations under this Agreement or on account of failure of the Concessionaire to comply with Applicable Laws and Applicable Permits.
- 7.1.2. The Authority will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss, damage, cost and expense arising out of failure of the Authority to fulfil any of its obligations under this Agreement, materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement or this Agreement, other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Authority, its officers, servants and agents.
- 7.1.3. The Lenders' Representative will indemnify, defend and hold the Concessionaire harmless against any and all proceedings, actions and third party claims for any loss,

damage, cost and expense arising out of failure of the Lenders' Representative to fulfil its obligations under this Agreement, materially and adversely affecting the performance of the Concessionaire's obligations under the Concession Agreement, other than any loss, damage, cost and expense, arising out of acts done in discharge of their lawful functions by the Lenders' Representative, its officers, servants and agents.

7.2. Notice and contest of claims

In the event that any Party hereto receives a claim from a third party in respect of which it is entitled to the benefit of an indemnity under Clause 7.1 or in respect of which it is entitled to reimbursement (the "Indemnified Party"), it shall notify the other Party responsible for indemnifying such claim hereunder (the "Indemnifying Party") within 15 (fifteen) days of receipt of the claim and shall not settle or pay the claim without the prior approval of the Indemnifying Party, such approval not to be unreasonably withheld or delayed. In the event that the Indemnifying Party wishes to contest or dispute the claim, it may conduct the proceedings in the name of the Indemnified Party and shall bear all costs involved in contesting the same. The Indemnified Party shall provide all cooperation and assistance in contesting any claim and shall sign all such writings and documents as the Indemnifying Party may reasonably require.

8. DISPUTE RESOLUTION

8.1. Dispute resolution

- 8.1.1. Any dispute, difference or claim arising out of or in connection with this Agreement which is not resolved amicably shall be decided by reference to arbitration to a Board of Arbitrators comprising one nominee each of the Authority, Concessionaire and the Lenders' Representative. Such arbitration shall be held in accordance with the Rules of Arbitration of the International Centre for Alternative Dispute Resolution, New Delhi (the "Rules") or such other rules as may be mutually agreed by the Parties, and shall be subject to provisions of the Arbitration and Conciliation Act, 1996.
- 8.1.2. The Arbitrators shall issue a reasoned award and such award shall be final and binding on the Parties. The place of arbitration shall be the capital of the State and the language of arbitration shall be English.

9. MISCELLANEOUS PROVISIONS

9.1. Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts in the New Delhi shall have jurisdiction over all matters arising out of or relating to this Agreement.

9.2. Waiver of sovereign immunity

The Authority unconditionally and irrevocably:

- a) agrees that the execution, delivery and performance by it of this Agreement constitute commercial acts done and performed for commercial purpose;
- b) agrees that, should any proceedings be brought against it or its assets, property or revenues in any jurisdiction in relation to this Agreement or any transaction contemplated by this Agreement, no immunity (whether by reason of sovereignty

or otherwise) from such proceedings shall be claimed by or on behalf of the Authority with respect to its assets;

- c) waives any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- d) consents generally in respect of the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

9.3. Priority of agreements

In the event of any conflict between the Concession Agreement and this Agreement, the provisions contained in the Concession Agreement shall prevail over this Agreement.

9.4. Alteration of terms

All additions, amendments, modifications and variations to this Agreement shall be effectual and binding only if in writing and signed by the duly authorized representatives of the Parties.

9.5. Waiver

9.5.1. Waiver by any Party of a default by another Party in the observance and performance of any provision of or obligations under this Agreement:

- a) Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- b) Shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- c) Shall not affect the validity or enforceability of this Agreement in any manner.

9.5.2. Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to another Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

9.6. No third party beneficiaries

This Agreement is solely for the benefit of the Parties and no other person or entity shall have any rights hereunder.

9.7. Survival

9.7.1. **Termination of this Agreement:**

- a) Shall not relieve the Parties of any obligations hereunder which expressly or by implication survive termination hereof; and
- b) except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, shall not relieve either Party of any obligations or

liabilities for loss or damage to the other Party arising out of or caused by acts or omissions of such Party prior to the effectiveness of such termination or arising out of such termination.

9.7.2. All obligations surviving the cancellation, expiration or termination of this Agreement shall only survive for a period of 3 (three) years following the date of such termination or expiry of this Agreement.

9.8. Severability

If for any reason whatever any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision. Failure to agree upon any such provisions shall not be subject to dispute resolution under Clause 8 of this Agreement or otherwise.

9.9. Successors and assigns

This Agreement shall be binding on and shall inure to the benefit of the Parties and their respective successors and permitted assigns.

9.10. Notices

All notices or other communications to be given or made under this Agreement shall be in writing, shall either be delivered personally or sent by courier or registered post with an additional copy to be sent by facsimile or e-mail. The address for service of each Party, its facsimile number and e-mail address are set out under its name on the signing pages hereto. A notice shall be effective upon actual receipt thereof, save that where it is received after 5.30 (five thirty) p.m. on any day, or on a day that is a public holiday, the notice shall be deemed to be received on the first working day following the date of actual receipt. Without prejudice to the foregoing, a Party giving or making a notice or communication by facsimile or e-mail shall promptly deliver a copy thereof personally, or send it by courier or registered post to the addressee of such notice or communication. It is hereby agreed and acknowledged that any Party may by notice change the address to which such notices and communications to it are to be delivered or mailed. Such change shall be effective when all the Parties have notice of it.

9.11. Language

All notices, certificates, correspondence and proceedings under or in connection with this Agreement shall be in English.

9.12. Authorized representatives

Each of the Parties shall by notice in writing designate their respective authorized representatives through whom only all communications shall be made. A Party hereto shall be entitled to remove and/or substitute or make fresh appointment of such authorized representative by similar notice.

9.13. Original Document

This Agreement may be executed in three counterparts, each of which when executed and delivered shall constitute an original of this Agreement.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN

<p>THE COMMON SEAL OF CONCESSIONAIRE has been affixed pursuant to the resolution passed by the Board of Directors of the Concessionaire at its meeting held on the.....day of the20.....here unto affixed in to the presence of.....the Director, who has signed these presents in token thereof,Company Secretary /Authorized Officer who has countersigned the same in token thereof</p>	<p>SIGNED, SEALED AND DELIVERED For and behalf of THE AUTHORITY by:</p>
<p>(Signature) (Name) (Designation) (Address) (Fax No.) (e-mail address)</p>	<p>(Signature) (Name) (Designation) (Address) (Fax No.) (e-mail address)</p>

SIGNED, SEALED AND DELIVERED

For and on behalf of

SENIOR LENDERS by the

Lenders' Representative:

(Signature)

(Name)

(Designation)

(Address)

(Fax No.)

(E-mail address)

In the presence of:

- 1.
- 2.