

## EXECUTIVE SUMMARY

**The Project: To establish 1400 Tons Per Day (having 4 streams each of 350 capacity) Municipal Solid Waste Processing Plant for Conversion of MSW to Compost & Refuse Derived Fuel with SLF at Perungudi Dumping Ground in Chennai in the state of Tamil Nadu as per MSW (Management & Handling) Rules 2000.**

- Technology to be used** : Integrated MSW processing through Aerobic Bio-composting and RDF for Utilization of short – term biodegradables, long-term Biodegradables and Inert processing to eco bricks.
- Project Implementation by** : **M/s Hydroair Tectonics (PCD) Ltd., Mumbai**  
116, Raheja Arcade, Sector 11, Plot 61,  
Belapur, Navi Mumbai 400 614.  
Tel : 022 – 27564347 / 27564777.
- Technology Status** : In accordance with Municipal waste Processing and Handling Rules-2000.

Also as per the recommendations of Supreme Court’s Technical Committee and Inter-Ministerial Task Force under the Ministry of Urban Development, New Delhi.

“Accelerated Aerobic Bio Conversion under controlled conditions to recover manure & Refuse Derived Fuel” from Municipal Solid Waste, with power generation and inert processing to civil bricks.

- Processing Operation** : Waste receiving and processing treatment throughout the year.

- Segregation, Composting, Fuel pelletisation, Power generation, Marketing, Selling of compost & land filling of the non degradable waste.
- The activities for development of dumping ground

would include clearing of site survey, lighting, pipelines, cables, laying internal roads etc.

- Gate Control – Receiving of waste – Pre-sorting into food waste, dry waste, plastic and others.
- Sanitization treatment, bio-stabilisation and rapid fermentation of short term bio-degradables.
- Processing of dry waste into RDF
- Mechanical Processing of fermented biomass for recovery of compost.

**Environmental Issues covered** :

- Control of Mal-odors and toxic gaseous emissions
- Control of pathogens, flies, rodents and vultures.
- Control of Dusty Particulate matters

**Technology Relevance** :

**Triple Eco-friendly**

- Control of Smoke & Fire
- It takes care of polluting putrescible matters
- Processing treatment itself is non-polluting
- Recover products namely organic manure to help in soil health building and RDF as a replacement of fossil fuel.

**Benefits to Corporation of Chennai :**

- Compliance of MSW rules 2000 & other regulatory aspects
- Saving of cost on maintenance of disposal site.
- Increasing the shelf life of waste management site by 6 to 8 folds.
- Avoiding of public litigation, environmental risks in terms of diseases, mal odors, ground water contamination
- Ensuring congenial working conditions for conservancy workers & recyclers etc.
- Avoiding nuisance of garbage to the neighborhoods.
- Protection of aesthetic value of the city.
- Conservation of natural resources

- Project operation in eco friendly manner and in line with national/ international standards.
- Lesser future problems for capacity enhancement or technological adjustments due to rapid changing waste characteristics.
- Integration of recovered product usage with national programmes.

**Role of Project Promoter:**

- To receive MSW & treat daily on all year round basis.
- To maintain the site under hygienic conditions & other controls as per regulatory requirements of environment & Pollution Control Board.
- To produce compost, RDF as & other usable products as per technical committee recommendations & MSW Rule 2000. This will be property of M/s Hydroair Tectonics (PCD) Ltd., Mumbai.
- Timely preparation & submission of reports to different authorities.

Maintain records, data & offers facility inspection as and when required with prior notice.

**Role of Corporation of Chennai :**

To make available 1400 TPD waste up to the project site on day to day basis

To accord permission to use 30 acres of Land for the project.

To furnish NOCs for getting service connections like power, water & drainage facilities.

**Recovered products** :  
**from MSW**

- 1) Soil friendly compost
- 2) RDF
- 3) Plastics/metals/Glass etc.

Eco Bricks from Inert Processing

**Compost and Potting**

**Media:**

- Highly useful for improving organic carbon content of soils and supplementation of trace element requirements.
- The product will be useful in improving the efficiency of fertilizers and conservation of moisture.
- Compost will be extremely useful as organic soil

conditioner.

**RDF– Green Coal**

- The lignitic content of MSW having high calorific value will be processed into green coal. This will be supplementing the fuel requirement from other sources.
- The calorific value of processed green coal will be 3200 to 3800 kcal/kg. Fixed Carbon 10 to 12% Sulfur content <0.70% and ash content of 20 to 25%.

**Civil Bricks**

- Civil bricks and hollow blocks which can be used in compound walls, pedestrian path, public gardens etc.

**MSW Processing and Disposal Facilities**

**Requirement of land, infrastructure and utilities:**

1. Project size : 1400 TPD
  2. Total land area required : 30 Acres.
  3. Power connection : 1200 HP
  4. Water requirement : 1200 KL per day
  5. Consumables:
    - Diesel : @ 1.5 lit / MT of MSW
    - Electricity : @ 5.0 unit MT of MSW
- Treatment materials:**
- Herbal Sanitiser : @ 50 ml / MT of MSW
  - Bioculture / additives : @ 1.0 kg / MT of MSW