



## EXECUTIVE SUMMARY

BEIL Infrastructure Ltd. Started operations in 1997 with a secured landfill for disposal of hazardous waste at GIDC Ankleshwar. Subsequently Incineration system was added to treat organic waste. The company has added other waste processing activities like CMEE, E-Waste collection and dismantling facility, Plastic Processing plant, drums decontamination system, Stabilization plant, Pre-processing facility of organic waste, well equipped Laboratory, etc.

BEIL group companies: BEIL Infrastructure Limited (Ankleshwar unit, Dahej Unit, Ahmedabad Unit & Baddi unit), Enviro Technology Limited, BEIL Research and Consultancy Private Limited, Kerala Enviro Infrastructure

Limited (KEIL), Shivalik Solid Waste Management Limited (SSWML), Coimbatore Integrated Waste Management Company Private Limited (CIWMCPL), and Gharpure Engineering and Constructions Private Limited (GECPL).

We have also started activities in hazardous waste management/MSW/Wastewater treatment/Design and setting up of plants.

BEIL group has entrusted M/s. AICL for preparation of the Sustainability report covering the financial years 2021-22 & 2022-23. After compiling the data and analysis detailed report have been prepared as per GRI standards 2021. The outcome of the report is highlighted below:

### 1. Reduction in landfill footprint:

- Hazardous waste landfill requires considerable amount of land. As land is scarce BEIL group have taken efforts to reduce landfill footprint.
- At BEIL Ankleshwar, in phase I the waste disposal capacity per sq. meter area was 16.28 MT/sq. meter. After expansion and implementation of phase IV the disposal capacity is 29.34 MT/sq. meter.
- At BEIL Dahej, the waste disposal capacity per sq. meter area was 14.84 MT/sq. meter which is increased to 28.69 MT/sq. meter.
- At SSWML, the waste disposal capacity per sq. meter area was 13.89 MT/sq. meter which is increased to 25.97 MT/sq. meter.
- At KEIL, the waste disposal capacity per sq. meter area was 12.35 MT/sq. meter which is increased to 21.92 MT/sq. meter.

#### LANDFILL FOOTPRINT (MT/sq. meter)

##### BEIL Ankleshwar

After expansion	29.34
Original	16.28

##### BEIL Dahej

After expansion	28.69
Original	14.84

##### SSWML

After expansion	25.97
Original	13.89

##### KEIL

After expansion	21.92
Original	12.35

### 2. Reduction in water consumption

BEIL group made significant achievement in reducing our freshwater consumption through efficient recycling practices and by reusing water in processes.

The freshwater consumption in the BEIL group companies have been reduced from 2,05,163 MT in FY 2020-21 to 1,44,698 MT in FY 2022-23. There is considerable reduction in the consumption of fresh water in all units except Dahej & KEIL where new activities like common Incinerator and BMW facility have been added.

#### Total Freshwater consumption (MT) in BEIL group

FY 2022-23	1,44,698
FY 2021-22	1,34,606
FY 2020-21	2,05,163

We have considered density as 1 for Fresh Water and in-case of leachate and other effluent streams we have taken average analysis values.

### 3. Electricity Efficiency

#### Electricity consumption (KWH)

FY 2022-23	2,97,69,869
FY 2021-22	2,69,50,541
FY 2020-21	2,30,43,538

The overall electricity consumption in the BEIL group have increased from 2,30,43,538 KWH in FY 2020-21 to 2,97,69,869 KWH in FY 2022-23. The major increase is due to new additions of incineration system at Dahej and BMW system at KEIL.

#### Ankleshwar Site (kWh/MT)

##### Landfill

FY 2022-23	0.3
FY 2021-22	0.3
FY 2020-21	0.5

##### CMEE

FY 2022-23	24.8
FY 2021-22	39.2
FY 2020-21	45.2

##### Inc

FY 2022-23	230.4
FY 2021-22	213.2
FY 2020-21	202.5

The electricity intensity of landfill at BEIL Ankleshwar have been decreased from 0.5 KWH/MT to 0.3 KWH/MT. for the incineration system at BEIL Ankleshwar due to decrease in the waste quantity incinerated the electricity intensity shows increases from 202.5 KWH/MT to 230.4 KWH/MT. In the CMEE the electricity intensity decreased from 45.2 KWH/MT to 24.8 KWH/MT.

Monsoon coverage of landfill



#### Dahej Site (kWh/MT)

##### Landfill

FY 2022-23	0.6
FY 2021-22	0.6
FY 2020-21	0.1

##### CMEE

FY 2022-23	88.8
FY 2021-22	75.8
FY 2020-21	73.8

At Dahej Landfill the Electricity intensity have increased from 0.136 KWH/MT to 0.58 KWH/MT. The increase in electricity consumption is due to augmentation of the APCM. In CMEE the electricity intensity has increased from 74 KWH/MT to 89 KWH/MT. This increase is due to decrease in the quantity received for evaporation.

#### SSWML Site (kWh/MT)

##### Landfill

FY 2022-23	1.3
FY 2021-22	1.7
FY 2020-21	2.3

##### CMEE

FY 2022-23	40.0
FY 2021-22	29.7
FY 2020-21	41.6

At SSWML landfill the electricity intensity have been reduced from 2.3 KWH/MT to 1.3 KWH/MT. In the CMEE the electricity intensity has been reduced from 41.6 KWH/MT to 40.0 KWH/MT.

#### KEIL Site (kWh/MT)

##### Landfill

FY 2022-23	7.6
FY 2021-22	6.4
FY 2020-21	7.8

At KEIL landfill the electricity intensity is reduced from 7.84 KWH/MT to 7.64 KWH/MT.



#### 4. Solar power generation and utilization

BEIL have installed solar panels at the capped portion of the landfill at Dahej & SSWML units. We have generated 2,99,104 KWH in FY 2021-22 and 2,83,200 KWH in FY 2022-23 at Dahej unit. At SSWML unit the solar power generated is 63,847 KWH in FY 2022-23.

**2,99,104**

KWH generated in FY 2021-22

**3,47,047**

KWH generated in FY 2022-23

**314 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**364 t CO<sub>2</sub>e**

GHG emission reduced in FY 2022-23

we have calculated using coal as fuel for power generation.

#### 5. Tree plantation

By planting trees and supporting social forestation projects, we've not only enhanced local ecosystems but also helped offset carbon emissions. We have planted 15,734 nos. of trees during FY 2021-22 and 13,088 nos. of trees during FY 2022-23. The total nos. of trees planted inside premises so far is 44,559 nos. In addition, we have also planted 22,728 nos. of trees outside our premises.

**15,734**

Nos. of tree planted in FY 2021-22

**13,088**

Nos. of tree planted in FY 2022-23

**54,199**

Nos. of tree available in FY 2021-22

**1,355 MT**

CO<sub>2</sub> intake with respect to total nos. of trees

**67,287**

Nos. of tree available in FY 2022-23

**1,682 MT**

CO<sub>2</sub> intake with respect to total nos. of trees

#### 6. Pre-processing of organic waste and sending to cement industries

BEIL group implemented a system for pre-processing of organic waste, diverting it to the cement industry as a fuel replacement. This innovative approach has significantly reduced coal consumption and emissions.

The total quantity of organic waste utilized as alternative fuel is 22,841 MT in FY 2021-22 and 58,151 MT in FY 2022-23. The reduction in GHG emissions due to utilization of organic waste as fuel was 22,936 tCO<sub>2</sub>e in FY 2021-22 and 37,060 tCO<sub>2</sub>e in FY 2022-23.

**22,841 MT**

Pre-processed waste in FY 2021-22  
(HCV-12025 MT + LCV-10816 MT)

**58,151 MT**

Pre-processed waste in FY 2022-23  
(HCV-17977 MT + LCV-40174 MT)

**15,473 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**24,036 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23



#### 7. Waste heat recovery from Incineration and utilization

BEIL group recover heat from incineration processes, converting it into valuable steam for use in MEE system. This innovative approach has not only reduced our fuel consumption but also lowered emissions.

BEIL recover the waste heat from incineration process at Ankleshwar & Dahej and produced steam. The steam is utilized in MEE plant for evaporation. Hence there is considerable reduction in GHG emission.

During FY 2021-22, 13,843 MT steam was generated through WHRB and in FY 2022-23 14,461 MT. The GHG emission reduction due to this is calculated as 2,713 tCO<sub>2</sub>e in FY 2021-22 and 2,996 tCO<sub>2</sub>e in FY 2022-23.

**13,843 MT**

Steam generated from Ank in FY 2021-22

**14,461 MT**

Steam generated from Ank in FY 2022-23

**2,574 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**2,689 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23

#### 8. Conversion of MSW to RDF or compost

BEIL group's MSW sites, converting municipal solid waste (MSW) into nutrient-rich compost, promoting a circular economy.

**28,071.62 MT**

Compost Sold in FY 2021-22

**18,190.6 MT**

Compost sold in FY 2022-23

Converting municipal solid waste to compost offers numerous benefits:

##### Waste Reduction

It significantly reduces the volume of waste sent to landfills, conserving valuable landfill space, and extending their lifespan.

##### Soil Enrichment

Compost is a nutrient-rich soil conditioner that enhances soil fertility, water retention, and plant growth, reducing the need for chemical fertilizers.

##### Environmental Sustainability

Composting helps lower greenhouse gas emissions by reducing methane production in landfills and promotes a more sustainable waste management approach.

Moreover, at the sites municipal solid waste (MSW) is converted to Refuse-Derived Fuel (RDF), which is used as an eco-friendly fuel replacement.

The total RDF produced in FY 2021-22 is 27,294 MT and in FY 2022-23 is 29,197 MT out of these 6,594.18 MT in FY 2021-22 and 33,470 MT in FY 2022-23 RDF was given to cement industry.

The GHG emission reduction due to this works out as 7,368 tCO<sub>2</sub>e in FY 2021-22 and 37,396 tCO<sub>2</sub>e in FY 2022-23.

**6,594.18 MT**

Quantity of RDF given to cement industry in FY 2021-22

**33,470 MT**

Quantity of RDF given to cement industry in FY 2022-23

**7,368 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**37,396 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23





### 9. Recycling of plastic waste

BEIL is processing plastic waste at Ankleshwar and Coimbatore facility. The total plastic waste processed in FY 2021-22 is 446 MT and quantity processed in FY 2022-23 is 408 MT. The GHG emission is calculated is 357 tCO<sub>2</sub>e in FY 2021-22 and 326 tCO<sub>2</sub>e in FY 2022-23.

**446 MT**

Plastic waste processed and recycled (Ankleshwa and Coimbatore) in FY 2021-22

**408 MT**

Plastic waste processed and recycled (Ankleshwa and Coimbatore) in FY 2022-23

**357 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**326 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23

### 10. E-waste processing

At Ankleshwar site, SSWML and KEIL site we have developed e-waste management facility. We have received 723 MT in FY 2021-22 and 434 MT in FY 2022-23.

#### Benefits of E-waste recycling

- Recycling prevents the release of harmful chemicals and toxins found in electronics into the atmosphere, soil, and water, helping to preserve the environment.
- Open burning of e-waste emits hazardous pollutants that can harm human health. Recycling helps mitigate these health risks for communities and workers involved in the process.
- Various valuable resources are recovered and reused.

### 11. Support to academics

BEIL group actively support academics by providing scholarships, internships, and research opportunities. Our investment in education not only enhance knowledge and innovation but also empowers future generations with the skills to address challenges.

**68**

No. of students benefited in FY 2021-22

**111**

No. of students benefited in FY 2022-23

### 12. Support to the community during difficult time

During challenging times like the COVID-19 pandemic, we've supported our community by providing essential aid, resources, and relief efforts. Moreover, during Covid we have also incinerated the waste from Hospitals and helped them.

**369.7 MT**

Quantity of covid waste incinerated during pandemic (Ankleshwar + KEIL) in FY 2021-22

**54.5 MT**

Quantity of covid waste incinerated during pandemic (KEIL) in FY 2023-23



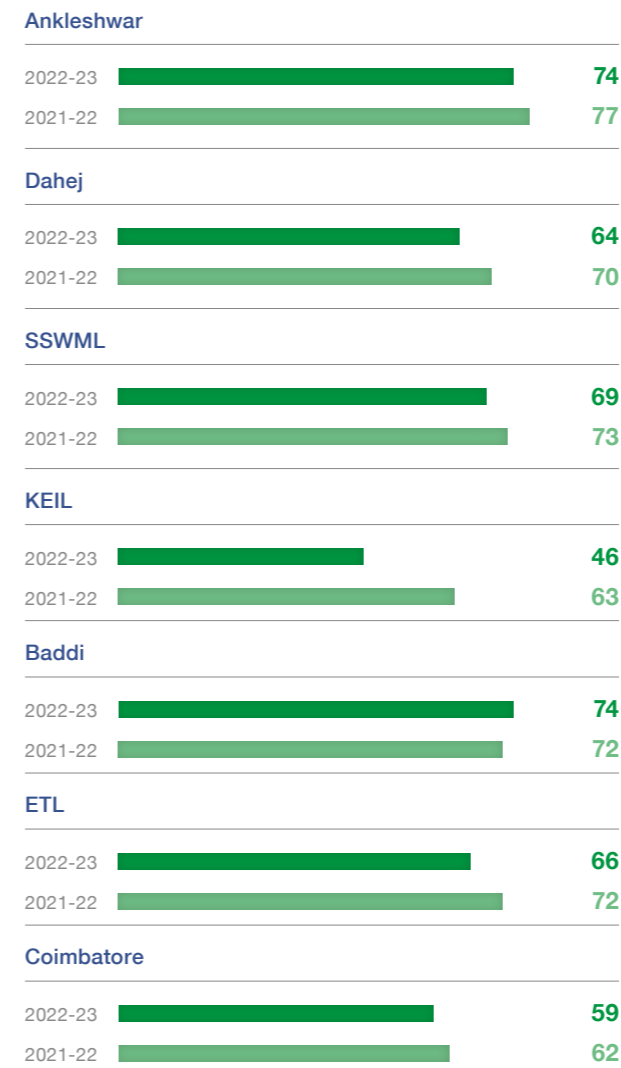
### 13. Improvement in the Ambient air

BEIL group's efforts have led to a measurable improvement in ambient air quality. By reducing emissions, enhancing APCM, and adopting cleaner technologies, we've contributed to a healthier environment and a better quality of life for our community.

The important parameters PM10 and PM 2.5 have been reduced substantially from the levels in FY 2021-22 to FY 2022-23 at all units.

AQI is satisfactory at all units and is under good category on few days. We are regularly monitoring the AQI data of our site and the AQI data from CPCB website for the nearby location. We have noted that AQI value at our site is always lower than AQI value of nearby monitoring location of CPCB.

#### IMPROVEMENT IN THE AMBIENT AIR QUALITY (PM10 IN MICROGRAM PER NM<sup>3</sup>)



### 14. BEIL Group plays a crucial role in supporting statutory bodies by responsibly incinerating seized materials and waste.

Particulars	FY 2021-22	FY 2022-23
incinerated qty. (Ank + KEIL)	5.13 MT	49.34 MT

### 15. BMW facility:

At KEIL site, BMW management facility commissioned in FY 2021-22.

Particulars	FY 2021-22	FY 2022-23
Biomedical waste processed	1,541MT	3,215MT

It offers a secure and controlled method for disposing of biomedical waste, ensuring that potentially hazardous materials, including pathogens and infectious agents, are destroyed, preventing the spread of diseases.

KEIL is also collecting and treating the BMW generated at households. During FY 2022-23, total domestic BMW treated is 93 MT.

### 16. Net GHG emission\*

By various activities listed above there is reduction in the GHG emissions. After deducting these reductions from the emission calculated the net GHG emissions comes to as follows:

Particulars	FY 2021-22	FY 2022-23
Total of GHG emission from all sites (tCO <sub>2</sub> e)	69,502	68,083
Overall GHG emission reduction (tCO <sub>2</sub> e)	27,441	66,494
Net GHG emission from all group (tCO <sub>2</sub> e)	42,061	1,589

\* For GHG Emission calculation, we have used US EPA emission Factor data base and CEA, India data base. Methodology adapted is in-line with the GHG Protocol.

- Sources of GHG Emission considered are as under
- Scope -1 Stationery Combustion of fuel from stacks of DG sets, Boiler, etc. ; Mobile combustion of fuel from vehicles owned by company & non road vehicles within plant premises.
  - Scope-2 Emission due use of purchased electricity
  - Scope-3 Mostly emission from upstream & downstream transportation, Employee commute & business travel.
- Exclusion-
1. Emission due to use of Refrigerants and Fire Extinguisher ; On-site composting and fugitive process emissions are not included under scope-1 for this reporting period
  2. Emission from hazardous waste landfills, as only inorganic waste is disposed of. Hence there is no chance for GHG emissions. Moreover, we are checking the landfill vents and monitoring results show negligible presence of VOCs.
  3. Emission from wastewater discharge outside are not included for this reporting period.

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- Presence
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### MESSAGE FROM THE DIRECTOR

Over the past year, we have demonstrated our ability to responsibly manage and transform waste. We have recycled, co-processed, treated, and disposed off a staggering 5,62,386 metric tonnes of hazardous waste across all our sites.



### CORPORATE GOVERNANCE

- Ethics and integrity (Anti-bribery/corruption, human rights, whistle blower and vigilance mechanism)
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# ABOUT THE REPORT

BEIL stands for trust and integrity towards all stakeholders as we stride ahead on our journey towards a more sustainable future. In furtherance of this commitment, we consider it imperative to share insights into our progress, milestones, challenges, and prospects, with all our valued stakeholders. Aligned with this goal, we are proud to present our first Sustainability Report.

Since this is our first report, we have incorporated performance of past two financial year in this one report itself. FY 2020-21 is considered for baseline and performance is evaluated for the FY 2021-22 & 2022-23, majorly highlighting FY 2022-23.

This Report highlights how we have integrated sustainability into our business operations through smart and effective waste management and wastewater treatment for a better and cleaner world. Additionally, the Report will also reflect our sustainability strategy, performance, relationships and value-creation efforts, including our overall approach towards Environment, Social and Governance (ESG) aspects. UPL University of Sustainable Technology supported in GHG Emission Calculations.

This report is evaluated & assured by a third party namely BSI (British Standard Institution)

### Reporting frameworks

The Report is prepared with reference to the Global Reporting Initiative (GRI) Standards 2021.

### Reporting scope and boundary

The Sustainability Report presents information about the pan-India consolidated operations of BEIL Infrastructure limited and group companies. Since this is the first sustainability report for BEIL group, there are no restatements in it. There have been no significant changes to the Company or its supply chain during the reporting year.

### Precautionary principle

We follow a precautionary approach towards minimizing our negative impact on the environment. As a waste management/ wastewater treatment service provider, we segregate, recover, and treat waste to have a limited impact of the waste on the environment. We take measures to effectively reduce our overall environmental footprint, i.e., the energy needed to process the waste.



# BEIL AT A GLANCE

Set up in 1997, BEIL Infrastructure Ltd. is one of India's leading waste management facilities. Being the first to be certified as a hazardous waste management company under ISO 14001-2015 and ISO 45001:2018, we are pioneers in the waste management space. We are continuously striving to set newer performance benchmarks pertaining to efficient and safe handling and management of liquid, solid and semi-solid hazardous waste.

The group companies included in the report are being operated under the control of BEIL. These units are formed as SPVs to execute the projects with equity participation of BEIL group. The Unit heads report to Mr Ashok Panjwani. All capexes are approved by HO. Various functions like Purchase, HR, Finance, Design and Engineering, Projects are taken care by HO. Day to day operations are carried out by units.

BEIL Infrastructure Ltd have units located at Ankleswar, Dahej, Baddi CETP and Ahmedabad site. Financial reports of these units are together prepared.

ETL,KEIL,SSWML and Coimbatore sites have separate Financial reports. In the sustainability report ,details of each sites are given separately and reported. However consolidated data is also presented.

We also offer turnkey solutions for hazardous waste management, in addition to pre-processing of hazardous waste, municipal waste management, rehabilitation of contaminated sites, wastewater treatment, recycle and provide a plethora of other services. We have partnered with leading organisations to mobilise our aim to 'better sustain the environment that sustains us.'

## Key business areas



Hazardous waste management



Municipal solid waste management



Plastic waste management



Bio-medical waste treatment facility



Waste to energy and co processing



E-waste management



Common effluent treatment plant



Design and consultancy services in environment

### Vision

To make BEIL & Its GROUP a world class Hazardous Waste Management Company which aims for a Clean, Green and Healthy Environment by providing reliable, economical, Waste Management solutions for treatment of Toxic / Non-Toxic Industrial, Municipal, Bio-Medical, Plastic and E-Waste to convert into reusable and minimise collected waste for disposal in a scientifically safe engineered way.

### Mission


To protect and preserve our natural resources and build a Sustainable future by implementing Innovative & Cost-effective solutions through advanced Technologies of Waste Management and creating a Green Environment.

### Values

- CUSTOMER'S DELIGHT
- INTEGRITY
- ENVIRONMENT FRIENDLY
- LEADERSHIP
- TECHNICAL EXCELLENCE



*We are continuously striving to set newer performance benchmarks pertaining to efficient and safe handling and management of liquid, solid and semi-solid hazardous waste.*

 Waste management performance highlights of FY 2022-23

ANKLESHWAR, DAHEJ

76,607 MT

Hazardous organic waste collected

18,026 MT

Hazardous waste incinerated

50 MT

Average amount of hazardous waste incinerated per day

ANKLESHWAR AND SHIVALIK

58,150 MT

Pre-processed and sent to cement industries

ANKLESHWAR, DAHEJ AND SHIVALIK

1,19,533 Nos.

Of drums decontaminated and recycled/reuse

KEIL

3,215 MT

Biomedical waste collected

1,257 MT

Biomedical waste Recycled/sold

1,601 MT

Biomedical waste incinerated

ANKLESHWAR, COIMBATORE

408 MT

Plastic waste processed and recycled Hazardous organic waste collected

ANKLESHWAR, DAHEJ, KEIL, SSWML

5,51,299 MT

Landfillable Hazardous waste collected

1,04,630 MT

Effluent evaporated in MEE

1,510 MT

The average amount of landfillable Hazardous waste collected and disposed per day

(ANK,KEIL,SHIVALIK)

448 MT

E-waste collected

AHMEDABAD, COIMBATORE

2,55,368 MT

MSW processed

33,470 MT

RDF Sold

18,190.6 MT

Compost sold

ETL, BADDI

7,836 ML

Effluent treated



## BEIL and its group companies

The BEIL and its group companies consists of BEIL Infrastructure Limited (Ankleshwar Unit, Dahej Unit, Ahmedabad Unit & Baddi unit), Enviro Technology Limited, BEIL Research and Consultancy Private Limited, Kerala Enviro Infrastructure Limited (KEIL), Shivalik Solid Waste Management Limited (SSWML), Coimbatore Integrated Waste Management Company Private Limited (CIWMCP), and Gharpure Engineering and Constructions Private Limited (GECPL). BEIL Ankleshwar, BEIL Dahej, SSWML, and KEIL Units are hazardous waste management facilities. The BEIL Ahmedabad Unit and CIWMCP are engaged in municipal solid waste management. ETL and BEIL Baddi Units are common effluent treatment plants. BEIL Infrastructure Ltd Ankleshwar is the head Office for all BEIL Group companies.



**BEIL Ankleshwar**



**BEIL Ahmedabad**



**BEIL Dahej**



**Baddi CETP**



**Shivalik Solid Waste Management Limited (SSWML)**



**Kerala Enviro Infrastructure Limited (KEIL)**



**Enviro Technology Limited (ETL)**



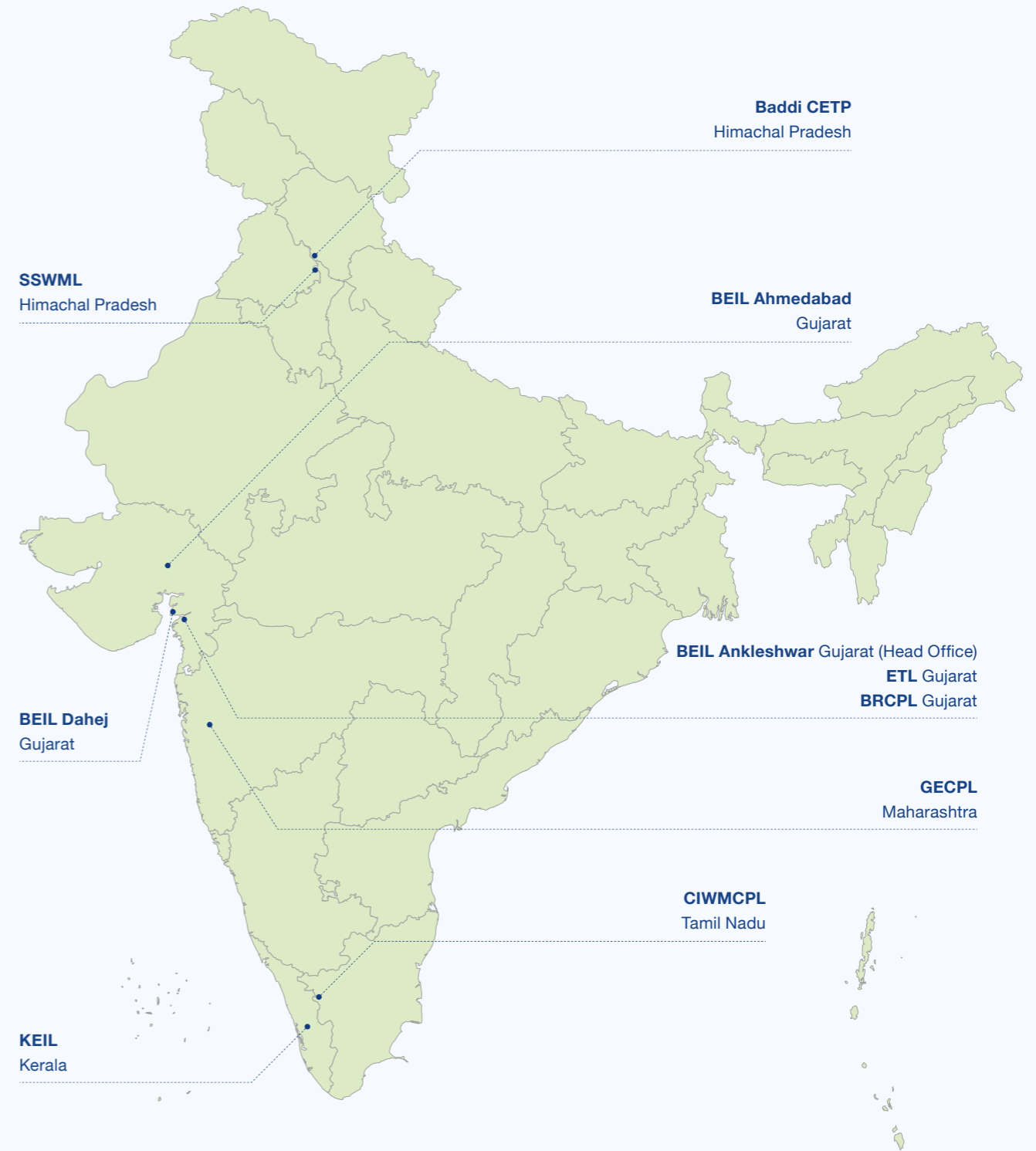
**Coimbatore Integrated Waste Management Company Private Limited (CIWMCP)**



**Gharpure Engineering and Constructions Private Limited (GECPL)**



**BEIL Research and Consultancy Private Limited (BRCPL)**



Note: Map not to scale. For representation only.





# BEIL Infrastructure Ltd.


## BEIL Ankleshwar

The operations in Ankleshwar began in 1998 with a secured landfill and have since added necessary components for the treatment and disposal of hazardous/industrial waste. Over the past 25 years, we've disposed of over 40 lakh MT of solid/hazardous waste in the landfill and incinerated more than 4 lakh MT of organic waste using our common incinerator, which includes a heat recovery system that provides steam to our Multiple Effect Evaporation (MEE) system.

### KEY ACTIVITIES

 Hazardous waste management

 E-waste management

 Plastic waste management



Incineration Plants At Ankleshwar

### WASTE PROCESSED (MT)

#### Landfill waste

FY 2022-23		<b>2,38,661</b>
FY 2021-22		2,63,020

#### Incineration waste

FY 2022-23		<b>14,954</b>
FY 2021-22		20,258

#### Drum - decontamination and disposal system

FY 2022-23		<b>151</b>
FY 2021-22		311

#### Plastic granules (Recyclable)

FY 2022-23		<b>280</b>
FY 2021-22		333

#### MEE (effluent evaporated)

FY 2022-23		<b>74,048</b>
FY 2021-22		71,686

#### Pre-processed and sent to cement industries

FY 2022-23		<b>53,769</b>
FY 2021-22		17,945

#### E- waste

FY 2022-23		<b>210</b>
FY 2021-22		317

### TOTAL WASTE TREATMENT CAPACITY

**50.98 lacs MT**

Secured landfill site (Phase I, II, III and IV)

**75 MT/M**

Plastic granules (recyclable)

**6.5 mn Kcal/Hour (60 MTD)**

First incinerator with heat recovery system

**1,08,000 Nos/Year**

Drum-decontamination and disposal system

**6.5 mn Kcal/Hour (60 MTD)**

Second incinerator with heat recovery system

**16,000 MTPA**

Waste mix liquid pre-processing facility

**15 MT/Hour**

MEE system (integrated with incinerator)

**10,000 MTPA**

Waste mix solid pre-processing facility

**700 MTPA**

E-waste collection, storage, transportation, dismantling, and recycling




Plastic Waste Processing Plant

## BEIL Ahmedabad

BEIL Infrastructure Limited, Ahmedabad is an integrated facility that was established to manage and process the Municipal Solid Waste (MSW) for Ahmedabad Municipal Corporation (AMC). This unit has a tie-up with AMC through a Public Private Partnership Mode (PPP) for a concession period of 25 years. The project was established in 2005 and the plant started operations in 2009 with a capacity of 250 MTPD.

### KEY ACTIVITIES

 MSW management- waste to energy



### WASTE PROCESSED (MT)

Landfill waste



### TOTAL WASTE TREATMENT CAPACITY

**250 MTD**  
Waste treatment capacity

### BOARD OF DIRECTORS

- |   |   |   |
|---|---|---|
| <p><b>1 Rajnikant Devidas Shroff</b><br/>Director</p> <p><b>2 Sandra Rajnikant Shroff</b><br/>Director</p> <p><b>3 Arun Chandrasen Ashar</b><br/>Director</p> <p><b>4 Ashok Amarlal Panjwani</b><br/>Director</p> | <p><b>5 Rashmikant Natwarlal Shukla</b><br/>Independent Director</p> <p><b>6 Vimalkumar Gopaldas Gandhi</b><br/>Independent Director</p> <p><b>7 Sachin Prakashbhai Parikh</b><br/>Independent Director</p> <p><b>8 Jigar Bharatbhai Dave</b><br/>Nominee Director of DIC</p> | <p><b>9 Jasubhai Sendhabhai Chaudhary</b><br/>Nominee Director of AIA</p> <p><b>10 Amitkumar Purushotambhai Dharva</b><br/>Nominee Director of IC</p> |
|---|---|---|

### COMMITTEES OF THE BOARD:

The committees at BEIL effectively oversee and promptly communicate the company's business operations and important Board decisions. Each committee, under the leadership of its respective head, mainly comprises Independent Directors and concentrates on specific areas of interest.

#### Audit Committee

Dr. Sachin Parikh	Chairman
Dr. Vimal Gandhi	Member
Mr. Arun C. Ashar	Member
Mr. Ashok A. Panjwani	Member
Mr. Jigar B. Dave	Member

#### Nomination and Remuneration Committee

Mr. Ashok A. Panjwani	Chairman
Mr. Arun C. Ashar	Member
Mr. Rashmikant N. Shukla	Member
Dr. Vimal Gandhi	Member

#### Corporate Social Responsibility (CSR) Committee

Mr. Ashok A. Panjwani	Chairman
Mr. Arun C. Ashar	Member
Dr. Sachin Parikh	Member
Dr. Vimal Gandhi	Member

#### Risk Assessment Committee

Dr. Sachin Parikh	Chairman
Dr. Vimal Gandhi	Member
Mr. Arun C. Ashar	Member
Mr. Ashok A. Panjwani	Member
Mr. Jigar B. Dave	Member

### ROLE OF THE HIGHEST GOVERNANCE BODY:

BEIL places great importance on sustainability, which is deeply ingrained in our values and day-to-day operations. In order to maintain a progressive mindset, our Board of Directors consistently stays updated on the most current ESG trends, frameworks, and economic, social, and environmental factors. By maintaining open lines of communication with the Board, we cultivate an atmosphere of continuous growth and actively implement sustainable strategies that align with our vision for a brighter future.

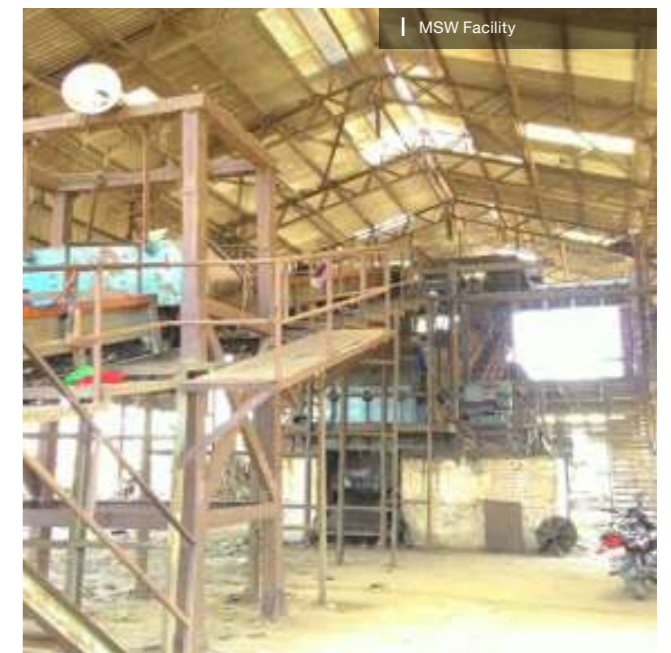
The Board of Directors, through the Environment Team, plays a critical role as the highest governing body in overseeing and advancing ESG initiatives.

### CONFLICTS OF INTEREST:

BEIL Code of Conduct emphasizes and advances the principles of discipline, good conduct, professionalism, loyalty, integrity and cohesiveness that are critical to the success and well-being of the BEIL Group. Code is part of the BEIL Group's overall corporate enhancement program. It reflects the increasing need for effective corporate governance compliance measures in the conduct of the BEIL group's business domestically and worldwide. This code is designed to mitigate and address conflicts of interest and is applicable to all Directors and employees across different work environments and functions when they are acting on behalf of the Company.

### BOARD PERFORMANCE EVALUATION:

In accordance with the Companies Act, 2013, the Independent Directors of the company conduct an annual evaluation of both non-independent directors and the board as a whole. This evaluation process is dependent on the proactive engagement of the Directors and encompasses significant aspects such as the Board and Committees' structure, meeting protocols, overall effectiveness, and the extent of Director attendance and participation in meetings.





## BEIL Dahej

The Dahej unit began operations in 2015 with a secured landfill, and added various facilities required for the treatment and disposal of hazardous/industrial waste, such as a stabilisation plant and a well-equipped laboratory. Over the last eight years, the Dahej unit has collected, treated, and disposed off more than 11 lakh MT of solid/hazardous waste in the landfill. Recently, a high-capacity state-of-the-art incineration plant was set up at the site.

### KEY ACTIVITIES



Hazardous waste management



MEE Plant

### WASTE PROCESSED (MT)

#### Landfill waste

FY 2022-23		2,27,520
FY 2021-22		2,47,660

#### Drum-decontamination

FY 2022-23		1,134
FY 2021-22		919

#### MEE wastewater

FY 2022-23		25,619
FY 2021-22		32,670

### TOTAL WASTE TREATMENT CAPACITY

**19 lacs MT**

Secured landfill site (TSDF)

**2,10,240 Nos/Year**

Drum-decontamination and disposal system

**200 KLD**

MEE plant

**12 mn Kcal/Hour (100 MTD)**

Incineration plant with heat recovery system

## BEIL Baddi CETP

With a capacity of 25 MLD, our Common effluent treatment plant (CETP) is operational in the village of Kenduwal, Malpur, Baddi, Himachal Pradesh. The plant receives effluent in five different categories in Baddi, Barotiwala, Nallagarh (BBN) area. We have designed and set up the plant for Baddi Infrastructure Ltd. BEIL Infrastructure is managing the plant's operations and maintenance under the agreement with Baddi Infrastructure Ltd.

### KEY ACTIVITIES



Common effluent treatment



CETP at Baddi

### WASTE PROCESSED (ML)

#### Total effluent treated

FY 2022-23		7,315
FY 2021-22		7,610

### TOTAL WASTE TREATMENT CAPACITY

**25 MLD**

Wastewater treatment capacity




Image caption to come




# Shivalik Solid Waste Management Limited (SSWML)

Since 2008, SSWML has been operating a common Hazardous Waste Treatment, Storage, and Disposal Facility (HWTSDF) in Himachal Pradesh. The facility includes secure landfill with a capacity of 10 lakh MT, as well as ancillary units, such as an analytical laboratory, storage shed, waste processing unit, MEE, and contaminated container washing facility. During the past 15 years, SSWML has collected, treated, and disposed off over 2.7 lakh MT of solid/hazardous waste in its landfill, while pre-processing over 24,000 MT of organic hazardous waste and sending it for co-processing in cement kilns. Pain sludge is also recovered as per suggestion by statutory body.

## KEY ACTIVITIES

 Hazardous waste management

 E-waste management



Aerial View of Shivalik Site

## WASTE PROCESSED (MT)

SSWML Unit-I		Contaminated Drums received & processed after cleaning	
FY 2022-23	41,046	FY 2022-23	339
FY 2021-22	34,619	FY 2021-22	289
Landfill waste		Batteries Received and sent for recycling	
FY 2022-23	33,603	FY 2022-23	13
FY 2021-22	26,270	FY 2021-22	35
Pre-processed waste sent for co-processing in cement plant		Non-hazardous waste collected	
FY 2022-23	4,444	FY 2022-23	550
FY 2021-22	4,705	FY 2021-22	599
Waste Sent for Recycling (Paint Sludge, Solvent & Others)		MEE	
FY 2022-23	199	FY 2022-23	1,655
FY 2021-22	306	FY 2021-22	2,207
Used Oil/Waste Oil received & sent for recycling		SSWML Unit-II E-waste	
FY 2022-23	242	FY 2022-23	171
FY 2021-22	208	FY 2021-22	149

## TOTAL WASTE TREATMENT CAPACITY

**10 lacs MT**  
Secured landfill site (TSDF)

**20 KL/Day**  
MEE plant

**600 KL/Year**  
Collection/ transportation of used oil/waste oil

**600 MT/Year**  
Collection/ transportation of used batteries

**48,000 Nos/Year**  
De-contaminated and de-toxification of contaminated containers

**9,500 MT/Year**  
Pre-processing of hazardous wastes for co-processing in cement kilns

**5,200 MT/Year**  
Collection, storage, dismantling and recycling of e-waste

## BOARD OF DIRECTORS

- |   |  |  |
|---|--|--|
| 1 Arun Chandrasen Ashar<br>Director                         | 6 Rajender Guleria<br>Director                           | 10 Rajiv Kumar Sharma<br>Independent Director          |
| 2 Ashok Amarlal Panjwani<br>Director                        | 7 Sunder Ramaswamy<br>Balasubramanian<br>Director        | 11 Virender Kumar Rattan<br>Independent Director       |
| 3 Poovillom Narayanan<br>Parameswaran Moothathu<br>Director | 8 Indermohanjit Singh Sidhu<br>Nominee Director of BBNIA | 12 Yashwant Singh Guleria<br>Nominee Director of BBNIA |
| 4 Mukul Bhupendra Trivedi<br>Director                       | 9 Bhupendrakumar Dalwadi<br>Dahyabhai<br>Director        | 13 .Ashok Kumar Verma<br>Govt. Nominee Director        |
| 5 Atma Ram Singh<br>Director                                |  |  |



## Kerala Enviro Infrastructure Limited (KEIL)

Kerala State Industrial Development Corporation (KSIDC) as nodal agency for setting up a Common Hazardous Waste Treatment, Storage and Disposal Facility (CHWTSDF) for management of solid hazardous waste in the State of Kerala. KSIDC established KEIL as a Special Purpose Vehicle with participation of 85 industries in the State. M/s United Phosphorus Ltd (UPL) was appointed as Developers for the project. M/s UPL and group companies has the majority equity in the Company. The landfill was setup in 2007 and so far 6.10 lakh MT hazardous waste have been disposed off.

At KEIL site, BMW management facility commissioned in FY 2021-22. It offers a secure and controlled method for disposing of biomedical waste, ensuring that potentially hazardous materials, including pathogens and infectious agents, are destroyed, preventing the spread of diseases. KEIL is also collecting and treating the BMW generated at households. During FY 2022-23, total domestic BMW treated is 93 MT.

### KEY ACTIVITIES



Hazardous waste management



Bio-medical waste treatment



E-waste management



KEIL Office Area

### WASTE PROCESSED (MT)

#### Hazardous waste



#### E-waste



#### Biomedical waste



### TOTAL WASTE TREATMENT CAPACITY

**27.50** lacs MT

TSDF disposal capacity

**16** MT/day

Bio-medical waste treatment capacity

**1,460** MT/Annum

E-waste processing capacity

### BOARD OF DIRECTORS

- 1 **Arun Chandrasen Ashar**  
Director
- 2 **Ashok Amaral Panjwani**  
Director
- 3 **Mukul Bhupendra Trivedi**  
Director
- 4 **Sunder Ramaswamy Balasubramanian**  
Director

- 5 **Poovillom Narayanan Parameswaran Moothathu**  
Director
- 6 **Ashok Kumar Sharma**  
Director
- 7 **Gopalakrishnapillai Madhu**  
Independent Director
- 8 **Kunjukunju George**  
Independent Director

- 9 **Nithesh Bhaskaran**  
Nominee Director of KSIDC
- 10 **Mohanchandran Madampath**  
Nominee Director of FACT



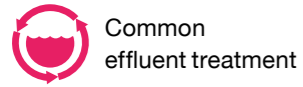
KEIL Landfill



# Enviro Technology Limited (ETL)

ETL is an advanced CETP with primary, secondary, tertiary, and MAP treatment processes. This plant has been in operation since 1997, and it serves approximately above 250 small-scale industries located within the GIDC Industrial Estate of Ankleshwar. The CETP receives effluent from its member industries and treats it both chemically and biologically using primary, secondary, and tertiary units. This treatment process helps in ensuring that the effluent discharged into the FETP of Narmada Clean Tech meets the effluent standards. ETL upgraded the treatment system under the guidance of IIT, Kanpur.

## KEY ACTIVITIES



### WASTE PROCESSED (ML)

Total wastewater treated



### TOTAL WASTE TREATMENT CAPACITY

**2.2 MLD**

Wastewater treatment capacity

## BOARD OF DIRECTORS


- |   |   |   |
|---|---|---|
| 1 <b>Rajnikant Devidas Shroff</b><br>Director | 5 <b>Prabodhkumar Bhailalbhai Patel</b><br>Director         | 9 <b>Vipulbhai Vallabhbhai Gajera</b><br>Director         |
| 2 <b>Sandra Rajnikant Shroff</b><br>Director  | 6 <b>Rashmikant Natwarlal Shukla</b><br>Director            | 10 <b>Jigar Bharatbhai Dave</b><br>Nominee Director - DIC |
| 3 <b>Arun Chandrasen Ashar</b><br>Director    | 7 <b>Vimalkumar Gopaldas Gandhi</b><br>Independent Director | 11 <b>Jasubhai Sendhabhai Chaudhary</b><br>Director       |
| 4 <b>Ashok Amarlal Panjwani</b><br>Director   | 8 <b>Sachin Prakashbhai Parikh</b><br>Independent Director  |   |



# Coimbatore Integrated Waste Management Company Private Limited (CIWMCPL)

Coimbatore Integrated Waste Management Company Private Ltd. or CIWMCPL is a Special Purpose Vehicle (SPV) – formed by BEIL in 2007-08, under DBOOT basis (PPP) for 20 years’ concession period for Coimbatore City Municipal Corporation. CIWMCPL is managing the Municipal Solid Waste for Coimbatore City Municipal Corporation, producing good quality of city compost and RDF by following the Unique Composting Technique of Windrow Composting.

## KEY ACTIVITIES

 Municipal solid waste management



MSW Facility

## WASTE PROCESSED (MT)

Total waste processed



## TOTAL WASTE TREATMENT CAPACITY

**600 TPD**

Waste treatment capacity

## BOARD OF DIRECTORS

1 Bipin Nandlal Jani  
Director

2 Kamleshkumar Parikh  
Director

3 Samir Bhupatrai Mehta  
Director

4 Narayananunnithan Kunjukrishna Pillai  
Director

# Gharpure Engineering and Constructions Private Limited (GECPL)

GECPL was incorporated on March 29, 2000. GECPL is basically an EPC contractor engaged in engineering, procurement, designing, and construction and consultancy services for water treatment and distribution systems. GECPL also undertakes secondary activities and pursues projects on its own and through its group companies.

## KEY ACTIVITIES


 Sewage treatment and wastewater treatment + EPC projects



Image caption to come

## BOARD OF DIRECTORS

1 Ashok Amarlal Panjwani  
Director

2 Prasad Paranjape  
Independent Director

3 Pradyumankumar Joshi  
Independent Director

4 Kamleshkumar Parikh  
Director

5 Bhupendrakumar Dalwadi  
Director

6 Manoj Kumar Patel  
Director

**O&M of STP's, WTP's & CETP's  
958.5 MLD**



**665.5 MLD**

STPs 12 nos. with total capacity 665.5 MLD, ranging individual capacities 8 MLD to 255 MLD.

**277 MLD**

WTPs 2 nos with total capacity-277.00 MLD, ranging individual capacities 27 MLD to 250 MLD.

**16 MLD**

Barhi CETP-16.00 MLD

**STP commissioned and O&M started  
40 MLD**



**2 WTPs**

Started two STPs with cumulative capacities of 40 MLD; with individual capacities 18 MLD and 22 MLD.

Made satisfactory progress across Various projects under execution.

## BEIL Research and Consultancy Private Limited (BRCPL)

BRCPL is a wholly owned subsidiary of BEIL Infrastructure Ltd. (BEIL). We are a leading company in India for project management consultancy. Our core experience team consists of engineers in various fields, namely, environmental, chemical, mechanical, electrical and instrumentation with rich and diverse experience in environmental and infrastructural projects. We are pleased to inform you that we have successfully carried out projects in India and abroad.

### KEY ACTIVITIES

 Design and construction of Environmental projects



### BOARD OF DIRECTORS

Ashok Amarlal Panjwani  
Director

Mukul Bhupendra Trivedi  
Director

Bhupendrakumar Dalwadi  
Director

Ashok Kumar Sharma  
Director

#### CONSULTANCY SERVICE PROVIDED FOR VARIOUS PROJECTS FOR EXECUTION OF LANDFILL EXPANSION, INCINERATOR, MSW, SOLAR PROJECTS, BIO MEDICAL ETC.

- BEIL Ankleshwar
- BEIL Dahej
- BEIL Jhagadia
- ETL
- KEIL
- BEIL Coimbatore
- SSWML

#### CONSULTANCY SERVICE PROVIDED OTHER COMPANIES

- Consultancy Services for the Pre-Feasibility Study for laying of Treated Effluent (TE) discharge pipeline from Grasim, Vilayat to Dahej deep sea.
- Consultancy service for preparation of DPR for Pre-Treatment/ New Clariflocculator System for Deep Bore well Water Treatment system of Kerala Minerals and Metals Ltd, Kollam, Kerala.
- Consultancy Services for Process Detailing of Para-Amino Phenol (PAP) to Paracetamol of Expede- Tech Research & Development Pvt. Ltd



# CREATING EXCELLENCE IN SUSTAINABILITY



Dear stakeholders,

It is with great pleasure that I present to you our inaugural Sustainability Report, which embodies the spirit of progress and our unwavering dedication to sustainability across every facet of our business.

In the face of unprecedented challenges, we have emerged stronger than ever, demonstrating our resilience and adaptability in the wake of the global pandemic. Throughout this period, we have remained steadfast in our commitment to ingraining sustainability into the very core of our operations, and the results have been truly remarkable. Our sustainable practices have not only fuelled our growth but also propelled us towards exceptional sustainability performance.

Over the past year, we have demonstrated our ability to responsibly manage and transform waste. We have recycled, co-processed, treated, and disposed off a staggering 5,62,386 metric tonnes of hazardous waste across all our sites.

Over the past year, we have demonstrated our ability to responsibly manage and transform waste. We have recycled, co-processed, treated, and disposed off a staggering 5,62,386 metric tonnes of hazardous waste across all our sites. Additionally, we have efficiently recycled, recovered, treated, and disposed of 2,55,369 metric tonnes of municipal solid waste (MSW), making a significant impact on waste reduction. Furthermore, our state-of-the-art Common Effluent Treatment Plants (CETP's) have successfully treated, recycled, and disposed of an impressive 7,836 million litres of wastewater. This achievement has not only safeguarded the environment but has also paved the way for a sustainable future.

Our dedication to renewable energy is evident through the installation of solar panels above the enclosed areas of the Dahej landfill and the Shivalik TSDF site, with a total generation capacity of 450 kilowatt-hours (KWH). Moreover, we have harnessed the energy generated from the incineration of hazardous waste to recover 18,285 metric tonnes of steam. This innovative approach has allowed us to efficiently evaporate wastewater while minimising our environmental impact.

## 2,55,369 MT

MSW recycled, recovered, treated, and disposed

We continue to focus on reducing energy consumption, minimising our waste footprint per tonne in landfills, mitigating emissions from stacks, improving ambient air quality, and decreasing water consumption.

The BEIL group remains resolute in our pursuit of sustainability excellence. We continue to focus on reducing energy consumption, minimising our waste footprint per tonne in landfills, mitigating emissions from stacks, improving ambient air quality, and decreasing water consumption. As part of our ongoing efforts, we have embarked on the modernisation initiative of the CETP at Ankleshwar, leading to enhanced performance and setting new industry benchmarks.

In our unwavering commitment to serving our member industries, we are expanding our facilities at the Jitali site and establishing a brand new TSDF site at Jhagadia. Through these strategic initiatives, we aim to not only meet but exceed the expectations of our valued customers. We are also maximising the utilisation of available land by implementing innovative design improvements, allowing us to significantly increase landfill capacity while ensuring compliance with regulatory requirements. Furthermore, our dedication to environmental conservation is showcased through our massive plantation initiatives, which have graced numerous locations with vibrant greenery, fostering a healthier ecosystem for generations to come.

To elevate our capabilities even further, we have invested in a cutting-edge high-capacity incineration system with heat recovery at the Dahej facility. This innovative system not only enhances our waste management capabilities but also harnesses the power of heat recovery, exemplifying our commitment to sustainable and efficient practices.

As we reflect on our accomplishments, we pledge to continue our commitment to providing exceptional environmental services to our customers, guided by our core principles of sustainability and responsibility. Together, let us forge a path towards a sustainable future, where economic prosperity harmonises with environmental stewardship.

Best regards,

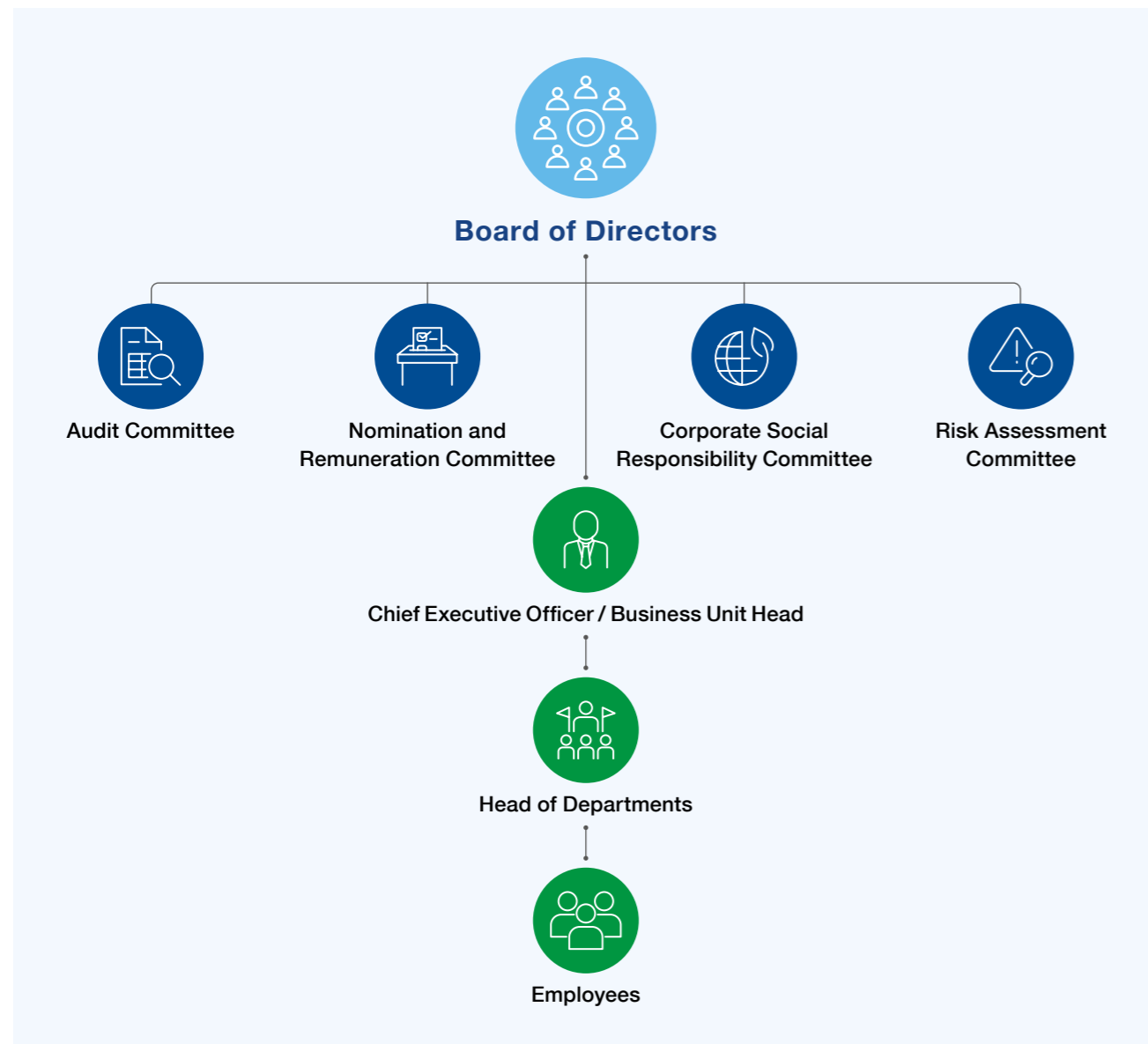
**ASHOK PANJWANI**

Director

# STRENGTHENING TRUST AND TRANSPARENCY

Responsible governance is a critical aspect of our commitment to ethical and sustainable business practices. We prioritise the implementation of transparent and accountable decision-making processes that ensure the protection of the interests of our stakeholders, including our employees, customers, and partners. By adopting responsible governance practices, we aim to build trust, foster long-term relationships, and create positive social and environmental impact in the communities we serve.

## Governance structure



### Ethics and responsibility

At our company, we have always prioritised maintaining strong corporate governance and adhering to responsible business ethics. We have a robust governance framework and Code of Conduct in place that enables us to create sustainable long-term value for all stakeholders. Our commitment to these principles is unwavering, and we are dedicated to upholding them in all aspects of our operations.

### Code of Conduct

Our Code of Conduct promotes discipline, professionalism, integrity, and loyalty, which are essential for the success of our company. It is a part of our corporate enhancement program and reflects the need for effective corporate governance measures in our domestic and global operations. Compliance and support for this Code are crucial to our continued success, and any failure to comply may result in disciplinary action.

### Whistle-Blower Policy

We are committed to creating a work environment that encourages open discussions of business practices and complying with laws that protect employees against discrimination or retaliation for reporting illegal acts. The company has established procedures for reporting any misconduct, which can be submitted openly, confidentially, or anonymously. The purpose of this policy is to make it easy for anyone (such as employees, business partners, customers, or the general public) to report any improper conduct defined in the Code of Conduct, using a whistle-blowing form or other written communication methods like email or letters.

### Anti-bribery Corruption Policy

At BEIL, we are dedicated to preventing, detecting, and deterring fraud, bribery, and other corrupt business practices. Our goal is to conduct all our activities with integrity, honesty, and the highest ethical standards possible, regardless of the scale or geographic range of our operations. To protect our reputation, we have implemented this global policy to address the risk of bribery and corruption. If any law conflicts with the policies outlined in our ABC Policy, we will comply with the law.

### Business Partner Policy

Being an important element of BEIL Group Integrity Compliance Program and the internal control system, this policy outlines the requirements for establishing contractual relationships with our current and future business partners on a global scale. We acknowledge that we can be held accountable for any corrupt acts committed by third parties or individuals/entities with whom we have a business relationship. To mitigate this risk, we have developed a policy to evaluate and manage potential corruption risks associated with these relationships. Our goal is to ensure that we only engage with business partners who meet our ethical standards, and this policy provides guidance for documenting the relationship.

### Risk Assessment Policy

At BEIL, we believe that risk assessment is the cornerstone of our Integrity Compliance Program. By proactively evaluating the risks associated with our business operations, we can identify and address potential vulnerabilities that may enable corruption. This framework helps us to identify risk factors and implement measures to mitigate the risks of fraud, corruption, or other misconduct that could harm our company's revenue, culture, and reputation.



# DRIVING POSITIVE IMPACT

At BEIL, we believe that sustainability goes beyond our operational practices. As a Waste Management Company, we have the advantage of using sustainability as the foundation for growth. By doing so, we can expedite the shift towards a low-carbon economy, promote circularity, and simultaneously add value to our business.

We are constantly on the lookout for prospects and making investments in initiatives that offer considerable environmental and economic advantages. At our company, sustainability initiatives with defined objectives are not a recent addition. They have always been a vital part of our business model and growth plans. Our approach towards sustainability is based on our ESG framework, which is comprised of three primary focus areas.



## Environment

Our foremost priority is to operate our business in a responsible manner that has the least possible impact on the environment.



## Social

Our objective is to create a diverse and fulfilling workplace that offers our employees opportunities for personal and professional growth. We collaborate with various non-governmental organisations and groups to improve the quality of life for people through our charitable contributions.



## Governance

We prioritise responsible governance to ensure ethical and sustainable practices that protect our stakeholders' interests and create positive impact.









# ENCOURAGING OPEN COMMUNICATION

We believe in engaging in a meaningful dialogue with our stakeholders to understand their concerns and needs. Stakeholder engagement is at the core of what we do, generating awareness around significant issues and steering the implementation of initiatives for positive transformation. Effective stakeholder communication is critical to our long-term viability and for upholding the principles of ethical business.

## Stakeholder engagement helps in

- Impacts of our business activities
- Risks and opportunities for our stakeholders and operation
- Managing the impacts in an effective manner
- Mapping and analysing the value created through proper implementation and management



Stakeholders	Significance	Focus	Mode of engagement
 <b>Shareholders</b>	We communicate with our shareholders to provide them with an understanding of its strategy, performance, and governance practices.	<ul style="list-style-type: none"> <li>• Compliance</li> <li>• Financial performance</li> </ul>	<ul style="list-style-type: none"> <li>• Board meetings,</li> <li>• Visits</li> <li>• Annual General Meeting (AGM)</li> </ul>
 <b>Employees</b>	We engage with our employees to understand their needs and expectations, foster the development of their skills, enhance working conditions, and build a culture that supports enquiry, innovation and high productivity.	<ul style="list-style-type: none"> <li>• Safe work place</li> <li>• Scope for career development</li> <li>• Welfare measures</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings</li> <li>• Shop floor discussions</li> <li>• Cultural and social activities</li> <li>• Goal setting and achieving targets</li> </ul>
 <b>Suppliers</b>	We interact with our suppliers to ensuring timely delivery of materials and quality of products, making them essential to continuity of our operations	<ul style="list-style-type: none"> <li>• Timely supply of materials</li> <li>• Meeting quality requirement</li> </ul>	<ul style="list-style-type: none"> <li>• Discussions during various stages of procurement</li> <li>• Site visits</li> </ul>
 <b>Service providers</b>	We rely on a number of service providers to support our operations and deliver high-quality products and services to our customers.	<ul style="list-style-type: none"> <li>• Regular supply of utilities</li> <li>• Un-interrupted power supply</li> <li>• Timely provision of relevant services</li> </ul>	<ul style="list-style-type: none"> <li>• Interactions</li> <li>• Site visits</li> </ul>
 <b>Consultants</b>	Having access to the right expertise and guidance is essential to achieve success in any field, and we are proud to have formed partnerships with various consultancy organisations that provide us with the necessary guidance and support to excel in our operations.	<ul style="list-style-type: none"> <li>• Improvements</li> <li>• Compliance to regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings</li> <li>• Site visit</li> <li>• Audit</li> <li>• Trainings</li> </ul>
 <b>Regulatory bodies</b>	We keep an active and positive communication channel open with policymakers and regulators to ensure that our perspectives are effectively communicated regarding matters that impact the industry.	<ul style="list-style-type: none"> <li>• Compliance to regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings</li> <li>• Attending seminars</li> <li>• Visits</li> </ul>



# PRIORITISING ISSUES THAT MATTER

As a responsible company, we understand the importance of identifying and addressing key issues that are relevant to our operations and stakeholders. During FY 2022-23, we conducted a peer-reviewed materiality assessment across ESG parameters to gain valuable insights on ESG-related issues.

This assessment process helped us identify topics that are strategically important to our Company and stakeholders, enabling us to make informed decisions across our value chain. The insights from this assessment have been compiled and organised to inform the content of this Report, highlighting our commitment to responsible and sustainable business practices. Materiality assessment was initiated in 2022-2023. Stakeholders feedback received in 2023 and the materiality assessment will be included in the next sustainability report.

## Assessment process



## ENVIRONMENT

### Environmental compliance

We prioritise the adherence to regulations across all our sites, ensuring a robust compliance framework. Each permission granted by the relevant authorities entails multiple conditions that we meticulously meet.

### Air quality, soil and ground water protection

We recognise our responsibility to protect the surrounding environment of our sites. It is our duty to implement a range of preventive measures to avoid contamination and minimise any potential negative impacts on the ecosystems and communities in which we operate.

### Circular economy

We place a strong focus on material recovery and recycling as part of our commitment to driving sustainability and minimising environmental impact.

### Water and wastewater management

Conserving water resources is a paramount responsibility that we prioritise in our operations. We are committed to reducing specific water consumption, implementing effective water treatment and recovery systems, and responsibly disposing of wastewater.

### Environment and energy management

We recognise that waste management and wastewater treatment processes consume significant amounts of energy. To reduce our energy consumption and minimise our environmental footprint, we implement various strategies, including waste heat recovery, energy management practices, and the utilisation of renewable energy sources.

## SOCIAL

### Occupational Health and Safety

As a waste water/waste management company, safeguarding the health and well-being of our employees is of paramount importance to us. We prioritise creating a safe workplace environment and adhering to rigorous safety practices.

### Corporate citizenship and philanthropy

We firmly believe in giving back to society and supporting those in need. We actively engage in projects and initiatives aimed at uplifting communities and making a positive social impact.

### Human rights, labour practices and equal opportunity

We are dedicated to providing equal opportunities to all employees and ensuring compliance with relevant laws and regulations related to employment.

### Human capital development

We recognise the importance of developing expertise in each area of our waste management activities. We are committed to nurturing a pool of trained and knowledgeable professionals who can effectively handle various aspects related to waste management.

### Customer relationship management

At our sites, we have a large customer base consisting of industrial members in the Treatment, Storage, and Disposal Facilities (TSDFs) and Common Effluent Treatment Plants (CETPs). For the two Municipal Solid Waste (MSW) sites, our customers are the municipal corporations. We recognise the importance of maintaining strong customer relationships and actively interact with our customers to ensure the smooth functioning of our facilities.

## GOVERNANCE

### Corporate governance

We operate with a clear mission and vision, guided by a comprehensive set of policies and guidelines. Under the leadership of our Board of Directors, each unit is led by a Chief Executive Officer (CEO) responsible for overseeing and managing the activities within their respective units.

### Business ethics and tax transparency

We adhere to a transparent system of management and ensure equal opportunities for all employees. We follow proper procedures for procurement, including quantitative bids/quotes, and maintain a robust accounting system. We fulfill our tax obligations regularly, emphasising business ethics and tax transparency in our policies.

### Innovation management

We recognise that continuous improvement is essential for staying competitive and driving success in any business activity. We are committed to seeking

new ideas, exploring emerging technologies, and fostering collaborations with academic institutions to drive innovation and advance our processes.

### Risk and crisis management

We take proactive measures to identify potential risks, implement corrective and preventive actions, and ensure the organisation's ability to overcome crises through concerted efforts. To provide comprehensive coverage, we have implemented various insurance policies, including a contingency policy, to mitigate risks effectively.

### Information / Cyber security

We recognise the criticality of data and information and the need to protect them from cyber-attacks and unauthorised access. We take extensive measures to ensure the security and confidentiality of our documents, exercising due care in safeguarding our valuable assets.

# TOWARDS ENVIRONMENTAL STEWARDSHIP

As a provider of waste management services, responsible environmental performance is a cardinal principle for our operations. In keeping with this, it is crucial for us to be responsible and conscious about the design, development, operations and management, and use of all of our facilities, including our fleet of vehicles and equipment. We are committed to collaborating with our clients and vendors to achieve environmental best practices, while utilising waste as the ultimate resource for the future.

## Reduction in landfill footprint

- Hazardous waste landfill requires considerable amount of land. As land is scarce BEIL group have taken efforts to reduce landfill footprint.
- At BEIL Ankleshwar, in phase I the waste disposal capacity per sq. meter area was 16.28 MT/sq. meter. After expansion and implementation of phase IV the disposal capacity is 29.34 MT/sq. meter.
- At BEIL Dahej, the waste disposal capacity per sq. meter area was 14.84 MT/sq. meter which is increased to 28.69 MT/sq. meter.
- At SSWML, the waste disposal capacity per sq. meter area was 13.89 MT/sq. meter which is increased to 25.97 MT/sq. meter.
- At KEIL, the waste disposal capacity per sq. meter area was 12.35 MT/sq. meter which is increased to 21.92 MT/sq. meter.

## LANDFILL FOOTPRINT (MT/sq. meter)

Facility	After expansion	Original
<b>BEIL Ankleshwar</b>	<b>29.34</b>	<b>16.28</b>
<b>BEIL Dahej</b>	<b>28.69</b>	<b>14.84</b>
<b>SSWML</b>	<b>25.97</b>	<b>13.89</b>
<b>KEIL</b>	<b>21.92</b>	<b>12.35</b>

## Environment and energy management

Recent developments across the world have served as a reminder of the imminent threat that climate change poses to our financial, social, and economic systems. To address this issue, governments, businesses, and the communities must work collaboratively. As the world becomes increasingly focused on reducing emissions and transitioning to clean energy sources, companies must adapt their practices and operations to minimise their environmental impact. As one of the leading waste treatment companies in India, BEIL acknowledges its responsibilities to provide resilient services, while mitigating the impacts of climate change.

## Our GHG emission profile (Tonnes CO<sub>2</sub>e)\*

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
BEIL Ankleshwar	Scope 1	34,506.5	37,521.6	26,994.6
	Scope 2	5,055.6	5,776.1	5,250.8
	Scope 3	1,784.6	2,013.6	2,189.4
	<b>Total</b>	<b>41,346.721</b>	<b>45,311.352</b>	<b>34,434.863</b>
BEIL Dahej	Scope 1	8,309.1	11,241.9	17,904.3
	Scope 2	1,987.3	2,211.9	3,342.6
	Scope 3	774.8	1,025.5	991.4
	<b>Total</b>	<b>11,071.2</b>	<b>14,479.3</b>	<b>22,238.4</b>
SSWML	Scope 1	381.0	539.6	475.1
	Scope 2	20.5	34.4	15.7
	Scope 3	219.1	265.1	297.4
	<b>Total</b>	<b>620.7</b>	<b>829.1</b>	<b>788.1</b>
KEIL	Scope 1	734.2	880.1	1,000.2
	Scope 2	222.9	481.6	646.3
	Scope 3	858.1	859.1	1,122.7
	<b>Total</b>	<b>1,815.2</b>	<b>2,220.8</b>	<b>2,769.2</b>
Baddi	Scope 1	47.4	32.8	77.5
	Scope 2	711.0	886.9	978.6
	Scope 3	636.3	652.5	695.7
	<b>Total</b>	<b>1,394.7</b>	<b>1,572.3</b>	<b>1,751.8</b>
ETL	Scope 1	202.5	211.6	207.3
	Scope 2	2,123.1	2,038.1	2,248.0
	Scope 3	498.1	598.2	609.5
	<b>Total</b>	<b>2,823.8</b>	<b>2,847.9</b>	<b>3,064.8</b>
CIWMCP	Scope 1	1,119.3	1,278.9	1,441.2
	Scope 2	376.9	453.5	498.3
	Scope 3	244.2	394.3	956.7
	<b>Total</b>	<b>1,740.4</b>	<b>2,126.6</b>	<b>2,896.2</b>
BEIL Ahmedabad	Scope 1	-	-	-
	Scope 2	122.9	114.3	139.7
	Scope 3	-	-	-
	<b>Total</b>	<b>122.9</b>	<b>114.3</b>	<b>139.7</b>

The major increase is due to new additions of incineration system at Dahej and BMW system at KEIL.

\* For GHG Emission calculation, we have used US EPA emission Factor data base and CEA, India data base. Methodology adapted is in-line with the GHG Protocol.

Sources of GHG Emission considered are as under

Scope -1 Stationery Combustion of fuel from stacks of DG sets, Boiler, etc. ; Mobile combustion of fuel from vehicles owned by company & non road vehicles within plant premises.

Scope-2 Emission due use of purchased electricity

Scope-3 Mostly emission from upstream & downstream transportation, Employee commute & business travel.

Exclusion-

1. Emission due to use of Refrigerants and Fire Extinguisher ; On-site composting and fugitive process emissions are not included under scope-1 for this reporting period
2. Emission from hazardous waste landfills, as only inorganic waste is disposed of. Hence there is no chance for GHG emissions. Moreover, we are checking the landfill vents and monitoring results show negligible presence of VOCs.
3. Emission from wastewater discharge outside are not included for this reporting period.



ENVIRONMENTAL PERFORMANCE

TOTAL GHG EMISSION FROM EACH FACILITY (Tonnes CO<sub>2</sub>e)

BEIL Ankleshwar		Baddi CETP	
FY 2022-23	36,224.3	FY 2022-23	2,085.2
FY 2021-22	47,279.8	FY 2021-22	1,874.6
FY 2020-21	43,069.6	FY 2020-21	1,637.0
BEIL Dahej		ETL	
FY 2022-23	23,377.5	FY 2022-23	3,830.9
FY 2021-22	15,233.1	FY 2021-22	3,542.4
FY 2020-21	11,748.5	FY 2020-21	3,547.3
SSWML		CIWMCPL	
FY 2022-23	793.5	FY 2022-23	3,066.0
FY 2021-22	837.4	FY 2021-22	2,281.1
FY 2020-21	627.7	FY 2020-21	1,868.9
KEIL		BEIL Ahmedabad	
FY 2022-23	2,989.4	FY 2022-23	195.1
FY 2021-22	2,385.0	FY 2021-22	159.6
FY 2020-21	1,891.2	FY 2020-21	171.8



By adopting and implementing a range of technologies and best practices that lessen environmental impacts, increase operational efficiencies, and generate cost savings, we explore solutions to improve energy efficiency in our facilities.

Variation with baseline data (2020-21)

Facility	FY 2021-22	FY 2022-23
BEIL-Ankleshwar	-3	-28
BEIL-Dahej	8	81
SSWML	-1	-20
KEIL	3	21
BADDI CETP	-17	-4
ETL	-16	0
CIWMCPL	9	31
BEIL-Ahmedabad	0	33

Note: Negative Value denotes % decrease  
Positive Value denotes % increase

Variation of GHG Intensity wrt 2020-21



**Electricity consumption within the organisation (KWH)**

The overall electricity consumption in the BEIL group have increased from 2,05,58,374 KWH in FY 2020-21 to 2,58,87,147 KWH in FY 2022-23. The major increase is due to new additions of incineration system at Dahej and BMW system at KEIL.

**ELECTRICITY CONSUMPTION WITHIN THE ORGANISATION (KWH)**

FY 2022-23		<b>2,58,87,147</b>
FY 2021-22		<b>2,36,71,643</b>
FY 2020-21		<b>2,05,58,374</b>

**Unit-wise Electricity consumption**

Facility	Indicator	Units	FY 2020-21	FY 2021-22	FY 2022-23
BEIL Ankleshwar	Total Electricity Consumption within the organisation	kWh	74,07,704	83,04,808	75,17,696
	Electricity Intensity= Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	22	22	20
BEIL Dahej	Total Electricity Consumption within the organisation	kWh	27,94,900	31,27,273	47,94,253
	Electricity Intensity= Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	12	11	19
SSWML	Total Electricity Consumption within the organisation	kWh	1,97,566	2,37,106	2,08,429
	Electricity Intensity = Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	8	7	5
KEIL	Total Electricity Consumption within the organisation	kWh	23,62,597	33,90,200	41,11,977
	Electricity Intensity= Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	8	6	7
Baddi CETP	Total Electricity Consumption within the organisation	kWh	66,21,298	82,14,694	91,36,425
	Electricity Intensity= Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	1	1	1

Facility	Indicator	Units	FY 2020-21	FY 2021-22	FY 2022-23
ETL	Total Electricity Consumption within the organisation	kWh	29,65,284	28,46,432	31,39,715
	Electricity Intensity= Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	6	5	5
CIWMCPL	Total Electricity Consumption within the organisation	kWh	5,26,469	6,33,306	6,95,938
	Electricity Intensity= Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	3	4	4
BEIL Ahmedabad	Total Electricity Consumption within the organisation	kWh	1,71,750	1,59,640	1,95,100
	Electricity Intensity= Total Electricity Consumption within the organisation/ MT Waste treated	kWh/MT	2	3	3

**Total electricity consumption at each facility (kWh)**

**BEIL Ankleshwar**

FY 2022-23		<b>75,17,696</b>
FY 2021-22		<b>83,04,808</b>
FY 2020-21		<b>74,07,704</b>

**BEIL Dahej**

FY 2022-23		<b>47,94,253</b>
FY 2021-22		<b>31,27,273</b>
FY 2020-21		<b>27,94,900</b>

**SSWML**

FY 2022-23		<b>2,08,429</b>
FY 2021-22		<b>2,37,106</b>
FY 2020-21		<b>1,97,566</b>

**KEIL**

FY 2022-23		<b>41,11,977</b>
FY 2021-22		<b>33,90,200</b>
FY 2020-21		<b>23,62,597</b>

**Baddi CETP**

FY 2022-23		<b>91,36,425</b>
FY 2021-22		<b>82,14,694</b>
FY 2020-21		<b>66,21,298</b>

**ETL**

FY 2022-23		<b>31,39,715</b>
FY 2021-22		<b>28,46,432</b>
FY 2020-21		<b>29,65,284</b>

**CIWMCPL**

FY 2022-23		<b>6,95,938</b>
FY 2021-22		<b>6,33,306</b>
FY 2020-21		<b>5,26,469.2</b>

**BEIL Ahmedabad**

FY 2022-23		<b>1,95,100</b>
FY 2021-22		<b>1,59,640</b>
FY 2020-21		<b>1,71,750</b>



Variation in Electricity intensity w.r.t. baseline financial year (2020-21)

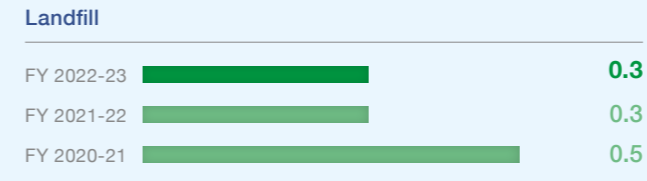
Facility	FY 2021-22	FY 2022-23
Ankleshwar	1	-10
Dahej	8	-55
Shivalik	-10	-33
KEIL	-22	-9
Baddi CETP	-7	8
ETL	-20	-20
CIWMCPL	7	4
Ahmedabad	19	33

Variation of Electricity Intensity wrt 2020-21

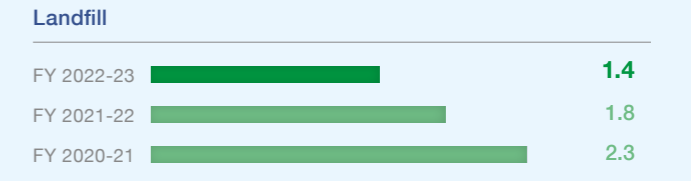


Facility wise electricity consumption of CHWTSDF sites

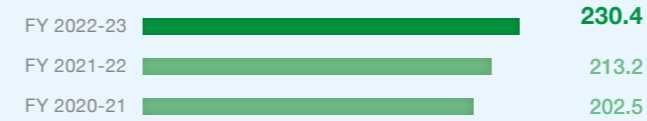
BEIL Ankleshwar (kWh/MT)



SSWML (kWh/MT)



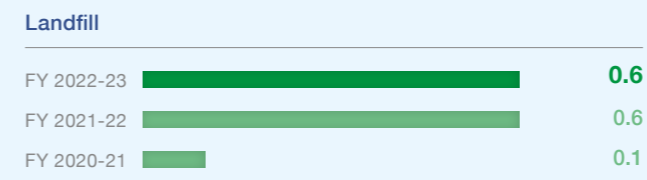
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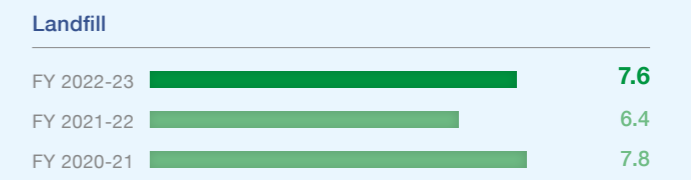
At SSWML landfill the electricity intensity have been reduced from 2.3 KWH/MT to 1.4 KWH/MT. In the CMEE the electricity intensity has been reduced from 41.57 KWH/MT to 40.77 KWH/MT.

The electricity intensity of landfill at BEIL Ankleshwar have been decreased from 0.5 KWH/MT to 0.3 KWH/MT. for the incineration system ay BEIL Ankleshwar due to decrease in the waste quantity incinerated the electricity intensity shows increases from 202.5 KWH/MT to 230.4 KWH/MT. In the CMEE the electricity intensity decreased from 45.2 KWH/MT to 24.8 KWH/MT.

BEIL Dahej (kWh/MT)



KEIL (kWh/MT)



At KEIL landfill the electricity intensity is reduced from 7.84 KWH/MT to 7.64 KWH/MT.

At Dahej Landfill the Electricity intensity have increased from 0.136 KWH/MT to 0.58 KWH/MT. The increase in electricity consumption is due to augmentation of the APCM. In CMEE the electricity intensity has increased from 74 KWH/MT to 89 KWH/MT. This increase is due to decrease in the quantity received for evaporation.



**Initiatives**

- Solar panel with a capacity of 225 KWp was set up at Dahej, on the top of the capped portion of landfill. This has generated 7,99,752 KWH energy.

BEIL have installed solar panels at the capped portion of the landfill at Dahej & SSWML units. We have generated 2,99,104 KWH in FY 2021-22 and 2,83,200 KWH in FY 2022-23 at Dahej unit. At SSWML unit the solar power generated is 63,847 KWH in FY 2022-23. We have calculated using coal as fuel for power generation.

**2,99,104**

KWH generated in FY 2021-22

**3,47,047**

KWH generated in FY 2022-23

**314 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**364 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23

- At the Shivalik site, solar panel with a capacity of 130 KWp was installed on the top of the capped portion of landfill This has generated 63,847 KWH energy.
- At ETL, the treatment process has been modified based on the studies conducted under the guidance of IIT Kanpur. This has resulted in better plant performance, with reduction in energy consumption.
- We have recovered waste heat from incinerators and converted to steam 14,461.214 MT during FY 2022-23. This steam is utilised in MEE process. (Ankleshwar).



**Biodiversity and tree plantation**

A range of project activities are most likely to have a negative impact on the ecology and biodiversity in the project area and surrounding areas. These include site preparation, excavation, manufacturing processes, operation of machinery and equipment, transportation, and the loading and unloading of hazardous waste. These activities can lead to dust emissions, an increase in greenhouse gas emissions, higher noise levels, soil erosion, water contamination, and waste generation. This can directly or indirectly contribute to a decrease in the transpiration rate of flora, loss of habitat, reduction in plant and tree cover, and ultimately, a decrease in the local faunal population.

To minimise these impacts, various mitigation measures have been implemented. Some of these measures include providing air pollution control equipment, ensuring proper maintenance of plantation areas, installing water sprinkling and dust suppression systems, setting up noise barriers, regulating vehicular movement near the project site, and properly disposing and treating any waste generated from the project.

It is worth noting that -greenbelt has already been partially developed along most of the periphery of the project area, as well as along roads.

It is to be noted that, no separate study has been conducted for the quantification of amount of CO<sub>2</sub> absorbed by trees. Reduction in CO<sub>2</sub> emissions is calculated in reference to below given link.  
<https://ecotree.green/en/how-much-co2-does-a-tree-absorb#answer>

**Plantation details**

Total trees planted by the group inside premises 44,559 Nos. Also, 22,728 Nos. of trees have been planted in the nearby area of the units.

By planting trees and supporting social forestation projects, we've not only enhanced local ecosystems but also helped offset carbon emissions. We have planted 15,734 nos. of trees during FY 2021-22 and 13,088 nos. of trees during FY 2022-23.

**15,734**

Nos. of tree planted in FY 2021-22

**13,088**

Nos. of tree planted in FY 2022-23

**54,199**

Nos. of tree available in FY 2021-22

**67,287**

Nos. of tree available in FY 2022-23

**1,355 MT**

CO<sub>2</sub> intake with respect to total nos. of trees

**1,682 MT**

CO<sub>2</sub> intake with respect to total nos. of trees





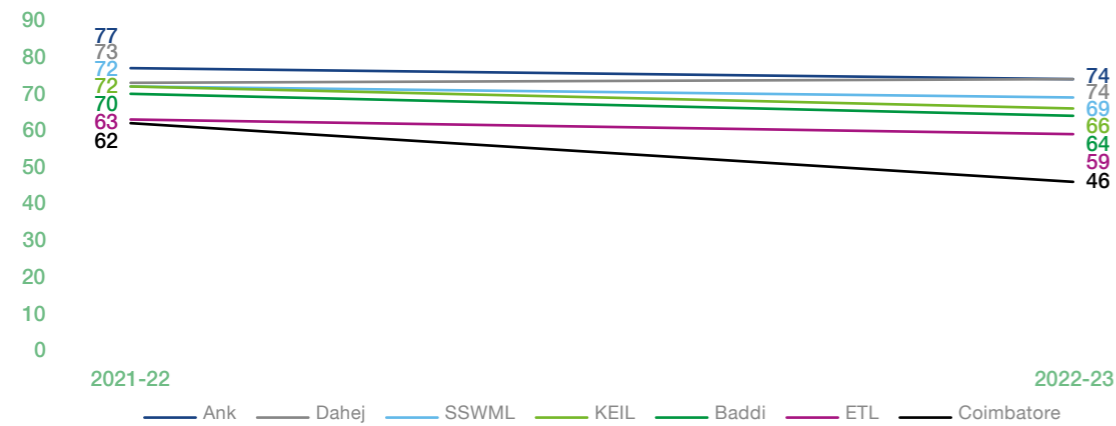
**Air quality**

We are conscious of the impact that our operations can have on the air quality in areas that we operate in. This makes mitigation of air emissions a key focus area for us. Incineration, emissions from waste transportation vehicles, and other waste management activities can contribute to air pollutants including NOx, SOx, and VOCs, among others. As part of our journey towards improving our environmental performance and complying with evolving regulatory guidelines, we deploy efficient technologies to minimise our air emissions.

**Initiatives**

We have formed a committee at each unit, comprising members from diverse areas, to implement various initiatives to reduce air pollution and enhance environmental conditions. To achieve this goal, we conduct fortnightly review meetings and share performance data. We have also taken various measures to decrease emissions from specific sources. Additionally, we have concreted or tarred all internal roads, imposed restrictions on vehicle movement, and implemented speed control measures. During summer, we spray water to minimise dusting, and we cover the landfill's operating area with soil to prevent dusting. Moreover, we have planted trees within and around the sites.

**IMPROVEMENT IN PM IN THE AMBIENT AIR (PM10 IN µG/M3)\***



\*Ambient air is monitored at our sites at three locations. Average data of each sites are included in the report.

**Air emission (MT)**

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	PM	31	42	34
	SOx	7	6	5
	NOx	13	12	10
Dahej	PM	16	13	3
	SO <sub>2</sub>	1	1	0
	NOx	4	3	1
Shivalik	PM	0.0862	0.1383	0.185
	NOx	0.0462	0.0543	0.111

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
KEIL	PM	0.831	0.226	1.77706
	Sox	0.961	0.151	0.91215
	NOx	5.053	5.972	6.26458

(\*In ETL, Baddi, Abd and Coimbatore no process stack is installed)

BEIL group's efforts have led to a measurable improvement in ambient air quality. By reducing emissions, enhancing APCM, and adopting cleaner technologies, we've contributed to a healthier environment and a better quality of life for our community.

**Ankleshwar**

**PM**



**SOx**



**NOx**



**Dahej**

**PM**



**SO<sub>2</sub>**



**NOx**

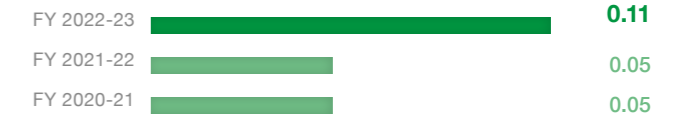


**Shivalik**

**PM**



**NOx**



**KEIL**

**PM**



**SOx**



**NOx**



### Circular economy

The inevitable outcome of everyday life is waste, but end-of-life materials can also be a source of new value. However, waste can be an issue if it's handled improperly. We provide recycling solutions for millions of customers across the country, conserving precious natural resources, contributing to the circular economy, and helping communities thrive. Our services range from managing hazardous waste and municipal waste, recycling e-waste and plastic, and treating effluents.

#### Contributions.

- Co-processing of organic waste instead of incineration.
- Heat recovery from incineration and utilisation of steam.
- Sewage treatment and utilisation of water.
- Conversion of MSW to RDF / compost.
- Plastic waste conversion to granules.
- Recovery of precious metals from e-waste
- Utilisation of treated effluent, thereby reducing freshwater consumption.
- Drum decontamination and recycling.
- Utilisation of lime ash for stabilisation process.
- Recovery of plastics from biomedical waste

#### Initiatives

- During the FY 2022-23,
- From CHWTSDf site, we have collectively pre-processed and sent 53,768.9 MT (Ankleshwar) and 4,444 MT (Shivalik) of hazardous waste for co-processing in cement industries.

BEIL group implemented a system for pre-processing of organic waste, diverting it to the cement industry as a fuel replacement. This innovative approach has significantly reduced coal consumption and emissions. The total quantity of organic waste utilized as alternative fuel is 22,841 MT in FY 2021-22 and 58,151 MT in FY 2022-23. The reduction in GHG emissions due to utilization of organic waste as fuel was 22,936 tCO<sub>2</sub>e in FY 2021-22 and 37,060 tCO<sub>2</sub>e in FY 2022-23.

**22,841 MT**

Pre-processed waste in FY 2021-22 (HCV-12025 MT + LCV-10816 MT)

**58,151 MT**

Pre-processed waste in FY 2022-23 (HCV-17977 MT + LCV-40174 MT)

**15,473 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**24,036 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23

- From MSW sites, 31,772.1 MT (Coimbatore) and 1,698 MT (Ahmedabad) of RDF was sent to cement industries. Also, 16,313 MT (Coimbatore) and 7,400 MT (Ahmedabad) of compost was made and sold to farmers.

BEIL group's MSW sites, converting municipal solid waste (MSW) into nutrient-rich compost, promoting a circular economy.

**28,071.6 MT**

Compost sold in FY 2021-22

**18,190.6 MT**

Compost Sold in FY 2022-23

Converting municipal solid waste to compost offers numerous benefits:

- **Waste Reduction:** It significantly reduces the volume of waste sent to landfills, conserving valuable landfill space, and extending their lifespan.
- **Soil Enrichment:** Compost is a nutrient-rich soil conditioner that enhances soil fertility, water retention, and plant growth, reducing the need for chemical fertilizers.
- **Environmental Sustainability:** Composting helps lower greenhouse gas emissions by reducing methane production in landfills and promotes a more sustainable waste management approach.

Moreover, at the sites municipal solid waste (MSW) is converted to Refuse-Derived Fuel (RDF), which is used as an eco-friendly fuel replacement. The total RDF produced in FY 2021-22 is 27,294 MT and in FY 2022-23 is 33,470 MT. out of these 6,594.2 MT in FY 2021-22 and 33,470 MT in FY 20, FY 2022-23 RDF was given to cement industry. The GHG emission reduction due to this works out as 7,385 tCO<sub>2</sub>e in FY 2021-22 and 37,486 tCO<sub>2</sub>e in FY 2022-23.

**6,594.2 MT**

Amount of RDF given to cement industry in FY 2021-22

**33,470 MT**

Amount of RDF given to cement industry in FY 2022-23

**7,368 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**37,396 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23

- 279.71 MT of plastic waste segregated and processed at Ankleshwar.

BEIL is processing plastic waste at Ankleshwar and Coimbatore facility. The total plastic waste processed in FY 2021-22 is 446 MT and quantity processed in FY 2022-23 is 408 MT. The GHG emission is calculated is 357 tCO<sub>2</sub>e in FY 2021-22 and 326 tCO<sub>2</sub>e in FY 2022-23.

**446 MT**

Plastic waste processed and recycled (Ankleshwa and Coimbatore) in FY 2021-22

**408 MT**

Plastic waste processed and recycled (Ankleshwa and Coimbatore) in FY 2022-23

**357 tCO<sub>2</sub>e**

GHG emission reduced in FY 2021-22

**326 tCO<sub>2</sub>e**

GHG emission reduced in FY 2022-23

- From E - waste processing, At Ankleshwar site, SSWML and KEIL site we have developed e-waste management facility. We have received 723 MT in FY 2021-22 and 434 MT in FY 2022-23.

- Benefits of E-waste recycling
- Recycling prevents the release of harmful chemicals and toxins found in electronics into the atmosphere, soil, and water, helping to preserve the environment.
- Open burning of e-waste emits hazardous pollutants that can harm human health. Recycling helps mitigate these health risks for communities and workers involved in the process.
- Various valuable resources are recovered and reused.



Aerial View of Shivalik Site



**Resource recovery and recycling**

Facility	Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	Amount of waste incinerated	MT	22,109	20,258	14,954
	Percentage of waste that was incinerated (with heat recovery) out of organic waste received	%	76	54	21
	Amount of material processed as waste-to energy (pre-processing waste)	MT	7,317	17,945	53,769
	Percentage of waste that was sent to cement industries out of organic waste received	%	24	46	79
	Amount of material recycled (plastic granules)	MT	365	333	280
	Amount of electronic waste collected	MT	102	317	210
Dahej	Amount of waste incinerated	MT	0	0	3,072
	Percentage of waste that was incinerated (with heat recovery) out of organic waste received	%	NA	NA	46
	Amount of material recycled (Drums decontaminated)	MT	602	919	1,134
Shivalik	Waste recovered /processed/ pre-processed and Sent for Recycling (Paint Sludge, Solvent & Others, used oil, decontaminated drums, batteries, non-hazardous waste)	MT	5,183	6,333	5,724
	Amount of electronic waste collected	MT	207	164	185
KEIL	Waste recovered or processed and Sent for Recycling (BMW)	MT	NA	526	1,257
	Amount of electronic waste collected	MT	31	236	32
CIWMCPL	Amount of material recycled (RDF)	MT	1,644	5,470	8,750
	Amount of material composted	MT	12,700	16,525.3	16,313
Ahmedabad	Amount of material recycled (RDF)	MT	24,187	21,823	20,447
	Amount of material composted	MT	14,530	11,717	7,400



**Water and wastewater management**

We are mindful of the implications that water degradation and scarcity have on us and the world. We effectively manage water and effluents, ensuring that the waste treatment processes are not contaminating the land, and that the resources are used sustainably. Leachate management is also a crucial aspect of waste management and is particularly significant to us.

this, we temporarily cover the landfill operating area during the monsoon season and store waste safely in a designated monsoon shed.

We also check the leachate well levels daily and pump out the leachate on a regular basis. To fully utilise the condensate, we have installed an Effluent Treatment Plant (ETP) at Ankleshwar and Dahej sites. As a ZLD (Zero Liquid Discharge) unit, we aim to recycle recovered water.

**Leachate and groundwater management**

At the TSDF sites, we collect and treat the leachate and effluent using the MEE system. The salt produced during this process is disposed of in a landfill, while the condensate generated from the MEE is treated and reused on-site. Our primary objective is to decrease the quantity of leachate and enhance its quality. To achieve

**Initiatives**

STP of ETL, BEIL: treated water recycling /selling to industries.

**Total Water Withdrawal (MT)**

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	Surface Water	53,611	46,795	42,929
	Ground Water	10,149	4,887	2,292
	Third Party (others)	1,499	601	221
	Total fresh water consumed	65,259	52,283	45,442
	Recycled Water	29,251	40,985	33,486
	Total water consumption	94,510	93,268	78,928
	Fresh water consumption intensity*	0.20	0.14	0.12
	Dahej	Surface Water	32,242	39,288
Dahej	Total fresh water consumed	32,242	39,288	51,670
	Recycled Water	19,629	25,261	20,957
	Total water consumption	51,871	64,549	72,627
	Fresh water consumption intensity*	0.14	0.14	0.20
SSWML	Ground Water	3,559	4,181	5,351
	Natural reservoirs (collection pond)	1,039	1,046	1,053
	Total fresh water consumed	4,598	5,227	6,404
	Recycled Water	788	1,206	886
	Total water consumption	5,386	6,433	7,290
	Fresh water consumption intensity*	0.18	0.15	0.16
KEIL	Third Party	3,675	5,836	4,295
	Total fresh water consumed	3,675	5,836	4,295
	Recycled Water	2,234	3,094	3,999
	Total water consumption	5,908	8,930	8,294
	Fresh water consumption intensity*	0.09	0.12	0.09
Baddi	Ground Water	1,830	1,461	1,144
	Total fresh water consumed	1,830	1,461	1,144
	Recycled Water	31,257	50,185	43,501
	Total water consumption	33,087	51,646	44,645
	Fresh water consumption intensity*	0.0003	0.0002	0.0002
ETL	Surface Water	65,533	22,751	27,064
	Ground Water	24,385	NIL	NIL
	Total fresh water consumed	89,918	22,751	27,064
	Recycled Water	0	54,584	1,06,651
	Total water consumption	89,918	77,335	1,33,715
	Fresh water consumption intensity*	0.19	0.04	0.04

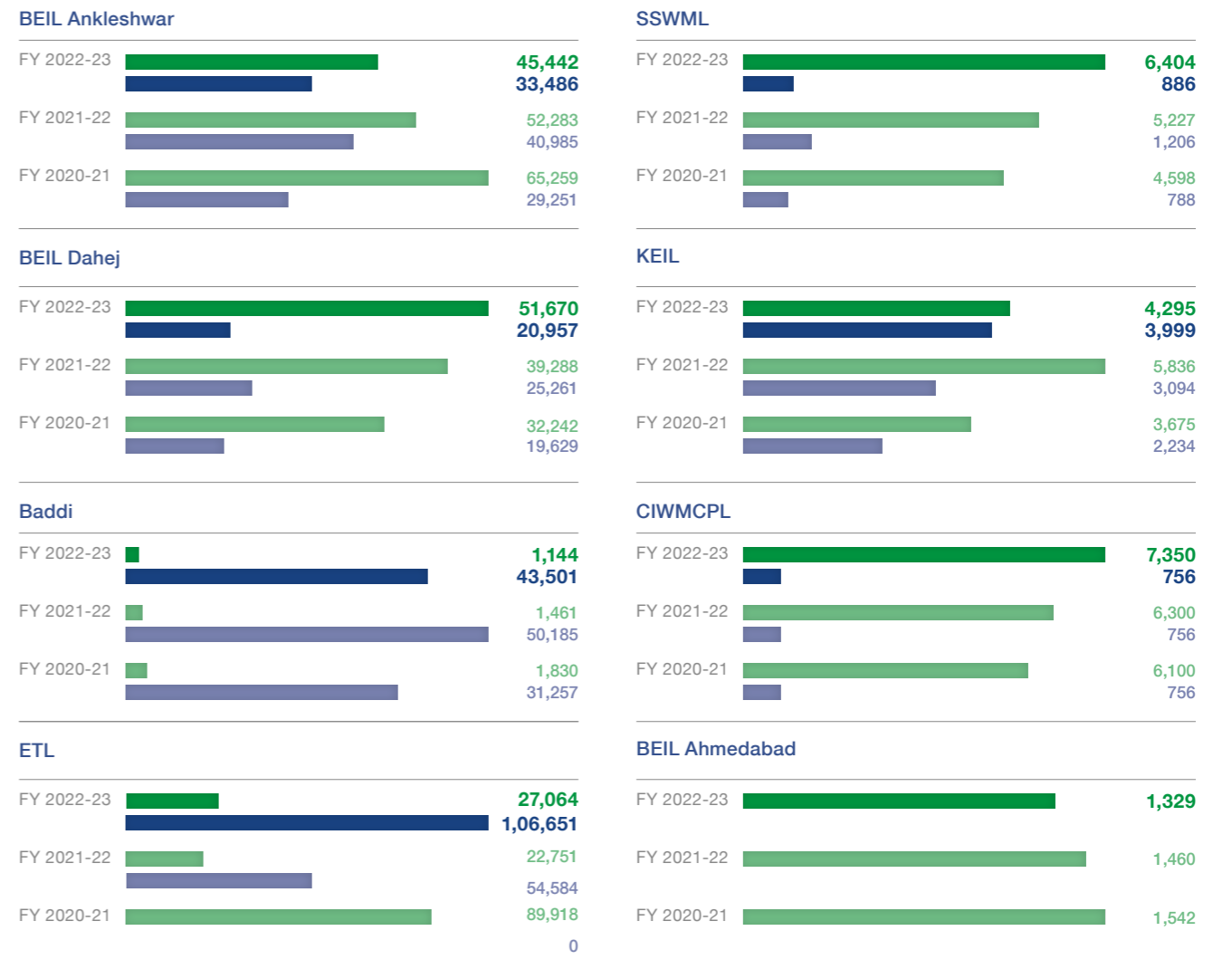
\*(MT of water consumed/MT Waste treated)

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
CIWMCPL	Ground Water	6,100	6,300	7,350
	Total fresh water consumed	6,100	6,300	7,350
	Recycled Water	756	756	756
	Total water consumption	6,856	7,056	8,106
	Fresh water consumption intensity*	0.04	0.04	0.04
	Ahmedabad	Ground Water	1,184	1,153
Third Party		358	307	508
Total fresh water consumption		1,542	1,460	1,329
Fresh water consumption intensity*		0.02	0.03	0.02

\*(MT of water consumed/MT Waste treated)

**Total Water Consumption (MT)**

■ Total fresh water consumed ■ Recycled Water



We have considered density as 1 for Fresh Water and in-case of leachate and other effluent streams we have taken average analysis values.



### Reduction in water consumption

BEIL group made significant achievement in reducing our freshwater consumption through efficient recycling practices and by reusing water in processes.

Total Freshwater consumption (MT) in BEIL group

FY 2022-23		1,44,698
FY 2021-22		1,34,606
FY 2020-21		2,05,163

The freshwater consumption in the BEIL group companies have been reduced from 2,05,163 MT in FY 2020-21 to 1,44,698 MT in FY 2022-23. There is considerable reduction in the consumption of fresh

water in all units except Dahej & KEIL where new activities like common Incinerator and BMW facility have been added.

### Variation in freshwater consumption Intensity w.r.t. 2020-21 financial year



### Water treatment & discharge details (MT)

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	Wastewater treatment (MEE)	21,729	31,230	26,388
	Discharge (Sent to ETL)	9,680	4,930	17,990
Dahej	Wastewater treatment (MEE)	17,211	19,846	20,412
	Discharge		Unit is ZLD	
Shivalik	Wastewater treatment (MEE)	1,051	2,018	1,326
	Discharge		Unit is ZLD	
ETL	Effluent treated and Discharge (NCT)	8,14,475	8,46,483	8,55,226
	STP water sold	-	12,110	12,150
Baddi	Effluent treated and Discharge	53,24,000	75,67,000	74,49,000
KEIL	Wastewater treatment	3,910	5,121	6,088
	Discharge		Unit is ZLD	

We have considered density as 1 for Fresh Water and in-case of leachate and other effluent streams we have taken average analysis values.

### Environmental compliance

The companies within the BEIL group have maintained a strong record of compliance, with no major non-compliances reported to date. Our commitment to adhering to regulations and upholding legal requirements is reflected in the absence of any penalties imposed by regulatory authorities or closures of units due to violations. No directives received.

While our units have received queries during inspections, it is important to note that these notices serve as opportunities for improvement and ensuring ongoing compliance. We value the feedback and observations provided by regulatory authorities as they help us identify areas where we can further enhance our processes and practices.

### Audits and studies

- NEERI, Nagpur carried out an environment audit of SSWML
- NPC, New Delhi carried out environment audit of BEIL, Ankleshwar
- NEERI, Nagpur carried out hydrogeological studies at BEIL, Ankleshwar
- NPC, New Delhi evaluated the groundwater monitoring data of BEIL Ankleshwar, BEIL Dahej and SSWML TSDF sites
- NPC, New Delhi carried out audit of Coimbatore MSW facility
- IIT Kanpur regularly interacts and assesses performance of CETP of ETL and CETP at Baddi and provides guidance for improvement
- IIT Delhi, Civil department inspects our TSDFs regularly. Only after inspection and certification, we start using the new cells of landfill for waste disposal.
- EC compliance certificates
- Regular environment audits by approved auditors from PCB.

# EMPLOYEES AT CORE, CUSTOMERS AT HEART

## Our people

Our employees are our greatest assets and we prioritise investing in them. We are dedicated to ensuring their safety and wellbeing, and we seek to foster an inclusive culture that respects the various perspectives of our

diverse workforce. We continually strive to maintain a high-performing workforce that is engaged and well-prepared to meet the needs of our customers and communities.



## Our workforce

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
BEIL Ankleshwar	Total employees	668	615	538
	Total on roll employees	189	199	206
	Total contractual employees	479	416	332
Shivalik	Total employees	211	193	179
	Total on roll employees	51	54	53
	Total contractual employees	160	139	126
ETL	Total employees	106	106	108
	Total on roll employees	34	33	35
	Total contractual employees	72	73	73

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
KEIL	Total employees	59	104	108
	Total on roll employees	45	53	58
	Total contractual employees	14	51	50
CIWMCPL	Total employees	265	297	304
	Total on roll employees	16	16	19
	Total contractual employees	249	281	285

## Diversity and equal opportunities

Diversity and inclusion are critical components for our success. We are cognisant of the fact that having a diverse workforce not only promotes a positive work environment, but also brings different perspectives and experiences to the table, leading to better decision-

making and innovation. An important objective of fostering a diverse and inclusive workplace is increasing female participation across our workforce. In keeping with our efforts to support and encourage diversity and inclusion, we have undertaken several initiatives.

Facility	Particulars	FY 2020-21		FY 2021-22		FY 2022-23	
		Male	Female	Male	Female	Male	Female
BEIL Ankleshwar	Junior Management	126	21	124	30	131	27
	Middle Management	29	2	30	3	31	2
	Senior and Top Management	11	0	13	0	15	0
Shivalik	Junior Management	33	9	35	10	35	8
	Middle Management	5	1	5	1	4	2
	Senior and Top Management	3	0	3	0	4	0
ETL	Junior Management	23	5	23	5	22	7
	Middle Management	3	1	2	1	3	1
	Senior and Top Management	2	0	2	0	2	0
KEIL	Junior Management	34	6	39	7	42	6
	Middle Management	4	0	5	1	7	2
	Senior and Top Management	1	0	1	0	1	0
CIWMCPL	Junior Management	7	2	7	2	8	1
	Middle Management	5	0	5	0	7	1
	Senior and Top Management	2	0	2	0	2	0





### Human capital development

Our priority is to enhance the skills of our employees by providing them with ample learning and development opportunities, which in turn would promote their professional growth and create a highly skilled employee base.

- Customer service excellence, retention and complaint management:** This training is focused on imparting customer service skills and strategies for handling complaints, providing solutions, and retaining customers.
- Sales game plan:** Designed to improve the selling skills of marketing personnel.
- Effective communication:** The training aims to enhance employees' verbal communication abilities.
- Attitude is everything:** Emphasises the significance of maintaining a positive attitude in the workplace and imparts the necessary skills to cultivate such an attitude.
- Effective personal productivity:** Focused on enhancing personal productivity, providing tools and skills to improve efficiency in all aspects of life.
- Fire and safety training programme:** Introduces the concepts of fire safety and the protocols to be followed.
- The Factories Act and mandatory compliances:** Provides training on the various provisions of the Factories Act and the mandatory compliances under it.
- Environment, Health and Safety at workplace:** Conduct EHS training to increase employees' awareness of the requirements and protocols for maintaining a safe work environment.
- Master class of advanced Excel:** Provide training on advanced Excel techniques to increase efficiency in working with Excel.
- Hazard and Operability Study (HAZOP):** Conduct training on identifying potential events that can lead to hazardous scenarios or operability problems.
- Electrical engineering training for non-electrical engineers:** Offer electrical engineering training to non-electrical engineers to help them understand electrical engineering concepts and facilitate their work.
- Prevention of sexual harassment (POSH):** Provide training to employees to understand the POSH Act, its various provisions, and the mechanism of the Act to help create a harassment-free work environment.

### Training hours

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
BEIL Ankleshwar	No. of Trainings	37	40	46
	No. of participants	368	573	640
	Training hours	2,650	2,852	2,915.5
Shivalik	No. of Trainings	5	43	16
	No. of participants	6	394	180
	Training hours	58	242	51
ETL	No. of Trainings	23	20	27
	No. of participants	71	92	145
	Training hours	380	372	607
KEIL	No. of Trainings	1	8	14
	No. of participants	34	149	73
	Training hours	34	189	204
CIWMCPL	No. of Trainings	2	11	3
	No. of participants	22	108	23
	Training hours	11	63	21.45

### Retention and attrition

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
BEIL Ankleshwar	Employee retention rate [%]	87	82	73
	Attrition rate [%]	13	18	27
Shivalik	Employee retention rate [%]	96	88	85
	Attrition rate [%]	4	12	15
ETL	Employee retention rate [%]	100	88	100
	Attrition rate [%]	0	12	0
KEIL	Employee retention rate [%]	100	98	96
	Attrition rate [%]	0	2	3
CIWMCPL	Employee retention rate [%]	100	100	95
	Attrition rate [%]	0	0	5

**Occupational health and safety (OH&S)**

We have established safety committees at all our locations with representatives of workman & the committee conducts meeting regularly. All the safety related issues are discussed in the meeting. Regular medical checkups are carried out to ensure health of employees.

Workman compensation, ESIC, and health insurance policies are also in place for employees. OHS training and awareness workshops are regularly conducted for both permanent and contractual employees on topics, such as PPE, MSDS, chemical safety, electrical safety, fire safety, and permit to work.

To protect our employees and assets, we proactively assess risks through internal inspections and external audits. Hazards are identified using workplace inspections, process risk assessments, such as HAZOP, audits, equipment checks, and EHS meetings. The Company adopts a hierarchy of mitigation strategies, including elimination, substitution, isolation, engineering and administrative controls, and PPE. Regular reviews are conducted to ensure effective mitigation of hazards. All reported incidents, including near misses, injuries, fires, and dangerous occurrences, are thoroughly investigated by teams using root cause analysis tools, such as 5 WHY.

**Lost Time Injuries (LTIs) and fatalities**

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar and Dahej	Lost Time Injuries (LTIs) per million man-hours (directly employed)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (Indirectly employed)	0.47	0.45	0
	Number of fatalities (involving third parties)	0	1	0
Ahmedabad	Lost Time Injuries (LTIs) per million man-hours (directly employed)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (Indirectly employed)	0	0	0
	Number of fatalities (involving third-parties)	0	0	0
Baddi	Lost Time Injuries (LTIs) per million man-hours (directly employed)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (Indirectly employed)	0	0	0
	Number of fatalities (involving third-parties)	0	0	0
Shivalik	Lost Time Injuries (LTIs) per million man-hours (directly employed)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (Indirectly employed)	0	0	0
	Number of fatalities (involving third-parties)	0	0	0
ETL	Lost Time Injuries (LTIs) per million man-hours (directly employed)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (Indirectly employed)	0	0	0
	Number of fatalities (involving third-parties)	0	0	0
KEIL	Lost Time Injuries (LTIs) per million man-hours (directly employed)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (Indirectly employed)	0	0.00048	0

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
CIWMCPL	Number of fatalities (involving third-parties)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (directly employed)	0	0	0
	Lost Time Injuries (LTIs) per million man-hours (Indirectly employed)	0	0	0
	Number of fatalities (involving third-parties)	0	0	0

We have well-equipped occupational health centres with qualified doctors and medical attendants that are available round-the-clock at all our sites. Prior to joining and at least once a year or as required by regulations, all employees undergo health check-ups. We strive to maintain the best practices and standards for Health and Safety at all our locations, which are outlined in our EHS Policy. Our team of knowledgeable and experienced occupational health and safety management continuously monitor, manage and respond to emergencies across all our locations. The majority of our manufacturing sites in

India are ISO 45001 certified, and employees with access to our operating sites are covered under these OHS management systems, which are periodically audited.

**Human rights**

We adhere to the highest standards of human rights practices and are committed to being a responsible social citizen. This includes ensuring that our suppliers and vendors comply with labour laws and human rights.

**Customer relationship management**

We strive towards maintaining a positive relationship with all of our customers. We regularly interact with the members, who are providing waste or effluent for treatment and disposal. Whenever a new member joins, detailed discussions are held, samples are collected and analysed and all the required data are collected. Also, we provide the required information to the industries. Moreover, our marketing team interacts with customers

and gets their suggestions and compliant. All suggestions and grievances are discussed internally and required actions are taken. We always ensure that the customers are not finding any difficulty in treating and disposing of their waste/wastewater. We organise training sessions for members about any new development/ regulations, etc. Additionally, we also offer technical guidance and external support to member industries, if needed.

**Customers connected by category**

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	Commercial	350	898	1,393
	Industrial	1,463	1,583	1,755
Ahmedabad	Municipal	1	1	1
	Commercial	146	106	118
Dahej	Industrial	847	1,004	1,174
Baddi	Municipal	1	1	1
	Commercial	23	34	207
	Industrial	445	506	471



Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Shivalik	Commercial	329	357	403
	Industrial	2,606	2,903	3,319
ETL	Municipal	1	1	1
	Commercial	21	25	28
	Industrial	242	244	244
KEIL	Municipal	4	4	0
	Commercial	72	112	61
	Industrial	1,009	1,145	1,506
	Other	1	939	1,060
CIWMCPL	Municipal	1	1	1

**Materials managed by customer category (MT)**

Facility	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	Commercial	24,405	23,755	26,024
	Industrial	73,49,134	74,69,991	66,40,734
Ahmedabad	Municipal	1,09,605	51,921	91,405
	Commercial	9	9	9
Dahej	Industrial	2,32,188	2,81,248	2,60,978
Baddi	Municipal	103	202	365
	Commercial	987	1,579	1,592
	Industrial	5,575	7,610	7,315
Shivalik	Commercial	4,613	4,872	10,145
	Industrial	26,898	35,120	41,072
ETL	Municipal	2,53,352	3,17,089	3,73,880
	Commercial	971	1,605	2,189
	Industrial	4,59,900	4,87,275	5,20,968
KEIL	Municipal	24	0	0
	Commercial	870	680	517
	Industrial	35,079	45,083	47,003
	Other	4,581	396	0
CIWMCPL	Municipal	1,51,499	1,70,415	1,92,326

Moreover, BEIL Group plays a crucial role in supporting statutory bodies by responsibly incinerating seized materials and waste.

Particulars	FY 2021-22	FY 2022-23
incinerated qty. (Ank + KEIL)	5.13 MT	49.34 MT

**Corporate citizenship and philanthropy**

Our philanthropic CSR interventions are impact-oriented and focus on improving the quality of life for under-resourced and vulnerable populations in India. We address areas, such as health, hunger eradication, skill development, and community upliftment to make a positive difference in people's lives.

**CSR Expenditure (₹ lakh)**

Facility	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	100.57	121.19	136.99
Dahej	111	10	
Baddi	5.45	1.18	5.035
Shivalik	9.96	10.77	11.26
ETL	10.00	12.10	16.00
KEIL	9.67	8.97	NIL

**Support to academics**

BEIL group actively support academics by providing scholarships, internships, and research opportunities. Our investment in education not only enhance knowledge and innovation but also empowers future generations with the skills to address challenges.

**68 students**

Benefited of ₹ 50 lacs in FY 2021-22

**111 students**

Benefited of ₹ 80 lacs in FY 2022-23

**Support to the community during difficult time**

During challenging times like the COVID-19 pandemic, we've supported our community by providing essential aid, resources, and relief efforts. Moreover, during Covid we have also incinerated the waste from Hospitals and helped them.

**369.7 MT**

Quantity of covid waste incinerated during pandemic (Ankleshwar + KEIL) in FY 2021-22

**54.5 MT**

Quantity of covid waste incinerated during pandemic (KEIL) in FY 2022-23

**Beil Infrastructure Ltd. - Ankleshwar, Dahej, Ahmedabad, Baddi CETP**

- Promotion of health care including preventive health care and sanitation – Donation of an ambulance to Prathimik Arogya Kendra Samiti
- Promoting education through providing special education, vocational training, and scholarship fund to support marginalised students via Mobile Education Van project
- Promotion of sports through the sports complex project
- Empowering women (ANC camp Organized at Jitali & Dadhal, Sticking training centre)
- Ensuring rural development via collection of kitchen waste (door-to-door) at Dadhal, Jitali, Dahej villages,
- Development of playground at Malpur village

**Enviro Technology Ltd**

- Promotion of health care, including preventive health care, distributing oxygen ventilator in Surat
- Promoting education via providing scholarship funds to support marginalised students and donating to libraries

**Kerala Enviro Infrastructure Ltd.**

- As part of COVID – 19 relief measures, provided food kits to affected families
- Promoting health care - Sponsored a Maruti Eco vehicle to Ernakulam district

**Shivalik Solid Waste Management Ltd.**

- Promoting health care including preventive health care and sanitation
- Contribution to COVID-care center (50 beds)
- Disaster management – contributed to disaster response fund, Himachal Pradesh State disaster management authority
- Training to promote rural sports.
- Rural Development Projects: Contribution to Himalaya Jan Kalyan Samiti for building washrooms at the community center at Baddi and contribution to gram panchayat Dabhota towards building schools

**Sponsored & research projects**

Facility	Title of the Project	Project status
BEIL	Plastic to oil	On going
	Refused derived fuel (RDF) to synthesis Gas	On going
	Household waste management at Jitali	On going
	Household waste management at Dahej	On going
	Designing the Equipment for Solid Waste Handling of Semi-Solid Material at BEIL	On going
	Recycle and Reuse of Lithium-Ion Batteries (Nov 2022-Oct 2023)	On going
	Precious metal recovery from E-waste	Completed
ETL	Electrochemical Oxidation of wastewater (ETL)	On going
	Recovery of metals (Silver, Mercury, chromium, and iron) from COD wastewater)	On going

**Supply chain**

We ensure an uninterrupted supply of goods at minimum prices and explore new sources for high-value purchases, while fostering better relationships with vendors. Our Company follows a vendor registration process in accordance with the standard operating procedure.

We initiate the procurement process only after collecting integrity compliance documents. In order to sustain the supply chain, a vendor muster is maintained to facilitate better tracking; records of negotiations with vendors are kept, along with ensuring timely delivery.

**Suppliers/partners pan-India.**

Facility	FY 2020-21	FY 2021-22	FY 2022-23
Ankleshwar	1,813	2,481	3,148
Dahej	847	1,004	1,174
Ahmedabad	147	107	119
Baddi	469	541	679
Shivalik	2,935	3,260	3,722
ETL	264	270	273
KEIL	1,014	2,082	2,566
CIWMCP	1	1	1





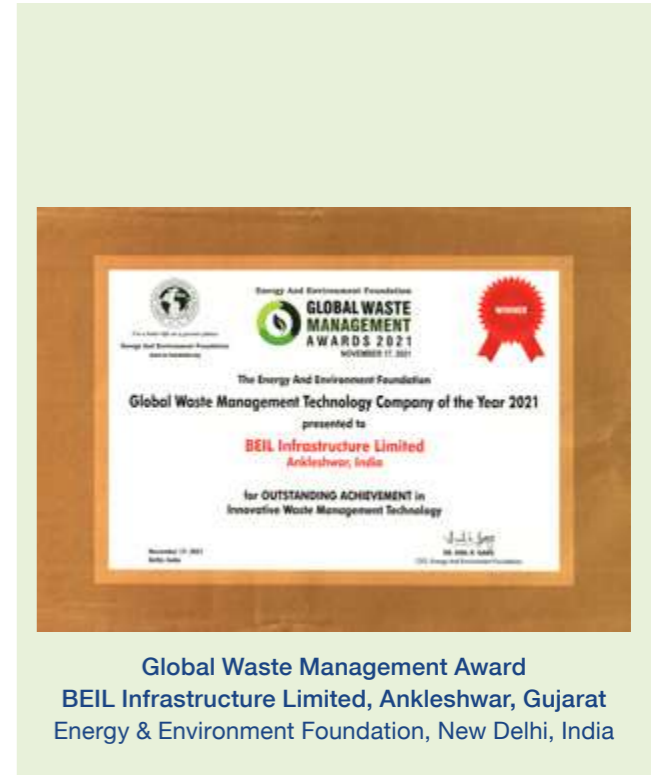
# GARNERING LAURELS FOR EXCELLENCE



Platinum category for the 'GLOBAL CSR AWARDS 2021  
For outstanding achievement in implementing CSR programs for strengthening core business with social commitment



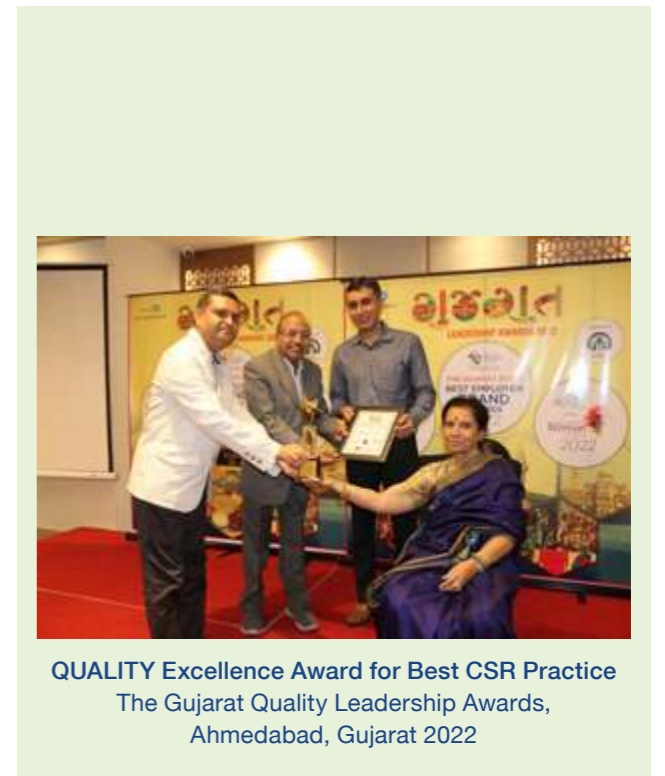
Gold category  
Global Bio Innovation & Technology Award 2021  
Energy and Environment Foundation



Global Waste Management Award  
BEIL Infrastructure Limited, Ankleshwar, Gujarat  
Energy & Environment Foundation, New Delhi, India



Best CEO of the Year for  
FAME Excellence Award 2020-2021  
FAME Excellence Award



QUALITY Excellence Award for Best CSR Practice  
The Gujarat Quality Leadership Awards,  
Ahmedabad, Gujarat 2022



**INDEPENDENT ASSURANCE OPINION STATEMENT**

**Statement No: SPLIC 807709-1**

**BEIL Infrastructure Limited & Group Sustainability Report 2022-23**

The British Standards Institution is independent to BEIL Infrastructure Limited & Group (hereafter referred to as BEIL in this statement) and has no financial interest in the operation of BEIL other than for the assessment and verification of the sustainability statements contained in this report.

This Independent assurance opinion statement has been prepared for the stakeholders of BEIL only for the purposes of verifying its statements relating to its environmental, social and governance (ESG), more particularly described in the Scope, below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This Independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by BEIL. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to BEIL only.

**Scope**

The scope of engagement agreed upon with BEIL includes the following:

1. The assurance covers the sustainability report for the period 2021-2022 & 2022-2023, prepared with reference to GRI standards 2021 and focuses on systems and activities of BEIL covering respective locations given in the below table, for the reporting period 1<sup>st</sup> April 2021 to 31<sup>st</sup> March 2022 & 1<sup>st</sup> April 2022 to 31<sup>st</sup> March 2023:



Sr. No.	Unit Name	Operation	Location & Address
1	BEIL Infrastructure Limited (Ankleshwar)	TSDF, Incineration, MEE, Drum decontamination, plastic waste recycling and E-Waste Recycling facilities.	GIDC Estate, Ankleshwar Dist. - Bharuch, Gujarat
2	BEIL Infrastructure Limited (Dahej)	TSDF, Incineration, MEE & Drum decontamination facilities.	GIDC Dahej, Gujarat
3	BEIL Infrastructure Limited (Baddi)	Effluent Treatment plant	Baddi, Himanchal Pradesh
4	BEIL Infrastructure Limited (Ahmedabad)	Municipal Solid Waste Management (Material Recover Facility)	Ahmedabad, Gujarat
5	Enviro Technology Limited	Effluent Treatment plant	GIDC Ankleshwar, Gujarat
6	BEIL Research & Consultancy Private Ltd.	Project Management Consultancy	Bharuch, Gujarat
7	Kerala Enviro Infrastructure Limited	TSDF, BMW, MEE and E-Waste Recycling facilities	Ambalamedu, Kochi, Kerala
8	Shivalik Solid Waste Management Limited	TSDF, MEE, Drum decontamination and E-Waste Recycling facilities	Nalagarh, District Solan, Himanchal Pradesh
9	Coimbatore Integrated Waste Management Company Private Limited (CIWMCPL),	Municipal Solid Waste Management (Material Recover Facility)	Coimbatore, Tamil Nadu
10	Gharpure Engineering and Constructions Private Limited (GECPL)	EPC contractor and consultancy	M.I.D.C Chinchwad Pune, Maharashtra

2. The evaluation of the nature and extent of the BEIL's adherence to all four AA1000 AccountAbility Principles and the reliability of specified sustainability performance information in this report as conducted in accordance with type 2 moderate level of AA1000AS v3 sustainability assurance engagement.

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**Opinion Statement**

We conclude that the Sustainability Report Review provides a fair view of BEIL’s sustainability programmes and performances during FY21-22 & FY22-23. We believe that the sustainability report economic, social and environment performance indicators are fairly represented.

Our work was carried out by a team of sustainability report assurers in accordance with the AA1000 Assurance Standard v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that BEIL’s description of their approach to AA1000 Assurance Standard and their self-declaration of compliance with the GRI standards were fairly stated.

**Methodology**

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top-level review of issues raised by stakeholders that could be relevant to BEIL’s policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers and staffs on BEIL’s approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- Interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- Review of key organizational developments.
- Review of the findings of internal audits.
- Review of supporting evidence for claims made in the reports.
- An assessment of the company’s reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000 AccountAbility Principles Standard (2018).

**Conclusions**

A detailed review against the AA1000 AccountAbility Principles of Inclusivity, Materiality, Responsiveness and Impact and the GRI Standards is set out below:

**Inclusivity**

This report reflects that there exists a process within BEIL where the stakeholders’ inputs are received while engaging with them via various modes of engagement, i.e. annual meet with shareholders, supplier site visits, meetings with regulatory bodies, cultural and social activities engagement with the employees. However this being the first sustainability report, the major outcomes have been derived out of the peer review exercise and in our professional opinion, there should exist a process of actively identifying and engaging with stakeholders and enabling their participation, so as their concerns can be identified and translated to the material topics list.

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**Materiality**

BEIL publishes sustainability information that enables its stakeholders to make informed judgments about the company’s management and performance. Issues are determined to be material at BEIL according to the peer review exercise conducted by them.

The material topics were identified are as below:

Environmental	Social	Governance
<ul style="list-style-type: none"> <li>• Environmental compliance</li> <li>• Air quality, soil &amp; ground water protection</li> <li>• Circular economy</li> <li>• Water &amp; wastewater management</li> <li>• Environment &amp; energy management</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational health &amp; safety</li> <li>• Human capital development</li> <li>• Human rights, labour practices &amp; equal opportunities</li> <li>• Corporate citizenship &amp; philanthropy</li> <li>• Customer relationship management</li> </ul>	<ul style="list-style-type: none"> <li>• Corporate governance</li> <li>• Business ethics and tax transparency</li> <li>• Risk &amp; crisis management</li> <li>• Innovation management</li> <li>• Information/cyber security</li> </ul>

The material topics process has been captured in the sustainability report for current reporting period, with a progressive statement of conducting in-depth material assessment in the upcoming years of reporting. In our professional opinion the report fairly covers the BEIL’s material issues. However, the report shall also reflect organization wide robust, systematic, and ongoing materiality determination process under the governance of senior management. Also, from declared list of material topics, the GRI indicators are not mapped for all topics but for few, this should be considered to be synchronized in future years to demonstrate informing stakeholders about the management approach and performance indicators linked with respective material topics.

**Responsiveness**

BEIL has implemented the practice to respond to the expectations and perceptions of its stakeholders. In their maiden sustainability report, they have showcased the comparisons from their previous years as well and demonstrated the process of monitoring the parameters associated with their material topics. In our professional opinion nothing has come to our attention to suggest that the responses related to identified material topics are not adequately represented in the report. However, the future reports should be further enhanced by the following areas:

- Encouraging to demonstrate strong engagement with providing the correlation among sustainability concerns raised by stakeholders, frequency of engagement, how concerns are getting translated to materiality and approach of management to address them.
- The timeliness of publishing the information should be looked into for improvement.

**Impact**

The organization, being functional in the waste management domain, is under comprehensive regulatory compliances to fulfil and since their operations directly impacts on environment and social dimensions of

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ESG, they have developed process of impact identification of their activities, and BEIL has also demonstrated that adequate systems are in place to monitor, measure and be accountable for their actions that affect the economy, the environment, society, stakeholders, and the organization itself. In our professional opinion the impact assessment done and the outcome in terms of risk and opportunities identified by BEIL are appropriate to their business and are addressed for their actions that affect the economy, environment, society, and the organization itself.

**GRI-reporting**

BEIL provided us with their self-declaration of compliance within GRI Universal Standards 2021, with reference to 'option for reporting. Based on our review, we confirm that the sustainable development indicators are reported with reference to the GRI universal standards 2021.

In our professional opinion the self-declaration covers BEIL's Corporate's social responsibility and sustainability issues. Based on the verification undertaken, nothing has come to our attention to suggest that the Report does not properly describe the following sustainability disclosures as stipulated in the GRI Standards.

- GRI 302: Energy 2016- 302-1, 302-3, 302-4
- GRI 303: Water & Effluents 2018- 303-1, 303-3, 303-4, 303-5
- GRI 305: Emissions- 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7
- GRI 306: Waste 2020- 306-4
- GRI 401: Employment 2016- 401-1
- GRI 403: Occupational Health & Safety 2018- 403-1, 403-9
- GRI 404: Training & Education 2016- 404-1
- GRI 405: Diversity & Equal Opportunity 2016- 405-1

**Assurance level**

The type 2 moderate level assurance provided is in accordance with AA1000 Assurance Standard v3 in our review, as defined by the scope and methodology described in this statement. Under this assurance level, the assurance providers assess the adherence to AA principles, reliability and quality of the specified sustainability performance and disclosed information. Due to limited extent of information, limitation of scope and time available for gathering evidence the level of assurance engagement risk is higher in a Type 2 moderate level than in Type 2 high level because of the different nature, timing or extent of evidence-gathering procedures.

"Based on our work described in the verification report, nothing has come to our attention that causes us to believe that data and information stated in the BEIL's Sustainability Report, FY 21-22 & FY 22-23 is not correctly presented or with omission, in any material respects or that Inclusivity, Materiality Responsiveness and Impact based on AA1000 criteria are not correctly addressed."

**Responsibility**

It is the responsibility of BEIL's senior management to ensure the information presented in the sustainability report is accurate. It is also left to the decision of the BEIL management on the publishing / submission of

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the report to any of their stakeholders. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

**Competency and Independence**

The assurance team was composed of Lead Auditors and Carbon Footprint Verifiers experienced in industrial sector, and trained in a range of sustainability, environmental and social standards including AA1000 AS, ISO14064-1, ISO45001, and ISO 9001. BSI is a leading global standards and assessment body founded in 1901.

Issue Date: 22/10/2024

For and on behalf of BSI:

Theuns Kotze, Managing Director – IMETA Assurance



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## GRI INDEX

Statement of Use	BEIL Group has reported with reference to the GRI Standards for the period between 1 <sup>st</sup> April 2022 to 31 <sup>st</sup> March 2023.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Setor Standard(s)	

2-1	Organizational details	Page No. 2-3
2-2	Entities included in the organization's sustainability reporting	Page No. 6-7
2-3	Reporting period, frequency and contact point	Page No. 1
2-4	Restatements of information	Page No. 1
2-5	External assurance	Page No. 66
2-6	Activities, value chain and other business relationships	Page No. 6-23
2-7	Employees	Page No. 58-59
2-9	Governance structure and composition	Page No. 30
2-10	Nomination and selection of the highest governance body	Reference of NRC Policy <a href="https://www.beil.co.in/compliances">https://www.beil.co.in/compliances</a>
2-11	Chair of the highest governance body	Page no. 11
2-12	Role of the highest governance body in overseeing the management of impacts	Page No. 31
2-14	Role of the highest governance body in sustainability reporting	Page No. 10-11
2-15	Conflicts of interest	Page No. 11
2-16	Communication of critical concerns	Page No. 16
2-17	Collective knowledge of the highest governance body	Page No. 11
2-18	Evaluation of the performance of the highest governance body	Page No. 11
2-19	Remuneration policies	Reference of NRC Policy <a href="https://www.beil.co.in/compliances">https://www.beil.co.in/compliances</a>
2-20	Process to determine remuneration	Reference of NRC Policy <a href="https://www.beil.co.in/compliances">https://www.beil.co.in/compliances</a>
2-22	Statement on sustainable development strategy	Page No. 32
2-23	Policy commitments	<a href="https://www.beil.co.in/compliances">https://www.beil.co.in/compliances</a>
2-24	Embedding policy commitments	<a href="https://www.beil.co.in/compliances">https://www.beil.co.in/compliances</a>
2-26	Mechanisms for seeking advice and raising concerns	Reference of Whistle Blower Policy <a href="https://www.beil.co.in/compliances">https://www.beil.co.in/compliances</a>
2-27	Compliance with laws and regulations	Reference of Policies <a href="https://www.beil.co.in/compliances">https://www.beil.co.in/compliances</a>
2-29	Approach to stakeholder engagement	Page No. 34-35
2-30	Collective bargaining agreements	Page No. 34-35

## GRI CONTENT INDEX

Environment		
302-1	Energy consumption within the organization	Page no. 38
302-3	Energy intensity	Page no. 38
302-4	Reduction of energy consumption	Page no. 42
303-1	Interactions with water as a shared resource	Page no. 49
303-3	Water withdrawal	Page no. 50
303-4	Water discharge	Page no. 53
303-5	Water consumption	Page no. 51
305-1	Direct (Scope 1) GHG emissions	Page no. 35
305-2	Energy indirect (Scope 2) GHG emissions	Page no. 35
305-3	Other indirect (Scope 3) GHG emissions	Page no. 35
305-4	GHG emissions intensity	Page no. 37
305-5	Reduction of GHG emissions	Executive Summary (Point no. 16)
305-7	Nitrogen oxides (NOx), Sulfur oxides (SOx), and other significant air emissions	Page no. 44
306-4	Waste diverted from disposal	Page no. 46-47
Social & Governance		
401-1	New employee hires and employee turnover	Page no. 57
403-1	Occupational health and safety management system	Page no. 58
403-9	Work-related injuries	Page no. 58
404-1	Average hours of training per year per employee	Page no. 57
405-1	Diversity of governance bodies and employees	Page no. 55



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**For Any Clarification, Please Contact**

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