

## EXECUTIVE SUMMARY

OF

**“Installation of a Split Cement Grinding Unit of 1.0 MTPA capacity”**

AT

**Village Chamata Pathar, Mouja- Sonapur, District- Kamrup (M),  
Assam**

Total Area: 8.42 ha

**Proposed Production:** 1.0 MTPA Cement

Schedule – 3(b) Category ‘B1’

Total Cost of the project: Rs. 342 Crores

Reference: TOR issued vide File No. SEIAA.3563/2023/TOR/9  
dated 03/01/2024

### PROJECT PROPONENT

**M/s Taj Cement Manufacturing Private Ltd.  
(TCMPL)**

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# 1. Executive Summary

## 1.1. Introduction

Taj Cement Manufacturing Private Ltd. (TCMPL) proposes “Installation of a Split Cement Grinding Unit of 1.0 MTPA capacity” at Dag no. 256, 257, 258, 259, 260, 261, 341, 344, 345, 346, 347, 348, 350 and 351, Village Chamata Pathar, Mouja-Sonapur, District- Kamrup (M), Assam over 8.42 ha land.

It has been made mandatory to obtain environmental clearance for all Cement Plants and the project lies under Item 3(b), Category B as per EIA Notification 2006 and its subsequent amendments. Since the unit is for “Installation of a Split Cement Grinding Unit of 1.0 MTPA capacity” the project falls under Category “B” (As per EIA Notification dated 14th Sept., 2006 and as amended from time to time).

Terms of Reference (TOR) for the proposed project has been granted by SEIAA, Assam File No.SEIAA.3563/2023/TOR/9 dated 03/01/2024.

### 1.1.1. About the Project

The total area of the plant will be 8.42 ha and the land has been owned by Touchdown Realtech Private Ltd. Out of total land, 5.89 ha of land has been purchased and the rest of the land area is being purchased. CLU for 3.91 ha is applied and CLU for remaining land will be applied. The lease agreement has been made between Touchdown Realtech Private Ltd. & Taj Cement Manufacturing Private Ltd. for setting up a cement plant and the lease is valid for the period of 30 years with effect from 19.06.2023.

Due to increase in market demand, M/s Taj Cement Manufacturing Private Ltd. (TMPCL) is planning for Installation of a Split Cement Grinding Unit of 1.0 MTPA.

### 1.1.2. Location & Accessibility

The proposed project is located at Village Chamata Pathar, Mouja- Sonapur, District- Kamrup (M), Assam. The minimum elevation of the site is about 74 AMSL and maximum elevation is 83 AMSL.

The site can be accessed from NH-27 which is 0.02 Km to South. The nearest Railway station is Teteliya Railway Station which is approx. 2.45 Km in the ENE direction. The nearest Airport is Lokpriya Gopinath Bordoloi International Airport, Guwahati which is approximately 41.01 Km in West direction.

## 1.2. Project Description

Details	Proposed
Production Capacity	Cement - 1.0 MTPA
Total plot area	8.42 ha
Total green area	2.94 ha (34.9% of total plot area)
Total Water Requirement	165 KLD
Fresh Water Requirement	156 KLD
Water Source	Groundwater permission has been applied vide application no. 21-4/2900/AS/IND/2023 dated 05.08.2023
Power Required	7,000 KVA (6,300 KW)- Assam Power Distribution Company Limited (APDCL)
Renewable Energy	50% of street solar lightning will be provided across the plant area
D.G. Sets	1 no. of DG Set of 500(for emergency lighting only)
Waste water	9.5 KLD
STP capacity	STP- 10 KLD
APCS proposed for process emissions	Pulse jet Bag Filters (For each process stack)
Process waste generated	STP Sludge- 3.14 kg/day, Dust from Bag filter- 25 TPD Bags & Containers- 5 TPA
Total Cost of the Project	Rs. 342 Crores
Manpower Details	During Construction Phase-228 Nos. During Operation Phase- 200 Nos.

\*Note: The plant will produce 100% Portland Pozzolana cement (PPC), however plant can produce upto 20% Ordinary Portland Cement (OPC) as and when required by market.

If OPC will be manufactured then the composition will be 95% Clinker, Gypsum 5%.

### Resource Requirements

- **Land:** The total area of the plant will be 8.42 ha and the land shall be leased by M/s Taj Cement Manufacturing Private Ltd. (TCMPL) .
- **Water Requirement:** The total water requirement will be 165 KLD out of which 156 KLD will be freshwater which will be sourced from groundwater, permission for which has been applied vide application no. 21-4/2900/AS/IND/2023 dated 05.08.2023 and treated water will be 9 KLD which will be reused in gardening.
- **Power Requirement:** Total Power load will be 7,000 KVA (6,300 KW)- Assam Power Distribution Company Limited (APDCL)/ DG set (for emergency use only) of capacity 1\* 500 kVA will be used for the power backup during construction and operation phase.

Installation of a Split Cement Grinding Unit of 1.0 MTPA capacity at Village Chamata Pathar, Mouja- Sonapur, District- Kamrup (M), Assam by M/s Taj Cement Manufacturing Private Ltd. (TCMPL)

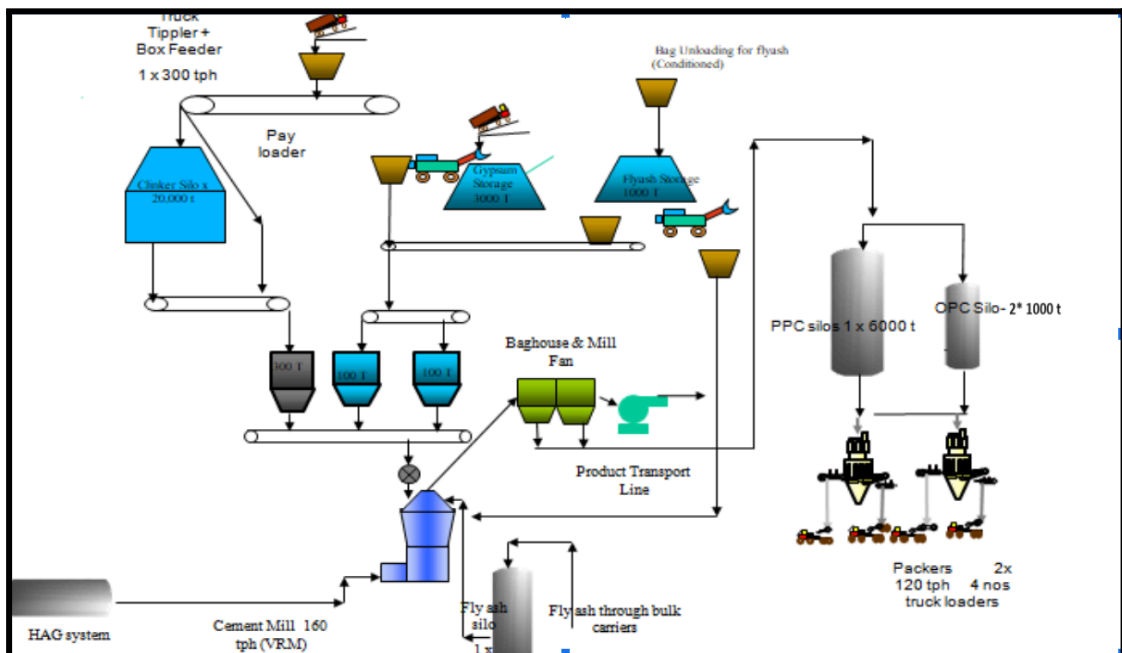
- **Fuel:** 80 liters/ hour of Low Density Diesel will be required for the operation of DG set (emergency use only).
- **Manpower:** 228 no. of workers required during the construction phase and 200 no. of workers will be required during the operation phase.
- **Operational Activities:** Operational activities involved in the unit are transportation, unloading of raw material, Clinker Storage & handling, Fly ash Storage & handling, Gypsum storage & handling, Cement grinding and storage and Cement packing and dispatch
- **Pollution Sources:** Main Pollution sources from the project will be air & noise emission, wastewater generation and Solid & Hazardous waste.

**Total quantity of wastewater generation** from the industry will be 9.5 KLD and will be treated in STP of capacity 10 KLD.

**Air Emissions** will be from the process machinery (Cement Mill (VRM), Coal mill, Packing Unit, Hot Air Generator & Gypsum Crusher), Vehicles & DG sets (emergency use only) used in production processes. To prevent emissions, APCS like pulse jet bag filters will be installed with all stacks in accordance with CPCB norms and bag house will be provided to cement mill (VRM).

The main sources of **noise generation** from the unit will be operation of process machinery, transportation & DG sets (emergency use only) etc. Adequate engineering control will be taken to minimize the noise level during construction and operations.

### Manufacturing Process:



## 1.3. Description of Environment

**Study Period:** Monitoring was carried out for **Post Monsoon Season from October 2022- December 2022**. The results for **Post Monsoon Season** have been summarized below:

The baseline data is generated through field study within the impact zone (Core Zone and Buffer Zone i.e. 10 Km from Project Boundary) for various components of the environment viz. Air, Noise, Water, Soil, Land, Traffic, Ecology and Socioeconomic. The baseline environmental quality has been assessed for Winter Season (October 2022- December 2022) (by NABL accredited laboratory Perfect Researchers Pvt Ltd, New Delhi) in a study area of 10 Km radius from the project site. The baseline data obtained is summarised below:

- **Land Use:**

**Core Zone:** The proposed Cement manufacturing unit will be located in an area of 8.42 ha and has been given on lease to M/s Taj Cement Manufacturing Private Ltd. (TCMPL) for setting up of cement plant. CLU has been applied to the concerned department for conversion of the agricultural land to industrial use land.

**Buffer Zone:** Out of total 10 km radius study area i.e. 32,991.56 Ha, barren/ waste land is about 107.7405 hectares (0.33%), built up area is about 1396.3496 hectares (4.23%), Water bodies area is about 585.842 hectares (1.78%), Forest land is about 21428.1343 hectares (64.95%), Agricultural land is about 9465.0784 hectares (28.69%) and grass grazing land is around 8.4106 ha. (0.03%) of the total 10 km radius study area.

- **Geology:** Topographically the proposed site area is almost flat. The minimum elevation on the northwest and east side is 73 m AMSL, whereas the maximum elevation on the south side of the project area is 83 m AMSL. The buffer area has both flat and undulating topography with a maximum elevation of 587 m AMSL in the southeast at the top of the hill. And the minimum elevation is 68 m AMSL lies in the north-northeast periphery in the Kopili River.

The study area consists of two different geological features mostly with indifferent fluvial sediments where in the south southeastern side the Assam-Meghalaya Gneissic complex covers. Geologically the area is underlain by geological formation of Archean/Pre-Cambrian age overlaid by Quaternary formation. The Archean and Precambrian are represented by inselbergs, comprising gneissic rocks, granite, schist, amphibolite, pegmatites and basic/acidic intrusives. The quaternary/pediments are represented by loose sands of various grades, pebbles, cobbles, gravels, clay and silts.

- **Hydrology:** A first-order ephemeral stream drains the project area. The general slope of the area is towards the north. The area is drained by the Digaru River, Kalang River and the Umpri nadi.

The buffer zone comprises various water bodies such as rivers, ponds, Jalikhora Bil, Domara Bil, Dave Bil and Chang Bil etc.

The area's major River is Digaru River located at 1.00 Km northwest, which flows from southwest to north-northwest. The Kopili River is located at 8.74 km north which flows from northeast to north. The Umpri River is located at 8.97 km south which flows from south-southeast to south-southwest.

The area has a parallel and dendritic drainage pattern with first- to fourth-order streams.

The slope of the area is towards the north and northeast and in the south direction of the project site.

There are water divides in the northeast and south-southeast. The northeast portion of the divide drains to the Kopili River whereas the south-southeast portion of the divide drains to the Umpri Nadi which flows in the south direction

- **Ambient Air Quality:**

**Core Zone:** The mean value of PM<sub>10</sub> at core zone locations ranges from (57.65 - 59.41 µg/m<sup>3</sup>) & PM<sub>2.5</sub> ranges from (29.20 - 30.11 µg/m<sup>3</sup>), SO<sub>2</sub> ranges from (6.33-6.55 µg/m<sup>3</sup>), NO<sub>2</sub> ranges from (14.46 - 14.92 µg/m<sup>3</sup>) & CO (0.41 - 0.43 mg/m<sup>3</sup>), are within the limits of National Ambient Air Quality Standards (NAAQS).

As per the Air Quality Index by CPCB, the air quality of the core zone is found to be Satisfactory during the sampling period - October 2022- December 2022.

**Buffer zone:** The mean value of PM10 ranges from (56.89 - 70.97 µg/m<sup>3</sup>), PM2.5 ranges from (29.29 - 36.54 µg/m<sup>3</sup>), SO<sub>2</sub> ranges from (7.11 - 8.87 µg/m<sup>3</sup>), NO<sub>2</sub> ranges from (14.99 - 18.70 µg/m<sup>3</sup>) & CO ranges from (0.45 - 0.56 mg/m<sup>3</sup>) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB the air quality of the buffer zone.

- **Ambient Noise levels:**

The ambient noise level during day time at the proposed project site varies from 58.5 dB (A) to 59.9 dB (A) which are within the day time standard limit of industrial area ~ 75 dB (A). During night the noise level at the project site ranges from 48.4 dB (A) to 48.9 dB (A) which are also within the night time standard limit of industrial area ~ 70 dB (A). In the residential area of Buffer Zone, noise levels at the day time range from 55.2 dB(A)- 58.2 dB(A) and at night time it ranges from 46.2 dB (A) to 47.8 dB (A). The daytime noise level in Commercial area (buffer zone) range from 62.3 dB(A) to 73.5 dB(A) during the day while during night time it 54.5 to 66.4 dB(A). The noise levels in the residential & commercial area of buffer zone is slightly higher than the ambient noise standards which could be attributable due to vehicular and residential activities.

- **Soil Quality:**

**Core Zone (S1):** The samples collected from the onsite - S1 shows that the soil moisture content in the core zone is 3.3%, pH is 6.96. Amount of primary nutrients like Organic matter is 0.95%, the available nitrogen is 72.8 mg/kg is very low, available Potassium is 23.7 mg/kg is very low while the available Phosphorus is 10.2 is medium in range. Therefore, the Primary nutrient profile shows that soil is low fertile in the core zone due to low concentration of available nitrogen.

**Buffer Zone (S2- S8):** The samples collected from the site S2- S8 shows that the soil moisture content in the buffer zone is between 2.8 -5.7%, pH is 5.33 - 7.16. Amount of primary nutrients like Organic matter is 0.39 - 2.50 %, the available nitrogen 67.4 - 128.8 mg/kg is low, available Potassium 9.9 - 43.9 mg/kg is low while the available Phosphorus 6.4 - 14.4 mg/kg is in higher range. Therefore, the Primary nutrient profile shows that soil is low fertile in the buffer zone due to the availability of extremely low amounts of nitrogen.

- **Surface Water Quality:**

The results of water quality of surface water (SW1 (i.e. Nala Onsite), SW2 (Pond Near Teteliguri) & SW5 (Digaru River Downstream) shows that it is meeting the criteria Class "D" i.e Propagation of Wildlife and Fisheries as per CPCB surface water quality- Designated Best Use Water Quality Criteria.

SW3, SW4 & SW6 i.e Digaru river upstream, Bomani Beel & Kopili river respectively shows that it is meeting the criteria class "B" i.e. Outdoor Bathing (Organised) as per CPCB surface water quality- Designated Best Use Water Quality Criteria defined by CPCB. The majority of the water quality parameters in the selected sites were within their respective drinking water quality standards.

- **Ground Water Quality:**

For the Buffer zone all the values are found within the drinking water standards (IS:10500). Total Dissolved Solids (TDS) of the sampling locations ranges from 204 mg/l to 438 mg/l., Total Hardness of the sampling locations ranges from 44 mg/l to 128 mg/l, Alkalinity of the sampling locations ranges from 40 mg/l to 112 mg/l, Calcium Concentration of all the sampling locations ranges from 8 mg/l to 25.6 mg/l, Chloride Concentration of all the sampling locations ranges from 12 mg/l to 36 mg/l. The results are well within the prescribed drinking water standard.

- **Biological Environment:**

Amchang wildlife sanctuary with ESZ is at 5.48 Km NW and Amchang wildlife sanctuary (6.045 Km NW). Pobitora wildlife Sanctuary (10.9 Km km NNE) In the Core Zone no significant varieties of flora and fauna were observed. The nearby area is limited to 3 to 4 differentiated forms of flora species. The names of flora species found at the time of site visit are *Arundinaria gigantea*, *Musa acuminata*, *Eupatorium perfoliatum*, *Ageratum conyzoides*, *Cynoglossum glochidiatum* etc

As per The Indian WildLife (Protection) Act, 1972, 13 endangered Schedule I Species are reported in the Buffer zone within a 10 km radius. The schedule I species observed in the buffer zone are, Conservation plan has been prepared for 13 schedules I species found in the buffer zone namely *Pavo cristatus* (Indian Peafowl), *Bos gaurus* (Gaur), *Elephas maximus indicus* (Indian Elephant), *Hoolock hoolock* (Western hoolock gibbon), *Manis pentadactyla* (Chinese pangolin), *Nycticebus bengalensis* (Slow loris), *Panthera pardus* (Leopard), *Trachypithecus pileatus* (Capped langur), *Python molurus* (Indian Python), *Varanus bengalensis* (Indian Monitor Lizard), *Prionailurus bengalensis* (Leopard Cat), *Lophura leucomelanos* (Kalij Pheasant), *Naja naja* (Indian cobra). Conservation plan for the Schedule I species has been prepared.

#### **Socioeconomic Environment:**

8 villages are taken as a sample village for Primary study.

The total population of the surveyed villages as mentioned above is 11240. The total household in the surveyed villages are 1935. The family size as per survey is 5.80. The total literacy rate in the surveyed village is 90%. Majority of the villages are Hindus by religion. Muslims are recorded as less than 36%. Caste wise, General, SC & ST, OBC are the main castes in the surveyed villages. Percentage of OBC category varies 43% to 78%. Percentage of SC category is 1%-10%, whereas percentage of ST are recorded up to 1 to 34%. General Category recorded up to 5 to 45%. All the villages are connected by a metal road with the main road. However, un-metalled roads are also seen within the villages. Average Pucca Houses are 19%, Average Semi Pucca Houses are 70% and Average Kutcha Houses are 11% in the surveyed villages. Category wise 45% farmers are marginal farmers. Small Farmers are 35%. Medium scale farmers are 15% and Large Farmers are only 5% in the sample villages as per Primary Study. Drinking water is primarily sourced from hand pumps and bore wells. Essential services like schools, banks, hospitals, and markets are easily accessible to the villagers. All the houses have their own individual toilet followed by a Septic Tank. Other sources of income are animal husbandry, labor wages, Govt. Jobs, Private Jobs & Self-employment.

- **Traffic Study:**

The carrying capacity of the NH-27 is much higher than the proposed traffic volume. The traffic (to & fro) from the Cement Grinding Unit will not create any traffic congestion. The volume/capacity ratio is likely to change from 0.14 to 0.15 with LOS being "A" to "A" only.

The carrying capacity of the SH-3B Road is much higher than the proposed traffic volume. The traffic (to & fro) from the Cement Grinding Unit will not create any traffic congestion. The volume/capacity ratio is likely to change from 0.23 to 0.26 with LOS being "B" to "B" only.



## 1.4. Additional Studies

The project is situated in the Seismic zone-V area and is a high risk zone. Proper measures will be taken during the construction to avoid damage and loss. To avoid flooding or water logging in the area due to the existing nearby river, the site will be raised above the existing road level. All measures will be taken as per law.

A detailed fire safety and management plan as well as on-site and off-site management plan have been developed for the site.

### **Some General safety measures**

- Occupational health surveillance programmes will be done six monthly & and their records will be maintained.
- Medical dispensary comprising a qualified doctor, male nurse, and Pharmacist in general shift will be available at the plant and the hospital facility is available nearby at Sonapur, Assam.
- Health check-up camps will be organised on a regular basis at company dispensary / nearby locations for nearby people.
- Proper medical facility arrangements will be provided in case of any accidental.
- Label Precautions and First Aid facilities will be provided.
- Emergency plans will be prepared and mock drills of the on-site emergency will be conducted.
- Employers and employees will be made aware of the hazardous properties of materials in their workplaces, and the degree of hazard each poses.
- Inspection of the industrial activity will be done at least once a year and an annual status report on compliance with the Rules will be submitted.
- An Environment, Health and Safety (EHS) Manager will be available, who handles all the safety issues related to man, machine & materials.
- Exterior refuge or safe areas include parking lots, open fields or streets which will be located away from the site of the emergency and which provide sufficient space to accommodate the employees.
- Coal storage mitigation – Proper ventilation will be provided around the coal storage shed.
- Specific written instructions will be obtained before any welding, burning, grinding or other flame heat producing work commences in coal processing areas.

## 1.5. Project Benefits

The unit will generate direct & indirect employment and benefits with respect to availability of social, physical infrastructure and other benefits, such as,

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- The project will cater to the increasing demand of cement in the country as well as increase export capacity of the country
- The industry will spend Rs. 342 Lakhs as Social welfare activities in the area including activities for Drinking water & Sanitation facility provision in near by village, Avenue plantation & development of green belt development in nearby area, Beel restoration of nearby site and Skill development will be done through vocational training programmes in nearby villages
- Employment opportunities will lead to a rise in income and improved standard of living. The industry would also generate jobs for the labourers during the construction phase as well as during the operation phase. It will provide direct and indirect employment to local youth.
- M/s Taj Cement Manufacturing Private Ltd. (TCMPL) will improve their efficiencies and use technological advances to reduce their impact on the environment. The industry also aims to use dust collected in Pulse jet Bag Filter
- The industry also aims at continuing their use of dust collected in bag filters back into the process to minimize the quantity of waste generated by the plant.
- The industry is Environmental Friendly as it will be consuming Fly ash which is a waste material from coal based power plants.
- The project will cater to the increasing demand of cement in the country as well as increase the export capacity of the country.

## 1.6. Environment Management Plan

### Air Quality Management Plan

#### For Construction Phase

- Water sprinkling will be done to reduce the dust generation.
- Flexible dust suppression systems (water spray) will be done as per the requirement at the construction site.
- No excavation of soil will be carried out without adequate dust mitigation measures in place.
- No loose soil or sand or Construction & Demolition Waste or any other construction material that causes dust will be left uncovered.
- Construction Waste processing and disposal sites will be identified and required dust mitigation measures be notified at the site.
- To minimize the occupational health hazard, proper masks will be provided to the workers who are engaged in dust generation activity.

#### For Operation Phase

- Workers will be trained properly regarding handling of raw materials/chemicals, appropriate PPEs like nose masks and goggles will be provided to the workers.

- Enclosures will be provided for all unloading operations, except wet materials like gypsum. The enclosures for the unloading sides could be flexible curtain type material covering up to the height of dumpers discharged from the roof.
- If required, water will be sprayed at the dust generation point.
- The air emissions will be controlled by proper mitigating measures such as regular dust suppression by sprinkling of water which helps in reducing the effect. In addition, periodical monitoring will be done and results will be analysed. In case any change shows adverse effects, it will be attended to for improvements.
- APCS Pulse Jet Bag Filter will be provided at all stacks in the cement grinding unit to reduce PM emissions to less than 30 mg/Nm<sup>3</sup> as per the revised standards of MoEFCC/CPCB norms.
- Coal will be used as primary fuel - For the proposed project, an adequate stack height with Cement Mill (VRM)(45 m), Coal Mill (25 m), Packing Unit (15 m), Hot air generator (15 m) and Gypsum Crusher (15 m) will be provided to process stack.
- All the personnel working in dust/noise prone areas are provided with appropriate personal protective equipment (PPE) such as helmets, safety shoes, safety goggles, industrial grade gloves, safety harnesses, nose masks.
- DG set (1 x 500 kVA) stack of 5 m will be provided and will be used in case of emergency only.
- Appropriate PPEs will be provided to the workers.
- Frequent work area monitoring will be done to ensure fugitive emission is under control.
- Green belt/ greenery will be developed along most of the periphery of the project area as well as along roads. Green area in the plot will be 2.94 ha (34.9% of plot area).

## **Noise Level Management Plan**

### **For Construction Phase**

- The noise will be limited only for specified periods of construction and most of the activities will be carried in the daytime only.
- Provision of protective devices like earmuffs/plugs to the workers will be done.
- Ready Mix concrete will be used instead of a concrete mixer so no noise generation will be there due to it.
- Proper training will be given to the workers regarding handling of construction materials. Workers will not be allowed to throw the construction materials like bricks, debris, etc. from height.
- Loading and unloading of Construction waste will be done from loaders/excavators directly to tippers/trucks to ensure minimal noise generation. Workers will be provided with ear plugs/ear muffs.
- Machines and equipment will be properly greased, lubricated and regularly maintained and shall be provided with vibration isolators and noise damping, construction will be done during the day time only, proper

barricading of the project site will be done and maintained during the construction.

- Appropriate PPE like ear plugs and muffs will be provided to the workers at the project site. Also, acoustic flooring using tiles will be done in the admin building so that it acts as a noise absorber.
- Proper barricading will be done around the project site which helps in controlling noise emission to & from the site to some extent.

### **For Operation Phase**

To reduce Ambient Noise level the following measures will be adopted:-

- Proper training will be given to the workers for handling raw materials. If required, PPE will be provided to the workers.
- Process machinery (coal mill, cement mill ) will be provided with Improved mufflers & silencers will be provided in the machinery generating high noise
- Machineries of the reputed make and less noise producing will be purchased.
- Stationary machineries and equipment will be properly enclosed by enclosures and will be provided with dampeners for minimising noise generated due to vibration of machineries.
- It is re-checked and assured that mufflers systems, vibration damping systems etc. will be installed in engines of machineries which will help in reduction of noise.
- Less noisy machinery/equipment will be installed.
- Sufficient oiling and lubrication will be done to all the parts of the machineries to ensure that minimal noise is generated.

### **Solid & Hazardous Waste Management plan**

- Proper care of waste will be taken while handling & transportation, appropriate PPE will be used.
- There will be no generation of hazardous waste from the process in the project.
- Used lubricating oil (0.08 KLPA) will be generated, and will be stored at separate storage areas designated and maintained as per Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. It Shall be given to authorized recycler
- STP sludge of 3.14 kg/day will be used as manure for plantation
- During the operational phase, Total 30 kg/day solid waste will be generated out of which 9 kg/day of biodegradable waste will be composted in OWC and will be used as a manure for green belt development and recyclable waste of 21 kg/day will be will be handed over to authorised recyclers
- E-waste of 0.25 TPA will be Sell/dispose to authorised vendor
- Plastic waste 5 TPA will be handed over to authorised recycler
- Battery waste of 0.18 TPA will be sell/dispose to authorised vendor i.e. M/s Kamakhya Power Solutions
- Bio medical waste of 0.1 TPA shall be given to authorised vendor

### **Wastewater & Effluent Management Plan**

#### **For Construction Phase**

- 20 KLD which will be sourced from treated water from STP/ Tanker and 9 KLD of wastewater generated will be treated in mobile STP.

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- During the construction period, runoff from the construction site will be properly channelised with garland drain and will not be allowed to stand (water logging) or enter the nala within the site. Proper channelization with gradland land will be done.
- The runoff due to rain water from the site will be collected and reused.

#### **For Operational Phase**

- Total water requirement for the project will be 165 KLD out of which 9 KLD will be treated water from STP of capacity 10 KLD, in turn reducing the consumption of freshwater.
- Groundwater will be extracted for the operations within the plant.
- There will be no discharge of wastewater into the nearby surface or groundwater sources as the unit is a Zero Liquid Discharge unit and will continue the same .
- Domestic effluent from plants is treated in STP of 10 KLD and the treated water will be utilised for gardening.

#### **Biological Environment Management Plan**

- Green belt/ greenery will be developed along most of the periphery of the project area as well as along roads. Green area in the plot will be 2.94 ha (34.9% of plot area).
- Total 8820 nos. of trees will be planted in the proposed site.

#### **Socio Economic Environment management plan**

- The Industry will require raw materials, skilled and unskilled laborers. It will be available from the local area. Due to increasing industrial activities, it will boost the commercial and economical status of the locality, to a positive extent.
- About 228 people will be employed during construction of the project.
- In the operation phase, the proposed plant will require a significant workforce of nontechnical and technical persons. About 200 people will be employed during the operational stage of the project. There will be indirect employment opportunities such as in transportation, workshop, packing, repair & maintenance etc. Lots of ancillary units will also come up. Unit will employ a minimum of 80% people of Assam in the Managerial cadre and minimum 90% people of Assam in Non Managerial Cadre.

The total area of the plant will be 8.42 ha and the land has been owned by Touchdown Realtech Private Ltd. Out of total land, 5.89 ha of land has been purchased and the rest of the land area is being purchased. CLU for 3.91 ha is applied and CLU for remaining land will be applied. The lease agreement has been made between Touchdown Realtech Private Ltd. & Taj Cement Manufacturing Private Ltd. for setting up a cement plant and the lease is valid for the period of 30 years with effect from 19.06.2023. Thus, no R&R will be applicable.

## 1.7. Cost & EMP Implementation Budget

The total cost of the project is Rs. 342 Crores. The total capital cost for the EMP Budget will be Rs. 5.74 crores and recurring cost will be Rs 0.32 Crores/Year.

Sr. No.	Particulars	Capital Cost (lakhs)	Recurring Cost (Rupees in lakhs/annum)
1	Air management	150	15
2	Solid Waste management	20	2
3	Wastewater management	15	2
4	Noise pollution control	10	1
5	Landscaping / plantation	17	4.5
6	Rain water harvesting	10	1
7	Social Activities	342	-
8	Safety	5	-
9	Environmental Monitoring	5.0	6.5
	<b>Total</b>	<b>574.0</b>	<b>32</b>

### Cost Summary

S.No.	COST Summary	Cost for Total (Rs. in Crores)	% of the project Cost
1	Project Cost	342.00	100
2	Capital cost for Environment Management Plan	5.74	1.67
3	Recurring cost for Environment Management Plan	0.32	0.094
4	Wildlife Conservation Plan (included in EMP capital)	0.60	0.17
5	Social activities (included in EMP capital)	3.42	1
6	Occupational Health and Safety and Public Health & Safety (included in EMP capital)	0.20	0.058