

# **EXECUTIVE SUMMARY**

**OF**

**DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

**&**

**ENVIRONMENTAL MANAGEMENT PLAN**

**For**

## **PUBLIC HEARING**

**Expansion of Cement production capacity of Standalone Grinding Unit from 0.9 MTPA to 6.0 MTPA (Expansion in existing Cement Mill from 0.9 to 3.0 Million TPA in phase - I and additional Cement Mill of 3.0 Million TPA in Phase - II)**

**At**

**Village-Parli Vaijnath, Tehsil-Parli, District-Beed, Maharashtra**

**/// APPLICANT ///**



**M/s. UltraTech Cement Limited**

**Parli Cement Works**

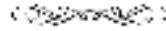
**Regd.: Ahura Centre, A-wing, 1st Floor, Mahakali Caves Road,  
Andheri (E), Mumbai - 400 093**

**Phone No.: 022-66917400, Fax No.: 022-28244970**

**Email : Kvijender.reddy@adityabirla.com**

## INDEX

<b>S.No.</b>	<b>Particulars</b>	<b>Page No.</b>
i.	Introduction	1
ii.	Location & Accessibility	1
iii.	Resource Requirement	2
iv.	Process description	3
v.	Environment Management Plant	5
vi.	Capital cost of the project	6
vii.	Environment Sensitivity of the area	8
viii.	Baseline Environmental Studies	11
ix.	Likely impact of the project on air, water, land, flora-fauna and nearby population	12
x.	Emergency Preparedness Plan in case of natural or in plant emergencies	12
xi.	Issues raised during public hearing (if applicable) and response given	12
xii.	Post project monitoring plan	14



## EXECUTIVE SUMMARY

### i) Introduction

M/s. UltraTrech Cement Ltd. (Unit: Parli Cement Works) has an existing Stand-alone Grinding Unit with cement production capacity of 0.9 million TPA at village Parli Vajinath, Tehsil - Parli, District - Beed, Maharashtra.

Environmental Clearance for Cement Grinding unit of Capacity 0.9 MTPA was obtained from MoEF&CC, New Delhi vide letter no. J-11011/872/2007-IA II (I) dated 1st May, 2008 in the name of M/s. Visaka Cement Industry Ltd.

Thereafter, M/s. The India Cements Ltd. took over M/s. Visaka Cement Industry Ltd. Transfer of EC from M/s. Visaka Cement Industry Ltd. to M/s. The India Cements Ltd. was obtained from MoEF&CC, New Delhi vide letter no. J-11011/872/2007-IA II (SI) dated 18th February, 2009. Copy of all the ECs are enclosed as Annexure - 1(a) & (b) along with this PFR.

Thereafter, M/s. UltraTech Cement Limited took over M/s. The India Cements Ltd. in April, 2024 by Asset Purchase Agreement. Application for Transfer of EC from M/s. The India Cements Ltd. to M/s. UltraTech Cement Limited has been uploaded on Parivesh Portal on 30th May, 2024 vide Proposal No. SIA/MH/IND1/477274/2024.

The Consent to Operate has been obtained from Maharashtra Pollution Control Board for the operation of 0.9 Million TPA of Cement (OPC & PPC) production in the name of M/s. The India Cements Ltd. (PGU). Application for Transfer of CTO from M/s. The India Cements Ltd. to M/s. UltraTech Cement Limited has been submitted to MPCB on 20th April, 2024.

Now, M/s. UltraTech Cement Ltd. is proposing an Expansion of Cement production capacity of Standalone Grinding Unit from 0.9 MTPA to 6.0 MTPA (Expansion in existing Cement Mill from 0.9 to 3.0 Million TPA in phase - I and additional Cement Mill of 3.0 Million TPA in Phase - II) at Village - Parli Vajinath, Tehsil - Parli, District - Beed, Maharashtra.

As per EIA Notification dated 14th Sept. 2006 & as amended thereof; this project falls under Category "B"; Project Activity '3 (b)' Cement Plant (Standalone Grinding Unit).

The Application for obtaining ToR has been uploaded on the Parivesh portal to SEAC on 23<sup>rd</sup> June, 2024 and Standard Terms of Reference have been issued by SEAC, Maharashtra dated 10<sup>th</sup> July, 2024. Baseline monitoring has been conducted during Summer Season (March, to May, 2024).

### ii) Location & Accessibility

#### Location

The plant site is located at Parli Vajinath, Tehsil Parli & District Beed in the state of Maharashtra.

#### Accessibility

The site is well connected to NH – 361H (adjacent in NE direction). Nearest village to the plant is Parli Vaijnath (Adjacent to Plant in SW direction) and nearest town to the plant site is town Latur (~50 Km in South direction). Nearest Railway Station is Parli Vaijnath Railway Station (~1.12 Km in WSW direction) and nearest airport is Shri Guru Gobind Singh Ji Airport, Nanded (~90 km in ENE direction). The site is well connected with communication facilities like telephone, internet etc.

**iii) Resource Requirement**

**a) Land requirement**

The existing plant area is 24.76 ha and proposed expansion will be done within the existing plant premises only. Land is already under possession of the company and the land use has already converted to Industrial type. Thus, there will be no change in land use, only intensity of land use will increase due to the expansion Project.

Out of total plant area of 24.76 ha; 33 % area i.e., 8.17 ha has been developed under greenbelt development / plantation in accordance with CPCB guidelines 8.17 ha; area (with 12255 Nos. of saplings) has already been developed. Further 8170 saplings will be planted on additional land for proposed expansion & gap filling will be done to maintain the density of 2500/ha.

**b) Raw material Requirement & Fuel requirement**

**Raw material**

The major raw materials are/will be Clinker, Fly ash, Slag and Gypsum.

Details regarding quantity of raw materials required, their source along with distance & mode of transportation are given below:

S. No.	Raw Material	Existing Quantity	Additional Quantity	Total	Source	Mode of Transportation & Approx Distance
1.	Clinker	0.603	3.417	4.02	UTCL Integrated Cement Plant i.e Balaji Cement Works, Rajashree Cement Works, Andhra Pradesh Cement Works and other Units	By Rail 350 km - 450 km
2.	Gypsum	0.045	0.255	0.30	NTPC Solapur, Coromandal, NFL Surat	Rail / Road ~ 120km-160 km
3.	Fly ash / Pond ash	0.252	1.428	1.68	Thermal Power Plant, Parli, Paras Thermal Power Plant Akola, Kharkhoda, Thermal Power Plant, Khaparkheda	Road ~10 km- 150km
4.	Slag	-	0.9	0.9	JSW, Dolvi Raigarh, Chandrapur, EASSAR Steel	Rail/Road ~ 200km-260km
5.	PI	-	0.05	0.05	Local Market	Road ~ 10 km - 100km

Source: Pre-feasibility Report

### Fuel Requirement

Details regarding quantity of fuel required, their source along with distance & mode of transportation for proposed expansion project are given below:

#### Fuel Requirement

S. No.	Name	Quantity (Million TPA)	Source	Mode of transportation and distance
		Total		
1.	Coal (Imported/ Indigenous)	0.112	Nearby Market	~100km by Road

Source: Pre-feasibility Report

### c) Basic requirement for the project

S. No.	Particular	Requirement			Source	
		Existing	Additional	Total		
1.	Water Requirement (KLD)	14	286	300	Ground water	
2.	Power Requirement (KVA)	6500	18500	25000	Maharashtra State Electricity Distribution Co. Ltd.	
3.	Manpower Requirement	<b>Operation Phase</b>			Unskilled/ semi-skilled manpower has been / will be sourced from the local area and skilled manpower has been / will be sourced from outside/ local.	
		Regular	80	30		110
		Contractual	129	50		179
		<b>Total</b>	<b>209</b>	<b>80</b>		<b>289</b>
	<b>Construction Phase</b>	0	500	500		

Source: Pre-Feasibility Report

### iv) Process description

#### a) Process Description of Grinding Unit

The cement manufacturing is based on dry process technology with a Cement mill (Ball Mill With Roller Press (BMRP) / VRM), closed-circuit grinding unit and automated rotary packers and truck loading machines for packing & loading of cement (OPC, PPC, PCC & PSC).

Major steps involved in the process of cement manufacturing are given as below:

- Clinker Transport & Storage
- Gypsum Crushing & Storage
- Fly Ash & Slag Storage
- Clinker Grinding (Cement Grinding System)
- Cement Storage
- Cement Packing Loading & Dispatch

b) Gaseous emission, liquid effluent and solid and hazardous wastes

Emission Management			
Emissions	Source		Mitigation measures
	Plant Unit	Section	
PM	Grinding Unit	Cement Mill	Bag House (01 Existing) + (01 Proposed)
Fugitive Emission	Grinding Unit	Raw Material Handling & Storage	<ul style="list-style-type: none"> <li>Covered Conveying System has been/will be provided for transfer of raw materials.</li> <li>Bag filters (existing (10 nos.) + proposed (8 nos.) has been/will be provided at all material transfer points.</li> </ul>
		Transportation activity	<ul style="list-style-type: none"> <li>Fly ash is being / will be received through closed bulkers &amp; fed into silo through pneumatic system.</li> <li>Clinker, fly ash and Cement is being / will be stored in the RCC silos.</li> <li>Gypsum, slag &amp; limestone is being / will be stored in the covered sheds.</li> <li>Regular water sprinkling through tanker is being/ will be carried out at internal road, loading and unloading points, transfer points, etc. to control dust emissions.</li> <li>Internal roads are/ will be paved in order to reduce the fugitive dust emission inside the plant premises.</li> <li>Proper maintenance of vehicles is being / will be done to reduce gaseous emissions.</li> <li>PUC certified vehicles is being / will be hired for the project.</li> <li>Greenbelt and plantation have been/will be done inside &amp; periphery of the plant to attenuate air pollution.</li> </ul>
Details of effluent and their management			
Effluents	Plant Unit		Mitigation measures to be adopted
Process Waste Water	Process		<ul style="list-style-type: none"> <li>Grinding unit is based on the dry process technology, no waste water discharge is envisaged. Hence, Zero Liquid Discharge (ZLD) is being/will be maintained at all points.</li> <li>Water used for cooling at various stages of cement manufacturing will be partially evaporated and partially recycled; hence, no waste water is being/will be discharged.</li> </ul>
Sewage	Domestic Utilities (Plant Canteen & Office)		<ul style="list-style-type: none"> <li>Total domestic waste water is estimated to be 6.7 KLD (generated from office toilets and canteen is being /will be treated in the STP of capacity 10 KLD and treated water 5 KLD is being /will be used in greenbelt development/ plantation.</li> </ul>

Details of Solid & Hazardous Generation and their management

Plant Unit	Type of Waste	Waste	Approx. Quantity (TPA)	Treatment / Disposal
STP	SW	STP Sludge	0.70 kg/day	Used as manure for greenbelt development/ plantation.
Different sections of plant (Plant Maintenance)	HW	Used / Spent Oil (5.1)	15	is being will be sent to TSD/Authorized recyclers
		Empty barrels/containers	1.0	
		Waste or Residues containing oil (5.2)	0.5	is being will be sent to authorized recyclers as per Battery Waste Management Rules, 2020 or will be sold in buyback scheme to authorized vendors.
		Lead Acid batteries	3	
Plant Canteen & Rest room (MSW)	Dry / Wet	Bottles, paper, cans, textile, etc.	5	Is being / will be disposed off as per Municipal Solid Waste Management Rules, 2016 and its subsequent amendment.
		Kitchen and canteen/ Green waste		
Plant & Office	E - waste	Discarded electrical equipment, cables, CFL / LED Lights	2	Is being/Will be sent to registered vendors as per E - waste Management Rules, 2020

v) **Environment Sensitivity of the area**

S. NO.	PARTICULARS	DETAILS
1.	Nearest Village	Parli Vajinath (Adjacent to Plant in SW direction)
2.	Nearest National Highway / State Highway	<ul style="list-style-type: none"> <li>o NH - 361H (Adjacent Km in NE direction)</li> <li>o NH-361F (1.0 Km in North direction)</li> <li>o NH-548B (1.0 Km in West direction)</li> </ul>
3.	Nearest Railway station	o Parli Vajinath Railway Station (~1.5 Km in WSW direction)
4.	Nearest Airport	o Shri Guru Gobind Singh Ji Airport, Nanded (~90 km in ENE direction)
5.	National Parks, Wildlife Sanctuaries, Biosphere Reserves within 10 km radius	There is No National Parks, Wildlife Sanctuaries, Biosphere Reserves within 10 km radius.
6.	Reserved Forest, Protected Forest within 10 km radius	<ul style="list-style-type: none"> <li>o Parli RF (3.0 km, SE directions)</li> <li>o PF (5.0 km, WNW directions)</li> <li>o RF (5.0 km in SW direction)</li> <li>o Ambalwadi RF (8.5km, SW)</li> <li>o Daunapur RF (9.0 km, SW direction)</li> </ul>
6.	River / Water Body (within 10 km radius)	<ul style="list-style-type: none"> <li>o Nallah Passing through the Plant site (inside Plant Premises)</li> <li>o Padmavati Nadi (~ 2.0 km in WNW direction)</li> </ul>

S. NO.	PARTICULARS	DETAILS
1.	Nearest Village	Parli Vajinath (Adjacent to Plant in SW direction)
2.	Nearest National Highway / State Highway	<ul style="list-style-type: none"> <li>o NH – 361H (Adjacent Km in NE direction)</li> <li>o NH-361F (1.0 Km in North direction)</li> <li>o NH-548B (1.0 Km in West direction)</li> </ul>
3.	Nearest Railway station	o Parli Vajinath Railway Station (~1.5 Km in WSW direction)
4.	Nearest Airport	o Shri Guru Gobind Singh Ji Airport, Nanded (~90 km in ENE direction)
		<ul style="list-style-type: none"> <li>o Right bank Canal (~3.5 Km in NW direction)</li> <li>o Mazalgaon Right Bank Canal Nala (~4.5 Km in NNE direction)</li> <li>o Borana Nadi (~7.0 km in East direction)</li> </ul>
7.	Nearest CPA/SPA/ESA/ESZ	o There is no CPA/SPA/ESA/ESZ within 10 Km radius of the study area.
8.	Seismic Zone	Zone II [as per IS 1893 (Part-I): 2016]

Source: Pre-feasibility Report

**vi) Baseline Environmental Studies**

Baseline study was conducted during Summer Season (March to May, 2024). The dominant wind direction of the area is from the North direction during the monitoring period.

**Ambient Air Quality:** Ambient Air Quality Monitoring reveals that the concentrations of PM<sub>2.5</sub> and PM<sub>10</sub> for all the 08 AAQM stations were in range of 20.6 to 48.4 µg/m<sup>3</sup> and 43.8 to 82.5 µg/m<sup>3</sup> respectively and were found to be well within the prescribed limits.

The concentrations of NO<sub>2</sub> and SO<sub>2</sub> were found to be in range of 10.2 to 32.9 µg/m<sup>3</sup> and 5.0 to 17.8 µg/m<sup>3</sup> respectively. The concentration of the gaseous pollutant for NO<sub>2</sub> and SO<sub>2</sub> was found minimum at Village Lokarwadi respectively.

Similarly, the value of PM<sub>10</sub> and PM<sub>2.5</sub> were found maximum at Village Parli and minimum at Village Lokarwadi. CO concentration was not detected at four of the monitoring locations & observed maximum of 1.1 mg/m<sup>3</sup> at Near New Thermal Power Plant, Parli. The PAH concentration was also not detected at any monitoring locations.

**Ambient Noise Quality:** Ambient noise levels were monitored at 08 locations in and around the plant site. Noise level varies from minimum 50.2 leq dB (A) at Village Maikapur to maximum 67.3 leq dB (A) at Old Power Plant during day time and from minimum 39.4 Leq dB (A) at Village Maikapur to maximum 61.7 Leq dB (A) at Old Power Plant during night time.

**Surface Water Quality:** 05 Surface water bodies present in 10 km radius from plant site; All the surface bodies were found dry during the baseline monitoring season (March to May, 2024).

**Ground water Quality:** The ground water was collected from 08 locations. The pH values across sampling locations range from 7.49 to 7.71, within the acceptable limit of 6.5-8.5, indicating neutral to slightly alkaline water, suitable for most purposes. The Total hardness levels vary significantly, with values ranging from 355.7 to 562.3 mg/l as CaCO<sub>3</sub>. TDS levels are elevated, ranging from 510



to 801 mg/l. it can be concluded that ground water quality values in the study area are within the permissible limits as per the drinking water standards (IS: 10500-2012). Therefore, the ground water available within the study area is fit for consumption.

**Soil Quality:** Soil sampling was carried out at 08 locations and the analysis results shows that soil have; pH value is ranging from 7.82 to 8.43 from --- % to --- % and Organic Carbon varies from 0.53 % to 0.72%. Soil texture of the soil samples majorly consists of silty clay, clay loam & clay. All the essential nutrients were observed to be Nitrogen (306.46 at village Parli to 250.76 at Village Daudpur), Phosphorous (17.36 at Village Lokarwadi to 30.8 at Village Parli), Potassium (345.29 at village Kanhewardi to 688.02 at village Parli), Magnesium (519.56 at village Daudpur to 934.89 at village Ukhali), Calcium (3603.2 at Village Lokarwadi to 5515.15 at Village Indapawdi) and Sodium (143.94 at Project site to 208.79 at Village Kanhewardi).

#### ∞ Traffic Study

- ✓ Traffic survey has been conducted for 24 hours at NH – 361H (Adjacent NE direction) and 361F (1.0 km in North direction).
- ✓ As per the survey it is shown that Motor Cycle / Scooter (33.0 %), Truck (17%) or bus (9 %), Passenger Car / Van/ Auto Rickshaw (24.0 %), Tractors (5.0 %), Trollers (1.0%) and Cycle (2.0 %) runs mainly on surveyed road. (NH – 361H (Adjacent NE direction)).
- ✓ As per the survey it is shown that Motor Cycle / Scooter (31.0 %), Truck (19%) or bus (9 %), Passenger Car / Van/ Auto Rickshaw (23.0 %), Tractors (5.0 %), Trollers (11.0%) and Cycle (2.0 %) runs mainly on surveyed road. (NH – 361F (1.0 km in North direction)).
- ✓ The existing V/C ratio is 0.35 & LOS value is “B” very good for NH – 361H.
- ✓ The existing V/C ratio is 0.35 & LOS value is “B” very good for NH – 361F.
- ✓ The V/C ratio will be 0.57 and LOS value will be “C” for NH – 361H, after the operation of proposed expansion project.
- ✓ The V/C ratio will be 0.57 and LOS value will be “C” for NH – 361F, after the operation of proposed expansion project.
- ✓ Thus, it can be concluded that the present road network will be stable to bear the traffic load of 100% transportation by road. However, in future Railway siding will be proposed for raw material & product transportation, which will help in reducing the traffic load of road transportation activities.

#### ∞ Biological Environment

**Terrestrial & Aquatic Floral Diversity:** There is total 118 species of floral diversity and 10 major species of agriculture diversity found in the buffer zone of the study area. Out of total terrestrial floral diversity there are 68 species of trees, 9 species of grasses, 21 species of shrubs, 12 species of herbs and 8 species of climbers recorded in the study area based on primary observation as well as based on secondary data.

**Terrestrial & Aquatic Faunal Diversity:** There is total 110 species of faunal diversity and 8 species of ichthyofaunal diversity. Out of total terrestrial faunal diversity there are 18 species of mammals, 11 species of reptiles, 5 species of amphibians and 53 species of avian fauna and 23 species of Butterflies & Arthropods and 8 species of fishes found in the study area based on primary observation as well as based on secondary data.

No National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas exists within 10 km radius study area.

There are 20 schedule - I species recorded in the study area which are as follows; *Canis aureus* (Jackal), *Felis chaus* (Jungle Cat), *Hyaena hyaena* (Striped Hyena), *Hystrix indica* (Porcupine), *Herpestes edwardsii* (Mongoose), *Macaca radiata* (Bonnet Macaque), *Vulpes bengalensis* (Bengal Fox), *Chamaeleon zeylanicus* (Indian Chameleon), *Daboia russelii* (Russell's Viper), *Eryx johini* (Sand Boa), *Naja naja* (Indian Cobra), *Ophiophagus hannah* (King Cobra), *Ptyas mucosa* (Indian Rat Snake), *Asio flammeus* (Short-eared Owl), *Accipiter badius* (Shikra), *Leopicus mahrattensis* (Yellow-crowned Woodpecker), *Gallus sonneratti* (Grey Junglefowl), *Nettapus coromandelianus* (Cotton Pygmy Goose), *Pavo cristatus* (Peafowl), and *Sterna aurantia* (River Tern). Wildlife Conservation Plan for Schedule - I species preparation is under process.

#### ∞ Socio-Economic Environment

As per 2011 Census, the population recorded is 362364 (for 10 km radius). Total no. of households is 60153, 7306, 5285 respectively in primary, secondary and outer zone. Sex ratio is 922, 911, 908 (females per 1000 males) observed in primary, secondary and outer zone respectively. Scheduled Caste fraction of the population of the study area is 59298 i.e., 16.36% and Scheduled Tribe 4298 i.e., 1.19%. Literacy rate of the area is 66.03%.

#### vii) Likely impact of the project on air, water, land, flora-fauna and nearby population.

S. No.	Project Activity	Aspect	Impact	Mitigation Measures
<b>Impact on ambient air quality &amp; its mitigation measures</b>				
1.	Raw Material & Finished Product - storage and handling, Plant process (Cement mill), Packing & dispatch	Air Pollution	<ul style="list-style-type: none"> <li>▪ Increase in the fugitive dust concentration in the ambient air</li> <li>▪ Workers affected by respiratory diseases due to working in the high dust-zone area</li> </ul>	<ul style="list-style-type: none"> <li>• Fly ash is being / will be received through closed bulkers &amp; fed into silo through pneumatic system.</li> <li>• Clinker, fly ash and Cement is being / will be stored in the CSC silos, Hopper Silo and Silos.</li> <li>• Gypsum, slag &amp; limestone is being / will be stored in the covered sheds.</li> <li>• Internal roads are/ will be paved in order to reduce the fugitive dust emission inside the plant premises.</li> <li>• There is one Bag House along with Cement Mill stack, Bag filters (existing (10 nos.) + proposed (8 nos.) has been/will be provided at all material transfer points.</li> <li>• Greenbelt and plantation have been/will be done inside &amp; periphery of the plant to attenuate air pollution.</li> </ul>

S. No.	Project Activity	Aspect	Impact	Mitigation Measures
				<ul style="list-style-type: none"> <li>Personal Protective Equipment will be provided to the workers.</li> </ul>
<b>Impact on ambient noise quality &amp; its mitigation measures</b>				
1.	Construction activities; transportation of raw materials and products, concrete mixing, crane operation, steel erection, mechanical / electrical installation	Noise generation	<ul style="list-style-type: none"> <li>Stress related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption etc</li> </ul>	<ul style="list-style-type: none"> <li>Equipment will be kept in good condition to keep the noise level within 90 dB (A).</li> <li>Workers will be provided necessary protective equipment e.g., ear plugs, earmuffs.</li> <li>Periodic Occupational Health Surveillance of worker will be done.</li> </ul>
2.	Machineries and equipment; Cement mill operation, packing & dispatch, compressors, pumps and motors and D.G. Set and from transportation activities.	Noise generation	<ul style="list-style-type: none"> <li>stress related illness, high blood pressure, speech interference, hearing loss, sleep disruption, impact on nearby fauna etc</li> </ul>	<ul style="list-style-type: none"> <li>Equipment proposed to be installed will be designed to confirm occupational noise levels prescribed by regulatory agencies.</li> <li>Machine operators and Persons working close to machine are being / will be provided with personal protective equipment viz. Ear plugs / Ear muffs etc.</li> <li>Proper maintenance, oiling and greasing of machines at regular intervals is being / will be done to reduce generation of noise.</li> <li>Properly insulated enclosures/closed building has been/will be provided.</li> <li>Periodic Occupational Health Surveillance of worker will be done.</li> </ul>
<b>Impact on road &amp; traffic &amp; its mitigation measures</b>				
1.	Transportation of raw materials and products	Particulate Matter Emission, Fugitive Dust Emission, emission of CO, NOx, Noise generation	<ul style="list-style-type: none"> <li>deterioration of the ambient air quality.</li> <li>noise level</li> <li>Impact on nearby fauna due to noise generation</li> <li>Increased probability of accidental incidences in the area</li> <li>Impacts on public health</li> </ul>	<ul style="list-style-type: none"> <li>Vehicles are being / will be covered with a tarpaulin and not over loaded.</li> <li>Un-necessary blowing of horn is being / will be avoided.</li> <li>Roads are being / will be maintained in good condition to reduce noise due to traffic.</li> <li>Greenbelt of minimum 3 m width is being / will be developed along the plant boundary.</li> <li>To avoid accidents, the speed of vehicles is being / will be kept low near habitation areas.</li> <li>No. of vehicles influx in the plant is/will be maintained on daily or weekly basis</li> <li>Vehicles with PUC Certificate are being / will be hired.</li> </ul>

S. No.	Project Activity	Aspect	Impact	Mitigation Measures
<b>Impact on water resource and quality &amp; its mitigation measures</b>				
1.	Abstraction of groundwater for plant process & domestic use	Impact on ground water level & quality	<ul style="list-style-type: none"> <li>▪ There will be decrease in ground water level due to ground water abstraction.</li> <li>▪ The discharge of waste water from the plant may pose adverse impact on the ground water quality of the area.</li> </ul>	<ul style="list-style-type: none"> <li>• The existing project has ground water abstraction permission of 14 KLD and additional 286 KLD will be required for the proposed expansion.</li> <li>• Company has one rainwater recharge structures for recharging groundwater with rooftop area of 1000sq.m placed inside the plant boundary with a maximum water storage of 4000 cubic meter. It may be seen that a total of 666.4 runoff is available for recharge in the premises from the roof top of the building.</li> <li>• The company is / will use water efficiently such as out of total water requirement of 300 KLD, water used for cooling at various stages of cement manufacturing will be partially evaporated and partially recycled into the process apart from that the waste water generated is being/will be treated in existing STP and is being/ will be reused for greenbelt &amp; plantation</li> </ul>
<b>Impact on terrestrial and aquatic habitat</b>				
1.	Construction activity	Particulate Matter Emission, Noise generation	<ul style="list-style-type: none"> <li>▪ disrupting food chains, reducing biodiversity, and causing diseases to living beings</li> </ul>	<ul style="list-style-type: none"> <li>• No site clearing and site preparation is required as the expansion will be done through process optimization in existing Cement Mill.</li> <li>• Sprinkling of water on construction site (i.e., Silos, packing plant &amp; truck parking area) and on unpaved roads is being/will be done during the expansion of grinding unit.</li> </ul>
2.	Transportation activity	Particulate Matter Emission, Fugitive Dust Emission, emission of CO, NOx, Noise generation		<ul style="list-style-type: none"> <li>• Scaling up the greenbelt development &amp; plantation in and around the Plant site to control the spread of particulate emission and noise.</li> <li>• Equipment will be kept in good condition to keep the noise level within 90 dB (A).</li> <li>• Efficient Air Pollution Control Equipment (APCE) have been/ will be installed to keep the emissions within the permissible limits.</li> <li>• Using paved roads for transportation to minimize fugitive emissions.</li> </ul>
3.	Plant operations	Particulate Matter Emission, Fugitive Dust Emission		<ul style="list-style-type: none"> <li>• Material transport in covered truck and storing it under tarpaulin cover or covered sheds.</li> <li>• Transport vehicles and machinery is being/ will be properly maintained and periodically checked for pollution level to reduce noise and gaseous emissions in the surrounding environment</li> </ul>
<b>Impact on socio economic environment &amp; its mitigation measures</b>				

S. No.	Project Activity	Aspect	Impact	Mitigation Measures
1.	Construction activity, transportation of raw material & finished products, plant operations	Population influx	<ul style="list-style-type: none"> <li>▪ Employment generation</li> <li>▪ Impacts on the health of nearby villagers</li> </ul>	<ul style="list-style-type: none"> <li>• Employment opportunities is being/will be created by M/s. UltraTech Cement Limited during planning and preparation, construction and operational phases of the proposed expansion project.</li> <li>• Company is/ will be using advance pollution control equipment's ensuring compliance with environmental standards set by the State and Central Governments.</li> <li>• Company has organised health camps for including Eye Check Up monitoring of BP, Sugar and general health check up with distribution of medicine under CSR activities.</li> </ul>

viii) Post-project monitoring plan

S. No	Attributes / Aspects	Monitoring Parameter	Location	Frequency	Responsibility
1.	Ambient Air quality Monitoring	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> and NO <sub>x</sub>	Plant Site, Village in Upwind and Downwind direction from the plant site and as per EC/CTO conditions.	Twice a Week	Environment Site In charge
2.	Fugitive Emission Monitoring	SPM	Cement Mill, Packing Plant, Near Gypsum Feeding Yard & Near Fly Ash Unloading Area	Monthly	Environment Site In charge and team
3.	Stack Monitoring	PM	Cement Mill	Monthly / Continuous Online Monitoring	Environment Site In charge and team
4.	Water Quality and level	pH, Turbidity, Colour, Odour, Taste, TDS, Total Hardness, Calcium hardness, Magnesium hardness, Chloride, Fluoride, Sulphate, Nitrates, Alkalinity, Iron, Copper, Manganese etc.	Plant Site, Nearby Ground water sources and as per CGWA NOC	As per CGWA NOC	Environment Site In charge
5.	Sewage Treatment Plant	pH, BOD, COD & Total Coliform	Inlet and Outlet of STP	Monthly & as per CTO	Environment Site In charge and team
6.	Noise Level	Day & Night dB (A)	Project Boundary, High noise generating areas within the Plant	Monthly & as per EC / CTO	Environment Site In charge

S. No	Attributes / Aspects	Monitoring Parameter	Location	Frequency	Responsibility
			Boundary and as per CTO conditions		
7.	Medical Checkup	Spirometry, Audiometer, Biochemical Parameter (Urine, Blood) / Circulatory and Vision Test etc.	Dispensary / Health Centre	Yearly as per Factories Act	Environment engineer, Plant Unit Head and HR Department

**ix) Emergency preparedness plan in case of natural or in plant emergencies.**

M/s. UltraTech Cement Limited is having an Emergency Plan (Onsite & offsite) at the plant site. Suitable Risk Control Measures with respect to Risk Assessment has been/will be implemented to minimize the risk to an acceptable level. Regular Training, Implementation of SOPs and compliance of relevant Personal Protective Equipment (PPEs) help to minimize the health hazards and incidental casualties.

**x) Issues raised during public hearing (if applicable) and response given.**

Public Hearing is yet to be conducted for the proposed expansion in standalone grinding unit. As per MoEF&CC OM dated 30<sup>th</sup> Sept., 2020 & OM dated 20<sup>th</sup> Oct., 2020; Socio-Economic Developmental activities will be formulated on the basis of the issues raised during Public hearing; which will be addressed in EMP & will be implemented in a time bound manner with the start of the Proposed expansion project.

**xi) Environment Management Plan**

Particulars	Details
Air Quality Management	<ul style="list-style-type: none"> <li>⊗ There is one Bag House along with Cement Mill stack, Bag filters {existing (10 nos.) + proposed (8 nos.)} has been/will be provided at all material transfer points.</li> <li>⊗ Clinker, fly ash and Cement is being / will be stored in the RCC silos.</li> <li>⊗ Gypsum, slag &amp; limestone is being / will be stored in the covered sheds.</li> <li>⊗ Fly ash is being / will be received through closed bulkers &amp; fed into silo through pneumatic system.</li> <li>⊗ Internal roads are paved in order to reduce the fugitive dust emission inside the plant premises.</li> <li>⊗ Proper maintenance of vehicles is being / will be done to reduce gaseous emissions.</li> <li>⊗ PUC certified vehicles is being / will be hired for the project.</li> <li>⊗ Greenbelt and plantation have been/will be done inside &amp; periphery of the plant to attenuate air pollution.</li> </ul>
Effluent Management	<ul style="list-style-type: none"> <li>⊗ Cement manufacturing process will be based on dry process technology hence, no waste water is being/will be discharged outside the plant premises and ZLD is/ will be strictly implemented.</li> </ul>

Particulars	Details
	<ul style="list-style-type: none"> <li>☞ Water used for cooling at various stages of cement manufacturing is being/will be partially evaporated and partially recycled; hence, no waste water is being/will be discharged.</li> <li>☞ Total domestic waste water is estimated to be 6.7 KLD (generated from office toilets and canteen is being /will be treated in the STP of capacity 10 KLD and treated water 5 KLD is being /will be used in greenbelt development/ plantation.</li> </ul>
Storm water Management	<ul style="list-style-type: none"> <li>☞ Storm water drains are maintained</li> <li>☞ Sedimentation pits are/will be provided at appropriate location to trap the silt laden runoff water and preventsilt from going outside.</li> </ul>
Rain Water Harvesting	<ul style="list-style-type: none"> <li>☞ Company has one rainwater recharge structures for recharging groundwater with rooftop area of 1000sq.m placed inside the plant boundary with a maximum water storage of 4000 cubic meter. It may be seen that a total of 666.4 runoff is available for recharge in the premises from the roof top of the building</li> </ul>
Noise Management	<ul style="list-style-type: none"> <li>☞ Equipment generating excessive noise has been/will be kept in properly insulated enclosures.</li> <li>☞ Isolation of continuously vibrating structures/ machines by proper and secured mountings.</li> <li>☞ Proper maintenance, oiling and greasing of machines and conveyors at regular intervals to reduce generation of noise.</li> <li>☞ Personal Protective Equipment (PPEs) like earplugs and earmuffs has been/will be provided to the workers exposed to high noise level.</li> <li>☞ Regular monitoring of noise level and corrective measures accordingly.</li> </ul>
Solid & Hazardous Waste Management	<ul style="list-style-type: none"> <li>☞ Sewage sludge (0.70 kg/day) generated from STP to be used as manure in greenbelt development &amp; plantation.</li> <li>☞ Used/Spent oil (Cat. 5.1) 15 TPA, Waste Residue containing oil (5.2) 0.5 TPA, Empty barrels/ Containers/liners contaminated with hazardous chemicals/ wastes (33.1) 1.0 TPA is being/will be generated which is being/ will be sent to TSD/Authorized recyclers.</li> <li>☞ Municipal Solid waste 5 TPA generated from plant canteen &amp; rest room; which Is being / will be disposed off as per Municipal Solid Waste Management Rules, 2016 and its subsequent amendment.</li> <li>☞ Used Lead acid batteries (0.5 TPA) is being/ will be sent to authorized recyclers as per Battery Waste Management Rules, 2020 or will be sold in buyback scheme to authorized vendors.</li> </ul>
Greenbelt Development / Plantation	<ul style="list-style-type: none"> <li>☞ Out of total plant area of 24.76 ha; 33 % area i.e., 8.17 ha has been developed under greenbelt development / plantation in accordance with CPCB guidelines. Out of which; 8.17 ha area (with 12255 Nos. of saplings) has already been developed. Further 8170 saplings will be planted for gap filling to maintain the density of 2500/ha.</li> <li>☞ Native species like Neem, Shisham, Aam, Arjun, Jamun, Karanj, Siris, Gulmahar, Sagwan, Peepal, Gular, Ashoka etc has been/ will be planted in the plant area under greenbelt development &amp; Plantation.</li> </ul>
Occupation Health & Safety Management	<ul style="list-style-type: none"> <li>☞ To control and minimize the risks at workplace M/s. UltraTech Cement Limited has implemented Health, Safety and Environment Policy (HSE).</li> <li>☞ The company has/ will adopt occupational health and safety standards along with health and safety measures against occupational health and safety hazards; dust, noise, heat stress, electrical hazards, fire &amp; explosion etc., for which company has allocated Rs. 1 lakh (Capital cost) &amp; Rs. 8 Lakhs/annum (Recurring cost).</li> </ul>

xii) Capital cost of the project

S. No.	Particular	Details
1.	Capital Cost for the Project	Rs.600 Crores (Phase - I: 250 Crores and Phase - II: 350 Crores)
2.	Cost for Environment Protection Measures	
a.	Capital Cost	Rs. 60 Crores (Phase - I: 25 Crores and Phase - II: 35 Crores)
b.	Recurring Cost	Rs. 2.4 Crores / annum (Phase - I: 1 Crores / annum and Phase - II: 1.4 Crores / annum)

.