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Application of Prior Environmental Clearance

For

Proposed 3.0 Million Tonnes Per Annum (MTPA)

Cement Grinding Unit

&

60 m3 / hr. Readymade Concrete Mixing (RMC) Unit

at

Village: Kudumalakunte, **Taluka:** Gowribidanur

District: Chikballapur, **Karnataka**

Project Proponent:

Reliance Cement Company Private Limited
Anil Dhirubhai Ambani Group (ADAG), Mumbai

Appendix- I

Form-1

(I) Basic Information

Sr. No.	Item	Details
1	Name of the project	Cement Grinding and Ready Mix Concrete (RMC) Unit at Gowribidanur of M/s. Reliance Cement Company Pvt. Ltd (RCC)
2	Serial No. in the schedule	3 (b)
3	Proposed capacity/ area/ length/ tonnage to be handled/ command area/ lease area/ number of wells to be drilled	**Production Capacity** Cement: 3.0 Million TPA (MTPA) & Ready Mix Concrete: 60 m3 / hr. Total Plant Area: ~ 34.39 Ha Additional requirement of land for railway siding & alignment will be estimated after detailed railway survey. **Project Cost :** ~ 690 Crores **Annexure 1 :** Index map **Annexure 2 :** Study area map **Annexure 3:** Plant layout
4	New/Expansion/ Modernization	New project
5	Existing Capacity/ Area etc.	Not applicable
6	Category of Project i.e. 'A' or 'B'	Category – B (Stand alone Grinding Unit)
7	Does it attract the general condition? If yes, please specify.	Yes. Andhra Pradesh Boundary is adjacent.
8	Does it attract the specific condition? If yes, please specify.	No

Sr. No.	Item	Details
9	Location	Gowribidanur Industrial Park, Phase- II of Karnataka Industrial Areas Development Board (KIADB – a part of Karnataka Commerce and Industries Department (Govt. of Karnataka) near Village: Kudumalakunte, Taluka: Gowribidanur, District: Chikballapur, Karnataka. **Geographical Co-ordinates of Plant:** Toposheet no. D 43 R 10 (1:50,000) Lat & Long : **Point** **Coordinates** A ► 13^0 42'47.06" N 77^0 30' 49.80" E B ► 13^0 42' 49.05" N 77^0 30' 28.00" E C ► 13^0 41' 35.98" N 77^0 30' 18.27" E D ► 13^0 41' 48.19" N 77^0 30' 40.56" E (Please refer Google map as **Annexure – 4**) **Activity** **Location** Cement Grinding Unit Village : Kudumalakunte Taluka : Gowribidanur, Dist: Chikballapur, Karnataka.
	Plot/Survey/Khasra No.	Land allotment letter enclosed as **Annexure-5.** Final survey no. will be included in draft EIA report after final allotment of land from KIADB.
	Village	Kudumalakunte
	Tehsil / Taluka	Taluka : Gowribidanur
	District	Chikballapur
	State	Karnataka
10	Nearest railway station/airport	Nearest railway station Viduraswattha is ~

Sr. No.	Item	Details
	along with distance in km.	3.3 km. Nearest airport Bangalore is at ~ 60 km.
11	Nearest Town, City, District Headquarters along with distance in kms.	From Project Site: Nearest Town Gwaribianur is at ~ 9.5 km.. Dist.HQ: Chikballapur is at ~ 43.7 km. Nearest city Bangalore is at ~ 82 km.
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	i) KIADB, Bangalore ii) Chief Executive Officer, Chikballapur District. Ph.No : 08156-262002 Fax No:08156-262002 Mob No: 9480859000 E-mail : ceo-ckbpur-ka@nic.in iii) Deputy Commissioner & District Magistrate, Chikballapur District. Ph.No : 08156-262001 Fax No: 08156-262005 Res No: 08156-250050 Res Fax:08156-274800 Mob No: 9480696350 E-mail : deo.ckbpur@gmail.com, dc-ckbpur@nic.in
13	Name of the applicant	Mr. Harendra S. Patel
14	Registered Address	Reliance Cement Company Pvt. Ltd. H Block, 1st floor, Dhirubhai Ambani Knowledge City, Koparkhairane, Navi Mumbai – 400710.
15	Address for correspondence	

Sr. No.	Item	Details
	Name	Mr. Harendra Patel
	Designation Owner/Partner/CEO)	Head (Business Development) Reliance Cement Company Pvt. Ltd.
	Address	E Block, 2nd Floor, 3rd Wing, Dhirubhai Ambani Knowledge City, Koparkhairane, Navi Mumbai.
	Pin Code	400710
	E-mail	harendra.patel@relianceada.com
	Telephone No.	022 3038 4226
	Fax No.	022 3038 4399
16	Details of Alternative Sites examined, if any. Location of these sites should be shown on a Toposheet.	No alternative land is envisaged as the site is allotted by Karnataka Industrial Areas Development Board (KIADB).
17	Interlinked Projects	Clinker for this grinding unit will be sourced from nearby integrated cement plants or purchased from Karnataka/ A.P.
18	Whether separate application of interlinked project has been submitted	Application submitted for proposed integrated cement plant at Sedam, Dist: Gulbarga, Karnataka and MOEF approved TOR.
19	If yes, date of submission	21.12.2011 vide letter RCC/MoEF/Kar/Cem
20	If no, reason	--
21	Whether the proposal involves approval/clearance under: (a) The Forest (Conservation) Act, 1980 (b) The Wildlife (Protection) Act, 1972 (c) The C.R.Z Notification, 1991	No.
22	Whether there is any Government Order/Policy	Industrial Entrepreneur Memorandum (No.1251/SIA/IOM/2012 dated 29/05/2012)

Sr. No.	Item	Details
	relevant/relating to the site	issued by Ministry of Commerce & Industry, Govt. of India. (Please refer **Annexure – 6**)
23	Forest land involved (hectares)	Nil.
24	Whether there is any litigation pending against the project and/ or land in which the project is propose to be set up a) Name of the Court b) Case No. c) Orders/ directions of the Court, if any and its relevance with the proposed project.	Nil.

(II) Activity

Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.1	Permanent or temporary change in landuse, land cover or topography including increase in intensity of land use (with respect to local landuse plan)	NO	Land requirement for the proposed plant is given below: Plant area : ~ 20 Ha Road &Rail yard : ~ 7 Ha Plantation area : ~ 5.15 Ha other infra : ~ 2.24 Ha **Total plot area : 34.39 HA**** **(The areas indicated above are approximate which will be finalised after detailed engineering stage)

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.2	Clearance of existing land, vegetation and building?	No	----
1.3	Creation of new land uses	NO	. ----
1.4	Pre-construction investigations e.g. bore houses, soil testing.	Yes	The soil testing / investigation studies will be carried out before commencement of constructional activities.
1.5	Construction works?	Yes	Necessary construction work for a cement grinding unit will be carried out after obtaining statutory clearances.
1.6	Demolition Works?	No	------
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	A temporary housing facility within the allotted land will be provided to construction workers during construction phase only.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Limited excavation work will be carried out for construction of the civil structures. Some amount of levelling / grading through cut and fill is required to make the land suitable for construction. Above ground structures include main plant, service buildings, storage etc.
1.9	Underground works including mining or tunnelling?	No	-----
1.10	Reclamation works?	No	-----

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.11	Dredging?	No	-----
1.12	Offshore structures?	No	-----
1.13	Production and manufacturing Process?	Yes	3.0 MTPA Cement & 60 m3 / hour RMC unit. Process description is enclosed as **Annexure – 7.**
1.14	Facilities for storage of goods or materials?	Yes	Temporary Storage Facilities will be provided within the plant premises during construction period. The raw materials will be stored in adequate capacity in covered shed. Clinker and final product will be stored in RCC silos.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	**During construction phase:** **Solid waste**: Waste generated during the construction phase like construction debris waste etc will be reused in levelling. **Liquid effluents:** The domestic effluent which will be generated during construction phase will be disposed off in common municipal sewerage treatment plant developed by KIADB, however a properly designed soaked pits with septic tank will be proposed . **During operation phase:** **Solid waste**: ►Dust collected from air pollution control equipment will be 100% recycled & reused in

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			cement manufacturing. ►Waste like used batteries will be sold to authorized recyclers. **Liquid effluent**: Domestic effluent will disposed in properly designed soak pit, used Oil and waste oil will be sold to authorised vendor.
1.16	Facilities for long term housing of operational workers?	No	--
1.17	New road, rail or sea traffic during construction and operation?	Yes	Manpower and material during construction & operations will be transported through the existing road network as well as new rail siding will be established from nearest rail head during operation phase.
1.18	New road, rail, air, waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc.?	Yes	The site is connected through existing road network for transporting equipment, machineries during construction period; the Rail siding will be established to transport raw materials like clinker, gypsum, fly ash and finished products etc in operational period.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	___

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.20	New or diverted transmission lines or pipelines?	Yes	New transmission lines for power requirement / water pipeline will be established after required permission.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	____.
1.22	Stream crossings	No	
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	The water required for the proposed plant operations will be 690 KLD which will be provided by KIADB.
1.24	Changes in water bodies or the land surface affecting drainage or run-off	No	___
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	During construction phase of plant, the manpower and the material for construction will be sourced from the surrounding areas.
1.26	Long-term dismantling or decommissioning or restoration works?	NO	Not envisaged

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Nil.
1.28	Influx of people to an area in either temporarily or permanently?	Yes	**Proposed Manpower requirement:** ■ During Construction: Approx. direct employment of 25 employees & indirect employment of 400 employees preferably state ■ During Operation: Approx. 182 employees preferably from state subject to skill and training will be imparted during the job period.
1.29	Introduction of alien species?	No	Not envisaged.
1.30	Loss of native species or genetic diversity?	No	Not envisaged.
1.31	Any other actions?	No	Not envisaged.
2.0	**Use of Natural Resources for construction or operation of Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply).**		
2.1	Land specially undeveloped or agricultural land (ha)	NO	Land allotted by KIADB
2.2	Water (expected	Yes	Water will be provided by KIADB. Water

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	source & competing users) unit KLD		requirement will be 690 KLD
2.3	Minerals (MT)	No	Not applicable.
2.4	Construction material – stone, aggregates, and/soil (expected source-MT)	Yes	Construction material such as sand, steel, aggregates etc will be used during construction. However, the quantification of these materials will be done during detailed engineering stage. These materials will be sourced from nearby areas. Quantities will be ascertained after detailed engineering.
2.5	Forests and timber (source-MT)	No	___
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	**During construction phase:** Power requirement during construction phase shall be met by installing DG set through respective sub-contractor(s) / grid power. **During operation phase:** The power demand for the proposed project has been estimated as ~ 25 MW and will be supplied by Karnataka Power Corporation, from nearby substation in Gowribidanur Industrial Area. **Diesel**: Storage tank: ~ 10 KL for plant. **Coal:** ~ 0.027 MTPA

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			For emergency requirement, it is proposed to install DG set. (figures mentioned above may get changed as per ordering & detail engineering)
2.7	Any other natural resources (use appropriate standard units)	No	Not envisaged.
3.0	**Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health**		
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	----
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	----.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Direct and indirect employment avenues will be created due to project which would improve the living conditions of the people. The CSR activities will be undertaken.

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	No	Not envisaged
3.5	Any other causes	No	Not envisaged
4.0	**Production of solid wastes during construction or operation or decommissioning (MT/month)**		
4.1	Spoil, overburden or mine wastes	No	Not Applicable
4.2	Municipal waste (domestic and or commercial wastes)	Yes	The domestic waste water will be discharge in CMTP developed by KIADB, however properly designed soak pit is proposed for disposal of Municipal sewage.
4.3	Hazardous wastes (as per hazardous waste management rules)	Yes	Waste oil and burnt grease generated will be disposed off through authorized recyclers. Used batteries will be disposed off as per Batteries Management & Handling Rule-2001.
4.4	Other industrial process wastes	No	Nil.
4.5	Surplus product	No	Nil.
4.6	Sewage sludge or other sludge from effluent treatment	Yes	The domestic waste water will be discharge in CMTP developed by KIADB, however properly designed soak pit is proposed for disposal of Municipal sewage.

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
4.7	Construction or demolition wastes	No	-----
4.8	Redundant machinery or equipment	No	Not envisaged
4.9	Contaminated soils or other materials	No	Not envisaged
4.10	Agricultural wastes	No	Not envisaged
4.11	Other solid wastes	Yes	Efficient pollution control device will be installed. The dust collected in PCD will be 100% recycled in cement manufacturing. Sludge from Domestic water treatment will be used as manure. Scrap from stores / workshop is envisaged during the operational phase of the plant. This will be given to authorized recyclers.
5.0	**Release of pollutants or any hazardous, toxic or noxious substances to air (kg/hr)**		
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Emissions during operation of drier are envisaged. Details of emission and impact will be provided in EIA report.
5.2	Emission from production processes	Yes	≤ 50mg/Nm3 of dust emissions (PM) are envisaged from cement mill & packing plants. Details of emission will be provided in EIA report.
5.3	Emissions from materials handling including storage or	Yes	Adequate mitigation measures will be adopted to preventive & control emissions at material handling & storage areas.

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	transport		Details of emission, impact and EMP will be provided in EIA report. Fugitive emission control guidelines issued by CPCB will be adopted.
5.4	Emissions from construction activities including plant and equipment	Yes	Fugitive dust, SO_2, NO_X, CO emissions are envisaged from the vehicular movement during construction period. However, mitigative measures will be taken to control the same. As such they are localized and temporary in nature.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Adequate mitigation measures will be taken to control fugitive dust emission. There will be no odour generation.
5.6	Emissions from incineration of waste	No	----
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	----
5.8	Emissions from any other sources	No	----
6.0	**Generation of Noise and vibration, and emissions of light and heat**		
6.1	From operation of equipment e.g.	Yes	Noise will be generated from various activities. Preventive measure will be taken

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	engines, ventilation plant, crushers		to control the noise level. Regular maintenance of the equipment will help in reducing these noise levels. Preventive enclosures, necessary PPEs will be provided to concerned persons. The greenbelt development will be proposed in the plant premises as per CPCB guidelines.
6.2	From industrial or similar processes	Yes	
6.3	From construction or demolition	Yes	Noise will be generated during construction activities. Regular maintenance of the equipment will help in reducing these noise levels.
6.4	From blasting or piling	No	----
6.5	From construction or operational traffic	Yes	Noise will be generated during RCC work. Noise is envisaged from the traffic during construction phase. Noise will be generated from HEMM and transportation. Preventive control measures will be taken.
6.6	From lighting or cooling systems	No	Not envisaged.
6.7	From any other sources.	No	Not envisaged.
7.0	**Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal wasters or the**		

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	sea		
7.1	From handling, storage, use or spillage of hazardous materials	No	----
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	The sewage will be discharge in CMSTP developed by KIADB The project will be operated on "Zero Discharge" concept. No contamination of ground water or land is envisaged.
7.3	By deposition of pollutants emitted to air into the land or into water	Yes	The incremental ground level concentrations of air pollutants (dust) will be evaluated and preventive measures will be taken to keep the level within the permissible limits.
7.4	From any other sources	No	Not envisaged
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	-----
8.0	**Risk of accidents during construction or operation of the project, which could affect human health or the environment**		
8.1	From explosions, spillages, fires etc from storage, handling, use or production of	Yes	Required precautionary measures will be envisaged. Factory Act, 1948 & The Karnataka Factories Rules, 1969 will be complied.

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	hazardous substances		
8.2	From any other causes	Yes	Required precautionary measures will be envisaged. Applicable Factory Act with amendment will be complied with.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloud burst etc)?	No	The project site falls in zone-II as per IS 1893 (Part-I): 2002 for seismic hazard.
9.0	**Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality**		

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
9.1	Lead to development of supporting, facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	Yes	Proposed unit will result in considerable growth of service sector, which will lead to supporting ancillary development in the region.
	• Supporting infrastructure (roads, power supply, waste or waste water treatment, etc)	Yes	These facilities will be developed.
	• Housing development	No	---
	• Extractive industries	No	.
	• Supply industries	Yes	Potential for development of small vendors namely workshops / fabrication shops / hardware / rubber items / automobile repairs etc.
	• Other	Yes	Potential for various services for livelihood requirement will likely to be developed.
9.2	Lead to after use of the site, which could have an impact on the	Yes	Impacts will be minimised by adopting adequate control measures.

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	environment.		
9.3	Set a precedent for later developments	Yes	Community development activities will be undertaken as per KIADB norms.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	Not envisaged. Detail cumulative impacts will be covered under detail EIA study.

(III) Environmental Sensitivity

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil	Not applicable.
2	Areas which are important or sensitive of ecological reasons – wetlands, water courses or other water bodies, coastal zone, biospheres, mountains, forests	Reserve Forests (RF) Rivers	**From Plant Boundary:** ● Narasimha Devarbetta RF ~ 13.47 km E ● Bommashettihalli RF ~ 14.50 km SW ➲Penner / Uttara Pinakini ~ 2.84 km W ➲ Kumudvati / Kundar ~ 8.33 km W ➲ Jayamangali ~ 12.12 km W ➲ Kotnuru Cheruvu Reservoir ~ 13.53 km N.
3	Areas used by protected,	Nil	Nil.

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km) Proposed project location boundary
	important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration		Flora fauna inventory will be included in EIA study.
4	Inland, coastal, marine or underground waters	Nil	----
5	State, national boundaries	Yes	**From Plant Boundary:** Andhra Pradesh : adjacent
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil	----
7	Defence installations	Nil	----
8	Densely populated or built-up area	Yes	Gowribidanur is at 9.5 km towards South.
9	Areas occupied by sensitive man made land uses *(hospitals, schools, places of worship, community facilities)*	Yes	Primary health centres, hospitals, schools etc.
10	Areas containing important, high quality or scarce resources *(ground water resource, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	Yes	Narasimha Devarbetta RF ~ 13.47 km E Bommashettihalli RF ~ 14.50 km SW Penner / Uttara Pinakini ~ 2.84 km W Kumudvati / Kundar ~ 8.33 km W Jayamangali ~ 12.12 km W Kotnuru Cheruvu Reservoir

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km) Proposed project location boundary
			~ 13.53 km N.
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	Nil	KIADB Industrial area
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No	----

(IV) Proposed Terms of Reference for EIA Studies (if applicable)

1.0 PROPOSED EIA STUDY

The components of the EIA study will include:

- Determination of baseline data using primary data generation and secondary data available from various government published reports on air, meteorology, water, soil, flora & fauna, socio-economics, infrastructure, sensitive areas (forests, archaeological, historical etc);

- Detailed description of all elements of the project activities during the pre-construction, construction and operational phases. The elements to be analyzed will include the infrastructures of the project including drainage features, roads, waste collection, disposal and management and utility requirements.

- Identifying the sources of pollution and assessing the impacts on the environment due to proposed project.

- Preparation of EIA and EMP documents with recommendations on preventive and mitigative measures for limiting the impact on environment to the desired level during various stages of project. Development of a suitable post study-monitoring program to comply with various environmental regulations will also to be done; and

- Risk Assessment (RA) and Disaster Management Plan (DMP) describing the probable risks and preventive & precautionary measures to be followed in the event of emergency situations such as accidents, fire etc.

2.0 BASELINE ENVIRONMENTAL DATA GENERATION

a. Ambient Air Quality (as per 18th Nov'2009 notification on CPCB on National Ambient Air Quality Standards)

Parameters	No. of Locations, Samples, and Frequencies	Method
SO2 (µg/m3)	10, Twice a week for 13 weeks of a season	-Improved West and Gaeke -Ultraviolent fluorenscence
NOx (µg/m3)		-Modified Jacob & Hochheiser (Na-Arsenite) -Chemiluminescence
PM less than 10 µm (24 hrly) (µg/m3)		-Gravimetric -TOEM -Beta attenuation
PM less than 2.5 µm (24 hrly) (µg/m3)		-Gravimetric -TOEM -Beta attenuation
CO (1hrly - average) (µg/m3)		Non Dispersive Infrared (NDIR) spectroscopy

b. Meteorology

Parameters	Methods
Wind speed, wind direction, solar radiation, cloud cover, relative humidity, temperature, rainfall.	As per CPCB guideline for ambient air quality monitoring

c. Noise Level

Parameters	No. of Locations, Samples, Frequencies
Equivalent noise level (Leq) for day time and night time.	10, once in a season, as per CPCB guideline for ambient air quality monitoring

d. Water Quality

Parameters	No. of Locations, Samples,
Parameters as per IS-10500 and IS-2296.	Total 10 number of samples (minimum 3 for surface water), once during the season,

e. Soil Quality

Parameters	No. of Locations, Samples, Frequencies
Texture, pH, salinity, electrical conductivity, organic carbon, NPK, Na, Mg, Ca, Cl, F etc Physico Chemical analysis and relevant trace metals.	10 locations, once during a season

f. **Land use**

Parameters	No. of Locations, Samples, Frequencies
Land use as per the district census handbooks and satellite imagery data.	Once during the study period

g. Geology and Hydrological aspects

Parameters	No. of Locations, Samples, Frequencies

Detailed Hydrogeological study will be carried out for assessment of availability of groundwater, determination of aquifer, their nature & depth, impact of groundwater due to project and feasibility of rainwater harvesting.	As per requirement.

h. Socio Economic and Health aspects

Parameters	No. of Locations, Samples, Frequencies
Socio-economic and health aspects will be done for study area.	Once during the study period

i. Ecological studies (Terrestrial and Aquatic)

Parameters	No. of Locations, Samples, Frequencies
Flora and fauna will be studied in 10 km radius study area, once during the study period. These studies will be based on primary as well as secondary sources.	Once during the study period

j. Aesthetic/Cultural/Sensitive Aspects

Parameters	No. of Locations, Samples, Frequencies
Identification of all historical/ archaeological sites/cultural/religious/tourist interests/defence installations in the study area. Other sensitive locations such as national park, sanctuary, important lakes, biosphere reserves, within 15 km radius will be identified.	Once during the study period

k. Traffic Survey

Parameters	No. of Locations, Samples, Frequencies
Traffic volumes will be measured once during study period at three important traffic intersections leading to the project site to assess the traffic volumes.	Once during study period.

3.0 IDENTIFICATION OF SOURCES OF POLLUTION

3.1 Data Generation

This includes the following:

- Identifying the sources of pollution of air, water, land and noise;
- Quantifying the emissions from the pollution generating sources; and
- Quantification of solid wastes and likely disposal methods will be suggested.

3.2 Sources of Pollution

The likely sources of air and water pollution will be identified and quantified;

- The proposed pollution control measures envisaged in project area for fugitive dust, noise pollution and other environmental effects of each project activities will be assessed ;
- The present and proposed changes in land use pattern will be identified; and
- Suitable green belt development plan will be prepared.
- Based on various project activities, the likely impact on the environment attributes in project area will be identified by:
- Estimating the air pollution levels for SPM, SO_2 and NOx in the study area
- Estimating the source emissions for each project specific pollutants;
- Predicting the noise dispersions for all the noise generating sources;
- Predicting the impact of wastewater discharges, if any;
- Studying the short-term and long-term affects on sensitive targets like endangered species, crops and historically/archaeologically important sites (if any).

4.0 ENVIRONMENTAL IMPACT ASSESSMENT

The proposed project will have an impact on the environment. The parameters likely to be affected are air quality, water quality, soil quality and noise levels etc on account of Particulate Matter emissions, liquid effluent discharges, resultant particulates, generation of solid wastes etc will be discussed.

The baseline data generated from the above studies will be analyzed and compared with applicable standards prescribed by the CPCB. By this means, the impact will be assessed and the environmental attributes requiring special attention for mitigating the impact, if any, will be identified. Also the areas, which fulfil the prescribed environmental norms and not requiring further improvements, will be specified. Both short-term and long term impacts particularly on sensitive targets such as habitat of endangered species of wildlife or mines, crops, historically/culturally important sites/monuments, centres with concentrated population in the study area will be established. Impact of the fugitive emissions on terrestrial flora will be scientifically documented based upon species composition of the area and their air pollution tolerance levels.

The impacts of project on various components of environment and the possible mitigation measures for mitigating the negative impacts were described in the following sections.

4.1 Impact on Land Use

- *Impact Assessment*

The land use impacts due to proposed cement grinding plant will be identified in terms of local land use planning efforts. The change in land use pattern of project site will also be identified. This includes visual impact, impact on forest, impact due to industrial growth and growth due to socio-economic factors.

- *Mitigation Measures*

The mitigation measures will be addressed towards restoration of land disturbed by the proposed project activities to the extent possible.

4.2 Impact on Ambient air Quality

- *Impact Assessment*

Emission inventory will be carried in the study area. A computer based internationally recognized equivalent mathematical air quality model will be used to predict the concentration of SO_2, NOx & PM due to proposed project. The results will be presented for short-term (24-hourly) concentrations in and around the project site. The dispersion model results will be included in the report using isopleths or other graphical methods, over laying a land use map of the surrounding area. The predicted air quality results will be compared with existing regulations.

- *Mitigation Measures*

Potential mitigation measures include the control measures at the source level. The measures to control the fugitive dust emissions will also be suggested according to guidelines of CPCB .

4.3 Impact on Noise

- *Impact Assessment:* Sources of noise and its impact on the environment will be addressed. The noise level at varying distances for multi-sources will be predicted using Noise model. A comparison of measured noise (Leq) at monitoring locations to that of predicted noise levels (Leq) will be made and mitigatory measures will be recommended to conform to regulatory ambient air noise standards.

Baseline noise levels in different zones like industrial, residential and silence areas like hospitals, schools etc will be monitored. The potential noise level exposure will be determined and evaluate for acceptable limits of exposure.

- *Mitigation Measures*

The potential mitigation measures will be addressed to reduce noise levels by control at source, isolation of high noise generating sources, use of protective measures especially in high noise areas and development of green belt .

4.4 Impact on Ecology

Impacts on flora-fauna especially during dry season will be assessed particularly those which are endangered, if any. Recommendations will be made to mitigate such adverse impacts as soil erosion and habitat loss. In addition, impact of fugitive emissions will be assessed on the surrounding species of economic/genetic/biological importance.

The parameters, which are of concern, are TSS, TDS, heavy metals, oil and grease, pH and temperature. The assessment will also include impacts of chlorinated organic chemicals. The impact of site preparation activities involving site clearing, excavation, earth moving, dewatering or impounding water bodies and developing burrow and fill areas will be assessed.

4.5 Impact on Water Use

- *Impact Assessment*

The impacts of the proposed project due to water usage and wastewater discharges will be addressed covering the following:

- Groundwater quality degradation due to likely solid waste disposal and sewage disposal;
- Agricultural productivity;
- Habitat conditions; and
- Recreation resources and aesthetics.
- *Mitigation Measures*

The mitigation measures will be addressed ensuring the present and anticipated future water requirements for various purposes. The measures also address the need to maintain or improve the existing Class of Water (as per IS: 2296) to ensure that the current/proposed uses are not impaired due to deterioration of the water quality.

4.6 Impact on Water Quality

- Impact Assessment of ground & surface water will be addressed.

Deterioration of Groundwater and surface water quality are not envisaged due to the project activities.

- *Mitigation Measures*

The mitigation measures including wastewater treatment and recycle will be suggested.

4.7 Impact on Demography and Socio-Economics

- *Impact Assessment*

On the basis of the information proposed to be collected and employment and other potential for the benefits of surrounding community of the study area , the likely socio-economic impacts of proposed project during construction ,operation and post-project will be assessed in detailed .

- *Mitigation Measures*

Strategies to mitigate the negative impacts, if any, due to the project will be suggested.

4.8 Impact on Soil

- *Impact Assessment*

Impact on soil will be assessed in view of change in land use pattern due proposed cement grinding. The debris generated will be reused in levelling of low-lying area.

- *Mitigation Measures*

Strategies to mitigate the negative impacts on soil due to disposal of solid wastes/over burden, if any, due to the project activities will be suggested with a emphasis on reuse of maximum solid wastes.

5.0 ENVIRONMENT MANAGEMENT PLAN

A Rapid EIA Report based on three months field data generation will be prepared for the purpose of getting clearance from MoEF.

The Environment Management Plan (EMP) will include all the mitigative measures proposed under each significant environmental attribute. Further, a

suitable green belt development plan for the project site will be included in the EMP report.

6.0 POST STUDY MONITORING PLAN

The Post Project Monitoring (PPM) plan will be prepared considering the following:

i. The proposed pollution control measures for air, wastewater and solid waste (hazardous/non-hazardous) disposal;
ii. Waste minimization, wastewater management, waste reuse and resource recovery, waste segregation to make the treatment and disposal cost-effective;
iii. The monitoring requirements for ensuring the statutory as well as process data is collected; and
iv. The organizational/institutional set-up required for effective environment management plan implementation and post-project monitoring will be suggested along with the budgetary requirements.

7.0 DISASTER MANAGEMENT PLAN AND OCCUPATIONAL SAFETY

A Disaster Management Plan (DMP) for dealing emergency situation arising due to fire, explosion, leakages of oil, waste oil and other materials will be prepared. The plans include safe storage, handling, transportation and use of hazardous materials/wastes to be used or generated.

Occupational risk involved during construction and operation of the project will be assessed and necessary safety and protective measures will be suggested. The DMP include both onsite and off site emergency preparedness plans. The components of the EIA study include:

- Determination of baseline data using primary data generation and secondary data available from various government published reports on air, meteorology, water, soil, flora & fauna, socio-economics, infrastructure, sensitive areas (forests, archaeological, historical etc);

- Detailed description of all elements of the project activities during the pre-construction, construction and operational phases. The elements analyzed include the infrastructures of the project including drainage features, roads, waste collection, disposal and management and utility requirements;
- Identification of the sources of pollution and assessing the impacts on the environment due to proposed project;
- Preparation of EIA and EMP documents with recommendations on preventive and mitigative measures for limiting the impact on environment to the desired level during various stages of project. Development of a suitable post study-monitoring program to comply with various environmental regulations; and
- Risk Assessment (RA) and Disaster Management Plan (DMP) describing the probable risks and preventive & precautionary measures to be followed in the event of emergency situations such as accidents, fire etc.

Declaration

I hereby give an undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any, to the project will be revoked at our risk and cost.

Signature of the applicant

With name and full address

(Harendra Patel)

Head, Business Development

E Block, 2nd Floor, 3rd Wing, Dhirubhai Ambani Knowledge City

Koparkhairane, Navi Mumbai - 400710.

Date:

Place:

NOTE:

1. The projects involving clearance under coastal Regulation zone Notification, 1991 shall submit with the application a C.R.Z map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z (at the stage of ToR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z Notification, 1991 for the activities to be located in the CRZ.

2. The projects to be located within 10 km or the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-a-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon (at the stage of EC)."

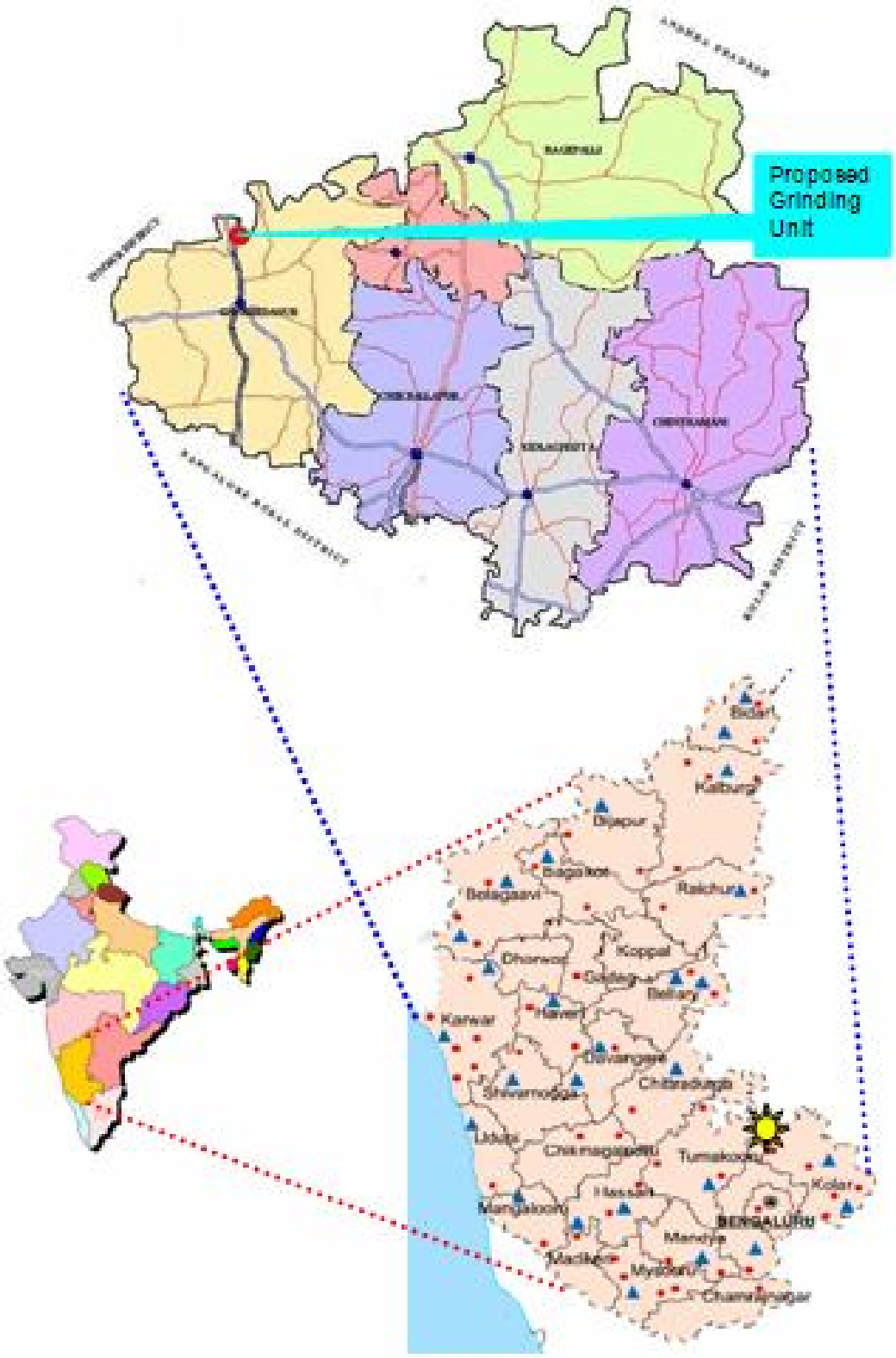
3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project."

List of Annexures

Sr.No.	Annexure No.	Title
1.	Annexure – 1	Index map of Plant area
2.	Annexure – 2	15 km. study area showing Plant area
3.	Annexure – 3	Layout of Plant
4.	Annexure – 4	Co-ordinates of Plant boundary
5.	Annexure – 5	Allotment of Land by KIADB
6.	Annexure – 6	Industrial Entrepreneur Memorandum
7.	Annexure – 7	Process description of grinding unit

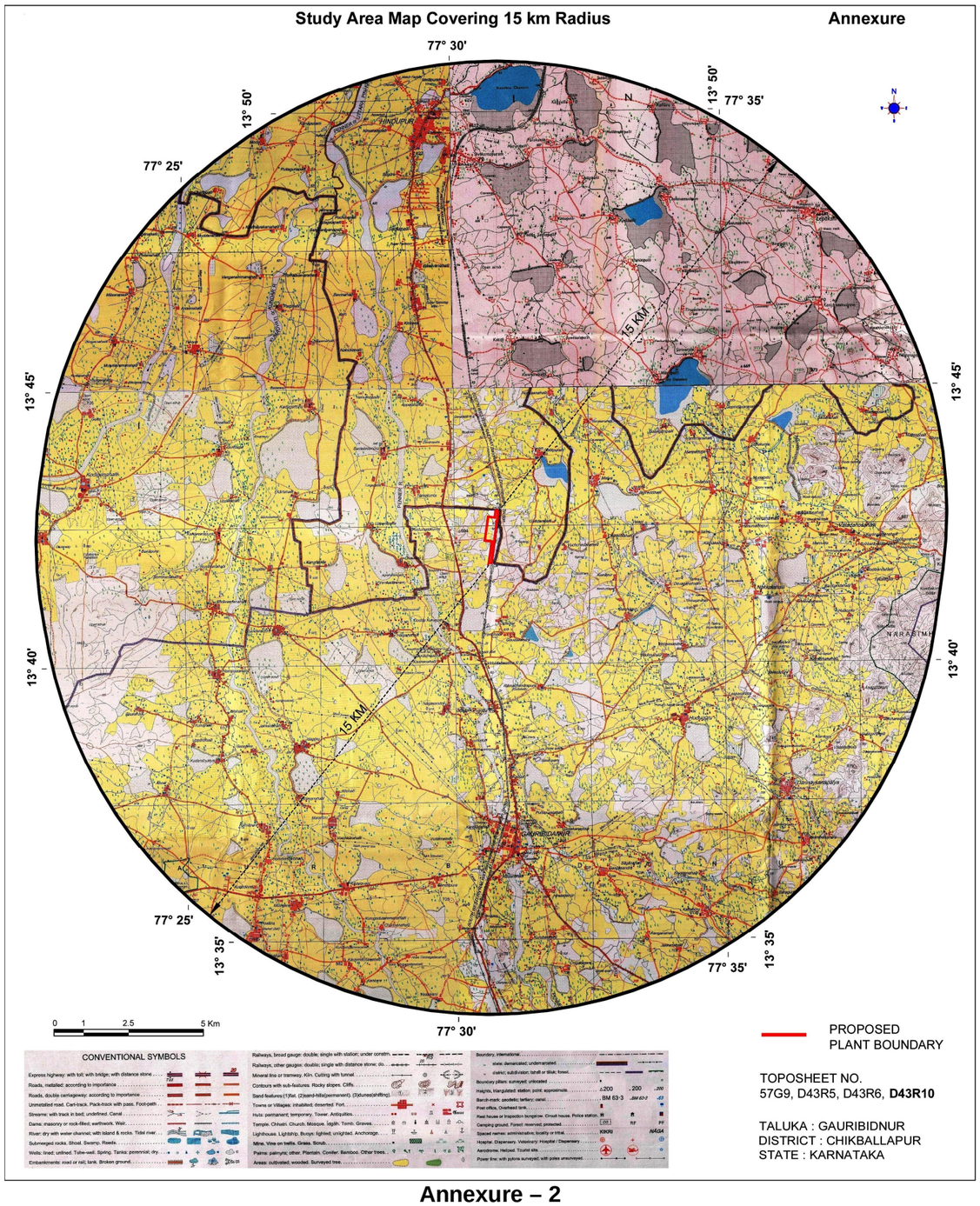
Index Map

Annexure - 1



Study Area Map Covering 15 km Radius

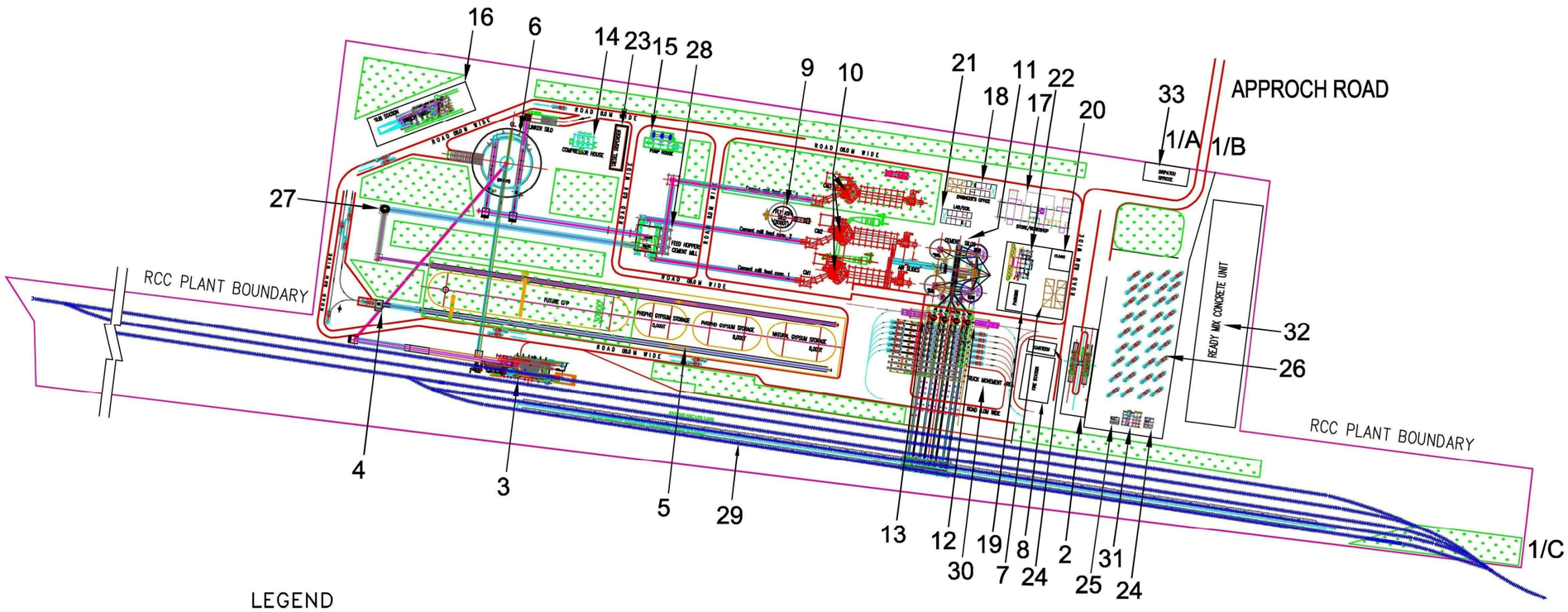
Annexure



Annexure – 2

15 km. study area showing Plant area

Plant Lay Out



LEGEND

SL.NO.	DESCRIPTION
1/A	MAIN GATE & LABORS ENTRY GATE
1/B	MATERIAL ENTRY GATE
1/C	RAIL GATE
2	WEIGH BRIDGE
3	WAGON /TRUCK TIPPLER TRUC FOR CLINKER UNLOADING
4	TRUCK TIPPLER FOR COAL,GYPSUM UNLOADING
5	STORAGE YARD FOR GYPSUM(NATURAL & PHOSPHO),COAL,
6*	CLINKER SILO (TYPICAL SECTION IS SHOWN BELOW)
7	TIME OFFICE
8	FIRE STATION
9	FLYASH SILO
10	CEMENT MILL – 1 CEMENT MILL – 2 CEMENT MILL – 3
11	CEMENT SILOS
12	PACKING PLANT
13	EMPTY BAG STORAGE
14	COMPRESSOR HOUSE
15	WATER TANK & PUMP HOUSE

SL.NO.	DESCRIPTION
16	MAIN SUB–STATION
17	STORE/WORKSHOP
18	ENGINEER'S OFFICE
19	PARKING ZONE
20	FIRST AID & SECURITY
21	LAB/CCR
22	ADMINISTRATIVE BUILDING
23	DIESEL DISPENSER
24	CANTEEN BLDG.
25	REST SHELTER
26	TRUCK PARKING AREA
27	CRUSHER
28	CEMENT MILL PROPORTIONING STATION
29	CEMENT LOADING BY WOGAN
30	CEMENT LOADING BY TRUCK
31	TRANSPORTERS OFFICE
32	READY MIX CONCRETE UNIT
33	DISPATCH OFFICE

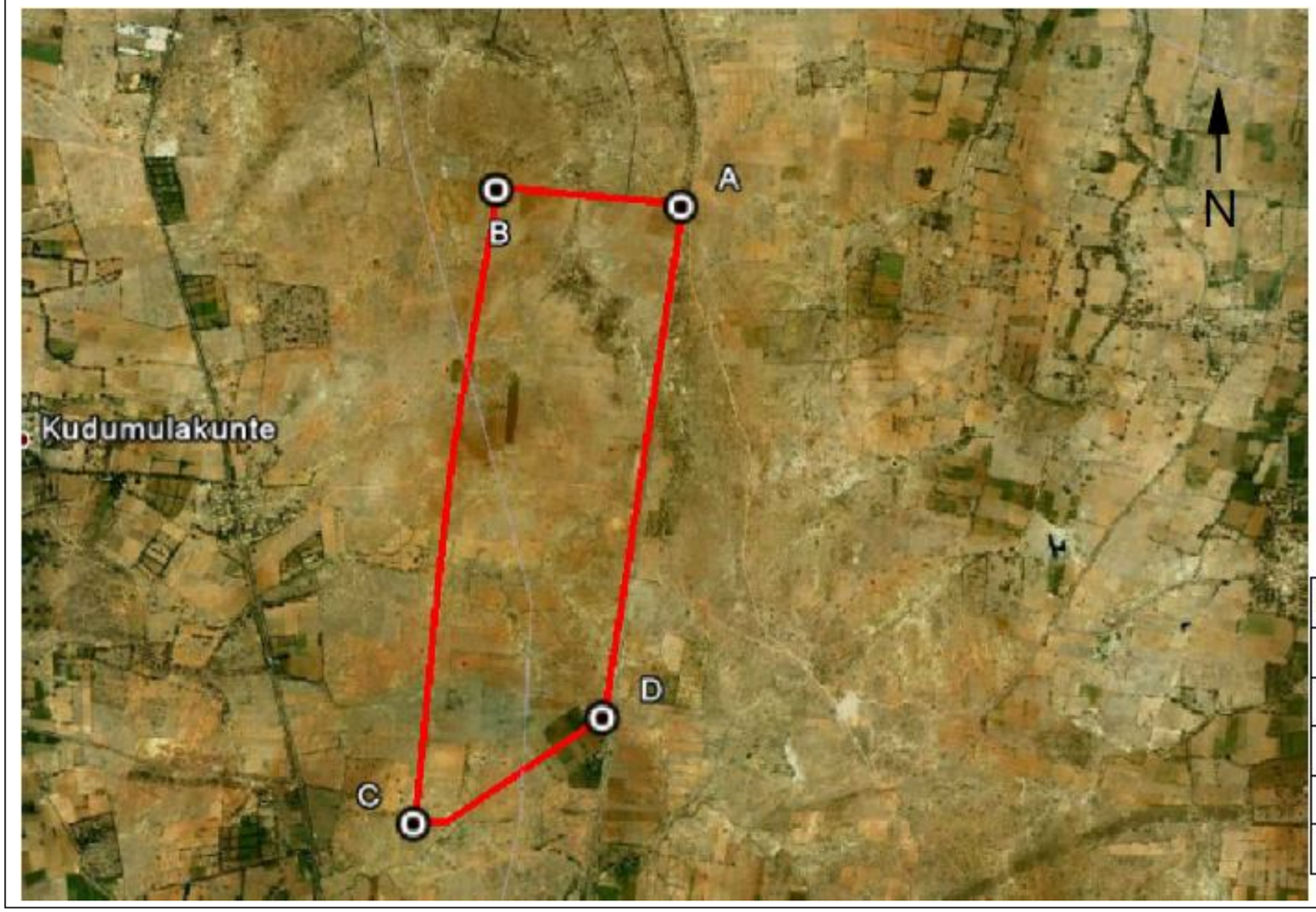
PRELIMINARY

RELIANCE CEMENT COMPANY PVT. LTD.

PROJECT			GAURIBIDANUR PROJECT
DES.	BY	DATE	PLOT PLAN SHOWING LAND UTILISATION FOR PROPOSED GRINDING UNIT
DRN.	SRM	10.02.13	
CHKD.	MSR	12.02.13	
APPD.	YVS	21.02.13	
SCALE 1:5000			DRG.NO. RCC–GAU–GU–001–L–00002 REV 0
ALL DIMENSIONS ARE IN MM			

Annexure- 4

Coordinates of Project Site



Points	Coordinates	
	Lat.	Long.
A	13°42'47.06"N	77°30'49.80"E
B	13°42'49.05"N	77°30'28.00"E
C	13°41'35.98"N	77°30'18.27"E
D	13°41'48.19"N	77°30'40.56"E

Annexure – 5
Land allotment letter

KARNATAKA INDUSTRIAL AREAS DEVELOPMENT BOARD
(A Government of Karnataka Undertaking)
14/3, 2nd Floor, R.P. Building, Nrupathunga Road, Bangalore - 560 001
Phone : 22215383, 22215679, 22242006, 22215069, Fax : 080-22217702
Website : www.kiadb.in e-mail : kiadb@mail.kar.nic.in

No: IADB/ SUC-143/ DO-II/ 14748 /2012-13 Date: 08.02.2013

By RPAD

M/s. Reliance Cement Company Pvt.Ltd.,
Dhirubhai Ambani Knowledge City E-Block,
1st Floor Wing 3, Thane Belapur Road,
Koparkhairane Navi Mumbhai – 400 710.
India

ALLOTMENT LETTER

Sir,

Sub: Allotment of SUC 85 acres of land several Survey numbers as per sketch and list of survey nos (enclosed) in Gowribidanur Industrial Area. 2nd Phase

Ref: 1) Your application dt: 05.11.2012
2) G.O No: CI/332/SPI/2012 Bangalore, dt: 03.11.2012
3) CEO & EM Approval dt: 07.02.2013

*****

I am happy to inform you that you have been allotted 85 acres of land in several **Sy.Nos as per sketch and list of survey Nos (enclosed)**. of **Gowribidanur 2nd Phase** for development and manufacture of **Cement Grinding and Packing Unit**, subject to terms and conditions indicated in the **Annexure** appended hereto and also the terms and conditions mentioned hereinafter.

1. The allotment of land is on lease-cum-sale basis for a period of **10 years**. At the end of **10 years**, the lease shall be converted into a sale subject to fulfillment of all the terms and conditions of allotment and payment of price of land in full as finally fixed subject to adjustment of amounts paid by you towards premium. The conversion of lease into sale shall also be subject to the utilization of minimum **50%** of the land allotted. The utilization of land as determined by the Board on the merits of each case is final and binding.

2. The price of the land shall be determined by the Board and intimated to you in due course. However, for the purpose of this allotment, the tentative price of the land per acre/ Sq.mtrs. has been fixed at Rs. 9,50,000=00 per acre + 12% Board Service Charges of RS. 96,90,000=00 together with prorate cost of approach Roads, Water and Power, Infrastructure.

3. The tentative price of the land and lease rents shall be paid as follows:

3(a). A sum of **Rs.** ---------- =00 being the balance 20% of the land cost shall be paid within 30 days from the date of issue of this letter. i.e. on or before ----------

3(b). A sum of **Rs.** ----------**=00** being the balance tentative cost of land and Rs.---------- =00 towards Board Service Charges i.e., Rs---------- =00 shall be paid within **180 days** from the date of issue of this letter i.e. on or before ----------

3(b.1). The allotment is made subject to the condition that you should pay the prorate cost of Approach Road, water and Power infrastructure after intimation from Board.

3(c) In the event of your furnishing bank guarantee or letter of commitment from KSFC/KSIIDC/Financial institutions agreeing to pay the cost of land indicated at 3(b) directly to the Board, the allotment will be confirmed and documentation will be permitted subject to payment of interest at **12.75%** per annum on amount due from the date of handing over possession of land to the date of payment which should be made within 90 days from the date of execution of agreement.

3(d) You should pay lease rent of Rs. **1000=00** per acre/per annum or part thereof or at such other rates as may be fixed by the Board from time to time together with maintenance charges **of Rs. 3,000=00 per** acre per annum

3(e) Interest at 12.75% per annum shall be levied in case the lease rents are not paid within one month from the date on which the lease rents fall due every year.

4. This allotment letter will be valid only for a period of 30 days from the date of its issue and in the event of failure to pay the amount indicated at para 3(a), allotment stands automatically cancelled and EMD paid stands forfeited.

5. In case of your failure to pay the amount mentioned at Para 3(b) before expiry of the time stipulated therein, this offer of allotment stands automatically expired and the earnest money deposit and **10%** of the amount paid by you towards cost of land stands automatically forfeited.

5(a) If the balance land cost is not paid within **180 days** from the date of execution of lease agreement in respect of cases mentioned at Para 3(c), the plot would be resumed on expiry of the time stipulated without issuing any fresh notice.

6. Soon after receipt of the payment of 100% tentative cost of land and on your acceptance of all the terms and conditions indicated herein before and also those mentioned hereinafter, the possession of land will be handed over within 30 days from the date of payment and at the time of taking over possession you should produce the original receipt, issue for the payment made, to the Engineer in charge of the area.

7. On taking possession of land, you shall adhere to the time schedule indicated in the standard conditions appended hereto

8. Your failure to fulfill any of the standard terms and conditions and also to take over possession of land within **30 days** from the date of payment of the land cost shall result in cancellation of allotment and forfeiture of **25%** of the amount paid towards tentative cost of land and EMD deposited shall stand forfeited.

9. The cancelled allotments or the resumed plots shall be restored, only at the rates prevailing at the time of considering such requests provided the request in writing for such restoration is received within one month from the date of cancellation of allotment or resumption. Any requests received after expiry of **30** days from the date of cancellation/resumption of land will be rejected.

10. Extension of time will be granted only in the following circumstances.
a) On direction from High Court/Injunction Order / Orders from competent Judicial forum relating to acquisition proceedings and taking over possession of Plot.

11. The Coverage, setbacks, floor area ratio shall be in accordance with the schedule prescribed below:

A) ZONE-I – Industrial (General)

Sl. No.	Size of the Plot (Sq.m)	Ground Coverage	FAR	Set backs(M)	
				Front	Rear and sides
1	Upto 500	75 %	1.50	4.50	4.50
2	Above 500 upto 1000	60 %	1.25	4.50	4.50
3	Above 1000 upto 3000	50 %	1.00	6.00	6.00
4	Above 3000	45 %	1.00	10.00	8.00

B) Zone-I(H)- Industrial (Hi-Tech)

This Zone is a priority area for establishment of activities associated with IT, BT, Electronics, Telecom, etc.

Sl. No.	Size of the Plot (Sqm)	Ground Coverage	FAR	Road width (M)	Set backs (M)	
					Front	Rear and sides
1	Upto 1000	55 %	2.00	Upto 12	4.50	4.50
2	Above 1000 upto 2000	50 %	2.25	Above 12 upto 18	6.00	6.00
3	Above 2000 upto 4000	50 %	2.50	Above 18 upto 24	10.00	8.00
4	Above 4000 upto 6000	45 %	3.00	Above 24 upto 30	12.00	10.00
5	Above 6000	45 %	3.25	Above 30	16.00	12.00

However, where Industrial Areas are located within the Municipal Corporation limits, Urban Development Areas, the building by-laws of the Corporation authorities, Urban Development Authorities shall only be followed.

12. You obtain the environment clearance from the Ministry of Environment and Forest, Government of India, after obtaining No objection certificate from Karnataka State Pollution Control Board and the Department of Ecology and Environmental before the execution of agreement wherever applicable.

13. You shall create maximum possible additional employment opportunities and provide a minimum of **80%** of the employment to the local people on an overall basis. However, you shall employ **100%** of the local people in case of Group C&D categories.

14. The Personnel Officer to be employed by you should be a Kannadiga.

15. You shall provide employment to at least one person in each displaced family of the erstwhile landowners in respect of the land allotted to you, depending on their qualification and suitability to the post.

16. You are also requested to remit **Rs. 8,10,000=00** towards slum improvement cess as per G.O. No. HUD/180/MIB/94/ dt. 29.03.1984 together with balance land cost.

17. You should make arrangement for rainwater harvesting and ground water recharging in the Plot allotted in consultation with Ecology, Environment and Forest Department.

The receipt of this letter may please be acknowledged.

Yours faithfully,

Chief Executive Officer and
Executive Member

Annexure – 6
Copy of IEM

X104181150

भारत सरकार
Government of India
वाणिज्य और उद्योग मंत्रालय
Ministry of Commerce & Industry
औद्योगिक सहायता सचिवालय
Secretariat for Industrial Assistance
जन सम्पर्क एवम् शिकायत अनुभाग
Public Relation & Complaints Section

संख्या..... 1251/SIA/IMO/2012 प्राप्ति सूचना नई दिल्ली, दिनांक
No. ..... ACKNOWLEDGEMENT New Delhi, Date
29/05/2012

एतद्द्वारा निम्नलिखित का विनिर्माण करने संबंधी आपका ज्ञापन प्राप्त होने की सूचना दी जाती है:–
The receipt of your memorandum for the manufacture of following is hereby acknowledged:-

Item Code

Proposed Item: CEMENT IN THE FORM OF CLINKERS
of Manufacture

3241 falling under NIC – broad description
MANUFACTURE OF CEMENT IN THE FORM OF CLINKERS
Proposed Capacity : 3.00 MTPA

Proposed Item: PORTLAND CEMENT, ALUMINOUS CEMENT, SLAG CEMENT AND
of Manufacture SIMILAR

3242 falling under NIC – broad description
MANUFACTURE OF PORTLAND CEMENT, ALUMINOUS CEME NT,SLAG CEMENT AND
SIMILAR HYDRAULIC CEMENTS,EXCEPT IN THE FORM OF CLINKERS
Proposed Capacity : 3.00 MTPA

Proposed Item: ASBESTOS CEMENT & OTHER CEMENT PRODUCTS
of Manufacture

3270 falling under NIC – broad description
MANUFACTURE OF ASBESTOS CEMENT AND OTHER CEMENT PRODUCTS
Proposed Capacity : 120.00 M3/HRS

********* No More Items *********

This acknowledgement is subject to the provisions of Press Note No 6 dated 29th July 1993, Press Note No 17 dated 28th November 1997 and Press Release dt 17-01-2012 (F.No.7(7)/2011-IP) regarding the significance implications and legal status of filing of Industrial Entrepreneur Memorandum

M/S RELIANCE CEMENT COMPANY PVT.LT
D.,

H-BLOCK,IST FLOOR,
DHIRUBHAI AMBANI
KNOWLEDGE CITY,
NAVI MUMBAI- 400 710
MAHARASHTRA

स्थापना–स्थल Located at	GWARIBIDNUR/ALKAPUR/ BOMMASANDRA/KUDUMA–
स्थान/कस्बा Place/Town	LAKUNTE,GWARIBIDNUR
तहसील/ताल्लुक Tehsil/Taluk	CHIKBALLAPUR
जिला District	KARNATAKA

Neera 30/5/12
नीरा शर्मा/NEERA SHARMA
अवर सचिव/Under Secretary
औद्योगिक नीति एवं संवर्धन विभाग
Deptt. of I. P. & P.
उद्योग मंत्रालय
Ministry of Industry

Annexure - 7
Grinding Unit - Process Description

The manufacturing process of this plant comprises of grinding of clinker with Gypsum and Flyash / slag. This involves the use of Flyash / slag as a resource; No clinker manufacturing is involved. There will be no generation of waste water or any obnoxious emissions from the plant. The cement dust emission during packing and grinding operations will be collected in the bag filters and recycled. The process selected for grinding of clinker at proposed unit will be dry process.

Major equipments / Material Storage

Sr. No.	Description
1	Wagon & Trucks Tippler
2	Vertical / Ball mill
3	Gypsum crusher
4	Hot Air Generator (HAG)
5	Coal crusher & Coal mill for HAG
6	Blender
7	Packer
8	Wagon loader
9	Truck loader
10	Bulk cement loading spot
11	Gypsum covered storage yard
12	Wet slag storage yard
13	Raw coal covered storage yard
14	Cement storage silos
15	Clinker storage silo
16	Intermediate silos for OPC / ground slag
17	Flyash storage silo

Raw Material Procurement & Handling

The major raw materials for the proposed grinding unit will be clinker, gypsum and fly ash /slag.

- Clinker

Clinker will be made available from integrated cement plant at Sedam, Dist : Gulbarga, Karnataka by road / rail to the proposed Grinding Unit. Clinker shall be unloaded by Wagon Tippler. The capacity of the Wagon Tippler shall be such that a rail rake of clinker is unloaded, within a time span of 5 hours. One rake loads per day minimum is envisaged. The Wagon tippler shall have a built-in weighing system to measure the filled & tare weights of the wagon. The wagon Tippler installation shall be fully covered and equipped with dust extraction system. This will enable to reduce fugitive dust.

Clinker shall be unloaded into the covered clinker silo by belt conveyors. Clinker shall be stored in a clinker storage silo of approximately 40,000 tonne capacity. It will be reclaimed by gravity flow and fed to the mill through rubber belt conveyors from the silo bottom. It shall be fed by weigh feeder provided beneath the clinker hoppers.

- Fly Ash

Fly Ash in dry state will be sourced from adjacent thermal power plants of TTPP Chennai. The fly ash system shall be designed for compatibility with multiple transport modes, viz. covered trucks, tankers and direct pumping from adjacent power plant. The dry fly ash received in covered trucks shall be unloaded into receiving hopper with the help of Truck Tippler. The hopper shall be equipped with aeration pads to facilitate extraction of Fly ash. The Fly ash extracted from receiving hopper shall be conveyed and discharged into a RCC Silo of ~ 5000 tonnes capacity. Aerated airslides shall be provided for feeding the elevator. The RCC silo feeding system shall be a bucket elevator or direct pneumatic unloading system from road bulkers.

The Fly ash extracted from RCC silo shall be conveyed and discharged into a Steel silo (day bin) of ~ 450 t capacity (to be placed in the cement mill building) vide the Bucket Elevator, overhead air slides. Air slide system facility for recirculation of fly

ash within the Silo by means of extraction air slides and belt bucket elevator shall be provided.

- Gypsum

Gypsum (mineral) will be procured from Rajasthan / Vishakapatanam (phospho gypsum) and transported by road / rail. Gypsum will be unloaded by wagon / truck tippler into a hopper / crusher. Gypsum will be stored in a gypsum hopper through belt conveyors. Gypsum shall be fed at a controlled rate into the mill by weigh feeders provided beneath the gypsum hoppers.

- Grinding

Clinker and Gypsum will be ground in vertical mill, where rollers are used for grinding. The product from the mill will be transported to storage silo through closed bucket elevator / pneumatic system

Fines collected in ESP/Bag house will be recycled to storage silo. For grinding of wet slag, coal fired hot gas generator will be installed for drying operation inside the vertical mill.

- Cement Storage Silo

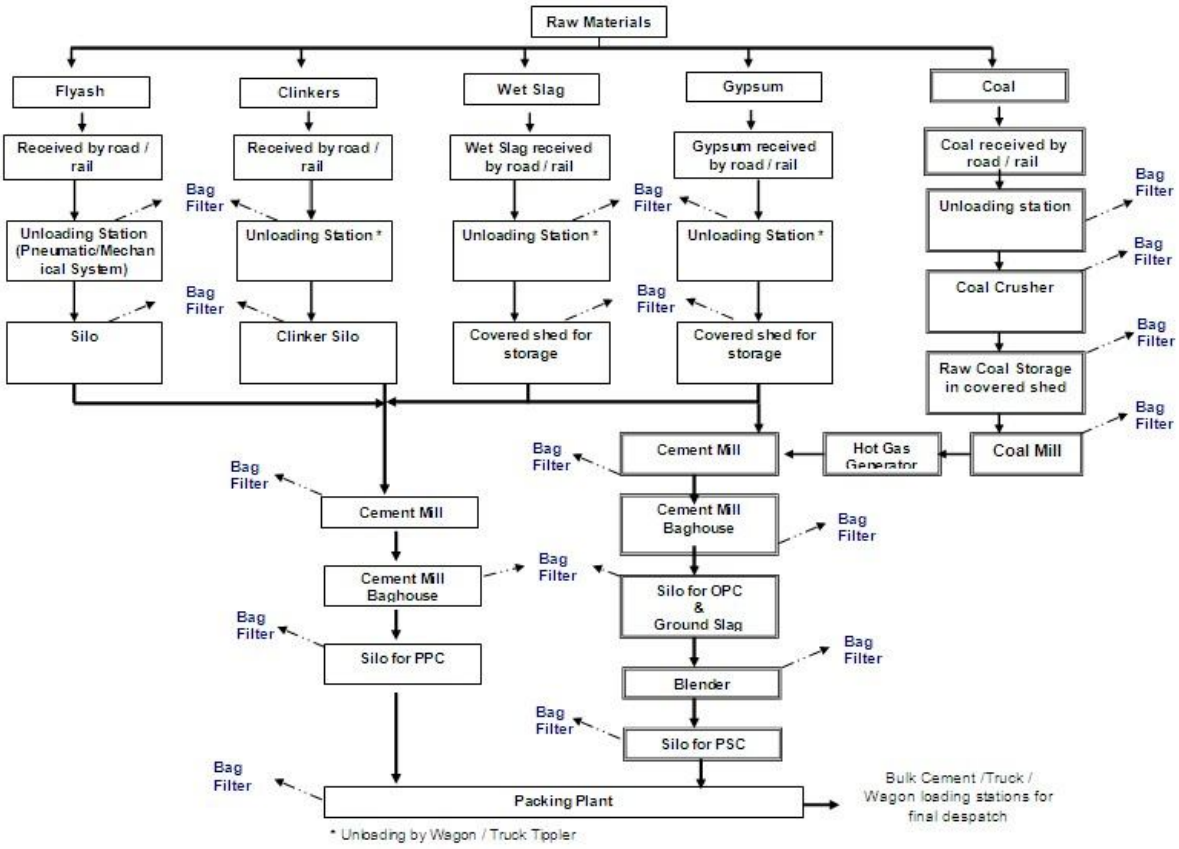
The ground material shall be transported to cement storage silo by air slides and bucket elevator/ belt conveyor. Two RCC Silos will be constructed for storage of cement.

- Packing & Transport

Twin discharge packing machines shall be installed. Material will be extracted from the silo by air slides and fed to packer by bucket elevator and screen. Space & system provision shall be made for a second packer.

From the packer, bags shall be transported to truck / wagon loading bays by suitable system of flat belts and diverters. Each packer will be provided with 3 nos. of mechanised truck loaders. Bags shall be loaded in the trucks by these automatic truck loading machines.

Process Flow Diagram



Project description of Proposed Ready Mixed Concrete (RMC) Unit

The process selected for Ready Mixed Concrete manufacturing at proposed unit will be wet process.

Ready Mixed concrete will be made from a mix of cement, aggregates and water. Aggregates make up the majority of the concrete's volume and the cement provides resistance. Additives will be incorporated into the mix to ensure particular properties such as improved durability or shortened hardening times.

In proposed RMC Unit, cement, aggregates (coarse & fine), admixtures and water will be fed for homogeneous mixing of concrete in high efficiency pan mixers or twin shaft vibro-mixers in fully automated mixing & batching plant. The Ready Mixed Concrete will be immediately transported to specified construction site in the radius of 50 to 75 km of proposed RMC unit by concrete mix tankers having rotating drums which will rotate at a speed of two to six rotations per minutes during transportation to maintain the quality of ready mixed concrete.

Inert raw materials namely fine aggregates and coarse aggregates will be stored in bins, whereas cement will be stored in air-tight silos. Water and admixtures will be stored in tanks.

Inert raw materials namely fine aggregates and coarse aggregates will be stored in bins, whereas cement will be stored in air-tight silos. Water and admixtures will be stored in tanks. Inert raw materials will be fed to the batching plant mixer by means of an aggregate belt conveyor. The required quantity of cement will be extracted from the silo by a screw conveyor and fed into the mixer. Water and admixtures will be pumped into the mixer through a flow meter. After the mixing in the mixer completely, the ready mixed concrete will be discharged into the transmit mixer which can be then transported the concrete to the construction site. All these above operations will be controlled by a computer housed in the control room of the batching plant.

The detail of each raw material is given below:

Cement: The ingredient that gives concrete its strength. All types of cement (OPC or PPC) can be used for the preparation varying the additives added to the mix.

Aggregates: It makes up roughly 60% to 75% of RMC's volume, obtained from quarries and aggregate banks.

Chemical Admixtures: Additives are solid or liquid chemical substances that can be added to RMC before or during preparation. Most commonly used additives either improve hardened concrete's durability or reduce a concrete's water content in an effort to shorten setting times.

Water: This is the mix's vital fluid, which sets off a chemical reaction when it comes into contact with the cement.

Concrete Mixing: During the mixing phase, the different components come together to produce a uniform mass of concrete. Mixing time is registered from the moment material and water is poured into the cement mixer, and it starts rotating.

Transportation: While transporting concrete to a site, the cement mixer never stops revolving at a speed of two to six rotations per minute. Entire process will be fully computerized, leaving no scope for human errors.

Cement and other raw material will be checked as per quality plan. Cement, Fly ash, Slag etc will be stored in separate silos for better control on recipe. Handling of fly ash and slag will be done from closed bunkers to silos directly. Separate weigh-batchers will be provided for each ingredient like cement, water, admixtures and aggregates. The weighing will be done on sophisticated electronic weigh batchers. Precise weighing of all materials will be done through electronic load cells made up of special alloys. Homogeneous mixing of concrete will be ensured by use of special high-efficiency mixers like pan-type or turbo-twin shaft mixers. A fully equipped onsite plant laboratory will be available. Processes will be in place for effective and periodic maintenance and calibration of all critical components. Laser sensor and moisture control will be used for a stringent quality assurance.

All the raw materials will be stacked in separate bins and will be stored under cover so that aggregates will not be exposed to direct sunlight and thus avoid environment pollution. A Sprinkler system will be installed to ensure temperature control of aggregates in hot weather. All silos will be installed with bag filters and level indicators to avoid any kind of pollution.

Plant & Machineries:

The major machineries required for proposed RMC unit will be two storage yards of aggregates (coarse and fine), four hoppers (two each for coarse and fine aggregates) , three silos fitted with suitable bag filters (two for OPC and one for fly ash each of capacity 50-100 m^3), two water tanks (one working & one standing), weighing station and PLC, concrete mixer, battery of screw conveyors to carry cement / fly ash to mixer, Batching stand support, truck parking area, access for in-feeding the material (aggregate) etc.

The coarse and fine aggregates will be stored in covered storage yards, cement will be fed directly through cement silo, admixture chemicals solution and water will be pumped to mixers.

Details of Raw Materials for Proposed RMC Unit

No.	***Name of Raw Materials***	**Quantity (MTPA)**
For Ready Mixed Concrete@ 1.12 Million TPA (475,200 m^3/year or 60 m^3/hr)		
1	Cement	0.312
2	Aggregates (Coarse & Fine)	0.714
3	Admixture Chemicals	0.011
4	Water	0.024

Note: For RMC, working is considered for 330 days in a year and density of Ready Mixed Concrete is considered as 2.35 T/M^3.

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Process Flow Diagram of RMC Unit