

PRE FEASIBILITY REPORT

of

CIDCO STONE QUARRIES, NAVI MUMBAI

For extraction of Minor Mineral - Stone

Submitted to

MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE

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Project Proponent

City and Industrial Development Corporation of Maharashtra Limited

NAVI MUMBAI,
THANE DISTRICT, MAHARASHTRA



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EIA Consultant

POLLUTION & ECOLOGY CONTROL SERVICES

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1. EXECUTIVE SUMMARY

This Pre Feasibility Report has been prepared for the CIDCO Stone Quarries, Navi Mumbai located spread over 138.07 Ha in five villages viz., Parvane, Bonsari, Shirvane, Turbhe & Kukshet, Navi Mumbai Tahsil of Thane District Maharashtra, in accordance with the Notification of MoEF S.O. 1533 dated 14th September 2006.

Developmental activities like industries or quarry project may cause temporary damage to land, forest and induce changes in the quality of air, water, flora and fauna of the area. But, there are favorable effects of industrialization on social development and progress of the Nation. For overall gain, it is necessary to strike a balance between the two aspects of economy and ecology and ensure that impacts on the environment are minimized with improvement in socio-economic conditions. This is better achieved through a well-planned approach of EMP relevant to the area under consideration.

Stone / Murrum is used for a wide variety of purposes. It is most commonly crushed for use as an aggregate in construction projects. Crushed Stone/Murrum is required for road base, concrete aggregate, asphalt pavement aggregate, railroad ballast, filter Stone/Murrum in drain fields and many other purposes. Stone / Murrum is also cut into dimension stone. Thin slabs of Stone/ Murrum are cut and sometimes polished for use as floor tiles, building veneer, monuments and other Stone/Murrum objects.

The quarries are developed as opencast for the production of Stone/Murrum metal of various sizes. Stone/ Murrum crusher of adequate capacity has been suggested for aggregate production in various sizes as per the demand. In order to obtain environmental clearance as per the EIA Notification 2006, the prefeasibility report is submitted along with the application Form-I for the project under consideration.

The selected area has exposures of Stone. This Stone/Murrum is excellent building material as it possesses most of the required characteristic. The compact black Stone/Murrum are quite strong. The applicant has received Forest Clearance in 2006 valid upto 2026 (**Annexure** enclosed with Form-1).

2. INTRODUCTION OF THE PROJECT / BACKGROUND INFORMATION.

i) Identification of Project and Project Proponent

CIDCO – India's Premiere Town Planning Agency, City and Industrial Development Corporation of Maharashtra Ltd., is a company wholly owned by the Govt. Of Maharashtra and was incorporated on 17th March 1970, with the specific aim of Mumbai city and at the same time creating a new planned, self sufficient and sustainable city on the mainland across Thane creek adjoining Mumbai. What began as a mission to Mumbai ended up in the creation of one of the largest planned city known today and elevated CIDCO into the position of India's premier town planning agency.

Mumbai Metropolitan Regional Planning Board recommended considering a twin city across to facilitate the separation of greater Mumbai and CIDCO was entrusted with developing necessary social and physical infrastructure. Forty-one years later, CIDCO has carved out an eminent nest of planned, sustainable and self sufficient inhabitation, out of a



common, undeveloped expanse of 344 sq. km. which was once a marshy sanctuary to salt pans and paddy fields.

With a wide spectrum of activities, CIDCO is a multi faceted and multi disciplinary organization having 1,750 employees, which includes planners, architects, engineers and other professionals. Since its inception, CIDCO has diversified its working spectrum to accommodate new activities, even though its primary attention is still concentrated in overlooking the constant development of Navi Mumbai. The multidimensional activities undertaken today by CIDCO can be classified under these three broad concepts:

- Planning and Development of New Towns.
- Consultancy.
- Project Management and Designing.

CIDCO Developed Cities:

Navi Mumbai (34400 sq. m.)	New Nanded (172 Ha.)
Oros-Sindhurg (430 Ha.)	Waluj (8571 Ha.)
Aurangabad Fringe Area (15184 Ha.)	Khopta (9400 Ha.)
Jalna New Town (470 Ha.)	New Aurangabad (1012 Ha.)
New Nashik (398 Ha.)	Vasai-Virar Sub Region (38000 Ha.)
Meghdoot, New Nagpur	Chikhaldara Hill Station (1953 Ha.)
Latur Fringe Area (25131 Ha.)	

Navi Mumbai has become a unique project by virtue of its pattern of development, housing, social and physical infrastructure, method of finance and sustainable futuristic planning, earning the city a reputation of being a Super City and one of the largest planned city. Polycentric pattern of development ensured balanced land and even distribution of residential areas, job centers, wholesale markets, non-polluting industry and population density. Today, Navi Mumbai is endowed with an entire gamut of infrastructure facilities.

ii) Brief description of nature of the project

The present Pre Feasibility Report has been prepared for the CIDCO Stone Quarries, Navi Mumbai admeasuring an area of 138.07 Ha of forest Land as per the details given below;

Location/Village	Survey No	Area in Ha
1. Pawane Village	163	21.23
2. Bonsari Village	203	30.81
3. Shirvane Village	323/A	18.59
4. Turbhe Village	387	47.74
5. Kukshet Village	183	19.70
	TOTAL	138.07

For the development for Navi Mumbai during 1970, CIDCO had acquired land from the villagers with compensation prevalent at that time. Some of the Project Affected Persons were offered quarries in lieu of their land compensated for the purpose of Navi Mumbai. The land identified for this purpose was forest land. After the enactment of Forest Conservation Act, 1980 necessary clearance under the provisions of the Act has been obtained. Today these stone quarries are being jointly operated by these entitled PAP's, whilst some of the stone quarries are abandoned . The quarries are developed by

mechanized opencast method of mining. A list of them along with area allocated to each of them is provided in **Annexure 2** in Form-1.

In order to obtain environmental clearance as per the EIA Notification 2006 the prefeasibility report is submitted along with the application Form 1 for the project under consideration. The project is categorized as **Category A**.

iii) Need for the project and its importance to the country and or region.

Building material Stone/Murrum metal is an essential requirement as one of the minor mineral deposits occurring in the majority portion of Maharashtra. It has played a great role in development of civilization and industrialization. The occurrence of Stone/Murrum in the area is proved by the way of exposures and its production has important role in the local infrastructural development.

iv) Demand Supply Gap.

It is an essential constituent infrastructural development projects like road, dams, bridges and building. Its demand in industrial area of Thane District and nearby areas is increasing rapidly.

v) Imports vs. Indigenous production.

Maharashtra is one of the major producers of building Stone/ Murrum in the country.

vi) Export Possibility.

Not explored

vii) Domestic / export Markets.

Domestic market for Stone/Murrum as building material is well established..

viii) Employment Generation (Direct and Indirect) due to the project.

Almost every lessee has 5 to 10 persons on its roll. Presentably over 560 persons are employed, out of these nearly 300 are skilled and highly skilled worked and over 250 unskilled workers.

3 PROJECT DESCRIPTION

i) Type of project including interlinked and Interdependent project, if any.

The project is quarry by opencast method. There is no interlinked and interdependent project

ii) Location (map showing general location, specific location, and project boundary & project site layout) with coordinates.

The mining lease area is covered in parts of Survey of India Toposheet No. 47 E/4 within latitude as given in the Annexure 1. The land is Reserved Forest Land. . The location of site is shown in the **Figure-1**.



FIGURE-1: LOCATION OF QUARRIES

- iii) Details of alternate sites considered and the basis of selecting the proposed site, particularly the environmental consideration gone into should be highlighted.**

The project is a site specific and has to be undertaken at the place of the occurrence of the mineral and hence no alternative sites explored.

- iv) Size or magnitude of operation.**

The mining operations in this area are ongoing operations carried out from more than 4 decades with an average production of 6-7 MTPA by opencast method.

- v) Project description with process details (a schematic diagram/ flow chart showing the project layout, components of the project etc. should be given).**

The area has exposures of Stone. This Stone/ Murrum are excellent building material as it possesses most of the required characteristic. A surface Plan of the mining lease showing existing features is enclosed as **Map-1** while the proposed production plan at the conceptual stage is depicted at **Map-2**.

- vi) Raw material along with estimated quantity, likely source marketing area of final products, mode of transport of raw material and Finished product.**

There is no requirement of any Raw Material for the production of stone from this project. Mode of transport of extracted building material is surface transport by existing roads.

- vii) Resource optimization / recycling and reuse envisaged in the project, if any, should be briefly outlined.**

There is no waste material generation as there is no overburden, soil or interburden. All the excavated material is directly consumed in the market as per the sizes.

- viii) Availability of water its source, Energy / power requirement and source should be given.**

Drinking water is supplied through MIDC pipeline partially. At some locations ground water is abstracted to the tune of 12 m³/day for meeting drinking water purpose through borewell / tubewell. The power supply is available from the Maharashtra State Electricity Board.

ix) Quantity of waste to be generated (liquid and solid) and scheme for their Management /disposal.

Solid Waste: There is no solid waste generation during quarry development.

Liquid Effluent: There is no effluent generation. The quarries does not intercept the water table. Storm water during monsoon is drained into natural water courses of seasonal nature.

x) Schematic representation of the feasibility drawing which give information of EIA purpose.

Not required

4 SITE ANALYSIS

i) Connectivity.

The area is approachable by well developed road network provided by MIDC.

ii) Land use and Land ownership.

CIDCO Stone Quarries, Navi Mumbai admeasuring an area of 138.07 Ha is categorized as reserved forest Land as per the details given below;

Location/Village	Survey No	Area in Ha
1. Pawane Village	163	21.23
2. Bonsari Village	203	30.81
3. Shirvane Village	323/A	18.59
4. Turbhe Village	387	47.74
5. Kukshet Village	183	19.70
	TOTAL	138.07

At the time of development of new city of Navi Mumbai during 1970, this forest land was transferred to CIDCO by State Government in July 1972. This proposal 138.07 Ha of forest land for which lease was granted from time to time from 1972. There were 94 stone quarries allocated to project affected persons to CIDCO and Government Contractors. Quarrying was continued in many of the sites from 1972

till date on the basis of lease granted by revenue department. The Forest clearance for the above land has been obtained MoEFCC New Delhi.

iii) Topography (along with map).

The topography of the lease area is hilly terrain. The hilly trend is in almost N-S direction with steep slope towards east and west. The 138.07 Ha of mining lease lies towards western side of the hill as shown on the surface plan placed at **Map-1**.

iv) Existing land use pattern (agriculture, non-agriculture, forest, water bodies (including area under CRZ), shortest distances from the periphery of the project to periphery of the forest, national park, wild life sanctuary, eco sensitive areas, water bodies (distance from the HFL of the river), CRZ. In case of notified industrial area, a copy of the Gazette notification should be given.

The mining lease Of 138.07 Ha is categorized as Forest land has been used for extraction of the stone for almost 4 decades and has undergone changes and the current landuse is as under;

Sr. No	Particulars	Area
1	Stone quarries area	84.14 Ha
2	Crusher and Allied works, temporary labour shed and offices etc.	32.20 Ha
3	Approach Road	21.73 Ha
	Total	138.07 Ha

Significant features in **10 Km radius** (aerial distance) of the project are tabulated below;

Sr. No.	FEATURES	DETAILS	DISTANCE
1.	Village (Nearest)	Kukshet	1.3 km (W)
2.	Creek, Nala	Vasai creek	4.5 km (W)
		Bava Malang	6 km.(E)
3.	Reserved Forest	Forest area	SQ within Reserved Forest
	Protected Forest	-	-
4.	National Highway	NH 4	2.0 (E)
5.	Industries	MIDC Area	400m (W)
6.	Thermal Power Plant	None	-
7.	Mines	Various stone quarries	Adjacent
8.	Railway Line	Nerul Railway	1.62 km (W)
9.	Archeological Monument	None	-
10.	National Park	None	-
11.	Wildlife / Bird Sanctuary	None	-
12.	Interstate Boundary	None	-

There is no nearest National Park, Wild life Sanctuary in 15 Km radius of the project.

v) Existing Infrastructure.

There are quarrying activities carried out in the surrounding. There is well established road connection from the quarries to the National Highway /village road.

vi) Soil classification.

The lease area is broken land with Stone/ Murrum exposures and no soil cover.

vii) Climatic data from secondary sources.

The climate of the surrounding area is generally dry except in the south-west monsoon season. The year may broadly be divided into four seasons.

- Winter Season : December to February
- Pre Monsoon Season : March to May
- Monsoon Season : June to September
- Post Monsoon Season : October and November

The climate of this district is characterized by hot humid summer, well distributed high rainfall during the southwest monsoon and general dryness except in the rainy season. The cold season is mild from December to February. This is followed by the hot season from March to May. The southwest monsoon season is from June to September. October and November constitute the post-monsoon season.

Source : IMD

viii) Social Infrastructure available.

The area is closely situated near the Turbhe MIDC and enjoys all the infrastructural facilities like road, railway, telecommunication, power, water etc. There is plenty of manpower available and all necessary facilities like Post office, Hospital, Police Station etc are available within the nearby area of Turbhe.

5 PLANNING BRIEF

i) Planning Concept (type of Industries, facilities, transportation etc) Town and country planning/ Development authority Classification.

The stone quarries are developed as opencast for the production Stone/Murrum metal of various size. A crusher with dust suppression arrangement is installed. The quarried material is crushed and screened to the desired output before being dispatched by road through trucks.

ii) Population Projection.

CIDCO Stone Quarries, Navi Mumbai is close to the Turbhe MIDC and exhibit semi urban nature. Villages like Kukshet, Pawane, Shirvane, Turbhe and Bonsari are close to the stone quarries. The manpower required for the project is engaged from the nearby village(s) supplemented with some population from the surrounding states.

iii) Land use planning (breakup along with green belt etc.).

Presently the quarries are developed and other temporary infrastructure is also developed. Current landuse is as under;

Sr. No	Particulars	Area
1	Stone Quarries area	84.14 Ha
2	Crusher and Allied works, temporary labour shed and offices etc.	32.20 Ha
3	Approach Road	21.73 Ha
	Total	138.07 Ha

iv) Assessment of Infrastructure Demand (physical & social).

The project requires roads for the transport of the produced material which is adequate, besides it requires manpower to operate the quarry and is available locally.

v) Amenities/Facilities.

Facilities are available for drinking water, canteen and toilets.

6 PROPOSED INFRASTRUCTURE

i) Industrial area (processing area).

Mining from mineralized zone only.

ii) Residential Area (Non processing Area).

None

iii) Green Belt.

Compensatory afforestation is already carried out in lieu of forest land diverted. In addition every quarry lessee planted trees in their premises.

iv) Social Infrastructure.

None

v) Connectivity (Traffic and Transportation Road/Rail/Metro/Water ways etc.)

The area is approachable from Navi Mumbai.

vi) Drinking Water management (Source & Supply of water)

Water supplied through tanker.

vii) Sewerage System.

Not required

viii) Industrial Waste Management.

Not required

ix) Solid Waste Management.

No Solid waste generation.

x) Power Requirement & Supply / Source.

State Electricity Board

7 REHABILITATION AND RESETTLEMENT (R & R) PLAN

i) Policy to be adopted (central/state) in respect of the project affected person including home oustees, land oustees and landless laborers (a brief outline to be given.)

The allotment of the stone quarries are a part of the compensation given the land looser of the area who opted for the stone quarry activities.

8 PROJECT SCHEDULE & COST ESTIMATES

i) Likely date of start of construction and likely date of completion (Time schedule for the project to be given.)

The operations are carried as per the statutory guidelines. Adequate reserves are available. Reclamation and Rehabilitation plan will be prepared for sustainable development and minimized environmental damage.

ii) Estimated project cost along with analysis in terms of economic viability of the project.

Rs. 50 to 60 lakhs already invested towards each quarry development and stone crusher.

9 ANALYSIS OF PROPOSAL FINAL RECOMMENDATIONS)

i) Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area.

The local population are employed wherever possible in the project activities directly or indirectly.

