



## STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

Environment department,  
Room No. 217, 2nd floor,  
Mantralaya, Annexe,  
Mumbai- 400 032.  
Date: November 27, 2018

To,  
**Shri Pravin Darade-Additional Metropolitan Commissioner, MMRDA**  
at The project is located in Municipal Corporation of Greater Mumbai and several survey numbers are coming in 23.64 stretch.

**Subject:** CRZ Clearance for Proposed construction of Mumbai Metro Line -2B (D.N.Nagar-Mandale)

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered, by the Maharashtra Coastal Zone Management Authority, Maharashtra in its 144th meeting and recommend the project for CRZ Clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 144th meetings.

2. It is noted that the proposal is considered by Maharashtra Coastal Zone Management Authority as per CRZ Notification 2011.

### Brief Information of the project submitted by you is as below :-

1.Name of Project	Proposed construction of Mumbai Metro Line -2B (D.N.Nagar-Mandale)
2.Type of institution	Government
3.Name of Project Proponent	Shri Pravin Darade-Additional Metropolitan Commissioner, MMRDA
4.Name of Consultant	The application is prepared in house by MMRDA
5.Type of project	others
6.New project/expansion in existing project/modernization/diversification in existing project	New project
7.If expansion/diversification, whether CRZ Clearance has been obtained for existing project	MoEF, Government of India intimated MMRDA vide letter dated 9th March, 2016 that construction of Metro rail is not covered under EIA Notification, 2006.
8.Location of the project	The project is located in Municipal Corporation of Greater Mumbai and several survey numbers are coming in 23.64 stretch.
9.Taluka	The project is located in Municipal Corporation of Greater Mumbai and several survey numbers are coming in 23.64 stretch.
10.Village	The project is located in Municipal Corporation of Greater Mumbai and several survey numbers are coming in 23.64 stretch.
Correspondence Name:	Shri. Vikas Tondwalkar, Joint Project Director (Environment)
Room Number:	E Block, B Wing
Floor:	3rd floor
Building Name:	old MMRDA Building
Road/Street Name:	Bandra Kurla Complex (BKC)
Locality:	Bandra (E)
City:	Mumbai -400051
11.Whether in Corporation / Municipal / other area	Corporation area

12.IOD/IOA/Concession/Plan Approval Number	Not Applicable
	IOD/IOA/Concession/Plan Approval Number: Not Applicable
	Approved Built-up Area: 000000
13.Note on the initiated work (If applicable)	Not Applicable
14.LOI / NOC / IOD from MHADA/ Other approvals (If applicable)	Not Applicable
15.Total Plot Area (sq. m.)	Not Applicable
16.Deductions	Not Applicable
17.Net Plot area	Not Applicable
18 (a).Proposed Built-up Area (FSI & Non-FSI)	FSI area (sq. m.): Not Applicable
	Non FSI area (sq. m.): Not Applicable
	Total BUA area (sq. m.): 000000
18 (b).Approved Built up area as per DCR	Approved FSI area (sq. m.): Not Applicable
	Approved Non FSI area (sq. m.): Not Applicable
	Date of Approval: 01-01-1900
19.Total ground coverage (m2)	Not Applicable
20.Ground-coverage Percentage (%) (Note: Percentage of plot not open to sky)	Not Applicable
21.Estimated cost of the project	82610000000.00

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22. Production Details				
Serial Number	Product	Existing (MT/M)	Proposed (MT/M)	Total (MT/M)
1	Not Applicable	Not Applicable	Not Applicable	Not Applicable
23. Total Water Requirement				
Dry season:	Source of water	MCGM		
	Fresh water (CMD):	Drinking water -132 m3/Day and for other activities 374m3/day		
	Recycled water - Flushing (CMD):	wastewater from depot will be recycled by installing STP		
	Recycled water - Gardening (CMD):	Partly out of 64 KLD of treated wastewater from STP will be used for gardening		
	Swimming pool make up (Cum):	Not Applicable		
	Total Water Requirement (CMD) :	approx. 2500 KLD		
	Fire fighting - Underground water tank(CMD):	underground water tank of suitable capacity will be used for firefighting		
	Fire fighting - Overhead water tank(CMD):	overhead tank of suitable capacity will be used		
	Excess treated water	excess treated water will be diverted to near by nalla, stream		
Wet season:	Source of water	MCGM		
	Fresh water (CMD):	Drinking water -132 m3/Day and for other activities 374m3/day		
	Recycled water - Flushing (CMD):	wastewater from depot will be recycled by installing STP		
	Recycled water - Gardening (CMD):	Partly out of 64 KLD of treated wastewater from STP will be used for gardening		
	Swimming pool make up (Cum):	Not Applicable		
	Total Water Requirement (CMD) :	approx. 2500 KLD		
	Fire fighting - Underground water tank(CMD):	underground water tank of suitable capacity will be used for firefighting		
	Fire fighting - Overhead water tank(CMD):	overhead tank of suitable capacity will be used		
	Excess treated water	excess treated water will be diverted to near by nalla, stream		
Details of Swimming pool (If any)		Not Applicable		

24.Details of Total water consumed									
Particulars	Consumption (CMD)			Loss (CMD)			Effluent (CMD)		
Water Requirement	Existing	Proposed	Total	Existing	Proposed	Total	Existing	Proposed	Total
Domestic	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
25.Rain Water Harvesting (RWH)	Level of the Ground water table:		Different at each location						
	Size and no of RWH tank(s) and Quantity:		Rain water harvesting structures of suitable capacity will be constructed at stations and depot wherever possible						
	Location of the RWH tank(s):		As far as maximum practicable						
	Quantity of recharge pits:		Recharge pit as per the requirements will be constructed						
	Size of recharge pits :		Recharge pit of suitable size						
	Budgetary allocation (Capital cost) :		Rs. 360 Lakhs						
	Budgetary allocation (O & M cost) :		will be decided by consulting with the Local Authorities like MCGM or other concerned statutory authorities.						
	Details of UGT tanks if any :		Underground tank of suitable capacity will be constructed						
26.Storm water drainage	Natural water drainage pattern:		care will be taken that the storm water drain will not be affected by construction work of the project and if at certain locations due to unavoidable reasons it affects will be maintained properly.						
	Quantity of storm water:		care will be taken that the storm water drain will not be affected by construction work of the project and if at certain locations due to unavoidable reasons it affects will be maintained properly.						
	Size of SWD:		Storm water drain of suitable size						
27.Sewage and Waste water	Sewage generation in KLD:		80 KLD						
	STP technology:		STP technology will be finalized by consulting with the Local Governing Authorities like MCGM or other concerned statutory authorities						
	Capacity of STP (CMD):		1 STP in 1 Depot						
	Location & area of the STP:		STP will be provided in depot area						
	Budgetary allocation (Capital cost):		Rs. 78.00 Lakh						
	Budgetary allocation (O & M cost):		will be finalized by consulting with the Local Governing Authority (MCGM) or other concerned statutory authority.						

## 28.Solid waste Management

<b>Waste generation in the Pre Construction and Construction phase:</b>	<b>Waste generation:</b>	C & D waste will be generated during construction phase.
	<b>Disposal of the construction waste debris:</b>	The C & D waste would be handle and disposed off to C & D waste processing facility or for back filling of low lying areas, leaving no significant impact on environment.
<b>Waste generation in the operation Phase:</b>	<b>Dry waste:</b>	0.8-1.2 m3/day solid waste will be generated from stations
	<b>Wet waste:</b>	included in dry waste
	<b>Hazardous waste:</b>	Used acid and alkalies, paints, spent oil and other waste will be generated
	<b>Biomedical waste (If applicable):</b>	used cotton, bangages
	<b>STP Sludge (Dry sludge):</b>	250 kg/year
	<b>Others if any:</b>	Not Applicable
<b>Mode of Disposal of waste:</b>	<b>Dry waste:</b>	Solid waste at depot site will be taken up by the cleaning contractor weekly and disposed to the Municipal Waste disposal sites.
	<b>Wet waste:</b>	Wet waste is included in dry waste. So disposed off as mentioned in the above point.
	<b>Hazardous waste:</b>	The contractor shall approach only Authorized recyclers for disposal of Hazardous waste under intimation to MMRDA.
	<b>Biomedical waste (If applicable):</b>	Will be handed over to the authorized vendor
	<b>STP Sludge (Dry sludge):</b>	Sludge will be stored in leak proof containers and disposed off as per State Pollution Control Board guidelines.
	<b>Others if any:</b>	Not Applicable
<b>Area requirement:</b>	<b>Location(s):</b>	Stations and depot
	<b>Area for the storage of waste &amp; other material:</b>	10 m3
	<b>Area for machinery:</b>	Not Applicable
<b>Budgetary allocation (Capital cost and O&amp;M cost):</b>	<b>Capital cost:</b>	Not Applicable
	<b>O &amp; M cost:</b>	Finalized after consulting with Local Authority (MCGM)

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29.Effluent Charecterestics					
Serial Number	Parameters	Unit	Inlet Effluent Charecterestics	Outlet Effluent Charecterestics	Effluent discharge standards (MPCB)
1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Amount of effluent generation (CMD):		About 63 KLD at depot			
Capacity of the ETP:		ETP of suitable capacity will be constructed to treat the effluent.			
Amount of treated effluent recycled :		recycled water will be used for gardening and dust suppression			
Amount of water send to the CETP:		Water will not be sent to CETP			
Membership of CETP (if require):		Not Applicable			
Note on ETP technology to be used		Technology will be finalized by consulting with the Local Governing Authorities like MCGM or other statutory authority.			
Disposal of the ETP sludge		Sludge will be disposed at the sites approved by Maharashtra Pollution Control Board.			

  
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30.Hazardous Waste Details							
Serial Number	Description	Cat	UOM	Existing	Proposed	Total	Method of Disposal
1	Paint/spent solvent	21.2	Not Applicable	Not Applicable	Not Applicable	Not Applicable	will be handed over to authorized vendor
2	Spent acid, alkalies	12.2	Not Applicable	Not Applicable	Not Applicable	Not Applicable	will be handed over to authorized vendor
3	Spent oil	5.1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	will be handed over to authorized vendor

31.Stacks emission Details						
Serial Number	Section & units	Fuel Used with Quantity	Stack No.	Height from ground level (m)	Internal diameter (m)	Temp. of Exhaust Gases
1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

32.Details of Fuel to be used				
Serial Number	Type of Fuel	Existing	Proposed	Total
1	diesel	Not Applicable	Not Applicable	Not Applicable
33.Source of Fuel		from authorized dealers available in the vicinity of the project location		
34.Mode of Transportation of fuel to site		For vehicles directly from authorized dealers available in the vicinity of the project area and for DG set on vehicle containing barrels form authorized dealers		

35.Energy		
<b>Power requirement:</b>	Source of power supply :	M/s. Tata Power Company
	During Construction Phase: (Demand Load)	Not Applicable
	DG set as Power back-up during construction phase	DG sets of 180 KVA capacity at the elevated station
	During Operation phase (Connected load):	43.35 MVA
	During Operation phase (Demand load):	Not Applicable
	Transformer:	Not Applicable
	DG set as Power back-up during operation phase:	DG set of 180 KVA capacity
	Fuel used:	Diesel
	Details of high tension line passing through the plot if any:	Not Applicable
<b>Energy saving by non-conventional method:</b>		

1. Use Automatic Train operation System (ATO) will save 30 % energy
2. Use of Platform Screen Doors (PSD) will also save energy
3. Mechanism of energy saving for rolling stock
  - Train Control Monitoring System (TCMS)
  - Auxillary Power System (APS)
  - Permanent Magnet Synchronous Motor (PSMS)

### 36.Detail calculations & % of saving:

Serial Number	Energy Conservation Measures	Saving %
1	BY rolling stock	30

### 37.Details of pollution control Systems

Source	Existing pollution control system	Proposed to be installed
Sewerage and effluent generated in the Depot	Not Applicable	STP and ETP will be installed
Noise from construction	Not Applicable	use of noise barriers, use of pneumatic tools
Dust and gaseous emission from vehicles	Not Applicable	wheel washing facility, dust screens, water sprinklers
Budgetary allocation (Capital cost and O&M cost):	Capital cost:	Not Applicable
	O & M cost:	Not Applicable

### 38.Environmental Management plan Budgetary Allocation

#### a) Construction phase (with Break-up):

Serial Number	Attributes	Parameter	Total Cost per annum (Rs. In Lacs)
1	Air, noise, vibration, water, waste water, solid waste	PM10, PM2.5, SO2, NOX, Noise level in dB(A), Leq, LMax, water and waste water analysis	15.00 Lakh

#### b) Operation Phase (with Break-up):

Serial Number	Component	Description	Capital cost Rs. In Lacs	Operational and Maintenance cost (Rs. in Lacs/yr)
1	Rain water harvesting	at station and depot	332.12	will be finalized by consulting with concerned authority
2	Ecological motorizing	Monitoring of planted trees will be carried out	5.00	will be finalized by consulting with concerned authority
3	Tree Plantation	As per the norms of the Tree Authority of MCGM	17.00	will be finalized by consulting with concerned authority
4	Water Treatment Plant	will be installed	120.00	will be finalized by consulting with concerned authority
5	Sewage Treatment Plant	STP will be installed	78.00	will be finalized by consulting with concerned authority
6	Effluent Treatment Plant	ETP will be installed	88.50	will be finalized by consulting with concerned authority

7	Green Belt at Depot	will be developed	30.00	will be finalized by consulting with concerned authority
8	Recycling of treated waste water	will be carried out and recycled water will be used for gardening and flushing	41.00	will be finalized by consulting with concerned authority
9	Air, Noise, Vibration, water, wastewater	PM10, CO,NOX,SO2, Vibration, Noise levels in dB (A)	15.00	will be finalized by consulting with concerned authority

### 39.Storage of chemicals (inflamable/explosive/hazardous/toxic substances)

Description	Status	Location	Storage Capacity in MT	Maximum Quantity of Storage at any point of time in MT	Consumption / Month in MT	Source of Supply	Means of transportation
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

### 40.Any Other Information

No Information Available

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	<b>CRZ/ RRZ clearance obtain, if any:</b>	Yes, MCZMA recommended the proposal in its 113th meeting dated 8th-11th August, 2016
	<b>Distance from Protected Areas / Critically Polluted areas / Eco-sensitive areas/ inter-State boundaries</b>	6.7 km from Thane Creek Flamingo Sanctuary and 7.3 km from Sanjay Gandhi National Park
	<b>Category as per schedule of EIA Notification sheet</b>	Metro Rail projects are not categorized in EIA Notification, 2006
	<b>Court cases pending if any</b>	Yes
	<b>Other Relevant Informations</b>	Not Applicable
	<b>Have you previously submitted Application online on MOEF Website.</b>	No
	<b>Date of online submission</b>	-

**3. The proposal has been considered by SEIAA in its 144th meeting & decided to accord CRZ Clearance to project proponent under the provisions of Environment Impact Assessment Notification, 2006 & CRZ Notification 2011 subject to implementation of the following terms and conditions:**

**Specific Conditions:**

<b>I</b>	PP to comply with conditions imposed by MCZMA.
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**General Conditions:**

<b>I</b>	The SEIAA reserves the right to revoke this recommendation, if the conditions stipulated are not complied with to the satisfaction of the MCZMA or Environment Department.
<b>II</b>	The SEIAA or any other competent authority, may stipulate any additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with
<b>III</b>	A copy of the recommendation letter shall be marked to the concerned local body/ local NGO, if any, from whom any suggestion/ representation has been received while processing the proposal
<b>IV</b>	The environmental safeguard measures should be implemented in letter and spirit
<b>V</b>	The Clearance from CRZ point of view is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act

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4. The CRZ Clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.
5. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the CRZ Clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.
6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
7. This Clearance will be valid for 5 years from the date of issue of recommendation for commencement of construction & operation.
8. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
9. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.
10. Any appeal against this CRZ Clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-, Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

  
Shri. Anil Diggikar (Member Secretary SEIAA)

**Copy to:**

1. SECRETARY MOEF & CC
2. IA- DIVISION MOEF & CC
3. MEMBER SECRETARY MAHARASHTRA POLLUTION CONTROL BOARD MUMBAI
4. REGIONAL OFFICE MOEF & CC NAGPUR
5. MUNICIPAL COMMISSIONER MUMBAI
6. MUNICIPAL COMMISSIONER NAVI MUMBAI
7. REGIONAL OFFICE MPCB MUMBAI
8. REGIONAL OFFICE MPCB NAVI MUMBAI
9. REGIONAL OFFICE MIDC ANDHERI
10. REGIONAL OFFICE MIDC KOPER KHAIRANE NAVI MUMBAI
11. MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD
12. COLLECTOR OFFICE MUMBAI
13. COLLECTOR OFFICE MUMBAI SUB-URBAN