

Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi - 110003
Dated: 28 August, 2017

To,

The Chief Engineer
Municipal Corporation of Greater Mumbai (MCGM)
Mumbai Sewage Disposal Project
2nd Floor, Engineering Hub Building
Dr E. Moses Road, Near Worli Naka
Mumbai- 400 018

Sub: CRZ Clearance for: (i) Malad Sewage Treatment Plant at Malad (W), adjacent to Malad Greek, Survey No.2841(Pt), Mumbai; (ii) Construction of Sewer Tunnel Phase-I from Don Bosco School Junction, Borivali (W) to Malad Waste Water Treatment Facilities at Malad and (iii) Construction of Sewer Tunnel Phase-II from Goregaon Pumping Station to Malad Waste Water Treatment Facilities at Mumbai, Maharashtra - reg.

Sir,
This has reference to your proposals No. IA/MH/MIS/32429/2015, IA/MH/MIS/32430/2015 and IA/MH/MIS/32432/2015 respectively, dated 17.02.2016 received in this Ministry for CRZ Clearance in accordance with the provisions of the Coastal Regulation Zone (CRZ) Notification, 2011 issued under the Environment (Protection) Act, 1986.

2. The proposals for setting up of: (i) Malad Sewage Treatment Plant system at Malad (W), at Survey No. 2841(Pt); (ii) Construction of Sewer Tunnel Phase-I from Don Bosco School Junction, Borivali (W) to Malad Waste Water Treatment Facilities and (iii) Construction of Sewer Tunnel Phase-II from Goregaon Pumping Station to Malad Waste Water Treatment Facilities in Mumbai, have been recommended for CRZ clearance by the Expert Appraisal Committee (EAC) - Infrastructure Development, Coastal Regulation Zone, Building / Construction and Miscellaneous projects in its 172nd meeting held on June 30, 2017. The details of the projects, as per the documents submitted by you and as informed to the EAC are noted as under:

(A) SEWAGE TREATMENT PLANT:

- (i) The project envisages construction of sewage treatment plant including sewage conveyance tunnels for development and upgradation of existing facilities with the intended purpose of improving environmental conditions in and around Mumbai.
- (ii) The waste water collection and treatment facilities for the city are grouped in 7 (seven) service zones. The Malad service zone i.e. Zone 5 is one of the major service zone in the Western suburb of Mumbai covering five administrative wards. The zone covers an area of 5483 Ha and serves a population of 3.5 Million (as per 2011 census). The population is projected to increase upto 5.6 Million by 2031.
- (iii) The existing sewage treatment facility is limited to preliminary treatment and discharge into the Malad creek. The Malad creek does not have the required assimilative capacity due to nominal tidal flushing. The DO level in the Malad creek has

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- reached alarming low level raising serious environmental concern. The present proposal for a comprehensive Waste Water Treatment Facility (WwTF) at Malad zone is therefore an acute necessity.
- (iv) The Greater Mumbai Master Plan for sewage disposal has identified the land bearing CTS no. 2841 of village Malvani for construction of STP for Malad zone. This land has been identified for STP due to technical and geographical suitability keeping in mind that there is no other alternative location available in this zone for STP. This land is also reserved in the Development Plan of the city for public purpose for an STP. The area required for the STP is 35.5 Ha. The land is covered by dense mangrove and is located in CRZ-I.
 - (v) The design capacity of the STP will be 847 MLD and the capacity of the Influent Pumping Station (IPS) will be 1580 MLD. The discharge standards proposed to be achieved with tertiary treatment is 10 mg/l for BOD, as well as, Total Suspended Solids. Fecal Coliform will be < 230 (MPN/ 100 ml).
 - (vi) The Hon'ble High Court of Bombay passed an order dated 18.03.2009 to exempt the project sites of MSDP, from being declared as 'Protected Forest'. The High Court has also granted sanction for cutting the mangrove to the extent of 35.5 Ha required for purpose of Malad project by obtaining clearances from respective government authorities e.g. CRZ and Forest Clearances.
 - (vii) Malad STP project is proposed as one of the priority projects under MSDP Stage-II, and will be constructed at MCGM land at Sy. No. 2841 (pt). The waste water will be collected from the wards of KE, KW, PN, PS, RN and at the pumping station of Goregaon, Malvani, Charkop, Gorai, Shipoli and Vallah Nagar. Waste water from the above pumping stations shall be relayed to the Malad influent pumping station (IPS) through proposed priority sewer tunnel from L.T Chowk (Don Bosco) upto Goregaon PS along link road and finally to the proposed Malad STP for treatment.
 - (viii) In addition to the proposed Malad Sewage Treatment Plant to be constructed adjacent to Malad creek at Survey No.2841(Pt), the system entails construction of Sewer Tunnel Phase-I from Don Bosco School Junction, Borivali(W) to proposed STP and construction of Sewer Tunnel Phase-II from Goregaon Pumping Station to the proposed STP. In addition, shafts and pumping stations at appropriate locations will be constructed.

(B) PRIORITY SEWER TUNNEL-I:

- (i) The Priority Sewer Tunnel (PST) is intended to act as a deep collector sewer for all sewage flows on Link Road.
- (ii) The site (PST I) under reference partly fall in CRZ-I, CRZ-II, CRZ-IV and partly outside CRZ areas, as per the approved CRZ map. The total length of the tunnel is 6.39 Km and will have nine nos. of Shafts. Out of the total length of 6.39 Km the stretch admeasuring a length of 1.578 Km. from Malad Pumping Station to Malad WwTF falls in CRZ-I area below mangroves.
- (iii) The first phase consists of Priority Sewer Tunnel (PST-I) from Don Bosco school junction Borivali (W) to Malad Waste Water Treatment Facility. The PST-I is an underground tunnel carrying sewage at 16 to 20 m depth below ground level. The diameter of tunnel varies from 2600 mm to 3200 mm. The details tunnels along the various stretches are tabulated below:

S. N	Description	Diameter	Length	Method
1.	From Don Bosco School Junction, Borivali (W) to	2600 mm	3.588 km	Tunnelling with segmental lining

	Ambewadi			method
2.	From Gorai Pumping Station to Link road near MTNL building	1000 mm	0.666 km	Micro Tunnelling with pipe jacking
3.	From Ambewadi to Malad Pumping Station.	2600 mm	0.558 Km	Tunnelling with Segmental lining method
4.	From Malad Pumping Station to Malad WwTF	3200 mm	1.578 Km	Tunnelling with segmental lining method

(C) PRIORITY SEWER TUNNEL-II:

- The PST-II under reference partly falls in CRZ I, CRZ II, CRZ IV. Tunnels are to be laid below ground along road except for a small stretch of 0.45 Km below mangroves in CRZ I area.
- The second phase i.e Priority Sewer Tunnel (PST-II) from Goregaon Pumping station to Malad Waste water Treatment Facility, will be an underground tunnel carrying sewage at 14 to 16 m depth below ground level. There will be seven shafts. The diameter of tunnel varies from 1800mm to 2200 mm. The details tunnels along the various stretches are tabulated below:

S.N	Description	Diameter	Length	Method
1.	From Goregaon Pumping Station to Toyota showroom	1800 mm	3.2 km	Micro Tunnelling with pipe jacking
2.	From Toyota showroom to Malad STP	2200 mm	1.225 km	Micro Tunnelling with pipe jacking

(D) COST OF PROJECT:

(i) Sewage treatment plant (STP)	: 2020 crores
(ii) Priority sewer tunnel (PST I)	: 368 crores
(iii) Priority sewer tunnel (PST II)	: 191 crores
Total	: 2579 crores

(E) MCZMA have recommended the proposals to MoEFCC for CRZ clearance subject to certain specific and general conditions.

3. Based on the information submitted by you as at para no. 2 above and presentation made before the EAC (Infrastructure Development, Coastal Regulation Zone, Building / Construction and Miscellaneous projects) in its 172nd meeting held on June 30, 2017, and in acceptance of the recommendation of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords CRZ Clearance to the above projects viz 'Malad Sewage Treatment Plant system at Malad (W), adjacent to Malad Creek, Survey No.2841(Pt), Construction of Sewer Tunnel Phase I from Don Bosco School Junction, Borivali (W) to Malad Waste Water Treatment Facilities and Sewer Tunnel Phase II from Goregaon Pumping Station to Malad Waste Water Treatment Facilities at Mumbai, Maharashtra, subject to the specific and general conditions as under:

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PART A - SPECIFIC CONDITIONS:

- (i) The project proponent shall implement the project as a *model project* where environmental concerns are appropriately addressed through an *inbuilt-robust monitoring mechanism* and also ensuring that mangroves developed /rehabilitated in lieu of the areas diverted for the project are model example for replication elsewhere.
- (ii) All conditions/recommendations stipulated by the Mumbai Coastal Zone Management Authority (MCZMA) vide its letter no. CRZ 2014/CR-191/TC-4, dated 12.02.2015 shall strictly be complied with.
- (iii) Prior approval of the High Court of Bombay shall be obtained before commencement of the construction of project activities.
- (iv) Prior approval of the Standing Committee of the National Board of Wildlife, as may be applicable, shall be obtained;
- (v) Prior approval for diversion of forest land (mangrove) as applicable shall be obtained before commencement of the construction of project activity.
- (vi) 'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, as may be applicable.
- (vii) The construction in CRZ areas shall be done strictly in accordance with the provisions of CRZ Notification, 2011 and as amended from time to time.
- (viii) There shall be no dressing or alteration of the sand dunes, natural features including landscape changes for beautification, recreation and other such purpose.
- (ix) A 2% of the cost of the respective projects shall be apportioned for marine and coastal biodiversity protection and conservation measures, to be spent by the project proponent towards fulfilling its Corporate Environmental Responsibility (CER) during the currency of the project. Proper record and account of measures taken should be maintained and should also be submitted to the CZMA every six months.
- (x) About 36 ha mangrove cover shall be required to be compromised for the construction of STP and associated input Sewer Tunnel. Accordingly, five times this area i.e approximately 180 ha shall be developed elsewhere in the region as committed by the project proponent.
- (xi) A mangrove conservation plan shall be developed in consultation with Mangrove Foundation of Maharashtra or any institute of repute working in the field of mangrove conservation for the purpose of development / rehabilitation of mangrove as specified in para at item no. (vi) above. The implementation thereof and annual progress on the compensatory plantation of mangrove shall be submitted to the regional office of the Ministry clearly indicating the growth and survival of mangroves.
- (xii) *The project proponent shall communicate schedule of work to the Ministry at New Delhi so as to facilitate a site visit to be undertaken before actual cutting of the mangroves. The site inspection will be carried out by a Committee comprising of Member(s) of the Committee, Official(s) of MoEFCC and a member from Mangrove*

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Foundation of Maharashtra, so that suggestions for additional measures that may be necessary can be evaluated during the course of project commencement.

- (xiii) *The project proponent shall explore possibility of treating the sewage in a way that the resultant effluent can be used for industrial and other applications, rather than discharging as effluent waste of such a scarce resource. Accordingly, the project proponent shall submit time bound action plan to the regional office of the Ministry and the MCZMA within six months from commencement of project activity.*
- (xiv) *Discharge of unused treated effluent shall conform to the standards as laid down by MoEFCC. CPCB/SPCB may lay down stricter norms if Necessary. Necessary measures should be undertaken to mitigate foul odour from the STP.*
- (xv) *The project proponent should also make alternate arrangement for situation arising due to malfunctioning of STP. There shall be regular monitoring of the results of standard parameters of the effluent discharged from STP under intimation to the SPCB.*
- (xvi) *Soil and ground water samples in and around the STP shall be tested regularly to ascertain that there is no threat to ground water quality through leaching of toxic contaminants arising from the STP.*

PART B - GENERAL CONDITIONS:

- (i) Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.
- (ii) A six-monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry regarding the implementation of the stipulated conditions.
- (iii) The Ministry of Environment, Forest & Climate Change or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
- (iv) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with to the satisfaction of the Ministry.
- (v) A copy of the clearance letter shall be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.
- (vi) A copy of the CRZ Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/Tehsildar's Office for 30 days.
- (vii) Full co-operation shall be extended to the officials of the Regional Office of MoEF&CC, during monitoring of implementation of conditions stipulated in the clearance. It shall be ensured that documents/as may be necessary is submitted to the monitoring team

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during inspection. A complete set of all the documents shall be also submitted to Regional Office of the MoEF&CC.

(viii) Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

4. The above stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991, the EIA Notification, 2006 and the CRZ Notification, 2011.

5. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

6. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

7. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

② → 8. ★ The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board (SPCB) and may also be seen on the website of the Ministry of Environment, Forest and Climate Change at <http://www.envfor.nic.in>. The advertisement should be made within seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry.

9. This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

10. Any appeal against this clearance shall lie with the National Green Tribunal, Western Zone, at Pune, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

→ 11. ★ A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

→ 12. ★ The proponent shall upload the status of compliance of the stipulated conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB.

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13. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of conditions and shall also be sent to the respective Regional Office of the Ministry by e-mail.

Arvind
(Arvind Nautiyal)
Director

Copy to:

1. The Secretary, Department of Environment, Govt. of Maharashtra, Mantralaya, Mumbai - 400032
2. The Chairman, CPCB, Parivesh Bhawan, CBD cum-Office Complex, East Arjun Nagar, Delhi-110032
3. The Chairman, Maharashtra Coastal Zone Management Authority, Room No. 217 (Annexe), Mantralaya Mumbai-400032
4. The Member Secretary, Maharashtra Pollution Control Board, Sion (E), Mumbai
5. The APCCF, MoEF&CC, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur.
6. Guard File
7. Monitoring Cell.

Arvind
(Arvind Nautiyal)
Director

बृहन्मुंबई महानगरपालिका प्र.अ. (मुंबई पर्यावरण प्रकल्प)
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क्र.प्र.अ./मु.प्र.अ./क्र.
वेळ : ११, १२, १३, १४, १५, १६, १७

Dy. Ch. E. (MSDP) *(I)* H ✓
Dy. Ch. E. (M&E) SP
Exe Engr. (ENV) / MSDP
AO (MSDP)
For n / a ✓
Please Discuss

Wym 4/9/17
Satish R. Narkar
Ch. Engr. (MSDP)

E.E. Shinde
YA 12/9
Debt

बृहन्मुंबई महानगरपालिका प्र.अ. (मुंबई मलनिःसारण प्रकल्प)
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वेळ : ११, १२, १३, १४, १५, १६, १७

E.E. (ENV)
Original copy for record & o/a pl
13/9/17
EEC (MSDP)

बृहन्मुंबई महानगरपालिका प्र.अ. (मुंबई मलनिःसारण प्रकल्प)
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For n/a pl
SE (MSDP)

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F.No. 11-1/2016-IA-III
Government of India
Ministry of Environment, Forest and Climate Change

Indira Paryavaran Bhawan,
Jor Bagh Road,
New Delhi - 110003
Date: 16.10.2018

To,
The Chief Engineer
Municipal Corporation of Greater Mumbai (MCGM)
Mumbai Sewage Disposal Project
2nd Floor, Engineering Hub Building
Dr E. Moses Road, Near Worli Naka
Mumbai- 400 018.

Sub: CRZ Clearance for construction of Malad Sewage Treatment Plan and ancillary facilities at Malad, Maharashtra - Amendment - reg.

Sir,

This refers to letter nos. Ch.E/3588/MSDP, dated 02.11.2017 and DMC/E/114/MC, dated 21.07.2018 respectively of the Municipal Corporation of Greater Mumbai requesting therein amendment of CRZ clearance accorded for construction of Malad Sewage Treatment Plan and its ancillary facilities at Malad, Maharashtra.

2. In this regard, it is to inform that your request was reconsidered by the Expert Appraisal Committee (EAC)- Infrastructure Development, Coastal Regulation Zone, Building/Construction and Miscellaneous Projects viz. EAC (CRZ), in its 196th meeting held on 31.08.2018.

3. In acceptance of the recommendation of the viz. EAC (CRZ) and the Competent Authority in this Ministry, has considered your request and it is hereby informed that the following amendment shall be made in this Ministry's letter of even no. dated 28.08.2017 as follows:

Under para no. 3, Specific Condition no. (x) read as "About 36 ha mangrove cover shall be required to be compromised for the construction of STP and associated input Sewer Tunnel. Accordingly, five times this area i.e approximately 180 ha shall be developed elsewhere in the region as committed by the project proponent.", shall be now substituted as follows:

The project proponent shall replant five times the mangroves affected (25900 nos.) due to the project, in the region in consultation with the Forest Department and ensure that the survival rate of the replantation of the mangroves is not less than 85 percent.



4. All other terms and conditions mentioned in this Ministry's letter of even number, dated 28.08.2017, shall remain unaltered.

This issues with the approval of the Competent Authority.

Yours faithfully,

(W. Bharat Singh)
Addl. Director/ Sc 'E'

Copy to:

1. The Secretary, Department of Environment, Govt. of Maharashtra, Mantralaya, Mumbai - 32
2. The Chairman, Maharashtra Coastal Zone Management Authority, Room No.217 (Annexe), Mantralaya, Mumbai - 32
3. The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
4. The Member Secretary, Maharashtra Pollution Control Board, Kalpataru Point, 3rd & 4th Floor, Opp. Cine Planet, Matunga Scheme Road No. 8. Sion Circle, Sion (E), Mumbai-400022
5. The Member Secretary, Maharashtra Coastal Zone Management Authority, Environment Department, Government of Maharashtra, 5th Floor, New Administrative Building, Mantralaya, Mumbai- 400 032
6. The APCCF (C), MoEF&CC, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur - 1
7. Guard File.
8. Monitoring Cell.

(W. Bharat Singh)
Addl. Director/ Sc 'E'

~~Dy.Ch.Eng.(MSDP)-I~~

~~Dy.Ch.Eng.(MSDP)-II~~

~~Dy.Ch.Eng.(M.&T.)S.P.~~

~~Dy.Ch.Eng.(M.&T.)MSDP-I~~

~~Ex.Eng.(M.S.D.P.)~~

~~Ex.Eng.(M.S.D.P.)~~

~~Ex.Eng.(M.S.D.P.)~~

~~A. Ch.Eng.(M.S.D.P.)~~

For Circulation/Necessary action

Please Verify / Report/discuss

M.M. Thakur 21x11b.

Mahesh M. Thakur

Ch. Engr.(M.S.D.P.) Incharge

EE Shinde
NA on perlocity

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AE (MSDP) Bhi Kadane
n/a urgently. Forwarded
to Environment section &
co-ordinate for further compliance.

11/11/18
EE (MSDP)

बृहन्मुंबई महानगरपालिका प्र.अ. (मंडळ मलनिःसारण प्रकल्प)
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01/11/18
Received on

01/11/18 Received on 12/11/18 @ 1.00 pm