

*Minutes of the 199<sup>th</sup> Meeting of Maharashtra Coastal Zone Management Authority (MCZMA) held on 29<sup>th</sup> June, 2026*

Item No. 3: Proposed Thane Integral Ring Metro Project (TIRMP), District Thane, State of Maharashtra by Maharashtra Metro Rail Corporation Limited (MMRCL) (IA/MH/CRZ/583065/2026)

**INTRODUCTION:**

The Maharashtra Metro Rail Corporation Limited (MMRCL) officials along with consultant presented the proposal before the Authority.

Maharashtra Metro Rail Corporation Limited (MAHA-Metro) a joint venture company of Government of India (GoI) and Government of Maharashtra (GoM), is developing the Thane Integral Ring Metro Rail Project.

The MMRCL has proposed the construction of Thane Integral Ring Metro Rail Project in Thane. The project is envisaged as a sustainable urban transportation infrastructure initiative aimed at addressing traffic congestion and enhancing mobility within Thane City by providing an efficient public transit alternative.

The Thane Integral Ring Metro Rail Project (Thane Metro Phase-I), proposed by Maharashtra Metro Rail Corporation Limited (Maha Metro), is a 29.1 km circular Mass Rapid Transit System (MRTS) comprising 22 stations (20 elevated and 2 underground).

The corridor extends along the western periphery of Thane, from the proposed New Thane Station (Kopri) to Thane Railway Station, traversing major residential and commercial areas including Wagle Estate, Kolshet, Balkum, Rabodi, Manpada and Kasarvadavali.

The alignment originates at New Thane Station, adjacent to the Kopri suburban station, and traverses a ring-shaped corridor via Dongripada and Kasarvadavali before looping back to its point of origin. The total length of the ring corridor is 27,040.253 meters, with an additional 1,177.7 meter spur from Waghbil to Kasarvadavali planned to facilitate depot connectivity. The corridor is predominantly viaduct-based, running along existing roads as well as Development

  
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Plan (DP) roads earmarked for future development by the TMC. The alignment also incorporates underground stretches and Switch Over Ramps (SOR). A total of 22 stations are proposed along the alignment, comprising 20 elevated stations and 2 underground stations.

The project provides seamless integration with the proposed Green and Orange Metro Lines, Mumbai Metro Line 4 (Wadala-Kasarvadavali), Mumbai Metro Line 5 (Thane-Bhiwandi-Kalyan) and the existing Thane Railway Station, thereby significantly enhancing regional connectivity and mobility.

Salient features of the project-

- Length of the project - 29.1 km
- Length falling in CRZ area- 3.65 km
- Project area falling in CRZ - 95,036.24 Sqm

Stations & Depot

- 20 Elevated stations - Length - 140m; Width - 24m
- 2 underground stations - UG- Length - 190m; Width - 24m
- Depot location - Kavesar & Vadvali village (Area - 18 Ha)

The project will enhance connectivity and transportation efficiency by linking key areas such as Saket and Ghodbunder, thereby creating a comprehensive and swift transit network connecting the western, central and northern parts of Thane. The project is designed to facilitate multi-modal integration through seamless connectivity with the existing Thane Railway Station and the upcoming Mumbai Metro Line 4 (Wadala-Kasarvadavali) and Line 5 (Thane-Bhiwandi-Kalyan), thereby strengthening the regional transit network and improving overall accessibility.

The proposed alignment crosses mangroves and creek waters from northern to North-West side of Thane Creek, therefore falls under CRZ area as per approved CZMP 2019. Hence, the project requires to obtain CRZ clearance from the MoEFCC.

Consultant presented that, the part of the proposed alignment passes through the CRZ IA ( Mangroves & 50 m mangrove buffer zone), CRZ IB and CRZ



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II area, as per approved CZMP, 2019 and it is permissible as per para 5.1.1(ii), 5.1.1(iii), 5.1.2(i)(c) and 5.2(i) of the CRZ Notification, 2019

**DELIBERATION:**

Consultant presented that, part of the proposed alignment and other allied activities like depot building, metro station, viaduct falls in CRZ area. The NCSCM, Chennai has carried out the CRZ survey (map 1:4000 scale & report) for the part of the proposed activities falling in CRZ area, as per which:

Sr No.	Proposed Activities	CRZ IA (Mangroves)	CRZ IA (50 m mangrove buffer zone)	CRZ IB Intertidal	CRZ II
1	Proposed Alignment	1095.30	1655.05	162.93	735.60
2	Depot Building	-	-	491.40	997.75
3	Metro Station	4669.84	1996.60	-	817.50
4	Underground Alignment	123.27	6365.56	408.44	5133.90
5	Viaduct	25078.76	32564.07	3518.53	12870.43

The Authority noted the EIA report prepared by M/s Building Environment (India) Pvt Ltd (Nabet accredited consultant). Observations and mitigations measures as suggested in the EIA report has been noted. Certain observations of the EIA report is as follows-

- The proposed Thane Integral Ring Metro Rail Project traverses predominantly urbanized coastal plains with localized undulating terrain. The project area is physiographically influenced by the hilly and forested terrain of Sanjay Gandhi National Park to the west, the Ulhas River system to the north and east and the Thane Creek estuarine system to the south. Thus, the project corridor represents a transition zone between the upland hill ranges and the low-lying coastal plain, with natural drainage ultimately directed towards the Ulhas River Thane Creek system.



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- The alignment lies predominantly to the west of the Ulhas River, which constitutes the major surface water body in the project area. The Ulhas River flows northward and ultimately discharges into Vasai Creek, which is located adjacent to the northern portion of the project alignment and forms an important estuarine system before joining the Arabian Sea. Thane Creek, situated to the south of the project area, is another major estuarine water body connected to the Ulhas River system. The project area falls within a highly urbanized landscape that has undergone substantial modification due to rapid urban development and associated infrastructure activities
- The proposed TIRMRP also traverses through ecologically sensitive areas of SGNP. In addition, the alignment also passes through the Protected areas (Reserve / Protected Forest) along the existing Development Plan Road and outside the compound wall of SGNP at various locations.
- The proposed corridor lies within an urban area, where a detailed tree survey was conducted using the direct enumeration method. The survey focused on trees with a girth of 30 cm and above which are located in (a) 16 m corridor along the line i.e. 10 m line Right of Way (RoW) and 3 m on each side of line RoW (b) within each station and c) within the Depot land. A tree inventory carried out along the project alignment identified approximately 3,214 trees that are likely to be affected by the project. Most of the affected trees are situated along the median of the road, on both sides of the road near metro stations.
- A total of 43 mammalian species is recorded in and around Sanjay Gandhi National Park, of which 5 species are classified as Near Threatened (NT) and 2 as Vulnerable (VU) as per the IUCN Red List.
- All raw materials should be stored in designated, impermeable storage areas with proper bunding to prevent seepage into the soil. Vehicles and machinery should be regularly maintained to avoid leaks, and spill control equipment should be readily available at all storage sites. Dust suppression techniques such as regular water spraying should be used to reduce dust deposition on soil surfaces.
- Tree removal should be minimized and confined strictly to the required project area. Native vegetation should be replanted in suitable areas after construction. Erosion control measures such as mulching, silt fences, and geotextiles should be implemented to prevent soil loss. Where possible, mature trees should be transplanted rather than cut.



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- The project involves removal of 303 nos. of trees and 5380 nos. of mangroves falling within the project ROW. The removal of trees in the right of way will lead to loss of terrestrial flora and habitats, which support a variety of fauna. The total mangrove forest area affected by the project as per survey by forest department is 6.6579 Ha. The clearance of the approach path will require the removal of mangrove vegetation along the proposed ROW, leading to the direct loss of mangroves and disturbance to associated fauna.
- The proposed project alignment passes abutting to Vasai creek. The construction activities near creek may lead to the discharge of silt, cement, chemicals and other pollutants into it, degrading water quality and harming aquatic life. Install silt fences, sediment traps and geotextile covers near the creek to prevent construction runoff from entering the waterbody. Implement a strict waste disposal plan, ensuring that construction debris and hazardous materials are properly collected and stored away from the creek.
- All transport vehicles should comply with emission standards and be regularly maintained. Construction materials should be covered during transport and stored in enclosed or covered areas to prevent wind-blown dust. Water sprinkling should be carried out regularly on haul roads and material storage areas to suppress dust emissions. Idling of vehicles should be strictly prohibited.
- Noise and dust control measures such as acoustic barriers, regular water sprinkling, and use of low-noise machinery should be implemented. Construction activities must be restricted to daytime hours (e.g., 6:00 AM-10:00 PM). A grievance redressal mechanism should be established for residents to report issues, with timely resolution ensured.

Consultant presented that alternate alignment studies were carried out. The alignment has been finalised after taking into account environmental and social concerns, considerations of traffic, integration with the existing system and importantly, the overall economic and financial viability. The underlying principles for evaluation for each alternative alignment, without affecting the overall usefulness of the corridor, are:

- Minimum private land acquisition
- Least disturbance to properties
- Minimum disturbance to ecology/ biodiversity.



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Expert Members discussed about the impact at certain locations, particularly at Chendani, Majiwada, Balkum, Kolshet & Kavesar, alignment is traversing through small inland branch creeklets arising from main Thane Creek. Consultant presented that no creeklet would be disturbed, alignment in CRZ area is proposed is elevated and necessary environmental measures would be implemented to minimize the impact on coastal environment during construction phase.

Expert Members deliberated on the impact of the project on the mangroves. Consultant presented that, Mangrove Cell has carried out the ground verification and as per their survey, total no. of mangroves proposed to be cut for the proposed project is about 5380 nos. Consultant presented that, compensatory plantation of mangroves is proposed and process of identification of the site for mangrove plantation is in progress. The Authority suggested the MMRCL to carry out the three times mangrove area affected or destroyed or cut the compensatory plantation of mangroves in view of the CRZ Notification, 2019, in consultation with the Mangrove Cell. Prior High Court permission should be obtained by the MMRCL for mangrove cutting.

Expert Members observed that, a portion of the proposed alignment in some of villages passes through core and notified eco-sensitive zone (ESZ) of protected area of Sanjay Gandhi National Park. It was further asked whether any scheduled species of flora and fauna were observed, to which, PP and consultant responded that, there are certain species observed, for which, wildlife management plan has been formulated and submitted to Forest Dept. It was suggested to obtain the necessary NoC from ESZ point of view.

Expert Members asked consultant about the muck generation due to excavation activity and muck disposal plan. Consultant presented that, excavation and piling is expected to generate approximately 5,25,564 cubic meters of muck. The storage or disposal of this muck in the creek region may affect the aquatic flora and fauna. Excavation and piling will disturb soil and sediment, damaging root systems of mangroves and altering the natural hydrology. Large volumes of muck generated from piling can smother both terrestrial and aquatic flora if improperly managed. In aquatic habitats, muck deposition can lead to sedimentation, reduced water quality, and loss of benthic organisms, while suspended solids can reduce



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light penetration and affect aquatic plants and filter-feeding fauna. Consultant informed that, muck generated would be disposed scientifically outside CRZ area after obtaining necessary permission from the statutory Authority.

Consultant presented that, a systematic approach has been adopted for the preparation of the Disaster Management Plan (DMP) for the proposed Thane Integral Ring Metro Rail Project. The Disaster Management Plan has been prepared with the objective of ensuring safety of personnel and infrastructure, enhancing emergency preparedness and facilitating prompt and coordinated response during emergency situations.

The Authority noted the permissibility of the project as per CRZ Notification, 2019 -

Sr No.	Proposed Activities	CRZ Classification	Permissibility as per CRZ Notification, 2019
1	Proposed Alignment	CRZ IA (Mangroves)	5.1.1(i) & (iii)
		CRZ IA (50 m mangrove buffer zone)	5.1.1(ii)
		CRZ IB	5.1.2(i) (c)
		CRZ II	5.2(i)
2	Depot Building	CRZ IB	5.1.2(i) (c)
		CRZ II	5.2(i)
3	Metro Station	CRZ IA	5.1.1(i) & (iii)
		CRZ IA (50 m mangrove buffer zone)	5.1.1(ii)
		CRZ II	5.2(i)
4	Underground Alignment	CRZ IA	5.1.1(ii)
		CRZ IA (50 m mangrove buffer zone)	5.1.1(ii)
		CRZ IB	5.1.2(i) (c)
		CRZ II	5.2(i)
5	Viaduct	CRZ IA	5.1.1(ii)
		CRZ IA (50 m mangrove buffer zone)	5.1.1(ii)
		CRZ IB	5.1.2(i) (c)
		CRZ II	



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The Authority noted that as per para 7 (ii) of the CRZ Notification, 2019, project proposed in CRZ I & IV area, requires CRZ clearance from MoEF&CC, New Delhi. The para 7(ii) of the CRZ Notification, 2019 is reproduced as below-

*"All development activities or projects in CRZ-I and CRZ-IV areas, which are regulated or permissible as per this notification, shall be dealt with by Ministry of Environment, Forest and Climate Change for CRZ clearance, based on the recommendation of the concerned Coastal Zone Management Authority"*

The Authority noted that, proposed construction of mass transit system will have a positive impact on local's socio-economic conditions. New transportation infrastructure, can drive local economic development. A high-capacity mass transit system. will create a seamless multimodal transport network, reducing travel time, improving accessibility and supporting the region's economic and social development. The modal shift from road transport to metro rail is expected to reduce vehicular emissions, thereby lowering concentrations of air pollutants such as particulate matter (PM), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and hydrocarbons in the project area. Thus, it is a vital infrastructure project for the city of Thane.

**DECISION:**

In the light of above, the Authority after detailed discussion and deliberation decided to recommend the proposal from CRZ point of view to MoEF&CC, New Delhi, under CRZ Notification, 2019 subject to compliance of the following conditions:

1. The proposed project should be carried out strictly as per the provisions of CRZ Notification, 2019 (as amended from time to time) and guidelines/ clarifications given by MoEF from time to time.
2. The bridge design and construction method should be selected to require the least number of piles in the mangrove region, ensuring minimal disturbance to the mangrove ecosystem. The approach path to the piling area for the proposed elevated road project should be determined to minimize the loss of mangrove vegetation.

  
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3. Prior High Court permission shall be obtained by the PP as per Hon'ble High Court order dated 17<sup>th</sup> September, 2018 in PIL 87/2006, since the project requires clearing of the Mangroves
4. MMRCL to carry out the three times mangrove area affected or destroyed or cut the compensatory plantation of mangroves in view of the CRZ Notification, 2019.
5. PP to obtain the Forest NoC for the project
6. Wildlife Management Plan to be implemented by the PP in letter and spirit.
7. PP to obtain the tree NoC from the Competent Authority.
8. Muck should be collected, stored, and disposed of at designated, approved disposal sites, away from mangrove and creek areas. Temporary storage sites should be lined and covered to prevent leachate and runoff. Silt curtains and sediment traps should be installed in water bodies to prevent the spread of sediment. Muck disposal plan should be implemented scientifically. No Muck should be stored/ disposed in the CRZ area.
9. PP to ensure that eco-concrete should be used for the structure facing the creek water/ marine environment.
10. There shall not be any kind of discharge/ disposal in the marine water/ CRZ area. Solid / liquid waste management plan should be in place during construction and operation phase of the project.
11. Project proponent should implement Mitigation measures and Environment Management plan as stipulated in the EIA report, effectively and efficiently during construction and operational phase of the project to ensure that coastal environment is protected.
12. MMRCL to set up a dedicated Environment Cell for implementation of the EIA and other environment studies and monitoring of the Environment Management Plan (EMP) for the project for the project effectively and efficiently during construction and operational phase of the project to ensure that coastal environment is protected. It is also suggested to have a third-party monitoring/Audit of all such management initiatives by Govt agency during and after completion of project from time to time
13. PP and its contractors shall implement best practices to minimize the impact on coastal environment during construction and operation phase
14. During construction phase, the project implementing agency should proactively implement all possible appropriate environmental measures to achieve minimum disturbance to coastal ecosystem.



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15. C&D waste/ Debris generated during the construction activity should not be dumped in CRZ area. It should be ensured that debris is processed in a scientific manner at a designated site, as per MSW Rules, 2016.
16. Site preparation and site restoration in CRZ area should be undertaken without damaging the coastal-geomorphologic features.
17. Proponent shall take utmost care in controlling dust, fugitive emissions using best pollution control methods during operation phase
18. No labour camps are allowed in CRZ area and it should be ensured that the wastewater from these entities should not be released into the sea.
19. PP to explore the maximum use of renewable energy source during construction and operation phase of the project.
20. All other required permissions as per applicable rules from different statutory authorities should be obtained prior to commencement of work.



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