

**HALF YEARLY REPORT FOR MUMBAI
TRANS HARBOUR LINK**

**JULY TO
DECEMBER
2021**



Submitted to
Maharashtra Pollution Control Board (MPCB)

Submitted by



**एम एम आर डी ए
MMRDA**

Information of Project officer and Nodal officer

1.	<p>Name of Project officer</p> <p>Email</p> <p>Phone /Fax Number</p>	<p>Executive Engineer, MTHL- Project Implementation Unit</p> <p>2nd & 5th floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051</p> <p>Phone No.: 022-26594034</p>
2.	<p>Name of Nodal officers</p> <p>Email</p> <p>Phone /Fax Number</p>	<p>Engineer In Chief, MTHL Project Implementation Unit</p> <p>2nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051</p> <p>Email: engineerinchief@mailmmrda.maharashtra.gov.in Phone No.: 022-26594032</p>

Photographs showing present progress of work

Please refer to the Quarterly Progress Report No. 17 (April to June 2021) and 18 (July to September 2021) for the photographs of the progress

Monitoring the Implementation of Environmental Safeguards

**Ministry of environmental & Forest
Western Region, Regional Office, Bhopal**

Monitoring Report

PART - I DATA SHEET

No.	Particular	Information
1.	Project type: River Valley / Mining / Industry / Thermal / Nuclear / Others (specify)	: Infrastructure
2.	Name of the Project	: Mumbai Trans Harbour Link Project
3.	Clearance letter (s) / OM No. and date	: F. No. 11-65/2012-IA.III on 25 th January, 2016
4.	Location	Start point: Sewri in Mumbai City
	a) District (s)	: End Point: Chirle in Raigad District
	b) State (s)	: Maharashtra
	c) Location latitude / longitude	: Start: Latitude: 18°59'48.57"N Longitude: 72°51'20.67"E End: Latitude: 18°56'18.33"N Longitude: 73° 1'52.92"E
5.	Address for Correspondence	: Engineer In Chief,
	a) Address of the Concerned Project Chief Engineer (with Pin code & Telephone / Telex / Fax Numbers)	MTHL Project Implementation Unit 2 nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051
	b) Address of the Concerned Project Chief Engineer (with Pin code & Telephone / Telex / Fax Numbers)	Phone No.: 022-26594034
6.	Salient features	: The proposed Mumbai Trans Harbour Link ('MTHL') is proposed to facilitate decongestion of the island city by improving connectivity between Island city and main land (Navi Mumbai) and development of Navi Mumbai Region.
	a) of the Project	

No.	Particular	Information
		<p>Mumbai Trans Harbour Link Project is 22 km long 6-lane bridge across the Mumbai Bay connecting Sewri on Mumbai side to Chirle on Navi Mumbai side.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Saving in travel time, Vehicle Operating Cost and Fuel Savings • Accelerated growth of Navi Mumbai • Decongestion of island city of Mumbai • Connectivity to MbPT and JNPT Ports • Faster access to Navi Mumbai International Airport • Connectivity to Pune Expressway and to South India
	b) of the Environmental Management Plans	Various measures stipulated in the Environmental Management Plan mentioned in the CRZ clearance are being complied.
7.	<p>Breakup of the Project Area :</p> <p>a) Submergence area: forest & non forest</p>	<p>Total Area of Right of Way: 120.228 Ha</p> <p>Forest area: 47.417 Ha</p> <p>Non-Forest area: 72.811 Ha</p>
	b) Others	--
8.	<p>Breakup of the project affected population with the enumeration of those losing Houses / Dwelling units only, Agricultural Land & Landless Laborers / Artisans:</p> <p>a) SC, ST / Adivasi</p> <p>b) Others</p> <p>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)</p>	<p>Project affected population:</p> <p>Please refer to the Quarterly Progress Report No. 17 and 18 for the project affected population attached as Annexure-VI</p> <p>MMRDA has approved eligibility of 6645 fisher folks as project affected so far. Accordingly, fisheries department, Gov. of Maharashtra has paid compensation to eligible fisher-folk as per approved Fisherman Compensation Policy</p>
9	<p>Financial Details: Project cost as originally planned and subsequent revised estimates and the year of price reference</p>	<p>The total cost of the project is Rs. 17,843 Crore</p> <p>Year of reference: 2016</p>
	b) Allocation made for	Allocation of Rs. 335 Crore has been made for the

No.	Particular		Information
	environmental management plans with item wise and year wise breakup		implementation of Environment Management Plan for the MTHL project. The item-wise cost breakup of the EMP is attached as Annexure-II.
c)	Benefit cost ratio/Internal rate of Return and the year of assessment	:	-
d)	Whether (c) includes the cost of environmental management as shown in the above	:	-
e)	Actual expenditure incurred on the project so far	:	Rs. 8895.43 Crore
f)	Actual expenditure incurred on the environmental management plans so far	:	Please refer Annexure-VII for actual expenditure incurred on the environmental management plans so far.
10	Forest Land Requirement		
a)	The status of approval for diversion of forest land for non-forestry use	:	Stage - I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC on 22 nd January 2016 vide letter F.No.8-89/2013-FC.
b)	The status of clearing felling	:	NOC from Hon. High Court for cutting of mangroves is received on 28 th November 2016. Working Permission from Forest Department received on 22 May 2017.
c)	The status of compensatory afforestation, if any Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far	:	Rs. 91.42 crores have been transferred to Mangrove cell of Mangroves & Marine Biodiversity Foundation, setup under Maharashtra State Forest Department for Compensatory Afforestation (CA). Mangrove cell, Mumbai submitted updated status report of plantation (Attached as Annexure-VIII)
11	The status of clear felling in non-forest areas (such as submergence area or reservoir, approach roads.), if any with quantitative information required.	:	Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. Permission for cutting/transplantation in non-forest area of Navi Mumbai side has been granted by CIDCO. Copy of permission letter is attached herewith as

No.	Particular	Information
		<p>Annexure-IX.</p> <p>However, felling in non-forest area has not started yet</p>
12	<p>Status of construction (Actual&/or planned)</p>	<p>Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018.</p> <p>Please refer to the Quarterly Progress Report No. 17 and 18 attached with this report as Annexure-VI.</p>
a)	Date of commencement (Actual & / or planned)	: Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018.
b)	Date of completion (Actual &/or planned)	: Date of completion planned of Package 1 & 2 is 21-09-2022 and for Package 3 is 21-09-2021.
		<p>Extension of Time (EoT) has been granted to the contractors is below:</p> <p>Package 1: 30-09-2023</p> <p>Package 2: 27-09-2023</p> <p>Package 3: 03-03-2023</p>
13	<p>Reasons for the delay if the project is yet to start</p>	: Due to Covid 19 pandemic situation and Land Acquisition issues a project was delayed and Extension of Time (EoT) has been granted up to September 2023. Annexure - XI.
14	<p>Dates of Site Visits</p>	--
a)	The dates on which the project was monitored by the Regional Office on previous occasions, if any	: --
b)	Date of site visits for this monitoring report	: --

July to Dec 2021

Name: - **Shri. S. A. Wandhekar**

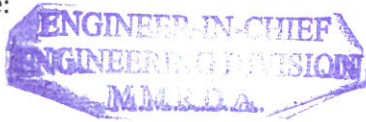
Engineer In Chief, MTHL Project Implementation Unit

New Administrative building, MMRDA, 2nd floor, Engineering Department, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051
Phone No.: 022-26594034

Signature:

S. A. Wandhekar

Stamp:



HALF YEARLY COMPLIANCE REPORT

1.	Project Type	:	Infrastructure
2.	Name of the Project	:	Mumbai Trans Harbour Link (MTHL) Project
3.	Clearance letter and date	:	F. No. 11-65/2012-IA.III on 25 th January, 2016
4.	Location	:	
	a. District	:	Start point: Sewri in Mumbai City End Point: Chirle in Raigad District
	b. State	:	Maharashtra
	c. Latitude/Longitude	:	Start: Latitude: 18°59'48.57"N Longitude: 72°51'20.67"E End: Latitude: 18°56'18.33"N Longitude: 73° 1'52.92"E
5.	Address of correspondence	:	
6.	a. Address of concerned project Head	:	Chief Engineer / Engineer In Chief, MTHL Project Implementation Unit 2 nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051 Phone No.: 022-26594034

Compliance to the Conditions Recommended in CRZ Clearance-2013

S. No.	Condition of 2013 clearance	Compliance
7. Specific Conditions		
(i)	As per the CRZ Notification 2011, at least five times the number of mangroves destroyed/cut during the construction process shall be replanted. Mangrove plantation in an area of 30 ha shall be carried out as committed against loss of 0.1776 ha mudflats/mangroves. Permission from the High Court of Bombay shall be obtained with respect to mangrove cutting.	Noted, about 25 Crores have been contributed by MMRDA to Mangroves Fund, as an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas. The amount is used for Survey & Demarcation of Notified areas. Purchase of vehicles and equipment for anti-Encroachment drives, etc. Permission copy of High court for mangrove cutting attached as Annexure-I
(ii)	Proponent shall provide lighting in consulting with the Bombay Natural History Society (BNHS) so as to minimize the likely impacts to the migratory birds.	Noted and being complied (embedded lighting, to be finalized in consultation by BNHS)
(iii)	All the construction equipment's shall be provided with exhaust silencers as committed.	Noted, all the construction equipment used by contractors are provided with exhaust silencers to reduce noise. Photographic evidence of same attached as Annexure-III
(iv)	Noise containment barriers shall be provided on both sides of the bridge in mudflat areas (CRZ-IA) so as to minimize the likely impacts to the migratory birds as committed	Noise containment barriers have to be provided by the Package-I and Package-II on both sides of the bridges to minimize the likely impact to the migratory birds. Till date 1.15 crore have been spent by packages on the temporary barriers.
(v)	There shall be no dredging and reclamation for the project	The proposed project is for the construction of 6 lane road bridge across the Mumbai Harbour between Sewari in MbPT area and Chirle in Navi Mumbai to improve connectivity and facilitate traffic decongestion and hence does not involve dredging and reclamation works
(vi)	Pre-stressed super structure shall be used in the mud flat area for construction as committed	Noted and is being proposed in the mudflat area
(vii)	The muck materials shall be analyses	Noted and is being complied. Muck

S. No.	Condition of 2013 clearance	Compliance
	prior to dumping/disposal in the identified locations with the approval of the competent authority to ensure that it do not cause any impact to the environment.	materials are collected and analyzed prior to dumping/disposal at identified locations. Muck analysis report from Package-II attached as Annexure-IV
(viii)	Proponent informed that there is no fishing activity in the area since it is a navigation channel for the nearby ports. However, navigational channel is provided with 25 m from ships and 9.1 m from fishing boats.	Noted and being complied
(ix)	All the recommendations of the MCZMA shall be strictly complied with.	Noted and being scrupulously complied
(x)	There shall be no building construction beyond 20,000 sqm.	The proposed project is for the construction of 6 lane road bridge across the Mumbai Harbour between Sewari in MbPT area and Chirle in Navi Mumbai to improve connectivity and does not involve construction of buildings. However, during construction phase of the project temporary site offices and work camps will be constructed which will be well within 20,000 sqm area
(xi)	There shall be no water drawal in CRZ area.	The proposed project does not involve abstraction of the ground water in CRZ area. The water demand for the proposed project is being met through tanker water
(xii)	There shall be no disposal of solid or liquid waste on coastal area. Solid waste management shall be as per Municipal Solid (Management and Handling) Rules, 2000.	The project strictly complies with the new SWM rules 2016 and subsequent amendments and the solid and liquid waste and segregated at source, collected and disposed as per the abovesaid rules. Biodegradable waste is being used for composting at site and non-biodegradable waste will be handed over to authorized agencies for disposal.
(xiii)	Sewage shall be treated and Treatment Facility shall be provided in accordance with the Coastal Regulation Zone	Noted and will be complied

S. No.	Condition of 2013 clearance	Compliance
	Notifications 2011, The disposal of treated water shall conform to the regulation of the State Pollution Control Board.	
(xiv)	The project proponent shall set up a separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of senior executive	<p>Noted and complied,</p> <p>An Environmental Management Cell has been set up and the structure of the committee comprise experts from National Institute of Oceanography; Representative of BNHS; renowned expert in Ornithology; Director, Fisheries Institute, Versova, Andheri; Head of Coastal Engineering, IIT, Mumbai and Representative of Environment Department and Maharashtra Pollution Control Board. The officer of MMRDA is acting as a Member Secretary to coordinate the quarterly meetings of the committee.</p> <p>Six meetings with the members have already commenced till date.</p>
(xv)	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.	<p>Noted,</p> <p>Total fund allocated for the environmental management is 335 crores and till date 274.90573 Cr has been spent as a part of environmental management out of which 249.94 Cr has been contributed by the MMRDA.</p> <p>EMP expenditure details attached as Annexure-V.</p>
8. General Conditions		
(i)	Full support shall be extended to the officers of the Ministry/Regional Office of Bhopal by the project proponent during inspection of the project for monitoring purpose by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities	Noted and being complied

S. No.	Condition of 2013 clearance	Compliance
(ii)	A six-monthly monitoring report shall need to be submitted by the project proponent to the regional office of this ministry at Bhopal regarding the implementation of the stipulated conditions	Noted and is being complied
(iii)	Ministry of Environment and Forest or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary, in the interest of environment and same shall be complied with	Noted and will be adhered
(iv)	The Ministry reserve the right to revoke this clearance if any of the conditions stipulated are not complied with to the satisfaction of the Ministry	Noted and will be adhered
(v)	In the event of a change in project profile or change in the implementation agency, afresh reference shall be made to the Ministry of Environment and Forests	Noted and will be adhered
(vi)	The project proponents shall inform to the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work	Noted and will be adhered
(vii)	A copy of the clearance letter shall be marked to concerned Panchayat/local NGO if any, from whom any suggestions/representations has been made a received while processing the proposal	Noted and complied. Annexure-X
(viii)	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office/Tehsildar's office for 30 days.	-----
9.	The above stipulations would be enforced among others under the provisions of Water (Prevention and	Noted and complied

S. No.	Condition of 2013 clearance	Compliance
	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 and EIA notification 1994 including the amendments and rules made thereafter	
10.	All other statutory clearances such as approvals for storage of diesel from Chief Controller of Explosive, Fire Department, Civil Aviation Department and clearances under the Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities	<p>Noted and complied.</p> <p>Clearances under Forest Conservation Act, 1980 has been taken by MMRDA from MoEF & CC on 22nd January 2016 vide letter F.No.8-89/2013-FC.</p> <p>The project proponent had allotted the construction work to L&T and JV of Daewoo and Tata through contract and the statutory clearances such as approvals for storage of diesel from Chief Controller of Explosive, Fire Department, Civil Aviation Department has been taken by them.</p> <p>After completion of the project MMRDA will ensure compliance.</p>
11.	The project proponent shall advertise in at least two local newspapers widely circulate in the region, one of which shall be in a vernacular language informing that the project has been accorded CRZ Clearance and copies of the clearance letter are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forest at http://www.envfor.nic.in . The advertisement should be made within 10 days from the date of the receipt of the clearance letter and a copy of the same should be forwarded to the Regional office of this ministry at Bhopal	<p>Noted and complied.</p> <p>The advertisement for accord of the CRZ clearance was published in the (Lok Satta and Indian Express on 30.01. 2016)</p> <p>Annexure-X</p>
12	The clearance is subject to final order of the Hon'ble Supreme Court of India in	Noted

S. No.	Condition of 2013 clearance	Compliance
	the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.	
13	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010	Noted
14	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent on its website.	Noted and Complied The status of the compliance of stipulated EC conditions are uploaded on the website of MMRDA
15	A copy of the clearance letter shall be sent by the proponent to be 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.	Noted and Complied
16	The proponent shall upload the status of the compliance of stipulated EC 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 the MoEF, the respective Zonal Office of CPCB and the SPCB	Noted and complied The status of the compliance of stipulated EC conditions, including results of monitored data are uploaded on the website of MMRDA and also submitted to Regional Office of the MoEF&CC, the respective Zonal Office of CPCB and the SPCB
17	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated EC conditions including results of monitoring data (both in hard copies as well as by e-mail) to the respective Zonal Office of CPCB and the SPCB	Noted and complied

S. No.	Condition of 2013 clearance	Compliance
18	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) Rule 1986 as amended subsequently, shall also be put on the website of the company along with the status of the compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	Noted and Complied

Compliance to the Conditions Recommended in CRZ Clearance-2016

Sr. No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
i.	All the terms and conditions stipulated by the MCZMA in their letter No. CRZ 2015/CR236/TC 4 dated 26 th November 2015 shall be strictly complied with.	Noted. MMRDA is following the conditions stipulated in the CRZ Clearance.
ii.	All the terms and conditions as mentioned in the earlier CRZ Clearance dated 19 th July 2013, shall also be complied with in letter and spirit,	Noted. MMRDA is following the conditions stipulated in the CRZ Clearance dated 19 th July 2013.
iii.	The Environment Management Plan as presented during the meeting shall be implemented in consultation with all the stakeholders.	MMRDA is implementing the Environment Management plan as stipulated in CRZ clearance. The implementation plan with detailed EMP is attached as an Annexure V
iv.	The project/activity shall be carried out strictly be in accordance with the provisions of CRZ Notification, 2011, and shall not affect the coastal ecology of the area including flora and fauna.	Noted and is being complied
v.	The project proponent shall obtain all permissions from concerned authorities prior to commencement of the project and shall observe all safety requirements onshore and offshore.	Noted and will be complied
vi.	The project proponent shall not undertake any blasting/construction activities during	This condition has been revised by MoEF& CC vide letter dated 28 th August,

Sr. No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
	night hours.	2017 having file no F. No. 11-65/2012-IA. III. Refer Annexure-VI (QPR)
vii.	The proposal indicates the diversion of 47.417 ha forest land for which the proponent shall obtain the requisite Forest Clearance. The project may be executed in the entire stretch in non-forest land, and while making application to get the Forest Clearance, the execution of work on non-forest land shall not be cited as a reason for grant of FC and in case FC is declined, the forest land shall be maintained at its existing condition. The PP shall submit an undertaking to this effect at the earliest to the concerned Regional Office to this Ministry.	<p>Stage - I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC on 22nd January 2016 vide letter F.No.8-89/2013-FC.</p> <p>Stage - II application is submitted to Deputy Conservator of Forest vide MMRDA letter 6-3-2017 and latest compliance submitted on 10-09-2018.</p> <p>Stage II Forest Clearance is under process, the earlier land allocated for CA was short by 11 Ha. Of land in Roha Forest Division in Tala Taluka has been identified and is in the process of handover. After the handover the Stage II Clearance will be finally processed by the Forest Department.</p>
viii.	<p>All the wildlife mitigation measures as proposed by BNHS in their report dated 23.09.2015 for original alignment shall be implemented with the following modification</p> <p>a) Construction of jetty on both the ends passing through mud flats and mangroves must not exceed 30 months and construction of actual spans must not exceed more that further 12 months.</p> <p>b) The distance between the supporting pillars shall remain 50 m as currently proposed by the MMRDA.</p> <p>c) MMRDA will partly bear the cost of setting of effluent treatment plant in the region as suggested by BNHS.</p>	<p>Noted and shall be complied</p> <p>Noted</p> <p>The distance between the piers is maintained more than 50 m.</p> <p>Noted and being complied</p>
ix.	The project proponent shall not undertake any blasting/construction activities during	This condition has been revised by MoEF&CC vide letter dated 28 th August 2017 having file no F. No. 11-65/2012-

Sr. No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
	night hours.	IA. III. Refer Annexure-VI (QPR)

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
1	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.	Noted and is being complied.
2	Full support shall be extended to the officers of this Ministry/Regional Office at Nagpur by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Noted and shall be complied.
3	A Six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Nagpur regarding the implementation of the stipulated conditions.	Noted and is being complied. List of Six-monthly compliance report uploaded are: <ol style="list-style-type: none"> 1. January to June 2016. 2. July to December 2016. 3. January to June 2017. 4. July to December 2017. 5. January to June 2018. 6. July to December 2018. 7. January to June 2019. 8. July to December 2019 9. January to June 2020 10. July to December 2020 11. January to June 2021
4	MoEF&CC 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.	Noted and shall be complied
5	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.	Noted.
6	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the MoEF & CC.	Noted.
7	The project proponents shall inform to the	Noted.

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	
8	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	Noted and complied
9	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.	Noted and complied.
10	The above stipulations would be enforced among others under the provisions of 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 and EIA Notification 1994, including the amendments and rules made thereafter.	Noted and will be complied.
11	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, and clearances under the Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Noted and are being complied.
12	The project proponent shall 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 and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the	Complied.

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	same should be forwarded to the regional office of this Ministry at Nagpur.	
13	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.	Noted.
14	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
15	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent on its website.	Stipulated environmental conditions as mentioned in CRZ are complied in six monthly compliance reports. Environmental Safeguards are incorporated in Environmental Management Plan which is being implemented as per the budgetary provisions mentioned in CRZ. Reports & Publications: Half Yearly Report (https://mmrda.maharashtra.gov.in)
16	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.	Complied.
17	The proponent Shall upload the status of compliance of the stipulated EC 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, the respective Zonal Office of CPCB and the SPCB.	Noted. Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB Regional, sub regional office, Nagpur MPCB office, MCZMA & SEIAA.
18	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as	Noted. Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB Regional, sub regional office, Nagpur

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	by e-mail) to the respective Regional Office of MoEF & CC, the respective Zonal Office of CPCB and the SPCB.	MPCB office, MCZMA & SEIAA.
19	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 EC conditions and shall also be sent to the respective Regional Offices of MoEF & CC by e-mail.	Noted. Individual construction packages have obtained CTE for batching plant and casting yards and the stipulations are being adhered to and are uploaded on the website of MMRDA

Annexures

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BDPPS

**IN THE HIGH COURT OF JUDICATURE AT BOMBAY
ORDINARY ORIGINAL CIVIL JURISDICITON
NOTICE OF MOTION NO.307 OF 2016
IN
PUBLIC INTEREST LITIGATION NO.87 OF 2006**

Mumbai Metropolitan Region
Development Authority

..... Applicant.

In the matter between

Bombay Environment Action Group
and Another

.....Petitioners.

V/s

State of Maharashtra and Others.

.... Respondents.

Mr. Saket Mone a/w Mr. Subit Chakrabarti i/b Vidhi Partners for
applicant in Notice of Motion No. 307 of 2016 in PIL No.87 of 2016.

Mr. Navroz Seeryai, Senior Counsel a/w Ms. Shreya Parikh for the
Petitioner in PIL No.87 of 2006.

Mrs. P.H. Kantharia, AGP for Respondent/State in PIL No.87 of 2006.

Ms. Trupti Puranik for Respondent/BMC.

Ms. Sharmila Deshmukh for CRZ.

**CORAM: V. M. KANADE &
MS. NUTAN D. SARDESSAI, JJ.**

DATE: 28th November, 2016

P.C.:-

1. This Notice of Motion is taken out by the Applicant for carrying out construction of the proposed Mumbai Trans Harbour Link (a proposed 22 km freeway grade road bridge connecting the island city of Mumbai with Navi Mumbai).
2. The learned Counsel appearing on behalf of the Applicant submits that Applicant has obtained clearance from all the concerned authorities. He submitted that Ministry of Environment and Forest, Government of India has granted approval on 22/01/2016 and CRZ clearance has been granted on 25/01/2016. Applicant has given an undertaking in paras 12 and 27 of the affidavit in support of the Notice of Motion. The said undertaking is accepted. Applicant shall comply with all the conditions which are imposed in the said letters of sanction granted by both the authorities.
3. We are satisfied that the said project is public utility project and we grant leave in terms of prayer clause (a) of the Notice of Motion subject to conditions imposed by both the authorities.
4. Notice of Motion is accordingly allowed in terms of prayer clause (a) and disposed of.

(MS. NUTAN D. SARDESSAI, J.)**(V.M. KANADE, J.)**

Annexure-II Environment Management Plan stipulated in CRZ clearance

Sr. No	Environmental attribute	Cost in Crores
1.	Environmental Monitoring- Air Act, Water Act, Noise levels	8
2.	Compensatory Restoration Plan (Mangroves)	25
3.	Implementation of the suggestions given by BNHS	25
4.	Noise barriers	45
5.	Mitigation of marine water pollution caused due to the surrounding industries and Sewage from Urban Bodies, by providing Funding and Capacity Building for Enabling Effluent Treatment	40
6.	<ul style="list-style-type: none"> • Contribution to Mangroves Fund, an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas by depositing Seed Money. • This can be used for Survey & Demarcation of Notified areas • Purchase of vehicles and equipment for anti-Encroachment drives, etc. 	25
7.	Oil Spill Mitigation Plan	10
8.	Habitat quality assessment and monitoring Surveillance management and monitoring team for migratory birds, marine flora, turbidity in sea floor, etc Corpus fund for mudflat restoration program	20
9.	Appointment of Bird Monitor and his assistant till Restoration of Baseline data	4
10.	DMP, Firefighting, Risk Analysis	15
11.	Sustainable development including establishing Nature Interpretation Centre	10
12.	Safety and Security	15
13.	Energy conservation	10
14.	Landscaping-Plantation of trees, flower in plants etc.	8
15.	Compensation and Capacity Building of Fisher folks due to Temporary and Permanent Loss of Fishing round	75
		335 crores

Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III



Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III



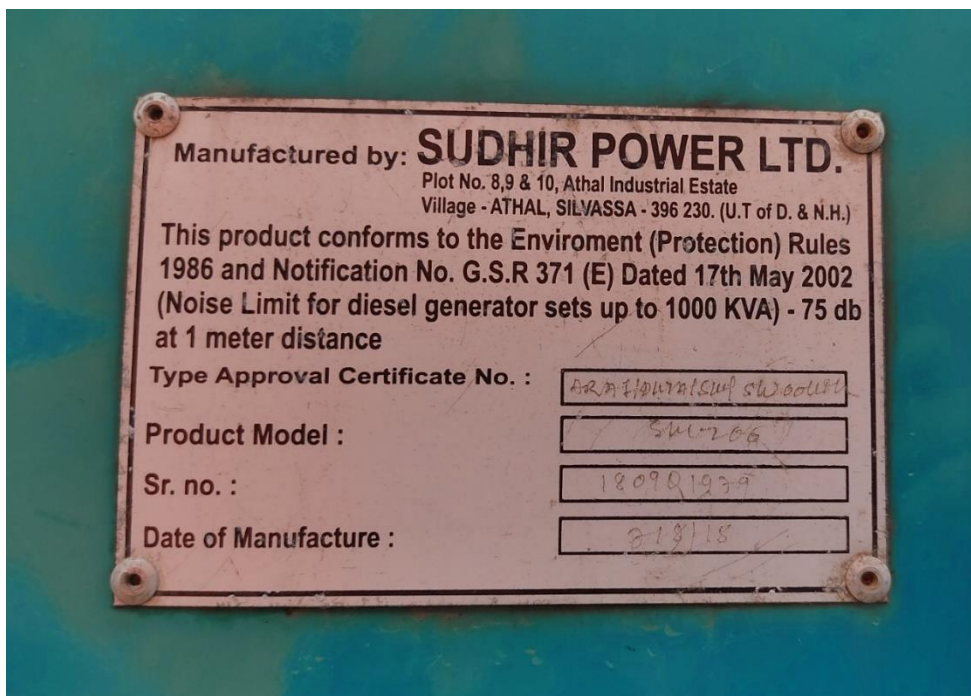
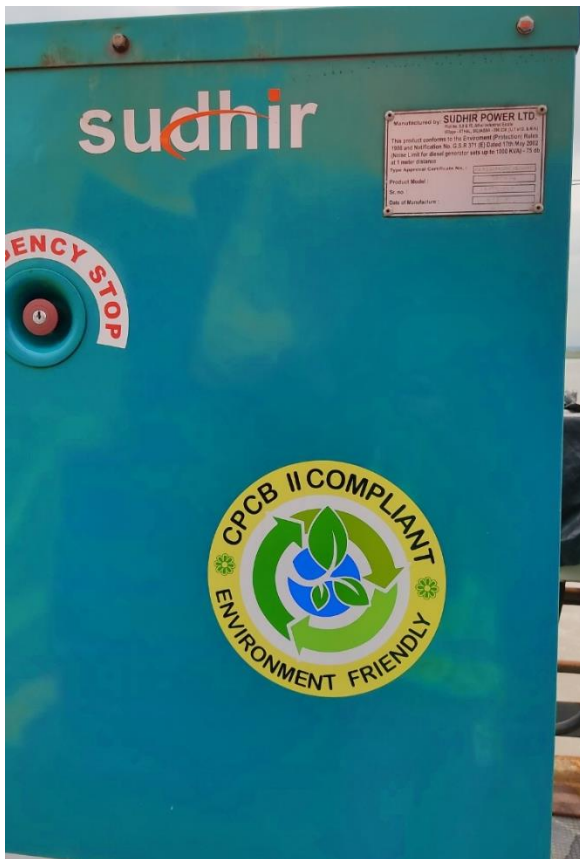
Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III



Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III



DAEWOO-TPL JV

C/O TATA Projects Limited, 11th Floor, Hiranandani Knowledge Park, Technology Street, Powai, Mumbai-400 076, India

Ref: MTHL/DW-TPL/GC/LT/ENV/2021-3256

Date: 14 Oct 2021

To, : **The Engineer**
General Consultant for MTHL Project
6th Floor, A Wing, MMRDA Old Building, Bandra-Kurla Complex
Bandra (E), Mumbai 400 051

Kind Attn. : Dr. Sham, Siu hung Robin

Project : Procurement of Mumbai Trans Harbour Link Project (Package 2) Construction of 7.807km long bridge section (CH 10+380-CH 18+187) across Mumbai Bay including Shivaji Nagar Interchange

Subject : Submission of Muck Test Report (September 2021)

Ref. : 1. Contract Agreement no. MMRDA/ENG1/00753 dated 19-01-2018

Dear Sir,

The Contractor has conducted muck testing and the reports of the same are attached herewith for your information & records.

We assure you of our best attention of all times.

Yours truly,

For Daewoo-TPL JV



Min Geun KIM / Project Director

Encl: 1) Muck Testing report (September 2021)

CC: 1) Mr. S. A. Wandhekar, Engineer-in- Chief, MMRDA
2) Mr. Yatin Sakhalkar, Superintendent Engineer, MMRDA
3) Mr. Abhijit Bhisikar, Executive Engineer, MMRDA
4) Mr. Hohsing Lee, PE, SE, Resident Engineer, General Consultant (MTHL)



Netel (India) Limited

TEST REPORT

Name of Organization : M/s. Daewoo-TPL-JV					
Customer Address : MTHL Pkg-2, Daewoo – TPL JV, Shivaji Nagar Post Khar Kopar, Sector 8, Ulwe, Navi Mumbai - 410206					
Sample Type : Muck			Sampling Done By : Netel (India) Limited		
Sample Packing : Plastic Bag			Sample Quantity : 2 Kgs		
Date of Sampling : 27.09.2021			Analysis Date : 28.09.2021-04.10.2021		
Sample Received : 27.09.2021			Date of Reporting : 05.10.2021		
Sampling Location : 172 Muck			Sample Code : NIL/SO/09/21/009		
Sr. No.	Test Parameter	Method	Unit	MDL*	Result
					NIL/SO/09/21/009
1	Organic Phosphorus	Leachate - Lab SOP* NIL/IHM/01 Analysis - APHA 4500-P-C	mg/kg	0.5	22.7
2	Cynide	APHA 4500-CN	mg/kg	0.005	BDL
3	Lead	Lab SOP* NIL/SOP/15	mg/kg	0.1	0.2
4	Cadmium	Lab SOP* NIL/SOP/15	mg/kg	0.1	BDL
5	Hexavalent Chromium	EPA 3050B	mg/kg	0.1	BDL
6	Copper	Lab SOP* NIL/SOP/15	mg/kg	0.1	3.1
7	Mercury	EPA 3050B / By FIAS	mg/kg	0.1	BDL
9	Selenium	EPA 3050B / By FIAS	mg/kg	0.1	BDL
10	Arsenic	EPA 3050B / By FIAS	mg/kg	0.1	BDL
11	Polychlorinated Biphenyls	GC ECD	mg/kg	0.01	BDL
12	Dichloromethane	GC FID	mg/kg	0.1	BDL
13	Carbon Tetrachloride	GC FID	mg/kg	0.1	BDL
14	1,2-Dichloroethane	EPA-8260 B	mg/kg	0.1	BDL
15	1,1-Dichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
16	cis-1,2-Dichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
17	1,1,1-Trichloroethane	EPA-8260 B	mg/kg	0.1	BDL
18	1,1,2-Trichloroethane	EPA-8260 B	mg/kg	0.1	BDL
19	Trichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
20	Tetrachloroethylene	EPA-8260 B	mg/kg	0.1	BDL

A Neterwala Group Company

W-408, Rabale MIDC,
TTC Industrial Area,
NAVI MUMBAI - 400 701,
INDIA.

Tel. : 72080976 92 / 93 / 94 / 95

E-mail : sales@netel-india.com
Website : www.netel-india.com

CIN : U74999MH2003PLC142228



Regd. office : Liberty Building, 3rd Floor, Sir Vithaldas Thackersey Marg, (New Marine Lines), Mumbai - 400 020. Tel. : 22066231 / 61





Netel (India) Limited

Sr. No.	Test Parameter	Method	Unit	MDL*	Result
					NIL/SO/09/21/009
21	1,3-Dichloropropane	EPA-8260 B	mg/kg	0.1	BDL
22	Thiuram	GC-MS	mg/kg	0.1	BDL
23	Simazine	GC-MS	mg/kg	0.1	BDL
24	Thiobencarb	GC-MS	mg/kg	0.1	BDL
25	Benzene	GC FID	mg/kg	0.1	BDL
26	Oil & Grease	EPA Method 9071 B	mg/kg	1	BDL

Note :

1. MDL – Method Detectible Limit.
2. BDL – Below Detectible Limit.
3. * Based on Manual of Soil testing in India, Ministry of Agriculture, GOI, 2011
4. This Test Report shall not be reproduced except in full, without written approval of the Laboratory.
5. This Test Report refers only to the sample tested.
6. The complaint register is available with the Laboratory as per Environment Protection Act, 1986.

Verified by:

Surekha Jamdar
Dy. Technical Manager

Issued by:

Shraddha Kere
Technical Manager

End of Report

A Neterwala Group Company

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Netel (India) Limited

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Sample Type : Muck			Sampling Done By : Netel (India) Limited		
Sample Packing : Plastic Bag			Sample Quantity : 2 Kgs		
Date of Sampling : 27.09.2021			Analysis Date : 28.09.2021-04.10.2021		
Sample Received : 27.09.2021			Date of Reporting : 05.10.2021		
Sampling Location : 176 Muck			Sample Code : NIL/SO/09/21/010		
Sr. No.	Test Parameter	Method	Unit	MDL*	Result
					NIL/SO/09/21/010
1	Organic Phosphorus	Leachate - Lab SOP* NIL/IHM/01 Analysis - APHA 4500-P-C	mg/kg	0.5	8.5
2	Cynide	APHA 4500-CN	mg/kg	0.005	BDL
3	Lead	Lab SOP* NIL/SOP/15	mg/kg	0.1	0.17
4	Cadmium	Lab SOP* NIL/SOP/15	mg/kg	0.1	BDL
5	Hexavalent Chromium	EPA 3050B / By FIAS	mg/kg	0.1	BDL
6	Copper	Lab SOP* NIL/SOP/15	mg/kg	0.1	2.9
7	Mercury	EPA 3050B / By FIAS	mg/kg	0.1	BDL
9	Selenium	EPA 3050B / By FIAS	mg/kg	0.1	BDL
10	Arsenic	EPA 3050B / By FIAS	mg/kg	0.1	BDL
11	Polychlorinated Biphenyls	GC ECD	mg/kg	0.01	BDL
12	Dichloromethane	GC FID	mg/kg	0.1	BDL
13	Carbon Tetrachloride	GC FID	mg/kg	0.1	BDL
14	1,2-Dichloroethane	EPA-8260 B	mg/kg	0.1	BDL
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Netel (India) Limited

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24	Thiobencarb	GC-MS	mg/kg	0.1	BDL
25	Benzene	GC FID	mg/kg	0.1	BDL
26	Oil & Grease	EPA Method 9071 B	mg/kg	1	BDL

Note :

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Verified by:

Surekha Jamdar
Dy. Technical Manager

Issued by:

Shradha Kere
Technical Manager

End of Report

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Annexure-V

Sr. No	EMP break up for July to December 2021			Cumulative Expenditure (Rs. In Crore)
	Environmental attribute	Cost in crores (As stipulated in CRZ clearance) (Rs. in Crore)	Expenditure incurred on the environmental management plans (Rs. in Crore)	
1.	Environmental Monitoring- Air Act, Water Act, Noise levels	8	0.07	0.9421
2.	Compensatory Restoration Plan (Mangroves)	25	0	50.82
3.	Implementation of the suggestions given by BNHS	25	0	41.98
4.	Noise barriers	45	0	1.1426
5.	Mitigation of marine water pollution caused due to the surrounding industries and Sewage from Urban Bodies, by providing Funding and Capacity Building for Enabling Effluent Treatment	40	0	5.8
6.	Contribution to Mangroves Fund, an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas by depositing Seed Money. This can be used for Survey & Demarcation of Notified areas. Purchase of vehicles and equipment for anti-Encroachment drives, etc.	25	0	25
7.	Oil Spill Mitigation Plan	10	0.31	1.75919
8.	Habitat quality assessment and monitoring Surveillance management and monitoring team for migratory birds, marine flora, turbidity in sea floor, etc Corpus fund for mudflat restoration program	20	0	0

Sr. No	EMP break up for July to December 2021			Cumulative Expenditure (Rs. In Crore)
	Environmental attribute	Cost in crores (As stipulated in CRZ clearance) (Rs. in Crore)	Expenditure incurred on the environmental management plans (Rs. in Crore)	
9.	Appointment of Bird Monitor and his assistant till Restoration of Baseline data	4	0	0
10.	DMP, Firefighting, Risk Analysis	15	0.263	2.67034
11.	Sustainable development including establishing Nature Interpretation Centre	10	0	10
12.	Safety and Security	15	1.01	14.2154
13.	Energy conservation	10	0.22	3.4671
14.	Landscaping-Plantation of trees, flower in plants etc.	8	0	0.769
15.	Compensation and Capacity Building of Fisher folks due to Temporary and Permanent Loss of Fishing round	75	0	116.34
	TOTAL	335 Crores	1.90	274.90573



एम एम आर डी ए
MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.17

(From 1st April 2021 to 30th June 2021)



**Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 17
1st April 2021 to 30th June 2021
Loan Agreement No. ID-P255 (Tranche-I)**

ORGANIZATION INFORMATION

Borrower	Mumbai Metropolitan Region Development Authority	
	Person in Charge	Metropolitan Commissioner, MMRDA
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block, Bandra (East), Mumbai - 400051 Phone: +91-22-26594000 Fax No:+91-22-2659 1264
Executing Agency	Mumbai Trans Harbour Link Project Implementation Unit	
	Headed by:	Chief Engineer Mumbai Trans Harbour Link Project Implementation Unit
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block Bandra (East), Mumbai - 400 051 Phone: +91-22-2659 4034 Fax No: +91-22-2659 4179

Details of JICA Loan

Source of Finance	JICA ODA Loan Portion:	238,572 million Japanese YEN (JPY)
	Tranche-I:	144,795 million Japanese YEN (JPY) (Loan Agreement signed on 31 st March 2017)
	Tranche-II:	66,909 million Japanese YEN (JPY) (Loan Agreement signed on 27 th March 2020)
Terms and Conditions of JICA ODA Loan (Tranche-1)	Repayment Period:	30 years, including 10 years of grace period.

DOCUMENT VERIFICATION AND REVISION RECORD

PROJECT NAME		Mumbai Trans Harbour Link Project			
DOC NO.		17	DATE OF ISSUE		30/07/2021
DOC TITLE		Quarterly Progress Report No. 17			
REV No.	DATE OF ISSUE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY
R0	05/07/2017	Quarterly Progress Report No. 1 (Apr-Jun 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/10/2017	Quarterly Progress Report No. 2 (Jul-Sep 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/01/2018	Quarterly Progress Report No. 3 (Oct-Dec 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/04/2018	Quarterly Progress Report No. 4 (Jan-Mar 18)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	24/07/2018	Quarterly Progress Report No. 5 (Apr-Jun 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R0	10/10/2018	Quarterly Progress Report No. 6 (Jul-Sep 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R1	08/02/2019	Quarterly Progress Report No. 7 (Oct-Dec 18)	Prashant B	J Senthil/ Dr T K Sundaram	Dr Robin Sham
R0	05/04/2019	Quarterly Progress Report No. 8 (Jan-Mar 19)	Prashant B	J Senthil	V. D. Sharma/ Dr Robin Sham
R0	18/09/2019	Quarterly Progress Report No. 9 (Apr-Jun 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	13/11/2019	Quarterly Progress Report No. 10 (Jul-Sep 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	11/02/2020	Quarterly Progress Report No.11 (Oct-Dec 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	25/11/2020	Quarterly Progress Report No.12 (Jan-Mar 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	15/12/2020	Quarterly Progress Report No.13 (Apr-Jun 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	06/01/2021	Quarterly Progress Report No.14 (Jul-Sept 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	12/02/2021	Quarterly Progress Report No.15 (Oct-Dec 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	06/05/2021	Quarterly Progress Report No.16 (Jan-Mar 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	30/07/2021	Quarterly Progress Report No.17 (Apr-Jun 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham

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1.0 PROJECT DESCRIPTION

1.1 Project Objective

Original:

To improve connectivity in Mumbai Metropolitan region by constructing the Mumbai Trans Harbour Link connecting Mumbai with Navi Mumbai, thereby contributing to mitigation of traffic congestion and promoting regional economic development.

Actual (*P/R, PCR*)

There is no change in the Project Objective.

1.2 Necessity of the Project

The Project is consistent with the development policy, sector plan, national/regional development plans and demand of target group of the recipient country.

Benefits from MTHL Project

- Saving in travel time for commuters from Mumbai to Navi Mumbai.
- Improved comfort and accessibility between the island and the mainland.
- Reduced operating costs of vehicles due to lesser congestion.
- Smooth traffic flow from Navi Mumbai airport to Mumbai Island.
- Accelerated economic development of Navi Mumbai and nearby regions.
- Greater economic integration of Mumbai Island with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug.
- Improvement in environment and reduced pollution levels.
- Improved safety due to reduction in accidents.
- Improvement in trade competitiveness through faster and improved logistics.
- Accelerated growth of Navi Mumbai.
- Decongestion of Mumbai Island and dispersal of population to Navi Mumbai region & beyond.

Necessity of the Project

1. Although the urbanization in India has been rapidly progressing, infrastructure development in the urban areas has not caught up its progress. Particularly, the traffic congestion in the urban areas due to a lack of road network hinders the economic development. Thus, Government of India (GOI) places transport and connectivity as one of the “Growth Enablers” and plans to enhance road network in the “Three Year Action Agenda 2017-2018 to 2019-20 (NITI Aayog)”.
2. Mumbai Metropolitan Region, which includes Mumbai and Navi Mumbai, has about 18.4 million people in population as of 2011 (Census 2011) and the population density reaches 20,694 people per square km in the center of Mumbai, which is one of the most overpopulated and high-density cities in the world.
3. Mumbai, the narrow stretch of land that has traditionally been the epicentre of India’s commerce, has seen a steady increase in population in the last three decades despite obvious spatial constraints. Thus, the development of Navi Mumbai has been identified as an urgent requirement for broad development in Mumbai Metropolitan Region.

4. The Government of Maharashtra (GoM), of which Mumbai Metropolitan Region is under jurisdiction, has been facilitating various development plans particularly in Navi Mumbai area, which stands at the opposite site of Mumbai across the Mumbai Bay and still has spacious area for development, such as a new international airport, Special Economic Zone (SEZ) and expansion of Jawaharlal Nehru Port in order to promote the sustainable economic development in Mumbai Metropolitan Region.
5. Furthermore, a lack of connectivity in Mumbai has stunted its growth. The GoM has given importance to construct the faster connection with Mumbai to Navi Mumbai International Airport, Jawaharlal Nehru Port, Mumbai-Pune expressway and main hinterland.
6. Accordingly, the Mumbai Trans Harbour Link (MTHL) has been identified as the important infrastructure to improve the connectivity between Mumbai and Navi Mumbai and continue economic development in Mumbai Metropolitan Region.

The MTHL is proposed to be developed as an expressway link comprising of a dual three-lane main carriageway bridge connecting Sewri in Mumbai to Chirle in Navi Mumbai. When completed, MTHL will reduce the distance between Mumbai and Navi Mumbai and will help save approximately an hour in travel time. Also, development of Navi Mumbai along with the imminent construction of the Navi Mumbai airport will lead to increased traffic between Mumbai and Navi Mumbai. Consequently, the project is envisaged to; improving accessibility between Mumbai and Navi Mumbai, accelerating growth of Navi Mumbai, smooth traffic flow from Navi Mumbai airport to Mumbai, accelerating economic development of Navi Mumbai and surrounding regions, greater economic integration of Mumbai with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug, and decongestion of Mumbai and dispersal of population to Navi Mumbai region and beyond.

7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region which was guided by Mumbai Metropolitan Region Development Authority (MMRDA) and supported by World Bank, was completed in July 2008, which was over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless and integrated system, in which commuters can make their journeys safely and conveniently by various modes of transport, particularly by public transport, and recommended the development of Multi Modal Corridor to take care of the varied travel demands of the region for the period up to 2031. The CTS proposed to develop the highway network in the region. The MTHL has been regarded as the priority road for Mumbai, considering its function and importance connecting between Mumbai and Navi Mumbai.
8. Necessity of the Project: - To promote economic development in Mumbai Metropolitan Region it is essential to improve the connectivity between Mumbai and Navi Mumbai, by constructing MTHL.

Actual (P/R, PCR)

There is no change in the Necessity of the Project preamble.

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

- At the opening year 2022, the daily traffic on the main bridge is expected to be 39,300 PCU. The traffic is projected to increase up to 103,900 by 2032 and up to 145,500 by the year 2042. The daily breakdown by vehicle class on the main bridge link is presented in the Table 1.3.1 below:

Table 1.3.1 Demand Projections Over the Period

Vehicle Type	Between Sewri Interchange and Shivaji Nagar Interchange			Between Shivaji Nagar Interchange and Chirle Interchange		
	2022	2032	2042	2022	2032	2042
Car	24,100	66,400	94,100	4,900	21,300	43,300
Taxi	2700	14,100	20,200	100	400	2,300
Bus	2,700	3,700	3,700	2,700	3,700	3,700
LCV	2,200	4,100	5,600	700	1,300	1,800
HCV	3,000	6,500	8,100	1,000	2,000	2,200
MAV	4,600	9,100	13,800	400	900	1,700
Total	39,300	103,900	145,500	9,800	29,600	55,000

LCV: Light Commercial Vehicle; HCV: Heavy Commercial Vehicle; MAV: Multi Axle Vehicle

- At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.
- 6-lane of main carriageway was decided by GoM. It was reviewed based on the forecasted result of future traffic volume by Manual of Specification and Standards for Expressways (IRC: SP:99-2013). The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open). Although, 8-lane will be required in 2042, it is assumed that the level of service of MTHL would be maintained as additionally metro might be constructed in parallel with MTHL.

Design Parameters / Overall Design

- The MTHL which is 21.8 km long road bridge partly on the land and partly over the creek across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai, is to be constructed with the approach sections and interchanges. ITS (Intelligence Transport System) and the other necessary facilities will be provided for full access-controlled bridges.
- As per the provisions of IRC (Indian Road Congress) SP:99-2013, the Width of each lane of the Main Carriageway is 3.5 meters.
- When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).
- The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.
- The major portion of MTHL structure is on sea and partly towards ends is on land with

different type and with different span, viz., PC box girder with 50 m spans which is typically applied on marine viaduct since, it is economical, easy to construct and maintain.

9. On the land portion, the PC box girder having span of generally 30m is used.
10. As far as the location in which long span (150-180 m) is required to cross significant obstacles, such as navigation channels, pipelines and creeks, the steel box girder bridge with steel deck is proposed with large block erection method to shorten the construction period.
11. The project is coded with three lanes of traffic in each direction. The reference toll is presented in the Table 1.3.2 below for each vehicle class in Year 2022 (based on 2015 monetary value reflecting price escalation).

Table 1.3.2: Base Toll Rates (Rs) for different class of vehicles between Interchanges

Vehicle Type	Sewri to Shivaji Nagar	Shivaji Nagar to Chirle	Total
Car	180	60	240
Bus	420	130	550
LCV	240	70	310
HCV	420	130	550
MAV	600	180	780

Intelligent Transport Systems (ITS) and Toll Management System (TMS)

12. The Toll Management System will be implemented in MTHL to collect tolls from all road users of MTHL. Two types of toll collection method will be adopted: Electronic Toll Collection (ETC) and Manual (paying by cash).
13. The lanes corresponding to these toll collection methods are dedicated ETC lanes and Manual lanes, and Manual system shall be installed to ETC lanes for backup to be able to cope at the time of the trouble of ETC equipment failure.

Traffic management System

14. Traffic Management System is a support system to Manage the traffic on MTHL safely and efficiently. The System consists of the information collection system including Closed-Circuit Television (CCTV), Emergency Call Box (ECB), Automatic Traffic Counter-Cum-Classifer (ATCC) and Meteorological Data System (MDS), and Information Dissemination System including Variable message Sign (VMS).
15. CCTV Cameras shall be installed at around three places per 1 km, on Both side of main route and the monitoring of the traffic condition of the whole stretch of MTHL will be almost enabled in the Traffic Control Centre and VMS displays the appropriate information for road users on the collated information.
16. The Information collected by these devices shall be transmitted to the Command Control Centre through the medium of an Optical Fiber Cable laid in MTHL.

Actual (P/R, PCR)

There is no change in the Rationale of the Project Design.

2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

Refer Table 2.1.1 and 2.1.2 for details on Scope of the Project.

Table 2.1.1 Comparison of Original and Actual location

Location	Original: (P/M) Mumbai Metropolitan Region Development Authority, Mumbai, State of Maharashtra	Actual: (P/R and PCR)
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Table 2.1.2 Comparison of Original and Actual Scope

Items	Original	Actual
Construction work: 6-lane Marine Bridge Road (21.8 km)		
Package-1 Ch 0+000-10+380 (10.380 km)	<ul style="list-style-type: none"> 1 Interchange (Sewri) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR)
Package-2 Ch 10+380-18+187 (7.80 km)	<ul style="list-style-type: none"> 1 Interchange (Shivaji Nagar) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual: No View Barriers
Package-3 Ch 18+187-21+800 (3.61 km)	<ul style="list-style-type: none"> 2 Interchanges (State Highway-54, National Highway-4B) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder for Rail-over-Bridges (ROB)) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Cutting Section (6-lane with Slope Protection) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual: No Noise Barriers & View Barriers

Items	Original	Actual
Package-4 ITS (Intelligent Transport System)	<ul style="list-style-type: none"> • Administrative Buildings • Toll Booths (1 for main alignment and each on and off rumps for 3 interchanges) • Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Observation System (MET), Emergency Call Box (ECB), Automatic traffic Counter-cum-Classifer (ATCC), Variable Message Sign (VMS)) • Highway Lighting (Whole sections Low-positioned lighting for some sections) • Electrical Powering System including HV/ LV Ring Network across the Bridge. 	<p><i>(P/R and PCR)</i></p>
Consulting Services	<ul style="list-style-type: none"> • Tender Assistance • Construction Supervision • Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP). 	<p><i>(P/R and PCR)</i></p>

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

Table 2-2-1 Comparison of Original and Actual Schedule

Items	Original	Status (P/R and PCR) as on 30 th June 2021
1) Completion of Land Acquisition and Resettlement	March 2019	September 2021
2) Consulting Services		
a) Selection of Consultant	May – December 2016	May – December 2016
b) Consultancy Works	December 2016 – September 2024	December 2016 – September 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – December 2016	May – December 2016
b) Main Bidding	January – December 2017	January – December 2017
c) JICA's Concurrence of Contract	February-2018	February-2018
Package-4 (ITS)		
a) Pre-Qualification Process	January 2019 – May 2019	January 2020 – May 2020
b) Main Bidding	June 2019 – September 2020	June 2020 – September 2021
4) Civil Construction		
Package-1 and Package-2	March 2018 – September 2022	March 2018 – September 2022
Package-3	March 2018 – September 2021	March 2018 – September 2021
Package-4	October 2020 – September 2022	November 2021 – July 2023
5) Defect Liability Period		
Package-1, Package-2 and Package-4	October 2022 – September 2024	October 2022 – September 2024
Package-3	October 2021 – September 2023	October 2021 – September 2023
6) Commencement of Toll Collection	September -2022	September -2022
7) Selection of O&M Organization	October 2020 – September 2021	October 2021 – September 2022

Attachment 6, 7 & 8: Package wise construction schedules (progress) updated at the end of 1st Quarter (April-May-June 2021).

2.2.2 Reasons for changes of the schedule and their effects to the Project

(P/R and PCR)

No change in the Implementation Schedule except the selection of O&M Organization timeline.

2.3 Project Cost

2.3.1.a Comparison of Originally Planned and Actually Incurred Cost BY ITEM

Table 2.3.1.a.(i) Originally Planned Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	34,398	34,398	0	45,376	45,376	0	105,713	105,713	0
Package-2	26,513	26,513	0	32,617	32,617	0	77,774	77,774	0
Package-3	759	759	0	8,276	8,276	0	13,766	13,766	0
Package-4 (ITS)	0	0	0	1,444	1,444	0	2,269	2,269	0
Package-5 (Geotechnical Investigation)	0	0	0	166	0	166	260	0	260
Dispute Boards (Package-1, 2, 3 & 4)	63	63	0	45	45	0	134	134	0
Price Escalation	2,251	2,251	0	7,133	7,133	0	13,460	13,460	0
Physical Contingency	6,398	6,398	0	9,506	9,489	17	21,338	21,312	26
Consulting Services	1,650	1,650	0	1,587	1,587	0	4,145	4,145	0
Land Acquisition*	0	0	0	11,293	0	11,293	17,748	0	17,748
Administration Cost	0	0	0	4,898	0	4,898	7,698	0	7,698
GST	0	0	0	18,238	0	18,238	28,663	0	28,663
Import Tax	0	0	0	13,435	0	13,435	21,114	0	21,114
Interest during construction	2,942	0	2,942	0	0	0	2,942	0	2,942
Front End Fee	477	0	477	0	0	0	477	0	477
Total	75,451	72,032	3,419	154,013	105,967	48,046	317,501	238,572	78,929

(Note) 1. Exchange Rate: US\$1=Rs. 71.9, US\$1=JPY 113.0, Rs.1 = JPY 1.57

2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.

(b) Local Currency Portion: 4.13% p.a.

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: December 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

Table 2.3.1.a.(ii) Actually Incurred Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	13,039	13,039	-	25,180	25,180		49,670	49,670	
Package-2	13,214	13,214	-	17,261	17,261		38,849	38,849	
Package-3	623	623	-	4,690	4,690		7,265	7,265	
Package-4 (ITS)	-		-	-			-		
Package-5 (Geotechnical Investigation)	-			196		196	308		308
Dispute Boards (Package-1, 2, 3 & 4)	-			-			-		-
Price Escalation	-			4	4		6	6	-
Physical Contingency	-			-			-		-
Consulting Services	253	253		362	362		1,108	1,108	
Land Acquisition*	-			6,709		6,709	10,532		10,532
Administration Cost	-			3,909		3,909	6,138		6,138
GST	-			8,724		8,724	13,697		13,697
Import Tax	-			-			-		-
Interest during construction	-			-			-		-
Front End Fee	-			-			-		-
Total	27,129	27,129	-	67,035	47,497	19,538	1,27,573	96,898	30,675

(Note) 1. Exchange Rate: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.

(b) Local Currency Portion: 4.13% p.a.

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: December 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

2.3.1.b Comparison of Originally Planned and Actually Incurred Cost BY YEAR

Table 2.3.1.b.(i) Originally Planned Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	12,679	10,134	0	0	10,134	2,545
FY 2018	30,771	22,707	0	0	22,707	8,064
FY 2019	72,379	56,816	0	0	56,816	15,563
FY 2020	92,944	55,138	16,040	0	71,178	21,765
FY 2021	66,397	0	50,869	0	50,869	15,527
FY 2022	27,683	0	0	20,113	20,113	7,570
FY 2023	3,723	0	0	565	565	3,158
FY 2024	10,925	0	0	6,189	6,189	4,735
Total	317,501	144,795	66,909	26,868	238,571	78,929

Table 2.3.1.b.(ii) Actually Incurred Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	40,410	31,014	-	-	31,014	9,396
FY 2020	35,540	23,885	-	-	23,885	11,655
FY 2021	11,072	11,072	-	-	11,072	
FY 2022						
FY 2023						
FY 2024						
Total	1,27,573	96,898	-	-	96,898	30,675

(Note) 1. Exchange Rate used: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Fiscal Year starting from 1st April and ending on 31st March.

2.3.2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(P/R and PCR)

There is no major gap between the original and actual cost.