

Date: 19.08.2026

To,
State Level Environment Impact Assessment Authority Maharashtra,
Environment Department,
New Administration Building,
15th floor, Mantralaya, Mumbai
State: Maharashtra

Subject : Submission of June 2026 Six Monthly Compliance Report for Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. GOPAL SONS"

Reference : Environmental Clearance EC Identification EC24B038MH142634, dated 08th February, 2024 as per General condition no. IV.

Respected Sir,

With reference to the subject cited above and in compliance with the conditions stipulated in the Environmental Clearance letter, we are submitting the Six Monthly Compliance Report and Environmental Monitoring Report for the period June 2026 on behalf of project proponent M/s. Gopal Sons.

We have enclosed the completed Data-Sheet along with all requisite annexures and monitoring reports for your official records.

Kindly acknowledge the receipt of the same.

Thanking you,

Yours Sincerely,

For M/s. Growmore Lifespaces LLP

(On behalf of M/s. Gopal Sons)

FOR GROWMORE LIFESPACES LLP



**Designated Partner
AUTHORIZED SIGNATORY**



Date: 19.08.2026

To,
Shri Kanwarjit Singh, IFS
Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WCZ), Ground Floor, East Wing,
New Secretariat Building Civil Lines, Nagpur 440001
Tel.No.0712-2531318
Email ID: apccfcentral-ngp-mef@gov.in

Subject : Submission of June 2026 Six Monthly Compliance Report for Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. GOPAL SONS"

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For GROWMORE LIFESPACES LLP


AUTHORIZED SIGNATORY
Designated Partner



Date: 19.08.2026

To,
Shri Pratik D Bharne (Scientist 'E' & Regional Director)
CENTRAL POLLUTION CONTROL BOARD,
Survey No. 110, Dhankude Multipurpose Hall,
Baner Road, Baner, Pune- 411045,
Tel 020-29912772 & 020-29912773,
E-mail: rdpune.cpcb@gov.in , pratik.cpcb@gov.in

Subject : Submission of June 2026 Six Monthly Compliance Report for Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. GOPAL SONS"

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For M/s. Growmore Lifespaces LLP
(On behalf of M/s. Gopal Sons)
For GROWMORE LIFESPACES LLP


Designated Partner

AUTHORIZED SIGNATORY



Date:19.08.2026

To,
S.R.O. Kalyan II,
Maharashtra Pollution Control Board,
Sidhivinayak Sankul,
3rd and 4th Floor, Station Road,
Kalyan (West)

Subject : Submission of June 2026 Six Monthly Compliance Report for Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. GOPAL SONS"

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Yours Sincerely,

For M/s. Growmore Lifespaces LLP

(On behalf of M/s. Gopal Sons)

For GROWMORE LIFESPACES LLP

M. S. Shaila
Designated Partner

AUTHORIZED SIGNATORY



SIX MONTHLY COMPLIANCE REPORT

(June 2026)

Of

**Proposed Residential Building on Plot
Bearing S. No. 16/1 (PT), H.No. 1. Mauje
Umbarli, Tal – Ambernath, Dist – Thane
Project by M/s. GOPAL SONS**

Submitted by

M/s. Growmore Lifespaces LLP

Prepared By



NABET Accreditation No.: NABET/EIA/24-27/RA 0346

Point wise compliance status to various stipulations laid down by the Government of Maharashtra as per the amended Environmental Clearance Identification No. EC24B038MH142634, dated 08th February, 2024

Sr. No.	EC condition	Reply
	Specific Conditions	
A.	SEAC Conditions -	
1.	PP to submit IOD/IOA/Concession Document/ Plan Approval or any other form of documents as applicable clarifying its conformity with local planning rules and provision as per the circular dated 30.01.2014 issued by the Environment Department, Gov. of Maharashtra.	Agreed and complied. Our Project has received Plan Approval with Letter of Intent no. KDMC/TPD/4871, dated- 30.11.2024 for Plot Area: 11,271 Sq.mt as per Lease Document, FSI Area: 49,022.02 Sq.mt, Non FSI Area: 7,778.50 Sq.mt, Total Construction Area: 56,800.52 Sq.mt. Refer Annexure No. 4 for LOI and approval plan
2.	PP to obtain following NOC & Remarks: (a) Water supply; b) Sewer connection; c) SWD NOC; d) CFO NOC excluding bldg. no-A; e) Tree NOC.	Agreed to comply. We have obtained All mentioned NOCs. Refer Annexure no. 5 for NOCs.
3.	Planning authority to ensure that assured water supply, sewer and storm water network is made available in the vicinity of the project before issuing occupation certification to the project.	Agreed to comply with the same. We are submitting the undertaking that Occupation will not be given to the above-mentioned project unless we get assured Water supply provision, storm water drainage and sewerage line facilities within the vicinity of the project by Planning Authority. Refer Annexure no. 6 for the same.
4.	PP to carry out Miyawaki plantation in 100 Sq. Mtr. area & accordingly revise tree list including trees planted in Miyawaki plantation.	Agreed and complied. We have provided the 100 Sq.mtr area Miyawaki Plantation. Total 141 No.s of trees will be Planted at the site. Refer Annexure no. 7.
5.	PP to maintain 3 Mtr. distance between DG set and transformer.	Agreed and complied. We have maintained 3 mtr distance between DG set and Transformer Refer Annexure no. 8.
6.	PP to provide mandatory RG area as per prevailing norms on virgin land and submit the drawing with calculations.	Agreed And complied. We have Provided 1,147.16 Sq.mtr RG area on the mother earth which is 10.32 % of the Net plot area which is more than the required RG area. Refer A Annexure no. 9.
7.	PP to reduce the discharge of treated sewage to 35%. PP to submit NOC from concern authority for use of excess treated water in nearly Garden reservation/ Construction; PP to ensure that treated water parameters are as per NGT norms.	Agreed to comply with the same. Project has excess treated sewage i.e 228 KLD in Dry Season & 235 KLD in Wet Season after reusing it for flushing and gardening. Tie up for the same is done with Tanker Water Supplier who will supply water to nearby factories, Construction sites, farms & RMC Plant etc. Refer undertaking for the same along with acknowledgment from tanker Owner. Refer Annexure no. 10 for the same

**Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambarnath, Dist – Thane
by M/s. GOPAL SONS**

Sr. No.	EC condition	Reply
8.	PP to include cost of firefighting equipment's in DMP & accordingly revise DMP.	Agreed and complied. We have included cost of firefighting Equipment's in DMP and revised DMP costing. Refer Annexure no. 11.
9.	PP to adopt water conservation measures in operation phase by providing Low Flow Devices (LFD) as plumbing fixtures. Accordingly, revise EMP of Operation phase. PP to include cost of DMP in EMP.	Agreed and noted. We will propose a Low Flow device (LFD) & Sensor appliance.
B.	SEIAA Conditions-	
1.	PP has provided mandatory RG area of 1130.02 m ² on mother earth without any construction. Local planning authority to ensure the compliance of the same	Agreed and complied. We have provided 1,147.16 Sq.mtr RG area on the mother earth. Refer Annexure no. 9 for the same.
2.	This EC is restricted up to 57.00 m height only as per CFO NOC	Agreed and noted. We have received revised CFO NOC for all buildings having NOC Vide No. letter no. Fire/HQ/KDMC/OW/2023/E-375 on dated 23.11.2023 Refer Annexure no. 5 for the same.
3.	PP to keep open space unpaved so as to ensure permeability of water. However, whenever paving is deemed necessary, PP to provide grass pavers of suitable types & strength to increase the water permeable area as well as to allow effective fire tender movement.	Agreed to comply with the same.
4.	PP to achieve at least 5% of total energy requirement from solar/other renewable sources.	Yes. Saving upto 9.3 % will be achieved from solar/other renewable sources proposed. Refer Annexure 12 for Energy saving details.
5.	PP shall comply with standard EC Condition mentioned in the office Memorandum issued by MoEF & CC vide F. No. 22-34/2018-IA III dt. 04.01.2019.	Agreed and Noted.
6.	SEIAA after deliberation decided to grant EC for – FSI – 49,022.02 m ² , Non-FSI- 7,778.50 m ² , Total BUA- 56,800.52 m ² (Plan Approval No– KDMC/TPD/4871, dated- 30.11.2023)	Agreed and Noted. Refer Annexure no. 2 for the same.
General Conditions:		
a)	Construction Phase	
I.	The solid waste generated should be properly collected and segregated. Dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.	Solid waste segregation will be practiced in Operation Phase with Proper approved disposal methods. Wet waste from the project will be treated in OWC. Refer Annexure no. 13.
II.	Disposal of muck, Construction spoils, including bituminous material during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in	Agreed to comply with the same.

**Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane
by M/s. GOPAL SONS**

Sr. No.	EC condition	Reply
	approved sites with the approval of competent authority.	
III.	Any hazardous waste generated during construction phase should be disposed of as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.	Agreed to comply with the same.
IV.	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of waste water and solid wastes generated during the construction phase should be ensured.	Agreed to comply.
V.	Arrangement shall be made that waste water and storm water do not get mixed.	Separate drain lines for Storm water and Sewerage system. Sewerage lines will be connected to STP.
VI.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices.	Yes, We will adopt such best Construction practices.
VII.	The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.	Agreed and comply with the same.
VIII.	Permission to draw ground water for construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.	Agreed to comply with the same.
IX.	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	Yes. Low flow water fixtures will be proposed.
X.	The Energy Conservation Building Code shall be strictly adhered to.	Yes. Energy Conservation will be done by use of solar hot water & solar PV as per ECBC.
XI.	All the top soil excavated during construction activities should be stored for use in horticulture / Landscape development within the project site.	Yes. Top soil will be utilized for landscape development within the project site.
XII.	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Yes. The earth debris will be utilized for leveling and for road construction within site.
XIII.	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	Agreed to comply with the same.
XIV.	PP to strictly adhere to all conditions mentioned in Maharashtra (Urban Areas) Protection and preservation of Trees Act, 1975 as amended during the validity of Environment Clearance.	Agreed to comply the same.

**Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane
by M/s. GOPAL SONS**

Sr. No.	EC condition	Reply
XV.	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.	Agreed to comply with. During Construction phase 1 DG set of 100 KVA is proposed only as power back up. The same will be with acoustic enclosure.
XVI.	Vehicles hired for transportation of Raw material shall strictly comply the emission norms prescribed by Ministry of Road Transport & Highway Department. The vehicle shall be adequately covered to avoid spillage/ leakages.	Agreed and Comply with same.
XVII.	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/ MPCB.	Agreed to comply with same. Refer Annexure
XVIII.	Diesel power generating sets proposed as source of backup power for elevators and common area illumination during construction phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets, Use low sulphur diesel is preferred. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.	Agreed to comply with the same.
XIX.	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings by a separate environment cell/ designated person.	Environmental Management cell will be formed to monitor implementation of EMP. Refer Annexure no. 14.
b)	Operation Phase	
I.	a) The solid waste generated should be properly collected and segregated. b) Wet waste should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. c) Dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.	Solid waste segregation will be practiced in Operation Phase with Proper approved disposal methods. Wet waste from project will be treated in OWC. Refer Annexure no. 13.

**Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane
by M/s. GOPAL SONS**

Sr. No.	EC condition	Reply
II.	E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.	Yes, E-waste will be handed over to Authorized recycler.
III.	a) The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled/reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP. b) PP to give 100% treatment to sewage/Liquid waste and explore the possibility to recycle at least 50 % of water, Local authority should ensure this.	Agreed to comply with. Proposed 2 stps 310 KLD & 127 KLD STP during operational phase. Recycled Water will be used for Flushing & Gardening. Refer Annexure no. 15 for STP details.
IV.	Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement.	Agreed to comply with the same.
V.	The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.	Yes, agreed to comply with the same. Refer Annexure no. 6 for PP undertaking
VI.	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.	Sufficient parking as per the local norms will be given. i.e. 2W – 718 & 4W–259. The parking plans are approved from competent authority and followed the same to avoid traffic congestion in nearby area.
VII.	PP to provide adequate electric charging points for electric vehicles (EVs).	Agreed to comply with the same. We will provide the 25 % of our Parking to EV Parking
VIII.	Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.	Refer Annexure no. 9 for Landscape Plan and the list of trees to be planted in the premises. Refer Annexure no. 5 for Tree NOC.
IX.	A separate environment management cell with qualified staff shall be set up for	Refer Environment Management Cell structure enclosed as Annexure no. 14

**Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane
by M/s. GOPAL SONS**

Sr. No.	EC condition	Reply
	implementation of the stipulated environmental safeguards.	
X.	Separate funds shall be allocated for implementation of environmental protection measure/EMP along with item- wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes	Refer Annexure no. 16 the Budgetary allocation and expenditure for Environment Management Plan.
XI.	The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://parivesh.nic.in	Agreed and noted. Refer Annexure 18 for same
XII.	A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation 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.	Agreed and noted.
XIII	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. The criteria pollutant levels namely; SPM, RSPM. SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Agreed and noted.
B)	General EC Condition	
I.	PP has to strictly abide by the conditions stipulated by SEAC & SEIAA.	Agreed to comply with the same.
II.	If applicable Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.	We have applied for consent to establish for proposed project.

**Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane
by M/s. GOPAL SONS**

Sr. No.	EC condition	Reply
III.	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	Agreed & comply the same. We have not started any construction work prior to the Environment clearance.
IV.	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 by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	Yes. This is our Dec 2026 Six Monthly Compliance Report & monitoring reports. Construction work is initiated but due to financial issue we have stopped the construction.
V.	The environmental statement for each financial year ending 31 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 by e-mail.	Agreed and noted.
VI.	No further Expansion or modifications, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the SEIAA. In case of deviations or alterations in the project proposal from those submitted to SEIAA for clearance, a fresh reference shall be made to the SEIAA as applicable to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Agreed to comply with the same.
VII.	This environmental clearance is issued subject to obtaining NOC from Forestry & wild life including clearance from the standing committee of the National Board for wild life as if applicable & this environment clearance does not necessarily implies that forestry & Wild life clearance granted to the project which will be considered separately on merit.	Agreed and Noted.
4.	The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance	Agreed and Noted.

**Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane
by M/s. GOPAL SONS**

Sr. No.	EC condition	Reply
	does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.	
5.	This Environment clearance is issued purely from an environment point of view without prejudice to any court cases and all other applicable permission/ NOCs shall be obtained before starting proposed work at site.	Agreed to comply with the same.
6.	In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department Will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.	Agreed and Noted.
7.	Validity of Environment Clearance: The environmental clearance accorded shall be valid as per EIA Notification, 2006, amended from time to time.	Agreed and Noted.
8.	The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	Agreed and Noted.
9.	Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1 st Floor, D-Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Agreed and Noted.

ANNEXURE LIST

Annexure No.	Details
1.	Current Status of Work
2.	Environment Clearance Copy
3.	Consent application Details
4.	LOI and Approval Plan
5.	NOC's
6.	PP Undertaking before OC
7.	Miyawaki Plantation Details.
8.	Revised Services Layout.
9.	Landscape Details.
10.	Excess treated water discharge details.
11.	DMP details
12.	Energy saving Details
13.	Solid waste management details
14.	Environment Management Cell
15.	STP details
16.	EMP budgetary allocation
17.	Lab reports
18.	Advertisement
19.	Annexure A B & C

Annexure No. 1: Current Status of the Work

Sr. No.	Building Name & number	Number of floors	Current Status of Work
1.	A wing	G+20 floors	Plinth Work completed of Building A
2.	B1 wing	G+ 2PO + 20 floor	
3.	B2 wing	G+ 2PO + 20 floor	
4.	B3 wing	G+ 2PO + 20 floor	
5.	C wing	G+ 2PO + 20 floor	
6.	D wing	G+ 2PO + 20 floor	
Total			



ENVIRONMENTAL
CLEARANCE

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), Maharashtra)

To,

The Partner

GOPAL SONS

HOUSE NO 42/A, MANPADA UMBRALI ROAD, POST-KHONI, DOMBIVLI-421203 -421203

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/MH/MIS/265559/2022 dated 01 Apr 2022. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|--|
| 1. EC Identification No. | EC24B038MH142634 |
| 2. File No. | SIA/MH/MIS/265559/2022 |
| 3. Project Type | New |
| 4. Category | B2 |
| 5. Project/Activity including Schedule No. | 8(a) Building and Construction projects |
| 6. Name of Project | Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. Gopal Sons |
| 7. Name of Company/Organization | GOPAL SONS |
| 8. Location of Project | Maharashtra |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 08/02/2024

(e-signed)
Pravin C. Darade , I.A.S.
Member Secretary
SEIAA - (Maharashtra)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

This is a computer generated cover page.

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and Virtuous Environmental Single-Window Hub)*



STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

No. SIA/MH/MIS/265559/2022
Environment & Climate
Change Department
Room No. 217, 2nd Floor,
Mantralaya, Mumbai- 400032.

To
M/s. Gopal Sons,
S. No. 16/1 (PT), H.No. 1.
Mauje Umbarli, Ambernath,
Dist – Thane

Subject : Environment Clearance for Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. Gopal Sons.

Reference : Application no. SIA/MH/MIS/265559/2022

This has reference to your communication on the above-mentioned subject. The proposal was considered by the SEAC- 2 in its 177th meeting under screening category 8 (a) B2 as per EIA Notification, 2006 and recommend to SEIAA. Proposal then considered in 270th & 275th (Day-1) meeting of State Level Environment Impact Assessment Authority (SEIAA) held on 10th January, 2024.

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

Sr. No.	Description	Details	
1	Proposal Number	Proposal No - SIA/MH/MIS/265559/2022	
2	Name of Project	Proposed Residential Building Plot Bearing S. No. 16/1 (Pt), H. No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane	
3	Project category	8 (a) b 2 Building & construction Project	
4	Type of Institution	Private	
5	Project Proponent	Name	Mr. Sukhadev Patil
		Regd. Office address	House no. 42, Manpada Umbarli Road at – Umbarli, Po – Khoni Tal- Ambernath , Dombivali East, Khoni , Thane Maharashtra
		Contact number	9867851056
		e-mail	gopal.sons159@gmail.com
6	Consultant	Vaishali Tambat, Manusrushti NABET Accreditation Number & Validity: NABET/EIA/2023/IA0068 valid up to 24th November, 2023.	
7	Applied for	Fresh EC	
8	Location of the project	Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane	
9	Latitude and Longitude	Latitude: 19°10'55.63"N, Longitude: 73°6'19.96"E	
10	Plot Area (sq. m.)	11,271Sq. m	

11	Deductions (sq. m.)	155.5 Sq. m					
12	Net Plot area (sq. m.)	11,115 Sq. m					
13	Ground coverage (m ²) & %	4229.72Sq. m (37.53 % on total plot area)					
14	FSI Area (sq. m.)	49,022.02 Sq. m					
15	Non-FSI (sq. m.)	7,778.50 sq.mt.					
16	Proposed built-up area (FSI + Non FSI) (sq. m.)	56,800.52 sq.mt.					
17	TBUA (m ²) approved by Planning Authority till date	56,800.52 sq.mt.					
18	Earlier EC details with Total Construction area, if any.	NA					
19	Construction completed as per earlier EC (FSI + Non FSI) (sq. m.)	NA					
20	Previous EC / Existing Building	Proposed Configuration					
		Sr. no.	Building Name & number	Number of floors	No. of Flats/ shops/ offices		Height of the building (Mtrs)
					Flats	Shop	
		1.	A wing	G+20 floors	156	0	63.15
		2.	B 1 wing	G+2 PO+20 floor	116	0	68.25
		3.	B2 wing	G+2 PO+20 floor	116	3	68.25
		4.	B3 wing	G+2 PO+20 floor	136	13	68.25
		5.	C wing	G+2 PO+20 floor	96	7	64.35
		6.	D wing	G+2 PO+20 floor	116	0	64.35
	Total			Flats: 736 Nos. Shops: 23 Nos.			
21	No. of Tenements & Shops	Proposed: Flats -736, Shops - 23					
22	Total Population	3249 nos.					

23	Total Water Requirements CMD	201 KLD			
24	Under Ground Tank (UGT) location	Flushed to ground			
25	Source of water	KDMC (Kalyan Dombivali Municipal Corporation)			
26	STP Capacity & Technology	2 STP of 310 KLD,127 KLD MBBR (Moving Bed Biofilm Reactor) Technology			
27	STP Location	Below Ground and 40% Open to Sky			
28	Sewage Generation CMD & % of sewage discharge in sewer line	282 KLD (61% of sewage discharge in sewer line)			
29	Solid Waste Management during Construction Phase	Type	Quantity (Kg/d)		Treatment / disposal
		Dry waste	30		Will be segregated and Handed over to Authorized recyclers
		Wet waste	45		Handed over to KDMC by daily collection system
		Construction waste	3172.29 m3		Excavated material will used for building and levelling ground in our other site
30	Total Solid Waste Quantities with type during Operation Phase & Capacity of OWC to be installed	Type	Quantity (Kg/d)		Treatment / disposal
		Dry waste	459	188	Handed over to Authorized recyclers
		Wet waste	675	277	Wet garbage treatment in 2 OWC's of 700 Kg and 300 kg capacity
		E-Waste	1152	473	Handed over to Authorized recyclers
		STP Sludge (dry)	54	22	Will be used as manure After Treatment in OWC
31	R.G. Area in sq. m.	RG required –			
		RG provided on Podium – 1147.16 Sq. m			
		RG provided on ground - 0 Sq. m			
		Total – 1147.16 Sq. m			
		Existing trees on plot: 4 Nos.			
		Number of trees to be planted: a) In RG area: 155 Nos. b) In Miyawaki Plantation (with area): Not provided			
		Number of trees to be cut: 0			
		Number of trees to be transplanted: 0			
32	Power requirement	During Operation Phase:			
		Details			
		Source		MSEDCL	
		Connected load (kW)		4177.82 KW	
		Demand load (kW)		1902.23 KW	
33	Energy Efficiency	a) Total Energy saving (%): 20.45 %			
		b) Solar energy (%): 5.8 %			

34	D.G. set capacity	Construction Phase: 1 DG set of 100 KVA Operation Phase: 2 DG set of 400 KVA & 630 KVA
35	No. of 4-W & 2-W Parking with 25% EV	4 – W = 259 Nos, 2 – W = 718 Nos
36	No. & capacity of Rain water harvesting tanks /Pits	3 RWH - 835 KLD,270 KLD,500 KLD
37	Project Cost in (Cr.)	128.35 Cr.
38	EMP Cost	During construction phase – per year: Rs. 18.41 During operation phase: Capital cost: 127.0216 Lakh O & M Cost: 33.7 Lakh/ Year
39	CER Details with justification if any....as per MoEF&CC circular dated 01/05/2018	As this is SRA Scheme already infrastructure, Road and other amenities are being developed on the same plot which will enhance the living condition as well as employment opportunities are being generated because of this development. As per F. No. 22-65/2017-IA.III dated 30 September 2020 Office Memorandum the OM dated 1 st may 2018 is suppressed. Hence, we will go along with your recommendation.
40	Details of Court Cases/litigations w.r.t the project and project location, if any.	NA

3. The proposal has been considered by SEIAA in its 275th (Day-1) meeting held on 10th January, 2024. and decided to accord Environment Clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implantation of following terms and conditions-

Specific Conditions:

A. SEAC Conditions-

- 1.PP to submit IOD/IOA/Concession Document/Plan Approval or any other form of documents as applicable clarifying its conformity with local planning rules and provisions as per the Circular dated 30.01.2014 issued by the Environment Department, Govt. of Maharashtra.
- 2.PP to obtain following NOC & remarks:
 - a) Water supply; b) Sewer connection; c) SWD NOC; d) CFO NOC excluding bldg. no-A; e) Tree NOC.
- 3.Planning authority to ensure that assured water supply, sewer and storm water network is made available in the vicinity of the project before issuing occupation certificate to the project.
- 4.PP to carry out Miyawaki plantation in 100 Sq.Mtr. area & accordingly revise tree list including trees planted in Miyawaki plantation.
- 5.PP to maintain 3 Mtr. distance between DG set and transformer.
- 6.PP to provide mandatory RG area as per prevailing norms on virgin land and submit the drawing with calculations.
- 7.PP to reduce the discharge of treated sewage to 35%. PP to submit NOC from concern authority for use of excess treated water in nearby Garden reservation/ Construction; PP to ensure that treated water parameters are as per NGT norms.

8. PP to include cost of firefighting equipment's in DMP & accordingly revise DMP.
9. PP to adopt water conservation measures in operation phase by providing Low Flow Devices (LFD) as plumbing fixtures. Accordingly, revise EMP of Operation phase. PP to include cost of DMP in EMP.

B. SEIAA Conditions-

1. PP has provided mandatory RG area of 1130.02 m² on mother earth without any construction. Local planning authority to ensure the compliance of the same.
2. This EC is restricted up to 57.00 m height only as per CFO NOC.
3. PP to keep open space unpaved so as to ensure permeability of water. However, whenever paving is deemed necessary, PP to provide grass pavers of suitable types & strength to increase the water permeable area as well as to allow effective fire tender movement.
4. PP to achieve at least 5% of total energy requirement from solar/other renewable sources.
5. PP Shall comply with Standard EC conditions mentioned in the Office Memorandum issued by MoEF & CC vide F.No.22-34/2018-IA III dt.04.01.2019.
6. SEIAA after deliberation decided to grant EC for-FSI-49,022.02 m², Non FSI- 7,778.50 m², total BUA-56,800.52 m². (Plan approval No-KDMC/TPD/4871, dated-30.11.2023)

General Conditions:

a) Construction Phase :-

- I. The solid waste generated should be properly collected and segregated. Dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.
- II. Disposal of muck, Construction spoils, including bituminous material during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in the approved sites with the approval of competent authority.
- III. Any hazardous waste generated during construction phase should be disposed of as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.
- IV. Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
- V. Arrangement shall be made that waste water and storm water do not get mixed.
- VI. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices.
- VII. The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.
- VIII. Permission to draw ground water for construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.
- IX. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
- X. The Energy Conservation Building code shall be strictly adhered to.

- XI. All the topsoil excavated during construction activities should be stored for use in horticulture / landscape development within the project site.
- XII. Additional soil for levelling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
- XIII. Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
- XIV. PP to strictly adhere to all the conditions mentioned in Maharashtra (Urban Areas) Protection and Preservation of Trees Act, 1975 as amended during the validity of Environment Clearance.
- XV. The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.
- XVI. Vehicles hired for transportation of Raw material shall strictly comply the emission norms prescribed by Ministry of Road Transport & Highways Department. The vehicle shall be adequately covered to avoid spillage/leakages.
- XVII. Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.
- XVIII. Diesel power generating sets proposed as source of backup power for elevators and common area illumination during construction phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel is preferred. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control Board.
- XIX. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings by a separate environment cell /designated person.

B) Operation phase:-

- I. a) The solid waste generated should be properly collected and segregated. b) Wet waste should be treated by Organic Waste Converter and treated waste (manure) should be utilized in the existing premises for gardening. And, no wet garbage will be disposed outside the premises. c) Dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable material.
- II. E-waste shall be disposed through Authorized vendor as per E-waste (Management and Handling) Rules, 2016.
- III. a) The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled/ reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP. b) PP to

- give 100 % treatment to sewage /Liquid waste and explore the possibility to recycle at least 50 % of water, Local authority should ensure this.
- IV. Project proponent shall ensure completion of STP, MSW disposal facility, green belt development prior to occupation of the buildings. As agreed during the SEIAA meeting, PP to explore possibility of utilizing excess treated water in the adjacent area for gardening before discharging it into sewer line. No physical occupation or allotment will be given unless all above said environmental infrastructure is installed and made functional including water requirement.
 - V. The Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained availability of drinking water, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.
 - VI. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.
 - VII. PP to provide adequate electric charging points for electric vehicles (EVs).
 - VIII. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.
 - IX. A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.
 - X. Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes.
 - XI. The project management shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at parivesh.nic.in
 - XII. A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation 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.
 - XIII. 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. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sector parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

C) General EC Conditions:-

- I. PP has to strictly abide by the conditions stipulated by SEAC & SEIAA.
- II. If applicable "Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the

Environment department before start of any construction work at the site.

- III. Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.
 - IV. 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 by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.
 - V. 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 by e-mail.
 - VI. No further Expansion or modifications, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the SEIAA. In case of deviations or alterations in the project proposal from those submitted to SEIAA for clearance, a fresh reference shall be made to the SEIAA as applicable to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
 - VII. This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life as if applicable & this environment clearance does not necessarily implies that Forestry & Wild life clearance granted to the project which will be considered separately on merit.
4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.
 5. This Environment Clearance is issued purely from an environment point of view without prejudice to any court cases and all other applicable permissions/ NOCs shall be obtained before starting proposed work at site.
 6. In case of submission of false document and non-compliance of stipulated conditions, Authority/ Environment Department will revoke or suspend the Environment clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.
 7. Validity of Environment Clearance: The environmental clearance accorded shall be valid as per EIA Notification, 2006, amended from time to time.
 8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

9. Any appeal against this Environment clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-Wing, Opposite Council Hall, Pune, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.



Pravin Darade
(Member Secretary, SEIAA)

Copy to:

1. Chairman, SEIAA, Mumbai.
2. Secretary, MoEF & CC, IA- Division MOEF & CC
3. Member Secretary, Maharashtra Pollution Control Board, Mumbai.
4. Regional Office MoEF & CC, Nagpur
5. District Collector, Thane.
6. Commissioner, Thane Municipal Corporation
7. Regional Officer, Maharashtra Pollution Control Board, Thane.

MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010706/24010437
Fax: 24023516
Website: <http://mpcb.gov.in>
Email: cac-cell@mpcb.gov.in



Kalpataru Point, 2nd, 3rd
and 4th floor, Opp. Cine
Planet Cinema, Near Sion
Circle, Sion (E),
Mumbai-400022

Infrastructure/ORANGE/L.S.I

No:- Format1.0/CC/UAN No.0000187908/CE/2508003553

Date: 27/08/2025

To,
Gopal Sons
Plot Bearing S.No. 16/1 (Pt), H.No.1.Mauje
Umbarli, Tal- Ambernath, Dist - Thane



Your Service is Our Duty

Sub: Consent to Establish for residential & commercial construction project under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981

- Ref:**
1. Environment Clearance vide letter no SIA/MH/MIS/265559/2022 on 08/02/2024.
 2. Minutes of 7th Consent Committee Meeting of 2025-26 w.r.t. Agenda A- Consent to Establish Cases - held on 19/08/2025.

Your application NO. MPCB-CONSENT-0000187908

For: Grant of Consent to Establish under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization / Renewal of Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I,II,III & IV annexed to this order:

1. **The Consent to Establish is granted for a period upto commissioning of project or up to 5 year whichever is earlier.**
2. **The capital investment of the project is Rs.128.35 Cr. (As per undertaking submitted by pp).**
3. **The Consent to Establish is valid for residential & commercial construction project named as M/s. Gopal Sons, S.No.16/1(Pt),H.No.1,Plot A Bearing S.No.16/1(Pt),H.No.1.Mauje Umbarli,Tal - Ambernath,Dist-Thane on Total Plot Area of 11271 SqMtrs for construction BUA of 56800.52 SqMtrs as per EC granted dated 08/02/2024 including utilities and services**

Sr.No	Permission Obtained	Plot Area (SqMtr)	BUA (SqMtr)
1	Environment Clearance granted on 08/02/2024	11271.00	56800.52

4. **Conditions under Water (P&CP), 1974 Act for discharge of effluent:**

Sr No	Description	Permitted (in CMD)	Standards to	Disposal
1.	Trade effluent	Nil	0	0
2.	Domestic effluent	397	As per Schedule - I	The treated effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be connected to the sewerage system provided by local body

5. **Conditions under Air (P& CP) Act, 1981 for air emissions:**

Stack No.	Description of stack / source	Number of Stack	Standards to be achieved
S1	DG Set (630 KVA)	1	As per Schedule -II
S2	DG Set (400 KVA)	1	As per Schedule -II

6. **Conditions under Solid Waste Rules, 2016:**

Sr No	Type Of Waste	Quantity & UoM	Treatment	Disposal
1	Biodegradable waste	953 Kg/Day	Treated in OWC	Used as manure
2	Non-Biodegradable waste	647 Kg/Day	Segregation	Handed over to Authorized recyclers
3	STP sludge	22 Kg/Day	drying	Used as manure

7. **Conditions under Hazardous & Other Wastes (M & T M) Rules 2016 for Collection, Segregation, Storage, Transportation, Treatment and Disposal of hazardous waste:**

Sr No	Category No.	Quantity	UoM	Treatment	Disposal
NA					

- The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.
- Project Proponent shall comply the Construction and Demolition Waste Management Rules, 2016 which is notified by Ministry of Environment, Forest and Climate Change dtd.29/03/2016.
- The project proponent shall make provision of charging of electric vehicles in atleast 25 % of total available parking area.
- The project proponent shall take adequate measures to control dust emission and noise level during construction phase.

13. The Project Proponent shall comply with the Environmental Clearance obtained vide No SIA/MH/MIS/265559/2022 dtd 08/02/2024 for construction project having Total Plot Area of 11,271 Sq. Mtrs and for total construction BBUA 56,800.52 sq. mtrs as per specific condition of EC.

This consent is issued on the basis of information/documents submitted by the Applicant/Project Proponent, if it has been observed that the information submitted by the Applicant/Project Proponent is false, misleading or fraudulent, the Board reserves its right to revoke the consent & further legal action will be initiated against the Applicant/Project Proponent.

Received Consent fee of -

Sr.No	Amount(Rs.)	Transaction/DR.No.	Date	Transaction Type
1	256700.00	MPCB-DR-35300	14/07/2025	NEFT

Copy to:

1. Regional Officer, MPCB, Kalyan and Sub-Regional Officer, MPCB, Kalyan II
- They are directed to ensure the compliance of the consent conditions.
2. Chief Accounts Officer, MPCB, Sion, Mumbai

SCHEDULE-I

Terms & conditions for compliance of Water Pollution Control:

- 1) A] As per your application, you have proposed to provide MBBR based Sewage Treatment Plants (STPs) of combined capacity **437 CMD for treatment of domestic effluent of 397 CMD.**
B] The treated domestic effluent shall be 60% recycled for secondary purposes such as toilet flushing, air conditioning, cooling tower make up, firefighting etc. and remaining shall be utilized on land for gardening and connected to the sewerage system provided by local body.
- 2) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto.
- 3) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
- 4) **The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and as amended, and other provisions as contained in the said act.**

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	0.00
2.	Domestic purpose	427.00
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	0.00
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	0.00
5.	Grandening/Other consumption	0

- 5) The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time.

SCHEDULE-II

Terms & conditions for compliance of Air Pollution Control:

- 1) As per your application, you have proposed to provide the Air pollution control (APC) system and also proposed to erect following stack (s) and to observe the following fuel pattern-

Stack No.	Source	APC System provided/proposed	Stack Height(in mtr)	Type of Fuel	Sulphur Content(in %)	Pollutant	Standard
S1	DG set	Stack	3.00	HSD 202.141 Ltr/Hr	1	SO ₂	48.5 Kg/Day
S2	DG set	Stack	3.00	HSD 108.2628 Ltr/Hr	1	SO ₂	25.96 Kg/Day

- 2) The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards.

Total Particular matter	Not to exceed	150 mg/Nm ³
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- 3) The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement well before its life come to an end or erection of new pollution control equipment.
- 4) The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).
- 5) **Conditions for utilities like Kitchen, Eating Places, Canteens:-**
- The kitchen shall be provided with exhaust system chimney with oil catcher connected to chimney through ducting.
 - The toilet shall be provided with exhaust system connected to chimney through ducting.
 - The air conditioner shall be vibration proof and the noise shall not exceed 68 dB(A).
 - The exhaust hot air from A.C. shall be attached to Chimney at least 5 mtrs. higher than the nearest tallest building through ducting and shall discharge into open air in such a way that no nuisance is caused to neighbors.

SCHEDULE-III

Details of Bank Guarantees:

Sr. No.	Consent(C2E/C2O/C2R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	Consent to establish	10 Lakh	Within 15 days period	Compliance of consent conditions	Continuous	COU

** The above Bank Guarantee(s) shall be submitted by the applicant in favour of Regional Officer at the respective Regional Office within 15 days of the date of issue of Consent.

Existing BG obtained for above purpose if any may be extended for period of validity as above.

BG Forfeiture History

Srno.	Consent (C2E/C2O/C2R)	Amount of BG imposed	Submission Period	Purpose of BG	Amount of BG Forfeiture	Reason of BG Forfeiture
NA						

BG Return details

Srno.	Consent (C2E/C2O/C2R)	BG imposed	Purpose of BG	Amount of BG Returned
NA				



SCHEDULE-IV

Conditions during construction phase

A	During construction phase, applicant shall provide temporary sewage and MSW treatment and disposal facility for the staff and worker quarters.
B	During construction phase, the ambient air and noise quality shall be maintained and should be closely monitored through MoEF approved laboratory.
C	Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

General Conditions:

- 1 The applicant shall provide facility for collection of samples of sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
- 2 The firm shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act 1986 and Solid Waste Management Rule 2016, Noise (Pollution and Control) Rules, 2000 and E-Waste (Management & Handling Rule 2011.
- 3 Drainage system shall be provided for collection of sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No sewage shall be admitted in the pipes/sewers downstream of the terminal manholes. No sewage shall find its way other than in designed and provided collection system.
- 4 Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- 5 Conditions for D.G. Set
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) The applicant shall comply with the notification of MoEFCC, India on Environment (Protection) second Amendment Rules vide GSR 371(E) dated 17.05.2002 and its amendments regarding noise limit for generator sets run with diesel.

- 6 Solid Waste - The applicant shall provide onsite municipal solid waste processing system & shall comply with Solid Waste Management Rule 2016 & E-Waste (M & H) Rule 2011.
- 7 Affidavit undertaking in respect of no change in the status of consent conditions and compliance of the consent conditions the draft can be downloaded from the official web site of the MPCB.
- 8 Applicant shall submit official e-mail address and any change will be duly informed to the MPCB.
- 9 The treated sewage shall be disinfected using suitable disinfection method.
- 10 The firm shall submit to this office, the 30th day of September every year, the environment statement report for the financial year ending 31st march in the prescribed Form-V as per the provision of rule 14 of the Environmental (Protection) Second Amended rule 1992.
- 11 The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before commissioning of the project.

This certificate is digitally & electronically signed.



KALYAN DOMBIVALI MUNICIPAL CORPORATION
TOWNPLANNING DEPARTMENT



No. KDMC/TPD/ 4871

Date : 30/11/2023 .

To,
 M/s. Tulshiram Gopal Patil & Other
 Architect – Mr. Vinayak Sahastrabuddhe, Thane
 Structural Engineer – Mr. Sameer S. Jeste (M/s. Golble Stuctcon)

Sub : Letter of Intent for Enviroment Clearance of proposed development on the plot bearing S.No.16, H.No. 1, Village – Umbroli, Tal.- Kalyan, Dist – Thane.

Ref : 1) Building Permission No. KDMC/TPD/BP/27 Village/2021-22/24/99, Date : 27/05/2022.
2) Architect application dated 09/11/2023.

With reference to above reffered application at serial No. 2 regarding the Letter of Intent for the Enviroment Clearance of proposed Residential & Commercial Complex of M/s. Tulshiram Gopal Patil & Other Architect – Mr. Vinayak Sahastrabuddhe, Thane, Structural Engineer – Mr. Sameer S. Jeste (M/s. Golble Stuctcon) on plot bearing S.No.16, H.No. 1, Village – Umbroli, Tal.- Kalyan, Dist – Thane, admeasuring area 11323.60 as per 7/12 extract & admeasuring 11270.50 Sq.mt. as per possession, and the **revised proposal has been sanctioned for the area 3159.36 Sq.mt.** as per UDCPR.

This is to inform you that, the proposal submitted by you is scrutinized as per the details, documents, reports & plan submitted by you. The proposal submitted by you is for seeking **building permission for built-up area of 49022.02 Sq.mt.** and **Non FSI area approximately 7778.50 Sq.mt.** and the same is permissible as per prevelling Unified development control and promotion regulations dated 02/12/2020, rule no. 3.15 and i.e. FSI + Non FSI including parking, podium etc. **total area 56800.52 Sq.mt. statement attached.**

The same is permissible as per the prevailing Unified development control and promotion regulations.

You are further instructed to take all necessary permissions and approvals along with from the concern authorities whichever applicable.

This is for your information.

Your faithfully,

(D. P. Sawant)

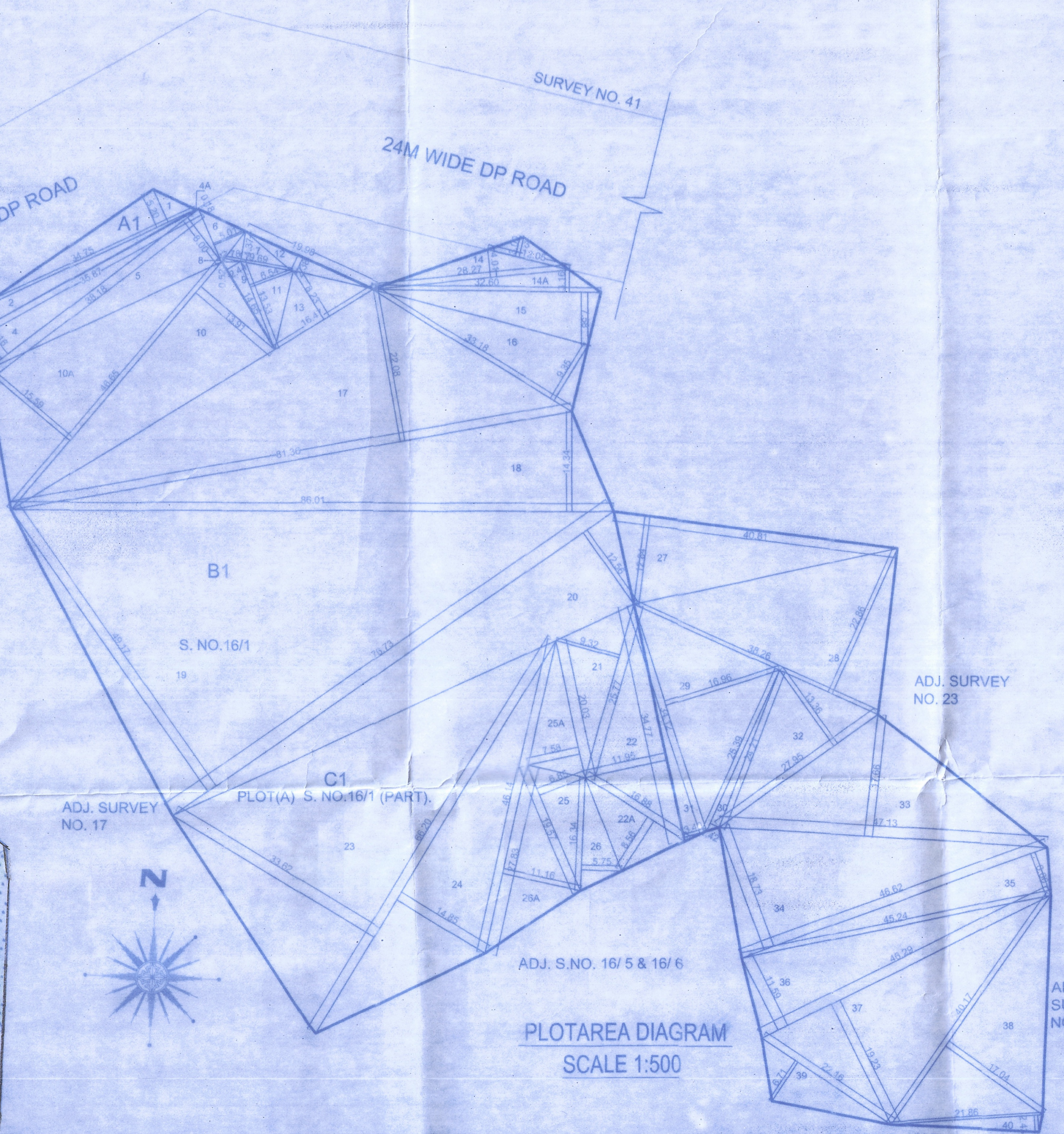
Assistant Director of Townplanning
 Kalyan Dombivali Municipal Corporation, Kalyan



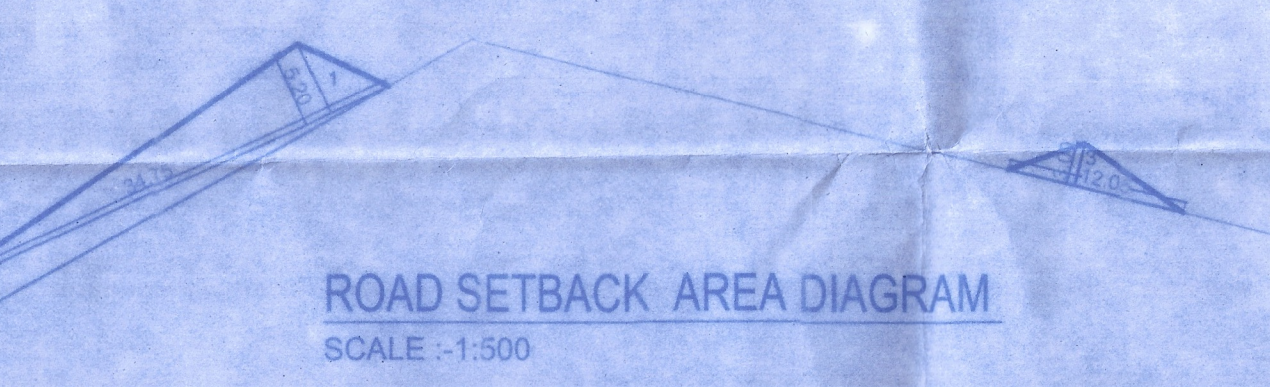
BLOCK - A, B1, B2, B3, C, & D
LAYOUT PLAN.
SCALE 1:500



(A-BLOCK)



PLOT AREA DIAGRAM
SCALE 1:500



ROAD SETBACK AREA DIAGRAM
SCALE 1:500

ROAD SETBACK AREA CALCULATION
PART A1.

1	34.75	X	5.20	X	0.50	=	90.34	SQ.MT.
2	34.75	X	2.71	X	0.50	=	47.09	SQ.MT.
3	12.05	X	3.00	X	0.50	=	18.08	SQ.MT.
TOTAL						=	155.50	SQ.MT.

TOTAL CONSTRUCTION AREA

WING	A WING	B1 WING	B2 WING	B3 WING	C WING	C WING	D WING	TOTAL
1st to 20th FLOOR AREA (Y)	192.1	229.61	194.38	28.6	84.78		233.04	962.51
1st to 20th FLOOR AREA (Y)	7737.9	8786.62	9717.25	10421.34	3739	2464.88	8619.91	51436.9
CONSTRUCTION AREA	X	Y					Z	(X+Y)
	962.51	51486.9						52409.41

R.G. AREA CALCULATION.
R.G. 01- GROUND LV.

1	28.27	X	7.80	X	0.50	=	114.15	SQ.MT.
2	28.27	X	6.08	X	0.50	=	88.88	SQ.MT.
3	10.62	X	3.49	X	0.50	=	53.43	SQ.MT.
4	10.62	X	18.48	X	0.50	=	282.93	SQ.MT.
5	21.18	X	0.97	X	0.50	=	15.12	SQ.MT.
6	31.18	X	12.59	X	0.50	=	195.28	SQ.MT.
TOTAL						=	750.89	SQ.MT.

R.G. 02- GROUND LV.

1	10.02	X	4.34	X	0.50	=	65.14	SQ.MT.
2	48.24	X	8.90	X	0.50	=	205.77	SQ.MT.
TOTAL						=	270.91	SQ.MT.

R.G. 03- GROUND LV.

1	25.50	X	7.94	X	0.50	=	101.24	SQ.MT.
2	25.50	X	0.37	X	0.50	=	4.72	SQ.MT.
3	1.03	X	1.49	X	0.50	=	2.26	SQ.MT.
TOTAL						=	108.21	SQ.MT.

TOTAL R.G. (RG 1+RG 2+RG 3) = 1130.02 SQ.MT.

REQUIRED R.G. = 1111.50 SQ.MT.

PROPOSED R.G. = 1130.02 SQ.MT.

PLOT AREA CALCULATION.

PLOT AREA CALCULATION.
PART A1.

1	34.75	X	5.20	X	0.50	=	90.34	SQ.MT.
2	34.75	X	2.71	X	0.50	=	47.09	SQ.MT.
3	12.05	X	3.00	X	0.50	=	18.08	SQ.MT.
TOTAL						=	155.50	SQ.MT.

PART B1.

4	38.18	X	5.16	X	0.50	=	98.90	SQ.MT.
4A	35.87	X	0.18	X	0.50	=	3.23	SQ.MT.
5	38.18	X	8.00	X	0.50	=	152.72	SQ.MT.
6	8.24	X	5.01	X	0.50	=	20.64	SQ.MT.
7	9.98	X	4.37	X	0.50	=	21.17	SQ.MT.
8	2.79	X	0.52	X	0.50	=	0.72	SQ.MT.
9	14.85	X	2.44	X	0.50	=	17.87	SQ.MT.
10	46.85	X	13.91	X	0.50	=	324.45	SQ.MT.
10A	46.85	X	15.59	X	0.50	=	363.84	SQ.MT.
11	13.53	X	6.54	X	0.50	=	44.24	SQ.MT.
12	19.98	X	2.38	X	0.50	=	23.78	SQ.MT.
13	16.47	X	8.23	X	0.50	=	67.77	SQ.MT.
14	28.27	X	4.01	X	0.50	=	56.88	SQ.MT.
14A	32.60	X	3.16	X	0.50	=	51.51	SQ.MT.
15	32.60	X	7.58	X	0.50	=	123.55	SQ.MT.
16	33.18	X	9.35	X	0.50	=	155.12	SQ.MT.
17	81.36	X	22.08	X	0.50	=	898.21	SQ.MT.
18	86.01	X	14.34	X	0.50	=	615.69	SQ.MT.
19	76.73	X	49.17	X	0.50	=	1886.41	SQ.MT.
20	76.73	X	12.56	X	0.50	=	481.86	SQ.MT.
21	25.77	X	9.32	X	0.50	=	120.09	SQ.MT.
22	34.77	X	11.95	X	0.50	=	207.75	SQ.MT.
22A	16.88	X	8.56	X	0.50	=	72.25	SQ.MT.
27	40.81	X	12.84	X	0.50	=	262.00	SQ.MT.
28	38.25	X	22.86	X	0.50	=	437.31	SQ.MT.
29	34.12	X	16.36	X	0.50	=	289.34	SQ.MT.
30	25.39	X	1.42	X	0.50	=	16.38	SQ.MT.
31	34.12	X	3.40	X	0.50	=	58.00	SQ.MT.
32	27.95	X	13.38	X	0.50	=	186.71	SQ.MT.
33	47.13	X	17.86	X	0.50	=	415.16	SQ.MT.
34	46.82	X	18.73	X	0.50	=	436.60	SQ.MT.
35	45.24	X	6.80	X	0.50	=	143.29	SQ.MT.
36	46.29	X	11.59	X	0.50	=	268.25	SQ.MT.
37	46.29	X	19.23	X	0.50	=	445.08	SQ.MT.
38	40.17	X	17.04	X	0.50	=	342.25	SQ.MT.
39	22.16	X	6.71	X	0.50	=	74.35	SQ.MT.
40	21.86	X	2.467	X	0.50	=	26.97	SQ.MT.
TOTAL						=	9219.19	SQ.MT.

PART C1.

23	66.20	X	33.80	X	0.50	=	1112.16	SQ.MT.
24	66.20	X	14.85	X	0.50	=	491.54	SQ.MT.
25	19.57	X	6.85	X	0.50	=	67.03	SQ.MT.
25A	20.03	X	7.58	X	0.50	=	75.91	SQ.MT.
26	16.34	X	5.75	X	0.50	=	46.98	SQ.MT.
26A	27.83	X	11.16	X	0.50	=	155.29	SQ.MT.
TOTAL						=	1948.90	SQ.MT.

TOTAL ADDITION (A1 + B1 + C1).

155.50 + 8871.52 + 1932.93	=	11323.60	SQ.MT.
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PROPOSED PARKING STATEMENT.

PROPOSED PARKING STATEMENT.

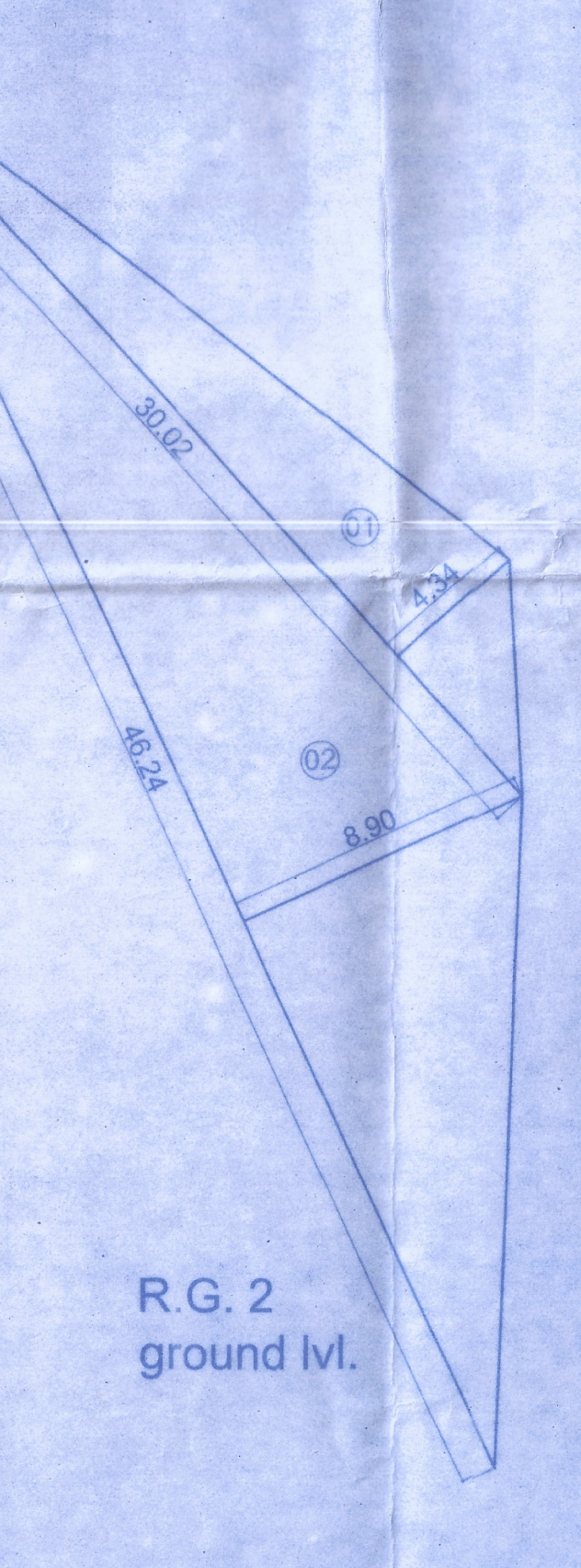
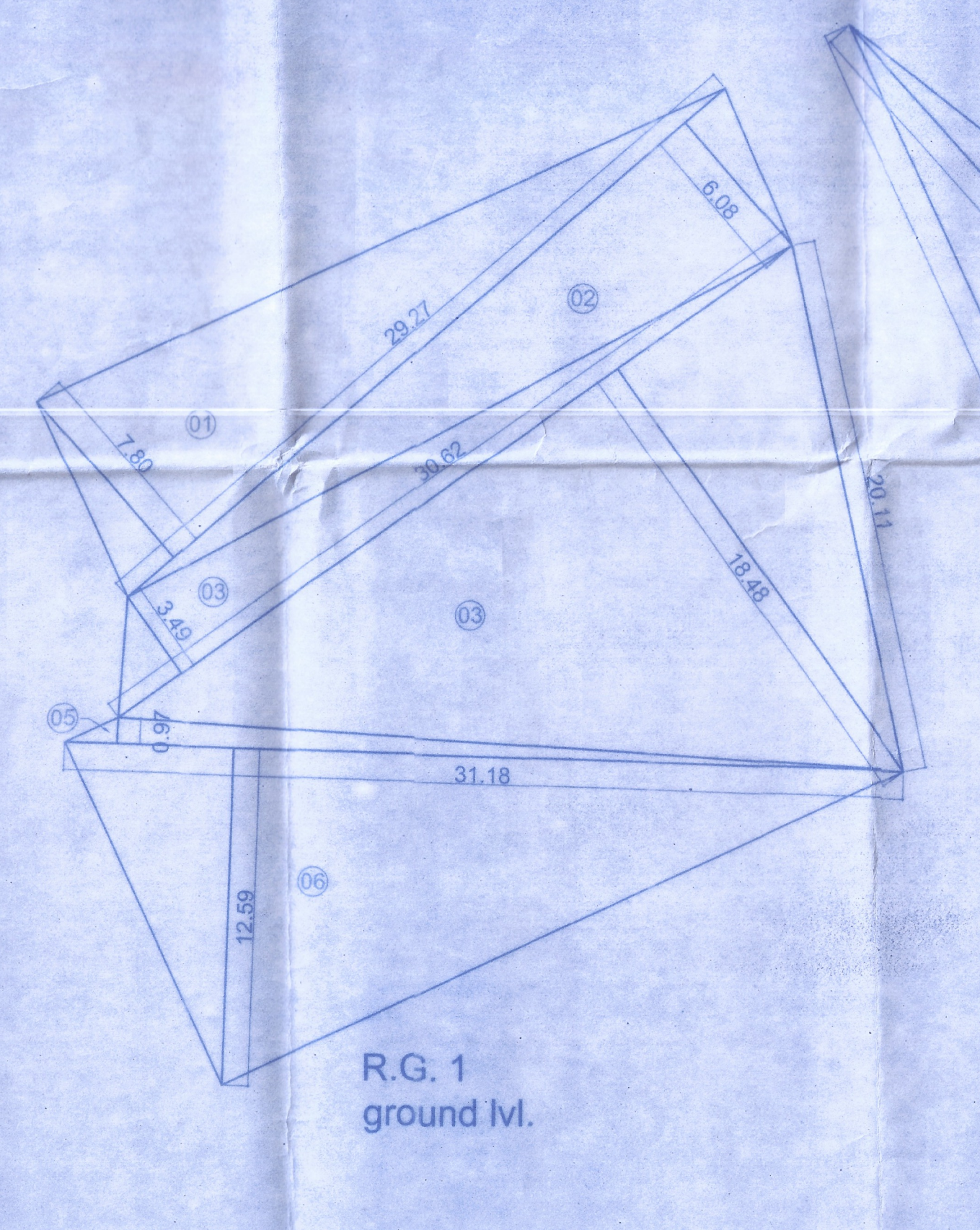
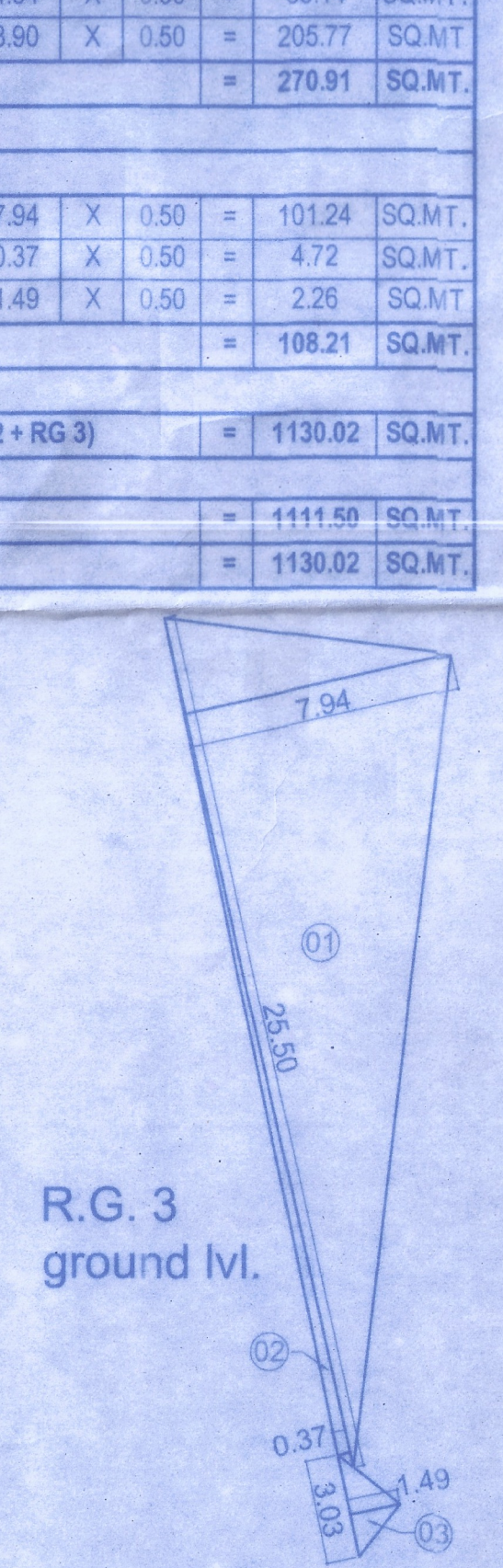
CAR PARKING
STACK PARKING = 121 X 2 = 242 NOS. CAR
SINGLE PARKING = 19 X 1 = 19 NOS. CAR
TOTAL CAR PARKING = 242 + 19 = 261 NOS.
REQUIRED CAR PARKING = 258.72 NOS.
PROPOSED CAR PARKING = 261 NOS.

BIKES PARKING
SINGLE PARKING = 455 NOS. BIKES
COMPOSITE PARKING (6 BIKES / PARKING) = 44 X 6 = 264 NOS. BIKES
TOTAL BIKES PARKING = 455 + 264 = 719 NOS.
REQUIRED BIKES PARKING = 712.36 NOS.
PROPOSED BIKES PARKING = 719 NOS.

BUILTUP AREA STATEMENT WITH ANCILLARY AREA

BUILTUP AREA STATEMENT WITH ANCILLARY AREA

FLOOR	A WING	B1 WING	B2 WING	B3 WING	C WING	C WING (FOR MHADA)	D WING
GROUND FLOOR	70.5	61.57	152.09	550.04	214.51		54.11
PODIUM-01		61.57	54.38	53.54			
1ST FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
2ND FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
3RD FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
4TH FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
5TH FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
6TH FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
7TH FLOOR	354.17	388.83	430.38	445		207.60	371.65
8TH FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
9TH FLOOR	390.67	444.26	488.06	502.36		256.21	442.45
10TH FLOOR	390.67	444.26	488.06	502.36	130.57	207.60	442.45
11TH FLOOR	354.17	388.83	430.38	445		301.06	371.65
12TH FLOOR	390.67	444.26	488.06	502.36		355.82	442.45
13TH FLOOR	390.67	444.26	488.06	502.36		355.82	442.45
14TH FLOOR	390.67	444.26	488.06	502.36		355.82	442.45
15TH FLOOR	354.17	388.83	430.38	445		301.06	371.65
16TH FLOOR	390.67	444.26	488.06	502.36		355.82	442.45
17TH FLOOR	390.67	444.26	488.06	502.36		355.82	442.45
18TH FLOOR	390.67	444.26	488.06	502.36		355.82	442.45
19TH FLOOR	354.17	388.83	430.38	445		301.06	371.65
20TH FLOOR	390.67	444.26	488.06	502.36		355.82	442.45
TOTAL	7737.9	8786.62	9717.25	10421.34	3739	2464.88	8619.91
A1+B1+B2+B3+C+D							49022.02



DATE AND STAMP OF APPROVAL OF PLANS

ONLY FOR ENVIRONMENTAL CLEARANCE
PURPOSE READ WITH LETTER NO-
KDMC/NRV/4871 DT-30/11/2023.

ASSISTANT DIRECTOR OF
PLANNING
Kalyan District Municipal Corporation

DATE AND STAMP OF RECEIPT OF PLANS.

Area Statement

	SQ.MT.
1 Area of plot as per possession. (Minimum area of a.h.c to considered)	11323.60
a) as per ownership document (7/12, CTS no)	11410.00
b) as per measurement sheet	
c) as per site	11270.50
2 Deduction for a) proposed DP / DP road widening area / Service road / High widening	155.50
b) any DP reservation area (Total a + b)	155.50
3 Balance area of plot (1-2)	11115.00
3a Plot (A) area considered as per physical possession based on POA.	
4 Amenity space (if applicable) 5% a) Required - b) Adjustment of 2b, if any c) balanced proposed	
5 Net plot area (3-4 (c))	1111.5
6 Recreational open space (if applicable) 10% a) Required - b) Proposed	1130.02
7 Internal Road area Putable area (if applicable)	
9 Built up area with reference to Basic F.S.I. (or no 5 basic FSI) 11115.00 X 1.10	12226.50
10 Addition of FSI on payment of premium 11115.00 X 0.50	5557.50
a) Maximum permissible premium FSI-based on road b) Proposed FSI on payment of Premium	
11 In - situ FSI / TDR loading a) In situ area against DP road (2.0 x 50 no 2 (a), if any 155.50 X 2 = 311.00	311.00
b) In situ area against amenity space if handed over	
c) TDR area 11115.00 X 1.15	12782.25
d) Total in - situ TDR loading proposed (11 (a) + (b) + (c))	13093.25
12 Additional FSI area under chapter no 7	
13 Total entitlement of FSI in the proposal a) (9 + 10 (b) + 11 (d) or 12 whichever is applicable.	30877.25
b) ancillary area FSI upto 60 % or 80 % with payment of charges (7523.16)	18526.35
c) Total entitlement (a + b)	49403.60
Maximum utilization limit of FSI (building potential) permissible as per road width (as per regulation no 6.1 or 6.2 or 6.3 or 6.4 as applicable) x 1.6 or 1.8	49403.60
15 Total BUA in proposal (excluding area at sr no 17 b)	
a) Existing BUA	
b) Proposed BUA (as per line)	49022.02
c) Total (a + b)	
16 FSI consumed (15/13) (should not be more than serial no 14 above.)	
17 Area for inclusive housing, if any a) required (20 % of sr no 5) 12226.50 X 20%=2445.30 b) Proposed	2445.30 2464.88

DESCRIPTION OF PROPOSAL & PROPERTY

PROPOSED RESIDENTIAL BUILDING ON PLOT A BEARING
S.NO.16/1 (PT) , H. NO. 1, MAJJE UMBOORI TAL- AMBARNATH,
DIST - THANE. FOR - DEVENDRA VASUDEV PATIL & MAYUR PATIL

NAME & SIGN. OF OWNER

NAME & SIGN. OF ARCH.

DEVENDRA VASUDEV PATIL &
MAYUR PATIL

VINAYAK SAHASRABUDHE

DRAWN BY: SCALE: DATE: 2/04/2021

CHECKED BY: VS. SHEET NO.: JOB NO.:

OP: BIL NAY SASTRI BCC, SHRIKUMAR, KANPURA PHASE
PH-40002, PHASE-2023/01/04

कल्याण डोंबिवली महानगरपालिका, कल्याण

९ (आय) प्रभागक्षेत्र कार्यालय, पाणी पुरवठा विभाग
मंगेशी संस्कार इमारत, विंध्याचल शाळेजवळ, खडेगोळवली गांव, कल्याण (पुर्व)

जा.क्र.कडोंमपा/प्र.क्र.९(आय)/पा.पु/उअ/२९५

दिनांक २८/१०/२०२१

ना हरकत दाखला

अर्जदार : श्री. विनायक सहस्त्रबुध्दे (आर्किटेक्ट)
नवनाथ सोसायटी, रुम नं. १३,
शिवाजी नगर, ठाणे.



संदर्भ — १) आपला अर्ज आ.क्र. ८७ दि. २७/४/२०२१.

२) लिपीक श्री. सखाराम म्हात्रे (चिंचपाडा) यांचा तपासणी व पहाणी अहवाल
दिनांक १२/१०/२०२१.

संदर्भित अर्जान्वये प्रमाणित करण्यात येते की, अर्जात नमुद केलेल्या स नं. १६, हि. नं. १
मौजे उंबाली या भुखंडावर एकुण निरंक नळ जोडण्या आहेत. पाणी बिलाची थकबाकी नाही.

सदर दाखला संदर्भ क्र १ चे अर्जानुसार व संदर्भ क्र २ प्रमाणे तपासणी/पहाणी अहवालानुसार
देण्यांत येत आहे.

उप अभियंता (पा.पु)

प्रभाग क्र. ९ (आय)

कल्याण डोंबिवली महानगरपालिका, कल्याण

Sewer NOC



कल्याण डोंबिवली महानगरपालिका, कल्याण.

मलनिःसारण विभाग.

जा.क्र.कडोंमपा/काअ/मनि:/३६२

दिनांक : २८/०८/२०२१

प्रति,

मा.क्र. - ६९६ वा.क्र. ६९६ पाटील & मयूर पाटील
वा.क्र. ११११११ - विनायक रावरावराव

विषय :- फ्लॉट - १, लॉट नं. १६/१८६ मॉडेल डेव्हलपमेंट
नॅशनल विप्रोम करारानुसार इमारतीच्या
बांधणीसाठी फ्लॉट नं. १६/१८६

संदर्भ :- आपला अर्ज दिनांक २८/८/२०२१

वरील संदर्भान्वये खालील अटी व शर्तीनुसार मलनिःसारण विभागाचा ना हरकत दाखला देण्यात येत आहे.

अटी व शर्ती :-

- १) प्रस्तावित इमारतीसाठी सेप्टिक टॅक २०.० घन मी. व सोकपीट ३०.० घन मी. एवढ्या क्षमतेचे बांधण्यात यावे.
- २) आपल्या प्रस्तावित इमारतीच्या अंतर्गत असणारे चॅबर्स हे २'.०" X १.५०" एवढ्या आकाराचे असावेत. तसेच गल्ली ट्रॅप चॅबर्स प्रत्येक बाथरूम व किसचनच्या डावूनटेक पाईप खाली प्रस्तावित करण्यात यावेत.
- ३) सेप्टिक टॅकच्या प्रत्येक भागासाठी स्वतंत्र व्हेंट पाईप व हेवी ड्यूटी मॅनहोल कव्हर प्रस्तावित करण्यात यावे.
- ४) भविष्य काळात इमारतीजवळ भुयारी गटार योजना कार्यान्वित झाल्यास त्यास पूर्व परवानगी घेऊन इमारतीचे सांडपाणी/मैलापाणी जोडणे आपल्यावर बंधनकारक राहील.
- ५) सेप्टिक टॅक सोबत सोक पीट बांधणे बंधनकारक असून सदर सेप्टिक टॅक व सोकपीट IS2470 पार्ट १ व २ नुसार बांधणे बंधनकारक आहे. तसेच सदर सेप्टिक टॅक व सोकपीट बांधणेपुर्वी व बांधकाम झाल्यानंतर महापालिकेच्या अभियंत्याची पाहणी अहवाल बांधकाम पूर्णत्वाच्या दाखल्यापुर्वी सादर करणे आवश्यक आहे.

कार्यकारी अभियंता (मनिः),

कल्याण डोंबिवली महानगरपालिका, कल्याण.

प्रत : सहाय्यक संचालक, नगररचना, कडोंमपा, कल्याण यांचे माहितीसाठी सस्नेह अग्रेषित.

Storm Water Drainage NOC



कल्याण डोंबिवली महानगरपालिका, कल्याण

जलनिःसारण विभाग

जा.क्र.कडोंमपा/काअ/जनि:/ ३६९

दिनांक :- २८/०९/२०२१.

:: ना हरकत-दाखला (बांधकाम परवानगी मिळणे कामी)

प्रति,

वास्तुशिल्पकार श्री.विनायक सहस्त्रबुध्दे,

ठाणे पश्चिम

विषय :- जलनिःसारण विभागाचा ना-हरकत दाखला.

संदर्भ :- वरील विषयाबाबतचा आपला दिनांक १२/०४/२०२१ रोजीचा अर्ज.

मालक :- श्री.देवेंद्र वासुदेव पाटील व श्री.मयूर पाटील

इमारत पत्ता :- सर्व्हे नं.१६/१पै., मौजे-उंबरोली, ता.अंबरनाथ या भूखंडावर नव्याने विकसित करावयाच्या इमारतीसाठी (एक इमारत)

उपरोक्त विषयांकीत भूखंडाची प्रत्यक्ष जागेवर पाहणी केली असता आपण सादर केलेल्या नकाशाप्रमाणे आपले इमारत बांधण्याचे नियोजन असुन या इमारतीस खालील अटी व शर्तीवर जलनिःसारण विभागाचा ना हरकत दाखला देण्यात येत आहे.

१) सोबत जोडलेल्या नकाशात दिलेल्या मार्गिकेप्रमाणे पावसाळी पाण्याचा निचरा योग्यरीतीने होणेकामी नकाशात दर्शविलेल्या सेक्शननुसार व सोबत जोडलेल्या नकाशात दिलेल्या मार्गिकेप्रमाणे M-30 या उच्च प्रतिच्या सिमेंट कॉक्रीटने आर.सी.सी. बॉक्स नाल्याचे बांधकाम पावसाळी पाण्याचा निचरा योग्यरित्या होण्यासाठी इमारतीचे बांधकाम पुर्ण अथवा सुरू करण्यापुर्वी स्वखर्चाने बांधणे आपल्यावर बंधनकारक राहील. यात कुठल्याही प्रकारचा फेरबदल करू नये. सदर नाल्याचे बांधकाम करण्यापुर्वी नाल्याचे ड्रॉइंग व डिझाईन कडोंमपा मान्यता प्राप्त आर.सी. सी. कन्सल्टंटमार्फत तयार करून या विभागास सादर करावे व या विभागामार्फत मान्यता प्राप्त करून घ्यावी. सदर नाला बांधतेवेळी जलनिःसारण विभागाच्या नियंत्रणाखाली बांधकाम करावे.

२) इमारतीच्या सांडपाण्याचा व पावसाळी पाण्याचा निचरा योग्यरित्या होण्यासाठी इमारतीचे बांधकाम पुर्ण अथवा सुरू करण्यापुर्वी जलनिःसारण विभागाने दिलेल्या निर्देशान्वये/सोबत जोडलेल्या नकाशात दिलेल्या मार्गिकेप्रमाणे व दिलेल्या सेक्शनप्रमाणे आपण विकसित करीत असलेल्या भूखंडासमोरील २४ मी. रुंद डी.पी. रस्त्यालगत M-15/1:2:4 या उच्च प्रतिच्या सिमेंट कॉक्रीटने नाला स्वखर्चाने बांधणे आपल्यावर बंधनकारक राहील. यात कुठल्याही प्रकारचा फेरबदल करू नये. सदर नाला बांधतेवेळी जलनिःसारण विभागाच्या नियंत्रणाखाली बांधकाम करावे.

३) आपण आपला भूखंड विकसित करीत असल्यामुळे भविष्यात शेजारील रहिवाशांना तसेच शेजारच्या भूखंडात सांडपाणी व पावसाळी पाणी साचणार नाही किंवा जाणार नाही याची संपुर्ण जबाबदारी आपल्यावर राहील.

४) रस्त्याच्या कडेला बांधण्यात येणा-या / बांधलेल्या नाल्याच्या भिंतीवर भविष्यात आपणास कोणत्याही प्रकारे बांधकाम करता येणार नाही. अन्यथा तसे केल्यास तोडण्याचा महापालिकेला कायदेशिर अधिकार राहील.

५) सदर बांधकाम पुर्ण झाल्यानंतर नाल्यात पडलेले बांधकामाचे साहित्य त्वरीत बाहेर काढुन टाकावेत.

६) इमारतीच्या जोत्याची उंची (Plinth Level) डी.सी. नियमाप्रमाणे (Development Control Rule) उंच असणे

आवश्यक आहे.

७) सदर नाल्याचे बांधकाम पुर्ण झाल्यावर महापालिकेला जागेसहीत हस्तांतरीत करावयाचे आहे.

८) सदर प्रस्तावित इमारतीची प्लॅथ लेव्हल (पाया) ही परीसरातील हाय प्लॅड लेव्हलचा विचार करून व ठरवून त्यानंतरच बांधकाम करावे.

९) आपण विकसित करीत असलेल्या भुखंडामध्ये वरील अट क्रमांक १ व २ नुसार आवश्यक सेक्शन प्रमाणे नाल्याचे बांधकाम स्वखर्चाने करण्यात येवून महापालिकेकडे हस्तांतरीत करावयाचे आहे व या ठिकाणी बाधा होईल अशी झाडे लावू नये.

१०) आपण बांधलेल्या नाल्याची वेळोवेळी देखभाल, दुरुस्ती व साफसफाई करणे आपल्याला बंधनकारक राहिल.

११) आपल्या भुखंडालगत/भुखंडातील असलेल्या नाले सफाईसाठी सफाई कर्मचारी आपल्या संकुलामधुन जाण्यास, संकुलातील रहिवासी भविष्यात कुठलीही हरकत घेणार नाही याबाबत सदनिका धारकाच्या खरेदीखताच्या करारनात्यात तशी अट घालणे आपल्याला बंधनकारक राहिल.

१२) आपल्या संकुलातील कोबा अथवा रस्ता तुटणार /डॅमेज होणार नाही. यासाठी ते उच्च प्रतिच्या कॉक्रीटने अथवा उच्च प्रतिच्या खंडीकरणाने व डांबरीकरणाने करण्यात यावे जेणेकरून संकुलातील रहिवासी कोणत्याही प्रकारची हरकत घेणार नाहीत.

१३) आपल्याद्वारे बांधण्यात येणाऱ्या आर.सी.सी. बॉक्स नाल्यावर सफाईसाठी प्रत्येक ५.०० मीटर अंतरावर २.५० फुट X ३.५० फुट या आकारची हेवीड्युटी लोखंडी फ्रेम व झाकण बसविणे आपल्यावर बंधनकारक राहिल जेणेकरून वाहन गेल्यास ते तुटणार नाही.

१४) आपण विकसित करीत असलेल्या भुखंडावर पाण्याचा निचरा वाहत असल्यास तो इकडील परवानगी शिवाय वळवू अथवा बंद करू नये.

१५) विकसित करण्यात येत असलेल्या भुखंडाबाबत आपण काही चुकीची माहिती दिली आहे असे निदर्शनास आल्यास सदरची परवानगी रद्द करण्यात येईल व आपणावर योग्य ती कारवाई करण्यात येईल.

१६) पावसाचे पाणी / सांडपाणी वाहून नेणा-या नाल्याला बाधित होईल अशा त-हेने कुठल्याही प्रकारचे बांधकाम करण्यात येऊ नये.

१७) भुखंडाच्या मोकळ्या जागेतुन (Open Space) भविष्यात महापालिकेला नाला बांधावयाचा असल्यास/नाल्याचे रुंदीकरण करावयाचे असल्यास नाल्यास लागणारी आवश्यक तेवढी जागा महापालिकेला विनामुल्य देणे आपल्याला बंधनकारक राहिल.

१८) इमारतीचे बांधकाम पुर्ण केल्यावर त्यावेळी या विभागाचा स्वतंत्र ना हरकत दाखला घेणे आपल्याला बंधनकारक राहिल.

१९) आपल्या भुखंडात रेन हॉर्वेस्टिंगचे आवश्यक ती उपाययोजना करणे आपल्याला बंधनकारक राहिल.

२०) आपल्या भुखंडात माती भरणी केल्याने भुखंडासभोवताली व लगतच्या परिसरात पावसाचे पाणी/सांडपाणी साचुन रहात असेल तर त्या पावसाचे पाणी/सांडपाणीचे निचरा होणेसाठी आवश्यक नाला बांधणेची जबाबदारी आपली राहिल.

वरीलपैकी कोणत्याही अटी व शर्तीच्या भंग केल्यास महाराष्ट्र महानगरपालिका अधिनियम १९४९ मधील तरतुदीनुसार आपल्यावर कारवाई करण्यात येईल व सदरचा ना हरकत दाखला आपोआप रद्द होईल. याबाबत आपणास वेगळे पत्र दिले जाणार नाही.

कार्यकारी अभियंता (जनि:),

कल्याण डोंबिवली महानगरपालिका, कल्याण.

प्रत :- मा.सहायक संचालक/नगररचना विभाग कडोमपा, कल्याण यांचे माहितीस्तव व पुढील योग्य

Kalyan Dombivli Municipal Corporation

Fire & Emergency Service

Phone: 2310155 / 2315101 / 2365101 / 2470357 / 2400447

FIRE/HQ/KDMC/OW/2021/629

Date: 07/10/2021

To,

The Assistant Director/Town Planner,
Kalyan Dombivli Municipal Corporation,
KALYAN.

- Subject:** Grant of provisional NOC stipulating Fire Protection & Fire Fighting requirements to construct of 1 Residential building, Gr + 18th Floors at Plot A, S.No. 16/1, Mouje-Umborli, Taluka Kalyan, Dist- Thane.
- Ref.:** 1] Application from Architect- Ar. Vinayak Sahasrabudhe
2] P. O. A. Holder-Mr. Devendra Patil & Mayur Patil.
3] Site Visit: 08/07/2021

Dear Sir,

Architects proposal to construct of 1 Residential building, Gr + 18th Floors at Plot A, S.No. 16/1, Mouje-Umborli, Taluka Kalyan, Dist- Thane

Architectural plans of proposed building are referred to the Chief Fire Officer, Fire & Emergency services of Kalyan Dombivli Municipal Corporation, Kalyan for advice on the Fire Protection & Fire Fighting majors to be recommended in the building by an architect.

These plans will be scrutinized by Town Planning department as per UDCPR. Rule, bye laws, while scrutinizing these plans by Fire & Emergency services following things are observed.

OBSERVATION & DIRECTIVES:

1. Gross Plot area under reference is 11324.74 sq.mts in area.
2. The said plot is approachable by **12 mtr WIDE road.**
3. 2 enclosed staircases having the width of 1.5 mtrs from basement level to terrace level are shown in the plan for proposed building. Staircase location is acceptable.
4. Open spaces are proposed around the building by architect as per UDCPR rule. However, from the point of fire & life safety. **Suggestions are given.**
5. 1 Passenger lift and 1 Fire lift for building are shown in the plan. **Suggestions are given.**

The Building Built-Up Area, Height and Occupancy is as under

Total Covered Built up area sq.mtr.	Height Mts.	Occupancy Type	Capitation Fees
6635.49	57.00	Residential	5,25,000/-

Location of transformer, generator, meter room, Fire Pump room & other electrical gadgets are mark on the plan. It should be marked on plan before construction of building with prior approval from this dept.
For this suggestion are given.

Considering the above situation following fire prevention & fire protection majors are recommended in the proposed buildings.

(Suggestions to Architect & Town Planning Dept. of KDMC)

MAIN ROAD / D.P. ROAD:

The said plot is approachable by 12 mtr WIDE road. No suggestions.

ENTRY GATE:

If gate is provided, then the height & width of gate shall be minimum 6 meters.

HEIGHT:

As per prevailing UDCPR Rule.

OPEN SPACE:

Though this department suggest the requirement of marginal Open Space is as per UDCPR-2020 Chapter 2 & Around the building from any projections of the building should be kept open and encroachments / obstructions free for easy mobility of fire appliances & same shall be capable of taking the load of fire engines up to 45 tons (Garden, Parking, Pump Room or any construction is not permitted in open space).

In view of the above marginal open space obviously around the building irrespective of any projection such as so called podium etc.

Upper podium level slab shall be capable of taking the load of fire engines up to 45 tons.

COURT YARDS:

- 1) Available Courtyards on all the sides of the building shall be paved suitably to bear the load of fire engines weighing up to 45 m. tons each.
- 2) All the courtyards shall be in one plane.
- 3) The Courtyards shall be kept free from obstructions at all time
- 4) Astro turf etc. shall not be permitted in the courtyard.



STILT / GROUND FLOOR PARKING:

- 1) Sides of car parking shall not be enclosed except for parapet walls.
- 2) Driveway shall be properly marked and maintained unobstructed.
- 3) Appropriate illuminated signage's for escape routes shall be provided at prominent locations.

If podium is not accessible by fire tender, the podium may be such that it is not extended beyond the building footprint to an extent more than 3m. on the side for the fire tender access.

MEANS OF ESCAPE :

1. 2 enclosed staircases having the width of 1.5 mtrs from basement level to terrace level building. It should be remote from each other. At least one of them shall be on external walls of building and shall open directly to the exterior open space or to an open place of safety. (NBC-2016 Part IV).
2. Treads & risers of the each building is as per existing bye-laws.
3. Staircase of each proposed building should allow movement of fresh air.
4. The layout of staircase of each building should be of enclosed type for the entire height.

2 hours fire resistance fire doors, good quality door closer adhering to IS 3614(Part-II):1992 (Reaffirmed 2002) should be provided for fire staircase, and for the same the test certificate and 'A' Certificate from Licensing Agency authorized by Director of Maharashtra Fire Services shall be attached at the time of final NOC.



(Particularly at the entrance to lift lobby and stair well, Refuge Room, Electric Duct)

SUGGESTIONS:

- Travel Distance between the staircase & Exits should be maintained as per UDCPR Rules and exits and staircase guidelines as per National Building Code-2016
- Fire escape constructed of M.S. angles are not permitted.
- Opening of the Fire Escape Staircase should be from outside.
- Fire Escape staircase should be enclosed type. These should always be kept in sound operable condition.
- Exits door shall open outwards, that is always from the room, but shall not obstruct the travel along any exit.
- Fire Escape Staircase shall be directly connected to the ground.
- Entrance to the Fire Staircase shall be separate and remote from the internal staircase.
- Care shall be taken to ensure that no wall opening or window opens on to or close to Fire Escape Stairs.
- The route to the external staircase shall be free of obstructions at all times.
- The Fire Escape stairs shall be constructed of non-combustible materials, and any doorway leading to it shall have the required fire resistance.
- No Staircase, used as a fire escape, shall be inclined at an angle greater than 45 from the horizontal.

REFUGE AREA:

Refuge areas should be provided as per UDCPR-2020 Chapter-09, Clause No. 9.29.6. For buildings more than 24m. in height, refuge area of 15 sq.m or an area equivalent to 0.3 sq.m per person to accommodate the occupants of two consecutive floors, whichever is higher, shall be provided as under:

The refuge area shall be provided on the periphery of the floor or preferably on a cantilever projection and open to air at least on one side protected with suitable railings.

- A) For floors above 24m & up to 39m height – One refuge area on the floor immediately above 24m
- B) For floors above 39m height- One refuge area on the floor immediately above 39m and so on after every 15m.
- **2 hours fire resistance fire doors with good quality door closer should be provided to Refuge room.**
- **NOTE: Refuge area provided in excess of the requirements shall be counted towards FAR.**

SUGGESTIONS:

Following additional suggestions are recommended for the proposed refuge area:

- Each refuge area shall be ventilated and provided with first aid box, fire extinguishers, public address speaker, fire man talk back, and adequate emergency lighting as well as drinking water facility.
- The layout of refuge area shall not be changed / modified at any time in future.
- Refuge area shall be segregated by brick masonry partition wall of 9" thickness & access to the refuge area shall be gained through 2 hours fire resistant self-closing door.
- Lifts & / or open type staircases shall not be open into refuge area.
- Clear height of the refuge areas below the beam/drop paradi shall be as per existing by-laws.
- The refuge areas shall be ear-marked exclusively for the use of occupants as a temporary shelter & for the use of fire brigade department & any other organization dealing with fire or other emergencies when occurs in the building & also for exercise / drills if conducted by the fire brigade department.
- The refuge area shall not be allowed to be used for any other purposes & it shall always be responsibility of the owner / occupier to maintain the same clean & free of encumbrances & encroachment.
- A prominent sign bearing the words "Refuge Area" shall be installed at the entry of the refuge area and containing information about the location of refuge areas on the floors above and below this floor. The same signage shall also be conspicuously located within the refuge area.
- Refuge areas shall be approachable from the space they serve by an accessible means of egress.
- Refuge areas shall connect to firefighting shaft (comprising fireman's lift, lobby, and staircases) without having the occupants requiring to return to the building spaces through which travel to the area of refuge occurred.



- The refuge area shall always be kept clear. No storage of combustible products and materials, electrical and mechanical equipment's, etc shall be allowed in such areas.
- Refuge area shall be provided with adequate drainage facility to maintain efficient storm water disposal and water supply.
- Entire refuge area shall be provided with sprinklers.
- Where there is a difference in level between connected areas for horizontal exits, ramps of slope not steeper than 1 in 12 shall be provided. (and steps should be avoided)

MEANS OF ENTRY:

- 1 Passenger lift and 1 Fire lift provided for residential building.
- All Lift of Building should be nomenclature as "Fire Lift".
- The fire lift shall reach ground floor not more than one minute.
- Automatic rescue device should be provided for all lifts so that in case of power failure, lift cannot be stuck & also proper power back up should be provided for all lifts.



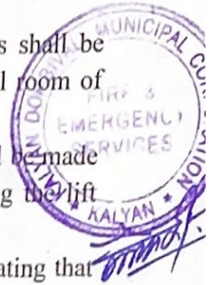
FIRE LIFT:

Fire lift shall be provided with a minimum capacity for 8 passengers up to 60 meters & above 60 meter 1000 kg capacity of fire lift. Fully automated with emergency switch on ground level. In general, building 15 m. in height or above shall be provided with fire lift. In case of fire, only fireman shall operate the fire lift. In normal course, it may be used by other persons. Each fire lift shall be equipped with suitable intercommunication equipment for communicating with the control room on the ground floor of the building. The number and location of fire lifts in a building shall be decided after taking into consideration various factors like building population, floor area, compartmentation, etc.

SUGGESTIONS:

- If building height is more than 24m at least two lifts shall be provided out of which one lift will be stretcher lift & other will be passenger lift.
- Separate lift should be provided for commercial part of the building if any.
- Planning & Design of the lifts shall be in accordance with the latest National Building Code 2016
- Lifts of the building are to be provided with automatic steel doors for lift cars & landings.
- One Lift of Each Building shall be designed & designated as fire lift. This lift shall be equipped with fireman's switch for grounding it in the event of fire.
- The Fire Lift shall have floor area not less than 1.4 Sq. Mts. It shall have loading capacity of not less than 545 Kg. (8 person Lift) for residential building & as per lift norms for commercial building with automatic closing doors of minimum 0.8 m. width.
- Firefighting lift should provide with a ceiling hatch for the use in case of emergency. So that when lift car gates stuck up, it shall be easily open able.

- Walls of each lift enclosure shall have fire resistance of not less than 2 hours including lift well doors.
- Fire lift of the building shall be conspicuously painted with florescent paint on all landing doors of fire lift.
- Fire lift of the building can however be used for the purposes under normal conditions.
- Lift motor room shall be located preferably on top of the shaft and separated from the shaft by the floor of the room.
- Collapsible gates shall not be permitted for lifts and shall have solid doors with fire resistance of at least 1 hrs.
- Lifts shall not normally communicate with the basement; if, however, lifts are in communication, the lift lobby of the basements shall be pressurized, with self-closing door.
- Grounding switch (es), at ground floor level, shall be provided on all the lifts to enable the fire service to ground the lift.
- Telephone or other communication facilities shall be provided in lift cars shall be provided. Communication system for lifts shall be connected to fire control room of the building.
- Suitable arrangements such as providing slope in the floor of lift lobby, shall be made to prevent water used during firefighting, etc. at and landing from entering the lift shafts.
- A sign shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall also contain a plan for each floor showing the locations of the stairways.
- In case of failure of normal electric supply, it shall automatically change over to alternate supply. For apartment houses, this changeover of supply could be done through manually operated changeover switch. Alternatively, the lift shall be so wired that in case of power failure, it comes down at the ground level and comes to stand-still with door open.
- It must be ensured that, power cables to fire lift are laid along the route, which is fire safe route (lift shaft)
- Power supply to fire lift must be automatically changeover type to the alternate source at power supply in the event of failure of normal power supply.
- The word 'Fire Lift' shall be conspicuously displayed in fluorescent paint on the lift landing doors at each floor level.
- The speed of the fire lift shall be such that it can reach the top floor from ground level within 1 min.



ELECTRICAL INSTALLATION:

- Meter Room is not permitted below staircase at ground floor. It should be provided in separate room.
- The electric distribution cables/wiring shall be laid in a separate shaft. The shaft shall be sealed at every floor with fire stop materials having the fire resistance as that of floor. (non-combustible material such as vermiculite concrete).



- For requirements regarding electrical installations from the point of view of fire safety reference may be made to good practice [4(6)] and part 8 'Building Services, Section 2 Electrical and Allied Installations' of the National Building Code 2016.
- Water mains, telephone lines, inter-com lines or any other service line shall not be laid in the duct for electric cables.
- Separate circuits for water pumps, lifts, staircases & corridor lighting shall be provided directly from the switch gear panel & these circuits shall be laid in separate conduit pipes so that, fire in one circuit will not affect the others. Master switches controlling essential services circuits shall be clearly labeled.
- Electric cable shafts shall be exclusively used for electric cables and shall not open in the staircase enclosure.
- Electric meter rooms shall be provided at stilt floor level. They shall be adequately ventilated.
- Electric cable shafts shall be sealed at each floor level with non-combustible material such as vermiculite concrete.
- Inspection door for the shaft if provided shall have two hours fire resistance.
- Escape route lighting (staircase, & corridor lights) shall be on emergency circuits as per rules.
- Staircase and corridor lighting shall also be connected to alternative supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains.

A stand-by electric generator shall be installed to supply power to staircase and corridor lighting circuits, fire lifts, the stand-by fire pump, pressurization fans and blowers, smoke extraction and damper systems in case of failure of normal electric supply.

ACTIVE FIRE PROTECTION REQUIRED FOR RESIDENTIAL TOWERS & COMMERCIAL BUILDING AS PER PART IV TABLE -7 OF SP-7: NBC- 2016:

UNDERGROUND WATER STORAGE TANK:

Separate underground water storage tank of **1,50,000 Liters** shall be provided as per design rules specified in rules with the baffle walls and brigade connecting breaching.

OVERHEAD (TERRACE) WATER STORAGE TANK:

Overhead (Terrace) water storage tank of **25,000 Liters** water capacity for residential building shall be provided at terrace level **exclusively for firefighting** purpose only. The design & layout of this tank shall be got approved from concerned department prior to its erection. The tank shall be connected to wet riser/down comer through a booster pump through N.R. Valve & Gate Valve.

FIRE PUMP & BOOSTER PUMP:

- a. 1 No of Hydrant pump, 1 No of Sprinkler Pump & Same capacity Diesel Pump at underground water storage tank Pump Room of capacity not less than 2280LPM capable of giving pressure of not less than 3.5 Kg/cm² at topmost hydrant level and Separate jockey pump for hydrant and sprinkler of capacity 180LPM shall be provided.
- b. Installation of negative suction arrangement and submersible pumps shall not be allowed.
- c. 1 Nos of Booster pump on terrace level for building electrical driven of capacity 900 LPM capable of giving a pressure of not less than 3.5 Kg/cm at top most hydrant with ISI mark Electrical auto starter at ground floor as on terrace level & all refuge areas.
- d. Electric supply (normal) to these pumps shall be on independent circuits.
- e. All pumps shall be provided with dual source of power supply with auto change over one source to be grid power and other source to DG.

FIRE DUCT:

- 1 Fire duct shall be provided at each floor level (with glass door) for Building.

WET- RISER:

1 Nos. of wet-riser (IS 3844:1989) of internal diameter of 150 mm, for Hydrant system/Landing Valves separately for high & low pressure & 1 Nos. of wet-riser of internal diameter of 150 mm, for Sprinkler system separately for High & Low pressure & 1 dry-riser of internal diameter of 80 mm for Drain system Of G.I. 'C' Class ISI Mark pipe preferably Tata, Zenith, Jindal make from ground level up to terrace level in each fire duct of residential building shall be provided from pump room to terrace level water tank adjoining the staircase with hydrant for outlet & hose reel on each floor in such a way as not to reduce the width of corridor. Pressure reducing discs or ore fiches shall be provided at lower level so as not to exceed pressure of 5.5 Kgs/cm². A fire service inlet on the external face of the building near the static tank directly fronting the courtyard shall be provided to connect the mobile pump of fire service to the wet riser along with non return valve, air valve, main valve & other subsequent valves for all buildings.

(All buildings/wings wet riser should be connected to each other and Siemens Connection shall be provided at approachable location for fire tender.)

HYDRANT VALVE / LANDING VALVE:

Type B fire Hydrant valves/ Landing valves of 63 mm dia ISI marked shall be provided on each floor for residential building.



HOSE REEL HOSE:

Type II Hose Reel hose with jet & spray multipurpose Nozzle confirming to IS: 884: 1985 not less than **30 Meters** shall be provided on each floor & each riser & car parking at residential building.

HOSE BOXES:

Near every Hydrant valve/ Landing valve, shall be equipped with 2 x 15meter length of 63 mm rubber line hose along with standard branch pipe, for residential building & each car parking level. It shall confirm to latest IS code 636 & 903 respectively for each Building. External Yard hydrants shall be provided with the 750 x600x 250deep hose box equipped with 2 x 15meter length of 63 mm rubber line hose along with standard branch pipe.

FIRE SERVICE INLET:

Four ways fire service inlet with hydrant valve outlet should be provided to residential building at ground level in front of building entry gates & it should be accessible for fire service personnel for easy operation.



RING MAIN & EXTERNAL HYDRANTS (IS 12039:1991):

Lower level of building external hydrants shall be provided within the confines of the site on the wet riser at the distance 15 meters from each other. The underground periphery ring main of the compound 8 inches dia. G.I. 'c' class with necessary coating & warping shall be provided. Wet riser outlet and hose reel at a distance of 30 meters shall be provided on periphery of all car parking floors to cover the fire risk at all floor level.

AUTOMATIC FIRE SPRINKLER SYSTEM:

It's a High rise residential building taking in to account the local firefighting facility available, automatic pendent/side wall type sprinkler system with flow switch on each floor should be provided in flats each of building (In all rooms like hall, bedrooms, kitchen, common lobby, passage & garbage duct etc.) and all car parking, common corridors, lobbies & lift lobbies, commercial areas(if any) & total area at each floor level of residential building as per Confirming to IS.

DETECTION SYSTEM:

Automatic addressable Smoke/Heat detectors shall be installed in where-ever fall-ceiling void is more than 800 mm above & below of ceiling & for meter room, D.G. room, Transformer room, lift machine room.. Design of this system shall be as per latest IS 2189.

GAS LEAK DETECTOR SYSTEM

It is advised it install Automatic addressable Gas Leak Detector System in each flat kitchen area. Design of this system shall be as per latest IS norms. This system should be preferable for more safety purpose.

FIRE ALARM WITH P.A. SYSTEM:

Fully Addressable Fire Alarm Panel with 20 x 4 LCD display with P.A. Facility. MCP to be Glass break type. Hooter should be of good sound. The MCP to be Manual operate Call point. All the MCP cum Hooter to be tested from panel itself for ease of Maintenance and testing. The Hooter should have siren as well as voice evacuation message in Hindi and English. The MCP & Hooter to be provided on each floor near staircase of all buildings. The layout of Fire Alarm System shall be in accordance with IS specification and it should get approved from this department before installation. (MCP should not be concealed)

PORTABLE FIRE EXTINGUISHERS (IS 2190:1992) :

Fire Extinguisher for ABC class of fire shall be provided at strategic location and each floor of the residential & commercial building

- CO2. type fire extinguishers of 4.5 kg. capacity with ISI marks at electric meter room, lift machine room for each building and in commercial part of the building if any.
- ABC type fire extinguishers of 6.0 kgs capacity having IS certification mark shall be provided on all floor & spread over each level of commercial area. If any
- Buckets filled with dry clean sand- 4 Nos. for each building of residential building at still ground level



SIGNAGES:

Self-glowing / fluorescent exit sign, refuge area, fire duct signs. etc. in green color shall be provided showing the means of escape for the entire building, as well as on car parking area as per IS: 9457, IS: 12349, IS: 12407.

FIRE CONTROL ROOM:

Proposed residential building should have 1 Nos. of fire control room on entrance of the building as marked in drawing on ground floor of the building with communication system (suitable public address system) to all floors and facilities for receiving the message from different floors. Details of all floor plans along with the details of firefighting equipment and installations shall be maintained in the fire control room. The fire control room shall also have facilities to detect the fire on any floor through indicator board's connection; fire detection and alarm systems on all floors. The fire staff in charge of the fire control room shall be responsible for the maintenance of the various services and firefighting equipment and installations in co-ordination with security, electrical and civil staff of the building.

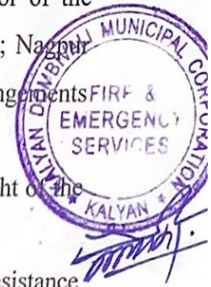
GENERAL REQUIREMENTS AND CONDITIONS FOR THE FIRE AND LIFE SAFETY OF THE BUILDINGS

1. Inflammable/ Explosive storages are prohibited in the basement or in building.
2. All materials to be used of ISI /UL/FM make.

3. After completion of the building civil work prior Approval of undersigned should be taken before commencement of Fire Fighting Work and list of material.
 4. The entire system must be painted with post box RED in color.
 5. If the documents attached with this proposal are illegal or misguided the NOC will be considered as the applicant/Land-owner /Developer will hold cancelled and overall responsibility for any consequence.
 6. All the Fire-fighting Equipment shall be well maintained and should be easily accessible in case of emergency.
 7. Well equipped fire control room shall be provided on the ground floor of the building & A qualified Fire Officer from National Fire Service College, Nagpur shall be employed to maintain all fire prevention & protection arrangements provided to Various buildings
 8. It shall be ensured that security staffs of the building are trained in handling Fire-fighting equipment & fire fighting.
- Cautionary boards such as "Danger", "No Smoking", "Exit", "Fire Escape", "Extinguishers", "Hydrant", "Manual Call Point" etc. should be displayed on the Strategic location to guide the occupants in case of emergency. The signs should be of florescent type and should glow in Darkness.
10. The Fire Exit Drill or Evacuation Drill should be planed & instruction should be given to the staff minimum **four times in a year** and drill should be carried out twice in a year
 11. Interconnectivity between fire water tank & Domestic water tank should be provided so that during emergency the stores water in domestic water tank can be utilized for Fire-fighting.
 12. All the firefighting systems drawing / layout should be approved from the Chief Fie Officer, before starting any work.
 13. In case of emergency, the alternate power supply should be provided for the Fire Pumps, Fire Lifts etc. The Certificate from electric engineer regarding this should be provided at the time of Final NOC.
 14. Fire-fighting work must be carried out by licensing agency authorized by Director of Maharashtra Fire Services only.
 15. Care & maintenance contract should be made with Licensed Agency to keep the system in good and efficient condition and Hamipatra of the same should be given at the time of Final NOC.



16. The provision of Ring hydrant/Courtyard hydrant system should be provided to entire complex. The distance between two hydrants should not be more than 30 Mtrs
17. As per the UDCPR Rules requirement all the marginal open spaces around the building should be kept open and obstruction free for easy mobility of fire engines.
18. Telephone numbers of **"Responsible persons of the office"**, **"Fire Brigade"**, **"Hospital"**, **"Police"**, **"Doctors"**, should be displayed on the board. This board should be displayed on prominent place. Preferably at the Fire Control Room, security office and in Reception area.
19. All other provisions of UDCPR.RULE & National Building Code of India-2005 & Amended to 2016 & Maharashtra Fire Prevention & Life Safety measures Act, 2006 should be strictly adhered.
20. Well equipped fire control room shall be provided on the ground floor of the building & A qualified Fire Officer from National Fire Service College; Nagpur shall be employed to maintain all fire prevention & protection arrangements provided to Various buildings.
21. Permission from Civil Aviation should be obtained for the maximum height of the building with reference to Navi Mumbai airport if required.
22. The Glassing and façade other Glasses should have at least one-hour fire resistance and should be UL approved and in accordance with NFPA requirement.
23. The glass faced should be protected with coating film so that in case breaking of glass the glass can remain in its place for some hours before replacement. This will reduce the risk of injuries to occupant and fire & rescue personal. In the event of blast, the shock wave created which created the damage to glass faced the use of film will help to reduce the damages due to glass breaking.
24. Any additional recommendations to be added or deleted depending upon the need of the fire safety requirement of buildings and amendment in code.
25. All internal furniture and fixtures used for the building should be fire resistance type and it should not give toxic fumes and smoke in case involved in fire. It should have minimum Two hours Fire Resistance .
26. This being a very special type of building if any additional recommendations to be added or deleted depending upon the need of the fire safety requirement of buildings.



Regular Training and Maintenance of these systems should be carried out by the **housing society/ builders**. As per provisions made in Maharashtra Fire Prevention and Life Safety Act 2006.

Considering this situation, above fire prevention & fire protection majors are recommended in the proposed buildings up to height mentioned in this provisional NOC only. If Architect/Developer makes any changes in height, area or location the above fire preventive majors, refuge area, staircase location, side margin etc. will change. And according to that the revised provisional NOC will be issued.

This is a "**Provisional No Objection Certificate**", After providing the above fire prevention and fire protection system and compliance of above recommendations the inspection of the fire prevention and fire protection arrangements will be carried out and after satisfactory inspection "**Final No Objection Certificate**" will be issued to your building for obtaining final occupancy certificate from KDMC.

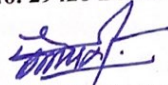
This provisional NOC conditions are valid for the period of one year. The undersigned reserves right to amend any additional recommendations deemed fit during the stage wise inspection due to the statutory provisions amended from time to time and in the interest of the protection of the subject mention building.

Please contacts authorities when & where required for these purposes.

If any additional requirement is suggested by fire department Party have also agree to comply the same.

Capitation Fee Rs. 5,25,000/- Paid By Receipt No. 29428 Dt. 01/09/2021




CHIEF FIRE OFFICER
Fire & Emergency services
Kalyan Dombivli Municipal Corporation

Copy to :- Architect/Developer

Kalyan Dombivli Municipal Corporation

Fire & Emergency Service

Phone: 2310155 / 2315101 / 2365101 / 2470357 / 2400447

FIRE/HQ/KDMC/OW/2023/ E-375

Date: 23/11/2023

To,

The Assistant Director Town Planner,
Kalyan Dombivli Municipal Corporation,
KALYAN.

Subject: Grant of provisional NOC stipulating Fire Protection & Fire Fighting requirements to construct of 3 Residential building, Wing A, St+ 20th Floor (revised), Wing B1, St + 2 Podium + 20th Floors & Wing D, St + 20th Floors & 3 Commercial cum residential building, Wing B2 & B3, Gr/St +2 Podium + 20th Floors & Wing C, Gr/St + 20th Floors at S. No. 16/1(pt), H. No. 1, Mouje – Umborli, Taluka- Ambernath, Dist- Thane.

Ref.: 1] Application from Architect- Ar. Vinayak Sahasrabudhe
2] P.O. A. Holder: Mr. Mayur Tulshiram Patil & Others.
3] FIRE/HQ/KDMC/OW/2021/629 Dt. 07/10/2021 Provisional Fire Noc (Wing A)
4] Site Visit: 21/11/2023

Dear Sir,

Architects proposal to construct of 3 Residential building, Wing A, St+ 20th Floors (revised), Wing B1, St + 2 Podium + 20th Floors & Wing D, St + 20th Floors & 3 Commercial cum residential building, Wing B2 & B3, Gr/St +2 Podium + 20th Floors & Wing C, Gr/St + 20th Floors at S. No. 16/1(pt), H. No. 1, Mouje – Umborli, Taluka- Ambernath, Dist- Thane.

Architectural plans of proposed buildings are referred to the Chief Fire Officer, Fire & Emergency services of Kalyan Dombivli Municipal Corporation, Kalyan for advice on the Fire Protection & Fire Fighting majors to be recommended in the building by an architect.

These plans will be scrutinized by Town Planning department as per UDCPR. Rule, bye laws, while scrutinizing these plans by Fire & Emergency services following things are observed.

OBSERVATION & DIRECTIVES:

1. Gross Plot area under reference is **11323.60** sq.mts in area
2. The said plot is approachable by **24 mtr WIDE road.**
3. 2 enclosed staircases having the width of 1.5 from ground level to terrace level are shown in the plan for proposed Building Wing A, B1, B2, B3, C & D.
4. Open spaces are proposed around the building by architect as per UDCPR rule. However, from the point of fire & life safety. **Suggestions are given.**

5. 2 Passenger lift from ground level to terrace level are shown in the plan for proposed building Wing A, B1, B2, B3, C & D **Suggestions are given.**
6. Refuge area mark on 7th, 11th, 15th & 19th Floor for proposed building Wing A, B1, B2, B3, C & D

The Building Built-Up Area, Height and Occupancy is as under

Building Wing	Gross Built up area sq.mtr.	Height Mts.	Occupancy Type	Capitation Fees
Wing A, St + 20 th Floors	7737.90	64.35	Residential	6,24,160/-
Wing B1 St + 2 Podium + 20 th Floors	8786.62	68.55	Residential	11,69,499/-
Wing B2 St/Gr + 2 Podium + 20 th Floors	227.12	68.55	Commercial	60,460/-
	9490.13		Residential	12,63,136/-
Wing B3 St/Gr + 2 Podium + 20 th Floors	374.80	68.55	Commercial	99,776/-
	10046.54		Residential	13,37,194/-
Wing C St/Gr + 20 th Floors	157.05	64.35	Commercial	41,810/-
	3569.91		Residential	4,75,155/-
Wing D St + 20 th Floors	8619.91	64.35	Residential	11,47,310/-

- 1) Refuge areas are should be provided as per UDCPR-2020 Chapter-09, Clause No. 9.29.6.
For buildings more than 24m. in height, refuge area of 15 sq.m or an area equivalent to 0.3 sq.m per person to accommodate the occupants of two consecutive floors, whichever is higher, shall be provided as under:
The refuge are shall be provided on the periphery of the floor or preferably on a cantilever projection and open to air at least on one side protected with suitable railings.
 - a) For floors above 24m & up to 39m height – One refuge area on the floor immediately above 24m
 - b) For floors above 39m height- One refuge area on the floor immediately above 39m and so on after every 15m. **Suggestions are given.**
- 2) Location of transformer, generator, Fire Pump room & other electrical gadgets are not mark on the plan. It should be marked on plan before construction of building with prior approval from this dept.
For this suggestion are given.

Considering the above situation following fire prevention & fire protection majors are recommended in the proposed buildings.

(Suggestions to Architect & Town Planning Dept. of KDMC)

MAIN ROAD / D.P. ROAD:

The said plot is approachable by **24 mtr WIDE road. No suggestions.**

ENTRY GATE:

If gate is provided, then the height & width of gate shall be minimum 6 meters.

HEIGHT:

As per prevailing UDCPR Rule.

OPEN SPACE:

Though this department suggest the requirement of marginal Open Space is as per UDCPR-2020 Chapter 2 & Around the building from any projections of the building should be kept open and encroachments / obstructions free for easy mobility of fire appliances & same shall be capable of taking the load of fire engines up to 45 tons (Garden, Parking, Pump Room or any construction is not permitted in open space).

In view of the above marginal open space obviously around the building irrespective of any projection such as so called podium etc.

Upper podium level slab shall be capable of taking the load of fire engines up to 45 tons.

COURT YARDS:

- 1) Available Courtyards on all the sides of the building, podium level shall be paved suitably to bear the load of fire engines weighing up to 45 m. tons each.
- 2) All the courtyards shall be in one plane.
- 3) The Courtyards shall be kept free from obstructions at all time
- 4) Astro turf etc. shall not be permitted in the courtyard.

STILT / GROUND / PODIUM FLOOR PARKING:

- 1) Sides of car parking shall not be enclosed except for parapet walls.
- 2) Driveway shall be properly marked and maintained unobstructed.
- 3) Appropriate illuminated signage's for escape routes shall be provided at prominent locations.
- 4) Podium entry gate should be enclosed type with Fire Resistance Doors for entry to building lobby.

If podium is not accessible by fire tender, the podium may be such that it is not extended beyond the building footprint to an extent more than 3m. on the side for the fire tender access.

MEANS OF ESCAPE :

1. 2 enclosed staircases having the width of 1.5 mtrs from ground level to terrace level for proposed Building Wing A, B1, B2, B3, C & D. It should be remote from each other. At least one of them shall be on external walls of building and shall open directly to the exterior open space or to an open place of safety. (NBC-2016 Part IV).
2. Treads & risers of the each building is as per existing bye-laws.
3. Staircase of each proposed building should allow movement of fresh air.
4. The layout of staircase of each building should be of enclosed type for the entire height.



5. 2 hours fire resistance fire doors, good quality door closer adhering to IS 3614(Part-II):1992 (Reaffirmed 2002) should be provided at each escape route, and for the same the test certificate and 'A' Certificate from Licensing Agency authorized by Director of Maharashtra Fire Services shall be attached at the time of final NOC.

(Particularly at the entrance to lift lobby and stair well, Refuge Room, Electric Duct)

SUGGESTIONS:

- Travel Distance between the staircase & Exits should be maintained as per UDCPR Rules and exits and staircase guidelines as per National Building Code-2016
- Fire escape constructed of M.S. angels are not permitted.
- Opening of the Fire Escape Staircase should be from outside.
- Fire Escape staircase should be enclosed type. These should always be kept in sound operable condition.
- Exits door shall open outwards, that is always from the room, but shall not obstruct the travel along any exit.
- Fire Escape Staircase shall be directly connected to the ground.
- Entrance to the Fire Staircase shall be separate and remote from the internal staircase.
- Care shall be taken to ensure that no wall opening or window opens on to or close to Fire Escapee Stairs.
- The route to the external staircase shall be free of obstructions at all times.
- The Fire Escape stairs shall be constructed of non-combustible materials, and an doorway leading to it shall have the required fire resistance.
- No Staircase, used as a fire escape, shall be inclined at an angel greater than 45 from the horizontal.

REFUGE AREA:

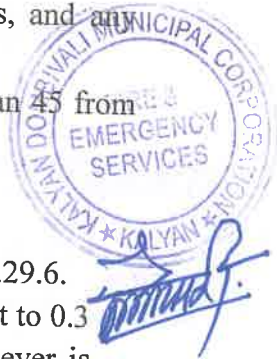
Refuge areas are should be provided as per UDCPR-2020 Chapter-09, Clause No. 9.29.6. For buildings more than 24m. in height, refuge area of 15 sq.m or an area equivalent to 0.3 sq.m per person to accommodate the occupants of two consecutive floors, whichever is higher, shall be provided as under:

The refuge are shall be provided on the periphery of the floor or preferably on a cantilever projection and open to air at least on one side protected with suitable railings.

- A) For floors above 24m & up to 39m height – One refuge area on the floor immediately above 24m
- B) For floors above 39m height- One refuge area on the floor immediately above 39m and so on after every 15m.
- 2 hours fire resistance fire doors with good quality door closer should be provided to Refuge room.
- NOTE: Refuge area provided in excess of the requirements shall be counted towards FAR.

SUGGESTIONS:

Following additional suggestions are recommended for the propose refuge area:



- Each refuge area shall be ventilated and provided with first aid box, fire extinguishers, public address speaker, fire man talk back, and adequate emergency lighting as well as drinking water facility.
- The layout of refuge area shall not be changed / modified at any time in future.
- Refuge area shall be segregated by brick masonry partition wall of 9" thickness & access to the refuge area shall be gained through 2 hours fire resistant self-closing door.
- Lifts & / or open type staircases shall not be open into refuge area.
- Clear height of the refuge areas below the beam/drop paradi shall be as per existing by-laws.
- The refuge areas shall be ear-marked exclusively for the use of occupants as a temporary shelter & for the user of fire brigade department & any other organization dealing with fire or other emergencies when occurs in the building & also for exercise / drills if conducted by the fire brigade department.
- The refuge area shall not be allowed to be used for any other purposes & it shall always be responsibility of the owner / occupier to maintain the same clean & free of encumbrances & encroachment .
- A prominent sign bearing the words "Refuge Area" shall be installed at the entry of the refuge area and containing information about the location of refuge areas on the floors above and below this floor. The same signage shall also be conspicuously located within the refuge area.
- Refuge areas shall be approachable from the space they serve by an accessible means of egress.
- Refuge areas shall connect to firefighting shaft (comprising fireman's lift, lobby, and staircases) without having the occupants requiring to return to the building spaces through which travel to the area of refuge occurred.
- The refuge area shall always be kept clear. No storage of combustible products and materials, electrical and mechanical equipment's, etc shall be allowed in such areas.
- Refuge area shall be provided with adequate drainage facility to maintain efficient storm water disposal and water supply.
- Entire refuge area shall be provided with sprinklers.
- Where there is a difference in level between connected areas for horizontal exits, ramps of slope not steeper than 1 in 12 shall be provided. (and steps should be avoided)

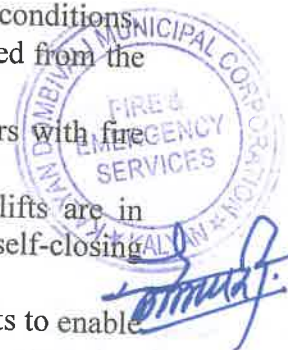
MEANS OF ENTRY:

- 12 Passenger lift for Building Wing A, B1, B2, B3, C & D are shown in the plan.
- All Passenger lifts are detached from each other.
- 1 Lift of each wing should be nomenclature as "Fire Lift".
- The fire lift shall reach ground floor not more than one minute.
- Automatic rescue device should be provided for all lifts so that in case of power failure, lift cannot be stuck & also proper power back up should be provided for all lifts.



SUGGESTIONS:

- If building height is more than 24m at least two lifts shall be provided out of which one lift will be stretcher lift & other will be passenger lift.
- Separate lift should be provided for commercial part of the building if any.
- Planning & Design of the lifts shall be in accordance with the latest National Building Code 2016
- Lifts of the building are to be provided with automatic steel doors for lift cars & landings.
- One Lift of Each Building shall be designed & designated as fire lift. This lift shall be equipped with fireman's switch for grounding it in the event of fire.
- The Fire Lift shall have floor area not less than 1.4 Sq. Mts. It shall have loading capacity of not less than 545 Kg. (8 person Lift) for residential building below 60 meter in height & 1000 Kg. for residential building above 60 meter in height & as per lift norms for building with automatic closing doors of minimum 0.8 m. width.
- Firefighting lift should provide with a ceiling hatch for the use in case of emergency. So that when lift car gates stuck up, it shall be easily open able.
- Walls of each lift enclosure shall have fire resistance of not less than 2 hours including lift well doors.
- Fire lift of the building shall be conspicuously painted with florescent paint on all landing doors of fire lift.
- Fire lift of the building can however be used for the purposes under normal conditions.
- Lift motor room shall be located preferably on top of the shaft and separated from the shaft by the floor of the room.
- Collapsible gates shall not be permitted for lifts and shall have solid doors with fire resistance of at least 1 hrs.
- Lifts shall not normally communicate with the basement; if, however, lifts are in communication, the lift lobby of the basements shall be pressurized, with self-closing door.
- Grounding switch (es), at ground floor level, shall be provided on all the lifts to enable the fire service to ground the lift.
- Telephone or other communication facilities shall be provided in lift cars shall be provided. Communication system for lifts shall be connected to fire control room of the building.
- Suitable arrangements such as providing slope in the floor of lift lobby, shall be made to prevent water used during firefighting, etc. at and landing from entering the lift shafts.
- A sign shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall also contain a plan for each floor showing the locations of the stairways.
- In case of failure of normal electric supply, it shall automatically change over to alternate supply. For apartment houses, this changeover of supply could be done through manually operated changcover switch. Alternatively, the lift shall be so wired that in case of power failure, it comes down at the ground level and comes to stand-still with door open.
- It must be ensured that, power cables to fire lift are laid along the route, which is fire safe route (lift shaft)



- Power supply to fire lift must be automatically changeover type to the alternate source at power supply in the event of failure of normal power supply.
- The word '**Fire Lift**' shall be conspicuously displayed in fluorescent paint on the lift landing doors at each floor level.
- The speed of the fire lift shall be such that it can reach the top floor from ground level within **1 min.**

ELECTRICAL INSTALLATION:

- Meter Room and power bank is not permitted below staircase at ground floor. It should be provided in separate room.
- The electric distribution cables/wiring shall be laid in a separate shaft. The shaft shall be sealed at every floor with fire stop materials having the fire resistance as that of floor. (non-combustible material such as vermiculite concrete).
- For requirements regarding electrical installations from the point of view of fire safety reference may be made to good practice [4(6)] and part 8 'Building Services, Section 2 Electrical and Allied Installations' of the National Building Code 2016.
- Water mains, telephone lines, inter-com lines or any other service line shall not be laid in the duct for electric cables.
- Separate circuits for water pumps, lifts, staircases & corridor lighting shall be provided directly from the switch gear panel & these circuits shall be laid in separate conduit pipes so that, fire in one circuit will not affect the others. Master switches controlling essential services circuits shall be clearly labeled.
- Electric cable shafts shall be exclusively used for electric cables and shall not open in the staircase enclosure.
- Electric meter rooms shall be provided at stilt floor level. They shall be adequately ventilated.
- Electric cable shafts shall be sealed at each floor level with non-combustible material such as vermiculite concrete.
- Inspection door for the shaft if provided shall have two hours fire resistance.
- Escape route lighting (staircase, & corridor lights) shall be on emergency circuits as per rules.
- Staircase and corridor lighting shall also be connected to alternative supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains.



A stand-by electric generator shall be installed to supply power to staircase and corridor lighting circuits, fire lifts, the stand-by fire pump, pressurization fans and blowers, smoke extraction and damper systems in case of failure of normal electric supply.

ACTIVE FIRE PROTECTION REQUIRED FOR RESIDENTIAL BUILDING AS PER REQUIREMENT

UNDERGROUND WATER STORAGE TANK:

Underground water storage tank of **3,00,000 Liters** shall be provided for building Wing A & B1 as per design rules specified in rules with the baffle walls and brigade connecting breaching.

&

Underground water storage tank of **3,00,000 Liters** shall be provided for building Wing B2 & B3 as per design rules specified in rules with the baffle walls and brigade connecting breaching

&

Underground water storage tank of **3,00,000 Liters** shall be provided for building Wing C & D as per design rules specified in rules with the baffle walls and brigade connecting breaching

OVERHEAD (TERRACE) WATER STORAGE TANK:

Separate Overhead (Terrace) water storage tank of **25,000 Liters** water capacity for each Wing A, B1, B2, B3, C & D shall be provided at terrace level **exclusively for firefighting** purpose only. The design & layout of this tank shall be got approved from concerned department prior to its erection. The tank shall be connected to wet riser/down comer through a booster pump through N.R. Valve & Gate Valve.

FIRE PUMP & BOOSTER PUMP:

- a. **1 No of Hydrant pump, 1 No of Sprinkler Pump & Same capacity of 1 no. Diesel Pump** at underground water storage tank Pump Room of capacity not less than **2850LPM** capable of giving pressure of not less than **3.5 Kg/cm²** at topmost hydrant level and **Separate jockey pump for hydrant and sprinkler** of capacity **240LPM** shall be provided for **building Wing A & B1**.
- b. **1 No of Hydrant pump, 1 No of Sprinkler Pump & Same capacity of 1 no. Diesel Pump** at underground water storage tank Pump Room of capacity not less than **2850LPM** capable of giving pressure of not less than **3.5 Kg/cm²** at topmost hydrant level and **Separate jockey pump for hydrant and sprinkler** of capacity **240LPM** shall be provided for **building Wing B2 & B3**.
- c. **1 No of Hydrant pump, 1 No of Sprinkler Pump & Same capacity of 1 no. Diesel Pump** at underground water storage tank Pump Room of capacity not less than **2850LPM** capable of giving pressure of not less than **3.5 Kg/cm²** at topmost hydrant level and **Separate jockey pump for hydrant and sprinkler** of capacity **240LPM** shall be provided for **building Wing C & D**.
- d. **Diesel pump is must. Battery of diesel engine operated fire pump shall have separate charger from emergency power supply circuit.**
- e. Installation of negative suction arrangement and submersible pumps shall not be allowed.
- f. **1 Nos of Booster pump** on each terrace level for building Wing A, B1, B2, B3, C & D electrical driven of capacity **900 LPM** capable of giving a pressure of not less than **3.5 Kg/cm** at top most hydrant with **ISI mark Electrical auto starter at ground floor as on terrace level & all refuge areas**.
- g. Electric supply (normal) to these pumps shall be on independent circuits.
- h. All pumps shall be provided with dual source of power supply with auto change over one source to be grid power and other source to DG.
- i. Fire pump test certificate should be attached at the time of Final Fire Noc

FIRE DUCT:

Suitable Fire duct shall be provided at each floor level (with glass door) for **Building Wing A, B1, B2, B3, C & D**.

WET- RISER:

1 Nos. of wet-riser (IS 3844:1989) of internal diameter of **150 mm**, for Hydrant system/Landing Valves separately & 1 Nos. of wet-riser of internal diameter of **150 mm**, for Sprinkler system separately & 1 dry-riser of internal diameter of **80 mm** for Drain system Of G.I. 'C' Class ISI Mark pipe preferably **Tata, Zenith, Jindal** make from ground level up to terrace level in each fire duct of **building Wing A, B1, B2, B3, C & D** shall be provided from pump room to terrace level water tank adjoining the staircase with hydrant for outlet & hose reel on each floor in such a way as not to reduce the width of corridor. Pressure reducing discs or ore fiches shall be provided at lower level so as not to exceed pressure of **5.5 Kgs/cm²**. A fire service inlet on the external face of the building near the static tank directly fronting the courtyard shall be provided to connect the mobile pump of fire service to the wet riser along with non return valve, air valve, main valve & other subsequent valves for all buildings.

(All buildings/wings wet riser should be connected to each other and Siemens Connection shall be provided at approachable location for fire tender.)

HYDRANT VALVE / LANDING VALVE:

Type B fire Hydrant valves/ Landing valves of 63 mm dia ISI marked shall be provided on each floor for building Wing A, B1, B2, B3, C & D.

HOSE REEL HOSE:

Type II Hose Reel hose with jet & spray multipurpose Nozzle confirming to IS: 884: 1985 not less than **30 Meters** shall be provided on each floor & each riser & car parking at building Wing A, B1, B2, B3, C & D (Fiber or Plastic nozzle should not be allowed.)

HOSE BOXES:

Near every Hydrant valve/ Landing valve, shall be equipped with 2 x 15meter length of 63 mm rubber line hose along with standard branch pipe, for building Wing A, B1, B2, B3, C & D & each car parking level. It shall confirm to latest IS code 636 & 903 respectively for Building. External Yard hydrants shall be provided with the 750 x600x 250deep hose box equipped with 2 x 15meter length of 63 mm rubber line hose along with standard branch pipe.

FIRE SERVICE INLET:

Four ways fire service inlet with hydrant valve outlet should be provided to building Wing A, B1, B2, B3, C & D at ground level in front of building entry gates & it should be accessible for fire service personnel for easy operation.

RING MAIN & EXTERNAL HYDRANTS:

Lower level of building external hydrants shall be provided within the confines of the site on the wet riser at the distance 15 meters from each other. The underground periphery ring main of the compound 8 inches dia. G.I. 'c' class with necessary coating & warping shall be provided. Wet riser outlet and hose reel at a distance of 30 meters shall be provided on periphery of all car parking floors to cover the fire risk at all floor level.

AUTOMATIC FIRE SPRINKLER SYSTEM:

It's a High rise residential building taking in to account the local firefighting facility available, automatic pendent/side wall type sprinkler system with flow switch on each floor should be provided in whole of building each flat (In all rooms like hall, bedrooms, kitchen, common lobby, passage & garbage duct etc.).and all car parking, podium parking, common corridors, lobbies & lift lobbies, shop area, office area, commercial area and total area at each floor level of Building Wing A, B1, B2, B3, C & D as per Confirming to IS. (CPVC pipes not allowed in parking area)

DETECTION SYSTEM:

Automatic addressable Smoke/Heat detectors shall be installed in (In all rooms like hall, bedrooms, kitchen, common lobby, passage & garbage duct etc.). meter room, D.G. room, Lift machine room, Transformer room, lobbies, common corridors, electric duct, shop area, office area, commercial/commercial kitchen area (if applicable). & where-ever fall-ceiling void is more than 800 mm above & below of ceiling detector should be provided for Wing A, B1, B2, B3, C & D. Design of this system shall be as per latest IS 2189. L.P.G/ P.N.G detector system shall be installed in kitchen area of building

FIRE ALARM WITH P.A. SYSTEM:

Fully Addressable Fire Alarm Panel with 20 x 4 LCD display with P.A. Facility. MCP to be Glass break type. Hooter should be of good sound. The MCP to be Manual operate Call point. All the MCP cum Hooter to be tested from panel itself for ease of Maintenance and testing. The Hooter should have siren as well as voice evacuation message in Hindi and English. The MCP & Hooter to be provided on each floor near staircase of all buildings. The layout of Fire Alarm System shall be in accordance with IS specification and it should get approved from this department before installation. (MCP should not be concealed)

GAS LEAK DETECTOR SYSTEM

It is advised to install Automatic addressable Gas Leak Detector System in each flat kitchen area. Design of this system shall be as per latest IS norms. This system should be preferable for more safety purpose.

PORTABLE FIRE EXTINGUISHERS:

Fire Extinguisher for ABC class of fire shall be provided at strategic location and each floor of the residential building

- CO2. type fire extinguishers of 4.5 kg. capacity with ISI marks at electric meter room, lift machine room for each building and in commercial part of the building if any.
- ABC type fire extinguishers of 6.0 kgs capacity having IS certification mark shall be provided on all floor & spread over each level of commercial area. If any
- Buckets filled with dry clean sand- 4 Nos. for each building of residential building, at still ground level



SIGNAGES:

Self-glowing / fluorescent exit sign, refuge area, fire duct signs. etc. in green color shall be provided showing the means of escape for the entire building, as well as on car parking area as per IS: 9457, IS: 12349, IS: 12407.

SMOKE CONTROL SYSTEM:

Smoke exhaust and pressurization of areas above ground level as per NBC 2016 clause no. 4.6.1.

FIRE CONTROL ROOM:

Proposed residential building should have 1 Nos. of fire control room on entrance of the building as marked in drawing on ground floor of the building with communication system (suitable public address system) to all floors and facilities for receiving the message from different floors. Details of all floor plans along with the details of firefighting equipment and installations shall be maintained in the fire control room. The fire control room shall also have facilities to detect the fire on any floor through indicator board's connection; fire detection and alarm systems on all floors. The fire staff in charge of the fire control room shall be responsible for the maintenance of the various services and firefighting equipment and installations in co-ordination with security, electrical and civil staff of the building.

QUALIFIED FIRE OFFICER:

A qualified fulltime officer with experience of not less than three years shall be appointed who will be available on the premises at all time. Alternative full-time qualified officer working in shift duty shall be placed round the clock on the premises who will be responsible for the following.

- a) Maintenance of all the firefighting equipment fixed installations be carried out all the times.
- b) Imparting training to the occupants of the building for the use of firefighting equipment provided on the premises and keep them informed about the fire and other emergency evacuation procedure.
- c) To liaise with the city fire brigade on regular and continual basis.

Passive Fire protection Requirement and Provisions for building Wing A, B1, B2, B3, C & D (If Applicable)

The following passive fire protection systems will have to be followed and installed for the Life Safety of the building as per Part 3 & 4 of National Building Code 2005 & Amended to 2016.

Sr. No	Clause Number	Description.
1.	Clause NO: 3.3.1 & 3.3.2	Fire Test General Requirement: Element Component shall have the requisite fire resistance performance when tested in accordance with the accepted standards.
2.	Clause NO: C-9	Compartmentation: The building shall be suitably compartmentalized so that the fire & smoke remain confined to the area where the fire incident has occurred & does not spread to other part of the building.

3.	Clause NO: 4.10.5	Smoke Extraction System: The exhaust system may be continued, provided the construction of the ductwork & fans is such that it will not be rendered inoperable by hot gases & smoke & there is no danger of spread of smoke to other floors via the <u>path</u> of extraction system.
4.	Clause NO: 3.4.12.3	Smoke management: Where smoke venting facilities are installed for the purpose of exit safety these shall be adequate to prevent dangerous accumulation of; smoke during the period of time necessary to evacuate the area served using available exit facilities, with margin of safety to allow for unforeseen contingencies.
5.	Clause NO: C- 1.17	Fire rated ducts: Where the ducts passes through fire walls, the opening around the duct shall be sealed with fire resisting materials having the fire resistant rating of the compartment. Where the duct crosses the compartment which is fire rated for same fire rating. Depending on the services passing around the duct work, which may be affected in case of fire temperatures rising, the ducts shall be insulated
6.	Clause NO: C- 1.12 a	Cable ducts: The electric distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every floor with non-combustible material having the same fire resistance as the fire rating of the duct.
7.	Clause NO: C- 1.12 e	Fire rated ceilings: The exhaust system may be continued, provided the construction of the ductwork & fans is such that it will not be rendered inoperable by hot gases & smoke & there is no danger of spread of smoke to other floors via the <u>path</u> of extraction system.
8.	Clause NO: 3.3.3	Steel protection: Load bearing steel beams & columns of building having total covered area of 500 Sq.Mtrs. and above shall be protected against failure collapse of structure in case of fire. This could be achieved by using appropriate methodology using suitable fire rated materials as per the accepted standards,
9.	Clause NO: 4,13	Fire escape enclosure: Fire towers shall be constructed of walls with a 2 hours fire rating without openings other than the exit doorway, with platforms, landings & balconies with the same fire rating of 2 Hours.
10.	Clause NO: C-1,4	Glazing: If glazing or glass bricks are used in a staircase shall have fire rating of minimum 2 hours.
11.	Clause NO: 3.4.19	Glazing: If glass is used as a facade for building it shall have minimum 1 hour fire rating.
12.	Clause NO: 3.4.8.3	Fire stopping: Every vertical opening between the floors of a building shall be suitably enclosed or



		protected as necessary to provide reasonable safety to the occupants while using the means of egress by preventing spread of fire, smoke or fumes through vertical openings from floor to floor, which will allow the occupants to complete their safe use of means of egress.
13.	Clause NO: 3.4.8.4	Fire Stopping: Openings in the walls or floors which are provided for the passage of all building services like cables, electrical wiring & telephone cables etc. Shall be protected by the enclosure in the form of Ducts/shafts with a fire resistance of not less than 2 Hours.
14.	Clause NO: C-1.9	Fire stopping service ducts & shafts: Service ducts & shafts shall be enclosed by walls of 2 hours & doors of 1 hour fire rating. All such ducts/shafts shall be properly sealed & fire stopped at all floors.
15.	Clause NO: C- 1.12	Fire stopping cable ducts penetration: The Electrical distribution cables/wiring shall be laid in separate duct. The duct shall be sealed at every floor with non-combustible materials having the same fire resistance as the fire rating of the cable duct.

Approval of the drawing of total active fire protection system along with pumping arrangement & sprinkler system shall be get approved from this department before commencement of the work.

The Architect & Developer shall strictly adhere to the requirements given in this Provisional NOC by this Department and UDCPR Rules to be compiled.

GENERAL REQUIREMENTS AND CONDITIONS FOR THE FIRE AND LIFE SAFETY OF THE BUILDINGS

1. Inflammable/ Explosive storages are prohibited in the basement or in building.
2. All materials to be used of ISI /UL/FM make.
3. After completion of the building civil work prior Approval of undersigned should be taken before commencement of Fire Fighting Work and list of material.
4. The entire system must be painted with post box RED in color.
5. If the documents attached with this proposal are illegal or misguided the NOC will be considered as the applicant/Land-owner /Developer will hold cancelled and overall responsibility for any consequence.
6. All the Fire-fighting Equipment shall be well maintained and should be easily accessible in case of emergency.
7. It shall be ensured that security staffs of the building are trained in handling Fire-fighting equipment & fire fighting.
8. Cautionary boards such as "**Danger**", "**No Smoking**", "**Exit**", "**Fire Escape**", "**Extinguishers**", "**Hydrant**", "**Manual Call Point**" etc. should be displayed on the Strategic location to guide the occupants in case of emergency. The signs should be of florescent type and should glow in Darkness.

9. The Fire Exit Drill or Evacuation Drill should be planed & instruction should be given to the staff minimum **four times in a year** and drill should be carried out twice in a year
10. Interconnectivity between fire water tank & Domestic water tank should be provided so that during emergency the stores water in domestic water tank can be utilized for Fire-fighting.
11. All the firefighting systems drawing / layout should be approved from the Chief Fie Officer, before starting any work.
12. In case of emergency, the alternate power supply should be provided for the Fire Pumps, Fire Lifts etc. The Certificate from electric engineer regarding this should be provided at the time of Final NOC.
13. Fire-fighting work must be carried out by licensing agency authorized by Director of Maharashtra Fire Services only.
14. Care & maintenance contract should be made with Licensed Agency to keep the system in good and efficient condition and Hamipatra of the same should be given at the time of Final NOC.
15. The provision of Ring hydrant/Courtyard hydrant system should be provided to entire complex. The distance between two hydrants should not be more than 30 Mtrs
16. As per the UDCPR Rules requirement all the marginal open spaces around the building should be kept open and obstruction free for easy mobility of fire engines.
17. Telephone numbers of "**Responsible persons of the office**", "**Fire Brigade**", "**Hospital**" "**Police**", "**Doctors**", should be displayed on the board. This board should be displayed on prominent place. Preferably at the Fire Control Room, security office and in Reception area.
18. All other provisions of UDCPR & National Building Code of India-2005 & Amended to 2016 & Maharashtra Fire Prevention & Life Safety measures Act, 2006 should be strictly adhered.
19. Well equipped fire control room shall be provided on the ground floor of the building & A qualified Fire Officer from National Fire Service College; Nagpur shall be employed to maintain all fire prevention & protection arrangements provided to Various buildings.
20. Permission from Civil Aviation should be obtained for the maximum height of the building with reference to Navi Mumbai airport if required.
21. The Glassing and façade other Glasses should have at least one-hour fire resistance and should be UL approved and in accordance with NFPA requirement.
22. The glass faced should be protected with coating film so that in case breaking of glass the glass can remain in its place for some hours before replacement. This will reduce the risk of injuries to occupant and fire & rescue personal. In the event of blast, the shock wave created which created the damage to glass faced the use of film will help to reduce the damages due to glass breaking.
23. Any additional recommendations to be added or deleted depending upon the need of the fire safety requirement of buildings and amendment in code.



24. All main doors of flats (office/shop) as per IS 3614 & all internal doors and its material should have two hours fire resistance and it should not produce toxic fumes and smoke in case of fire .
25. This being a very special type of building if any additional recommendations to be added or deleted depending upon the need of the fire safety requirement of buildings.

Regular Training and Maintenance of these systems should be carried out by the **housing society/ builders**. As per provisions made in Maharashtra Fire Prevention and Life Safety Act 2006.

Considering this situation, above fire prevention & fire protection majors are recommended in the proposed buildings up to height mentioned in this provisional NOC only. If Architect/Developer makes any changes in height, area or location the above fire preventive majors, refuge area, staircase location, side margin etc. will change. And according to that the revised provisional NOC will be issued.

This is a "**Provisional No Objection Certificate**", After providing the above fire prevention and fire protection system and compliance of above recommendations the inspection of the fire prevention and fire protection arrangements will be carried out and after satisfactory inspection "**Final No Objection Certificate**" will be issued to your building for obtaining final occupancy certificate from **KDMC**.

This provisional NOC conditions are valid for the period of one year. The undersigned reserves right to amend any additional recommendations deemed fit during the stage wise inspection due to the statutory provisions amended from time to time and in the interest of the protection of the subject mention building.

Please contacts authorities when & where required for these purposes.

If any additional requirement is suggested by fire department Party have also agree to comply the same.

Capitation Fee Rs. 5,25,000/- Paid By Receipt No. 29428 Dt. 01/09/2021

Capitation Fee Rs. 56,93,418/- Paid By Receipt No. 31237 Dt. 21/11/2023



CHIEF FIRE OFFICER
Fire & Emergency services
Kalyan Dombivli Municipal Corporation

Copy to :- Architect/Developer



कल्याण डोंबिवली महानगरपालिका, कल्याण
उद्यान व वृक्ष प्राधिकरण विभाग

जा.क.कडोमपा/उद्यान/वृपा/४०३
दिनांक:- २५/०८/२०२१

प्रति,

श्री. गोपाळ बृह्मजी पाटील
कु.मु.प.चा. श्री. मधुर नुकशीराम पाटील व शता
मौजे: उंबाळी, मानपाडा उंबाळी रोड, डोंबिवली (पु.)

विषय:- बांधकाम परवानगी करिता उद्यान विभागाचा ना हरकत दाखला.

संदर्भ:- १) आपला दि. १८/०८/२०२१ रोजीचा प्राप्त फॉर्म.
२) द्याता: श्री. विनायक सहस्रबुद्धे

उपरोक्त संदर्भित पत्र क. १ अन्वये आपण उद्यान व वृक्ष प्राधिकरण विभागाचा बांधकाम परवानगी प्राप्त करणे करिता ना हरकत दाखला अपेक्षिला आहे. तदनुषंगाने संदर्भ क.२ मधील आय.ओ.डी. परवानगी मध्ये नोंद असलेल्या सि.स.नं. ७६/१०
स.नं. ७६/१०
हि.नं.

प्लॉट क.
मौजे उंबाळी या भूखंडावर दि. २७/८/२०२१ रोजी पाहणी केली असता सद्यःस्थितीत सदर भूखंडावर
१) करेज - ०७ ११) १६)
२) बोरे - ०७ १२) १७)
३) ताड - ०७ १३) १८)
४) कड्डाळिज - ०७ १४) १९)
५) १०) १५) २०)

एकूण ०७ झाडे आहेत.

Area: 11324.74 Sqm

याप्रमाणे एकूण ०७ झाडे आढळलेली आहेत. तर खालील अटी/शर्ती नुर आपणास उद्यान व वृक्ष प्राधिकरण विभागाचा दाखला देण्यात येत आहे.

अटी/शर्ती :-

- १) इमारत बांधकामात झाडे बाधीत होत असल्याने बाधीत होणारी झाडे तोडणे/पुनरोपण करणेबाबत मा.वृक्ष प्राधिकरणाची परवानगी घेणे बंधनकारक राहिल.
- २) बांधकाम करण्यात आलेल्या इमारतीमध्ये व परिसरात पर्यावरणाचा समतोल राखला जाईल यासाठी पक्षांकरीता कृत्रिम घरटी किंवा तत्सम व्यवस्था करण्यात यावी.
- ३) आपण विकसित करीत असलेल्या इमारतीच्या मोकळ्या जागेत वापर परवाना मिळण्यापूर्वी बकूळ, नीम, कंदब, सातविन, टूबेक्युआ, फॉक्सटेल पाम, बोटल पाम, अशोक, बदाम, सिल्वर इ.जातींची ६ फुट पेक्षा जास्त उंची असलेल्या १०० वृक्षोपांची लागवड करणे बंधनकारक आहे.
- ४) सदर भूखंडाबाबत आपण काही चूकीची माहिती दिली आहे असे निदर्शनास आल्यास आपण महापालिकेची दिशाभूल केल्याचे समजण्यात येईल व सदर दाखला आपोआप रद्द झाल्याचे समजण्यात येईल.

(संजय जाधव)

मुख्य उद्यान अधिक्षक
उद्यान व वृक्ष प्राधिकरण विभाग,
कल्याण डोंबिवली महानगरपालिका,
कल्याण.

प्रत:- नगररचनाकार, नगररचना विभाग, क.डों.म.पा.कल्याण यांचे माहितीसाठी.

M/S. GOPAL SONS

Annexure No. 6

Builders & Developers

Ref:

Date :18/07/22

To,
Hon. Principal Chief Secretary,
State Environment Impact Assessment Authority (SEIAA)
Environment Department,
15th floor, new administration building,
Mantralaya, Mumbai – 400032

Subject : Undertaking for facilities within the vicinity of the “Proposed Residential Building” on Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane. Project by Gopal Sons.Proposal No: SIA/MH/MIS/265559/2022

Reference : Minutes of 177th meeting of State Expert Appraisal Committee-2 (SEAC-2), Maharashtra. Item No. 18, dated 24th June, 2022.

Respected Sir,

I, Mr. Sukhadev Patil, partner of Project “Proposed Residential Building” on Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane. Project by Gopal Sons. hereby undertake that Occupation will not be given to the above-mentioned project unless we get assured Water supply provision, storm water drainage and sewerage line facilities within the vicinity of the project by Planning Authority.

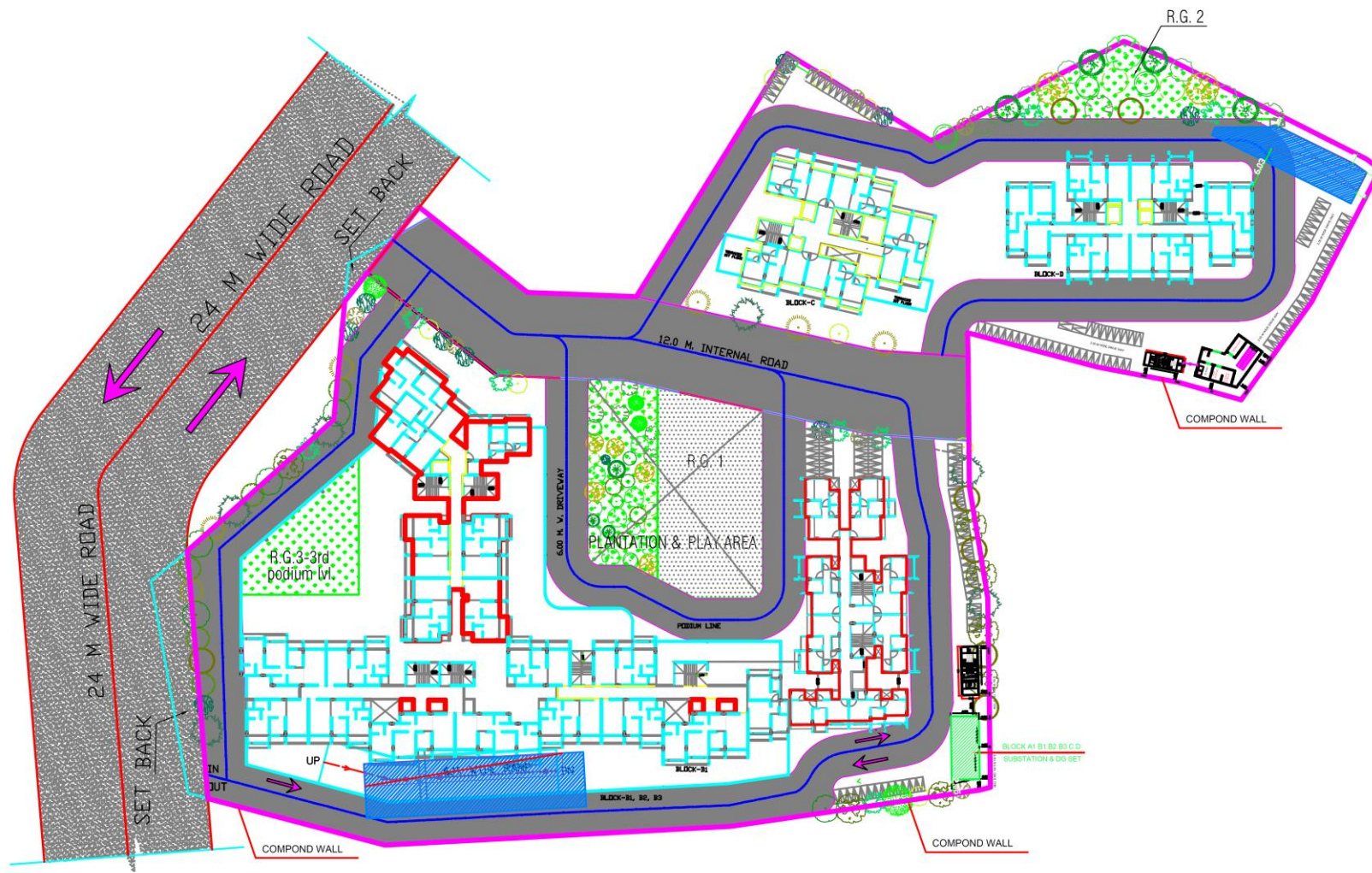
Thanking You,

For M/s. Gopal Sons

For GOPAL SONS

Partner

We have provided a Miyawaki 100 Sq. Mtr Miyawaki Plantation Area & revised Tree List

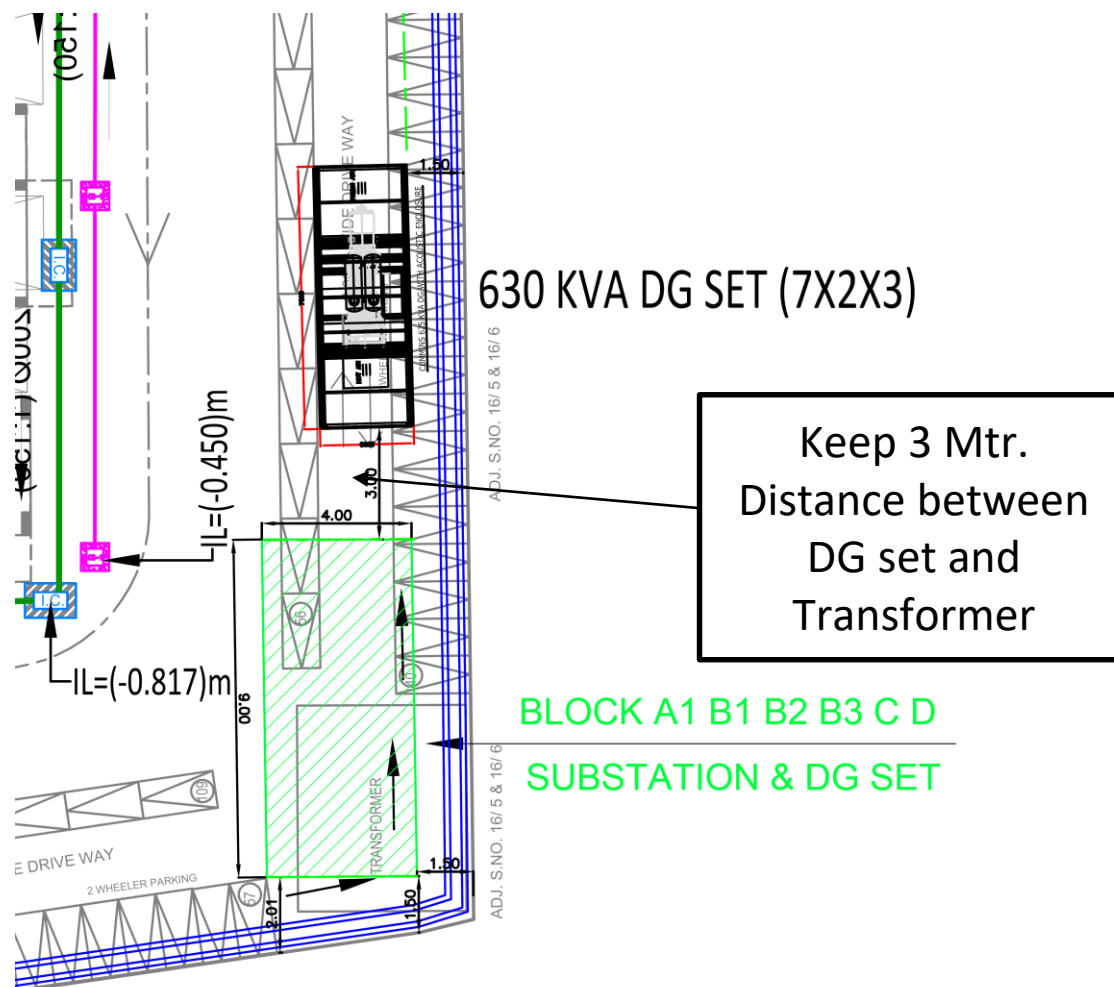


landscape layout

NUMBER AND LIST OF TREE SPECIES TO BE PLANTED

Sr. No.	Botanical Name	Common Name	Quantity	characteristics and ecological importance
1	Terminalia catappa	Badam	7	Fruit bearing plant with evergreen tree.
2	Mangifera indica	Mango	7	Small deciduous fruit bearing tree. different parts of the mango tree, both as food and medicine. Extracts of the bark, leaves, stems, and unripe fruits have demonstrated antibiotic properties in vitro, and are used in traditional medicine
3	Azadirachta indica	Neem	7	Good for restoration of dryer parts, good for air purifier and have medicinal properties
4	Syzygium cumini	Jambhul	7	Fruit bearing tree, Has medicinal properties, Host for many Flora and Fauna
5	Cocos nucifera	coconut tree	8	fruit bearing plant.
6	Saraca indica	Ashoka	6	Good for roadside plantation and provide shade.
7	Artocarpus heterophyllus	Jack fruit	6	Fruit bearing plant with evergreen tree.
8	Ficus racemosa	Umber	8	Bark of the plant cures dysentery, spongy gums, ulcers, diabetes, asthma, leucorrhoea and urinary problems.
9	Mimusops elengi	Bakul	10	Large evergreen tree, is a medicinal tree. For the medicinal purpose its leaves, fruit, bark and flowers are used.
10	Emblica officinalis	Aawala	10	Large tree for shading, good density
11	Psidium guajava	Guava	6	Guava is used as a juice in a concoction to help heal deep cuts, as a tea to cure headaches, as crushed leaves to revive a fainted person, and as chewed leaves to counteract diarrhea.
12	Neolamarckia cadamba	Kadamb	10	Host for many birds
13	Cassia fistula	bahava/amaltash	7	Used as Ayurveda/ medicinal tree.
14	Lagerstroemia flos reginae	Tamhan	8	Good as an avenue tree, good for group planting around water gardens and ponds.
16	Aegle marmelos	Bel	6	Evergreen tree having cultural value
17	Erythrina indica	Pangara	7	Host for many birds
18	Plumeria alba	Champa	7	Plumeria flowers produced most fragrant flowers
19	Albizia lebbek	Shirish	7	Use of Shirish has been extensively recommended to neutralize toxins in the body.
Total			141	

We Keep 3 Mtr. Distance between DG Set & Transformer



We Provided Mandatory RG Area as per prevailing Norms on Virgin Land.

Annexure No.9

R.G. AREA CALCULATION

R.G. AREA CALCULATION.								
R.G.- 01 - GROUND LVL.								
1	36.82	X	14.29	X	0.50	=	263.08	SQ.MT.
2	36.82	X	8.11	X	0.50	=	149.31	SQ.MT
3	34.94	X	4.75	X	0.50	=	82.98	SQ.MT
4	34.94	X	6.20	X	0.50	=	108.31	SQ.MT
5	27.33	X	6.04	X	0.50	=	82.54	SQ.MT
TOTAL						=	686.22	SQ.MT.
R.G.- 02 - GROUND LVL.								
1	44.87	X	8.55	X	0.50	=	191.82	SQ.MT.
2	29.27	X	4.32	X	0.50	=	63.22	SQ.MT
TOTAL						=	255.04	SQ.MT.
R.G.- 03 - PODIUM LVL.								
1	17.48	X	4.91	X	0.50	=	42.91	SQ.MT.
2	22.04	X	14.79	X	0.50	=	162.99	SQ.MT
TOTAL						=	205.90	SQ.MT.
TOTAL R.G. (RG 1 + RG 2 + RG 3)						=	1147.16	SQ.MT.
REQUIRED R.G.						=	1111.50	SQ.MT.
PROPOSED R.G.						=	1147.16	SQ.MT.

Landscape Layout

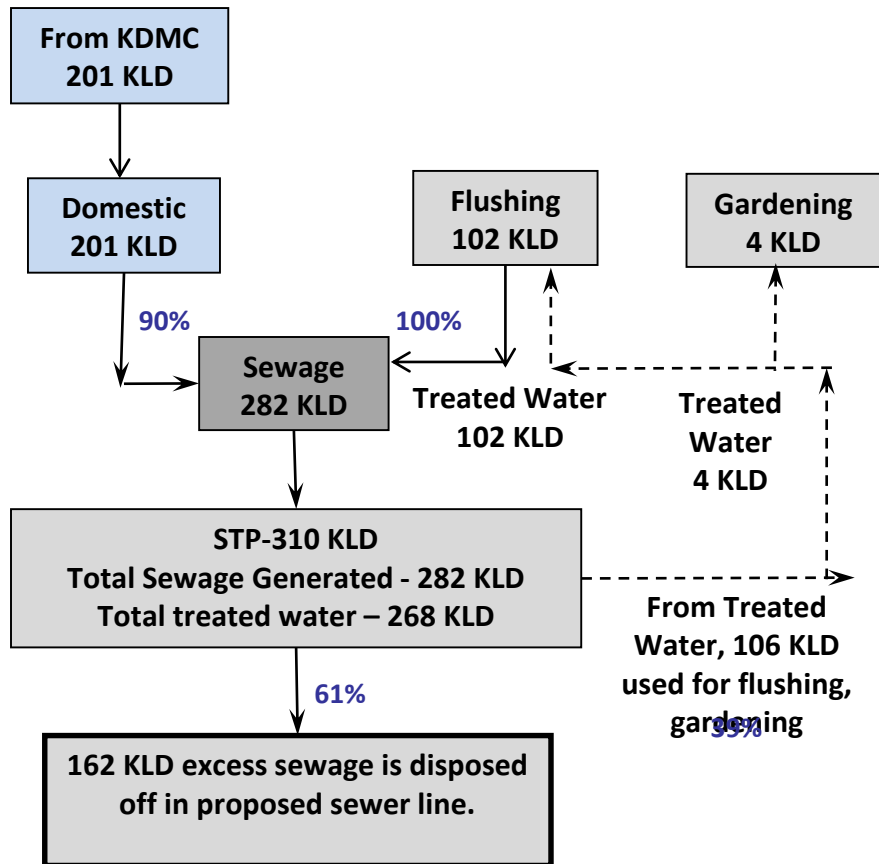


landscape layout

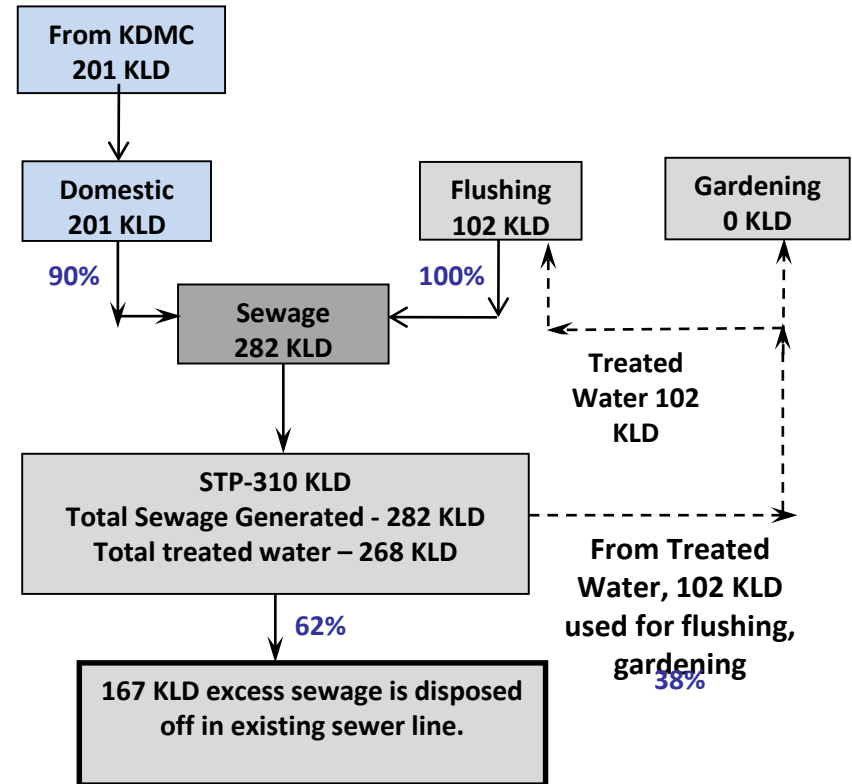
WATER REQUIREMENT (WING A & B)

Annexure No. 10

DRY SEASON

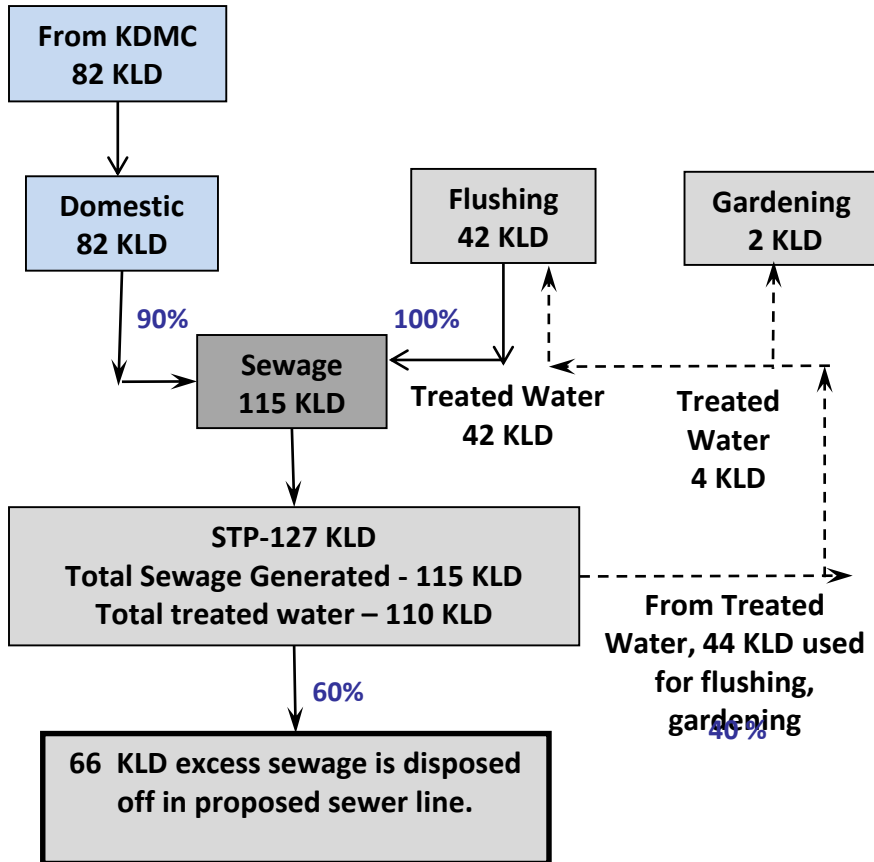


WET SEASON

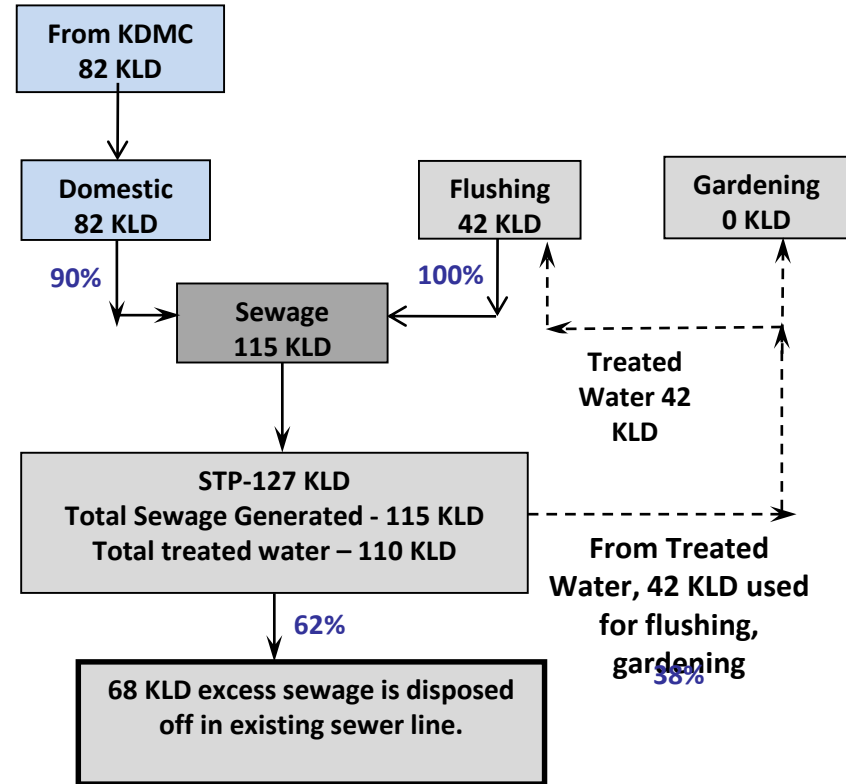


WATER REQUIREMENT (WING C & D)

DRY SEASON



WET SEASON



UNDERTAKING OF EXCESS TREATED WATER

M/S. GOPAL SONS

Builders & Developers

Date: 03/06/22

To,
The Chairman
State Expert Appraisal Committee (SEAC II)
Environment Department,
15th Floor, new administration building,
Mantralaya, Mumbai - 400032

Subject : Request to give your consent for use of excess treated water in future from our "Proposed Residential Building On Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal - Ambernath, Dist - Thane by M/s. Gopal Sons.

Reference : Environmental clearance Proposal No. SSIA/MH/MIS/265559/2022

Respected Sir,

I am Mr. Sukhadev Patil partner of "Proposed STP of Proposed Residential Building On Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal - Ambernath, Dist - Thane" developed by M/s. Gopal Sons., hereby confirms that from the above development we will have excess sewage treated water ie. 228 KLD in dry season & 235 KLD in Wet season.

We hereby propose to provide the excess treated water of the proposed STP to the water suppliers. Tie up for the same will be done with water suppliers.

We hereby undertake that we will explore this possibility and will put our best effort to ensure the use of excess treated water from our STP to the maximum possible extent instead of connecting the same to the sewer drain line.

Thanking You,

For

M/s. Gopal Sons.

For GOPAL SONS

Partner

RAJ ENTERPRISES

PROP. MAYUR T. PATIL / MOB NO. 8108801777

Date: 01/06/2022

To,
M/s. Gopal Sons,
Project: Proposed Residential Building
On Plot Bearing S.No. 16/1 (Pt), H.No. 1.
Mauje Umbarli, Tal - Ambernath ,
Dist - Thane.

Subject: Regarding the usage of excess treated sewage generated from STP

Respected Sir,

With reference to the above, this is to confirm that we will use excess treated sewage water generated from your Proposed Residential Building On Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal - Ambernath, Dist - Thane. Thanking You, for supplying water to nearby factories construction sites, farms, RMC, plants, etc. We will take the water free of cost.

For M/s. Gopal Sons

Authorized Signatory

or RAJ ENTERPRISES

 Proprietor

RAJ ENTERPRISES

PROP. MAYUR T. PATIL

LETTER TO WATER
SUPPLIER FOR
USAGE OF
EXCESS TREATED
WATER FROM STP

DISASTER MANAGEMENT PLAN

FOR

“PROPOSED RESIDENTIAL CUM COMMERCIAL BUILDING”

ON

PLOT A BRERING S.NO. 16/1 (PT), H.NO. 1.
MAUJE UMBARLI, TAL – AMBERNATH, DIST –
THANE

By

M/s. Gopal Sons

Prepared by



Environment Consultancy

Approved by: NABET- Quality Council of India

NABET/EIA/2023/IA0068

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DISASTER MANAGEMENT PLAN

1. INTRODUCTION

This chapter covers Risk Assessment Studies for the construction and operation phase, the safety precautions that have to be taken during construction phase and the Disaster Management Plan and Emergency Preparedness Plan Onsite and Offsite.

2. DISASTER MANAGEMENT PLAN

Disaster management is defined as the discipline of avoiding and dealing with natural risks. The whole process involves a preparation plan for the impending disaster, action in response to a disaster, and support and strength to rebuild a community after the occurrence of a disaster. Disaster management is very important for any building. It makes the occupant aware of the various disasters possible in a building, prevention & procedures, training in disaster management, and after-disaster procedures for building objects.

In general, disaster management is a continuous process that aims to manage and minimize hazards. Under disaster response, there are a variety of actions to take like evacuation quarantine, mass decontamination, and the like. Disaster management has its own advantages. Some of these are:

- Reduces the effects of a disaster's aftermath
- Gives the chance to survive, no matter what kind of a disaster occurs and irrespective of when it occurs
- Gives you peace of mind from the uncertainties of close encounters to unexpected and dangerous natural events
- Minimize the effects of the accident on people and property
- Initiate the rescue and medical treatment of casualties;
- Bring the incident under control
- Preserve relevant records and equipment for the subsequent enquiry into the cause and circumstances of the emergency
- Investigate and take steps to prevent recurrence of similar incidents
- Inform and collaborate with statutory local and state authorities

DMP follows the Basic structure as shown in Figure 1

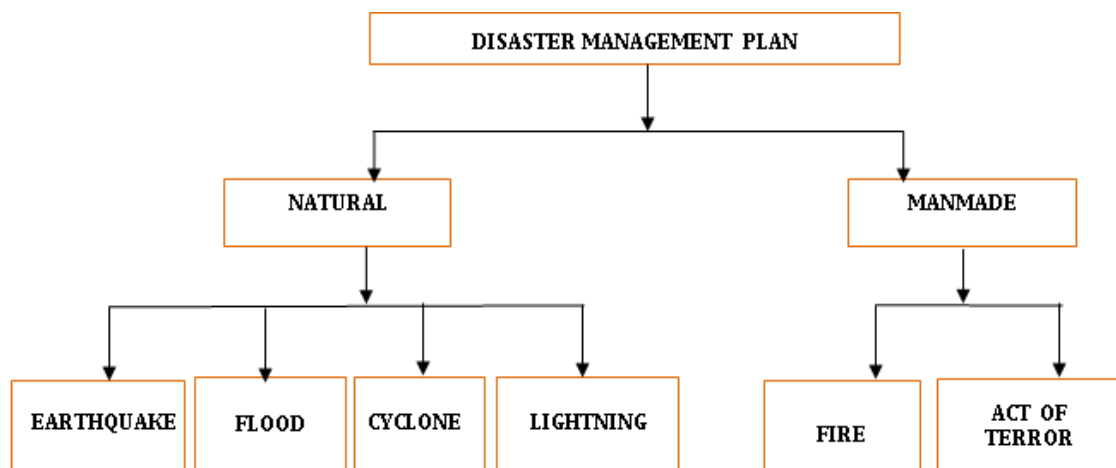


Figure 1: Basic Structures of DMP

3. CONSTRUCTION PHASE

i. Risk assessment and Vulnerability Analysis of Possible Disasters

Risk assessment study deals with identifying and evaluating the magnitude of impending risks to which the neighbouring population is exposed due to occurrence of accidents involved in the project construction and development.

Hazard Identification: Physical, Chemical, Mechanical, Electrical, Vibration & Occupational health hazards during construction phase

Risk of body injury, Injury to eyes, fatal accident, Fire and explosion, Hearing loss etc.

▪ **Are you using (Tick Boxes)**

- | | |
|---|---|
| ☒ Plant/Equipment | ☒ Scaffolding |
| ☒ Portable electrical equipment | ☒ Ladders |
| ☒ Hazardous substances | ☒ Lifts/Hoists/Cranes/Load shifting machinery |

▪ **Does the project/task involve (Tick boxes)**

- | | |
|---|--|
| ☒ Using tools/equipment with moving part(s) | ☒ Working around electrical installations |
| ☒ Using tools/equipment that vibrate | ☒ Working near traffic |
| ☒ Working with x-rays or lasers | ☒ Working at a height (>3m) |
| ☒ Electrical wiring | ☒ Working in isolation |
| ☒ Asbestos removal | ☒ Working in a confined space |
| ☒ Welding | ☒ Manual handling |
| ☒ Hazardous waste | ☒ Repetitive or Awkward movements |
| ☒ Excavation / Trenches (>1.5m) | ☒ Lifting or Moving awkward or Heavy objects |
| | ☒ Demolition work |

▪ **Is there (Tick boxes)**

- | | |
|--|--|
| ☒ Noise | ☒ Slippery surfaces/Trip hazards |
| ☒ Dust/Fumes/Vapours/Gases | ☒ Poor ventilation/Air quality |
| ☒ Extreme temperatures | ☒ A poorly designed work area for the project/task |
| ☒ Risk of fire/explosion | |

- **Risk Assessment:**

The details are explained below:

The calculation involves following 4 steps to complete the assessment:

Step-1 Consider how likely a risk is encountered and what might happen (Likelihood-L)

Step-2 Use the risk level calculator to determine the likely risk level to persons who may be exposed to the hazards.

Step-3 Determination of Risk level outcome.

Step-4 Identify & develop effective control measures.

1. Livelihood of event occurring

Livelihood of event occurring	
Almost certain	Event is expected to occur in most circumstances
Likely	Event will probably occur in most circumstances
Possible	Event might occur at some time
Unlikely	Event could occur at some time
Rare	Event may occur only in exceptional circumstances

2. Consequence's level of Event occurring

Level of consequences	
Catastrophic (C)	Fatality or permanent disability; toxic releases of chemicals, long term environmental impact; loss of facilities; very high financial loss
High	Long-term illness or serious injury; serious medium -term environmental effects; major property damage; loss of production; high financial loss
Moderate (M)	Medical treatment requiring up to several days off works; spillage contained with outside assistance; significant property damage; med-high financial loss.
Low (L)	Minor injury requiring First-Aid; spillage contained on site; moderate property damage; low- mined financial loss.
Insignificant (I)	No injuries; minor property or environmental damage; very low financial loss

3. Determination of Risk Level Outcomes.

	Livelihood					
		Almost certain	Likely	Possible	Unlikely	Rare
Consequences						
Catastrophic (I)		E	L	E	E	H
High(H)		E	E	E	H	M
Moderate(M)		E	H	M	M	L
Low (L)		H	H	M	M	L
Insignificant (I)		H	M	L	L	L

Where

E-Extreme

H-High

M-Medium

L-Low

4. Determination of Risk Control Actions

No.	Risk level Outcome	Action Required
1.	Extreme-E	URGENT- Immediate action required to control risk
2.	High-H	Highest management decision required urgently
3.	Medium-M	Follow management instructions regarding risk
4.	Low-L	These risks may not require immediate attention-monitor

Table 1: Risk Assessment during Construction Phase

Disaster \ Assessment	Livelihood of event occurring	Level of consequences	Risk level Outcomes.	Risk Control Actions
Earthquake	Unlikely	Moderate	Medium	Follow management instruction/Follow SOP
Flood	Possible	Moderate	Medium	These risks may require immediate attention monitor/Follow SOP
Fire	Possible	High	High	Follow management instructions /Follow SOP
Lightning	Unlikely	Moderate	Medium	These risks may require immediate attention monitor/Follow SOP
Power Failure	Rare	Low	Medium	These risks may require immediate attention monitor/Follow SOP
Fall from Height	Almost Certain	High	High	Follow management instructions regarding risk/Follow SOP

Table 2: Vulnerability Analysis

	Air Pollution	Water Pollution	Noise Pollution	Soil Pollution	Occupational Hazard
A. Material Handling:					
Cement	+M	+L	-	+M	+M
Steel	-	-	+	-	+M
Sand	+L	-	-	-	+M
Stone	-	-	+M	-	+L
Plywood dust	-	-	+M	-	+L
Glass	-	-	-	-	+M
Hardware	-	-	-	-	+L
Paint /Varnish Color	-	+H	-	+M	+M
B. Construction Machinery					
Excavation	+M	-	+H	-	+L
Tower crane	+L	-	+L	-	+H
Material Lift	-	-	+L	-	+H

Risk Factor:

+	:	Positive
-	:	Negative
L	:	Low
M	:	Medium
H	:	High

ii. Mitigation Measures & preparedness

For any projects/tasks that present a high or extreme risk, a Safe Work Method statement must be completed.

- **Note how you will control the risk following the priorities listed to the right. This may include controls like redesigning the workplace, using guards or barriers, ventilation, using lifting equipment or personal safety equipment.**

1. Eliminate the hazard
2. Installing Safety net for height fall
3. Keep the people away from the hazard
4. Change work methods
5. Conducting induction training, safety training & mock drills.
6. Use of Personal protective equipment at work.

- **Note any specific risk assessments required for high-risk hazards. Check whether any hazards noted in step 2 require further assessment or action**

☒ Hazardous substance risk assessment	☐ Confined spaces risk assessment
☐ Test and Tag electrical equipment	☐ Sound level test
☒ Inspection of scaffolding	

- **Note Permits/Licenses/Registration required**

☐ Demolition work	☐ Friable asbestos removal
☒ Electrical wiring	☐ Ionizing radiation sources
☒ RMC pumps	☒ Registers for Personal protective equipment, training, ladders, lifting gear etc.

- **Note certificates of competency/licenses for operators**

☒ Scaffolding	☒ Pesticide application
☒ Rigging	☒ Crane operation
☒ Load shifting machinery operation	☒ Hoist operation

- **Note emergency systems required**

☒ First aid kit	☒ Fire control
☒ Extended first aid kit	☐ Remote communication mechanism
☒ Emergency stop button	☐ BMS System
☒ Additional emergency procedures	

Table 3: Risk and Mitigation Measures

Sr. No.	Operations	Risk	Mitigation Measures
1.	Tower Crane	➤ Injury ➤ Fatal Accident ➤ Contact with high voltage live wires	➤ Inspected by Competent person. ➤ Operated by Trained & Certified person. ➤ Use of work permit system ➤ Use of PPA/PPE and Safe Operating Procedures (SOP).
2.	Construction/material Hoists	➤ Personal Injury ➤ Accidents	➤ Only approved hoist to be used by trained employees with safe area demarcation ➤ Inspection by competent person. ➤ Safe work instruction ➤ Testing before use for SWL ➤ Use of PPE/PPA and Fencing
3.	Passenger lift	➤ Fatal /Major accident	➤ Certified/approved passenger lifts to be used by trained employees with safe area demarcation. ➤ Use of PPA/PPE
4.	Portable electrical equipment	➤ Burns/Fatal	➤ To be checked before use by approved electrical safety official. ➤ Use of PPA/PPE
5.	Rock breaking machine	➤ Permanent disability ➤ Respiratory diseases ➤ Twists and sprains ➤ Electrocution	➤ Wear proper PPE ➤ Place the compressor as far as possible from the work area to reduce the level of noise. ➤ Use water suppression and/or respiratory equipment to limit exposure levels. ➤ Proper inspection
6.	Hazardous substances	➤ Fire explosion ➤ Toxic release ➤ Unhygienic dust	➤ Always review the Material Safety Data Sheet (MSDS) Before using. ➤ Store as per HAZMAT Rules. ➤ Use of PPA/PPE. ➤ Avoid direct contact with hazardous substances.
7.	Scaffolding	➤ Fall from Height	➤ Only Trained and Skilled

Sr. No.	Operations	Risk	Mitigation Measures
		➤ Fatal accident	person should be allowed. ➤ Check the straightness of wood ➤ Ensure all rope joints are properly tightened. ➤ Scaffolds must use full body harness and should be properly hooked where possible.
8.	Ladders	➤ Accident. ➤ Lifting Injury ➤ Unstable base ➤ Fall from ladder	➤ Training on Ladder selection and setup. ➤ Inspection program. ➤ Require 3 Points of contact. ➤ Basket/Belt for tools and materials.
9.	Material Lifts	➤ Accidental ➤ Injury even fatal	➤ Inspection by competent person ➤ Ergonomic training ➤ Use of PPE/PPA and Safety guards
10.	Using tools/equipment with moving part(s)	➤ Nipping ➤ Injury to Hand ➤ Electrical Shocks ➤ Leg Injury	➤ Proper selection of Hand tool ➤ Periodic Inspection ➤ Use of PPE/PPA ➤ Safety guard in case of Grinder
11.	Using tools/equipment that vibrate ➤ Electrical wiring ➤ Welding	➤ Vibration hazard ➤ Electrical shocks ➤ Asbestosis ➤ Eye and Body burns ➤ Toxic gases inhalation	➤ Work permits only to authorized persons. ➤ Remove all flammable material, such as cotton, oil, gasoline, etc. from the vicinity. ➤ Wear Safety Goggles ➤ Use of PPE ➤ Keep a suitable fire extinguisher nearby at all times.
12.	Working around electrical installation / working at a height (>3m) / Working in isolation. Working in a confined space/ demolition work	➤ Electrical shocks ➤ Injury ➤ Fatal accident ➤ Hazard of toxic gases inhalation	➤ Work permits only to authorized person. ➤ Uses of work permit system. ➤ Use of PPE/PPA ➤ Indian electrical safety rules to be followed
13.	Work environment	➤ Accidental injury	➤ Enclose noise source

Sr. No.	Operations	Risk	Mitigation Measures
	➤ Noise ➤ Dust/Fumes/Vapours/Gases ➤ Extreme temperatures ➤ Slippery surfaces/trip hazards ➤ Poor ventilation/air quality ➤ A poorly designed work area for the project/ task	➤ Occupational hazards ➤ Burn and Rashes ➤ Skin diseases	➤ Lubrication ➤ Min time exposure ➤ Use of PPE/PPA ➤ Good Housekeeping ➤ Illumination survey ➤ Trainings

a) Prepare SOPs for each disaster and for evacuation when necessary: All SOPs are attached to DMP.

❖ **EXCAVATION ACTIVITY**

➤ **Excavation Risks:**

- The most common hazard at any work site is the threat of cave-in. A cave-in occurs when walls of an excavation collapse
- Accidental contact with utility lines
- Crushing and striking hazards posed by mechanized equipment
- Materials/Equipment falling into excavation site
- Dust inhalation
- Asphyxiation
- Faulty equipment
- Explosion
- Fall Hazard

➤ **Mitigation:**

- Re-route traffic whenever possible, and keeping only the heavy; Construction equipment needed near the excavation
- All excavations shall be inspected daily by the Competent Person
- Spoil piles will be placed a minimum of 2 feet away from the edge of the excavation/trench
- All excavations shall be properly sloped, benched, or shielded.
- If the excavation is 2m or deeper, provide substantial barriers, e.g., guard rails etc.
- Emergency evacuation drill will be carried before monsoon
- Workers shall not enter excavations, if water has accumulated.
- Fence off all excavations in public places to prevent pedestrians and vehicles falling into them
- An emergency rescue plan should be in place before work begins inside an excavation.

- All excavations must be suitably lighted during the hours of darkness
- Trenches 4 m or more feet deep need a safe means of egress
 - Stairway
 - Ladder
 - Ramps
- Metal ladders may not be used, if they may come in contact with electrical lines.
- No worker is allowed underneath loads handled by lifting or digging equipment.
- Means of egress shall kept fixed and secure
- High visibility vest/waistcoat including protective boots, Ear protection and Protective helmets must be worn while working in the excavation.
- Means of egress shall kept fixed and secure

❖ **OTHER CONSTRUCTION ACTIVITIES**

➤ **Other Risk & Hazard area during construction activities:**

- Tower crane lifting
- Gas cutting & welding
- Bar Bending & Bar cutting
- Plywood cutting & drilling
- Height working
- Material storage

➤ **Mitigation for other risk & hazard area:**

- After safety officer inspection tower crane shall be operated under the direction of EHS engineer. Electrical cables & its condition & working shall be examined by competent person periodically. Fork and sling will be examined by engineer and worker before operating. Certified employee will be appointed for job
- Trained & experienced employee will be appointed for gas cutting & welding activities. Appropriate safety measures will be taken for cylinder storage and its equipment. Pressure regulator valve, nozzles, blow pipe, flexible hose and flash back arrester shall be checked by safety officer before workers operating. Appropriate PPEs shall be given to employee & also will ensure its use. Hand held helmet with filter lens shall be provided to welding/cutting operator to prevent his eye vision
- Trained & experienced employee will be appointed for bar bending & cutting activities. Sufficient space will be provided for job. Appropriate PPE's shall be given to employee & also will ensure its use
- Trained & experienced employee will be appointed for Ply cutting & drilling. Sufficient space will be provided for job. Appropriate PPEs shall be given to employee & also will ensure its use
- Safety belt, harness and lifeline with PPE's shall be provided to workers working at height. Such activities will be carried out under safety supervisor's supervision
- All noise creating machines shall be installed with insulation & rubber padding
- All the materials should be stacked on the levelled ground, all the materials should be stacked, providing good aisles between them for receiving the materials

- Diesel & Petrol will be stored as per The Petroleum Act
- Additional measures taken around batching plant by proper barricading also proper measures & procedures will be followed for the reduction of dust emission. Everyone working in the control room and the job site will be given knowledge that where the emergency shut off switch is, even people who won't be operating the batching plant. So when unfortunately, accidents can happen at that time everyone on location will be prepared to shut off the equipment immediately. Daily PPE's checking will be done for worker's safety. Plant will be operated under site engineer's direction & supervision.

Initially with first preference Safety team had been formed to control & reduce the possible hazards and risk which may occur. A detail of safety committee is being described below:

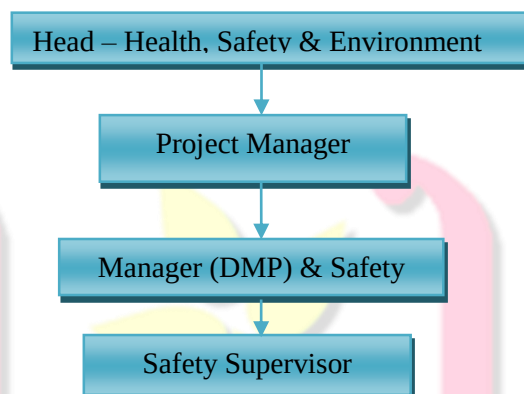


Figure 1: Organization Chart of Safety Committee

➤ **Roles & Responsibilities:**

Position: Project Manager

The responsibilities and duties shall include the following:

- Responsible for completion of the project with the relevant statutory rules and regulations.
- Responsible to ensure that all staff & workmen are competent to perform their tasks safely in Disaster
- Ensuring that workmen is effectively implemented engineer's solutions during evacuation process
- Establishing adequate control measures for the employee's fitness in order to avoid fatigue, stress, extended working etc.
- Make arrangement and ensure that required inventory resources are available or not to tackle disaster
- Make arrangement of fund from the management to purchase required equipment for tackling any disaster.

Position: Manager (DMP) & Safety

The responsibilities and duties shall include the following:

- Take necessary actions and decisions during an excavation
- Allotting a certified contractor for a job
- Ensure the quality and durability of all necessary equipment and aids required for construction
- Ensure the quality and durability of all necessary equipment required to tackle any disaster
- Should contact outer bodies, police, fire brigade & emergency rescue team for evacuation during any disaster
- Should prepare a team and allot the roles & responsibilities to team members for an evacuation during any Disaster
- Go through the checklist filled by an HSE Engineer to maintain the safe working

Position: Safety Supervisor

The responsibilities and duties shall include the following:

- Disseminate and Communicate HSE Policy, HSE Management System requirements to site personnel.
- Provide necessary advice, information and support in the effective implementation of the HSE Management System requirements and this HSE plan.
- Updating the HSE Plan to the requirements of the activities being carried out when there is a revision.
- Plan and conduct Internal HSE training programs, initiate drive to promote HSE awareness and performance
- Dangerous occurrences & recommend appropriate corrective measures.
- Convene HSE Committee meeting & minute the proceedings for circulation & follow-up action
- Advice & co-ordinate for implementation of Work Permit System
- Plan procurement of PPE & safety devices and inspect before use as per laid down norms.
- Facilitate screening of workmen and conduct HSE induction
- Monitoring administration of First Aid.
- Conduct Fire Drill, Procure, inspect and arrange to maintain Fire Extinguishers.
- Organize campaigns, competitions & other special emphasis programs to promote HSE in the workplace
- Record, First Aid Cases, Near Miss Cases & Accidents to all project personnel
- Maintain all HSE related documents
- Update HSE training records

Position: Section / Area In-charges

- Ensure that all the workmen engaged under him are selected through the screening system & have undergone site HSE Induction before assigning any task at site
- Ensuring compliance of basic HSE rules and applicable specifications by
 - Taking prompt action of site inspection and hazard findings
 - Closing all the points identified in inspection reports
 - Ensure HSE Risk Assessment is done for all the jobs under him

All Employees

The responsibilities and duties shall include the following:

- Report all unsafe acts and condition to the immediate supervisor
- Start work only when conditions are safe and stop work when it is unsafe
- Operate equipment only when authorized and prescribed manner. (If applicable)
- Report any injury or accident immediately

Sub-Contractors

All Subcontractors/Vendor/Supplier/Third Party performing services at the Project site shall be subject to this plan requirement

- Shall understand the HSE code of conduct for subcontractors and sign the same as a token of acceptance before starting the activity
- Subcontractor, his Supervisor and his workmen shall adhere all the laid down HSE rules & Regulations while working at site, follow the instruction / advice of Safety Supervisor & Manager (DMP) & Safety from time to time
- a) **Prepare Inventory of Resources (Rescue equipment, medical equipment for emergencies, ambulances, hospitals, NGOs and disaster management related material and personnel**
- Rescue equipment's / Safety Equipment's
 - Fall arrestor system
 - Safety belts
 - Safety Helmets
 - Safety shoes
 - Safety Net
 - Agro Safety Net –Green Colored
 - Barricading tape
 - Fire Extinguishers
 - Sand Buckets
 - Fire Jackets
 - Reflective Jackets
- **Emergency Contact Numbers**

Hospital		
Details	Distance km	Contact Nos.
Neptune Superspeciality Hospital	2.10	8425841002
Life care hospital	2.87	77385 02867
Hardikar hospital	3.05	20 4109 5000
ICON hospital	3.09	8425847412
Police Station		
Kalyan shil police station	3.18	9821448909
Manpada police station	3.27	02512470104
Fire Station		
Manpada fire station	3.19	912512470357
MIDC fire station	6.28	912512315101

c) Maintenance of systems/equipment necessary for tackling disasters

- Maintenance of systems/ equipment necessary for tackling disaster will be done periodically by a competent person after getting checked during mock drill.

d) Warning System

- Security will do the announcement by fan horn or reflex horn speaker in the guidance of Manager (DMP) & Safety.

e) Organize extensive training for disaster managers and assistants

- In every three months training will be arranged for disaster managers & assistants, also for all the workers. Disaster manager such as Manager DMP & Safety, Safety Supervisors and Section In-charge.

iii. Response Plan

❖ Emergency Preparedness and response plan for construction phase

An emergency having medium risk (cautionary risk) to high risk (critical risk) associated with it needs to be treated as **non-tolerable** or **unacceptable**. Projects use *Periodic Management Attention* and *Continuous Management Attention* as a strategic tool to manage cautionary risk and critical risk respectively.

Accordingly, Project Specific Emergency Response Plan is evolved incorporating five components;

- Prevention
- Preparedness
- Response
- Recovery
- Mitigation

Table 4 : Components of Emergency Preparedness and Response Plan

Components	Explanation/Associated Elements
Prevention	Prevention may not be always practical in case of natural disasters. But certain planning consideration help to minimize the impacts during emergency situation. Contrary, towards man-made emergency, prevention can be quite effective. Example- incidents and occupational diseases can be prevented by applying various controls; elimination, substitution, engineering, administrative & personal
Preparedness	It involves developing mechanism towards emergency preparedness a. Defining EPR team structure at project level b. Demarcation of roles, responsibility & authority c. Determining line of command and control d. Allocation of resources including training e. Developing & maintaining inventory of emergency management equipment's Preparedness also involves periodical testing through planned Mock Drill & Table Top exercises
Response	Response is execution of preparedness plans and typically involves, a. Put preparedness plan in execution b. Evaluate its effectiveness i.e. determine the gap between the plan and the execution c. Revisit plan and improve it in view of gap analysis (as part of Mitigation) d. Incorporate the learning's for continual improvement
Recover	Response is followed by recovery wherein projects need to take steps to bring back

	normalcy as soon as possible. The focus should be to maintain continuity of business by minimizing / eliminating disruptions and delays. Typically, recovery involves the following (but not limited to) - Clear up from the incident or help the people involved overcome their mental trauma - Consultation and coordination with contractors, suppliers and internal functions to streamline the work and the supply - Repair/renovate offices, Labour camps, stores, work fronts, machinery/equipment - Sanitization of entire area including canteen and utilities- water supply, wash rooms, & toilets/urinals - Pest Control - Preventive Health Check-up & consultation - Reorganizing workforce and re-inducting them
Mitigation	Mitigation involves taking steps to ensure no re-occurrence if possible, or putting additional plans in place to ensure less damage is done next time. This should feedback in to the preparedness stage, with updated plans in place to deal with future emergencies.

Emergency Preparedness & Response Plan (EPRP)

In consideration with components of EPRP, project specific EPRP is developed by the project team in a particular format as given in **Table 4**.

Tips for preparing plan:

- Have one plan sheet for one emergency scenario. Every emergency having cautionary or critical risk need to be covered
- Emergency Preparedness & Response Team can be the same for all emergency situations. Project should take a call to have one or more team for emergency situation management.

Plan Components	Incident																								
Prevention	• PPE shall be mandatory on site for all. Edge barricading to all openings on the floor, ducts and excavated places. • Safety and warning signage shall be placed at hazardous areas. Safety induction and TBT (Tool-Box Talks) shall be carried out on site for all workforces.																								
Preparedness	• Continuous supervision of safe working environment. • Special training shall be conducted on site to deal with any type of incident. • Sufficient stretcher shall be kept on site for immediate response during incident. Availability of first aider, first aid box and medical health center. • Preparedness for mention incident types as per below table: <table><tr><th>Type of Incident</th><th>Mock Drill</th><th>Table Top Exercise</th><th>Audit</th></tr><tr><td>Fall of person from height.</td><td>Yes</td><td>Yes</td><td>Yes</td></tr><tr><td>Structure collapse.</td><td>Yes</td><td>NA</td><td>NA</td></tr><tr><td>Fall of any material from height.</td><td>No</td><td>Yes</td><td>Yes</td></tr><tr><td>Excessive bleeding.</td><td>NA</td><td>Yes</td><td>Yes</td></tr><tr><td>Failure material</td><td>NA</td><td>NA</td><td>Yes</td></tr></table>	Type of Incident	Mock Drill	Table Top Exercise	Audit	Fall of person from height.	Yes	Yes	Yes	Structure collapse.	Yes	NA	NA	Fall of any material from height.	No	Yes	Yes	Excessive bleeding.	NA	Yes	Yes	Failure material	NA	NA	Yes
Type of Incident	Mock Drill	Table Top Exercise	Audit																						
Fall of person from height.	Yes	Yes	Yes																						
Structure collapse.	Yes	NA	NA																						
Fall of any material from height.	No	Yes	Yes																						
Excessive bleeding.	NA	Yes	Yes																						
Failure material	NA	NA	Yes																						

	hoist or any lifting equipment.			
	Electrical shock / Electrocutation.	NA	Yes	Yes
	Unconscious victim within a confined space.	Yes	NA	NA
Mock Drill (Frequency & methodology): Incident evacuation drill shall be carried out quarterly. Line of Method: • Emergency siren will be blown. • Head Count • Rescue the victims. • First Aid for minor injury. • Victim will be moved to hospital. • Emergency stopped up siren will be blown.				
Response	• As to see the effectiveness of the Preparedness plan for an Incident it shall be executed at site as per the plan. • Its effectiveness shall be evaluated to understand the gap between the plan and the execution on the basis of timelines, roles and responsibilities given to EPRP team members.			
Recovery	• The sufferer of the incident shall be provided with adequate medical facilities to recuperate from the incident.			
Mitigation	• Additional plans will be put up in place to avoid any kind of incidents on site during work.			
Identify site disaster manager for handling disasters with clearly enumerated functions	• Safety Manager will handle disaster with his safety team with clearly enumerated functions during construction phase • Safety Manager will be appointed for handling disaster by keeping in view of his knowledge, fire safety exposure, communication skill and his contact with public & local NGO's			
Plan Components	Fire			
Prevention	• All the flammable material shall be kept at a designated place. • Fire extinguishers, buckets etc. Shall be put up all across the site. • Operational Training for fire extinguishers will be given to all.			
Preparedness	• Fire prevention accessories shall be maintained at site. • Installation of Fire hydrant, smoke detector & sprinkler systems on site. • Assembly point and fire exit shall be notified at a specific place for all to gather whenever the fire takes place on site. • Fire exit shall be away from debris. Contact nos. of local Fire brigade and Fire Marshalls as well as nearest hospitals shall be displayed all over the site. • The site shall be having its own First Aid Center and ambulance.			

	Mock Drill (Frequency & methodology) for Class A, B and C Emergency evacuation drill shall be carried out quarterly. • Emergency siren will be blown. • All workers will be gathered at Assembly point. • Head Counting • Rescue the victims. • Fire will be put out by fire Marshalls or fire brigade. • Emergency stopped up siren will be blown.
Response	• As to see the effectiveness of the Preparedness plan for Fire it will be executed at site as per the plan. • Its effectiveness shall be evaluated to understand the gap between the plan and the execution on the basis of timelines, roles and responsibilities given to EPRP team members.
Recovery	• To recover from the Fire; Immediate renovation shall be done for offices, Labor camps, stores, work fronts, machinery/equipment, also all this will be recovered with the help of insurance. • Immediate reorganizing of work force will be done to maintain continuity of business without any delay.
Mitigation	• Additional plans will be put up in place to ensure less destruction and losses should occur during fire. • And for this additional insurance plan will be introduced. Fire Drill will be reorganized time to time to compact with future emergencies.
Plan Components	Earthquake
Prevention	• Inspect every item that could fall, spill, break or move during an earthquake. • Follow safety codes & building codes for building earthquake resistance structure when constructing a project. Project should be inspected by structural engineer. • Heavy items shall be moved away from where people work. • Fixed equipment and heavy machinery shall be secured to the floor.
Preparedness	• Disaster management accessories shall be maintained at site. • Assembly point shall be notified at an open specific place for all to gather whenever the earth quake takes place on site. • Emergency contact nos. shall be displayed all over the site. • All workforces shall follow the EPRT member's instruction. Mock Drill (Frequency & methodology): Emergency evacuation drill shall be carried out quarterly. Line of Method: • Emergency siren will be blown. • All workers will be gathered at Assembly point. • Head Counting • Rescue the victims. • Emergency stopped up siren will be blown.
Response	• Preparedness plan effectiveness shall be evaluated to understand the gap between the plan and the execution on the basis of timelines, roles and responsibilities given to EPRT members.

Recovery	• To recover from the Earthquake Incident Check with insurance bodies for life & property damages and Immediate Repair/renovation shall be done for offices, Labor camps, stores, work fronts, machinery/equipment. • Immediate reorganizing of work force shall be done to maintain continuity of business without any delay. • Moral support shall be given to workmen to come out from the Confrontation.
Mitigation	• Additional plans shall be put up in place to ensure less damage and losses should occur during earthquake. • Earthquake and other EPRP shall be updated time to time to deal with future emergencies.

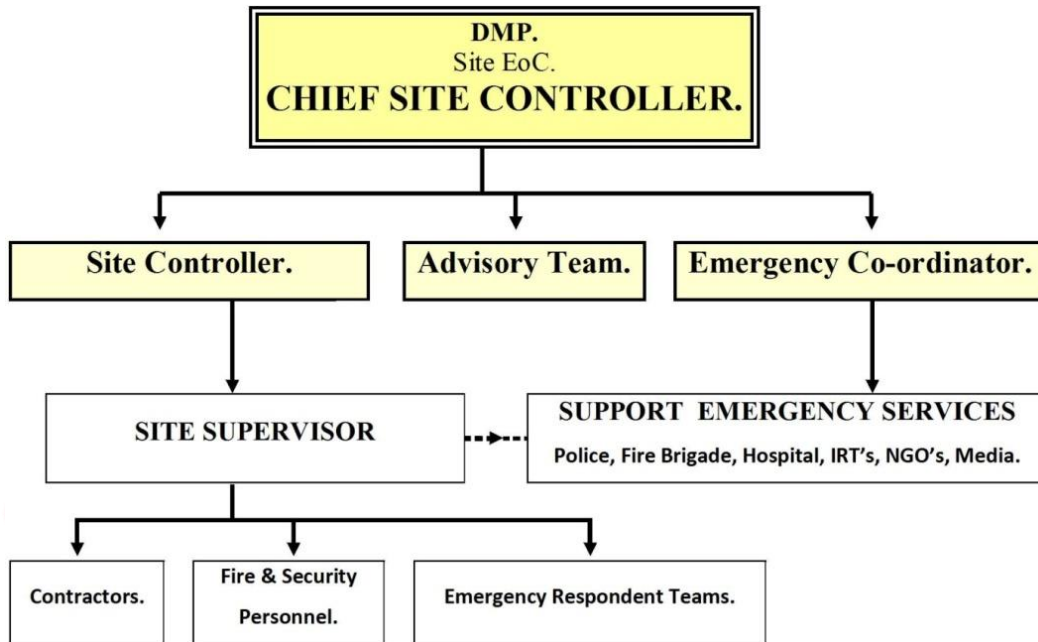
Plan Components	<u>Monsoon (Flood conditions)</u>
Prevention	• Proper dewatering and drainage system shall be implemented on site to avoid flooding. • Site is under flood area or not, this shall be confirmed through the local emergency management office. • To avoid electrical hazard during monsoon ELCB system shall be used. In addition to this, all the electrical cable joints shall be properly insulated.
Preparedness	• Monsoon preparedness checklist shall be circulating to all concern contractor & internal site team • Dewatering pumps shall be purchased and placed all over the site during monsoon. • Drainage system shall be specially designed for flooding so that water log jam is avoided. • All construction equipment/machinery/official documental records shall be ready to shift at a safe place where flood could damage the same. • All Electrical Distribution equipment shall keep under weather proof shade on proper elevated platform. • Emergency lighting arrangement shall be in place. Mock Drill (Frequency & methodology): Emergency evacuation drill will be carried before monsoon. Line of Method: • Emergency siren will be blown. • All workers will be gathered at Assembly point. • Head Counting • Rescue the victims. • Emergency stopped up siren will be blown
Response	• As to see the effectiveness of the Preparedness plan for monsoon it shall be executed at site as per the plan. • Its effectiveness shall be evaluated to understand the gap between the plan and the execution on the basis of response timelines, roles and responsibilities given to EPRP team members.
Recovery	• To recover from the monsoon disaster Immediate Repair/renovation shall be

	done for offices, Labour camps, stores, work fronts, machinery/equipment. • Pesticides shall be used all over the flooded or water-logged area to avoid any health contamination on site. • Medical check-up for all workforces shall be done to ensure and control epidemic situation on site.
Mitigation	• Additional plans (as per observation during mock drill) shall be put up in place to ensure less damage and losses should occur during monsoon. • Monsoon prevention plans shall be updated time to time to deal with future emergencies.

Plan Components	<u>Occupational Diseases</u>
Prevention	• Respiratory PPEs, hand gloves, face shield, ear plug etc. and other safety precautions shall be taken care of to avoid the occupational diseases. • Adequate information shall be given to all workers regarding occupational hazards and its prevention. • Educate workers to understand the importance of PPE's • Special training sessions shall be conducted on site to ensure that occupational hazards are eliminated through use of proper means of safety.
Preparedness	• Adequate information shall be given to all workers regarding occupational hazards and its prevention. • Special training sessions shall be conducted on site to ensure that occupational hazards are eliminated through use of proper means of safety.
	Mock Drill (Frequency & methodology): NA
Response	• As to see the effectiveness of the EPRP for Occupational Diseases it shall be executed at site as per the plan. • Its effectiveness shall be evaluated to understand the gap between the plan and the execution on the basis of timelines, roles and responsibilities given to EPRP team members.
Recovery	• To recover from the occupational disease's continuous improvement on site safety conditions shall be observed. • Periodical health check-up shall be done for specialized worker who are exposed to hazards material on daily basis.
Mitigation	• Awareness programme will be placed time to time to reduce the effect of occupational diseases.

❖ DISASTER MANAGEMENT ORGANIZATION

HIERARCHY OF LEVELS



❖ ROLES AND RESPONSIBILITIES

Roles and responsibilities for all the emergency respondents are detailed in respective SOP's of this report.

❖ EMERGENCY RESPONSE GUIDE

Sr. No.	Emergency Respondent → ↓ Hazards	Chief Site Controller	Site Incident Controller.	Emergency Co-Ordinator	Supervisor	Emergency Response Teams	All Other Site Personnel
1.	FALL OF STRUCTURE.	Task 3,8,16,17,20.	Task 1,2,4,13,14,15,19,21	Task 5,6,7,9,18.	Task 11.	Task 10.	Task 12.
2.	TRAPPED IN LIFT.	Task 3,8,16,17,20.	Task 1,2,19,21.	Task 7,18.	Task 11.	Task 10.	-
3.	FIRE/ EXPLOSION.	Task 3,8,16,17,20.	Task 1,2,4,13,14,15,19,21	Task 5,6,7,9,18.	Task 11.	Task 10.	Task 12.
4.	BOMB THREAT.	Task 3,8,16,17,20.	Task 1,2,4,13,14,15,19,21	Task 5,6,7,9,18.	Task 11.	Task 10.	Task 12.
5.	FLOODING.	Task 3,8,16,17,20.	Task 1,2,4,13,14,15,19,21	Task 5,6,7,9,18.	Task 11.	Task 10.	Task 12.
6.	CYCLONE.	Task 3,8,16,17,20.	Task 1,2,4,13,14,15,19,21	Task 5,6,7,9,18.	Task 11.	Task 10.	Task 12.
7.	EARTHQUAKE.*	Task 3,8,16,17,20.	Task 1,2,4,13,14,15,19,21	Task 5,6,7,9,18.	Task 11.	Task 10.	Task 12.

EMERGENCY RESPONSE GUIDE TABLE

- Where the numerical indicate task, number detailed in the following table:

DMP FLOW CHART	S. N	Task
<pre> graph TD Start([EMERGENCY OCCURS]) --> Manual[Manual Detection] Start --> Equipment[Equipment/ Sensor Detection] Manual --> Alarm[Site alarm activated at Fire Control Room/ Security Department] Equipment --> Alarm Alarm --> Verify{Fire & Security Department to verify, fire alarm activated, LEVEL, if emergency determined, is need to activate emergency three alarm?} Verify -- Yes --> External[External emergency respondents - Fire Brigade, Police informed] Verify -- No --> Internal[Internal resources activated to attend emergency, Fire & Security Dept. activates emergency control operations, Site Incident Controller take over the control of operations, informs Chief Site Controller.] Internal --> UnderControl1{Emergency under control?} UnderControl1 -- Yes --> Activate[Chief Site Controller activates Institutional Emergency Respondents, informs District Disaster Control Room] UnderControl1 -- No --> Assess[Chief Site Controller assess the potential for off-site emergency event, District Disaster Control Room informed, take evacuation decision] Activate --> UnderControl2{Emergency under control?} UnderControl2 -- Yes --> AllClear[All clear signal] UnderControl2 -- No --> Assess AllClear --> Recovery[Recovery, waste control, debriefing, investigations, reporting, review & DMP revision] Assess --> ActivateService[Chief Site Controller activates institutional emergency respondents service] ActivateService --> Arrive[External emergency respondents, IRT's arrive at site and take over the control of operations] Arrive --> CoOrdinate[Emergency Co-Ordinator to co-ordinate the operations.] CoOrdinate --> UnderControl3[Emergency under control] UnderControl3 --> Complete[External emergency respondents services involvement complete] </pre>	1	Raising the site emergency alarm.
	2	Inform police, Fire brigade and Mobilizing site emergency services.
	3	Determination of level of emergency, help from Advisory team, if required.
	4	Mobilizing ECC and AP.
	5	Mobilizing Emergency Respondent teams, IRT's, NGO's.
	6	Mobilise resources for emergency response teams
	7	Ensure Co -ordination between site emergency services.
	8	Review situation, assess the emergency level, consult advisory team, take external help if required, inform district disaster control cell, and declare off site emergency.
	9	Evacuation
	10	Ensure operations as per SOP
	11	Ensure proper coordination between all IRTs
	12	Head count at assembly point
	13	Feedback of head count to SAR
	14	Ensure traffic , law & Order and crowd control
	15	Withdraw the staff if the human life is in peril.
	16	Ensure any conflict resolved at the earliest
	17	Authorize release of information to the media
	18	Release of authorized information to the media.
	19	Emergency under control , inform to CSC
	20	Authorize to raise 'All Clear ' alarm
	21	Raise 'All Clear ' alarm

❖ **DISASTER MANAGEMENT ORGANIZATION FOR CONSTRUCTION PHASE:**

Sr. No.	Designation for DMP	Construction Phase
		Designation /Agency /Group
1	Site Main Controller	Head-Health & Safety Environment
2	Site Incident Controller	Project Manager
3	Emergency Coordinator	Safety S Manager
4	Supervisor	Site & Safety Supervisor Contractor supervisor
5.1	SAR Team	Security guards, First aiders, Fire fighters, staff & workmen, External IRTS
5.2	Engineering Team	Electricians, operators
5.3	Advisory Team	Architect, Consultants
6	All others at site	Contractors, Staff, Workers, Visitors, Drivers, construction workers colony

iv. Control Room

a) Earmark a specific area to function as control room for disaster management

- Security Control Room during Construction phase is at the main entry gate:
- The traffic in the area comprises
 - Regular workers
 - Vendors

Table 5: Details of Entries

i)	Regular workers	•	Recognition
		•	Distinct ID Card
		•	ID through card reader
ii)	Vendors	•	Temporary pass with time validity (with the consent of Resident)

b. Display proper Maps-Telephone nos. of disaster controlling authorities showing fire fighting equipment's

- Fire Brigade contact number is given above and all contact nos. will be displayed during construction by safety committee

c) Prepare & disseminate pamphlets on each disaster for occupants covering Do's and Don'ts for each type of disaster

- Dos and Don'ts for each type of disaster is been provided in SOP's which is attached to DMP.

v. On-Site Disaster during Construction Phase

a) Site disaster manager to take charge and give guidance over public address system

- Project manager will take charge and give guidance over public address system

- Assembly point shall be identified and marked. Mega phone shall be used to address the emergency to employees.

b) Call for outside assistance of fire brigade, Hospital, ambulance

- Manager (DMP) & Safety will call for outside assistance of fire brigade, Hospital, ambulance.
- In absence of Manager (DMP) & Safety, project manager will call outside for assistance.

C) Network with State, district and ward level control rooms

- Ward level details are provided below in operation Phase. Contact shall be done to Ward control room during emergency

d) Ensure adequate warning before switching off power

- All announcements will be done with good quality equipment's
- Manager (DMP) & Safety will ensure with Safety Supervisor that all workers are stopped working and shut downed the machines & equipment's before switching off emergency control switch.
- The main electrical switch during construction Phase will be placed at the site office.

e) Assure workers of continuous communication and take all measures to keep up their morale

- Project manager will do continuous announcements by various methods to keep up worker's morale

f) Guide workers on the steps being taken for evacuation in a systematic manner

- This requirement will be handled by dedicated trained staff/volunteers.

g) Take steps to reduce/ eliminate panic

- Periodical training to internal Volunteers & Officers.
- Periodical mock drills to all Workers, Officers, volunteers and staff in every three months.

h) Liaise with Law & order Machinery

- Project manager will liaise with police Fire Brigade, Civil Defence etc.

vi. Preventive Maintenance

a) Regular maintenance of Equipment's & Systems

- Periodical maintenance will be carried by certified, competent and skilled employed contractors at regular intervals.

4. OPERATION PHASE

i. Risk Assessment & Vulnerability Analysis of Possible Disaster

❖ Hazard Identification and Safety Assessment

➤ **Identification of potential structural hazards existing in the area**

- Structural safety of the building needs to be assessed with regards to its safety from hazards like earthquakes, floods and fire.

➤ **Identification of potential non-structural hazards existing in the area**

- DMC plan should be in that position to identify the potential hazards that frequently occur in that area. It is therefore necessary for us to identify potential hazards to which the building might be exposed. For this a hazard assessment shall be conducted by taking into account the history of disasters that have occurred in that area for the last 20 – 25 years. Based on the hazard assessment, the members of the DMC will prepare the Disaster Management Plan.

Source: -<http://www.karmayog.com>

(For identification of history of any disaster during the last 20-25 years.)

➤ **Points to remember while coordinating a survey**

- Check low lying area, Nallah, pitch hill, chocking site or any municipal tank etc. nearby or surrounding of the site
- The areas which would cause problems in an earthquake, flood, and fire are identified.

- ❖ **Possible disasters:** Fire/ Flooding/ Earthquake/ Bomb Explosion/ Terror Attack/ Structural Problems/ Lightening/ Power Failure/ Fire – Smoke/Electrical Fires/ Manmade Emergency.

Table 6 : Risk Assessment during Operation Phase

Assessment Disasters	Livelihood of event occurring	Level of consequence	Risk level Outcomes.	Risk Control Actions
Earthquake	Unlikely	Moderate	Medium	Follow management instructions /Follow SOP
Flood	Possible	Moderate	Medium	Follow management instructions /Follow SOP
Fire	Possible	High	High	Follow management instructions /Follow SOP
Terror Attack	Unlikely	Moderate	Medium	These risks may require immediate attention monitor/Follow SOP
Lightning	Rare	Low	Medium	These risks may require immediate attention monitor/Follow SOP
Power Failure	Possible	Insignificant	Low	Follow management instructions regarding risk/Follow SOP
Structural Problem	Unlikely	Low	Low	These risks may require immediate attention monitor/Follow SOP

❖ Disaster Response Team

Initially the Disaster Management Committee will be formed by the developer/society members. The Facility Manager/Security In-charge will be competent enough to handle various disasters, and will be In-charge to look after the complete process of DMC (Disaster Management Committee). DMC will be divided into three groups namely: Co-ordination group, Disaster Awareness group, and Disaster Response group. The roles and responsibilities of various groups are defined in subsequent paragraphs.

The building will have one Security In-charge/Facility Manager (and alternate), one assistant Security guard (and alternate) who will direct the evacuation of persons from their respective areas as quickly as possible in a safe and controlled manner. The list of building evacuation team members is maintained by Disaster management committee.

The given figure 3 demonstrates the structure of organization structure of the Disaster Management Committee

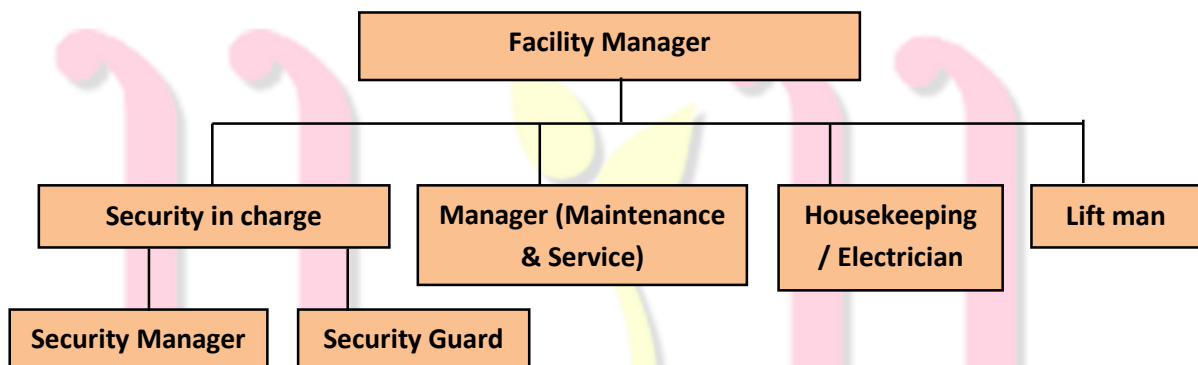


Figure 0-1 : Organization Chart of Disaster Management Committee

Roles and Responsibilities of Disaster Management Committee

- Look into the structural safety requirements of the building for various hazards (earthquake, fire, floods, etc.) Get the buildings assessed for the hazards identified and take prompt remedial measures, as required
- The members of the DMC shall have an understanding of the disaster management policy and planning principles
- Evaluation of the Disaster Management plan
- Carrying out the mock drill twice a year
- Updating of the plans at regular intervals (at least once a year, and after any significant disaster) to ensure that the plan is workable
- Earmark fund arrangements for carrying out preparedness and mitigation measures in the building
- Declaring emergencies and implementing the emergency plan
- Implementing evacuation procedures
- Contacting emergency services (fire, police, ambulance) and utilities
- Establishing a command post, chain-of-command and reporting procedures
- Assessing and obtaining emergency services, supplies and equipment
- Arranging for off-site storage and work facilities
- Arranging the transfer of collections to a safe site

- Recording the movement of collections
- Implementing and supervising salvage procedures for collections
- Contacting, training and supervising volunteers
- Documenting all aspects of the response / recovery procedures
- Meeting with the press
- Preparing post-emergency reports

➤ **Facility Manager**

- Ensures that the appropriate outside emergency agencies have been notified
- Coordinates all occupant notification and makes sure that any necessary evacuation or relocation begins
- Ensures adequate monitoring and control of all building life safety systems and equipment
- Confirms that any investigation of the fire or source of the fire alarm, or initial suppression of a fire, is performed
- Arranges for responding emergency personnel to be met at the designated entrance of the building and give an up-to-date report on the incident (including its location and any reported injuries), the status of security and building fire life safety systems and the location and status of all evacuees addressing the incident (building information forms, notification of specific hazards, floor plans, essential keys and access cards, etc., also should be readily available)
- Ensures that every incident is thoroughly documented and that required notifications and reports to the appropriate authorities are carried out

Table 7: Responsibility Matrix

Goal: To keep the disaster management plan up to date 24X7		
Objectives: To safeguard the occupants and neighbours in the event of disaster		
Scenario	Who is responsible	When to contact and how
Lift failure	Facility Manager/Security In-charge/lift man	When trapped inside a lift, Press the alarm button. If outside use phone (internal) or reverse alarm system (not running on electricity or battery backup)
Fire in building (limited area)	Security In-charge, Facility Manager	Press the nearby fire alarm or call to control room
Fire in large area (floor)	Security In-charge, Facility Manager	Press the on floor and down floor fire alarm or call to control room
Fire in utility areas	Security In-charge	Press the utility area fire alarm or call to control room
Electrical failure	Electrician	If power goes off only of your floor then call to the control room for electrician
Water supply interruptions	Security In-charge, Maintenance & Service manager	If water don't come to only your home then contact control room
Building damage (minor)	Security In-charge, Maintenance & Service manager	If any leakages to your floor or home then contact control room and note complaint and also raise the point in general society

		meeting
Building damage (major)	Facility Manager	If any fall of plaster to your floor or outside home, major cracks then contact control room and note complaint and also raise the point in general society meeting
Audible and Visible Alarms	Facility Manager	If alarm doesn't work during periodical check-up then call control room and note complaint
Emergency Staff	Security In-charge	If any disaster occurs then call control room for help

ii. Mitigation Measures & Preparedness

a) Prepare SOPs for each disaster and for evacuation when necessary

All SOPs for each Disaster and for evacuation is been prepared, attached to DMP.

I. NATURAL DISASTER:

❖ Earthquake: Seismic Environment & Precautions

Mitigation Measure:

As per the Seismic Zoning Map of India, Thane region falls under Seismic Zone-II. The structural design is base, on following Indian Standard Codes of practice and shall render the buildings safe and stable.

1. IS -456 -2000 -Code of Practice for Plain & Reinforced Concrete Structure.
2. IS -875 -1987 -Code of Practice for Design Loads.
3. IS -1893 -2002 -Criteria for Earthquake Resistant Design of Structure
4. IS -800 -1984 -Code of Practice for General Construction in Steel.

❖ Floods:

Particularly in Thane, areas having poor drainage characteristic get flooded by accumulation of water from heavy rainfall (extreme Situation).

Mitigation measures would be taken by Proponents to manage flood disasters:

- Storm water system would be checked and cleaned periodically
- Vulnerability of basement should be mapped
- Dewatering sump pumps shall be installed at four different locations
- Provision of Storm water drainage system with adequate capacity. These drains shall have silt and oil and grease traps to avoid pollution of water in drains outside the plot.
- SWD system shall construct as per the SWD.

❖ Cyclones:

Cyclones are caused by atmospheric disturbances around a low-pressure area distinguished by swift and often destructive air circulation. They are usually accompanied by violent storms and bad weather.

There is no history of any cyclone in this area. However, in such an instance the occupants should be advised to stay in the shelter in tightly secured windows and doors. The glass of windows etc. should be covered with paper/cardboards to avoid glass breaking due to flying objects outside.

❖ **Lightning:**

Lightning is an atmospheric electrostatic discharge accompanied by thunder which typically occurs during thunderstorms and sometimes during volcanic eruptions or dust storms. It often leads to physical damage to the building and occupants. It can also lead to short circuits, failure of power supply and fire.

Mitigation measure:

- Lightning arrestor systems shall be provided for entire project to abate the impact of lightning hazard.

II. Man Made Disaster

❖ **Bombs & Other Terrorist Activities**

Bombs can be constructed to look like almost anything and can be placed or delivered in any number of ways. The probability of finding a stereotypical- looking bomb is almost non-existent. The only common denominator among bombs is that they are designed to explode. Most bombs are homemade. Only the imagination of and the resources available to the bomber limit their design. When searching for a bomb, suspect anything that looks unusual. Let the trained technician determine what is or is not a bomb. Follow the checklist given below:

- Addressee unfamiliar with name and address of sender
- Improper or incorrect title, address, or spelling of name of addressee
- Handwritten or poorly typed address
- Return address and postmark are not from same area
- Excessive postage or unusual stamps used versus metered postage
- Special handling instructions on package (special delivery, to be opened by addressee only, foreign mail, and air mail, etc.)
- Restrictive markings (personal, confidential, etc.)
- Excessive securing material such as wrapping, tape, or string
- Oddly shaped or unevenly weighted packages
- Bulky, lumpy, or rigid envelopes
- Protruding wires or metal, strange odours
- Mail arrives before or after a telephone call from an unknown person who asks whether the recipient has opened it or who requests that he or she opens it

This is only a general checklist. When an item is in question, the best protection is to make personal contact with the sender of the package or letter but not to open it.

Mitigation Plan

➤ Safety Procedure

To cope with a bomb incident, it is necessary to develop two separate but interdependent plans. The bomb incident plan provides the detailed procedures to be implemented when a bombing attack is threatened or executed. A physical security plan, which is covered in detail in the next section, provides protection of property, personnel, facilities, and material against unauthorized entry, traces pass, damage, or other illegal or criminal acts.

To carry out these plans, a definite chain of command must be established to instill confidence and avoid panic. This is easy if there is a simple structure, or one business, in the building. However, in a multiple-tenant building a representative from each tenant should attend a planning conference. A leader—the Facility Manager, Security In-charge—should be appointed and a clear line of succession delineated. This chain of command should be printed and circulated to all concerned parties. There should also be a command center to act as a focal point for telephone or radio communications. The management personnel assigned to operate the center should have the authority to decide what action is to be taken during the threat. Only those with assigned duties should be permitted in the center, and alternates need to be appointed in case some-one is absent when a threat is received. In addition, an updated blueprint or floor plan of the building should be obtained and kept in the command center.

Contact the police department, fire department, or local government agencies to determine if any assistance is available for developing a physical security plan or bomb incident plan. If possible, have police or fire department representatives and building and tenant staff inspect the building for areas where explosives are likely to be concealed; make a checklist of these areas for inclusion in command center materials.

➤ Other Security Mitigation Measures to Reduce the Threat of Bombs

Controls should be established to positively identify personnel who have authorized access to critical areas and to deny access to unauthorized personnel. These controls should include inspection of all packages and materials being taken into critical areas, as well as the following:

- Security and maintenance personnel should be alert for people who act in a suspicious manner, as well as objects, items or parcels that look out of place or suspicious. Surveillance should be established to include potential hiding places (e.g., stairwells, restrooms, and any vacant space) for unwanted individuals. Designated patrols of such areas will assist in this endeavour.
- Doors or access ways to certain areas—mechanical rooms, switchboards and elevator control rooms— should remain locked when not in use. It is important to establish a procedure to keep track of keys. If keys cannot be accounted for, locks should be changed.
- Good housekeeping also is vital. Trash or dumpster areas should remain free of debris. A bomb or device can easily be concealed in the trash. Combustible materials should be properly disposed of, or protected if further use is anticipated.
- Detection devices may be installed at entrances to high-risk tenant areas, and CCTV should be used in areas identified as likely places where a bomb may be placed. This,

coupled with posting signs indicating that such measures are in place, is a good deterrent.

➤ **Responding to Bomb Threats**

Instruct all personnel, especially those at telephone switchboards, on what to do if a bomb threat call is received. It is always best if more than one person listens in on the call. To do this, a covert signalling system should be implemented, perhaps by using a predetermined signal to a second reception point.

A calm response to the bomb threat caller could result in obtaining additional information. This is especially true if the caller wishes to avoid injuries or deaths. If told that the building is occupied or cannot be evacuated in time, the bomber may be willing to give more specific information on the bomb's location, components, or method of initiation.

➤ **Vital Actions**

The person making the threat is the best source of information about the bomb. When a bomb threat is called in, the person taking the call should do the following:

- Keep the caller on the line as long as possible. Ask him or her to repeat the message. Record every word spoken by the person. (Some building managers and individual tenants may provide audio recorders for this purpose; others by policy do not)
- Pay particular attention to background noises such as motors running, music playing, and any other noise that may give a clue as to the location of the caller
- Listen closely to the voice (male or female), voice quality (calm or excited), accent, and any speech impediment. Immediately after the caller hangs up, report the threat to the person(s) designated by management to receive such information
- Report the information immediately to the police department, fire department, and other appropriate agencies. The sequence of notification should be established in the bomb incident plan
- When a written threat is received, save all materials, including any envelope or container. Once the message is recognized as a bomb threat, further unnecessary handling should be avoided. Every possible effort must be made to retain evidence such as fingerprints, handwriting or typewriting, paper, and postal marks. These will prove essential in tracing the threat and identifying the writer. Although written messages usually are associated with generalized threats and extortion attempts, a written warning about a specific device may occasionally be received. It should never be ignored.

❖ **Aircraft Collisions: Manmade disaster**

A building is vulnerable to the remote possibility that an aircraft flying off-course could collide with it or aircraft collide chances may occur. Obviously, the additional height, as compared with other structures, makes them more susceptible. To prevent such collide aircraft warning light shall be installed.

➤ **Aircraft Warning Lights**

- Aircraft warning lights are high-intensity lighting devices that are attached to tall structures that are used as collision avoidance measures. Such devices make

structures more visible to passing aircraft and are usually used at night, although they may be used during the day as well. These lights need to be of sufficient brightness in order to be visible for miles around the structure.

➤ **The lights generally come in two forms:**

- Red lamps that are either constantly illuminated or turn on and off slowly in a cycle of a few seconds.
- The luminaries will have an effective intensity of required candelas
- All luminaries will be supplied with minimum capacity required Volt A.C. powers connected to the emergency-maintained system.

b) Prepare Inventory of Resources (Rescue equipment, medical equipment for emergencies, ambulances, hospitals, NGOs and disaster management related material and personnel

- All the resources available in the building need to be listed out like: Fire Control System, Sensors.

Table 8-List of Inventory of Resources- Operation Phase

Sr. No.	Description	Resource	Location
1.	Rescue Equipment	Steel ropes, ropes, chains, harness, torches, radium signal & symbol sign boards, Walky talky, dust masks, tyres, Hammer, shovel, spade, mud pan etc.	At Society Office shall be provided.
2.	Medical Equipment's for emergencies	Wheel chairs, Stretchers, first aid box containing general medicines and equipment's	First aid box also provided in Security room.
3.	Other emergency tools	Spare Fire extinguishers, hydraulic jacks, crab winch, pulleys	At Fire control room at Stilt floor level.
4.	Other basic utilities and needs	Plastic bucket, plastic glass, plastic plates, blankets, some utensils and required food grains	At Fire control room and Society office room
5.	Other details of the building configuration	Total number of floors in the building The total number of rooms in the building Open areas where evacuation is possible Stairs and lift's locations and uses Open verandas and roof tops	Appropriate info will be displayed at each floor and same sheets will also be kept in Fire control room & Society office for use during emergency. Appropriate signs and symbols will be displayed on each floor for evacuation & exit

- **Document Inventory:**

- 1) Safe work manual for electrical repairs 2) SOP for inspection of Gas pipe line 3) Periodic checks of Active fire protection systems 4) Ambulance and Hospitals contacts nos. will be maintained in register

c) Maintenance of systems/ equipment necessary for tackling disaster

- All the lifesaving appliances such as Fire extinguishers, Alarm & Public address system to be maintained properly and effectiveness of these should be checked during Mock Drill.

d) Warning Systems

- Facility Manager will announce audio warning in case of fire, lightning or likely flood situation. Each Office/occupants will be informed by Security section for preparation by telephone.
- Sirens would be tested at noon on the first Saturday of each month. If you hear the sirens at any other time, then following steps should be taken:

Shelter	Go to nearest shelter to avoid exposure
Shut	Shut doors and windows. Building ventilation systems should be shut off if possible
Listen	Go to near the information source for building emergency information

➤ **Fire, Warning system & Mitigation measures**

- Fire shall be caused mainly due to negligence, short circuits and malfunctioning of gas regulator, tube and such related products. Hence, all the electrical works and material of the building would adhere to the standards. Fire extinguisher equipment would be evaluated periodically to ensure that it is in working conditions by security manager. If any faulty equipment is observed, then it would be repaired or replaced by Society. The map for the evacuation plan would be provided to all the occupants.

➤ **Fire Alarm & Detection System (For each wing)**

- The Building shall be provided with intelligent analog addressable fire alarm system with microprocessor based main control panel at ground floor and addressable call points and hooters at each floor level. The design of fire alarm system shall be in accordance to relevant I.S. specification and based on NFPA 72 guidelines.
- The addressable fire alarm system shall be equipped with the latest evacuation features such as Digital voice evacuation capabilities, firefighting telephone system, directories etc.

e) Devise system for two-way communication with the affected persons in the building especially in lifts and rooms

- The entire building shall be provided with the public address system as per the rules.
- Internal Phone in Lift will be available.

f) Organize extensive training for disaster managers and assistants

- **Training Program:** Regular mock drill will be conducted and same will be reported to Disaster Management Committee

Table 9 : Safety Drills and Maintenance Needs updates

Sr. No.	Types of Drills	Frequency of drill	Who must attend	Date of drill and any issues: Log book
1	Earthquake safety	6 months	All occupiers	Log book
2	Fire safety	3 months	All occupiers	Log book
3	Fire and any other equipment maintenance	3 months	Security	Must report to Security In-charge and maintain a log book
4	Lift security	3 months	Security, Maintenance & Service manager	Must report to Security In-charge and maintain a log book
5	Water management	3 months	Security, Maintenance & Service manager	Must report to Security In-charge and maintain a log book
6	Safety kit check	6 months	Security, Maintenance & Service manager and Members.	Maintain Log book

Mock drills are conducted to train building occupant and to test the various elements of your response plan in order to evaluate and revise it. During a disaster, life-protecting actions must be taken immediately. There will not be time to decide what to do next; everyone must already know how to react appropriately. After a disaster, further life protecting actions such as emergency evacuation or first aid administration may be necessary. Drills and exercises are an extremely important part of the preparedness plan because they

- Teach the occupants of a building how to respond to the complications of an actual disaster
- Helps to evaluate how well all parts of the emergency plan work together and how well the occupants have been trained

➤ **Earthquake**

- Follow the mitigation plan as given in Earthquake section of this DMP
- Practice drop, cover, and hold
- Evacuate building in less than 4 minutes using different exits
- Look out for colleagues, friends, etc.
- Stay away from weak areas
- Help those who need assistance

➤ **Fire / Chemical Accident / Drill**

- Follow the mitigation plan as given in Fire & Fire Alarm section of this DMP
- The need to prepare for sudden accidents needs awareness and sufficient knowledge
- To know Why and how to handle an accident is important
- Information
- Practice mock drills every month

➤ **Flood Drill**

- Follow the mitigation plan as given in Flood section of this DMP
- Listen to flood warning and recognize changes in weather
- Make announcements about precautionary measures
- Provide food, water, sheets, and beds in the place where people will assemble
- Explain how to remain safe outdoors
- Shift money and other valuables
- Put off electricity
- Remove or close down gas connections

iii. Response Plan

a) Identify site disaster manager for handling disaster with clearly enumerated functions

- Facility Manager will operate building with clearly enumerated functions during operation phase from Society office room located at stilt floor level

M/s. Gopal Sons selects a Site disaster manager for handling disasters with clearly enumerated functions by keeping in view the following qualification

Qualification required for Disaster Manager (Facility Manager) to be selected and appointed

- Must be trained in civil defence
- Should have knowledge about human management
- Should have Technical knowledge about Fire Fighting
- He should know local language to contact mutual help from Fire, MSEDCL. Police Hospital, Nearby NGO, Industries etc. Officials

Sr. No	Designation for DMP	Operation Phase
		Designation /Agency /Group
1	Site Main Controller	Facility Manager
2	Site Incident Controller	Security In charge
3	Emergency Coordinator	Security Manager
4	Supervisor	Fire & Safety staff
5.1	SAR Team	watch & ward personnel, Police, fire brigade; Agencies sent by district disaster control room such as Civil defence, NDRF, medical team, home guard etc.
5.2	Engineering Team	Manger (Maintenance & Services) Pump operators, Electricians

5.3	Advisory Team	Active past committee members
6	All Others at Site	shops Occupants, Visitors

iv. Control Room

a) Earmark a specific area to function as control room for disaster management

- Provision Fire control room at at stilt floor level of residential building.
- Provision of Society Office room shall be provided.
- Provision of Security room at entry/exit gate of residential building.

Surveillance Security System (SSS):

At project site CCTV at common areas & lobby with 24-hour DVR backup, will be provided. The controlling & processing of CCTV in common areas should be performed through a web-based management system on a separate Ethernet network in the building. Main operation work space shall be in the back building Society office room.

b) Display proper maps Telephone nos. of disaster controlling authorities showing fire fighting equipment, refuge floors, sprinklers system etc.

➤ Safeguard Requirements for Natural and Manmade Disasters:

- List of nearest clinics and hospitals shall be maintained for medical emergency as also any other eventuality. The table below will be ready and will be distributed to all members within the building and later for off-site plan to neighbourhood. These information need to be updated every six months before safety drills. The information thus updated should also be shared with occupants.
- **Emergency Contact Numbers**

Hospital		
Details	Distance km	Contact Nos.
Neptune Superspeciality Hospital	2.10	8425841002
Life care hospital	2.87	77385 02867
Hardikar hospital	3.05	20 4109 5000
ICON hospital	3.09	8425847412
Police Station		
Kalyan shil police station	3.18	9821448909
Manpada police station	3.27	02512470104
Fire Station		
Manpada fire station	3.19	912512470357
MIDC fire station	6.28	912512315101

➤ Fire fighting equipment, fire extinguishers, sprinklers system etc.

Hazard occurrence may result in on-site implications like:

- Fire and/or explosion through electric fire;
- Leakage of flammable material and leading to fire;

The following are the types of fire protection system proposed for all building premises as per NBC 2005 – Part IV Fire and Life Safety & Local Fire Authority Norms.

- Trained Security staff & fire staff shall be posted on duty at strategic location around the clock.
- Security / fire staff shall be trained in evacuation procedure & use of fire fighting equipment.
- An alternative source of L.V/H. V supply from separate substation as well as diesel generator with changeover switch shall be provided for fire pumps, fire lifts, staircase, corridor lightening circuits, sprinkler pump, jockey pump, fire alarm & fire detection system, integrated system, voice evacuation system, public address system. It shall be housed in a separate cabin.
- The entire building shall be provided with proper standard signage.
- Appropriate fire detection system shall be installed in lift lobby and common corridor.
- Access control system, close circuit cameras shall be installed in the entire building & connected to CCTV & security control at ground.
- L.P.G/P.N.G. detector system shall be installed in every kitchen area flat of each wing.

➤ **Type of Systems Proposed:**

Following are the various Fire Protection systems proposed:

- **Fire Fighting Tank:**
 - Overhead fire fighting tank has been provided at the terrace level of each wing. The tank shall be connected to wet risers through a booster pump through a non-return valve & gate valve.
 - Underground water storage tank shall be provided for project as per the design specified in the rules with baffle wall and fire brigade collecting breaching
 - One separate common underground water storage tank shall be provided for sprinkler system.
- **Pumping System:**
 - Wet riser shall be connected to a fire pump at ground level
 - Booster pump shall be provided at the terrace level.
 - A sprinkler pump of suitable capacity along with jockey pump shall be provided for sprinkler system.
 - Electric supply (normal) to these pumps shall be on independent circuit.
 - Separate jockey pump shall be provided to wet riser system to keep system pressurized.
 - All the pump shall be as per TAC norms or as per NFPS-20 compliances.
 - Diesel pump shall be provided as stand by pump as per NBC.
- **Wet riser cum Down comer**
 - Wet riser cum down comer of internal diameter of 15 cm. of G.I. "C" class pipe shall be provided in the duct adjoining the lift lobby at each wing with double hydrant outlet & hose reel at each floor in a such a way as not to reduce the width of the common corridor/ staircase. Pressure reducing discs or orifice shall be provided at lower level, so as not to exceed the pressure of 5.5 kg/sq. cm.

- Wet riser outlet and hose reel shall be provided at a distance of 100 ft. in the basement and on all podium floors.
- **Fire Service inlet**
 - A fire service inlet on the external face of the building in entire building near the tank directly fronting the courtyard shall be providing to connect the mobile pumps of the fire service to the wet riser separately.
 - Breeching connection inlet shall be provided to refill U.G fire tank.
 - Operating switches of fire pumps shall be also being provided in glass fronted boxes at ground floor.
- **External Hydrant System (For each wing)**
 - Courtyard hydrants in the basement, ground and all podium floors shall be provided at distance of 30 meter around the building as well as at the top of the podium level within the confines of the site on the wet riser at locations marked on the plan.
- **Smoke detector**
 - Automatic smoke detection system shall be provided in electric meter room& lift machine room, control /BMS room and in electric shaft at every floor level with response indicator: same should be connected to main console panel on ground floor level in BMS Room, as per IS specifications.
- **Fire Sprinkler Systems**
 - The Automatic sprinkler system shall be provided in entire building on every floor, in lift lobby& common corridor at each floor level of each wing, car parking area in the basement, ground floor on stilt & podium floor and in each flat on each floor of each wing, club house; as per the standard laid down by TAC or relevant I.S. Specification.
- **Drencher System (For podium floors & fire check floors of each wing)**

Drencher system should be provided on the periphery of podium floors & check floors of each tower and should be connected to the main sprinkler pump as per the standard laid down in relevant I.S. specifications.
- **Fire Drills/ Evacuation Drills**

Fire Drills and evacuation drills shall be connected regularly in accordance with fire safety plan of building at least once in a three month in consultation with Thane Fire Brigade and log of the same shall be maintained.
- **Provided fire check floors**

Refuge area of minimum ¼th of maximum floor area will be provided in front & conspicuously marked for identification located after 24 m, 39 m and every 5th floor thereafter. Refuge area parapet wall and railing to be painted n red color and a bold “Fire refuge area” board of min. 5ft x 3ft painting prominently to be display. Fire resistance door (with frame & accessories) of min 120 min. (45 mm thick) to be fitted for refuge area.

- **Portable Fire Extinguishers**

Portable fire extinguishers are intended as a first line of defence to cope with fires of a limited size. They are needed even if the property is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment. The fire protection guidelines are general in nature and are not intended to abrogate specific requirements of other codes and/or policies and procedures. The following general rules apply to most facilities:

- A fire extinguisher must be within 75 feet travel distance to any area of a building (does not have to be in a room). Travel distance cannot include stairs, steps, or locked doors
- Fire extinguishers must be of the appropriate type for the area. For this reason, fire extinguishers must be removed, relocated, purchased, serviced, and installed by the building's fire equipment technicians
- Fire extinguishers must be visible or signs posted to identify location. Access to fire extinguishers cannot be obstructed.

Portable fire extinguishers are provided at locations mentioned below,

- One dry chemical powder ABC type fire extinguishers of 09 kg capacity having ISI certification mark and two bucket filled with dry, clean sand shall be kept in electric meter room as well as in lift machine room.
- One dry chemical powder ABC type fire extinguishers of 09 kg capacity having ISI certification mark and two sand buckets filled with dry cleaned sand shall be kept at each basement, ground each level of podium for every 100 sq. mt. area.
- One dry chemical powder type fire extinguishers of 06 kg capacity having ISI certification marked shall be kept on each floor level at prominent places & refugee area.
- One dry chemical powder fire extinguishers ABC type of 06 kg capacity each shall be kept for every 100 sq. mt. Area in the basement
- All above fire extinguishers should be placed on each floor level as per IS: 2190 of 1992

- **Emergency escape route plan**

- Emergency exit route plan framed in glass shall be displayed in the common corridor, cross passages, staircase/lift lobbies of each floor level.
- A set of all floor plans shall be kept in the Fire control rooms.

- **Leakage of LPG without fire:**

Cordon off the area around 30 meters' radius so that no vehicle or source of ignition approaches the area. Attempt must be made to close the control/ manual valve.

- Open all windows to increase ventilation and hence prevent build-up of vapour cloud. Avoid getting entrapped in the cloud vapour
- Water sprays should be used to disperse the vapour cloud
- Warn the surrounding areas to put off all naked flames

➤ Power Failures

Failure of electrical power to building will have a serious impact on its operations, particularly if the failure occurs during normal operating hours when the building is fully occupied. A power failure may be a brownout (a partial reduction in service) or a total blackout.

Power failure can be caused either by man-made or natural events. Man-made causes may include drivers who collide with utility poles or power transformers, human error in operating equipment within the building or outside it (such as at the utility company supplying the power), or malicious tampering. Natural events include storms, floods, and earthquakes.

Power failures also can cause computer memory loss and equipment damage. If the power loss is anticipated, computers and computer systems can be shut down before it occurs. If no prior notice is received, the equipment should still be turned off as quickly as possible to avoid potential serious damage to the electrical system from the sudden surge of power when it is first restored. Computer systems, particularly mainframes, often are equipped with an uninterruptible power supply (UPS); and personal computers often are equipped with surge protectors to reduce the chance of damage when power fluctuates, surges, or is lost.

Buildings have emergency and standby power systems to provide safety and comfort to building occupants during interruptions in their normal power supply. These systems also provide power to operate building communication systems and to provide a minimum number of elevator functions. Both functions are critical to buildings during power failures.

- **Power failure backup**

Emergency power systems are a type of system, which may include lighting, generators, fuel cells and other apparatus, to provide backup power resources in a crisis or when regular systems fail. Emergency power systems can rely on generators, deep cycle batteries, and flywheel energy storage or hydrogen fuel cells.

- **Emergency Power Backup:**

1 DG set of capacity 100 KVA & 2 DG Set of capacity 400 KVA and capacity 630 KVA will be provided. The diesel generator will backup common area lighting, lobbies, staircase & lifts etc. Emergency backup for the (Common loads, Environmental management facilities) essential load will be provided.

The generating capacity to be installed will provide Essential power requirements of all systems/services. Auto Mains Failure (AMF) scheme is proposed for DG Sets.

- **Notes:**

Ratings of D.G. sets will be reviewed after finalization of all designs and before inviting tenders.

It is proposed to install emergency backup only for Essential loads using Diesel Generating Sets for supply of power when mains power is not available.

- **Maintenance of the DG:**

The vendor will provide the AMC for 3-5 Years as a part of contract. On expiration, the AMC will be renewed on annual basis.

- **Uninterruptible power supply (UPS)**

An uninterruptible power supply, also uninterruptible power source, UPS or battery/flywheel backup is an electrical apparatus that provides emergency power to a load when the input power source, typically the utility mains, fails. A UPS differs from an auxiliary or emergency power system or standby generator in that it will provide instantaneous or near-instantaneous protection from input. This will be used to backup important server and computer system.

b) Display evacuation plan in times of disaster

➤ **Evacuation**

- Stay calm; do not rush or panic
- Safely stop your work
- If safe, gather your personal belongings; take prescribed medications with you
- If safe, close doors and window but do not lock them
- If in parking lot, immediately park your car so that the access to other vehicles as well as people are not hampered and proceed to the nearest exit by staircase or as guided.
- Location of all exit corridors, exit stairs and exit serving the building would be marked and provided during commissioning stage.
- An evacuation team consisting of building management, the building Facility Manager, security, Security In-charge, and floor response personnel should be organized and trained. This should be coordinated with all building tenants and designed in conjunction with developing the bomb incident plan. The team will be trained in how to evacuate the building during a bomb threat. The order in which to evacuate—for instance, by floor level should be established.
- Evacuate the floor levels above and below the danger area to remove occupants from danger as quickly as possible. Training in such an evacuation usually is made available by building management, with advice supplied by local law enforcement and the fire department.
- The evacuation team also may be trained in search techniques, or there may be a separate search team. Volunteers should be sought for this function; however, Security In-charge, search monitors, and the like could be assigned to the task. To be proficient in searching the building, search personnel must be thoroughly familiar with all hallways, restrooms, false ceiling areas, and other locations in the building where an explosive or incendiary device could be concealed. Thus it is extremely important for the evacuation or search team to be thoroughly trained and familiar with both the inside of the building and immediate outside areas. When a room or particular area has been searched, it should be marked or sealed with a piece of tape and reported as clear to the appropriate supervisor.
- The team will be trained only in evacuation and search techniques and not in the techniques of neutralizing, removing, or otherwise having contact with the device. If a device is located, it should not be disturbed. However, its location should be well marked and the route to it noted

- **Fire Engine Access Movement**

The site layout & Fire Engine Movement has been shown, for the site.

An adequate space has been provided to escape and access for fire-fighting equipment and vehicle.

- **Demonstration/ Civil Disturbance Procedures**

Most demonstrations are peaceful and if one is conducted near or in your building, carry on work as usual. Avoid provoking or obstructing demonstrators. Should a disturbance occur, call Police for assistance.

If protestors enter your building, let them. Try to carry on work as usual. If the noise becomes too loud, or the crowd too large, feel free to close and lock your podium gate– this decision needs to be taken by society manager or managing committee of society in conjunction with local police authority only. Proceed to the EAA and wait for additional instructions.

- c) **Prepare and disseminate pamphlets on each disaster for occupants covering Do's and Don'ts for each type of disaster**

- Do's & don't in Flood/earthquake /fire are given in Standard Operation Procedure attached to DMP.

- d) **On-Site Disaster during Operation Phase**

- a) **Site disaster manager to take charge and give guidance over public address system**

- Facility Manager will take charge and give guidance over public address system during operation phase from Fire control room.

- e) **Call for outside assistance of fire brigade, Hospitals, ambulances**

- f) **Networks with state, district and ward level control rooms**

- The response structure given in the ward plan essentially limits itself to micro-level intervention. When more than one ward is affected, Mumbai Metro Region. Control room which is the co-ordinating authority, would expect the ward officers to co-ordinate the activities at the ward level with the line agencies such as Fire Brigade, Police etc. The responsibilities for all the ward level functionaries have been identified by Mumbai Metro Region.

- g) **Ensure adequate warning before switching off power**

- All announcements will be done with good quality equipment's.
 - Switching off power will be done only after having current status of the all building facilities from concern In-charge.
 - With the help of CCTV camera will confirm that if any trapped in basement & lift during the disaster
 - Parking In-Charge and lift man will ensure that no occupants are trapped inside the building and Security In-charge will confirm with Parking In-Charge and lift man

- Emergency Electrical switch is at the meter room will be operated by only authorized person under instruction of Security In-charge

h) Assure occupants of continuous communication and take all, measures to keep up their morale

- Periodical mock drill will be arranged by the Facility Manager / Security In-charge
- Through training & info will be given to occupants about the available rescue sources, rescue plans
- Assurance will be given to occupants that evacuation will be done by trained volunteers, so occupants will be trained that how to co-operate with volunteer during disaster

i) Guide occupants on the steps being taken for evacuation in systematic manner

- This requirement will be handled by dedicated trained volunteers
- In case lift power supply is shutdown all the lifts will stop at floor level and door will automatically open.

Procedures for people during emergencies:

- By law building occupant may be required to evacuate when the fire alarm is raised
- For floors beyond 10, evacuation has to be done to the nearest refuge area through staircase exit only
- The floor diagram will be provided to every floor which can show the entry and exit during evacuation
- Proper sign showing the exit route, Primary evacuation routes leading to the designated assembly point (solid lines) would be provided
- Use the nearest stairs and proceed to the nearest exit. Do not use the elevator
- If in parking lot, immediately park your car so that the access to other vehicles as well as people are not hampered and proceed to the nearest exit by staircase or as guided
- Duck under the nearest sturdy object and hold onto it until tremors stops. If you are not near a sturdy object, make yourself as small as possible and cover your head and neck when earthquakes occur.
- In case of fire, move away from fire and smoke. Close doors and windows if time permits. Touch closed doors. Do not open them if they are hot

Procedures for people with disabilities during emergencies:

In all emergencies, after an evacuation has been ordered:

- Evacuate people with disabilities if possible
- Do not use elevators, unless authorized to do so by police or fire personnel. Elevators could fail during a fire or a major earthquake
- Check on people with special needs during an evacuation. A “buddy system”, where people with disabilities arrange for volunteers (neighbours) to alert them and assist them in an emergency, is a good method

- Attempt a rescue evacuation ONLY if you have had rescue training or the person is in immediate danger and cannot wait for professional assistance
- Always ask someone with a disability how you can help BEFORE attempting any rescue technique or giving assistance. Ask how he or she can best be assisted or moved, and whether there are any special considerations or items that need to come with the person

j) Take steps to reduce/ eliminate panic

- Periodical training to internal volunteers & members.
- Periodical mock drills to all occupants, members, volunteers
- Evacuation assurance to occupants by trained personals or external force volunteers during emergency

k) Liaise with law-and-order machinery

- Facility Manager after occupancy of project will liaise with police Fire Brigade, Civil Defence, etc.

c) Preventive Measure

- Arrangement of periodical training for each disaster & equipment
- Provided Fire detection & fighting systems
- Automation will be there for warning system
- 24x7 fully trained Security staff
- One Copy of SOP to all Occupants
- Do's & Don'ts template at designated location of each buildings
- Preventive maintenance to all machineries & equipment
- Tagging of date for last preventive maintenance on every emergency equipment
- Video & evacuation training to volunteers for emergency

a) Regular inspection of equipment and systems mandated by Chief Fire Officer in the NOC granted

- Regular inspection will be carried out by competent and dedicated engineer of O&M employed contractors at regular intervals for all kinds of equipment & system
- Preventive maintenance will also be carried out after checking equipment during a mock drill.

b) Scrupulous adherence to approved plan of building and protection of system put in place to handle disaster

- No violation or changes will be done
- In Operation stage at the time of entry, emergency preparedness plan's training shall be conducted and reoriented after every drill conducted

c) Regular maintenances of equipment and systems

- Periodical maintenance will be carried by certified, competent and skilled employed contractors at regular intervals.

- Maintenance of lift will be done at regular intervals by the lift company who will install the lift.

Cost towards Disaster Management Plan:

During Construction Phase: Set up cost: Rs.113.60 Lakh
O&M cost: Rs. 34.08 Lakh/annum

During Operation Phase: Set up cost: Rs. 17.04Lakhs
O&M cost: Rs. 5.11 Lakh/annum

Table 10 : Cost during Construction & Operation Phase

INVENTORY OF RESOURCES FOR BUILDING		DMP cost in Lacs			
Sr No.	DMP RESOURCES	Construction Phase		Operation Phase	
		Capital	O & M/Year	Capital	O & M/year
1	Fire/Explosion protection				
	Fire detection and alarm system	9.54	2.86	1.43	0.43
	Smoke detection and alarm system	√	√	√	√
	Flammable Gas detection and alarm system	√	√	√	√
	Fire hydrant system				
	Portable Fire extinguishers :DCP, Foam, ABC type, sand buckets	4.77	1.43	0.72	0.21
	Under ground fire water tank	6.8	2.0	1.0	0.3
	Overhead fire water tank	√	√	√	√
	Header and Single Head Hydrant Valve (External)	9.54	2.86	1.43	0.43
	Header and Single Double Head Hydrant Valve (Internal)				
	Fire Hose Reel				
	Fire Hose Box.				
	Fire pump house				
	Main Hydrant Pump (HP) .2850LPM@ Mtr Head				
	Main Sprinkler Pump (SP). 2850LPM@ Mtr Head				
	Diesel Pump (DP).2850LPM@ Mtr Head				
	Jockey Pump (JP).180LPM@ Mtr Head				
	Booster Pump (BP).900LPM@ Mtr Head				
	Automatic water sprinkler system				
	Air Pressurization system	√	√	√	√
	Fire doors 2 hrs fire resistance type	0.63	0.20	0.10	0.03
	DG set for Emergency power	2.73	0.82	0.41	0.12
	Mechanical Ventilation system				
	Fire check floors	√	√	√	√
	Fire lift	√	√	√	√
	Paved court yard to carry the fire tender load	√	√	√	√
	Fire stopping cable ducts penetration	√	√	√	√
	Fire control room	√	√	√	√
	TOTAL	34.08	10.22	5.11	1.53
2	Security threat protection				
	CCTV security system	9.54	2.86	1.43	0.43

	Compound wall	13.08	5.73	2.86	0.86
	Emergency control centre	3.18	0.95	0.48	0.14
	TOTAL	31.81	9.54	4.77	1.43
3	Evacuation resources				
	Personnel Protective Equipment's (PPE)*	13.63	4.09	2.04	0.61
	Search & Rescue kit**				
	Safety Sinages & Symbols***				
	DMP (Operating manual)fire audit, fire fighting and first aid Training, Mock Drill, Fire Drill, Safety Awareness Program, Inspection				
	Watch and ward/fire & security staff				
	Refuge floors				
	Stretcher lift				
	Voice evacuation system				
	Mechanical Evacuation system				
	Escape chute				
	TOTAL	13.63	4.09	2.04	0.61
4	Cyclone protection				
	Lighting arrestor	6.82	2.04	1.02	0.31
	Height indication light				
	TOTAL	6.82	2.04	1.02	0.31
5	Earth quake, land slide protection				
	Earth quake resistant design & construction	17.04	5.11	2.56	0.77
	Structural Audit				
	TOTAL	17.04	5.11	2.56	0.77
6	Flood protection				
	Storm water drain of adequate capacity	4.60	1.38	0.69	0.21
	Dewatering pumps	3.07	0.92	0.46	0.14
	Life jackets	2.56	0.77	0.38	0.12
	Retaining wall	√	√	√	√
	TOTAL	10.22	3.07	1.53	0.46
	GRAND TOTAL	113.60	34.08	17.04	5.11

Note: Above costing is estimated cost.

Summary:

Prepare occupants in your building ahead of time for emergency evacuations. Know your building occupants. Awareness of the needs of people with disabilities and to know how to offer assistance. Hold evacuation drills in which occupants participate, and evaluate drills to identify areas that need improvement. Plans must cover regular working hours, after hours, and weekends. Everyone needs to take responsibility for preparing for emergencies. People with disabilities should consider what they would do and whether they need to take additional steps to prepare. "Emergency Guidelines for People with Disabilities" may be available from your Building Coordinator.

Conclusion:

M/s. Manusrushti Environmental Consultancy appoint the certified contractor who will periodically review and update the Disaster Management Plan and will take the initiative to institutionalize the relationship between all Emergency Security and Rescue Forces (e.g. Police, Municipality, Fire Brigade, Medi-Care Centers etc.)



ENERGY SAVING CALCULATION

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Construction Phase

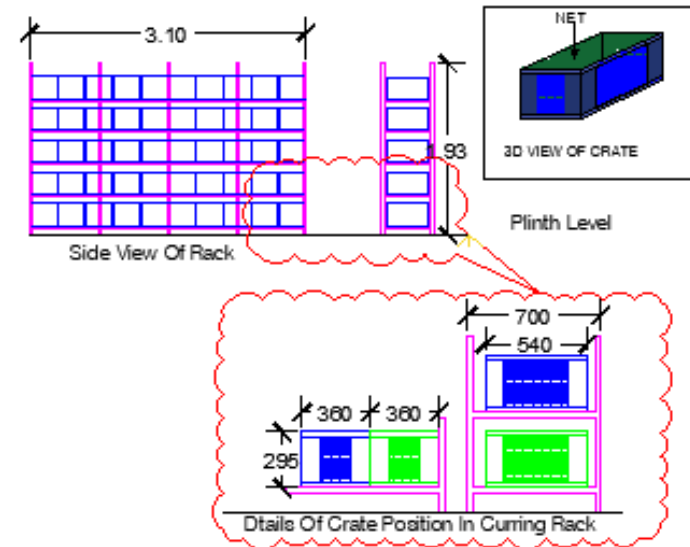
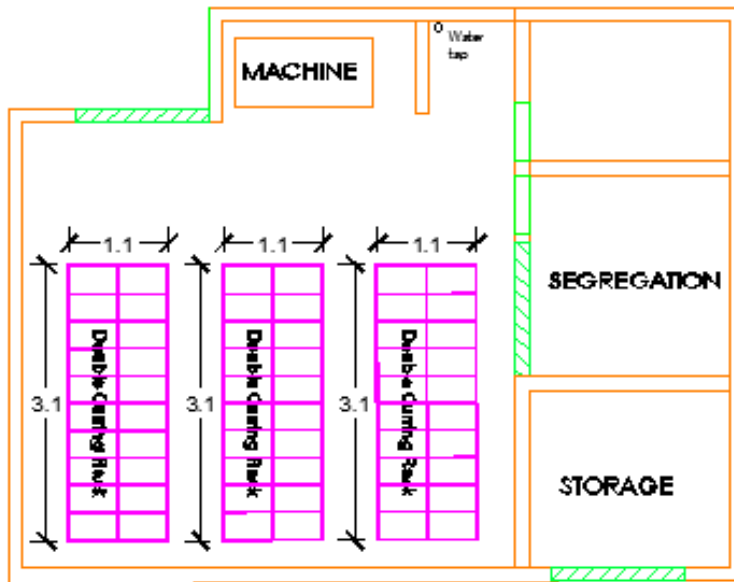
Waste	Quantity (kg/day)	Management
Biodegradable Waste Generation by Workers	45	Handed over to KDMC by daily collection system
Non- Biodegradable Waste Generation by Workers	30	Will be segregated and Handed over to Authorized recyclers

Operation Phase

Waste	Quantity (kg/day)			Management
	Total			
	Wing A & B	Wing C &D	Total	
Biodegradable	675	277	953	Wet garbage treatment in 2 OWC's of 700 Kg and 300 kg capacity
Non- Biodegradable	459	188	647	Handed over to Authorized recyclers
TOTAL	1134	466	1600	
E-waste (Kg/Yr.)	1152	473	1625	Handed over to Authorized recyclers
STP Sludge (kg/day)	54	22	76	Will be treated in OWC and then used as manure.



SECTION OF OWC



OWC PLANT

Machine	Curing Rack
BWC 130	3 Nos. Double

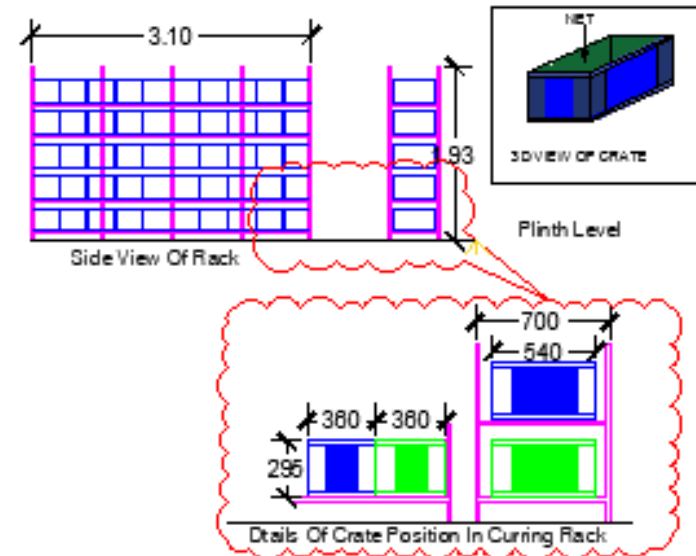
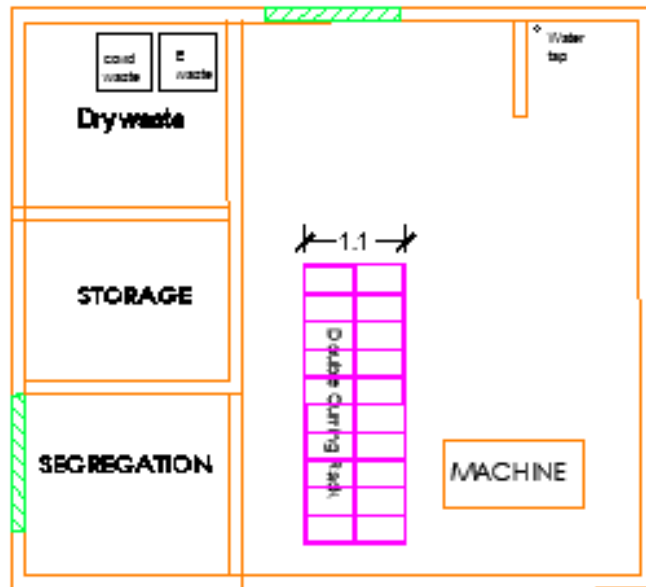
NOTES:

1. Three phase power connection required with proper earthing connection
2. cross ventilation is must in shade, if not possible then proper exhaust duct should be provide
3. Provide water connection and water tap

Actual Photos of Machine



SECTION OF OWC



OWC PLANT

Machine	Curing Rack
BWC 30	1 Nos. DOUBLE

NOTES:

1. Three phase power connection required with proper earthing connection
2. cross ventilation is must in shade, if not possible then proper exhaust duct should be provide
3. Provide water connection and water tap



Organization & Environment Management Cell

1.1 During Construction Phase:

No.	Designation	Qualification	Facet	Responsibility
1	Project Manager/ Site Manager (During Construction Phase)	B. E. (Five years' experience)	Construction Phase – Site in-charge	Material waste minimization, labour camp sanitation, Noise, oil grease & vibration nuisance control, accident prevention.
2	Environmental Coordinator (During construction Phase)	M. Sc. / M. Tech. (Environmental Science) Two years' experience in Environmental Monitoring and reporting.	Air	Monitoring PUC control, Noise & odour mitigation measures
			Water	Water budget, O&M of water supply & Monitoring functioning of waste water treatment plant.
			Solid waste	Monitoring Segregation, collection, composting & disposal
			Greening	Monitoring tree plantation, Lawn development, storm water management
			Monitoring	Field observation, Laboratory tests, interpretation & reporting.
			Compliance Reporting	Six monthly post EC compliance and State Pollution Control Board consents
			Public relation & Press	Documentation, training
3	EHS Officer/	Industrial	Environment	Operation and sampling of

	Safety officer- 1 No	Environment Health and safety Diploma holder with site specific 2 years of Experience	control equipment operation and sampling	environmental facilities and reporting to Environmental Coordinator
4	EHS team member – 1 no.	B.Sc. Equivalent	Solid waste & housekeeping	Collection of solid waste & overall maintenance

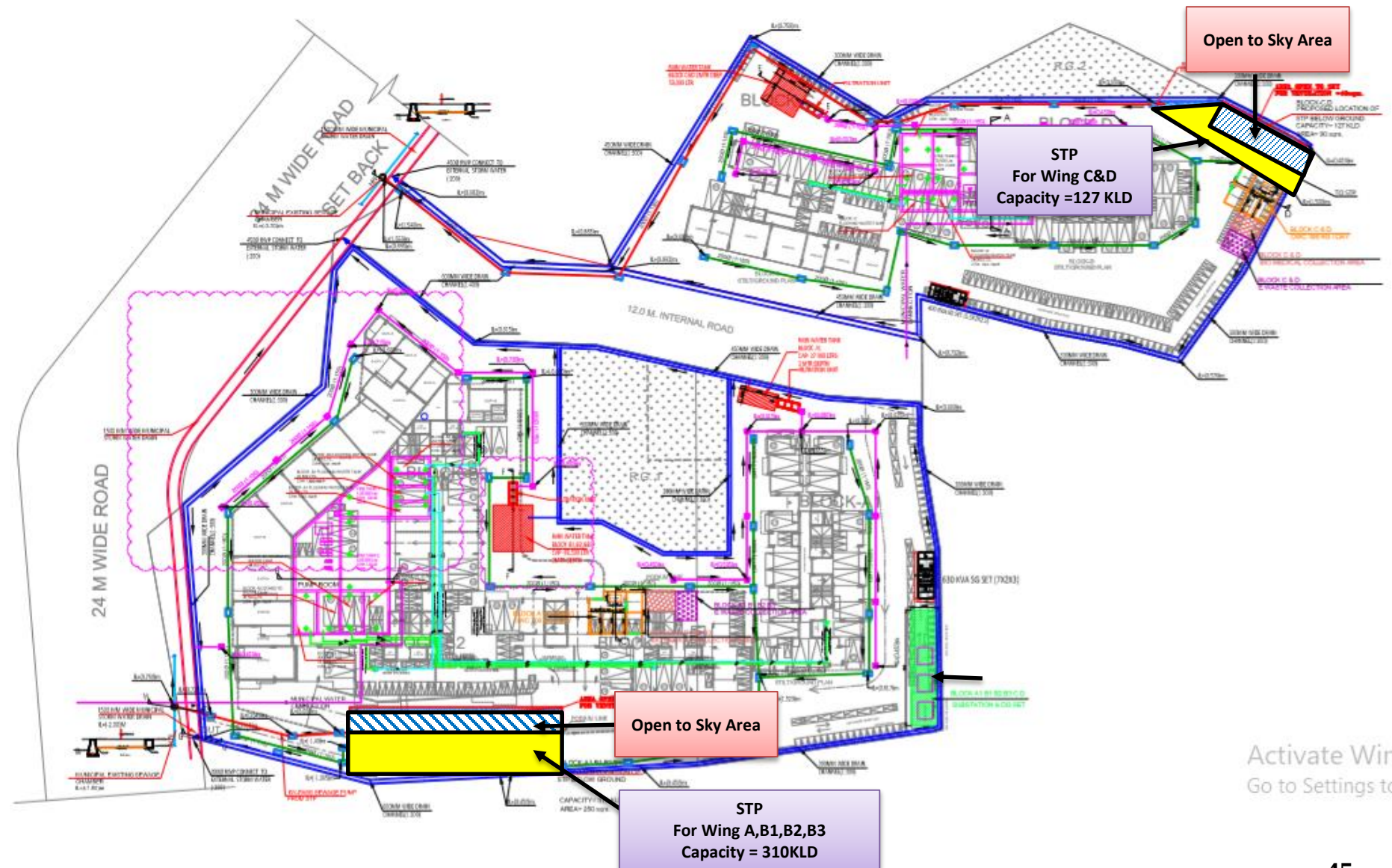
1.2 During Operation Phase:

No.	Designation	Qualification	Facet	Responsibility
1	Management Representative	Society representative	Environmental Issues	Top management personnel responsible for environmental issues and decisions related to environment.
2	Environmental Coordinator (Society representative)	Graduate Mostly from Science background	Air	Monitoring PUC control, Noise & odour mitigation measures
			Water	Water budget, O&M of water supply & Monitoring functioning of waste water treatment plant.
			Solid waste	Monitoring Segregation, collection, composting & disposal
			Greening	Monitoring tree plantation, Lawn development, storm water management
			Monitoring	Field observation, Laboratory tests, interpretation & reporting.
			Compliance	Six monthly post EC

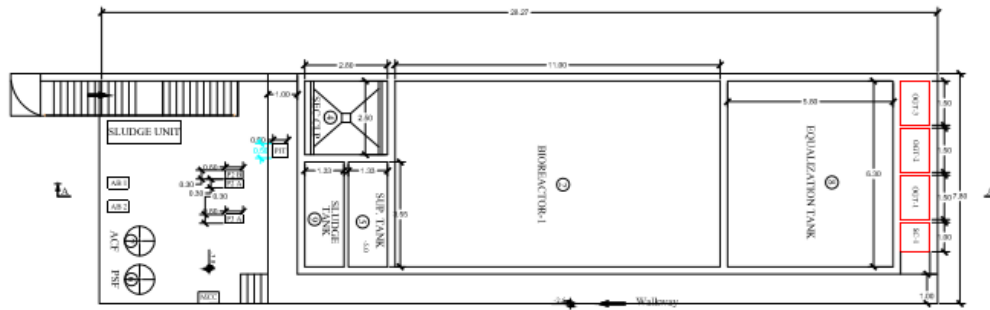
			Reporting	compliance and State Pollution Control Board consents
4	Operators – 2 No.	B. Sc. equivalent	Environment control equipment operation and sampling	Operation and sampling of environmental facilities and reporting to Environmental Coordinator
5	Field workers – 2 nos.	NA	Solid waste & housekeeping	Collection of solid waste & overall maintenance

LOCATION OF STP

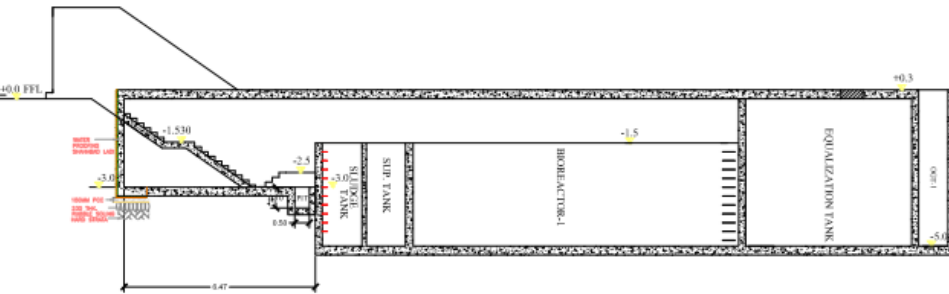
Annexure No. 15



MBBR STP LAYOUT & SECTION PLAN

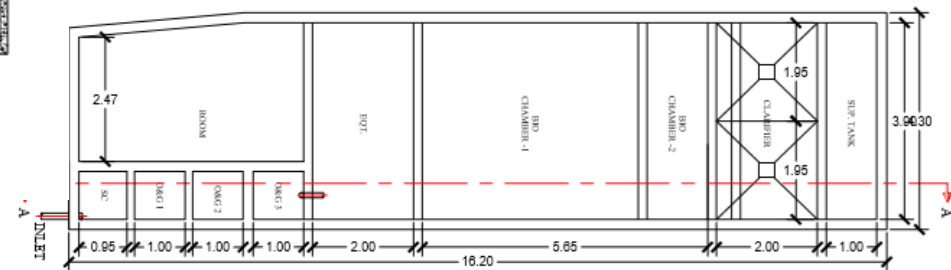


PLAN AT -1.5 LEVEL



SEC - AA

310 KLD STP LAYOUT AND SECTION



SECTION A-A

127 KLD STP LAYOUT AND SECTION

ENVIRONMENTAL MANAGEMENT PLAN



DURING CONSTRUCTION PHASE

Annexure No. 16

Sr. No	Attributes	Parameter	Total Cost per annum (Rs. In Lakhs)
1	Air	Water for Dust Suppression, Air & Noise Monitoring	3.34
2	Water	Water monitoring/ wastewater monitoring	4.15
3	Land	Portable STP	7.5
4	Biological Environment	Top soil preservation cost, Cost of transplantation of trees	1.49
5	Socio- Economic Environment	Disinfection- Pest Control, First Aid Facilities, Health Check Up, Personal Protective Equipment, CFL Lamp for hutment	8.93
	TOTAL		25.41

ENVIRONMENTAL MONITORING PLAN



DURING CONSTRUCTION PHASE – PER YEAR

Sr. No.	Pollution Monitoring	Parameters	Frequency	Location	Cost per Year (In lakhs)
1	Air quality	SPM,RSPM,SO2,& NOX,CO, HC	Quarterly	At major Construction area. (total 2 Stations)	0.46
2	Noise Level	Equivalent noise level	Daily	At major Construction area. (total 2 Stations)	
3	Exhaust from DG Set	SPM, SO2, Nox	Quarterly	Stack of DG set.	0.015
4	Exhaust from DG Set	SPM, SO2, NOx, Hydrocarbons and Carbon Monoxide	Yearly	Stack of DG set.	0.022
5	Waste Water Analysis	Portable STP : pH, BOD, COD,TSS, SS	Monthly	Outlet of STP	0.672
6	Drinking Water Analysis	Analysis of water for physical, chemical, biological parameters.	Quarterly	At source (municipal/ tankers)	0.07
	Total				1.243

ENVIRONMENTAL MONITORING PLAN

DURING Construction PHASE– PER YEAR



Sr. No.	Environmental Monitoring	Parameters	Frequency	Cost per Year (In lakhs)
1	Ambient Air quality	SPM, RSPM, SO ₂ , NO _x	Quarterly	0.46
2	Noise Level	Equivalent noise level	Daily	
3	Exhaust from DG Set	SPM, SO ₂ , NO _x	Quarterly	0.12
	Exhaust from DG Set	SPM, SO ₂ , NO _x , Hydrocarbons and Carbon Monoxide	Yearly	0.044
4	Drinking Water	(Physico- chemical and biological parameters as per the source and utilization of water)	Quarterly	0.28
5	Rain Water Harvesting	(Physico-chemical and bacteriological parameters as per the source and utilization of water)	Monthly	0.63
6	Sewage from STP	pH, BOD, COD, TSS TDS, Oil and Grease	Quarterly	0.45
		As per E (P) act 1986: 30 parameters	Yearly	0.08
	Swimming Pool	pH, Total residual chlorine, Cl, colour, Turbidity, odour, taste		0
		Total Alkalinity, Aluminium, DO, Total dissolve solids, Iron, Heavy metals		0
7	OWC Manure	pH, Conductivity, Colour, Bulk Density, Organic Carbon, Total Nitrogen as N, Total Phosphate as P ₂ O ₅ , Total Potash as K ₂ O, C:N ratio, Moisture Content	Quarterly	0.20
		Total		1.95

ENVIRONMENTAL MANAGEMENT PLAN



DURING OPERATION PHASE

Sr. No	Component	Description	Capital cost Rs. (Lakhs)	O and M cost
				(Rs. In Lakhs/year)
1	Sewage Treatment Plant	2 STP of 310 & 127 KLD Capacity	65.55	9.8
2	Rain Water Harvesting	3 RWH tank of total 50 cum capacity	23.100	2
3	Solid Waste Management	2 Organic waste convertor Machine and storage and Segregation of waste	20	2.40
4	Green Belt Development	Plantation of Tree and development of RG area	11.47	1.6
5	Solar Energy	Solar Panels for PV+ Solar Hot water	29	1.5
6	Environmental Monitoring	EMP costing	MoEF accredited lab will be hired	25.4
	TOTAL		149.1216	43.0
	DMP Cost		17.04	5.11

TEST REPORT						
Report No:		EFEL/PRO/2026/05/1815			Issue Date	27/05/2026
Name and Address of Customer		M/s. Gopal Sons Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. Gopal Sons				
Sample Name		Ambient Air	Sample Description		480 Min	
Date of Sampling		18/05/2026	Sampling duration		CPCB Guideline for measurement of Ambient Air pollutants Volume I	
Start Date of Analysis		19/05/2026	End Date of Analysis		26/05/2026	
Sampling Location		Near Main Gate	Sampling Procedure		CPCB Guideline for measurement of Ambient Air pollutants Volume I	
Dry bulb temperature		36 ⁰ C	Wet bulb temperature		31 ⁰ C	
Relative Humidity		61 %	Sampling done by		Manusrushti	
Results						
Sr. No.	Parameters	Results	Unit(s)	Specifications (NAAQ Standards)	Methods	
1	Sulphur Dioxide(SO ₂)	8.29	µg/m ³	≤ 80	IS 5182(Part 2)	
2	Oxides of Nitrogen(NO ₂)	14.8	µg/m ³	≤ 80	IS 5182 (Part 6)	
3	Particulate Matter PM ₁₀	40.1	µg/m ³	≤ 100	CPCB Guideline for measurement of Ambient Air pollutants Volume I	
4	Particulate Matter PM _{2.5}	19.5	µg/m ³	≤ 60		
5	Carbon Monoxide (CO)	0.45	µg/m3	≤ 04		
6	Ozone(O ₃)	16.1	µg/m3	≤ 180		
7	Lead (Pb)	BDL	µg/m3	≤ 01		
8	Arsenic(As)	BDL	ng/m3	≤ 06		
9	Nickel(Ni)	BDL	ng/m ³	≤ 20		
10	Ammonia(NH ₃)	BDL	µg/m ³	≤ 400		
11	Benzo(a)Pyrene(BaP)	BDL	ng/ m ³	≤ 1.0		
12	Benzene(C ₆ H ₆)	BDL	µg/m ³	≤ 05	IS 5182 (Part 11)	
Remark- All above results are within National Ambient Air Quality standards. BDL – Below Detectable Limit.						





Authorized Signatory
Mr. Mahesh Shelar
(Managing director)

TEST REPORT					
Report No:		EFEL/PRO/2026/05/1816		Issue Date	27/05/2026
Name and Address of Customer		M/s. Gopal Sons Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane by M/s. Gopal Sons			
Sample Name		Noise	Sample Description		Ambient Noise
Date of Sampling		18/05/2026	Sampling duration		Spot Time
Sampling done by		Manusrushti			
Results					
Sr. No.	Locations	12.30 Hrs Result dB(A) Day	22.00 Hrs Result dB(A) Night	Specifications (CPCB Standards dB(A))	Method
1.	Near Main Gate	39.4	28.8	55/45	CPCB Guideline
2.	Near site office	38.7	26.2		
Remark-					
➤ All above Noise level results are within Central Pollution Control Board Standards limit. ➤ Day/Night -55/45 dB.					





Authorized Signatory
Mr. Mahesh Shelar
(Managing director)

घोडबंदर येथे उभारणार शिवसृष्टी २०
कोटीचा निधी ; पालिकेकडून ठराव मंजूर

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PHILIP JAC HAYES: I have been working with the FBI for 15 years, and I have been involved in many of the most important cases in the history of the FBI. I have been involved in the investigation of the Kennedy assassination, the Watergate scandal, and the Iran-Contra affair. I have been involved in the investigation of the 9/11 attacks, and I have been involved in the investigation of the Boston Marathon bombing. I have been involved in the investigation of the Boston Marathon bombing, and I have been involved in the investigation of the Boston Marathon bombing.

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On behalf of my client, Jitendra Singh (Proprietor of M/s. Jitendra Singh & Co. (Proprietorship Firm) & Co. (Proprietorship Firm) the undersigned hereby invites any kind of claim or objection regarding the relevant proof within 15 days of the date of this notice. In case no objection is received within stipulated time, the same shall be assumed that there is no objection.

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to be followed by a display of further evidence that the company has the resources and the talent to meet the challenges of the new market place.

Expanding Supply Base

As the company's supply base expands, it will be able to offer more products and services to its customers. This will be a key factor in the company's success in the new market place.

Summary

The company's expansion into the new market place is a key factor in its success. The company's expansion into the new market place is a key factor in its success.

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set off a major legal crisis, at the Trump administration.

Chief of Chemistry with Chemistry
 Working Days 7:00 - 2:00 p.m. 2017
 10000 Hwy 471, Houston, TX 77056
 Fax: 281-460-0000 Email: info@houston.edu

Any person, firm, company, or financial institution who may have found or is currently

Washington DC / AgenceInfo

El Salvador's President Nayib Bukele assured Congress on Monday that he would not launch a mass military deportation from the United States, as the parliament over Trump's advance to send migrants to a robust prison in the Central American country. Bukele gave a warm welcome in the Oval Office to Christopher Ruess, the anti-proliferation "world's second dictator" who is now the US president's key ally in countering the global jihadist movement.

administration outside the migrants are members of criminal gangs designated by the United States as foreign organizations including El Salvador's MS-13 and Verónica's Trio de Armas. Ruess: members of several of the ones called they take the government to support criminal and in many cases had been sent up empty because the real battle remained to anti-gang activity. The explosion is the Salvador of El Salvador, the result of a major gang crisis, after the Trump administration.

A photograph showing President Nayib Bukele of El Salvador on the left and Christopher Ruess on the right. They are standing behind a model of a Concorde airplane. Bukele is wearing a dark sweater and has a beard. Ruess is wearing a dark suit, a red tie, and a white shirt. They are in a room with ornate gold-colored wall decorations.

Annexure No. 17: Data Sheet for Annexure A,B and C

**Monitoring the Implementation of Environmental Safeguards Ministry of Environment,
Forests & Climate Change Regional Office (W), Nagpur.**

Monitoring Report

PART I - DATA SHEET

1.	Project type: River - valley/ Mining / Industry / Thermal / Nuclear / Other (specify)		:	Proposed project is residential cum Commercial Building
2.	Name of the project		:	Proposed Residential Building on Plot Bearing S. No. 16/1 (PT), H.No. 1. Mauje Umbarli, Tal – Ambernath, Dist – Thane Project by M/s. GOPAL SONS
3.	Clearance letter (s) / OM No. and Date		:	EC24B038MH142634, On dated 08th February, 2024
4.	Location			
	a.	District (S)	:	Thane
	b.	State (S)	:	Maharashtra
	c.	Latitude/ Longitude	:	Latitude: 19°10'55.63"N Longitude: 73°6'19.96"E
5.	Addrsees for correspondence		:	Name: Mr. Zameer Khan Survey No 16, 54M4+43, Umbroli, Dombivli East, Kalyan, Maharashtra 421204
6.	a.	Address of Concerned Project Supervisor	:	Name: Mr. Mayank Jain Survey No 16, 54M4+43, Umbroli, Dombivli East, Kalyan, Maharashtra 421204
7.	Breakup of the project area		:	
	a.	Submergence area forest & non-forest	:	Project site is not a forest area.
	b.	Others	:	Annexure - A
8.	Breakup of the project affected Population with enumeration of Those losing houses/dwelling units Only agricultural land only, both Dwelling units		:	Not Applicable
	a.	SC, ST/Adivasis	:	Not Applicable
	b.	Others (Please indicate whether these Figures are based on any scientific And systematic survey carried out Or only provisional figures, it a Survey is carried out give details And years of survey)	:	Not Applicable
9.	Financial details			
	a.	Project cost as originally planned and subsequent revised estimates and the year of price reference	:	Rs. 128.35 Cr
	b.	Allocation made for environ-mental management plans with item wise and year wise Break-up.	:	Annexure – C
	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.	:	Yes
	e.	Actual expenditure incurred on the environmental management plans so far	:	13 Lakhs
10.	Forest land requirement			
	a.	The status of approval for diversion of forest land for nonforestry use	:	Not Applicable
	b.	The status of clearing felling	:	Not Applicable
	c.	The status of compensatory afforestation, if any	:	Not Applicable
	d.	Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far	:	Not Applicable
11.	The status of clear felling in Non-forest area s (such as submergence area of reservoir, approach roads), if any with quantitative information		:	Not Applicable
12.	Status of construction			
	a.	Date of commencement (Actual and/or planned)	:	2022
	b.	Date of completion (Actual and/or planned)	:	2029
13.	Reasons for the delay if the Project is yet to Start		:	Not Applicable
14.	Dates of site visits			
	a.	The dates on which the project was monitored by the Regional Office on previous Occasions, if any	:	Not Applicable
	b.	Date of site visit for this monitoring report	:	May 2026
15.	Details of correspondence with Project authorities for obtaining Action plans/information on Status of compliance to safeguards Other than the routine letters for Logistic support for site visits		:	Not Applicable

ANNEXURE – A

1. PROJECT DETAILS

Name & Location	:	“Proposed Residential Building” on Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal – Ambernath , Dist – Thane
Total no. of workers to be employed during the construction phase.	:	150
Total Project cost	:	Rs. 128.35 Cr
Project infrastructure	:	“Proposed Residential Building” on Plot Bearing S.No. 16/1 (Pt), H.No. 1. Mauje Umbarli, Tal – Ambernath , Dist – Thane The project involves the development of residential cum commercial project.
Area Statement	:	• Total Plot Area: 11,271 Sq.m. • Built Up Area as per FSI: 49,022.02 Sq. m. • Non FSI Area: 7,778.50 Sq. m. • Total Construction area: 56,800 sq.mt. • R. G. Area on the ground: 1,147.16 sq.mt.
Water Requirement and Sources	:	• Source: KDMC • During Construction Phase – For Workers: 10 KLD For Construction: Tankers: 10-20 KLD (Depending upon the activity). • During Operational Phase - Total Water Requirement.: 201 m3/ day
Sewage generated	:	292 KLD
Power	:	• During Construction Phase - 1.DG sets: 1 DG set of 100 KVA • During Operational Phase – 1.Power Requirement: • Total Connected Load – 4177.82 KW • Maximum demand – 1902.23 KW • Total 1 DG sets of capacity 250 KVA • Transformers: 1 x 400 KVA & 1 X 630 KVA
Gaseous emissions	:	• Vehicle carrying materials to be transported must have PUC certificate. • Heavy vehicle movement will be allowed only during nighttime. • Construction equipment with idling control technologies will be used. • Regular maintenance of the equipment’s will be carried out.
Solid waste from: Garbage: Wet Dry	:	• Biodegradable waste: 952 Kg/day • Non- Biodegradable Waste: 647 Kg/day • E waste: 1625 Kg/year

ANNEXURE – B
EMP for Construction Phase

No.	Environmental Issues/Impacts	Mitigation measures	Responsibility	
1.	Increase in water demand (10-20 m ³ /day) due to water usage for construction, dust suppression and for workers.	• Use of polymeric spray for dust suppression instead of water wherever possible • Curing water shall be sprayed on concrete structures, free flow of water shall not be allowed for curing • Use of wet jute cloth/gunny bags instead of water spray for curing activity.	Contractor & Project Manager	--
2.	Sewage generation (10 m ³ /day) and disposal	• Disposal of sewage generated to sewer line • Daily watch on sanitation facilities, drains & good housekeeping	Contractor & Project Manager	Water (P & CP) Act 1974
3.	Municipal solid waste generation (75 kg/day) by workers	• Segregation of Biodegradable (45 kg/day) and non-biodegradable garbage (30 kg/day) • Disposal of segregated waste to Authorized Vendor	Contractor & Project Manager	--
4.	Construction activity may lead to • Water logging on site • Unsanitary conditions and mosquito breeding on site • Sedimentation of outside drains	• Computation of the runoff from the catchment areas outside the plot and runoff within the plot. • Proper management of channelization of storm water • Designing storm water drainage with adequate capacity to cater the total runoff from site to avoid flooding on site • Use of screens and silt traps in advance of earthworks • Proper maintenance of storm water drainage to avoid choking of drains and flooding on site • Prompt completion of works relating to drainage and sediment control • Ensure discharge of storm water from the site or inflow to the site due to contributing catchment is clear of sediment and pollution	Contractor & Project Manager	Storm water drainage remarks from KDMC
5.	Demolition/Construction activity			

No .	Environmental Issues/Impacts	Mitigation measures	Responsibility	
a)	Dust generation	• Use of polymeric spray / water wherever possible for dust suppression • On site sensors shall be installed to monitor PM10 and PM 2.5 • Provision of Barricades of adequate height along the periphery of the site • Use of covering sheets while transporting the material	Contractor/ Proponents	
b)	Noise & Vibration	• Regular noise monitoring to be scheduled to maintain the noise level within the levels prescribed by CPCB during day and night time • Provision of ear plugs to workers • Use of good efficiency mufflers • No noise polluting work in night shifts • Provision of barricades along the periphery of the site		
c)	Disruption of soil & runoff	• Sedimentary controls to be implemented		
d)	Oil leaks	• Oil leaks Regular maintenance of machineries to prevent and repair leaks • Contaminated soil (if any) disposed to authorized Contactor		
e)	Generation of construction waste - Debris/ Excavation material	• Debris shall be reused for filling and remaining 1 shall be disposed to authorized landfill site. • Disposal of hazardous waste to authorized Contactor • Construction waste (Empty Cement Bags, Paint container, other Barrels & Scrap metal) will be handed over/sold to Authorized recyclers	Contractor/ Proponents	NOC for Solid Waste Management /Excavation permission from KDMC
f)	Vehicular movement • Increase in traffic • Air emissions & Noise • Oil leaks	• Proper traffic management for the construction vehicles • Provision of oil and grease traps to the Storm water drains • Contaminated soil found if any to authorized Contactor	Project Manager	--

No .	Environmental Issues/Impacts	Mitigation measures	Responsibility	
		- Regular maintenance of vehicles with suitable enclosures and intake silencers - Planning and ensuring effective implementation of the waste movement plan for loading and offsite movement in non-traffic hours		
6.	Air and noise pollution	- Site barricading - Regular maintenance	Project Manager	--
7.	Impact on health of workers Accidents, Hazards, injuries to workers	- Adequate drinking water, canteen, toilet and bathing facilities - First aid facility - Regular health checkup of workers - Risk assessment and preparation of disaster management plan - Provision of temporary water tank for firefighting and appropriate fire suppression measures - Safety educational and awareness programme. - Proper security arrangements	Safety officer	--

EMP for Operational Phase

No.	Environmental Issues/Impacts	Mitigation measures	Responsibility	
1.	Increase in water demand	• Use of treated sewage proposed for flushing (102 KLD) and gardening (4 KLD) • Use of Treated Waste Water for flushing and gardening resulting in reduction of Net water demand. Use of harvested rain water for domestic purpose and its reuse thereby reducing the fresh water demand in monsoon season	Project Proponents/ Society/ Facility Management system	Water Act 1974 as amended
2.	Sewage generation (398 KLD)	• Provision of STP for treatment of sewage up to tertiary level. • Proper operation and maintenance of STP and Daily analysis of general parameters like pH, BOD, COD and TSS & O & G of the STP outlet to ensure good treatment of waste water with the help of sensors. • Ventilation around the STP • Proper arrangements for sludge handling and disposal	Project Proponents/ Society/ Facility Management system	--
3.	Increment in Runoff 0.06 M ³ /sec. from site	• Minimizing the incremental runoff from the site with 3 RWH tank of 50KLD, 270KLD, 835KLD capacity • Proper management of channelization of storm water from site by using proper internal SWD system of 0.6 m X 0.6 m deep and two discharge points of having adequate capacity • Use of screens and silt traps to SWD • Proper maintenance of storm water drainage to avoid choking of drains and flooding on site • Ensure discharge of storm water from the site is clear of sediment and pollution • Provision of sump pumps • External drain of adequate capacity	Project Proponents/ Society/ Facility Management system	SWD NOC from KDMC
4.	Power demand	Provision of energy saving measures: • Use of Solar energy for external and common area lighting as well as for Hot water system • High efficiency pumps & motors • Use Low wattage LED fixtures in common area	Project Proponents/ Society/ Facility Management system	ECBC norms
5.	Air and noise pollution	Good Landscaping with plantation of 155 Nos. of trees.	Project Proponents/ Society/Facility Management	CPCB specification

			system	
6.	Vehicular movement Increase in traffic • Air emissions & Noise • Contamination of soil (if any) leads to Oil leaks	• Provide adequate traffic signs and signage to notify residents • Install safety mirrors to aid visibility in conflict points • Prevent parking near the Entry and Exit Gate • Provide speed control measures to regulate speed of vehicles • Provide pedestrian crossings and dedicated footpath to cater to the walking population • Assign traffic wardens to regulate flow of project traffic during peak hours	Project Proponents/ Society/Facility Management system	--
7.	Odour and unsanitary conditions due to STP and Composting of biodegradable garbage	• Ventilation for STP and OWC area • Proper housekeeping and maintenance	Project Proponents/ Society/ Facility Management system	Air act 1981, as amended
8.	Municipal waste & other solid waste generation	• Informing and educating occupants for solid waste management • Provision of adequate space for solid waste management • Proper segregation on site to biodegradable and non-biodegradable. • Non-Biodegradable waste (647kg/day) • Recyclable waste to recyclers • Non-recyclable waste to Authorized recycler • Biodegradable waste (953 kg/day) • Treatment in Organic Waste Convertor (OWC) • End product from OWC and sludge generated from STP shall be used as manure on site • Quarterly monitoring of manure	Project Proponents/ Society/ Facility Management system	--
9.	Disasters like Fire, lightning, Earthquake etc.	• Preparation of Disaster Management Plan • Provision of Safety officer, Security and First aid team • Regular review of DMP and mock drill • Effective implementation of DMP	Safety Officer	CFO NOC from KDMC