

**Half Yearly Compliance Report of  
Stipulated Specific & General Conditions of  
Environmental Clearance**

**(Period: April 2024 – September 2024)**

For

**CONSTRUCTION OF GROUP HOUSING PROJECT  
JAINS TUFNELL GARDEN**

**By M/S. Jain Housing**

AT

Survey No.: 483/14, 484/7, 485/1

Kakkanad Village, Kanayannur Taluk, Ernakulam District, Kerala State

**EC File No.: 21-59/2010-IA.III Dated 24.05.2011**

**Proponent**

Mr. Sandeep Mehta

Vice Chairman

M/s. Jain Housing

98/99, Habbibullah Road , T Nagar, Chennai-17

**Submitted to**

**Ministry of Environment, Forest and Climate Change (MoEF&CC)/  
State Environment Impact Assessment Authority (SEIAA), Kerala**

**Prepared by**



**ENVIRONMENTAL CONSULTANCY AND LABORATORY**

**NABET Accredited EIA Consulting Organization**

**Certificate No.: NABET/EIA/21-24/SA 0217**

**Valid till: 18 October 2024**

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Jains Tufnell Garden at Kakkanad, EC File No.: 21-59/2010-IA.III  
(April 2024 – September 2024)*



*Jain Housing*

To  
The Regional Director,  
MoEF Regional office, Southern zone, Kendriya Sadan  
4<sup>th</sup> floor, E&F Wings, Block II, Koramangala, Bangalore

Date: 02.09.2024

Sub: Report of Compliance of conditions stipulated in the Environmental Clearance for the Construction of Group Housing Project at Survey No. 483/14, 484/7, 485/1, Village Kakkanad, Panchayat Thrikkakara, Taluk Kanayannur, District Ernakulam, Kerala by M/s. Jain Housing,

Ref: Environment Clearance No. F.No.21-59/2010-1A.III dated 24.05.2011

Respected Sir,

The Construction of Group Housing Project by Ms. Jain Housing 'Jains Tufnell Garden' located in Survey Nos. 483/14, 484/7, 485/1 at Kakkanad Village, Kanayannur Taluk, Ernakulam, District, Kerala was accorded Environmental Clearance vide File No. F.No.21-59/2010-1A.III dated 24.05.2011.

The report of compliance to the specific and general conditions of the Environmental Clearance for the period of October 2023 – March 2024 is enclosed for your kind perusal.

Yours respectfully  
For Jain Housing

For JAIN HOUSING

  
Authorised Signatory

(Branch Head)

Copy to:

The Member Secretary

State Environment Impact Assessment Authority (SEIAA)

Directorate of Climate Change, 4<sup>th</sup> Floor, KSRTC Bus Terminal

Thiruvananthapuram, Kerala State

Jains Tufnell Garden, Block 4, Flat No. 4082 (Office), Nilampathinja Mughal Road,  
Kakkanad, Ernakulam - 682 039.

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**List of Annexures**

<b>S.No</b>	<b>Annexure</b>
Annexure-1	Copy of Environmental Clearance letter
Annexure-2	Covering letter submitted to SEIAA stating change in BUA
Annexure-3	Copy of the building permit
Annexure-4	Copy of application for CTO submitted to KSPCB
Annexure-5	Site photographs
Annexure-6	Environmental Baseline Monitoring results
Annexure-7	Copy of DG service bill
Annexure-8	Yield test result of wells
Annexure-9	Structural safety certificate
Annexure-10	Scarp agreement from authorized scrap collection agency
Annexure-11	NOC from AAI
Annexure-12	NOC from Civil Aviation Department
Annexure-13	NOC from fire & safety Department

## **CHAPTER 1. INTRODUCTION AND PROJECT DESCRIPTION**

The Group Housing Project 'Jain Tufnell Garden' is located in Survey Nos. 483/14, 484/7, 485/1 at Kakkanad Village, Kanayannur Taluk, Ernakulam District, Kerala. Environment Clearance for the construction of the Group Housing Project with total built up area of 1,39,885.78 sq.m in a plot area of 35,084.62 sq.m was obtained from MoEF&CC vide File No.: vide file no. 21-59/2010-IA.III dated 24.05.2011. Copy of Environmental Clearance letter is attached as **Annexure 1**. The total built-up area of the project is 1,39,885.78 sq.m as per the EC granted. However, this built up area is FSI area. The Non-FSI area [mainly basement parking termed as Lower Ground Floor and Upper Ground Floor] has not been taken into account in this area. Hence the actual total built up area considering both FSI and Non FSI area is 1,92,661.40 sq.m. A covering letter submitted to SEIAA stating the same is attached as **Annexure 2**.

It is proposed to construct 1,216 dwelling units (1 BR-456 +1BR +Study-456+ 2 BR = 304 Nos.) with Club area which will have 8 Towers (Lower ground floor + Upper Ground floor+ 19 floors). The total water requirement is 538.30 KLD (fresh water -399.25 KLD). Total cost of the project is Rs. 112.122 Crores.

The proponent has obtained building permit for the project from Thrikkakara Municipality vide File No. 2/Reg/2016-17. A copy of the building permit is attached as **Annexure 3**. The proponent has applied for Consent to Operate form Kerala State Pollution Control Board on 22.07.2019. Copy of the application is attached as **Annexure 4**.

The proponent is fully conscious about environmental management for the proposed project. Specific and General conditions stipulated in Environment Clearance will be complied during construction phase and operation phase. Environmental mitigation measures described in Environmental Management Plan will be implemented.

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## CHAPTER 2. BRIEF SUMMARY OF THE PROJECT

Item	Description	
Name of Project	Proposed Construction of Group Housing Project Jains Tufnell Garden at Kakkanad	
Category/Subcategory & Schedule	8 (b) Townships and Area Development projects (Environmental Clearance was obtained from Ministry of Environment, Forest and Climate Change (MoEF&CC))	
Location	Kakkanad Village, Kanayannur Taluk, Ernakulam District, Kerala	
Plot/Survey/Khasra No.	483/14, 484/7, 485/1	
District	Ernakulam	
Taluk	Kanayannur	
Village	Kakkanad	
GPS co-ordinates	Latitude (N)	10° 0'5.01"N
	Longitude (E)	76°21'20.12"E
Total Built up area	1,39,885.78 m <sup>2</sup>	
Total plot area	35,084.62 m <sup>2</sup>	
No. of building blocks	8 Towers + 1 Clubhouse	
No. of floors	Ground (Stilt) + 1st Level parking + 19 Floors	
Floor Area	Tower – 1,4,5,6,7,8	101021.10 m <sup>2</sup>
	Tower – 2 & 3	37,316.76 m <sup>2</sup>
No. of dwelling units	1,216 (1 BR - 456 units, 1 BR + Study - 456 units, 2 BR - 304 units )	
Maximum height from ground level	58.95 m	
FSI	3.987	
Coverage	20.75%	
Total green area	7,020.92 m <sup>2</sup>	
Project cost	INR 112.122 Crore	
Total water requirement during operation phase	Non-monsoon season: 588.20 kLD	
	Monsoon season: 538.20 kLD	
Fresh water requirement	399.25 kLD	
Rain water harvesting capacity	2 x 130 kL	
STP capacity	150 kLD & 450 kLD	
Total solid waste generation	2,420 kg/day	
Power requirement during operation phase	8,000 kVA	
DG Sets capacity	1 x 180 kVA	
Total number of parking provided	4 Wheelers (Nos.): 1337	
	2 Wheelers (Nos.): 334	

## CHAPTER 3. COMPLIANCE OF STIPULATED CONDITIONS OF EC

### 3.1 Part A – EC Specific Conditions by MoEF

S. No	Conditions for Environmental Clearance	Status of Compliance
<b>I. Construction Phase</b>		
1.	“Consent for Establishment” shall be obtained from Kerala State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.	Complied The project proponent has submitted the application for ‘Consent to Establishment’ and ‘Consent to Operate’ in Kerala State Pollution Control Board (KSPCB). The copy of application submitted for ‘Consent to Operate’ is attached as <b>Annexure 4.</b>
2.	The road along the park is not required and can be converted into pedestrian. The outer road should be widened to minimum 9.0 m. Revise the layout plan accordingly.	Complied Road along the park has been converted to pedestrian and outer road has been widened to 9 m.
3.	The storm water drainage shall be worked out after analyzing the contour levels of the site and the surrounding area and the carrying capacity of storm water drains and their outfall.	Complied Storm water drainage has been proposed considering contour levels of the site and surrounding area and the carrying capacity of storm water drains and their outfall.
4.	The total height of the building shall not be more than 60 m., due to the non-availability of sufficient firefighting facilities in the area.	Complied Total height of the building will be 58.95 m which will not be more than 60 m, due to the non-availability of sufficient firefighting facilities in the area.
5.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be	Complied The contractor has provided housing facilities for the construction workers at Kakkanad at 2 km distance away from the project site. Safe drinking water, temporary toilet facilities, fuel for cooking, sanitary living conditions and health care facilities were ensured for the construction workers.



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S. No	Conditions for Environmental Clearance	Status of Compliance
	removed after the completion of the project.	
6.	A First Aid Room will be provided in the project both during construction and operation of the project.	<p>Complied</p> <p>Proponent has provided a first aid room with necessary facilities. Photographs of the first aid facilities provided are:</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;"><i>Photographs of the first aid facilities</i></p>
7.	All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.	<p>Complied</p> <p>The construction was completed maintaining natural topography of the project site. The top soil excavated for foundation works were used for filling with in the project site itself and for landscape development. The photographs of the green area are attached below:</p> <div style="display: grid; grid-template-columns: 1fr 1fr; gap: 10px;">     </div>

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S. No	Conditions for Environmental Clearance	Status of Compliance
		<i>Photographs of green area</i>
8.	Disposal of muck 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 approved sites with the approval of competent authority.	Complied The muck was disposed safely by the project proponent with the help of a contractor. The proponent had taken necessary precaution to ensure that the muck will not create any adverse effect on the neighbouring communities considering the general safety and health aspects of people.
9.	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.	Complied. The soil and ground water quality monitoring has been conducted by a laboratory approved by the Pollution Control Board. The monitoring results of soil and ground water quality are attached as <b>Annexure 6</b> .
10.	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.	Complied Construction spoils, including bituminous material has been properly covered and stored to ensure that they won't leach into the ground water and cause contamination of watercourses. Since proposed construction was for a Group Housing project there will not be any generation of hazardous waste other than the used oil in DG sets. Used oil is being handed over to the concerned during DG servicing. Copy of DG Service bills are attached as <b>Annexure 7</b> . The project proponent did not use bitumen for construction of road and other purposes.
11.	Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the Kerala State Pollution Control Board.	Complied Since proposed construction was for a Group Housing project there will not be any generation of hazardous waste other than the used oil in DG sets. Used oil from DG sets is being handed over to the concerned during the DG servicing. Copy of DG service bills are attached as <b>Annexure 7</b> .
12.	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules	Complied Low sulphur diesel type DG sets that conform to Environment (Protection) Rules prescribed for air and noise emission standards were used during construction phase.

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S. No	Conditions for Environmental Clearance	Status of Compliance
	prescribed for air and noise emission standards.	
13.	The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.	Complied The diesel required for operating DG sets were stored in appropriate barrels. Since only makeup quantities of diesel were required clearance from Chief Controller of Explosives is not required. Used oil is being handed over to the concerned during the DG servicing. Copy of DG service bills are attached as <b>Annexure 7</b> .
14.	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.	Complied Vehicles with valid PUC certificate were used for the transport of construction materials to the project site.
15.	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/ KSPCB.	Complied Noise quality monitoring has been carried out and the results are attached as <b>Annexure 6</b> . Proponent has taken various measures to control the air and noise emissions. Spraying of water during summer season, use of covered vehicles for the transportation of materials, wheel washing of vehicles, ensuring that, all vehicles are in good condition with valid PUC certificate, limited work during night time, ensuring that all building equipment's are in good condition were some of the measures implemented to control the air and noise pollution levels.
16.	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27 <sup>th</sup> August, 2003.	Not Applicable
17.	Ready mixed concrete must be used in building construction.	Complied Ready mixed concrete was used in construction works that reduce the onsite water requirement during construction

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S. No	Conditions for Environmental Clearance	Status of Compliance
		works.
18.	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Complied The project proponent had constructed a portable tank with the capacity of 10 kL for rain water harvesting at the project site. Storm water management plan has been prepared for the proper management of the storm water at project site.
19.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Complied Ready mixed concrete was used in construction works that reduce the onsite water requirement during construction works.
20.	Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.	Complied Total fresh water requirement is 399.25 kLD. The source of fresh water are existing wells within the project site, KWA and harvested rainwater. Yield test has been conducted for the wells at the project site and as per yield test result 75 kLD of water will be yielded from the wells and remaining water will be sourced from KWA and harvested rainwater. The result of yield test conducted for the existing wells are attached as <b>Annexure 8</b> . No new wells are proposed in the project site hence permission was not taken from competent authority.
21.	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	Complied Dual plumbing line is used for the separation of grey and black water.
22.	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.	Complied Low flow taps and low flush toilets are used for ensuring efficient use of water.
23.	Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.	Complied The use of glass materials is below 40% in the existing buildings. Only high-quality double glass with special reflective coating is used where it is necessary.

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24.	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.	Agreed to comply Appropriate thermal insulation material as per Energy Conservation Building Code will be used for roofing to reduce the effect of heat.																
25.	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfill requirement.	Agreed to comply Most of the walls were constructed using solid bricks. This will reduce the load of air conditions installed in the buildings.																
26.	The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightening etc.	Complied The building design was done per National Building Code including protection measures from earthquake, lightening etc. for ensuring structural safety of buildings. Copy of structural safety certificate is attached as <b>Annexure 9</b> .																
27.	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.	Complied Environmental monitoring cell is constituted for the Regular supervision of the above conditions and other measures for monitoring through the construction phase and operation phase, so as to avoid disturbance to the surroundings. The details of EMC are given below. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>S.No</th> <th>Name</th> <th>Designation</th> <th>Contact</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Vijayshekhawat</td> <td>CEO</td> <td>9840572841</td> </tr> <tr> <td>2.</td> <td>Reni Abrahm</td> <td>Project Manager</td> <td>9995808887</td> </tr> <tr> <td>3.</td> <td>Colleen Petriz</td> <td>Branch Head</td> <td>9846404990</td> </tr> </tbody> </table>	S.No	Name	Designation	Contact	1.	Vijayshekhawat	CEO	9840572841	2.	Reni Abrahm	Project Manager	9995808887	3.	Colleen Petriz	Branch Head	9846404990
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28.	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.	Noted. The construction activities were initiated only after obtaining Environmental Clearance.
<b>II. Operation Phase</b>		
1.	The installation of the Sewage Treatment Plant (b) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated affluent emanating from STP shall be recycled/reused to the maximum extent possible. Treatment of 100% grey water by decentralised treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Kerala State Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.	Agreed to comply A septic tank and soak pit system is used to treat sewage, and the accumulated waste is periodically removed by a licensed septage collection agency.
2.	The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry / inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.	Complied Solid waste will be segregated at source into biodegradable, non-biodegradable domestic hazardous waste and E-Waste. The segregated waste will be collected and stored in designated temporary waste storage area. Biodegradable waste will be managed through biobins and is handled within the project site. Recyclable waste and Domestic hazardous waste will be handed over to the authorized recyclers and waste collectors respectively. The scrap agreement of the authorized collector is attached as

Prepared by ULTRA TECH Environmental Consultancy & Laboratory

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S. No	Conditions for Environmental Clearance	Status of Compliance
		<b>Annexure 10.</b>
3.	Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation 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. The location of the DG sets may be decided with in consultation with Kerala State Pollution Control Board.	Complied Two DG set of 220 kVA is used during the operation phase as source of backup power. The stack height of the DG sets installed will be 2 m from the roof level of the building. DG sets are of enclosed type and conform to the guidelines of KSPCB. CPCB approved low sulphur diesel is used in DG sets.
4.	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.	Complied. Since it is a residential building project, the main sound generates only from the vehicles of house owners. To monitor the noise level KSPCB approved laboratory has been conducting the noise monitoring. The results were under 75 dB (A). The monitoring result is attached as <b>Annexure 6</b> .
5.	The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.	Complied Green belt development has been done along the periphery of the project site by planting many local species to enhance the aesthetic value and to mitigate the dust and noise pollution.
6.	Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.	Complied Weep holes of size 30 cm x 20 cm are provided to ensure the natural drainage of rain water. Photos of weep holes are given below: 

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S. No	Conditions for Environmental Clearance	Status of Compliance
		<i>Weep holes provided at project site</i>
7.	Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 mts. above the highest ground water table.	Complied Two rain water harvesting tanks of capacity 130 kL has been constructed at the project site to collect the roof top runoff. Pretreatment is provided for the harvested rain water before its use. The rain water harvesting through recharge pits is not feasible due to high ground water table within the project site.
8.	The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.	Complied To assure the quality of ground water the project proponent regularly monitors the ground water samples with the help of a laboratory approved by Kerala State Pollution Control Board. The result of ground water monitoring is attached as <b>Annexure 6.</b>
9.	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. ROW inside the complex shall be minimum of 9 meters. Parking plan to be as per MoEF norms.	Complied All internal roads have minimum 6 m width for easy and smooth vehicular movement within the project premises. Total no.of 4 wheeler parking provided is 1337 cars and two wheeler parking provided is 334 two wheelers.
10	A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.	Noted
11	Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the	Complied As part of energy conservation, the project proponent is using a wide range of LED and CFL lights. The discarded



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S. No	Conditions for Environmental Clearance	Status of Compliance
	building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.	LEDs/CFLs/TFLs will be properly collected and disposed off for recycling as per the prevailing guidelines to prevent mercury contamination. The electrical lights of common area are being regulated by effective management. To conserve energy, the project proponent will incorporate solar energy after obtaining necessary permissions and approvals from various competitive authorities.
12	Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.	Agreed to comply To prevent odour problem from STP, the project proponent will adopt the following measures: 1. Proper design with the consultation of experienced STP suppliers 2. Regular cleaning of bar screen 3. Regular maintenance of Sewage Treatment Plant
13	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation. Landscape plan to be revised accordingly.	Complied. Buildings have been planned ensuring adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

**3.2 Part B – EC General Conditions by MoEF**

S. No	Conditions for Environmental Clearance	Status of Compliance
i.	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.	Complied Half yearly compliance report for the period October 2023 to March 2024 is being submitted to MoEF.
4.	Officials from the Regional Office of MoEF, Bangalore who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project	Noted The project proponent executed all possible measures for environment protection. The project proponent will provide all support to the officials from the regional of MoEF&CC for their

Prepared by ULTRA TECH Environmental Consultancy & Laboratory


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S. No	Conditions for Environmental Clearance	Status of Compliance
	proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MoEF, Bangalore	monitoring on environmental safeguards implemented in the project site.
5.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Noted No changes have been made to the scope of the project. The construction will be done according to the EC. Fresh appraisal will be taken in case of any changes in the scope of the project.
6.	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted Effective implementation of safeguard measures will be ensured in a time bound and satisfactory manner.
7.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Being complied. All statutory clearances will be obtained if required. Approvals for storage of diesel from Chief Controller of Explosives is not necessary since only small make up quantity of diesel is required for DG sets. NOC from Airport Authority of India, Civil Aviation Department and Fire Department has been obtained and are attached as <b>Annexures 11, 12 and 13.</b> Application for Wildlife clearance from NBWL has submitted.
8.	These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.	Noted All stipulations are being enforced under existing Acts, Rules, Notifications and Government Orders.

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S. No	Conditions for Environmental Clearance	Status of Compliance
9.	The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Kerala Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> . The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.	Complied The project proponent had advertised in two local newspapers widely circulated in the region within the stipulated time period.
10.	Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.	Noted
11.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied A copy of Environmental clearance letter has been submitted to the local self-Government. The project proponent has uploaded the environmental clearance order in the company website. The link of website showing EC letter and compliance is given below. <a href="https://jainhousing.com/cochin/jains-tufnell-gardens">https://jainhousing.com/cochin/jains-tufnell-gardens</a>
12.	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 <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be	Complied The ambient air quality and stack emissions from DG sets are monitored and the results are attached as <b>Annexure 6</b> . The same monitoring results are displayed near the main gate of the company in the public domain and the photographs of the same is given below:

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S. No	Conditions for Environmental Clearance	Status of Compliance
	monitored and displayed at a convenient location near the main gate of the company in the public domain.	 <p style="text-align: center;"><i>Display boards showing monitoring results</i></p>
13.	The environmental statement for each financial year ending 31 <sup>st</sup> 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.	Noted.

## **CHAPTER 4. DETAILS OF ENVIRONMENTAL MONITORING**

### **4.1 Ambient Air Quality Monitoring**

#### **4.1.1 Ambient Air Quality Monitoring Location**

Ambient air quality monitoring was carried at the project site and the monitoring report is attached as **Annexure**. Monitoring of ambient air quality facilitates in having an analytical understanding about air quality and the changes in the air environment of the study area with respect to the condition prevailing. The sampler was placed near the project site and was free from any obstructions.

#### **4.1.2 Ambient Air Quality Monitoring Methodology**

Monitoring was conducted in respect of the following parameters as mentioned in Table 4-1.

**Table 4-1: Methods used for Ambient Air Quality Monitoring**

S. No.	Parameter	Unit	Method
1.	Particulate Matter, PM <sub>10</sub>	µg/m <sup>3</sup>	IS 5182 (Part 23): 2006
2.	Particulate Matter, PM <sub>2.5</sub>	µg/m <sup>3</sup>	IS 5182 (Part 24): 2019
3.	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	IS 5182 (Part 2): 2001
4.	Oxides of Nitrogen as NO <sub>2</sub>	µg/m <sup>3</sup>	IS 5182 (Part 6): 2006
5.	Carbon Monoxide	mg/m <sup>3</sup>	IS: 5182 (Pt 10): 1999

#### **4.1.3 Ambient Air Quality Monitoring Results and Inference**

The detailed on-site monitoring results of PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub> and CO are presented in Table 4-2.

**Table 4-2: Ambient Air Quality Monitoring Results**

S. No.	Parameter	Unit	Result	Limit as per NAAQ Standards
1.	Particulate Matter, PM <sub>10</sub>	µg/m <sup>3</sup>	62.26	100
2.	Particulate Matter, PM <sub>2.5</sub>	µg/m <sup>3</sup>	21.13	60
3.	Sulphur Dioxide as SO <sub>2</sub>	µg/m <sup>3</sup>	10.48	80
4.	Oxides of Nitrogen as NO <sub>2</sub>	µg/m <sup>3</sup>	13.16	80
5.	Carbon Monoxide	mg/m <sup>3</sup>	0.90	2.0

#### **4.1.4 Discussion on Air Quality Monitoring in the study area**

Total five air quality parameters such as PM<sub>10</sub>, PM<sub>2.5</sub>, Sulphur Dioxide as SO<sub>2</sub>, Oxides of Nitrogen as NO<sub>2</sub> and Carbon Monoxide were analysed. All the parameters were found to be within the prescribed limits as per NAAQ Standards.

### **4.2 Ambient Noise Monitoring**

#### **4.2.1 Ambient Noise Monitoring Location**

The main objective of monitoring ambient noise levels in the study area is to assess the prevailing ambient noise levels in project site due to various construction activities and increased vehicular movement. The monitoring report is attached as **Annexure 6**.

#### **4.2.2 Limit as per Noise Pollution (Regulation and Control) Rules, 2000**

The noise level limit as per Noise Pollution (Regulation and Control) Rules, 2000 is given in Table 4-3 .

**Table 4-3: Noise Level Limits**

<b>Limits as per Noise Pollution (Regulation and Control) Rules, 2000</b>				
	Industrial Area	Commercial Area	Residential Area	Silence Zone
<b>Day Time</b>	75	65	55	50
<b>Night Time</b>	70	55	45	40

#### **4.2.3 Ambient Noise Level Monitoring Methodology**

Noise level monitoring was carried out continuously for 24-hours starting at 6:00 h To 6:00 h the next day. The noise levels were monitored using a Lab Authorized Sampler. During each hour Leq were directly computed by the instrument based on the sound pressure levels.

#### **4.2.4 Ambient Noise Monitoring Results**

The Ambient Noise Monitoring results are summarized in Table 4-4.

**Table 4-4: Ambient Noise Monitoring Results**

<b>S. No.</b>	<b>Location of Monitoring</b>	<b>Leq Value Reported in Db (A)</b>	
		<b>Day Time</b>	<b>Night Time</b>
<b>1.</b>	Project Site	51.2	43.2

#### **4.2.5 Discussion on Ambient Noise Level in the Study Area**

##### **Noise Levels Day Time – Db (A) Leq**

The day time noise level Leq at the monitoring stations were found that within limits prescribed for residential area i.e., 55 Db(A).

##### **Noise Levels Night Time – Db (A) Leq**

The night time noise level Leq at the monitoring stations were found that within limits prescribed for residential area i.e., 45 Db(A).

### **4.3 Water Quality Monitoring**

#### **4.3.1 Water Quality Monitoring Location**

To assess groundwater quality, water sample was collected from an open well in the project site. Analysing the groundwater quality is necessary as it may be a source of drinking water to many residents nearby. The monitoring report is attached as **Annexure 6**.

#### **4.3.2 Water Quality Monitoring Methodology**

The groundwater sample for monitoring was collected during December as per standard protocols and the quality monitoring methods used are given in Table 4-5.

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**Table 4-5: Methods used for Water Quality Monitoring**

S. No.	Parameters	Unit	Method
1.	pH at 25°C	---	IS 3025 (Pt 11):2022
2.	Turbidity	NTU,max	IS 3025 (Pt 10):1984
3.	Total Dissolved Solids	mg/l,max	IS 3025(Pt 16):2023
4.	Total Hardness as CaCO <sub>3</sub>	mg/l,max	IS 3025 (Pt 21):2009
5.	Chloride as Cl	mg/l,max	IS 3025(Pt 32):1988
6.	Sulphate as SO <sub>4</sub>	mg/l,max	IS 3025(Pt 24):2022
7.	Alkalinity as CaCO <sub>3</sub>	mg/l,max	IS 3025(Pt 23):1986
8.	Iron as Fe	mg/l,max	IS 3025 (Pt 53):2003
9.	Magnesium as Mg	mg/l,max	IS 3025(Pt 46):1994
10.	Nitrate as NO <sub>3</sub>	mg/l,max	IS 3025(Pt 34):1988
11.	Fluoride as F	mg/l,max	IS 3025(Pt 60):2008
12.	Ammonia (as Total Ammonia N)	mg/l,max	IS 3025(Pt 34):1988
13.	Lead as Pb	mg/l,max	IS 3025 (Pt 2): 2019
14.	Copper as Cu	mg/l,max	IS 3025 (Pt 2): 2019
15.	Cadmium as Cd	mg/l,max	IS 3025 (Pt 2): 2019
16.	Mercury as Hg	mg/l,max	IS 3025 (Pt 48):1994
17.	Zinc as Zn	mg/l,max	IS 3025 (Pt 2): 2019
18.	Arsenic as As	mg/l,max	IS 3025 (Pt 2): 2019
19.	Total Chromium as Cr	mg/l,max	IS 3025 (Pt 2): 2019
20.	Nickel as Ni	mg/l,max	IS 3025 (Pt 2): 2019
21.	Dissolved Oxygen	mg/l	IS 3025 (Pt 38) :1989
22.	Biochemical Oxygen Demand @ 27°C for 3 days	mg/l	IS 3025(Pt 44): 1993
23.	Chemical Oxygen Demand	mg/l	IS 3025(Pt 58): 2006
24.	Total coliform bacteria/100ml	---	IS 15185 :2016
25.	E. coli or thermotolerant coliform bacteria/100ml	---	IS 15185 :2016

### 4.3.3 Water Quality Monitoring Results

The results of the sample analysed as per standard procedures are given in the Table 4-6.

**Table 4-6: Water Quality Monitoring Results**

S. No.	Parameters	Unit	Results	Requirements (Acceptable Limit)
1.	pH at 25°C	---	6.9	6.5-8.5
2.	Turbidity	NTU,max	0.60	1.0
3.	Total Dissolved Solids	mg/l,max	32	500

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4.	Total Hardness as CaCO <sub>3</sub>	mg/l,max	16	200
5.	Chloride as Cl	mg/l,max	6.85	250
6.	Sulphate as SO <sub>4</sub>	mg/l,max	2.12	200
7.	Alkalinity as CaCO <sub>3</sub>	mg/l,max	14.21	200
8.	Iron as Fe	mg/l,max	0.07	1.0
9.	Magnesium as Mg	mg/l,max	1.46	30
10.	Nitrate as NO <sub>3</sub>	mg/l,max	0.14	45
11.	Fluoride as F	mg/l,max	BDL(MDL-0.2)	1.0
12.	Ammonia (as Total Ammonia -N)	mg/l,max	BDL(MDL-0.1)	0.5
13.	Lead as Pb	mg/l,max	BDL(MDL-0.005)	0.01
14.	Copper as Cu	mg/l,max	BDL(MDL-0.01)	0.05
15.	Cadmium as Cd	mg/l,max	BDL(MDL-0.001)	0.003
16.	Mercury as Hg	mg/l,max	BDL(MDL-0.0005)	0.001
17.	Zinc as Zn	mg/l,max	BDL(MDL-0.01)	5.0
18.	Arsenic as As	mg/l,max	BDL(MDL-0.005)	0.01
19.	Total Chromium as Cr	mg/l,max	BDL(MDL-0.01)	0.05
20.	Nickel as Ni	mg/l,max	BDL(MDL-0.01)	0.02
21.	Dissolved Oxygen	mg/l	5.0	NA
22.	Biochemical Oxygen Demand @ 27°C for 3 days	mg/l	2.40	NA
23.	Chemical Oxygen Demand	mg/l	8.0	NA
24.	Total coliform bacteria/100ml	---	Absent	Shall not be detectable in any 100ml sample
25.	E. coli or thermotolerant coliform bacteria/100ml	---	Absent	Shall not be detectable in any 100ml sample

#### **4.3.4 Discussion on Water Quality Monitoring in the Study Area**

Water quality parameters were found within the limits for potable water prescribed as per CPCB standards. The presence of Total Coliforms and E. Coli was found to be absent in the water sample.

#### **4.4 Soil Monitoring**

##### **4.4.1 Soil Quality Monitoring Location**

An assessment of soil quality has been carried out in objective to understand and identify the impact of ongoing activities. Studying the soil quality can also help to mitigate the predicted impacts of allied activities onsite. The monitoring report is attached as **Annexure**.



#### **4.4.2 Soil Quality Monitoring Methodology**

As per the established scientific methods for physico- chemical parameters about 500g of soil sample was collected in a plastic bag. Details of the test methods used for each parameter are given the following Table 4-7.

**Table 4-7: Methods used for Soil Quality Monitoring**

S. No.	Parameters	Unit	Method
c	Soil Type	--	SOP No. EEL/WP/SO/08
2.	Colour	--	SOP No. EEL/WP/SO/08
3.	Moisture Content	%	IS 2720(Pt 2):1973
4.	Conductivity	µS/cm	IS 14767:2000
5.	pH	--	IS 10158:1982
6.	Organic Carbon	%	IS 2720(Pt 22):1972
7.	Total Nitrogen	%	IS 14684:1999
8.	Phosphorus	mg/kg	SOP No.EEL/WP/SO/10
9.	Sodium Absorption Ratio	--	IS 11624: 2019
10.	Cation Exchange Capacity	meq/100g	Indian Bureau of Mines Analysis of Soil: 2012

#### **4.4.3 Soil Quality Monitoring Results**

The results obtained from the analysis of collected sample are presented in the Table 4-8.

**Table 4-8: Soil Quality Monitoring Results**

S. No.	Parameters	Unit	Results
1.	Soil Type	--	Sandy clay loam
2.	Colour	--	Reddish brown
3.	Moisture Content	%	4.23
4.	Conductivity	µS/cm	194
5.	pH	--	6.9
6.	Organic Carbon	%	0.36
7.	Total Nitrogen	%	0.21
8.	Phosphorus	mg/kg	183.43
9.	Sodium Absorption Ratio	--	1.03
10.	Cation Exchange Capacity	meq/100g	5.03

#### **4.4.4 Discussion on Soil Quality in the Study Area**

pH value obtained for the soil samples collected from the study area have 6.9, indicating that, the soil is slightly acidic in nature. All other parameters are found to be normal.

## **CHAPTER 5. SUMMARY AND CONCLUSION**

The proposed construction is a Group Housing Project 'Jain Tuffnell Garden' located in Survey Nos. 483/14, 484/7, 485/1 at Kakkanad Village, Kanayannur Taluk, Ernakulam District, Kerala.

Specific and general conditions stipulated in Environment Clearance has been complied during construction phase. This will be complied during the operation phase also. Proponent has planned to construct 8 towers for residential apartments but only 2 towers were completed and remaining 6 towers are not yet completed. Currently no construction works are going on at project site. Environmental monitoring was done for preparation of half yearly compliance report (April 2024 – September 2024) and it was observed that all the environmental parameters are within the respective prescribed limits. Environmental mitigation measures described in Environmental Management Plan will be implemented.

## **ANNEXURES**

F.No. 21-59/2010-IA.III  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi-110 003.

Dated: 24<sup>th</sup> May, 2011

To  
M/s. Jain Housing and Construction Ltd.,  
11-Somasundaram Street,  
T. Nagar, Chennai - 600 017

**Subject: Environmental Clearance for construction of Group Housing project at Survey No. 483/14, 484/7, 485/1, Village Kakkanad, Panchayat Phrikkakara, Taluk Kanayannur, District Ernakulam, Kerala by M/s. Jain Housing and Construction Ltd. - Reg.**

Dear Sirs,

This has reference to your application No. NIL dated 03.11.2010 seeking prior Environmental Clearance for the above project under the EIA Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification, 2006 and its subsequent amendments on the basis of the mandatory documents enclosed with the application viz., the Form-1 & 1A, Conceptual Plans to the Expert Appraisal Committee (EAC) constituted by the competent authority in its meeting held on 14<sup>th</sup> - 15<sup>th</sup> February, 2011.

2. It is, interalia, noted that the project involves the construction of Group Housing project on a plot area of 35,084.62 sq.m. The total built-up area is 1,39,885.78 sq.m. It is proposed to construct 1,216 dwelling units (1 BR-456 + 1BR +Study-456 + 2 BR = 304 Nos.) with Club area. Which will have 8 Towers (Lower ground floor + Upper Ground floor + 19 floors). The total water requirement is 538.30 KLD (fresh water -399.25 KLD). The capacity of STP proposed is 582 KLD. Treated waste water to be used for flushing of toilets-139.05 KL, horticulture-21KLD and nearby plantation-275.973 KLD. Total solid waste generation will be 2,420 Kg/day. The power requirement is 8,000 KVA. The total parking spaces proposed are for 1,337 cars + 334 two wheelers. Total cost of the project is Rs. 112.122 Crores.

3. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of Environmental Clearance for the project mentioned above. Accordingly, the Ministry hereby accord necessary Environmental Clearance for the above project as per the provisions of Environmental Impact Assessment Notification - 2006 and its subsequent amendments, subject to strict compliance of the terms and conditions as follows:



## **PART A - SPECIFIC CONDITIONS**

### **I. Construction Phase**

- (i) "Consent for Establishment" shall be obtained from Kerala State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.
- (ii) The road along the park is not required and can be converted into pedestrian. The outer road should be widened to minimum 9.0 m. Revise the layout plan accordingly.
- (iii) The storm water drainage shall be worked out after analyzing the contour levels of the site and the surrounding area and the carrying capacity of storm water drains and their outfall.
- (iv) The total height of the building shall not be more than 60 m., due to the non-availability of sufficient fire fighting facilities in the area.
- (v) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (vi) A First Aid Room will be provided in the project both during construction and operation of the project.
- (vii) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- (viii) Disposal of muck 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 approved sites with the approval of competent authority.
- (ix) 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.
- (x) Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.
- (xi) Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the Kerala State Pollution Control Board.

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- (xii) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.
- (xiii) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.
- (xiv) Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.
- (xv) 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/ KSPCB.
- (xvi) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August, 2003.
- (xvii) Ready mixed concrete must be used in building construction.
- (xviii) Storm water control and its re-use as per CGWB and BIS standards for various applications.
- (xix) Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
- (xx) Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.
- (xxi) Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.
- (xxii) 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.
- (xxiii) Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality double glass with special reflective coating in windows.
- (xxiv) Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.



- (xxv) Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfill requirement.
- (xxvi) The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code including protection measures from lightening etc.
- (xxvii) 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.
- (xxviii) 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.

## **II. Operation Phase**

- i) 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 Ministry before the project is commissioned for operation. Treated affluent emanating from STP shall be recycled/reused to the maximum extent possible. Treatment of 100% grey water by decentralised treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Kerala State Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.
- ii) The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry / inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
- iii) Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation 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. The location of the DG sets may be decided with in consultation with Kerala State Pollution Control Board.
- iv) 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.

*[Handwritten signature]*

- v) The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.
- vi) Deep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.
- vii) Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 mts. above the highest ground water table.
- viii) The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.
- ix) 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. ROW inside the complex shall be minimum of 9 meter. Parking plan to be as per MoEF norms.
- x) A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.
- xi) Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.
- xii) Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.
- xiii) The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation. Landscape plan to be revised accordingly.

#### **PART - B. GENERAL CONDITIONS**

- i) 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.





4. Officials from the Regional Office of MOEF, Bangalore who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Bangalore.
5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.
6. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
7. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
8. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
9. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Kerala Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.
10. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.
11. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
12. The proponent shall upload the status of compliance of the stipulated 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<sub>2</sub>, NO<sub>x</sub> (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.

13. The environmental statement for each financial year ending 31<sup>st</sup> 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.



**(Bharat Bhushan)**  
**Director (IA)**

24.05.2011

Copy to:

- (1) The Secretary, Department of Environment, Government of Kerala, Thiruvananthapuram.
- (2) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110 032.
- (3) The Member Secretary, Kerala State Pollution Control Board, Plamoodu Junction, Pattom Palace, P.O. Thiruvananthapuram - 695 004.
- (4) The CCF, Regional Office, Ministry of Environment & Forests(SZ), Kendriya Sadan, IVth floor, E&F wings, 17<sup>th</sup> Main Road, Koramangala II Block, Bangalore - 560 034.
- (5) IA - Division, Monitoring Cell, MOEF, New Delhi - 110003.
- (6) Guard file.



**(Bharat Bhushan)**  
**Director (IA)**



# Jain Housing & Constructions Ltd.

Dated: 18<sup>th</sup> July 2020

The Member Secretary

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA) KERALA  
K.S.R.T.C Bus Terminal Complex, 4th Floor, Thampanoor,  
Thiruvananthapuram - 695 001  
Ph: +91471-2334262 (Off) +91471-2334265 (Fax)  
e-mail:seacseiaakerala@gmail.com

Dear Sir,

Sub: Proposed Residential development – Representation on Amendment / Extension of EC – EC accorded @ S. Nos. 483/14, 484/7, 485/1 at Kakkanad Village, Kanayannur Taluk, Ernakulam District – Reg.

Ref: 1. Our application towards EC to MoEF & CC – Delhi dt: 03-11-2010  
2. EC accorded by MoEF & CC – New Delhi : 21-59/2010-IA.III dt: 24<sup>th</sup> May 2011

In reference to the above, we bring to your attention; we had proposed a residential development in the above cited survey nos. covered under the respective village and taluk falling under Ernakulam district.

Incidentally the overall built up area based was in excess of 20,000 Sq. mtrs; on the assumption as prevailed and as was the practice of the local planning authority @ Kerala State, we had applied to MoEF & CC – Delhi vide reference 1<sup>st</sup> cited.

We had undertaken the presentation in front of the EAC with the site plan as intended to be developed with the area statement towards FSI and Non FSI areas and eventually the same has been approved and accordingly we have been accorded with the environmental clearance vide reference second cited.

We had initiated our development works post securing the EC and other pertinent clearances / approvals as mandated under law and progressed. Due to market conditions and other financial constraints, we could not progress beyond a level and suspended our works to a period till the market condition improves.

For JAIN HOUSING AND CONSTRUCTIONS LTD.

*[Handwritten Signature]*  
Managing Director

CIN : U45201TN1994PLC029036

Corporate Office : No.98/99, Habibullah Road, T. Nagar, Chennai - 600 017.

Ph : 044 - 4679 1111 Fax : 91-44-2461 3077

E-mail : enquiry@jainhousing.com Website : http://www.jainhousing.com



# Jain Housing & Constructions Ltd.

The current status is that

S.NO	Development Component	Unit	Overall As Approved	Current Scenario
1	Total Plot Area	Sq. mtrs	35,084.62 sq. mtr	35084.62 sq. m
2	Total Built Up Area [ FSI ]	Sq. mtrs	1,39,885.78 sq. m	1,39,885.78 sq.m
3	Total No. of Blocks	Nos	8 nos.	8 nos.
4	Total no. of Lower Ground Floors	Nos	1 no	1 no
5	Total no. of Upper Ground Floors	Nos	1no	1no
6	Total no. of apartments / block	Nos	152 nos. / per block	152 nos./per block
7	Total no. of apartments overall	Nos	1216 nos.	1216 nos.

**Photos enclosed for immediate understanding and review**

As is known to the authority, the market has been sluggish especially for the development of our category of residential units and we could not progress for a long time since. While now we intend to start post this COVID scenario getting improved with no restrictions on developmental work and movements, we wish to get the EC revalidated for a span of three years [7 + 7 years] as mandated under the notification till May 2025 and oblige. Being a conscious developer, we have been complying with all the environmental provisions and submit to comply consistently in future as well.

Also, at this point, we bring to your attention inadvertently, due to so much amount of deliberations on built up area prevailed during our EC accorded stage, the Non- FSI areas [mainly basement parking termed as Lower Ground Floor and Upper Ground Floor] has not been taken into account and we request the authority may take a complete review of the following statements and also the documentary evidences and accordingly amend the EC with a revised validity and oblige.

It is imperative to note that the project area as projected from our end was the FSI area as total built up area and due to no occupational manpower or any other environmental component associated with the rest of the area, which is said to be Non- FSI area or free of FSI area was not considered in the area taken for EC. Though we had submitted the complete area statement along with the master plan which specifies both the areas separately.

It may be noted that there were so many doubts right from the EIA notification 2006, published date in terms of the definition towards built up area, as different state planning authorities adopted different modus of appraisal and understanding towards the same. In fact this has resulted in many such developments getting into the area related issues, for which already EC has been granted by Ministry.

For JAIN HOUSING AND CONSTRUCTIONS LTD.

*Sandeep Gehha*  
Managing Director

CIN : U45201TN1994PLC029036

Corporate Office : No.98/99, Habibullah Road, T. Nagar, Chennai - 600 017.

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## Jain Housing & Constructions Ltd.

We take an opportunity to cite here, the Ministry's OM dated 7<sup>th</sup> July 2017, which has given clarifications on the built up area based on a representation made by the national association of CREDAI, Which has categorically mentioned the clarifications given hereunder shall come into effect only prospectively from the date of notification [ to be read as the notification on BUA as made by MoEF & CC : SOE 695[E] dt: 04-04-2011].

Taking a cue out of the above, we wish to put forward our position and observation for your appropriate review and consideration as deemed fit

- Our application to MoEF & CC towards EC was made on – 03-11-2010
- Appraisal of our application by EAC was made during the EAC meeting held on 14-15<sup>th</sup> February 2011
- EC was accorded on 24<sup>th</sup> May 2011

### Observation / Inference

- Our application towards EC was made much before the said notification on clarification on BUA by MoEF & CC.
- Our appraisal by EAC was carried out much before the said notification in February 2011
- Our submissions to MoEF & CC was in a comprehensive manner with no suppression of details / drawings
- Evaluation through EAC happened for the development which is approved being executed
- No configuration Changes till date and won't happen in future too.
- EC specifies the product mix with parking provisions as well

Therefore it is imperative to note, we as a developer have submitted everything required for the clearance and we had with the understanding of the built up area as prevailed during that time. It is important to note, the ministry has also examined our proposal and accorded the clearance. It is obvious the areas for Non- FSI as said if at all is to be taken into consideration, should have been specified by MoEF & CC during our EC issual stage.

Given the above, we seek the SEIAA – Kerala, may take note of the complete proceedings and arrange to amend and also revalidate the EC for the requested span till 23<sup>rd</sup> May 2025 and oblige.

We are enclosing the following for your kind review as well

1. Copy of the EC
2. Copy of the presentation as made to EAC
3. Copy of our plan approval from Planning authority – Kerala
4. Copies of NOC's as applicable for the project
5. On date Site Photos depicting the status of construction

For JAIN HOUSING AND CONSTRUCTIONS LTD.  
*S. Anand Tejha*  
Managing Director

CIN : U45201TN1994PLC029036

Corporate Office : No. 98/99, Habibullah Road, T. Nagar, Chennai - 600 017.

Ph. : 044 - 4679 1111 Fax : 91-44-2461 3077

E-mail : enquiry@jainhousing.com Website : http://www.jainhousing.com



# Jain Housing & Constructions Ltd.

6. Affidavit towards complying to EC provisions and no change in the configuration as indicated in the EC

## PROJECT DETAILS

SI No	Description	Remarks
1.	Proposal Name	Proposed Group Housing Project At Village Kakkanad, Panchayat Phrikkakara, Taluk Kanayannur, District Ernakulam, Kerala
2.	Proponent	Jain Housing and constructions Ltd.
3.	Survey No:	483/14, 484/7, 485/1
4.	Village	Kakkanad
5.	Taluk	Kanayannur
6.	District	Ernakulam
7.	State	Kerala
8.	Proposal No:	IA/KL/NCP/1561/2010
9.	MOEF File no:	21-59/2010-IA.III
10.	Date of EC Granted	24 May 2011
11.	Total Plot Area	35,084.62 sq.mtr
12.	Built-up Area - FSI - [ A ]	1,39,885.78 sq.m
13.	Built - up Area - Non FSI [ B ]	52775.62 Sq.m
14.	Total Built Up Area - [ A+ B ]	1,92,661.40 Sq.m
15.	Configuration	8 Towers (Lower ground floor + Upper Ground floor + 19 floors) with Club Area
16.	No. of Dwelling Units	1216
17.	Proposed Parking Spaces - Cars	Car - 1337
18.	Proposed Parking Spaces - Two wheelers	Two Wheeler - 334
19.	Total water requirement	538.30 KLD
20.	Total Freshwater Requirement	399.25 KLD
21.	Flushing water Requirement	139.05 KLD
22.	STP Capacity	582 KLD
23.	Treated sewage quantity & usage	436.023 KLD Toilet Flushing - 139.05 KLD Horticulture - 21KLD Nearby plantation - 275.973 KLD
24.	Solid waste generation	2420 kg/day
25.	Power Requirement	8,000 KVA

CIN : U45201TN1994PLC029036

Corporate Office : No. 98/99, Habibullah Road, T. Nagar, Chennai - 600 017.

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*Jain Housing & Constructions Ltd.*  
Managing Director



# Jain Housing & Constructions Ltd.

26.	Total Building Height (excluding lift machine room, head room)	58.95 m (As per site plan)
27.	Total Project Cost	112.122 Crores

For JAIN HOUSING AND CONSTRUCTIONS LTD.

*Manoj K. Gokhale*  
Managing Director

CIN : U45201TN1994PLC029036

Corporate Office : No. 98/99, Habibullah Road, T. Nagar, Chennai - 600 017.

Ph. : 044 - 4679 1111 Fax : 91-44-2461 3077

E-mail : enquiry@jainhousing.com Website : <http://www.jainhousing.com>

**RENEWED PERMIT**  
 2/Reg/2016-17  
 Permit No: Tal. 959/12  
 B.A. No.....  
 Date of Renewal: 15/6/19  
 Valid up to: 15/6/2021  
 Secretary  
 Thrikkakara Municipality

Fee Remitted 119330/24/100 ₹ 723000  
 12/3/2020

**MUNICIPAL COUNCIL, THRIKKAKARA**

**APPENDIX C**

[See Rule 11(3)]

**BUILDING PERMIT**

(REGULARISATION)

12/20 No. 12/Reg/2016-17

Date 15-06-2016

Ref:- Application dated 06-08-2015 from Sri/Smt M.J. Louiz, Sunitha Elizabeth George, Indhira Louiz, Mukkadayil Veedu, Ernakulam

Permission is granted for the erection / re-erection / addition / alteration / demolition of building / hut / digging of well / Residential Apartments (specify the construction) in building

No. 483/14, 484/7, 485/1 or near the building No. in Survey No. Taluk Kanayanoor, Kakkanaad Village

District Ernakulam for Residential

(specify the occupancy) purpose, subject to the conditions stated below:

- (1) Fire Noc, POC and MDEF if required should be produced before
- (2) Completion of work
- (3)
- (4)

Fees remitted ₹ 373,29,000-

(vide RT No. 01/11602500063 - 2697000)  
 RT No. 01/11602500064 - 34632000)

Plinth area of the building is as follows:-

Basement Lower level Area (Carparking) - 27030.91 m<sup>2</sup>

Ground Floor upper level Area ( " ) - 27030.91 m<sup>2</sup>

First Floor Typical Floor Area Tower no

Tower no: 1, 4, 5, 6, 7, 8 - 19 x 5316.9 = 101021.10

Tower 2 & 3! 19 x 1964.04 = 37316.76

Headroom

238.12  
 192637.80 m<sup>2</sup>

Place : Thrikkakara  
 Date : 15-06-2016



Signature and name of Secretary  
 SECRETARY  
 THRIKKAKARA MUNICIPALITY

- Notes:-
- (1) The development permit or building permit unless otherwise provided under these rules, shall be valid for three years from the date of issue and may be renewed twice each for three years.
  - (2) The application for renewal shall be submitted to the Secretary in white paper, typed or written in ink affixed with necessary court fee stamp and accompanied by copy of permit and approved plan.
  - (3) The fee for renewal of permit shall be fifty percent of the prevailing permit fee.
  - (4) The permits issued under the Kerala Building Rules, 1984 and remaining valid at the commencement of these rules shall be deemed to have been issued under these rules and may be renewed for like period and on like terms as a permit issued under these rules.





## Form IVC/IC

## KERALA STATE POLLUTION CONTROL BOARD

APPLICATION FOR CONSENT/AUTHORISATION/REGISTRATION  
(RESIDENTIAL ESTABLISHMENT)

## PART I

## NAME AND ADDRESS OF ESTABLISHMENT:

JAIN HOUSING & CONSTRUCTIONS Ltd  
 Project at Jain Tuffnel Park, Phase-I, Block 4 & 5, Kakkanad  
 / H.O - JAIN HOUSING AND  
 CONSTRUCTIONS LTD  
 G 361 MAIN AVENUE  
 PANAMPILLY NAGAR  
 COCHIN 682036

I am the occupier of above industry/establishment. I hereby apply for clearance/s under :

*tick appropriate cells*

NAME OF STATUTE	ESTABLISH	OPERATE	RENEW
		✓	

- \* The entries in the application/s are true to the best of my knowledge, information and belief. I have signed hereunder, at the end of the application and on enclosure in affirmation of that.
- \* I undertake to furnish any information, explanation and/or clarification within 15 days of it being called for to make my application complete. I understand that the date on which the application is made complete in all respect will only be counted as the date of the application.
- \* I agree to abide by the conditions of the Consent/Authorisation/Registration and the pertinent legal provisions.
- \* I undertake to render access to functionaries and empowered officers of the Board to inspect the industry/establishment and its premises and peruse records thereof.
- \* Any change in line of activity/pollution load will be effected only after obtaining the Consent/Authorisation/Registration for which a fresh application will be made.

Place :ERNAKULAM I  
Date : 22/07/2019

Signature :  
Name :COLLEEN PETRIZ  
Designation : BRANCH HEAD

## PART II

### GENERAL INFORMATION

1.

	REGISTERED OFFICE ADMINISTRATIVE OFFICE	OCCUPIER
Postal Address	Project at Jain Tuffnel Park,Phase-I,Block 4 & 5,Kakkanad / H.O - JAIN HOUSING AND CONSTRUCTIONS LTD G 361 MAIN AVENUE PANAMPILLY NAGAR COCHIN 682036	JAIN HOUSING AND CONSTRUCTIONS LTD G 361 MAIN AVENUE PANAMPILLY NAGAR COCHIN 682036
PIN	682030	682036
Telephone	0484-2316111	0484-2320333
Fax	-	-
e-mail	colleen@jainhousing.co.in	colleen@jainhousing.co.in
Website	-	-

2.

	OWNERSHIP	AREA IN SQUARE METERS	ADDRESS OF LESSOR, IF ON LEASE
Built up area	-	34576.26	M.J Louiz,Indira Louiz,Sunitha Elizabeth George,Mukkadayil veedu,Eranakulam
Total area	-	35335.54	-
Survey No.	485/1	Ward NO.& Name	11
Village	KAKKANAD	Panchayat/ Municipality/ Corporation	Thrikakara
Taluk	KANAYANNUR	District	ERNAKULAM I

3.

Management Category	Public Limited Company ORANGE
------------------------	----------------------------------

4. Particulars of last clearance/s obtained :

CLEARANCE	GRANT/ REFUSAL, No., Date, Validity
Consent Under Water Act	NA
Consent Under Air Act	NA
ICE/ICO/ICO(R)	NA
Authorisation under BMW Rules	NA

5. Date of Commissioning: Dec/2016  
(if new, anticipated date)

6. Nearest building/water body within 100m:

	OWNERSHIP , USE ,DISTANCE, in m (to be marked on site plan)
From The Building	Residential-40Mtr
From Effluent Treatment Plant	Residential-80Mtr
Dug well/tube/pond	NA
Stream/river/lake/backwater/sea	Canal-3.5Mtr

7. Total occupants/staff: 304 Flats / 1064 Occupants(152-2 BHK, 152-3BHK)

8. Laundry: NO /round the year

9. Kitchen: YES

10. Number of staff quaters within the premises: NA

Number of residents: 5

11. Gross Fixed Capital Investment(Rs in Lakhs): 4088.79

AMOUNT	MODE OF PAYMENT	PERIOD
135000.0	Offline 135935 16/08/2016	
385000.0	Offline 153616 03/07/2012	

### PART III

#### WASTE WATER MANAGEMENT

##### 1. Water consumption details:

Sl.No.	PURPOSE	CONSUMPTION l/d
1	Domestic	38000.0
2	Others Toilet Flushing	34000.0
3	Others Horticulture	50000.0
4	Others Plantation	50000.0

##### 2. Source/s of water with quantity: Bore well & Open Well, 192

##### 3. Effluent treatment details:

S.No	Uses	Effluent Generation	Treatment Arrangement Status	Treatment Details
1	Domestic Effluent	154.0	Yes	STP

##### 4. Effluent quantity and quality:

OUTLET NUMBER	QUANTITY m <sup>3</sup> /d	QUALITY			RECIPIENT BODY
		PARAMETER	UNIT	CONCENT- RATION	
1	154	BOD	Mg/Ltr	30	Reuse Maximum and Soak pit
1	154	SS	Mg/Ltr	100	Reuse Maximum and Soak pit
1	154	Oil & Grease	Mg/Ltr	10	Reuse Maximum and Soak pit

1	154	PH	0	6.5-8.9	Reuse Maximum and Soak pit
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\* In case of discharge to land, extent and survey number shall be provided)

5. Recycle/Reuse of treated waste water:

QUANTITY,l/d	USE
134000	Flushing,Horticulture and Plantation

6. Water Budget: Total water consumption 192000 Ltr/day, Loss of 20% @ 38000 Balance-154000 . 34000 Ltr for For Toilet flushing,50000 Ltrs for Horti culture and 50000 Ltrs for Plantations, and 20000 ltrs to soak pit

(Account for difference between water consumption and effluent generated)

7. Details of rain water harvesting :Have a rain water harvesting tank capacity 150000 for both block

### PART IV

### AIR POLLUTION MANAGEMENT

1. Fuel consumption:

FUEL	CONSUMPTION tpd/kld	USE
Diesel	30	2 DG Set 220Kva

2. Stack details:

Stack No.	Material of Construction	Dimension		Height above roof level,m (for generation only)	Source of Emission		Fuel	
		Height m	Diameter cm		Equipment	Capacity	Type	Quantity (tpd or kld)
1	Mild Steel	6	100mm	100mm	3	One Stack Attached to DG set	220	KVA

	500 Ltr	2	Mild steel	6	100mm	100mm	3	One Stack Attached to DG set
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### 3. Emission Details:

Stack No.	Stack Name.	Design Flow Nm <sup>3</sup> /h	Concentration in mg/Nm <sup>3</sup> , at 12% CO <sub>2</sub> correction					
			PM	SO <sub>2</sub>	NO <sub>x</sub>	CO	Others	

### 4. Emission control & monitoring:

Stack No.	Stack Name.	Port Hole (Y/N)	Platform (Y/N)	Ladder (Y/N)	On-Line Monitoring		Sources	Control Measures
					Continuous (Y/N)	Periodic (Y/N)		

## NON-HAZARDOUS WASTE MANAGEMENT

7

Category	Quantity	Details of storage treatment & disposal
Garbage	18	Bio Bin/ Municipal service

2. Green-belt details:

(also to be shown in site plan)

Proposed

3. Details of litigation pending, if any, against pollution due to your establishment:

Nil

4. Details of separate energy meters, if provided, for pollution control equipments:

Will be Install

5. Details of stand-by power, if provided, for pollution control equipments:

Common facility

6. Any other pertinent matter:

Nil

Signature:

Name:

Accompaniments :

1. REPLY LETTER TO PCB (Attached)
2. PERFORMANCE GUARANTEE (Attached)
3. AMC (Attached)
4. Affidavit in Rs. 100/- stamp paper or C.A.'s certificate regarding undepreciated value of the fixed assets of the industry/project clearly indicating the value of Land, Plant & Machinery and other Miscellaneous Fixed Assets etc. on a particular date (along with a copy of the balance sheet of the industry/project as applicable) (Attached)
5. Request for modification of Existing STP to Treat the 155 Kld of effluent (Attached)
6. STP drawing (Attached)
7. ETP project report (if applicable) (Attached)
8. Building plan 4&5 Block (Attached)
9. Copy of lease agreement (if in lease) (Attached)
10. Copy of possession certificate (Attached)
11. Operation & maintenance contract (Attached)
12. Undertaking (Attached)
13. Location Sketch from village office (Attached)
14. Copy of Land Tax Receipt (Self attested) (Attached)
15. DD Original (Attached)
16. Site planing (in A4/A3) showing residences/structures, water bodies, roads etc, within 100m radius of the industry (200m in case of crusher industry) (Attached)

### INSTRUCTIONS

1. The Application is to be made by the occupier.
2. The application is to be submitted in triplicate to the office of the Board in the District.
3. The duplicate and triplicate copy can be photocopies of the original but copy should have the signature of the applicant in original. The copy should have copies of accompaniments.
4. State NA if any item is not applicable.
5. If the space provided is insufficient, duly referenced additional sheets can be used..
6. The gross fixed capital investment shall include the cost of land, building, plant, machinery, etc. without depreciation upto the date of application. If the land is on lease 20 times of the annual lease amount shall be taken as cost of land.
7. Consent fee shall be paid for a period of 3 years. In case fees under Water act, Air Act, BMW Rules, Plastic rules are already paid for part of the period, proportionate fees for the balance period are to be paid. For the purpose of calculation of consent fee, part of a year shall be counted as one year.
8. The consent fees is to be paid in the favour of Kerela state Pollution Control Board.

9. The analytical part in Part III and Part IV shall be supported by reports of analysis done by laboratory approved by the Board.

10. Pollution prevention, control and monitoring facilities may be got designed and installed preferably by consultants approved by the Board.

11. The following documents are available at the Board offices on request, free of cost.

(a) Chart of consent fee payable.

(b) List of laboratories/consultants approved by the Board.



Recent Site Photographs



Project site



Project site



ENVIRODESIGNS  
**ECO LABS**  
(Food Quality / Water / Environmental Testing Lab)



ISO 9001:2015, ISO 45001:2018 Certified organisation  
Approved 'A' grade Lab by Kerala State Pollution Control Board  
Accredited Lab by NABL as per ISO 17025:2017 (Cert No: TC-7114)  
Recognised Lab by Ministry of Environment, Forests & Climate Change (Govt. of India) as per E (P) Act 1986

**TEST REPORT**

Page 1 of 2

Report No. : EEL/LR/24/0027392/742  
Issue Date : November 25, 2024

Issued To:

M/s. ULTRA TECH  
Unit No. 206, 224, 225, Jai Commercial Complex  
Eastern Express Highway  
Opposite Cadbury Factory  
Khopat, Thane (West) – 400 601.

Customer ref. : Email dt. 11.11.2024

Project: - Jains Tufnell Garden at Kakkanad, Kanayannur, Ernakulam.

Sample receipt form Ref. No. : SRF/W/11/742 dt. 19.11.2024

Sampling done by: Customer

**Sample Particulars: Water sample**

Sample receiving date : November 19, 2024  
Analysis starting date : November 19, 2024  
Quantity of sample received: 1L x 2  
Packaging details : Plastic can  
Location coordinates : 10°0' 8.57" N 76°21'22.61" E  
Physical appearance of the sample: Clear liquid  
Tests required: For the parameters listed below, as per Drinking water specification IS 10500:2012

Lab identification code: W/11/742

Analysis completion date: November 23, 2024

Description of sample by the customer: Ground water sample  
(Open well)**SAMPLE TESTED AS RECEIVED**

Sl. No.	Parameters	Unit	Method	Result	Requirement (Acceptable limit)
1.	pH at 25°C	---	IS 3025 (Pt 11):2022	6.9	6.5-8.5
2.	Turbidity	NTU,max	IS 3025 (Pt 10):1984	0.60	1.0
3.	Total Dissolved Solids	mg/l,max	IS 3025(Pt 16):2023	32	500
4.	Total Hardness as CaCO <sub>3</sub>	mg/l,max	IS 3025 (Pt 21):2009	16	200
5.	Chloride as Cl	mg/l,max	IS 3025(Pt 32):1988	6.85	250
6.	Sulphate as SO <sub>4</sub>	mg/l,max	IS 3025(Pt 24):2022	2.12	200
7.	Alkalinity as CaCO <sub>3</sub>	mg/l,max	IS 3025(Pt 23):1986	14.21	200
8.	Iron as Fe	mg/l,max	IS 3025 (Pt 53):2003	0.07	1.0
9.	Magnesium as Mg	mg/l,max	IS 3025(Pt 46):1994	1.46	30
10.	Nitrate as NO <sub>3</sub>	mg/l,max	IS 3025(Pt 34):1988	0.14	45
11.	Fluoride as F	mg/l,max	IS 3025(Pt 60):2008	BDL(MDL-0.2)	1.0
12.	Ammonia (as Total Ammonia -N)	mg/l,max	IS 3025(Pt 34):1988	BDL(MDL-0.1)	0.5
13.	Lead as Pb	mg/l,max	IS 3025 (Pt 2) : 2019	BDL(MDL-0.005)	0.01

Note:- BDL: Below Detection Limit

MDL: Minimum Detection Limit

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Report No. : EEL/LR/24/0027392/742

Page 2 of 2

Sl. No.	Parameters	Unit	Method	Result	Requirement (Acceptable limit)
14.	Copper as Cu	mg/l,max	IS 3025 (Pt 2) : 2019	BDL(MDL-0.01)	0.05
15.	Cadmium as Cd	mg/l,max	IS 3025 (Pt 2) : 2019	BDL(MDL-0.001)	0.003
16.	Mercury as Hg	mg/l,max	IS 3025 (Pt 48):1994	BDL(MDL-0.0005)	0.001
17.	Zinc as Zn	mg/l,max	IS 3025 (Pt 2) : 2019	BDL(MDL-0.01)	5.0
18.	Arsenic as As	mg/l,max	IS 3025 (Pt 2) : 2019	BDL(MDL-0.005)	0.01
19.	Total Chromium as Cr	mg/l,max	IS 3025 (Pt 2) : 2019	BDL(MDL-0.01)	0.05
20.	Nickel as Ni	mg/l,max	IS 3025 (Pt 2) : 2019	BDL(MDL-0.01)	0.02
21.	Dissolved Oxygen	mg/l	IS 3025 (Pt 38) :1989	5.0	NA
22.	Biochemical Oxygen Demand @ 27°C for 3 days	mg/l	IS 3025(Pt 44): 1993	2.40	NA
23.	Chemical Oxygen Demand	mg/l	IS 3025(Pt 58) : 2006	8.0	NA

Note:- BDL: Below Detection Limit

MDL: Minimum Detection Limit

NA: Not Applicable

Sl. No.	Parameters	Method	Result	Requirement
1.	Total coliform bacteria/100ml	IS 15185 :2016	Absent	Shall not be detectable in any 100ml sample
2.	E.coli or thermotolerant coliform bacteria/100ml	IS 15185 :2016	Absent	Shall not be detectable in any 100ml sample

....End of Report.....

  
Susan Abraham  
Technical Manager  
Authorised Signatory  
Envirodesigns Eco Labs

  
Jesty M. T.  
Dy.Tech. Manager-Microbiology  
Authorised Signatory  
Envirodesigns Eco Labs



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Recognised Lab by Ministry of Environment, Forests & Climate Change (Govt. of India) as per E (P) Act 1986

**TEST REPORT**

Page 1 of 1

Report No. : EEL/LR/24/0027393/743  
Issue Date : November 25, 2024

Issued To:  
M/s. ULTRA TECH  
Unit No. 206, 224, 225, Jai Commercial Complex  
Eastern Express Highway  
Opposite Cadbury Factory  
Khopat, Thane (West) – 400 601.

Customer ref. : Email dt. 11.11.2024  
Project: - Jains Tufnell Garden at Kakkanad, Kanayannur, Ernakulam.  
Sample receipt form Ref. No. : SRF/SO/11/743 dt. 19.11.2024  
Sampling done by: Customer

**Sample Particulars: Soil sample**

Sample receiving date : November 19, 2024	Lab identification code: SO/11/743
Analysis starting date : November 19, 2024	Analysis completion date: November 23, 2024
Quantity of sample received: 1 kg x 1	Description of sample by the customer: Soil sample (Main entrance)
Packaging details: Plastic cover	
Location coordinates : 10°0'7.45" N 76°21'22.90" E	
Tests required: For the parameters listed below;	

**SAMPLE TESTED AS RECEIVED**

Sl. No.	Parameters	Unit	Method	Result
1.	Soil Type	--	SOP No. EEL/WP/SO/08	Sandy clay loam
2.	Colour	--	SOP No. EEL/WP/SO/08	Reddish brown
3.	Moisture Content	%	IS 2720(Pt 2):1973	4.23
4.	Conductivity	µS/cm	IS 14767:2000	194
5.	pH	--	IS 10158:1982	6.9
6.	Organic Carbon	%	IS 2720(Pt 22):1972	0.36
7.	Total Nitrogen	%	IS 14684:1999	0.21
8.	Phosphorus	mg/kg	SOP No.EEL/WP/SO/10	183.43
9.	Sodium Absorption Ratio	--	IS 11624: 2019	1.03
10.	Cation Exchange Capacity	meq/100g	Indian Bureau of Mines Analysis of Soil: 2012	5.03

  
Susan Abraham  
Technical Manager  
Authorised Signatory  
Envirodesigns Eco Labs

....End of Report.....



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**AMBIENT AIR MONITORING REPORT**

Page 1 of 1

Report No. : EEL/LR/24/0027394/744  
Issue Date : November 25, 2024

Issued To:  
M/s. ULTRA TECH  
Unit No. 206, 224, 225, Jai Commercial Complex  
Eastern Express Highway  
Opposite Cadbury Factory  
Khopat, Thane (West) – 400 601.

Customer ref. : Email dt. 11.11.2024

Project: - Jains Tufnell Garden at Kakkanad ,Kanayannur, Ernakulam.

Sample receipt form Ref. No. : SRF/A/11/744 dt. 20.11.2024

Sampling done by: Lab field technicians

**Sample Particulars: Ambient Air sample**

Date of monitoring	: November 19, 2024 to November 20, 2024	
Location of monitoring	: Ambient Air Monitoring –Main gate (East side)	
Location coordinates	: 10°0'7.15" N 76°21 '22.84" E	
Sampling method	: Monitoring Protocol No. EEL/ENV/MP/01	
Location of sampler	: 3.2 m above ground level	
Sample receiving date	: November 20, 2024	Lab identification code: A/11/744
Analysis starting date	: November 21, 2024	Analysis completion date: November 23, 2024
Tests required:	For the parameters listed below, as per CPCB guidelines	

**SAMPLE TESTED AS RECEIVED**

Sl. No.	Parameters	Unit	Method	Result	Limit (max)*
1.	Particulate matter(Size less than 10µm)or PM <sub>10</sub>	µg/m <sup>3</sup>	IS 5182(Pt 23):2006	62.26	100
2.	Particulate matter (Size less than 2.5µm)or PM <sub>2.5</sub>	µg/m <sup>3</sup>	CPCB guidelines 2011	21.13	60
3.	Sulphur dioxide	µg/m <sup>3</sup>	IS: 5182 (Pt 2):2001	10.48	80
4.	Nitrogen dioxide	µg/m <sup>3</sup>	IS: 5182 (Pt 6): 2006	13.16	80
5.	Carbon Monoxide (8hrs)	mg/m <sup>3</sup>	IS: 5182 (Pt 10): 1999	0.90	2.0

\* Limit applicable for Industrial, Residential, Rural and other Areas as per National Ambient Air Quality Standards 2009.

**Weather and Meteorological Data**

Weather condition: Partly cloudy

Meteorological Parameters	Max	Min
Temperature (°C)	30	25
Humidity (%)	92	65

**Instruments used for Monitoring**

1. Respirable Dust Sampler (RDS), Make: Envirotech Instruments Pvt. Ltd., ID No.: EEL/RDS/08
2. Fine Particulate Sampler (FPS), Make : Envirotech, Model: APM 550, ID No.: EEL/FPS/08
3. CO ANALYZER, Make: Endee Engineers, Model :IR-200, ID NO.:EEL/COA/01

....End of Report....

Susan Abraham  
Technical Manager  
Authorised Signatory  
Envirodesigns Eco Labs



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**NOISE LEVEL MONITORING REPORT**

Page 1 of 2

Report No. : EEL/LR/24/0027395/745  
 Issue Date : November 25, 2024

Issued To:  
 M/s. ULTRA TECH  
 Unit No. 206, 224, 225, Jai Commercial Complex  
 Eastern Express Highway  
 Opposite Cadbury Factory  
 Khopat, Thane (West) – 400 601.

Customer ref. : Email dt. 11.11.2024  
 Project: - Jains Tufnell Garden at Kakkanad ,Kanayannur, Ernakulam.  
 Sample receipt form Ref. No. : SRF/N/11/745 dt. 20.11.2024  
 Monitoring done by: Lab field technicians

**Sample Particulars: Noise Level Monitoring**

Date of monitoring : November 19, 2024 to November 20, 2024  
 Source of monitoring : Ambient Noise Level monitoring –Main gate (East side)  
 Location coordinates : 10°0'7.09" N 76°21 '22.65" E  
 Sampling method : Monitoring Protocol No. EEL/ENV/MP/01  
 Lab identification code : N/11/745  
 Method Used : IS 9989:1981

**Presentation of Results**

Sl. No.	Time of Monitoring(Hrs)	Value Reported in dB (A) $L_{eq}$
1.	06.00 - 07.00	48.6
2.	07.00 – 08.00	50.1
3.	08.00 – 09.00	51.3
4.	09.00– 10.00	53.6
5.	10.00 – 11.00	52.9
6.	11.00 – 12.00	54.1
7.	12.00 – 13.00	53.8
8.	13.00 – 14.00	51.6
9.	14.00 – 15.00	53.8
10.	15.00 – 16.00	50.5
11.	16.00 – 17.00	51.6
12.	17.00 – 18.00	52.8
13.	18.00 – 19.00	50.9
14.	19.00 – 20.00	49.1
15.	20.00 – 21.00	48.8
16.	21.00 – 22.00	46.3
17.	22.00 – 23.00	44.3

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Page 2 of 2

Report No. : EEL/LR/24/0027395/745

Sl. No.	Time of Monitoring(Hrs)	Value Reported in dB (A) $L_{eq}$
18.	23.00 – 00.00	43.8
19.	00.00 – 01.00	42.3
20.	01.00 – 02.00	40.6
21.	02.00 – 03.00	42.5
22.	03.00 – 04.00	43.8
23.	04.00 – 05.00	44.0
24.	05.00 – 06.00	44.4

Sl. No.	Location of Monitoring	Value Reported in dB (A) $L_{eq}$	
		Day time	Night time
1.	Ambient Noise Level monitoring - Main gate (East side)	51.2	43.2

LIMIT AS PER NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000				
	Industrial Area	Commercial Area	Residential Area	Silence Zone
Day Time	75	65	55	50
Night Time	70	55	45	40

Note: Day time means - 6.00 AM to 10.00 PM      Night time means - 10.00 PM to 6.00 AM

**Instrument used for Monitoring**

Name of Instrument : Sound Level Meter, Make: Cygnet, Model: A0106-302, ID No. : EEL/SLM/01

....End of Report.....

Susan Abraham  
Technical Manager  
Authorised Signatory  
Envirodesigns Eco Labs



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**PROFORMA INVOICE**

Annexure 7

<b>HAMSTER ENTERPRISES</b> PALLIKKADAVU ROAD KOONAMAVU PO VARAPUZHA 9895577384 GSTIN/UIN: 32AWLPD6760B1ZW State Name : Kerala, Code : 32 E-Mail : hamsterdiesel@gmail.com	Invoice No. <b>123</b>	Dated <b>20-Jul-2023</b>
	Delivery Note	Mode/Terms of Payment
	Supplier's Ref.	Other Reference(s)
	Buyer's Order No.	Dated
	Despatch Document No.	Delivery Note Date
Buyer <b>Project Managment Solutions</b> Site at:Jain Tuffnell Garden Flat No 4025 (Office) Nilampathinja Mujhal Road Kakkanad,Ernakulam-682039 GSTIN/UIN : 33AAOFP6515D1ZC State Name : Tamil Nadu, Code : 33	Despatched through	Destination
	Terms of Delivery	

Sl No.	Description of Goods and Services	HSN/SAC	GST Rate	Quantity	Rate	per	Disc. %	Amount
1	<b>Engine Oil Tc 15w-40</b>	27101980	18 %	<b>30.00 ltr</b>	261.17	ltr		<b>7,835.10</b>
2	<b>Fuel Filter 1.1 Ltr Set</b>	84212300	18 %	<b>1 nos</b>	237.29	nos		<b>237.29</b>
3	<b>Oil Filter 6r Fg</b>	8421	18 %	<b>2 nos</b>	422.89	nos		<b>845.78</b>
4	<b>8mm Pvc Assly 0.5 Mtr</b>	3917	18 %	<b>1 nos</b>	370.22	nos		<b>370.22</b>
5	<b>Copper Washer 6 mm</b>	7415	18 %	<b>4 nos</b>	6.00	nos		<b>24.00</b>
	<b>Service Charge</b>	9801	18 %					9,312.39
	<b>IGST</b>							<b>1,300.00</b>
	<b>Round Off</b>							<b>1,910.23</b>
								<b>0.38</b>
<b>Total</b>								<b>₹ 12,523.00</b>

Amount Chargeable (in words)

E. & O.E

**INR Twelve Thousand Five Hundred Twenty Three Only**

Company's Bank Details

Bank Name : **FEDERAL BANK**

A/c No. : **10160200006062**

Branch & IFS Code : **VARAPUZHA & FDRL0001016**

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for **HAMSTER ENTERPRISES**

Authorised Signatory

This is a Computer Generated Invoice



**PROFORMA INVOICE**  
(Tax Analysis)

Invoice No. **123**

Dated **20-Jul-2023**

**HAMSTER ENTERPRISES**

PALLIKKADAVU ROAD

KONAMAVU PO

VARAPUZHA

9895577384

GSTIN/UIN: 32AWLPD6760B1ZW

State Name : Kerala, Code : 32

E-Mail : hamsterdiesel@gmail.com

Party : **Project Managment Solutions**

Site at:Jain Tuffnell Garden

Flat No 4025 (Office)

Nilampathinja Mujhal Road

Kakkanad,Ernakulam-682039

GSTIN/UIN : 33AAOFP6515D1ZC

State Name : Tamil Nadu, Code : 33

HSN/SAC	Taxable Value	Integrated Tax		Total Tax Amount
		Rate	Amount	
27101980	7,835.10	18%	1,410.32	1,410.32
84212300	237.29	18%	42.71	42.71
8421	845.78	18%	152.24	152.24
3917	370.22	18%	66.64	66.64
7415	24.00	18%	4.32	4.32
9801	1,300.00	18%	234.00	234.00
<b>Total</b>	<b>10,612.39</b>		<b>1,910.23</b>	<b>1,910.23</b>

Tax Amount (in words) : **INR One Thousand Nine Hundred Ten and Twenty Three paise Only**

for **HAMSTER ENTERPRISES**

Authorised Signatory

# **YIELD TEST REPORT**

**FOR,**

**Smt. COLLEEN PETRIZ  
BRANCH HEAD  
JAIN HOUSING & CONSTRUCTIONS LTD  
JAINS TUFNELL GARDEN  
NILAMPATHINJA MUGHAL ROAD  
KAKKANAD, ERNAKULAM  
682039**



## **YIELD TEST REPORT**

Prepared for **Smt. Colleen Petriz, Branch Head, Jain Housing & Constructions Ltd, Jains Tufnell Garden, Nilampathinja Mughal Road, Kakkanad, Ernakulam- 682039**; construction site in, Survey Nos. 483/14, 484/7, 485/1 of Kakkanad Village, Kanayannur Taluk, Ernakulam District, Kerala State.

Prepared by

**Dr. B. Sharath Raj, Shri: P. N. Sarath, and Shri: P. Radhun Raj** , Groundwater Survey team from Hydro-Albite LLP, Tirur, Malappuram.

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**Smt. Colleen Petriz, Branch Head, Jain Housing & Constructions Ltd, Jains Tufnell Garden, Nilampathinja Mughal Road, Kakkanad, Ernakulam- 682039** and their designated representatives or relevant statutory authorities may use this document and only for the specific project for which this document was prepared. It should not be otherwise referenced without permission.

## CERTIFICATE

This is to certify that, the information and data presented here is based on the field survey work and yield test carried out by the Hydrogeology- Groundwater monitoring team led by the undersigned for the groundwater resources in the construction site of **Smt. Colleen Petriz, Branch Head, Jain Housing & Constructions Ltd, Jains Tufnell Garden, Nilampathinja Mughal Road, Kakkanad, Ernakulam- 682039**; construction site in, Survey Nos. 483/14, 484/7, 485/1 of Kakkanad Village, Kanayannur Taluk, Ernakulam District, Kerala State. Have been compiled and executed by the team. We certify the data presented here which is documented and verified by the experts in the relevant field.

**22-02-2024**



**Dr. B. SHARATH RAJ  
HYDROGEOLOGIST**

## INTRODUCTION

The water that lies beneath the ground surface, filling the pore space between grains in soil and rocks is called the Groundwater. The subsurface zone in which all rock openings are filled with water is called the saturated zone and the upper surface of the saturated zone marks the water table of any region. In hard massive crystalline rocks, the possibility of presence of large number of openings are very rare.

Groundwater is the major source of water supply for domestic, agriculture and industrial purposes in the urban as well as the rural water supply in many parts of Kerala. The rapid and accelerated pace of development in the state has led to a decline in the Groundwater level in some regions and consequent stress on Groundwater resources. So, it is necessary to identify and calculate the ability of a groundwater resources in an area where its usage is comparatively high.

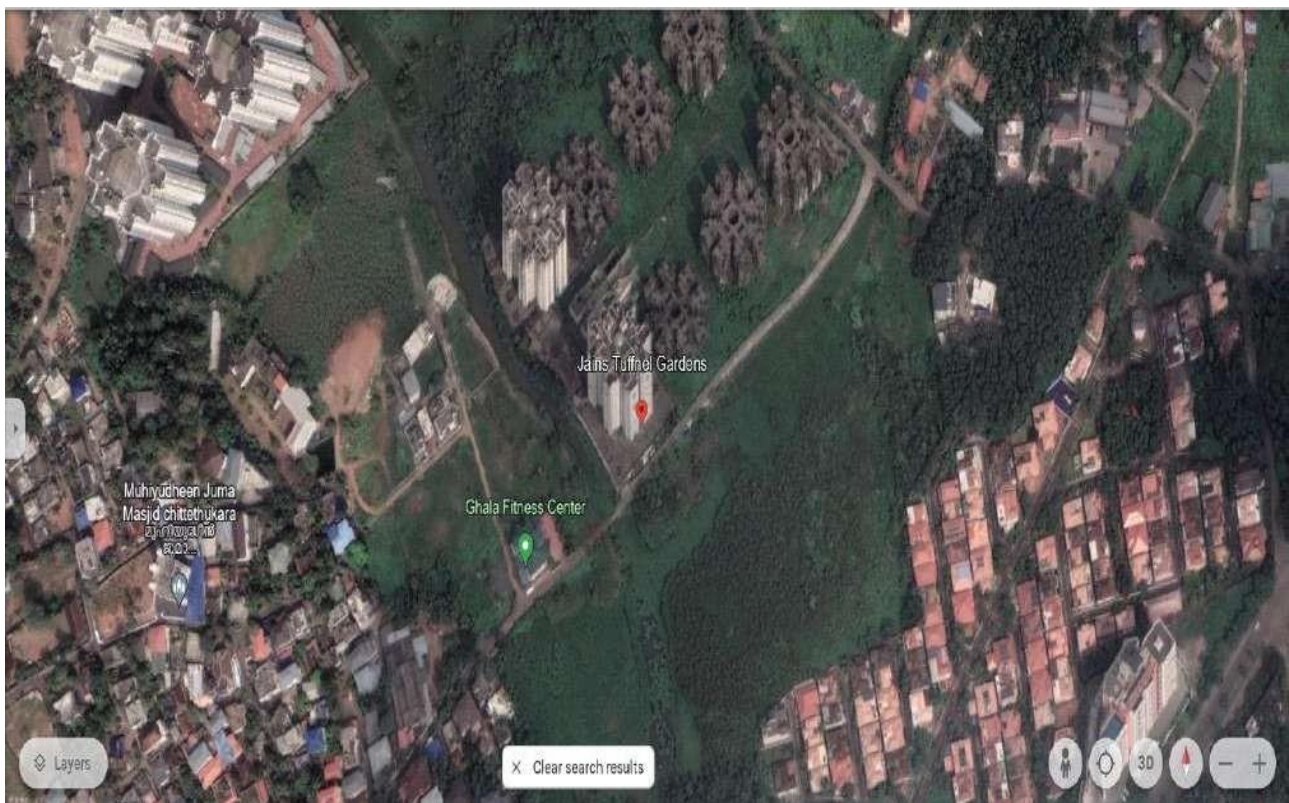
Hydrogeology is a branch of geology, dealing with all the aspects of water. Especially, hydrogeology comprises the depletion, movement, and the replenishment of both surface and subsurface water. Hydrogeology will explain the facts related with water in regards with the rock type and the morphology of an area.

The present Hydrogeological survey and yield test of the groundwater resource in the studied area is a scientific attempt to estimate the strength of the well. For identifying the yield of the already existing three open wells, the team used the most common and simple method of pumping/ yield test.

## STUDY AREA

The proposed area is located at N 10° 00' 09" latitude and E 76° 21' 21" longitudes in Kakkanad Village, Kanayannur Taluk, Ernakulam District, Kerala State. The area is situated at the lower portion of an undulating terrain with maximum elevation of 8-10 meters AMSL. The area is neither sloping towards any directions. The Clay rich loamy soil and residual soil are very common in the proposed area.

The first open well which is studied by the team is situated at North- East direction 10 meters north from building block No-8. The tested well is having a diameter of 1.5 Meters and with a maximum depth of 5.5 Meters. The Second well which is studied by the team is situated at the N- E direction, 4 meters south from the first pillar of building block No-8 in the proposed area. This Well has a diameter of 1.5 meters and with a maximum depth of 4.5 Meters. The Third well which is situated at 9 meters away from the south- west pillar of building block No-2, having a diameter of 1.4 meters and with a maximum depth of 3.8 meters.



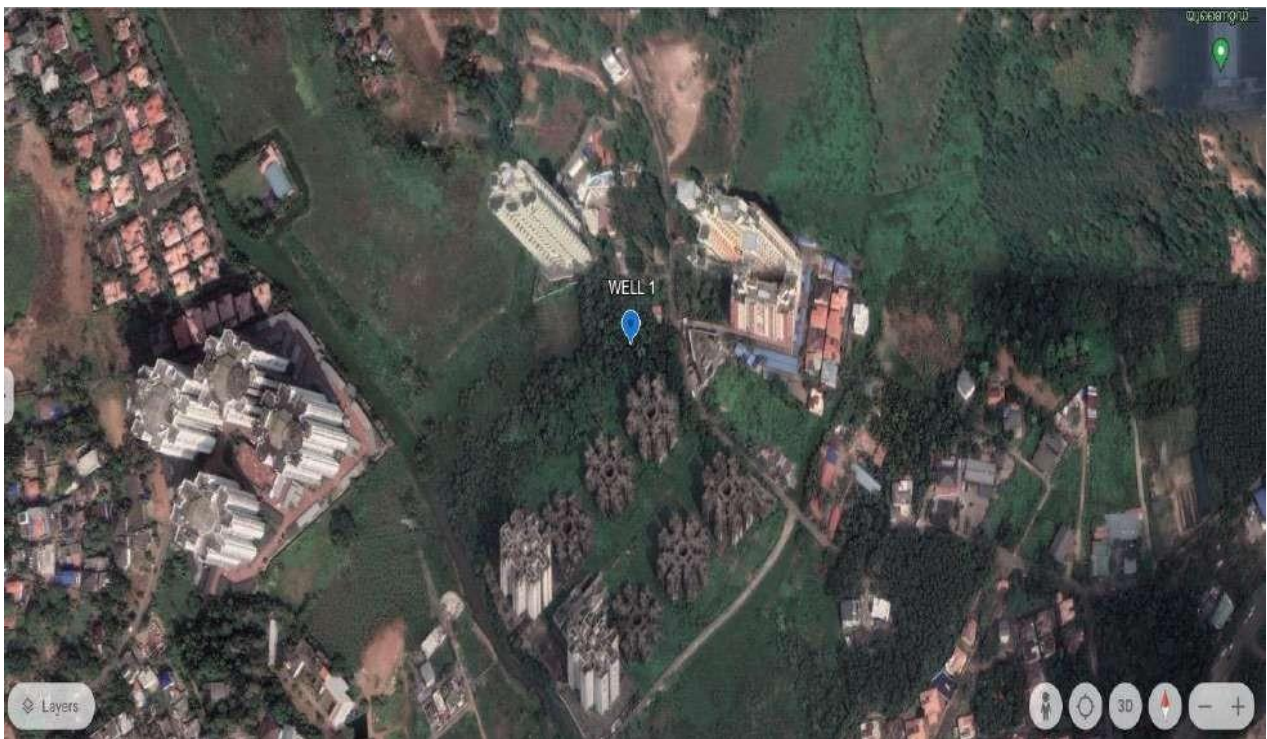
**GOOGLE EARTH IMAGE OF THE STUDY AREA**

## WELL INVENTORY DATA

A well is a deep hole, generally cylindrical, that is dug or drilled into the ground to penetrate an aquifer within the saturated zone. Usually, water that flows into the well from the saturated rock must be lifted or pumped to the surface.

### WELL NO: 1

- ❖ Open well- 1, Location- : **N 10° 00' 09" & E 76° 21' 21"**
- ❖ Depth of the open well : **5.5 m**
- ❖ Pumping motor power : **1.5 HP**
- ❖ Diameter of the well : **1.5 m**
- ❖ Parapet Height : **0.6 m**
- ❖ Capacity of the Tank : **240 Ltr**
- ❖ Diameter of the outflow pipe : **1.5 inches**
- ❖ Static Water Level before pumping : **3.55 mbgl**



**GOOGLE EARTH IMAGE OF WELL NO: 1**

### RESULTS OF THE YIELD TEST

SL NO	SAMPLING	TIME (SECONDS)	LAP TIME	WATER LEVEL (MBGL)
1	Iteration 1	72	00.00	3.55
2	Iteration 2	76	00.30 minutes	3.64
3	Iteration 3	78	01.00 hour	3.97
4	Iteration 4	81	01.50 hours	4.40

➤ **Discharge Test Results:**

❖ Average time for discharge by pump to fill the tank =  $\frac{I1+I2+I3+I4}{4}$

$$= (72+76+78+81) / 4$$

$$= 76.75 \text{ Seconds}$$

❖ Tank capacity/ Average time taken for filling tank

$$= 240 / 76.75$$

$$= 3.12 \text{ Liters/ Second}$$

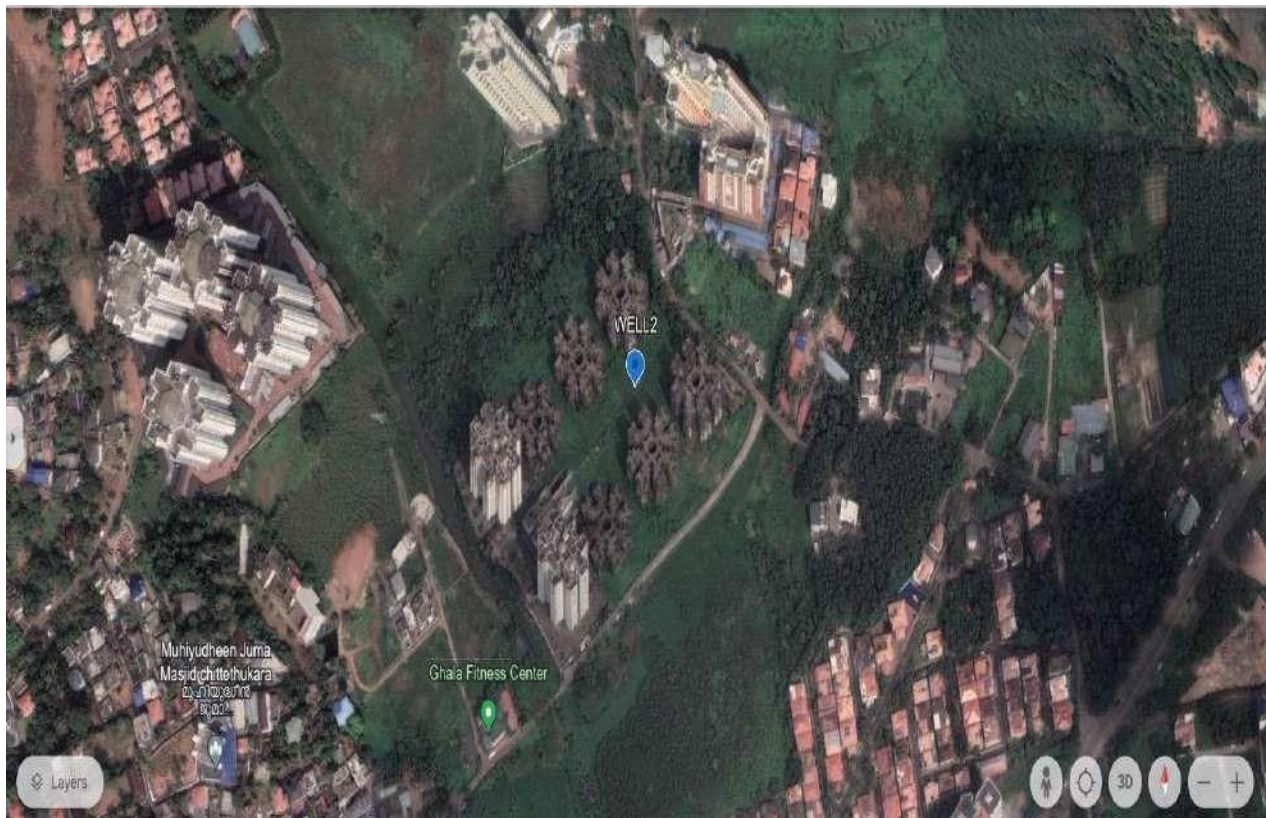
$$= \mathbf{11232 \text{ Liters/ Hours}}$$

$$= \mathbf{25 \text{ KLD}}$$



**WELL NO: 2**

- ❖ Open well- 2, Location- : **N 10<sup>0</sup> 00' 06" & E 76<sup>0</sup> 21' 22"**
- ❖ Depth of the open well : **4.5 m**
- ❖ Diameter of the well : **1.5 m**
- ❖ Parapet Height : **0.4 m**
- ❖ Pumping motor power : **1.5 HP**
- ❖ Capacity of the Tank : **240 Ltr**
- ❖ Diameter of the outflow pipe : **1.5 inches**
- ❖ Static Water Level before pumping : **2.10 mbgl**



**GOOGLE EARTH IMAGE OF WELL NO: 2**

## RESULTS OF THE YIELD TEST

SL NO	SAMPLING	TIME (SECONDS)	LAP TIME	WATER LEVEL (MBGL)
1	Iteration 1	68	00.00	2.10
2	Iteration 2	70	00.30 minutes	2.36
3	Iteration 3	71	01.00 hour	3.06
4	Iteration 4	73	01.50 hours	3.92

➤ **Discharge Test Results:**

❖ Average time for discharge by pump to fill the tank =  $\frac{I1+I2+I3+I4}{4}$

$$= (68+70+71+73) / 4$$

$$= 70.5 \text{ Seconds}$$

❖ Tank capacity/ Average time taken for filling tank

$$= 240 / 70.5$$

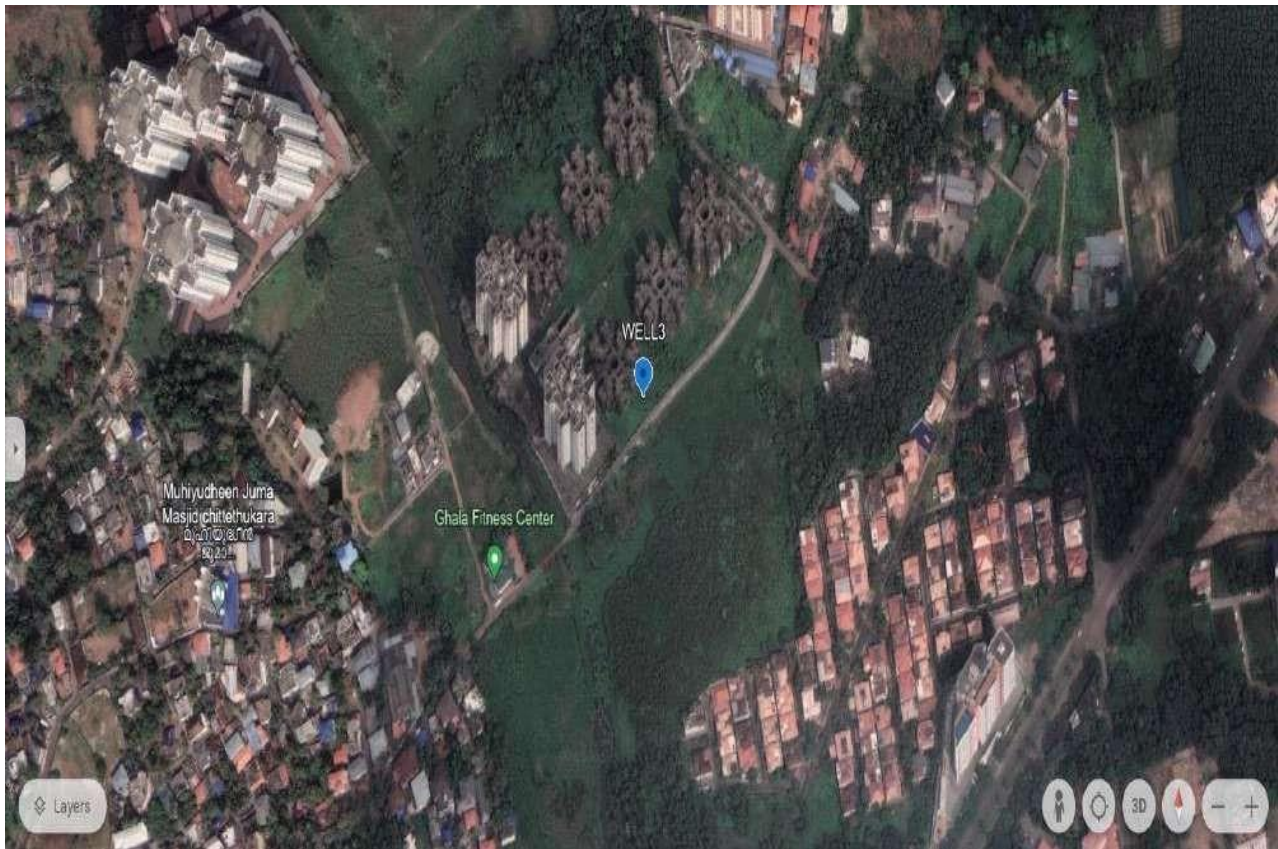
$$= 3.40 \text{ Liters/ Second}$$

$$= \mathbf{12240 \text{ Liters/ Hour}}$$

$$= \mathbf{30 \text{ KLD}}$$

**WELL NO: 3**

- ❖ Open well- 3, Location- : **N 10° 00' 03" & E 76° 21' 22"**
- ❖ Depth of the open well : **3.8 m**
- ❖ Pumping motor power : **1.5 HP**
- ❖ Diameter of the well : **1.4 m**
- ❖ Parapet Height : **0.3 m**
- ❖ Capacity of the Tank : **240 Ltr**
- ❖ Diameter of the outflow pipe : **1.5 inches**
- ❖ Static Water Level before pumping : **1.10 mbgl**



**GOOGLE EARTH IMAGE OF WELL NO: 3**

## RESULTS OF THE YIELD TEST

SL NO	SAMPLING	TIME (SECONDS)	LAP TIME	WATER LEVEL (MBGL)
1	Iteration 1	72	00.00	1.10
2	Iteration 2	77	00.30 minutes	2.21
3	Iteration 3	81	01.00 hour	2.78
4	Iteration 4	86	01.50 hours	3.34

### ➤ Discharge Test Results:

❖ Average time for discharge by pump to fill the tank =  $\frac{I1+I2+I3+I4}{4}$

$$= (72+77+81+86) / 4$$

$$= 79 \text{ Seconds}$$

❖ Tank capacity/ Average time taken for filling tank

$$= 240 / 79$$

$$= 3.03 \text{ Liters/ Second}$$

$$= \mathbf{10908 \text{ Liters/ Hours}}$$

$$= \mathbf{20 \text{ KLD}}$$

## CONCLUSION & RESULT

On continuous pumping of first open well (N 10<sup>0</sup> 00' 09" & E 76<sup>0</sup> 21' 21") for one and half hours, it was observed that, this open well yields an average water of about **11232** liters per hour/ **25KLD**, without significant variations in the static water level at the end stages. With the one and half hours of recovery time given, water level was found to be reaching back close to the initial state.

In the case of second well (N 10<sup>0</sup> 00' 06" & E 76<sup>0</sup> 21' 22"), pumping test conducted for 1.5 hours shown that, open well yields an average water of about **12240** liters per hour/ **30KLD**, without significant variations in the static water level at the end stages. With the one and half hours of recovery time given, water level was found to be reaching back close to the initial state.

In the third well (N 10<sup>0</sup> 00' 03" & E 76<sup>0</sup> 21' 22"), pumping test conducted for 1.5 hours shown that open well yields an average water of about **10908** liters per hour/ **20KLD**, without significant variations in the static water level at the end stages. With the one and half hours of recovery time given, water level was found to be reaching back close to the initial state.

***This clearly indicates that, with 1.5 hours pumping interval, together the three wells can yield up to 75 KLD of water.***

## SITE PHOTOGRAPHS



### WELL INVENTORY DATA COLLECTION

### PUMPING TEST- PHOTOGRAPHS





## **ACKNOWLEDGEMENT**

Hydro Albite LLP and team would like to extend heart felt gratitude to the proprietor for offering us the opportunity to explore the area to study and record the capacity of the groundwater resources. Hydro-Albite would like to thank, Mr. Muhammed Noorudheen, Mr. Sajil P P and Mr. Vipin T P for their immense helps for the survey works. The whole team would also like to thank the staffs of Department of P.G Studies and Research in Geology, M.E.S Ponnani College for their Support.



## REFERENCES

1. Kumar, C.P., (2012) Climate Change and Its Impact on Groundwater Resources, International Journal of Engineering and Science, Vol. 1, Issue 5, pp. 43-60.
2. Mrs., Parvathi Jayasankar, Dr., Sridar Babu., February, 2017. An Assessment of Groundwater potential for state of Kerala, India: A case study.
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6. Todd, D. K., Groundwater Hydrology, John Wiley and Sons, 1980
7. Dobrin M. B., Introduction to Geophysical Prospecting, Pergamon PressLahee, F. H., Field Geology, McGrawHill

# SREE GIRI CONSULTANTS



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E-mail : pkaravindan\_sgc@yahoo.co.in  
sgc.cons@gmail.com

**Prof. Dr. P.K. Aravindan**  
(Former Prof. in Struct. Engg IIT Madras)  
Principal Consultant  
Mobile: 9656650022

Kochi  
Date: 10/07/2012

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that, the structural design of proposed Ground + 20 storey Residential Apartment for Shri. M J Louiz, Sunitha Elizabeth George & Indhira Louiz, Mukkadayil Veedu, Jain Housing & Construction Ltd, G-361, Main Avenue, Panampilly Nagar, Cochin-682036 in Survey nos: 483/14, 484/7, 485/1, in Kakkanand Village, Kanayanur Taluk, Ernakulam District is done as per provisions of relevant codes of Bureau of Indian Standards (IS 456:2000, IS 1893 (Part 1) : 2002, IS 875:1987) and the design is structurally stable.

*mk*

**Prof.Dr.P.K.Aravindan**



SCRAP AGREEMENT

Name AFSAL  
Adress KAKKANAD

ഞാൻ (എന്റെ സ്ഥപനത്തിൽ) Jain Tuffund Garden Tower 4<sup>th</sup> block -ൽ നിന്നും Waste Materials, Plastic Bottle, Plastic Cover, Glass Bottle, Paper Small Carboard Box etc.. ശേഖരിച്ച് Tower ൽ നിന്നും എന്റെ സ്ഥപനത്തിലേക്ക് കൊണ്ടുപോകുന്നതിന് ..... തുപ കൈപ്പറ്റുന്നു.

എന്ന്  
Date

പേര് AFSAL P.A

Seal





M/s Jain Housing and Constructions Limited

Date: 16-09-2021

Flat No 4025, Jains TAuffnel  
Garden, Nilampathinja Mujhal  
Road, Kakkanad,System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/090921/574595
Applicant Name*	G Shiyamalann
Site Address*	Tower 1 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-682039
Site Coordinates*	10 00 06.48N 76 21 22.75E, 10 00 07.30N 76 21 23.81E, 10 00 04.74N 76 21 23.98E, 10 00 05.78N 76 21 25.14E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.97 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17689 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.62 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

3. This assessment is subject to the terms and conditions as given below:

a. The site-elevation and site coordinates provided by the applicant are taken for calculation of the permissible top elevation for the proposed structure. If however, at any stage it is established that the actual data is different from the one provided by the applicant, this assessment will become invalid.

b. The Site coordinates as provided by the applicant in the NOC application has been plotted on the street view map and satellite map as shown in ANNEXURE. Applicant/Owner to ensure that the plotted coordinates corresponds to his/her site. In case of any discrepancy, this assessment shall be treated as null and void

c. Airport operator or his designated representative may visit the site (with prior coordination with applicant or owner) to ensure that assessment terms & conditions are complied with.

d. The assessment is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft (Demolition of Obstruction caused by Buildings and Trees etc.) Rules, 1994.



भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

e. The applicant is responsible to obtain all other statutory clearances from the concerned authorities including the approval of building plans. This assessment for height is to ensure the safe and regular aircraft operations and shall not be used as document for any other purpose/claim whatsoever, including ownership of land etc.

f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

g. This assessment has been issued w.r.t. the Civil Airports as notified in GSR 751(E). Applicant needs to seek separate NOC for Defence, if the site lies within jurisdiction of Defence Airport. Applicants also need to seek clearance from state Govt. as applicable, for sites which lies in the jurisdiction of unlicensed civil aerodrome as outlined in Rule 13 of GSR751 (E).

*This assessment is system auto generated and thus does not require any signature*

Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

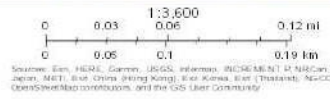
Email ID: vommm.noc@aai.aero

Contact No: 044-22560046

### Street View

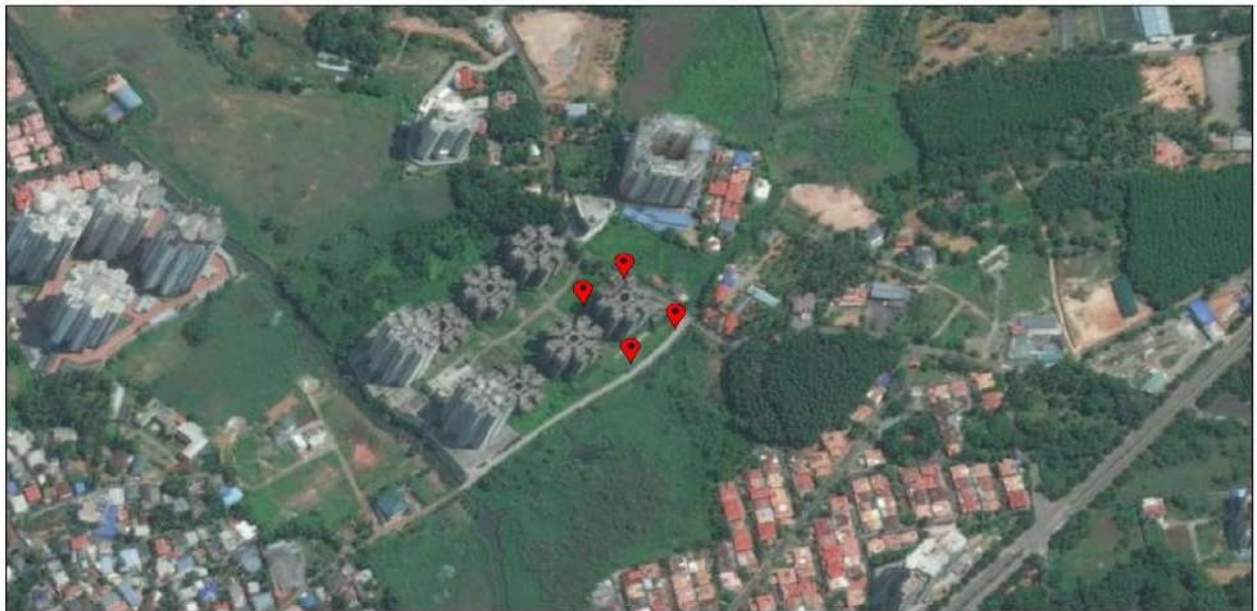


September 9, 2021

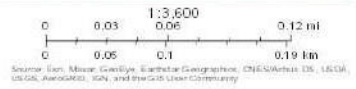


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### Satellite View



September 9, 2021



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M/s Jain Housing and Constructions Limitd

Date: 17-09-2021

Flat No 4025, Jains Tufnel  
Garden, Nilampathinja Mujhal  
Road, Kakkanad,

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/091021/574596
Applicant Name*	G Shiyamalann
Site Address*	Tower 2 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-682039
Site Coordinates*	10 00 05.05N 76 21 21.40E, 10 00 03.95N 76 21 22.36E, 10 00 06.15N 76 21 22.65E, 10 00 05.05N 76 21 23.65E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.94 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17769 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.59 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

3. This assessment is subject to the terms and conditions as given below:

a. The site-elevation and site coordinates provided by the applicant are taken for calculation of the permissible top elevation for the proposed structure. If however, at any stage it is established that the actual data is different from the one provided by the applicant, this assessment will become invalid.

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c. Airport operator or his designated representative may visit the site (with prior coordination with applicant or owner) to ensure that assessment terms & conditions are complied with.

d. The assessment is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft (Demolition of Obstruction caused by Buildings and Trees etc.) Rules, 1994.



भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

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f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

g. This assessment has been issued w.r.t. the Civil Airports as notified in GSR 751(E). Applicant needs to seek separate NOC for Defence, if the site lies within jurisdiction of Defence Airport. Applicants also need to seek clearance from state Govt. as applicable, for sites which lies in the jurisdiction of unlicensed civil aerodrome as outlined in Rule 13 of GSR751 (E).

*This assessment is system auto generated and thus does not require any signature*

Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

Email ID: vommm.noc@aai.aero

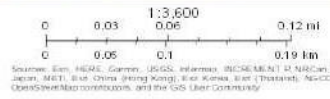
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### Street View

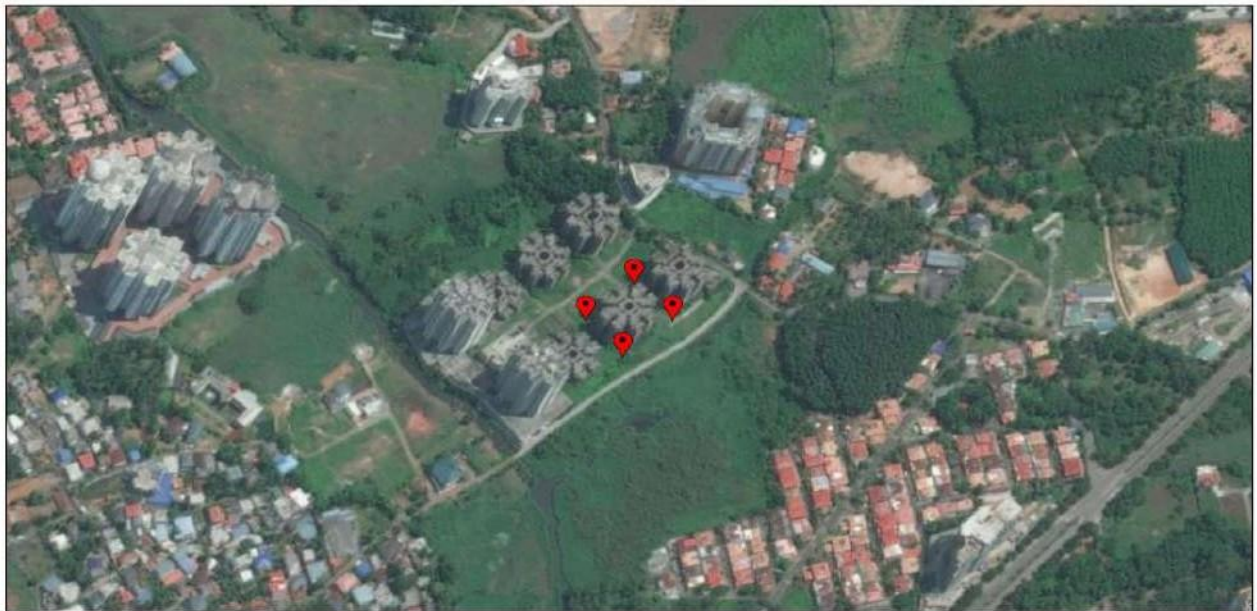


September 10, 2021

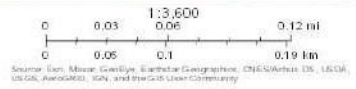


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### Satellite View



September 10, 2021



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M/s jain Housing and Constructions Limitd

Date: 17-09-2021

Flat No 4025, Jains Tuffnel  
Garden, Nilampathinja Mujhal  
Road, kakkanad,

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/091021/574597
Applicant Name*	G Shiyamalann
Site Address*	Tower 3 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-682039
Site Coordinates*	10 00 04.04N 76 21 20.02E, 10 00 04.81N 76 21 20.95E, 10 00 02.85N 76 21 21.38E, 10 00 03.72N 76 21 22.02E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.95 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17811 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.6 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

3. This assessment is subject to the terms and conditions as given below:

a. The site-elevation and site coordinates provided by the applicant are taken for calculation of the permissible top elevation for the proposed structure. If however, at any stage it is established that the actual data is different from the one provided by the applicant, this assessment will become invalid.

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भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

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f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

g. This assessment has been issued w.r.t. the Civil Airports as notified in GSR 751(E). Applicant needs to seek separate NOC for Defence, if the site lies within jurisdiction of Defence Airport. Applicants also need to seek clearance from state Govt. as applicable, for sites which lies in the jurisdiction of unlicensed civil aerodrome as outlined in Rule 13 of GSR751 (E).

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Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

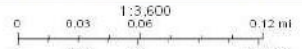
Email ID: vommm.noc@aai.aero

Contact No: 044-22560046

### Street View



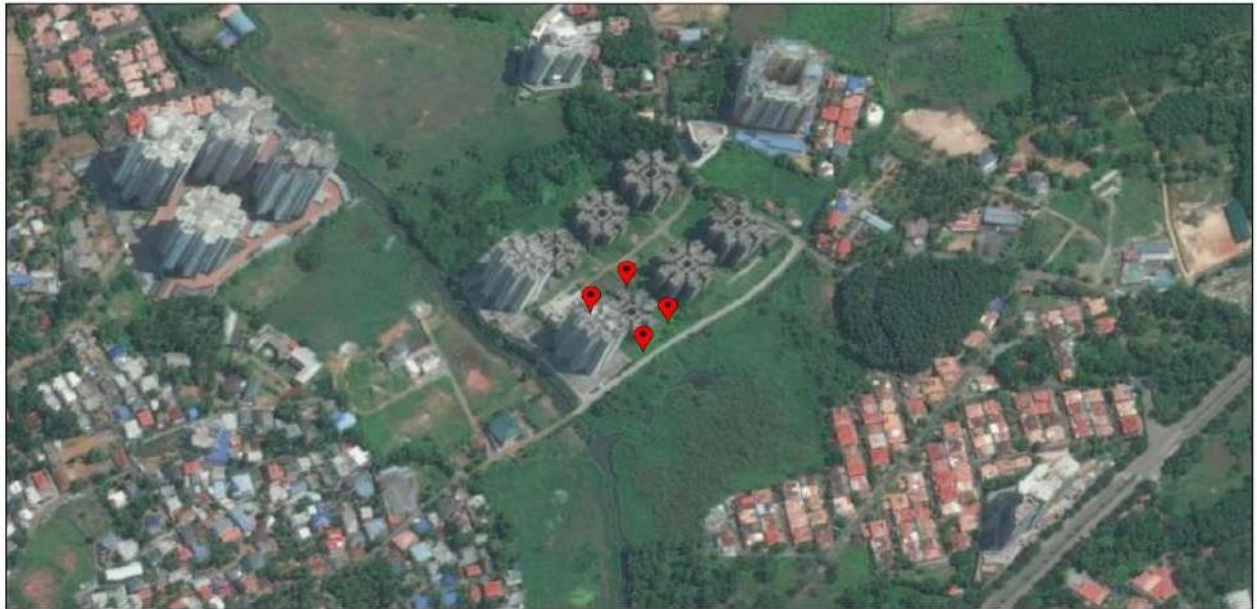
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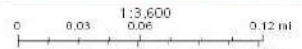
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### Satellite View



September 10, 2021



Source: Esri, Microsoft, Google, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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M/s jain Housing and Constructions Limitd

Date: 16-09-2021

Flat No 4025, Jains Tuffnel  
Garden, Nilampathinja Mujhal  
Road, Kakkanad,

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/090921/574470
Applicant Name*	G Shiyamalann
Site Address*	Tower 4 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-682039
Site Coordinates*	10 00 03.15N 76 21 18.93E, 10 00 01.75N 76 21 19.83E, 10 00 04.15N 76 21 20.15E, 10 00 02.95N 76 21 20.98E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.96 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17858 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.61 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

3. This assessment is subject to the terms and conditions as given below:

a. The site-elevation and site coordinates provided by the applicant are taken for calculation of the permissible top elevation for the proposed structure. If however, at any stage it is established that the actual data is different from the one provided by the applicant, this assessment will become invalid.

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d. The assessment is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft(Demolition of Obstruction caused by Buildings and Trees etc.) Rules,1994.



भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

e. The applicant is responsible to obtain all other statutory clearances from the concerned authorities including the approval of building plans. This assessment for height is to ensure the safe and regular aircraft operations and shall not be used as document for any other purpose/claim whatsoever, including ownership of land etc.

f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

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*This assessment is system auto generated and thus does not require any signature*

Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

Email ID: vommm.noc@aai.aero

Contact No: 044-22560046

### Street View



September 9, 2021



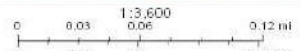
Source: Esri, HERE, Garmin, USGS, Imagio, RECURSION, IGN, swisstopo, Esri, Japan, METI, Esri, China (Beijing), Esri, Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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### Satellite View



September 9, 2021



Source: Esri, Microsoft, Google, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

AXI



M/s Jain Housing and Constructions Limited

Date: 20-09-2021

Flat No 4025, Jains Tuffnel  
Garden, Nilampathinja Mujhal  
Road, Kakkanad,

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/091621/575436
Applicant Name*	G Shiyamalann
Site Address*	Tower 5 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-6820393
Site Coordinates*	10 00 04.95N 76 21 16.51E, 10 00 03.55N 76 21 17.92E, 10 00 06.08N 76 21 18.12E, 10 00 04.68N 76 21 19.37E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.97 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17824 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.62 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

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भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

e. The applicant is responsible to obtain all other statutory clearances from the concerned authorities including the approval of building plans. This assessment for height is to ensure the safe and regular aircraft operations and shall not be used as document for any other purpose/claim whatsoever, including ownership of land etc.

f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

g. This assessment has been issued w.r.t. the Civil Airports as notified in GSR 751(E). Applicant needs to seek separate NOC for Defence, if the site lies within jurisdiction of Defence Airport. Applicants also need to seek clearance from state Govt. as applicable, for sites which lies in the jurisdiction of unlicensed civil aerodrome as outlined in Rule 13 of GSR751 (E).

*This assessment is system auto generated and thus does not require any signature*

Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

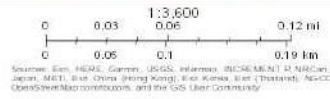
Email ID: vommm.noc@aai.aero

Contact No: 044-22560046

### Street View

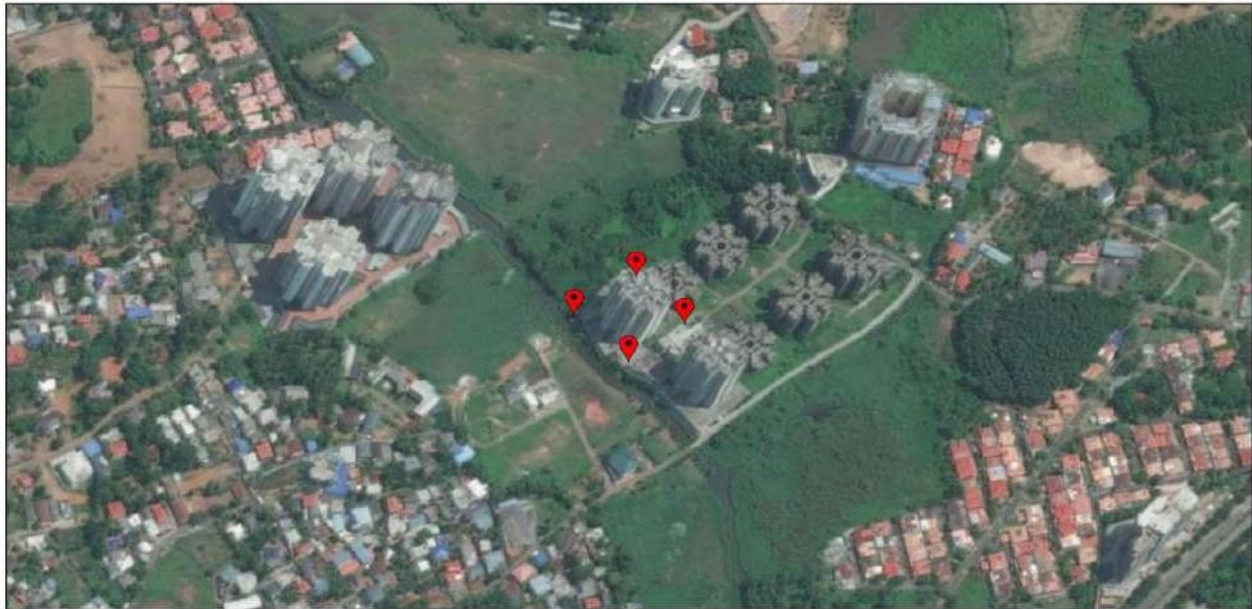


September 16, 2021

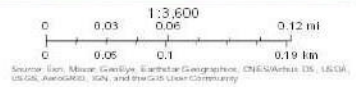


AA1

### Satellite View



September 16, 2021



AA1



M/s jain Housing and Constructions Limitd

Date: 16-09-2021

Flat No 4025, Nilampathinja  
Mujhal Road, kakkanad,  
ernakulam-682039

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/090921/574589
Applicant Name*	G Shiyamalann
Site Address*	Tower 6 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-682039
Site Coordinates*	10 00 05.85N 76 21 18.21E, 10 00 06.51N 76 21 19.22E, 10 00 04.68N 76 21 19.44E, 10 00 05.44N 76 21 20.21E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.97 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17776 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.62 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

3. This assessment is subject to the terms and conditions as given below:

a. The site-elevation and site coordinates provided by the applicant are taken for calculation of the permissible top elevation for the proposed structure. If however, at any stage it is established that the actual data is different from the one provided by the applicant, this assessment will become invalid.

b. The Site coordinates as provided by the applicant in the NOC application has been plotted on the street view map and satellite map as shown in ANNEXURE. Applicant/Owner to ensure that the plotted coordinates corresponds to his/her site. In case of any discrepancy, this assessment shall be treated as null and void

c. Airport operator or his designated representative may visit the site (with prior coordination with applicant or owner) to ensure that assessment terms & conditions are complied with.

d. The assessment is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft(Demolition of Obstruction caused by Buildings and Trees etc.) Rules,1994.



भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

e. The applicant is responsible to obtain all other statutory clearances from the concerned authorities including the approval of building plans. This assessment for height is to ensure the safe and regular aircraft operations and shall not be used as document for any other purpose/claim whatsoever, including ownership of land etc.

f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

g. This assessment has been issued w.r.t. the Civil Airports as notified in GSR 751(E). Applicant needs to seek separate NOC for Defence, if the site lies within jurisdiction of Defence Airport. Applicants also need to seek clearance from state Govt. as applicable, for sites which lies in the jurisdiction of unlicensed civil aerodrome as outlined in Rule 13 of GSR751 (E).

*This assessment is system auto generated and thus does not require any signature*

Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

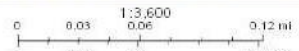
Email ID: vommm.noc@aai.aero

Contact No: 044-22560046

### Street View



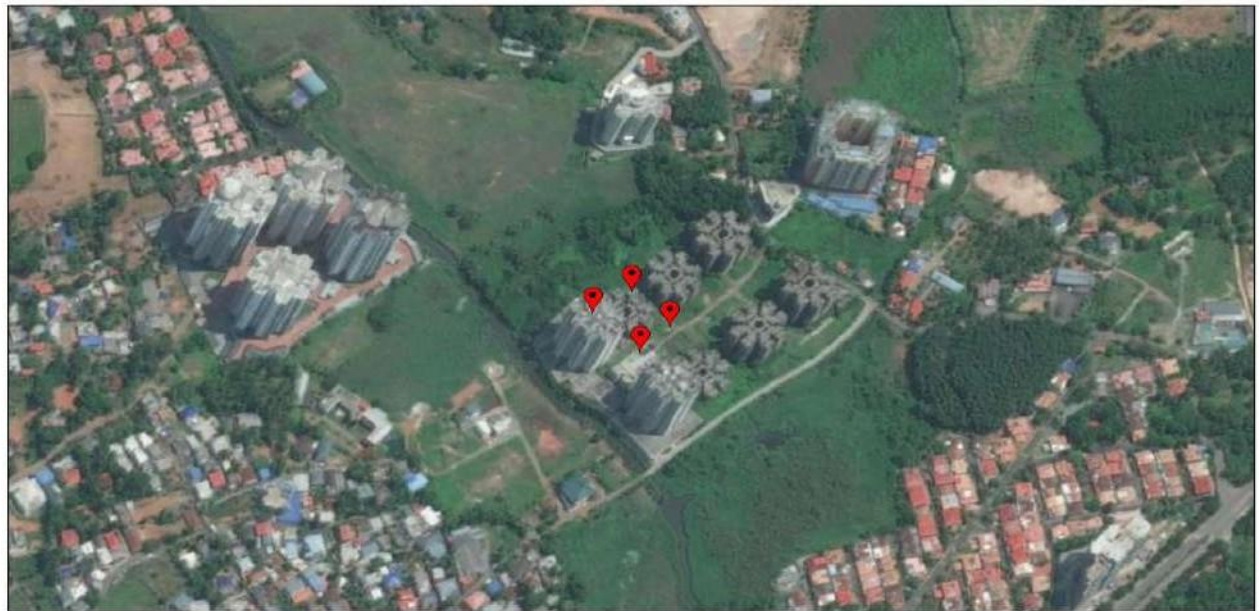
September 9, 2021



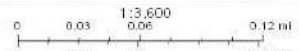
Source: Esri, HERE, Garmin, USGS, Imagio, GEBCO, IGN, swisstopo, Esri, Japan, METI, Esri, China (Beijing), Esri, Korea, Esri (Thailand), Swisstopo, IGN, Esri, OpenStreetMap contributors, and the GIS User Community

AXI

### Satellite View



September 9, 2021



Source: Esri, Microsoft, Google, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

AXI



M/s jain Housing and Constructions Limitd

Date: 16-09-2021

Flat No 4025, Jains Tuffnel  
Garden, Nilampathinja Mujhal  
Road, Kakkanad,

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/090921/574590
Applicant Name*	G Shiyamalann
Site Address*	Tower 7 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-682039
Site Coordinates*	10 00 06.84N 76 21 19.23E, 10 00 05.54N 76 21 20.32E, 10 00 07.62N 76 21 20.43E, 10 00 06.85N 76 21 21.42E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.97 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17694 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.62 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

3. This assessment is subject to the terms and conditions as given below:

a. The site-elevation and site coordinates provided by the applicant are taken for calculation of the permissible top elevation for the proposed structure. If however, at any stage it is established that the actual data is different from the one provided by the applicant, this assessment will become invalid.

b. The Site coordinates as provided by the applicant in the NOC application has been plotted on the street view map and satellite map as shown in ANNEXURE. Applicant/Owner to ensure that the plotted coordinates corresponds to his/her site. In case of any discrepancy, this assessment shall be treated as null and void

c. Airport operator or his designated representative may visit the site (with prior coordination with applicant or owner) to ensure that assessment terms & conditions are complied with.

d. The assessment is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft(Demolition of Obstruction caused by Buildings and Trees etc.) Rules,1994.



भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

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f. Use of oil, electric or any other fuel which does not create smoke hazard for flight operations is obligatory, within 8 KM of the Aerodrome Reference Point.

g. This assessment has been issued w.r.t. the Civil Airports as notified in GSR 751(E). Applicant needs to seek separate NOC for Defence, if the site lies within jurisdiction of Defence Airport. Applicants also need to seek clearance from state Govt. as applicable, for sites which lies in the jurisdiction of unlicensed civil aerodrome as outlined in Rule 13 of GSR751 (E).

*This assessment is system auto generated and thus does not require any signature*

Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

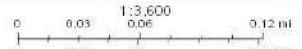
Email ID: vommm.noc@aai.aero

Contact No: 044-22560046

### Street View



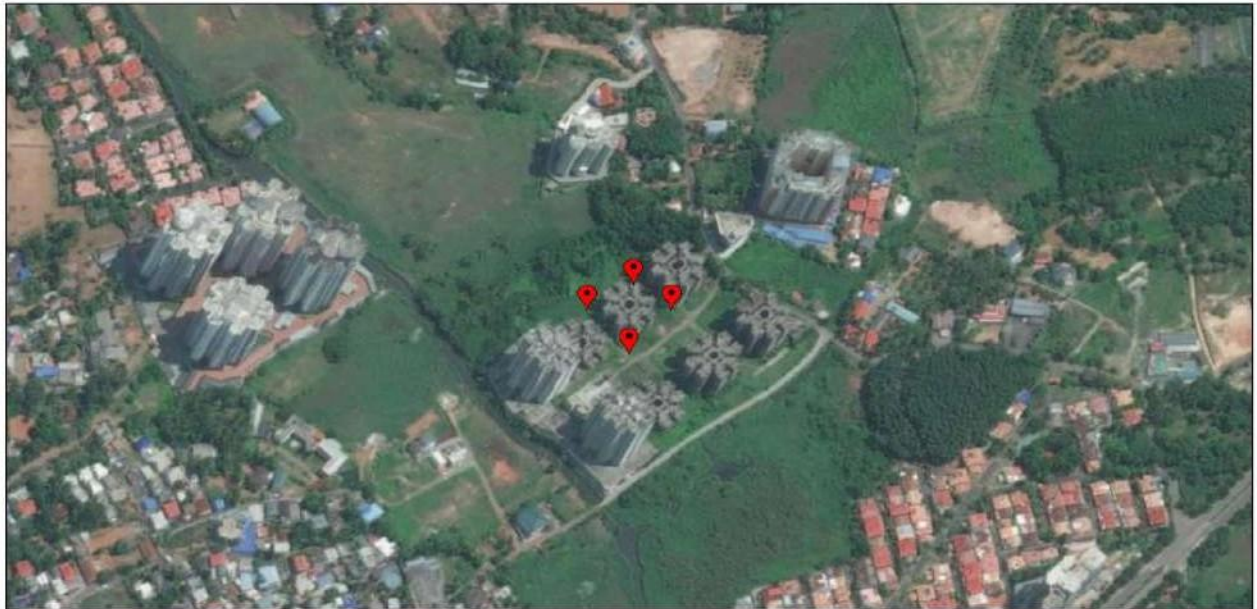
September 9, 2021



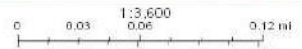
Source: Esri, HERE, Garmin, USGS, Imagery, BCSEMENT, Aerial, Swire, Japan, METI, Blue, China (Hong Kong), Esri Korea, Esri (Thailand), Swire, OpenStreetMap contributors, and the GIS User Community

AXI

### Satellite View



September 9, 2021



Source: Esri, Microsoft, Google, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

AXI





M/s jain Housing and Constructions Limitd

Date: 16-09-2021

Flat No 4025, Jains Tuffnel  
Garden, Nilampathinja Mujhal  
Road, Kakkanad,

System Generated Auto Assessment for Height Clearance

1. Airports Authority of India (AAI) in pursuance of responsibility conferred by and as per the provisions of Govt. of India (Ministry of Civil Aviation) order GSR 751 (E) dated 30th Sep. 2015 for Safe and Regular Aircraft Operations has assessed the site data filled by the applicant.

2. Assessment details for Height Clearance:

NOC ID :	CIAL/SOUTH/B/090921/574593
Applicant Name*	G Shiyamalann
Site Address*	Tower 8 located in Survey Nos 483/14,484/7 and 485/1, Block No9, Kakkanad Vilalage and at Nilampathinja Mujhal Road, Kakkanad, Ernakulam-682039
Site Coordinates*	10 00 07.98N 76 21 20.62E, 10 00 06.62N 76 21 21.66E, 10 00 08.88N 76 21 21.78E, 10 00 07.53N 76 21 22.76E
Site Elevation in mtrs AMSL as submitted by Applicant*	13.99 M
Type Of Structure*	Building

\*As provided by applicant

Your site is located at a distance 17698 mts from ARP and lies in the grid T11 of the published CCZM of CIAL airport. The Permitted top elevation for this grid is 109 mts.

Since the requested top elevation 80.64 mts in AMSL is below CCZM permitted top elevation, the NOC for height clearance is not required from Airports Authority of India.

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c. Airport operator or his designated representative may visit the site (with prior coordination with applicant or owner) to ensure that assessment terms & conditions are complied with.

d. The assessment is further subject to the provisions of Section 9-A of the Indian Aircraft Act, 1934 and any notifications issued there under from time to time including the Aircraft(Demolition of Obstruction caused by Buildings and Trees etc.) Rules,1994.



भारतीय विमानपत्तन प्राधिकरण  
AIRPORTS AUTHORITY OF INDIA

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Designated Officer

Region Name: SOUTH

Address: General Manager Airports  
Authority of India, Regional  
Headquarter, Southern Region,  
Chennai Airport,  
Chennai-600027 (Tamil Nadu)

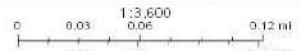
Email ID: vommm.noc@aai.aero

Contact No: 044-22560046

### Street View



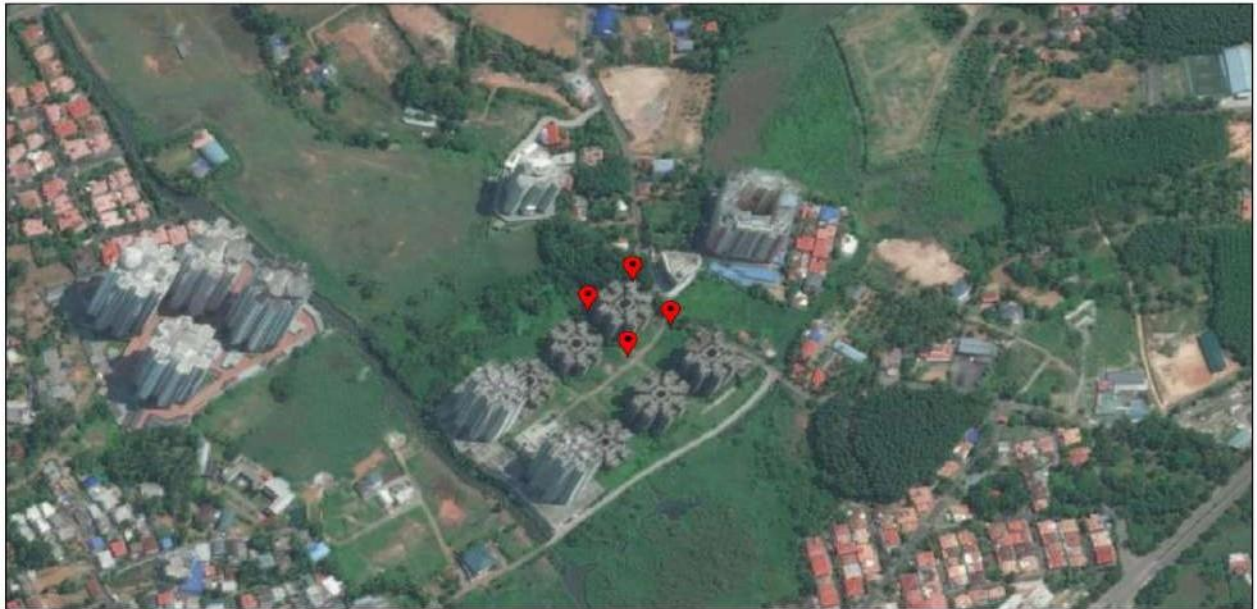
September 9, 2021



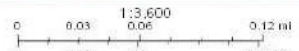
Source: Esri, HERE, Garmin, USGS, Imagery, BCSEMENT, AerialCam, Swire, Japan, METI, Blue China (Hong Kong), Esri Korea, Esri (Thailand), Swire, OpenStreetMap contributors, and the GIS User Community

AAI

### Satellite View



September 9, 2021



Source: Esri, Microsoft, Google, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

AAI

Tele: 2872049

Reply should be addressed to the  
Flag Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

Quoting: AO/1085/HC

26 Sep 17

M/s Jain Housing & ✓  
Construction Ltd.  
G-361, Main Avenue,  
Panampilly Nagar  
Kochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 1" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**

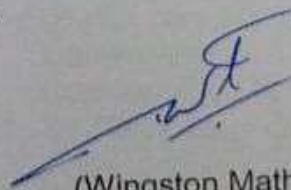
1. Refer to the following:-

(a) This office letter AO/747/HC dated 14 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 1"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 14 Mar 17 to 13 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 13 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.



(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

Encl:- As above

Copy to:-

The Chief of the Naval Staff  
(for DNAS)  
Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011

e: 2872049

ply should be addressed to the  
g Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

oting: AO/1089/HC

18 Sep 17

Jain Housing  
Construction Ltd.  
-361, Main Avenue,  
anampilly Nagar  
ochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 2" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**

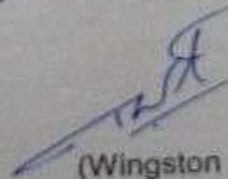
1. Refer to the following:-

(a) This office letter AO/746/HC dated 14 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 2"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 14 Mar 17 to 13 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 13 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.



(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

Encl - As above

Copy to :-

The Chief of the Naval Staff  
(for DNAS)  
Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011

ele: 2872049

Reply should be addressed to the  
Flag Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

Quoting: AO/1083/HC

18 Sep 17

M/s Jain Housing  
Construction Ltd.  
G-361, Main Avenue,  
Panampilly Nagar  
Kochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 3" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**

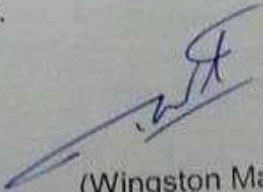
1. Refer to the following:-

(a) This office letter AO/744/HC dated 22 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 3"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 22 Mar 17 to 21 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 21 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.

  
(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

**Encl:-** As above

**Copy to:** -

The Chief of the Naval Staff  
(for DNAS)  
Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011

Tele: 2872049

Reply should be addressed to the  
Flag Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

Quoting: AO/1086/HC

26 Sep 17

M/s Jain Housing & ✓  
Construction Ltd.  
G-361, Main Avenue,  
Panampilly Nagar  
Kochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 4" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**

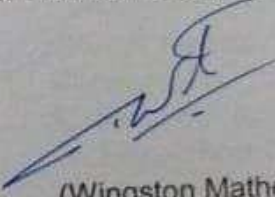
1. Refer to the following:-

(a) This office letter AO/745/HC dated 22 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 4"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 22 Mar 17 to 21 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 21 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.

  
(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

Encl:- As above

Copy to:-

The Chief of the Naval Staff  
(for DNAS)  
Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011

Tele: 2872049

Reply should be addressed to the  
Flag Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

Quoting: AO/1087/HC

18 Sep 17

M/s Jain Housing  
Construction Ltd.  
G-361, Main Avenue,  
Panampilly Nagar  
Kochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 5" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**


1. Refer to the following:-

(a) This office letter AO/741/HC dated 14 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 5"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 14 Mar 17 to 13 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 13 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.



(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

Encl: - As above

Copy to: -

The Chief of the Naval Staff  
(for DNAS)  
Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011



e: 2872049

ply should be addressed to the  
g Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

oting: AO/1084/HC

18 Sep 17

/s/ Jain Housing  
onstruction Ltd.  
-361, Main Avenue,  
anampilly Nagar  
Kochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 6" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**

1. Refer to the following:-

(a) This office letter AO/740/HC dated 14 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 6"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 14 Mar 17 to 13 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 13 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.

(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

**Encl:-** As above

**Copy to:-**

The Chief of the Naval Staff  
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Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011

Tele: 2872049

Reply should be addressed to the  
Flag Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

Quoting: AO/1090/HC

18 Sep 17

M/s Jain Housing  
Construction Ltd.  
G-361, Main Avenue,  
Panampilly Nagar  
Kochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 7" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**

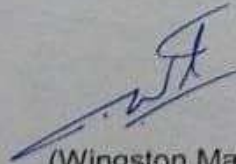
1. Refer to the following:-

(a) This office letter AO/742/HC dated 22 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 7"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 22 Mar 17 to 21 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 21 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.



(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

Encl:- As above

Copy to:-

The Chief of the Naval Staff  
(for DNAS)  
Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011

Tele: 2872049

Reply should be addressed to the  
Flag Officer Commanding-in-Chief

Headquarters  
Southern Naval Command  
Kochi - 682 004

Quoting: AO/1091/HC

26 Sep 17

M/s Jain Housing & ✓  
Construction Ltd.  
G-361, Main Avenue,  
Panampilly Nagar  
Kochi-682 036

**EXTENSION OF NOC FOR CONSTRUCTION OF NEW BUILDING PROJECT  
"TUFNELL PARK-TOWER 8" SITUATED AT KAKKANAD, KANAYANNUR,  
ERNAKULAM BY JAIN HOUSING AND CONSTRUCTIONS LTD.**

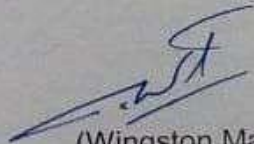
1. Refer to the following:-

(a) This office letter AO/743/HC dated 14 Mar 12 regarding the issue of No Objection Certificate (NOC) for construction of building project "Tufnell Park-Tower 8"(Copy Enclosed).

(b) Your office letter dated 24 Jun 17.

2. It is intimated that the validity of NOC issued vide this Headquarters letter quoted ibid is hereby extended for a further period of three years i.e. from 14 Mar 17 to 13 Mar 20.

3. It is further intimated that non submission of completion report/ occupancy certificate before 13 Mar 20, would render the NOC invalid and require submission of fresh application for accord of NOC.



(Wingston Mathews T)  
Captain  
Command Aviation Officer II  
for Flag Officer Commanding-in-Chief

**Encl:-** As above

**Copy to:-**

The Chief of the Naval Staff  
(for DNAS)  
Integrated Headquarters of  
Ministry of Defence (Navy)  
New Delhi - 110 011



**DEPARTMENT OF FIRE & RESCUE SERVICES  
GOVERNMENT OF KERALA**

**No. F2-13396/2018**

**Dated: 06.08.2020**

**CERTIFICATE OF APPROVAL**

*(Rule 53 of KMBR)*

- |                                     |   |
|-------------------------------------|---|
| 1. Name & Address of the Applicant  | : Sri. Sandeep Mehta,<br>Jain Housing & Constructions Ltd<br>39/5176, Panampilly Nagar, Cochin-682036 |
| 2. Name of the Company              | : -   |
| 3. Occupancy type of Building       | : Residential   |
| 4. Height of the Building           | : 58.95 mtrs. (Block 4)<br>Parking - SF+ULF   |
| 5. Number of Floors of the Building | : 21 F (SF+ULF+19 F)  |
| 6. Total Plinth Area (in sqm)       | : 24944.86 M <sup>2</sup>   |
| 7. Survey No                        | : 483/14, 484/7, 485/1  |
| 8. Village                          | : Kakkanad  |
| 9. Municipality                     | : Thrikkakkara Municipality   |
| 10. District                        | : Ernakulam   |

The above Site and Building were inspected by the authorized and competent Officials of this Department. The final Fire Plan drawings, the final filled up Checklist Cum Application and other Documents were scrutinized.

The building has been constructed as per the Rules and Norms pertaining to the Fire Safety arrangements (Duly filled and signed Checklist is attached which will form the part of this Certificate of Approval).

In the circumstances this Certificate of Approval is issued under my Seal and Authority. No further construction will be allowed in the vacant spaces provided in the approved plan. This Certificate is issued on the condition that the Fire Fighting Systems installed will be kept always functional and owner of the Building need to take special care to maintain the systems installed in proper working condition.

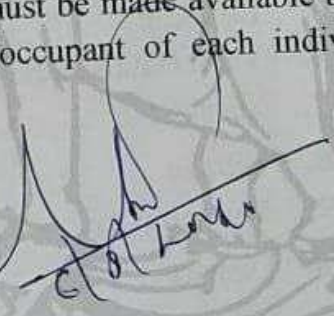


No: F2-13396/2018

**This Certificate is valid for one year from the date of issue. After one year the Certificate must be renewed. Non Renewal of the Certificate within the time limit may result in loss of eligibility for insurance coverage and appropriate legal action by Local Self Government/Revenue Department or any other Department or Body.**  
All Officers of and above the rank of Station Officers of the Fire & Rescue Services Department will have the right to Inspect the building on any day/time after serving seven days notice to ensure that the Installed Systems are in good working condition.

This Certificate of Approval pertains only to the Fire Fighting arrangements made and installed in the Building. The civil construction shall be got Inspected and Approved by the appropriate Local Authority.

A copy of this Certificate along with the enclosures must be made available by the applicant either in hard or in soft form with the owner/occupant of each individual apartment.

  
**M. NOUSAD,  
DIRECTOR (TECHNICAL),  
For DIRECTOR GENERAL.**

To,

**The Secretary, Thrikkakkara Municipality (In Original)**

Enclosures: 1) Approved Checklist Cum Application form duly signed by the Competent Official.  
2) Fire Plan duly affixed with Seal

Copy to:

- 1) The Applicant with the above Enclosures
- 2) The Regional Fire Officer, Ernakulam.
- 3) The District Fire Officer, Ernakulam.
- 4) The Station Officer, Thrikkakkara.