

Office of the Director General of Police
Commandant General, Home Guards &
Director of Civil Defence and
Director General Karnataka State Fire &
Emergency Services

No. 1, Annaswamy Mudaliar Road
Bangalore - 560 042



Phone : 25570733
: 22971501
Fax : 22971512

No. GBC(1)197/2010

21-08-2010

To

**The Commissioner,
Bruhat Bangalore Mahanagara Palike,
N.R. Square,
Bangalore – 560 002.**

Sir,

Sub: Issue of No Objection Certificate for the construction of
High Rise Residential building at Sy.No. 29/4, 29/5, 15/3D,
Kasavanahalli Village, Varthur Hobli, Bangalore East – reg.

Ref: Letter No.GGP/Projects/Bhuvana/001/10 dated 28-05-2010 of
the Authorised Signatory, Golden Gate Projects, Golden House,
No.80 Feet Road, 8th Block, Koramangala, Bangalore-560 095.
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With reference to the letter of the Authorised Signatory, Golden Gate Projects, Bangalore, cited above, the Deputy Director (Admn) of this department has on 24-07-2010 inspected the site of proposed High Rise Residential Building at Sy.No. 29/4, 29/5, 15/3D, Kasavanahalli Village, Varthur Hobli, Bangalore East with reference to the drawings submitted by the applicant and furnished the details as follows:

A: Details of the premises:

1. Address of the premise : Sy.No. 29/4, 29/5, 15/3D,
Kasavanahalli Village,
Varthur Hobli,
Bangalore East.
2. Number of building : One building with four blocks, Block-A,
Block-B, Block-C & Block-D, interconnected at
all floor levels and club house, interconnected
at ground and first floor levels.
3. Number of floors : One common basement, ground floor
and 10 upper floors.
4. Type of occupancy : Residential

5. Floor-wise details of the occupancy :

- a. Basement floor - For parking 282 cars, D.G. rooms & pump room.
 b. Ground floor - 20 flats.
 d. Typical 1st floor to 10th floor: Block-A: Entrance lobby and 6 flats on each floor x 10 floors = 60 flats.

Block-B & C: Entrance lobby and 4 flats on each floor x 10 floors x 2 blocks = 80 flats.

Block-D: Entrance lobby and 6 flats on each floor x 10 floors= 60 flats

6. Height of the building : 33.45 mtrs.

7. Site Area : 14062 sq.mtrs.

8. Built-up area of each floor:

Floor	Block-A	Block-B	Block-C	Block-D	Club House
Ground	707.66	1337.60	1337.60	707.79	301.91
First	720.37	1362.60	1362.60	720.36	301.91
Second	710.85	1352.98	1352.98	710.92	--
Third	720.37	1362.60	1362.60	720.36	--
Fourth	709.23	1343.71	1343.71	711.01	--
Fifth	720.37	1362.60	1362.60	720.36	--
Sixth	710.85	1352.98	1352.98	710.92	--
Seventh	720.37	1362.60	1362.60	720.36	--
Eighth	709.23	1343.71	1343.71	711.01	--
Ninth	720.37	1362.60	1362.60	720.36	--
Tenth	710.85	1352.98	1352.98	710.92	--
Total	7,860.52	14,896.96	14,896.96	7,864.37	603.82
Common Basement	8,605.00 sq.mtrs.				

9. Total built-up area : 39,830.67 sq. mtrs.

10. Surroundings of the premises:

East : 18 mtrs. wide Kasavanahalli main road

West : Private property

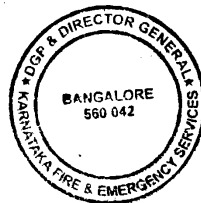
North : Private property

South : Private property



B. The plan shows the following structural details indicating the fire prevention, fire fighting and evacuation measures. These measures are considered adequate, as follows:

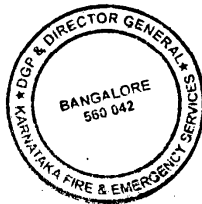
Details	Existing
1. Width of the road to which the building abuts and whether it is hard surfaced to carry the weight of 45,000 kg.	The premises is abutting 18 mtrs. wide Kasavanahalli Road towards Eastern side and it is hardened to carry the weight of 45,000 kgs.
2. Number of entrances and width of each.	Proposed to provide 2 entrances, each of 6 mtrs. width, from 18 mtrs. wide Kasavanahalli Road, located towards Eastern side.
3. Height clearance over the entrance.	No arch or any other constructions have been proposed over the entrances.
4. <u>Width of open space (Setbacks)</u>	
	Front (East) : Minimum 11.17 mtrs.
	Rear (West) : Minimum 11.73 mtrs.
	Side (North) : Minimum 11.00 mtrs.
	Side (South): Minimum 11.00 mtrs
5. Arrangements for parking cars.	Provision has been made to park 282 cars at basement and 40 cars in open setbacks parking area, after leaving 6.00 mtrs. wide driveway from the building line.
6. Number of staircases.	6.
7. Location of the staircases.	All the staircases have been designed to abut one of the external wall and have been extended up to the basement floor level and separate staircases have been provided to reach the basement from the ground floor level.



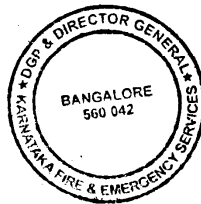
Details	Existing
8. Staircases size:	
(a) Width of the staircases	: Each of 1.20 mtrs.
(b) Width of treads	: 30 cm.
(c) Height of riser	: 15 cm.
(d) Number of risers in a flight	: 10 per flight.
(e) Height of hand rails	: 1 mtr. As proposed, the hand rails should be provided at a height of 1.00 mtr. The gap between two verticals should not exceed 15 cm.
(f) Head room clearance	: 2.20 mtrs.
9. Travel distance from the farthest point and from the dead-end of the corridor to the staircases.	Maximum 22.50 mtrs. from the farthest point to the staircases and maximum 7.5 mtrs. from the dead end of the corridor to the staircases.
10. Number of lifts and capacity	8 lifts, 4 lifts, each of 8 passengers capacity and another 4 lifts, each of 13 passenger capacity.

C. While constructing the building the following fire safety measures should be incorporated

Details	Existing	Recommendation
1. Condition of the open space	--	Out of the allowed and required setbacks of minimum 11.00 mtrs. all around, setbacks to the extent of 6.00 mtrs., from the building line, should have a RCC slab of 200 mm thickness to carry the load of 45,000 kgs, being the weight of a fire unit. This driveway, all around the building, should always be kept free and clear. It would be advantageous to the builders and the users to elevate this portion by a few inches and even provide for a different color, so that people are aware that this is the emergency route for fire fighting vehicles, ambulances etc. The total setbacks of minimum 11.00 mtrs. all around shall be at even level without any structure and projections up to a height of 5 mtrs. These setbacks shall be always kept free from any construction or utilization like garden, landscaping, parking, etc up to 6.00 mtrs. from building line.



Details	Existing	Recommendation
2. Structural materials	--	RCC materials and brick walls of not less than two hours fire resistance should be used for the construction of structures. Only fire resistant materials or materials treated with fire retardant chemicals should be used for interior decoration work. While attending the interior decoration, the fixed fire fighting systems like sprinklers/risers etc. should not be covered or shifted from their original location.
3. Design of the staircases.	Not indicated.	All the staircases should be constructed with non-combustible materials and should be completely enclosed at each landing to prevent smoke and fire traveling from the lower floors to the upper floors. Enclosures to staircases should be provided with self-closing smoke-stopping swing-door, fitted with door closing devices at the exit to the lobby. These doors should have at least <u>two hours</u> fire resistance capacity. The staircase area should be without glazing or glass brick walls to avoid reflections. Any area of dwelling or storage should not open directly to the staircase. As recommended in SI.No. B7, all the extended staircases shall be terminated at ground floor level & separate staircases shall be provided to reach the basement from ground floor level.
4. Specification	Not indicated.	The brick walls, enclosing the lift shafts, of lift should be of 90 mm thickness and have a fire resistance of not less than two hours. Shaft should have permanent vent of not less than 0.2 sq. m clear area, immediately under the machine room. Lift motor rooms should be preferably located at the top of the shaft and separated by the enclosing wall of shaft or by the floor of the machine room. Landing doors of lift



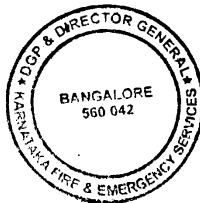
Details	Existing	Recommendation
5. Service ducts/ shafts.		<p>enclosures should open into a ventilated lobby, having one hour fire resistance. Lift car doors should be of metal finish, operating automatically and should have fire resistance capacity of one hour. Exit from the lift lobby should be through a self closing smoke stopping door of 15 mm thickness, having one hour fire resistance capacity. This is to prevent smoke and fire traveling from the lower floors to the upper floors. The lift machine rooms should be separate and no other machinery should be installed therein. Each lift should be connected to an alternative source of power (generator). Grounding switches, at the ground floor level, to enable the Fire & Emergency Services personnel to ground all the lift cars and use them as 'FIRE LIFT' in an emergency, should be provided. All the lifts, extended up to the basement, shall be terminated at the ground floor level or the lift lobby at the basements level shall be enclosed & pressurized with positive pressure.</p> <p>Service ducts should be enclosed by walls of 100 mm thickness to have at least two hours fire resistance capacity. A vent, opening at the top of the service shafts, should be provided between one fourth and half of the area of the shafts. The electrical distribution cables and wiring should be laid in a separate duct. All the ducts should be sealed at every alternate floor with non-combustible metal doors having at least two hours fire resistance capacity.</p> <p>Water mains, telephone lines, intercom lines or any other service lines should not be laid in the duct, meant for electric cables. The inspection panel doors and any other opening to the shafts should be provided with airtight doors of at least two hours fire resistance capacity.</p>



Details	Existing	Recommendation
6. Escape route.	Not indicated.	Directions in which the inmates should have to move in the event of any emergency have to be indicated in the corridor/passage on each floor as a guide during evacuation. These markings should be in luminous paint.

D: The builder should arrange for the following fire fighting and evacuation measures:

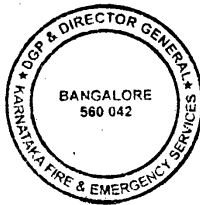
Details	Existing	Recommendation
1. Electric power supply.	-	<p>Circuits for water pumps, lifts, staircase lighting and corridor lighting in the building should be by separate line and independently connected so that they can be operated by one switch, installed at the ground floor. Dual operated switches should be installed in the service room for terminating the standby supply.</p> <p>Proposed to provide two standby diesel generators, one of 500 KVA and another of 250 KVA capacities at the basement level to supply alternative power for staircase lighting, corridor lighting, fire fighting systems, lifts, etc., in the event of failure of electricity supply, in the building.</p>
2. Wet riser-cum-down comer.	Proposed to provide five down comer systems	<p>As proposed five down comer systems, each of 100 mm diameter and made of G.I.'C' class pipe shall be provided. From each down comer system, single hydrant outlets should be provided at each landing of each floor of each block. Hose reel hose of minimum 12 mm size and each of 30 mtrs. length to reach the farthest point of each floor of each block, should be provided with a shut off branch having a nozzle of 5 mm size. The hose reel hose should be connected at each landing by means of an adaptor.</p>



Details	Existing	Recommendation
		<p>Adequate B.I.S. marked reinforced rubber lined delivery hoses of 63 mm size to reach the farthest point of the floor from the system should be provided with a branch pipe near each hydrant outlet in a proper box to protect it from withering. Atleast two fire service inlets to boost the water in the riser directly from the mobile pump should also be provided. These inlets should be located at an easily accessible position, preferably near the entry point to the premises.</p> <p>Each down comer system should be connected to an overhead tank of 25,000 liters' capacity with an electrically driven pump, capable of delivering 900 liters' of water per minute at 0.3N.mm2 pressure. The impeller of all the pumps should be of bronze.</p>
3. Manually operated fire alarm system	Proposed to provide manually operated electrical fire alarm system.	Manually operated electrical fire alarm system should be installed with call boxes located near each staircase landing of the building. The call boxes should be of 'break glass', where the call is transmitted automatically to the control when the glass of the system is broken. This system should also be connected to an alternative source of power supply (diesel generator). The call boxes should be so installed that their location can be easily noticed from either direction and should be at a height of one meter from the floor level.
5. Automatic sprinkler system.	Proposed to provide automatic sprinkler system with 640 pendent type sprinklers at common basement parking area and 74 pendent type sprinkler heads at club house parking area.	Adequate. Separate water and pump sprinkler system to use 10% of the sprinkler system for about 30 minutes shall be provided.



Details	Existing	Recommendation
6. Public address system.	Proposed to provide public address system with 2 way communication facility	As proposed a public address system with two way communication facility should be provided at each floor near each staircase landing with its console at the control room, located on the ground floor.
7. Portable extinguishers.	Proposed to provide suitable type of portable fire extinguishers, as per the requirement.	<p>a). One ABC powder extinguisher of 5 kgs. capacity and 2 fire buckets filled with clean, dry, fine sand should be provided for every 8 cars in the common basement floor parking area and on the setbacks parking area, under shelter.</p> <p>b. One CO₂ extinguisher of 2 kg capacity should be provided near the entrance to each main switch board room and in each kitchen of each floor.</p> <p>c. One ABC powder extinguishers of 5 kgs. capacity shall be provided near the transformer, if installed.</p> <p>d. One ABC powder extinguishers, 5 kgs. capacity should be provided near the entrance to each generator room.</p> <p>e. One CO₂ extinguisher of 2 kg capacity should be provided inside each lift room.</p> <p>f. One water type, gas cartridge extinguisher of 9 liters capacity should be kept near each staircase landing of each floor of each block.</p> <p>g. All the extinguishers suggested above should be with B.I. S markings and should be located at an easily accessible position without obstructing the normal passage.</p>



Details	Existing	Recommendation
8. Fire safety plan.	---	<p>A Fire safety plan for preventing and extinguishing any accidental fire in the building and action to be taken by the occupants in case of such fire should be prepared in advance and got approved by the Director, Karnataka Fire & Emergency Services. The fire safety plan, so approved, should contain the telephone numbers of the nearest Fire Control i.e., 101, 22971500, 22971550 and 22971600. The plan should be distributed to all the occupants and employees in the building and should be displayed on every floor.</p> <p>A Fire Command Station should be established in the lobby of the building on the entrance floor and such command station should be adequately illuminated. The main control of the public address system and fire alarm system should be at the Fire Command Station.</p> <p>A Fire Safety Director should be nominated for the building. He should conduct fire and evacuation drills periodically. He should nominate a Fire Warden for each floor and ensure that no individual of the building does anything which causes or stimulates an accidental fire and in case of lapses in respect of fire prevention measures, he should take action as deemed fit to ensure the safety from the fire point of view. If the action is beyond his capacity he should inform the Fire & Emergency Services department.</p>
09. Assembly Area	Not marked.	<p>An area at an appropriate place in the allowed/required setbacks shall be earmarked with a proper board as 'ASSEMBLY AREA' for the occupants to assemble after evacuation during practice drill and in an emergency.</p>



Details	Existing	Recommendation
10. Training.	Not indicated.	<p>40% of the occupants/employees should be got trained in fire prevention & fire fighting at the R. A. Mundkur Fire & Emergency Services Academy, Bannerghatta Road, Bangalore – 560 029, within 6 months from the date of occupation of the building.</p> <p>For this purpose, before approaching this department for final clearance certificate, the applicant should give an undertaking in the form of an affidavit regarding the maintenance of the fire prevention and fire fighting measures suggested above and arranging training of 40% of the occupants in fire prevention and fire fighting within 6 months from the date of issue of the clearance certificate.</p>

E. General:

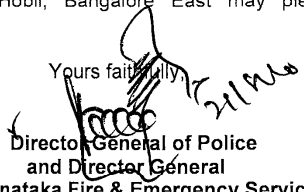
- a. All the Fire Prevention, Fire Fighting and Evacuation Measures suggested / recommended in B, C & D shall be strictly adhered to adopt.
- b. Hazardous materials such as petroleum products, explosives, chemicals etc. should not be stored on any floor of the building.
- c. Refuse dumps or storage should not be permitted in any of the floors.
- d. Liquefied petroleum gas should not be stored in the building.
- e. Plan & occupancy should not be changed without informing the Fire & Emergency Services and without taking clearance.
- f. The occupancy certificates should not be issued without obtaining the clearance certificate from the Fire & Emergency Services department as per clause 3.16 (v) of the Zoning Regulation 2007 of the Bangalore Development Authority.
- g. Such reasonable changes/modifications as may be found necessary, after the building is fully constructed, will have to be agreed to be done by the builder/occupants of the building.
- h. All the metal fittings of wet riser system and all the extinguishers suggested above should have B.I.S markings.



Subject to the strict adherence to the conditions laid down as above, issue of license for the construction of a High Rise Residential building of 33.45 mtrs. height at Sy.No.29/4, 29/5, 15/3D, Kasavanahalli Village, Varthur Hobli, Bangalore East may please be considered



Yours faithfully,


Director General of Police
and Director General
Karnataka Fire & Emergency Services

- COPY TO
- 1) The Authorised Signatory, Golden Gate Projects, Golden House, No.820, 80 Feet Road, 8th Block, Koramangala, Bangalore – 560 095.
 - 2) The Dy. Director (Admn.), Fire & Emergency Services, Bangalore.