

Dhaka basements not for 'slaves' alone

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"WE, at length, turned down a pair of stairs that led to a basement and I found myself in an eating-house somewhat better than those I had seen in passing; but that did not mean much for its excellence. The place was smoky, the tables were covered with oilcloth, the floor with sawdust, and from the kitchen came a rancid odour of fish fried over several times, which almost nauseated me."

Albeit very difficult to tell the difference, that is not a portrayal of a basement restaurant in 'modern' Dhaka, but an extract from James Weldon Johnson's *The Autobiography of an Ex-Colored Man*, published anonymously 1912.

"No provision had been made in the new building for a kitchen and dining room; but we discovered that by digging out a large amount of earth from under the building we could make a partially lighted basement room that could be used for a kitchen and dining room." That is how Booker T. Washington describes the life of a slave in *Up from Slavery* (Doubleday & Co., New York, 1901)

Over a hundred years later Dhaka provides similar conditions in spaces built and meant as car parking.

Driven out from their designated address by greedy building owners who earn a hefty rent, cars find themselves parked on street-side and on the street. The effective width of many a street in the capital is thus reduced, causing traffic jam throughout the day. This causes increase in travel time and loss in fuel by slow-moving vehicles. Revving cars contributes to air pollution. In the basement itself, change of use is not only against the law but poses serious safety issues that can lead to loss of life in case of an accident.

No single misuse of a building from approved car parking and/or

warehouse to anything illegal ranging from children playland to x-ray clinic has such a widespread effect on the city or the building concerned.

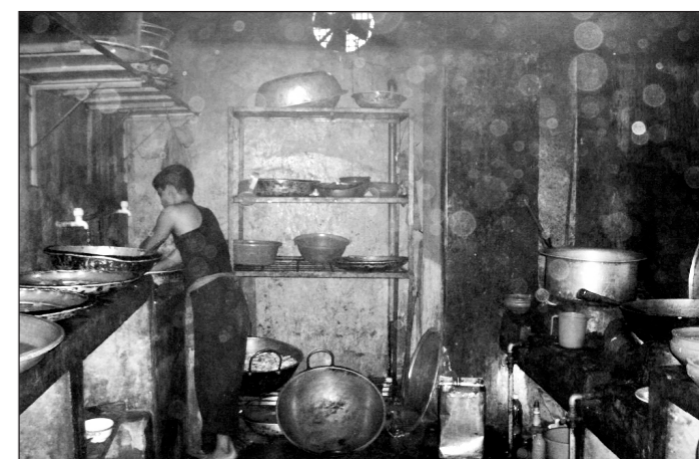
The students of final year of the Dept of Architecture, BUET undertook a comprehensive study of over fifty basements in Dhaka City and they came up with some expected findings unlawful and dangerous use.

Although time and again, excuse (even at ministerial level) has been brandished that the Building Construction Rules, 1996 is ill equipped to counter such menaces, in truth the law does empower the Authorised Officer to take action against such abuse. The old rules are expected to be totally replaced in the capital by the Dhaka Metropolitan Building Construction Rules, 2006 in early 2007, perhaps not without lawsuits blocking the way, but more than legislation we need a drastic change in outlook among building owners, and even users who can at least protest.

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Office, Family World



Kitchen, Hossain SuperMarket



Shops, Nagara Plaza



Show Room, Kagi Vaban

Basement use in commercial buildings: Illegal and unsafe

MD. ASHIKUR RAHMAN JOARDER

A long time has passed since Man came out of the cave for a living...

THE purpose of inclusion of basement in building is due to economic reason. The trend first practiced in commercial areas where the price of land is high and periphery of the land is fixed. The first option to expand building is to multiply story one above another and the other option is to go below ground. It seems that when the practice of calculating the cost of building in terms of unit space began, the value of ground floor becomes very important for commercial buildings. The space for parking and storages took place in basement.

The relevant law (Building Construction Rules, 1996) allows the basement to be used for these two intended

purposes car parking and storage. In fact, the law specifies the number of car parking spaces a building must have if it is to acquire planning (RAJUK) permission. Every building owner shows such adequate parking, most often in the basement of the building, in the design and drawings submitted to RAJUK. The approval given by RAJUK to a building owner to commence construction of this building is also based on having such parking spaces.

However, in order to make more profit from the car parking basement space a malpractice of using basement for other purposes like restaurant, shopping centre, office, kitchen, fast food shop, living room, children play area, cyber cafe, laboratory, electricity sub-station, stationary store, etc has become the rage. This type of usage of basement is not only the violation of law but also causes threat and hazard to individual users; at the same time being the basis of traffic

crisis in the city.

The violation is not only in making an alternative and more profitable usage only, but in most of the cases the setback rules are not followed, depriving the basement space from proper natural lighting and ventilation. According to Building Construction Rules, 1996 (under which legislation all the surveyed buildings have been approved) the setback for basement is same as it is for above the ground. But, most of the commercial buildings in Karwan Bazaar and Motijheel area have no setback on the sides above ground let alone below the ground. This type of construction negates the scope for natural light and air from sides in basement as well as in semi-basement, which are raised a few feet above ground. As the deprivation of lighting and ventilation is not mitigated mechanically, in most of the case studies the space has become humid and unhygienic for human habitation. Improper method of construction has exposed

some of the city basements to dampness and unhealthy environment.

Violation is also found with regard to access to the basement. In most of the cases the main staircase of the building leads directly to the basement, which should not be the case as per code as it will cause immense problems in case of a fire. A separate staircase has to be provided to connect the plaza/ground floor with the basement. The situation can become a nightmare when the fire stair of a high-rise building reaches up to the basement and if that is the only stair in the building, which is often the case. What will happen if a fire really occurs? An educated guess is that in a fire situation all the people fleeing from it shall follow the fire stair and terminate their journey at the basement (the place lacks oxygen), will be at a loss for not finding a means to escape, will try to reverse their direction of travel and cause chaos for more people coming down the stairs, if they can overcome the smoke, that is.

According to the law of the

land, people are not expected to use the basements in a other way than for car parking and storage of goods, but in reality Dhaka city basements were found to be used for gathering of people for activities such as restaurant (Hossain Super Market, Hasney Tower, Magnolia Super Market, Latif Emporium, Priyangon Shopping Centre), shopping (Kushal Centre, Meena Bazaar, Peer Yemeni Market, H. M. Plaza, Nagara Plaza, Chouranghee Bhaban, Kazi Bhaban), office (Family World, Lab Aid Cardiac Hospital, Meena Bazaar, Priyangon Shopping Centre), kitchen (S. R. Tower, Latif Emporium), living rooms (E. L. Chamber), common room (Sher Tower), children play area (Meena Bazaar, Western Grill), cyber cafe (S. R. Tower), and laboratory (Lab Aid Cardiac Hospital), Billiard Centre (S. R. Tower).

Basically these functions were provided in the basement instead of car parking for which the building was granted approval by RAJUK. As a result, car parking took place on the surface of the road, reducing the effective

width of the road, causing traffic congestion. One of causes of street parking in the building basement. Each building should ensure sufficient parking in its basement/s or within its premises in upper floors.

In addition to the above, basements are often made unsafe for use by cars by not deploying mandatory ramp slope, turning radius and clear height for vehicles.

The students of fifth and final year (2005), Dept of Architecture, BUET, Dhaka, surveyed as many as sixty commercial buildings in Dhaka city last year, and they discovered many a malpractice in basement usage. A summary of the findings are presented in the accompanying chart, using randomly chosen buildings from those surveyed, so as to provide an overall situation of the city.

The author is Lecturer, Dept of Architecture, BUET and one of the surveyors while he was a student.



Book Binding, Sher Tower

Building Construction Rules 1996, framed under Building Construction Act, 1952 (amended 1987)

Car parking space: Provide 23m ² (247.48sf)
For every 300m ² Of (use) Residential and Hospital/clinic
200m ² Commercial, Educational, Hotel, Industrial
100m ² Shopping, Restaurant
20 persons Cinema/theatre

Rules for Basement

- Setback rules similar to above ground, which means 'in mandatory open space, no construction of building'.
- No residential room, kitchen, toilet, bath
- Wall and floor must be waterproof
- Must be ventilated, naturally or mechanically
- Must not allow surface drainage water



Restaurant, Latif Emporium



Living Accommodation, EL Chamber



Children Play Area, Meena Bazar

Building	NAGARA PLAZA	KUSHAL CENTRE	PRIYANGON SHOPPING CENTRE	FAMILY WORLD	KAZI BHABAN	S.R TOWER,	HOSSAIN SUPER MARKET	PEER YEMENI MARKET	LAB-AID CARDIAC HOSPITAL	SHER TOWER	CHOURANG HEE BHABAN	H. M. PLAZA	HASNEY TOWER	MEENA BAZAR	EL CHAMBER
Land area	1600m ²	1538 m ²	2956 m ²	795 m ²	630 m ²	1185 m ²	501 m ²	1922 m ²	1583 m ²	409 m ²	675 m ²	397 m ²	882 m ²	706 m ²	613 m ²
Built-up area	1250 m ²	1653 m ²	2238 m ²	790 m ²	630 m ²	985 m ²	501 m ²	1905 m ²	1375 m ²	409 m ²	675 m ²	397 m ²	726 m ²	540 m ²	540 m ²
Number of stories	03 of 14	08	04 of 12	09	07	09	08 of 12	05	08	15	08	15		06	06
Access road and width	Phulbaria Road	Dhaka-Mymensingh highway, width 30m	Mirpur road width 27 m	Mirpur road width 27 m	Elephant Road width 20m	Dhaka-Mymensingh highway	Progati Sarani, Width: 25m	Majar road, Width: 24m	Mirpur Road	Road 17, Banani Width 10m	Elephant Road Width 30m	Sector :3 Uttara.	Karwan Baazar.	Satmasjid Road Width 25 m	Kazi Para Width 4m
Basement	One, partly underground	One, partially underground	One, fully underground	Two, partly underground	One, fully underground	One, partly underground	One, partly underground	One, fully underground	Two, fully & partially underground	One, fully underground	One, fully underground	One, partly underground.	One, underground.	Two, fully & partly underground	One, fully underground
Number of access to basement	Ramp : 2 Staircase: 3	Staircase: 1	Ramp : 1 Staircase: 3	Ramp: 1 Staircase: 2 Elevator: 1	Staircase: 1	Staircase: 1	Ramp: 1 Staircase : 1	Staircase: 3	Staircase: 2 Elevator : 1	Ramp: 1 Staircase : 1	Staircase : 1	Staircase : 3	Staircase : 1	Staircase : 1	Ramp: 1
Number of staircases in the building	02	02	04	02	02	02	02	04	04	01	02	03	01	02	01
Means of ventilation in the basement	Natural ventilation	Natural, by the entry openings	Natural, through staircase and ramp	Mechanical, Naturally through ramp	Natural	Natural	Natural, through high window	Least natural ventilation	Natural, Mechanical	Party mechanical, inadequate	Mechanical	Mechanical, sealed high windows	Mechanical	Mechanical	Natural, through ramp
RAJUK approved basement for	Parking	Parking	Parking and storage	Parking	Parking	Parking	Parking	Parking and storage	Parking	Parking	Parking	Parking	Parking	Parking	Parking
Parking	Less than specified		Less than specified	Less than specified	Less than specified	Less than specified			Less than specified	Less than specified	Less than specified				
Basement now used for	Market	60 shops (grocery, hardware)	Food shop, Storage, Machine Room, Prayer Space, Parking, Office	Office, Mechanical Room, Store	Shopping, Storage	Cyber Cafe, Billiard Centre, Storage, Mechanical Room, Kitchen, Toilet.	Storage, Restaurant.	Shopping	X-Ray Room, Laboratory, Parking, Morgue, Electric Substation, Waiting, Office	Common room, Photocopy center Binding Mechanical room	Shopping	Shopping	Restaurant	Shops, Massage corner, Children play area, Office, Storage	Parking, Electric Substation, Generator Room, Caretaker's lodging
Number of people in basement during peak hour	Hundred plus	Shop keeper-180 User- 250 plus	Hundred plus	35 people	15 people	Shop keeper-20 User-80	Hundred plus	538 people	50 people	150 people	100 people	Above Hundred	Above Hundred	Above Hundred	Above Hundred
Setback (distance from property line)	Violated	Violated	Violated	Violated	Violated	Violated	Violated	Violated	Violated	Violated	Violated	Violated			
Efficiency of staircase in a fire	Main staircase lead up to basement	Distance between two staircases more than specified	Staircase lead up to basement	Staircase lead up to basement	Staircase lead up to basement	Staircase lead up to basement	Staircase lead up to basement		No alternative staircase from ground to 7 th floor	No fire escape	Staircase lead up to basement		No fire escape		No fire escape
Other violations	No elevator	No elevator	Ramp ratio is 1: 6.5, steeper than specified	Ramp ratio steeper than specified	Lift not provided yet, Ramp ratio steeper than specified		Ramp is kept closed always by collapsible gate.	Ramp ratio steeper than specified	Have crossed height limit of the area		Lift not provided yet	Inadequate basement head room			

*Period of survey: March 2005