

## Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: <b>The Bay Super Textile Mills Limited</b>
Address of the Factory	: 24/4, Chamelibag, Santinagar, Dhaka
Present Status of the Factory	: <b>Under Operation</b>
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 22 <sup>nd</sup> November 2013
Fire & Electrical Assessment Conducted by	: BUET
Date of Fire & Electrical Inspection	: 22 <sup>nd</sup> November 2013

### **BASIC INFORMATION:**

The present garment factory is housed on the upper 2<sup>nd</sup> to 6<sup>th</sup> floors of a 7 storied commercial (shopping complex) building. The following information was noted:

i.	Building Usage Type	: Garments Factory + Shopping Centre
ii.	Structural System	: R.C. beam column frame structure
iii.	Floor System	: Edge supported R.C. solid floor slab system with R.C. beam at the edges
iv.	Floor Area	: Approx. 3984 sft per floor with a total of approx. 24000 sft (as per architectural drawing)
v.	No. of Stories	: 7 (Nine)
vi.	Construction Year	: 1976-1990
vii.	Foundation Type	: Individual column footing resting on stiff clay soil (as per foundation drawing and geotechnical investigation report)
viii.	Design Drawings	: Available
ix.	Soil Investigation Report	: Post construction report available, Done in May 2013 by Dhaka Soil, 871 Rokeya Sarani, Mirpur, Dhaka
x.	Construction Materials	: Reinforced Concrete (Stone chips + Brick Chips + Steel bars, 40- grade).
xi.	Generator	: Located outside the building

### **RECOMMENDATIONS FOR CORRECTIVE ACTION:**

The recommendations of corrective action for both Structural and Fire & Electrical Safety comprises in Short Term, Mid Term and Long Term basis.

The recommendations for **Structural Safety** corrective action are:

Short Term (Immediate)	: Ensure that intensity of floor load does not exceed 40 psf (2.0 kN/m <sup>2</sup> ) in all floors.
Mid Term (6-weeks)	: None
Long Term (6-months)	: Core tests are required to be done.

The recommendations for **Fire & Electrical Safety** corrective action are:

**(A): Recommendations for Fire Safety corrective actions:**

Immediate  <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A
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<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i></p>	<p>Remove all temporary obstructions from all escape routes, aisles and passageways.</p> <p>Ensure minimum width of corridors, passageways and aisles.</p> <p>Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines.</p> <p>Provide proper directional sign and exit sign in Bangla and English as per guidelines.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Remove temporary structure from roof top.</p> <p>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas. Also design to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per guidelines.</p> <p>Remove all collapsible gates/roller shutters/sliding doors. Produce design drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into fire-rated enclosures equipped with fire-rated side swinging doors of required dimensions opening in the direction of travel at each floor.</p> <p>Produce design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection and alarm system.</p> <p>Install command station as per guidelines.</p>
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Install horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas.</p> <p>Ensure proper fire separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per approved design.</p> <p>Install fire rated enclosure and doors of appropriate dimensions at exit to the stairs to prevent smoke and fire propagation as per approved design.</p> <p>Install standard standpipe, hose and fire pump system.</p> <p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self closing fire rated door as per guidelines.</p>

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### *(B): Recommendations for Electrical Safety corrective actions:*

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	N/A
<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity</i></p>	<p>Provide instructions for first aid and artificial respiration from exposure to electrical shock.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel body &amp; door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Provide separate service ducts for electrical cables.</p> <p>Provide new Emergency Lighting system.</p> <p>Provide appropriate Lightning Protection System as per guidelines.</p>
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	N/A