

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Cathay Apparels Ltd.
Address of the Factory	: Dag # 57(CS&SA), 222-Part (RS), Khatian # 8(CS), 26(SA), 13(Rs), Mouza-Purba Narsinghpur, P.S- Savar(P), Ashulia, Dhaka
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 11 th April 2014

BASIC INFORMATION:

The present garment factory is housed on all the floors of the 4 storied building. The following information was noted:

i. Building Usage Type	: Garments factory
ii. Structural System	: R.C. beam column frame structure.
iii. Floor System	: R.C. solid floor slab with R.C. beam
iv. Floor Area	: Approx. 8,400 sft per floor with a total of 33,000sft.
v. No. of Stories	: 4 (four) stories
vi. Construction Year	: Not known
vii. Foundation Type	: As per submitted drawings, the foundation of the building was made by using individual column footing at a depth of 6 ft from EGL. According to the soil report, the bearing capacity of soil is 0.75 tsf at a depth of 5 ft below the EGL which is not compatible with the foundation design and hence the soil test and foundation depth have to be examined.
viii. Design Drawings	: Structural design drawings were submitted.
ix. Soil Investigation Report	: Available, done in July 2013 by Blue Bird Soil Engineering, Nur Plaza, Shonir Akhra, Kadamtali, Dhaka-1236.
x. Construction Materials	: Reinforced Concrete (brick chips).
xi. Generator	: Located outside of 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)	: The factory owner has been instructed to prepare and submit a load plan for all floors.
Mid Term (6-weeks)	: The factory owner is asked to monitor any storing of any type cartoon boxes, finished material and fabrics in such a manner so that the intensity of loading does not exceed 40 psf (2.0 kN/m ²).
Long Term (6-months)	: Due to high stress in some columns, an in-situ test is required to be done and an adequacy checks for strength of the building to be completed.

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

Name of the Factory	: Cathay Apparels Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 4 th February 2014

(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 <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 adequate numbers of fire drills.</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 <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></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. 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>Provide design to install proper detection and alarm system.</p>
<p>Long Term <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 proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self closing fire rated door as per guidelines.</p>

(B): Recommendations for Electrical Safety corrective actions:

<p>Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p style="text-align: center;">N/A</p>
<p>Short Term <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>Provide rubber mat in front of the panel.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel body & door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p> <p>Remove broken/loose MCB/MCCB box/socket.</p>

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Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i>	Provide separate service ducts for electrical cables. Provide new Emergency Lighting system. Provide appropriate Lightning Protection System as per guidelines.
Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i>	N/A