

# Mondol Knit Tex Ltd (9959)

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ACCORD  
on Fire and Building Safety in Bangladesh



## Identified Priority 1 Concerns

Loading to be reduced for both buildings as storage areas surpass the prescribed limits displayed on signs on the walls.

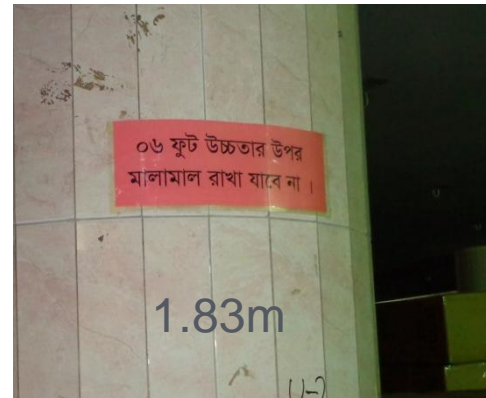


## 1<sup>st</sup> Priority 1 Concern

During our visit, we found that floors used for storage were loaded above the prescribed limits indicated on signs a few columns.

We also noticed that loading varied in weight density. A loading plan would be more appropriate for each floor level.

This concern is applicable for both buildings.



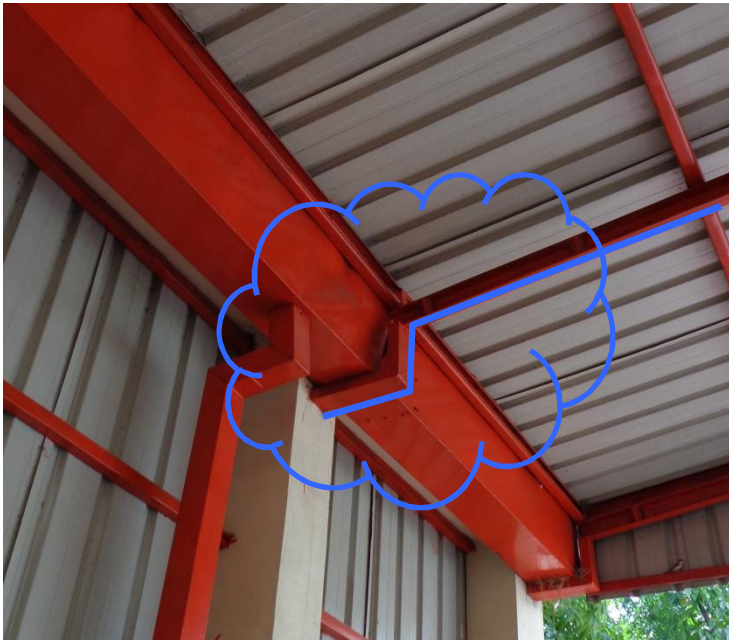
## Identified Priority 2 Concerns



Steel trusses with large tributary areas

### 1<sup>st</sup> Priority 2 Concern

During our survey, we found that some steelwork structural framing elements were built and used in an unorthodox way. We require a full detailed engineering assessment of all of the various steel roofs around the 2 buildings.



Supporting member redirected for gutter

## Identified Priority 3 Concerns



### 1<sup>st</sup> Priority 3 Concern

In certain areas of all floors, mainly in office spaces, we found old floor openings covered by flimsy aluminium plates.



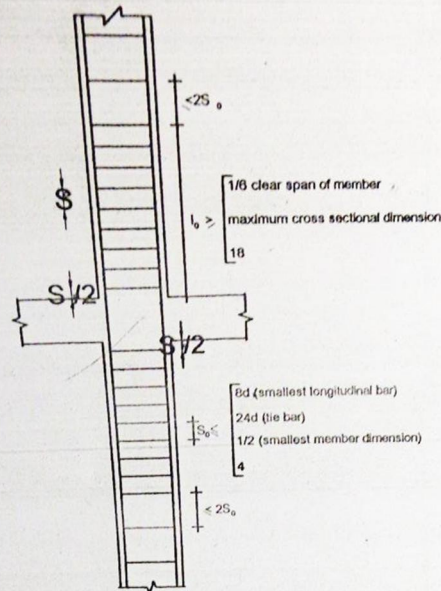
## 2<sup>nd</sup> & 3<sup>rd</sup> Priority 3 Concerns

No waterproofing membrane was visible on the roof of the buildings. This means that any cracks in the surface finishes on the roof will allow water to seep into the concrete slab beneath the finishes, and cause long-term soaking of the slab. The same applies to the water tanks at roof level.

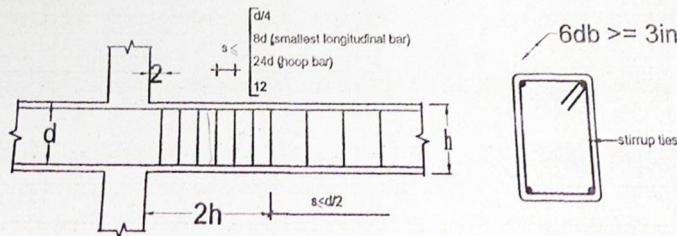
We can also noted steam from an ironing process being directed across the surface of the roof slab.

# Overall Stability System

28. CONFINEMENT REQUIREMENTS OF COLUMN AT JOINTS  
FOR EARTHQUAKE LOADING



29. CONFINEMENT REQUIREMENTS OF BEAM AT JOINTS  
FOR EARTHQUAKE LOADING



The overall stability of both buildings is provided by a moment frame action which requires special detailing at the beam to column connections. Such details were included on the construction drawings.

The moment frame for Building 1 is limited to the perimeter of the building, while Building 2 has beams across the grid in both directions.

We have 2 concerns with regards to the surveyed system. The first one is the fact that both buildings are connected in one bay and do not have a movement joint. This can alter load distribution. The second concern is with regard to the height of the first floor being close to 6m as opposed to 3.4m. This makes for a fairly flexible moment frame system.

A Detail Engineering Assessment should be carried out to assess both systems.

# Priority Actions

## Problems Observed Summary

**ITEM 1: (Priority 1) Storage areas do not respect height limits (Buildings 1 & 2)**

**ITEM 2: (Priority 2) Steel roofs above ground floor have unorthodox details (Buildings 1 & 2)**

**ITEM 3: (Priority 3) Openings in floor covered by weak aluminium panels (Buildings 1 & 2)**

**ITEM 4: (Priority 3) The roof has no waterproofing**

**ITEM 5: (Priority 3) The exit for steam from the ironing process is shooting directly at the roof slab**

## Item 1 and Actions

Storage areas do not respect height limits

### Priority 1 (Immediate – Now)

- Verify insitu concrete stresses either by 100mm dia. cores or existing cylinder strength data from 4 columns.
- Detail Engineering Assessment of Factory to be commenced, see attached scope

### Priority 2 (within 6 weeks)

- Factory engineer to produce and actively monitor a loading plan for all floor plates within the factory complex, with consideration given to slab, column and foundation capacity

### Priority 3 (within 6 months)

- Maintain and enforce the loading plans.

## Item 2 and actions

Steel roofs above ground floor have unorthodox detailing (Buildings 1 & 2)

**Priority 1  
(Immediate – Now)**

- None

**Priority 2  
(within 6 – weeks)**

- Include in a Detailed Engineering Assessment of the Factory, see attached scope. Assess capacity of connections and steel members of roofs to resist wind forces (down force & uplift)

**Priority 3  
(within 6-months)**

- None

## Item 3 and actions

Openings in floor covered by weak aluminium panels (Buildings 1 & 2)

**Priority 1  
(Immediate – Now)**

- None

**Priority 2  
(within 6 – weeks)**

- None

**Priority 3  
(within 6-months)**

- Replace with thicker panels designed for 3 kPa floor load. Securely fasten to floor.

## Item 4 and actions

The roof has no waterproofing

**Priority 1  
(Immediate – Now)**

- None

**Priority 2  
(within 6 – weeks)**

- None

**Priority 3  
(within 6-months)**

- Apply a new waterproofing membrane.

## Item 5 and actions

The exit for steam from the ironing process is shooting directly at the roof slab

**Priority 1  
(Immediate – Now)**

- None

**Priority 2  
(within 6 – weeks)**

- None

**Priority 3  
(within 6-months)**

- Redirect and collect steam via a different system which provides water/heat protection to slab