

Cotton Dyeing & Finishing Mills Ltd

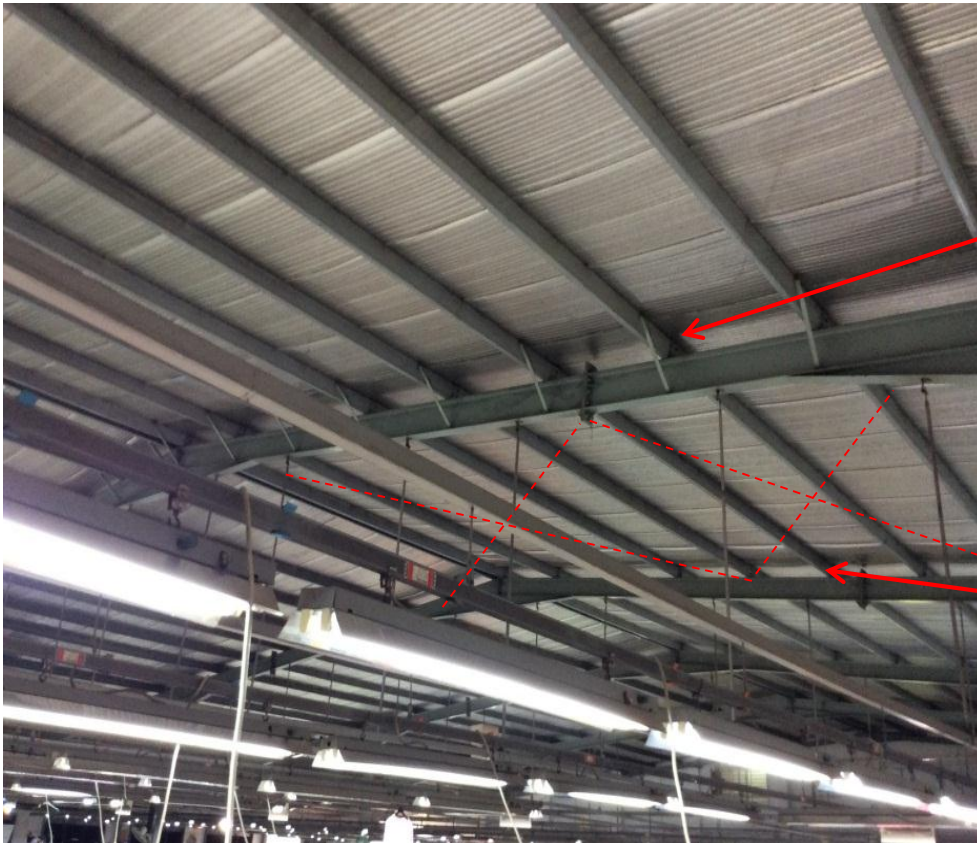
10 No. Habirbari PO, Seed Store Bazzar Thana, Valuka, Mymensing, Dhaka
(+24.315N, 90.38389E)

10 May 2014



Observations Garments Building

Incomplete bracing and inconsistent restraint detail to rafter of steel roof



Incomplete bracing and inconsistent restraint detail to steel rafter

Compression flange restraints for roof rafter steel are provided at a limited number of locations.

Building Engineer to review and confirm that these are provided in accordance with the design.

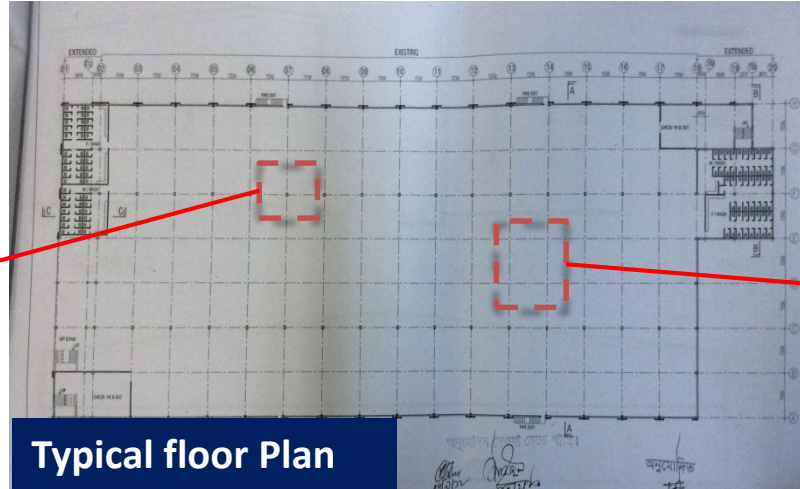
Roof horizontal bracing for lateral stability of steel roof structure is incomplete. Building Engineer to review horizontal and vertical bracing.

Structural steel columns do not correspond with sizes shown on building section drawing. Building Engineer to review adequacy of steel roof structure.

Cracking of floor finishes/slab and management of floor loads



Cracks in 1st floor slab



Typical floor Plan



Cracks in Ground floor slab



8 No. 2000 litre water tanks above the East extension

Building Engineer to prepare controlled loading plans, based on floor slab and column capacity, for all floors which will designate allowable storage density and where storage may be placed. Crack repairs to be carried out as necessary.

Cracking of floor finishes/slab and management of floor loads

Cracking of Building Façade

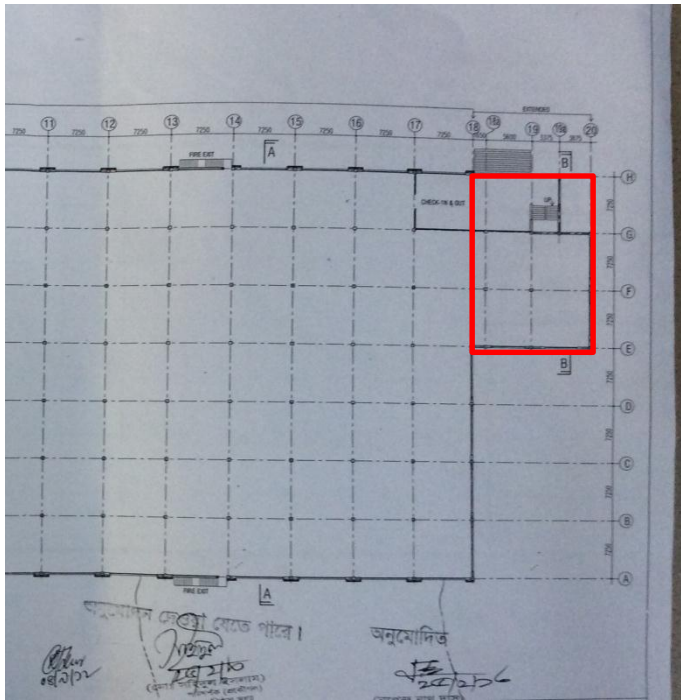


Façade cracks visible on elevations of the Garments Building.

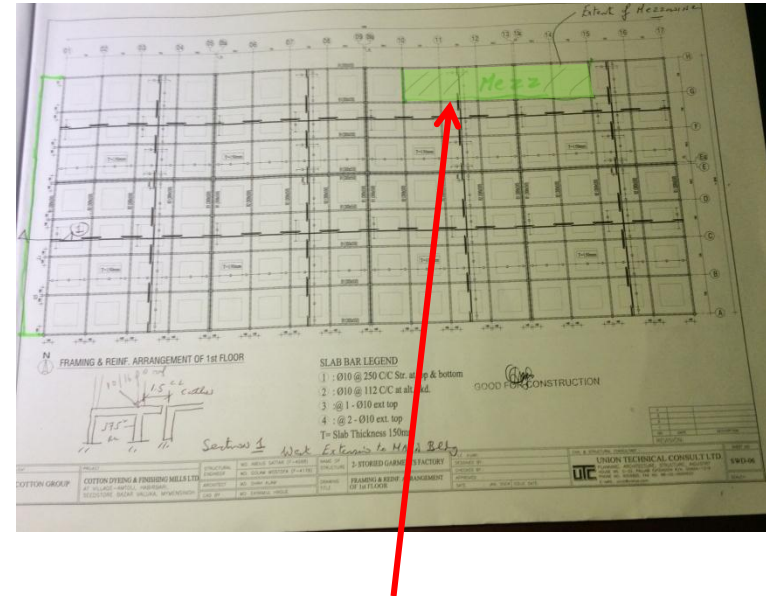
Building Engineer to conduct routine inspection and issue maintenance schedule for façade brick walls

Cracking of Building Façade

Missing drawings and discrepancies between drawings provided and the as constructed building



As constructed Eastern extension is rectangular on plan – this differs to layout shown on drawing



Missing drawings for the Mezzanine floor of the Garments Building

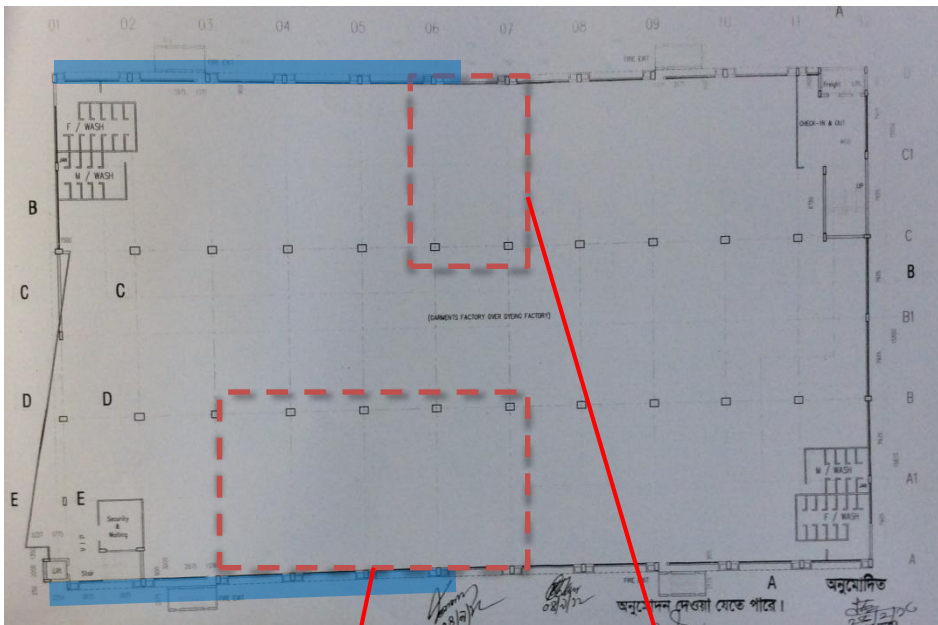
Building Engineer to check all drawings and update to match as constructed building.

Detailed structural steel drawings for steel roof and columns not provided.

Drawing Discrepancies

Observations Knitting and Dyeing Building

Cracking of floor finishes/slab and management of floor loads



Typical Floor Plan



1st floor slab



2nd floor slab soffit

Cracking of floor finishes/slab and management of floor loads



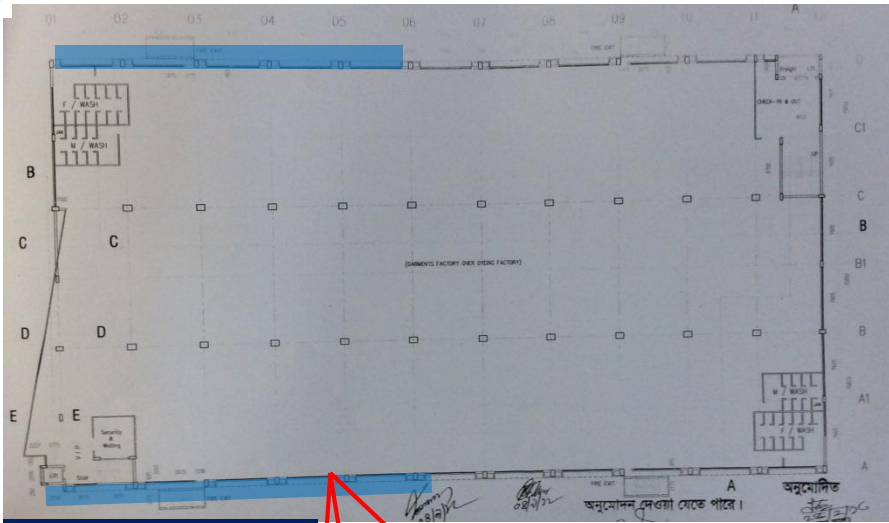
Water tanks loads



Equipment loads

Building Engineer to prepare controlled loading plans, based on floor slab and column capacity, for all floors which will designate allowable storage density and where storage may be placed. Crack repairs to be carried out as necessary.

Cracking of external cantilever slab and building façade



Typical Floor Plan



Façade cracking



Building Elevation



Cracks on the lower level cantilever

Cracks on the upper and lower cantilevers propagating from the column towards the tip of the cantilevers

Building Engineer to investigate reasons for cracking and implement repairs as necessary

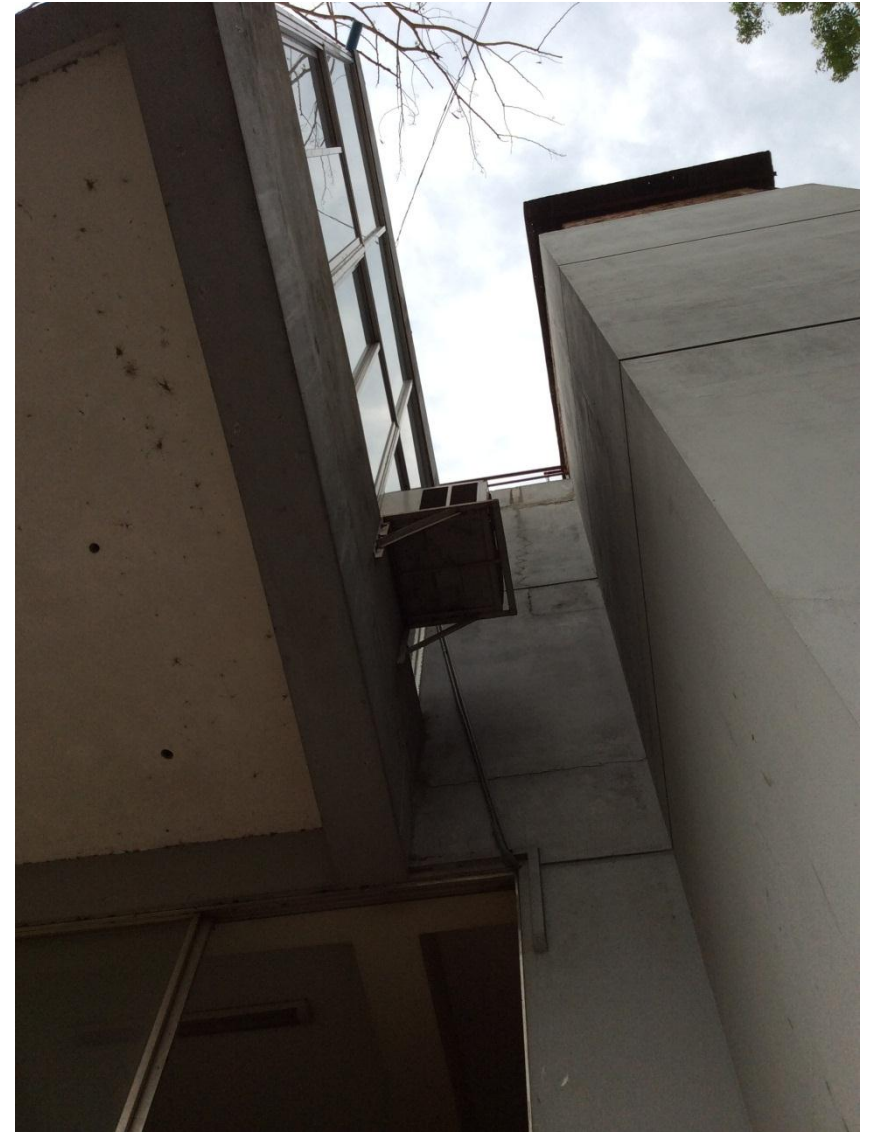
Cantilever slabs

Cracking of external cantilever slab and building façade



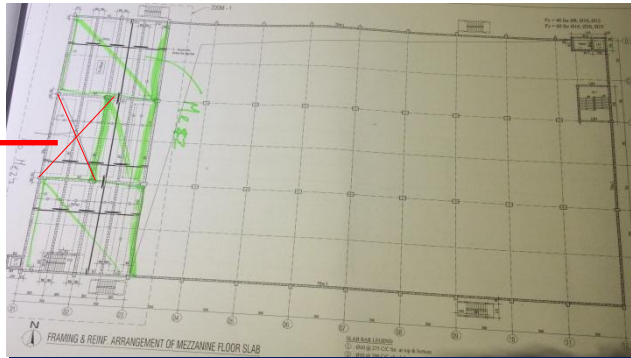
Façade cracks visible on elevations of the Knitting and Dyeing building.

Building Engineer to conduct routine inspection and issue maintenance schedule for façade brick walls



Cracks on façade brickwork walls

Discrepancies between drawings provided and the as constructed building



Mezzanine RC drawing



Mezzanine as constructed

Mezzanine is shown covering 2 full bays at the west end of the building on the RC drawing. As constructed it only covers 1 bay at the middle section of the mezzanine.

Discrepancies between the drawings and as constructed



Typical Floor Plan



Cantilever slabs as constructed – not shown on drawings

Cantilever slabs

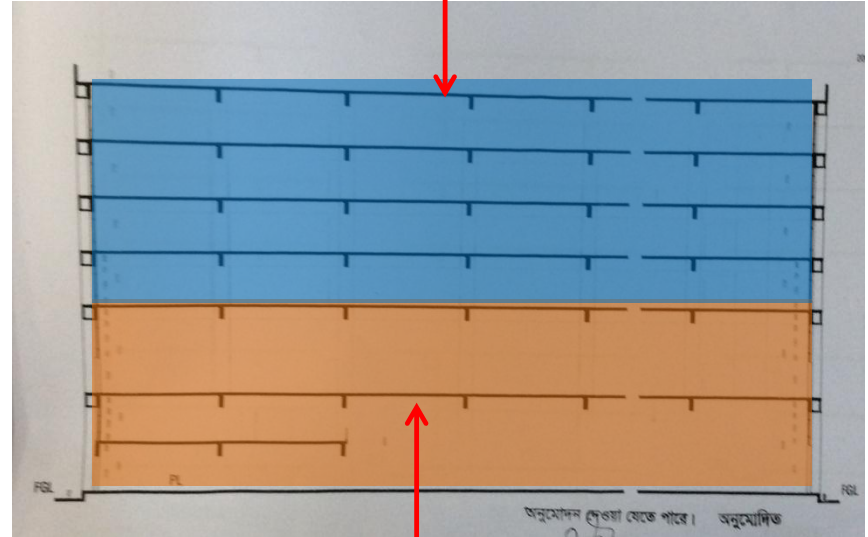
Building Engineer to check all drawings and update as constructed.

Any proposed additions to the existing building structure, including additional storeys, should be reviewed by the Building Engineer

Permit for 4 more storeys



Existing structure – 2 storeys



2 storeys currently constructed, permit drawings allow for 6 storeys. Building Engineer to review structural design and concrete strength within existing columns prior to commencing construction of any further building extension above the existing 2 storeys.

Priority Actions

Problems Observed

Garments Building

ITEM 1: Incomplete bracing and inconsistent restraint detail to rafter of steel roof

ITEM 2: Cracking of floor finishes/slab and management of floor loads

ITEM 3: Cracking of building façade

ITEM 4: Missing drawings and discrepancies between drawings provided and the as constructed building

Knitting and Dyeing Building

ITEM 5: Cracking of floor finishes/slab and management of floor loads

ITEM 6: Cracking of external cantilever slab and building façade

ITEM 7: Discrepancies between drawings provided and the as constructed building

ITEM 8: Any proposed additions to the existing building structure, including additional storeys, should be reviewed by the Building Engineer.

Item 1 and actions – Garments Building

Incomplete bracing and inconsistent restraint detail to rafter of steel roof

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- None required

Priority 3

(within 6-months)

- The design of the steel roof should be checked by the Building Engineer and, if required, upgraded to support code vertical and wind loads. Specifically the provision of roof bracing (horizontal and vertical) and compression flange restraints should be reviewed.

Item 2 and actions - Garments Building

Cracking of floor finishes/slab and management of floor loads

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.
- Building Engineer to review typical floor finish cracks at ground and 1st floors and confirm that cracking is in finishes only. Where required, remedial works to be carried out.

Priority 3

(within 6-months)

- Continue to implement load management plan

Item 3 and actions - Garments Building

Cracking of building façade

Priority 1

(Immediate - Now)

- None required.

Priority 2

(within 6-weeks)

- None required.

Priority 3

(within 6-months)

- Building Engineer to inspect area where cracking has occurred and propose a suitable repair to ensure that rainwater does not penetrate the building fabric.
- Building Engineer to provide a method statement for the on-going maintenance of the external facades.

Item 4 and actions - Garments Building

Missing drawings and discrepancies between drawings provided and the as constructed building

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- None required

Priority 3

(within 6-months)

- Building Engineer to survey as constructed building. Updated drawings to be prepared showing the correct as constructed layout including the steel frame structure.
- Update controlled loading plans for all floors designating allowable storage density and where storage may be placed.

Item 5 and actions–Knitting & Dyeing Building

Cracking of floor finishes/slab and management of floor loads

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.
- Building Engineer to review typical floor finish cracks and confirm that cracking is in finishes only. Where required, remedial works to be carried out.

Priority 3

(within 6-months)

- Continue to implement load management plan

Item 6 and actions-Knitting & Dyeing Building

Cracking of external cantilever slab and building façade

Priority 1

(Immediate - Now)

- None required.

Priority 2

(within 6-weeks)

- None required.

Priority 3

(within 6-months)

- Building Engineer to inspect area where cracking has occurred and propose a suitable repair to ensure that rainwater does not penetrate the building fabric and cantilever slab.
- Building Engineer to provide a method statement for the on-going maintenance of the external facades.

Item 7 and actions-Knitting & Dyeing Building

Discrepancies between drawings provided and the as constructed building.

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- None required

Priority 3

(within 6-months)

- Building Engineer to survey as constructed building. Updated drawings to be prepared showing the correct as constructed layout.
- Update controlled loading plans for all floors designating allowable storage density and where storage may be placed.

Item 8 and actions-Knitting & Dyeing Building

Any proposed additions to the existing building structure, including additional storeys, should be reviewed by the Building Engineer.

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- None required

Priority 3

(within 6-months)

- If any additions to the building structure are proposed, the Building Engineer shall provide calculations showing the structural adequacy of all columns taking into account any additions to the existing structure, the loading plans and as built structure, including insitu concrete strength testing.