

Ornob Fashion Wear Ltd

Kathora, Joydebpur, Gazipur, Bangladesh

(23.948253 N, 90.366634 E)

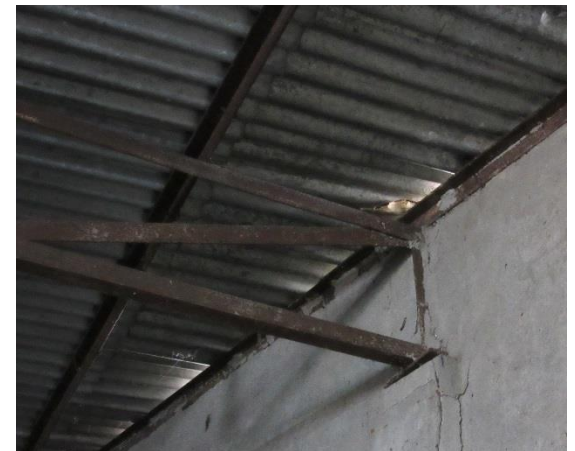
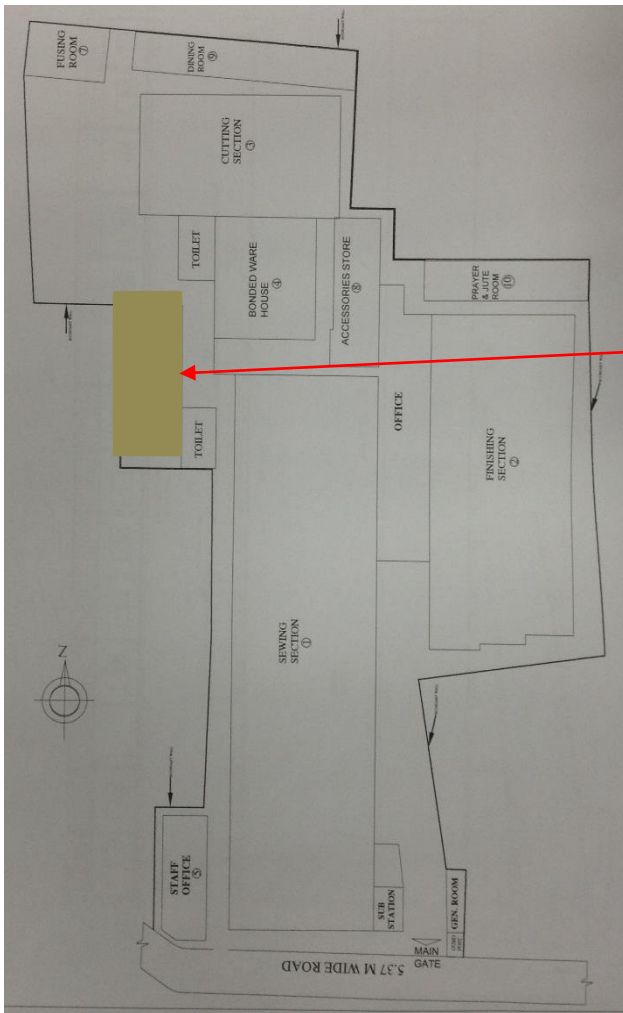
25th March 2015



Observations

Cracking in column, wall and roof connection - (Shed 6)

Corroded steel roof structure - (Shed 6)



Roof steel beams structure appears to be corroded.

Observations – Shed 8

Apparently non-engineered roof structures (all sheds)



Roof shed appears to be non-engineered steel structure:

- Condition of steel structure itself appears not sufficient
- Poor connections to substructure
- No apparent measures against up-lift

Roof sheds appear to be non-engineered

Observations

Possible lack of lateral bracing for the steel roofs of all the sheds

Lateral stability system non-apparent:

Generally:

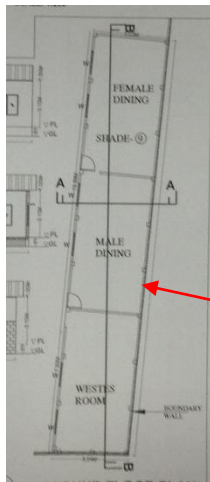
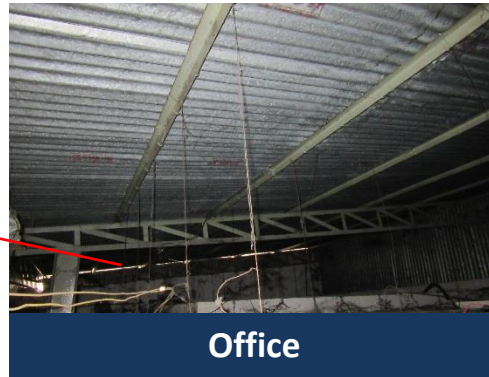
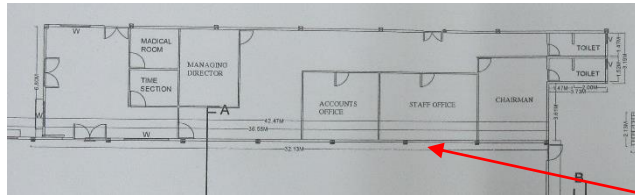
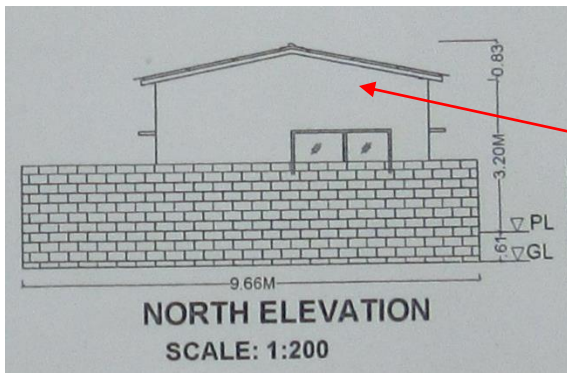
- No bracing
- No moment frame
- Non-load-bearing brick walls as in-fill on perimeter lines (exception is shed 6 which consists of metal sheet cladding)



Lateral stability system of sheds is non-apparent

Observations

**Discrepancies between
permit/structural/architectural drawings and as-
built structure for all the sheds**



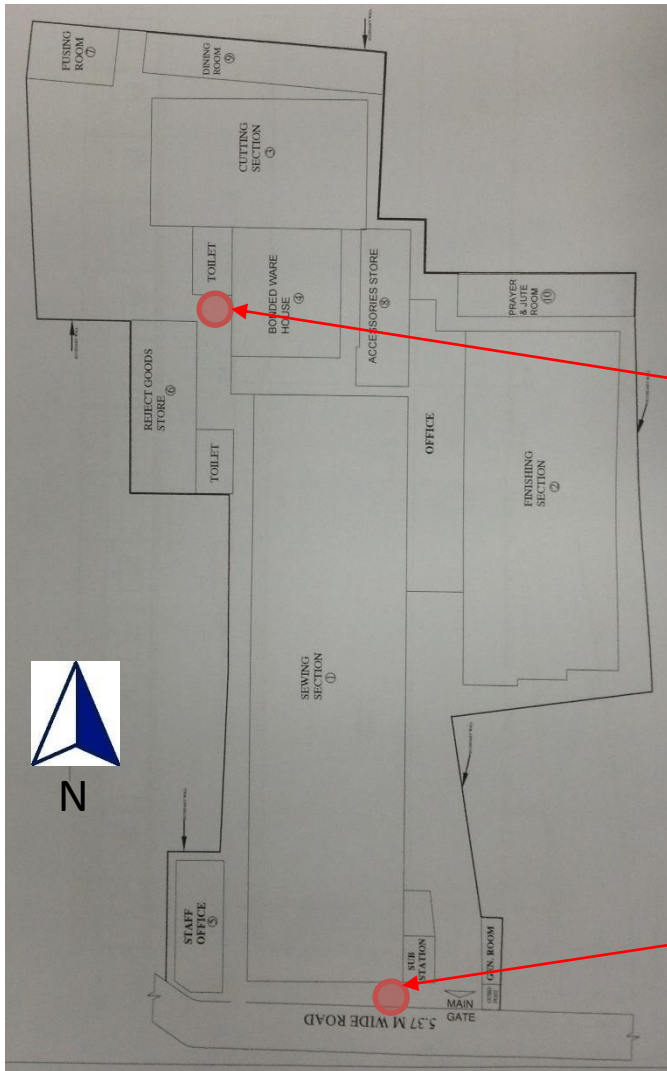
Discrepancies:

- Changes in the overall roof structure → truss/beams (parallel or sloped), height, shape
- Column layout and spans (bigger or smaller spans due to additional or missing column lines)
- Steel and concrete column not according to structural drawings

Discrepancies between permit/structural/architectural drawings and as-built structure

Observations

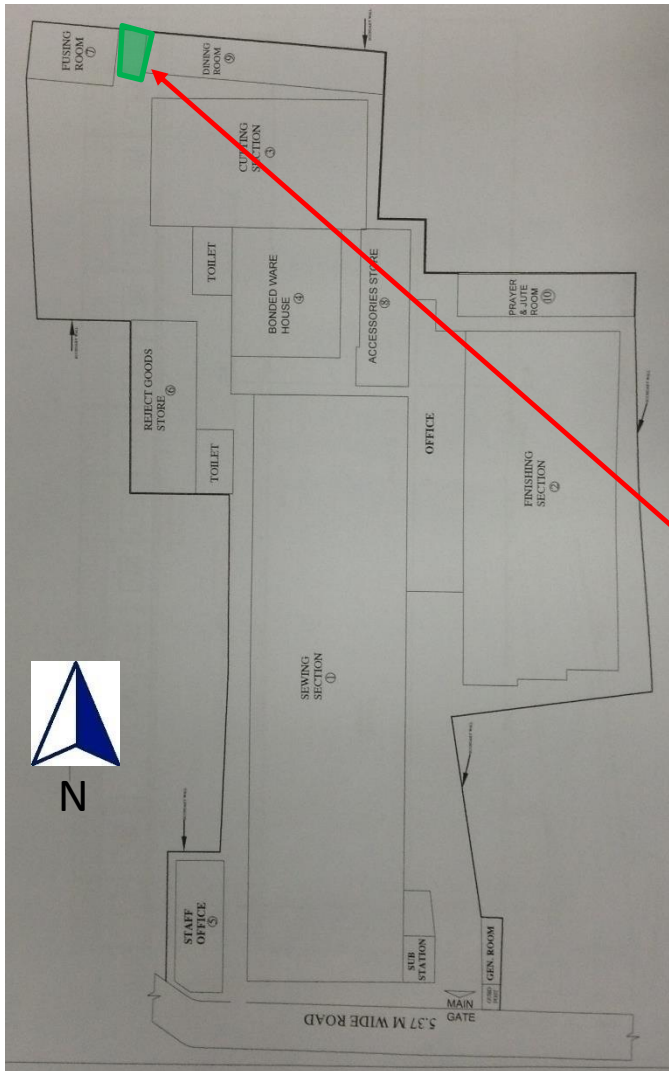
Apparently non-engineered Water towers



Water towers in two locations appear to be non-engineered.

Observations

Apparently non-engineered lightweight roof between Shed 7 & 9



Bamboo decking between Shed 7 and Shed 9 appears to be non-engineered

Observations

Priority Actions

Problems Observed

1. Cracking in column, wall and roof connection - (Shed 6)
2. Corroded steel roof structure - (Shed 6)
3. Apparently non-engineered roof structures (all sheds)
4. Possible lack of lateral bracing for the steel roofs of the sheds
5. Discrepancies between permit/structural/architectural drawings and as-built structure
6. Apparently non-engineered Water towers
7. Apparently non-engineered lightweight roof between Shed 7 & 9

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Cracking in column, wall and roof connection - (Shed 6)	Building Engineer to investigate the possible reasons of the crack, top of column and the roof connections.	6-weeks
2	Cracking in column, wall and roof connection - (Shed 6)	Carry out any remedial structural works arising from the investigation.	6-months
3	Corroded steel roof structure - (Shed 6)	Building Engineer to investigate the degree of corrosion and the capacity of the corroded structure.	6-weeks
4	Corroded steel roof structure - (Shed 6)	Connections of the roof structure to the vertical load bearing elements to be verified for conformity.	6-weeks
5	Corroded steel roof structure - (Shed 6)	Carry out any remedial structural works arising from the investigation.	6-months
6	Apparently non-engineered roof structures (all sheds)	Building engineer to survey and investigate the roof structures of all sheds and to ensure adequacy for code vertical and horizontal loads including wind and up-lift.	6-months
7	Apparently non-engineered roof structures (all sheds)	Connections of the roof structure to the vertical load bearing elements to be verified for conformity.	6-months
8	Apparently non-engineered roof structures (all sheds)	Perform any structural alterations as advised by Factory Engineer.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
9	Possible lack of lateral bracing for the steel roofs of the shades	The Building Engineer to investigate the lateral longitudinal stability and bracing of all the buildings. Code adequacy to be ensured and eventual alterations to be defined.	6-months
10	Possible lack of lateral bracing for the steel roofs of the shades	Make any structural alterations as advised by Factory Engineer.	6-months
11	Discrepancies between permit/structural/architectural drawings and as-built structure	Building engineer to survey as constructed building. Updated drawings to be prepared showing the correct as constructed layouts, roof structures and shed 11 (Office building).	6-months
12	Apparently non-engineered Water towers	Building engineer to survey and investigate the structures of the water towers. Adequacy for code vertical and wind loads to be ensured	6-months
13	Apparently non-engineered Water towers	Perform any structural alterations as advised by Factory Engineer.	6-months
14	Apparently non-engineered lightweight roof between Shed 7 and Shed 9	Lightweight bamboo roof is to be reconstructed/upgraded to ensure adequacy for code vertical and wind loads by the Building Engineer.	6-months
15	Apparently non-engineered lightweight roof between Shed 7 and Shed 9	Perform any structural alterations as advised by Factory Engineer.	6-months