

# RGR Sweater Ltd

VIII Madhakhala, post- Boiragirekala, Shreepur, Gazipur, Dhaka

(24.186236N, 90.428578E)

7th June 2014



# Building Observations

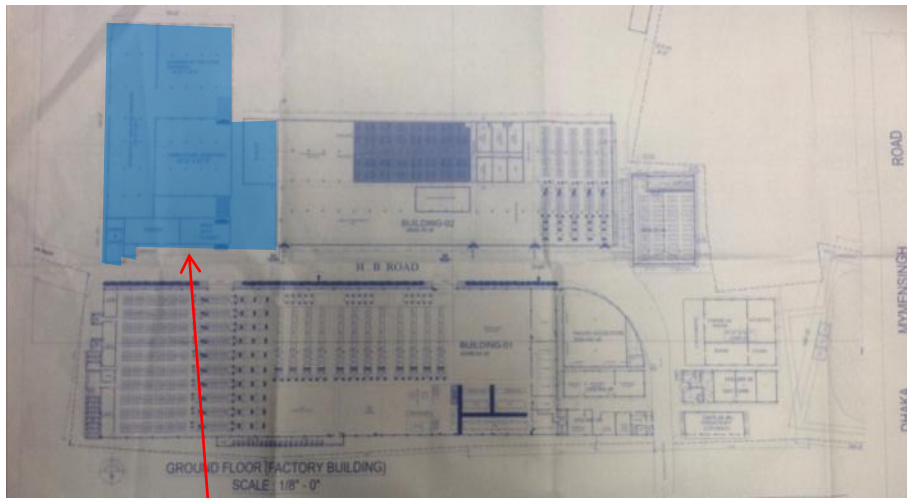
# Discrepancies between designed and as-built structures



As-built structure



Part of the building not incorporated into the design (winding section)

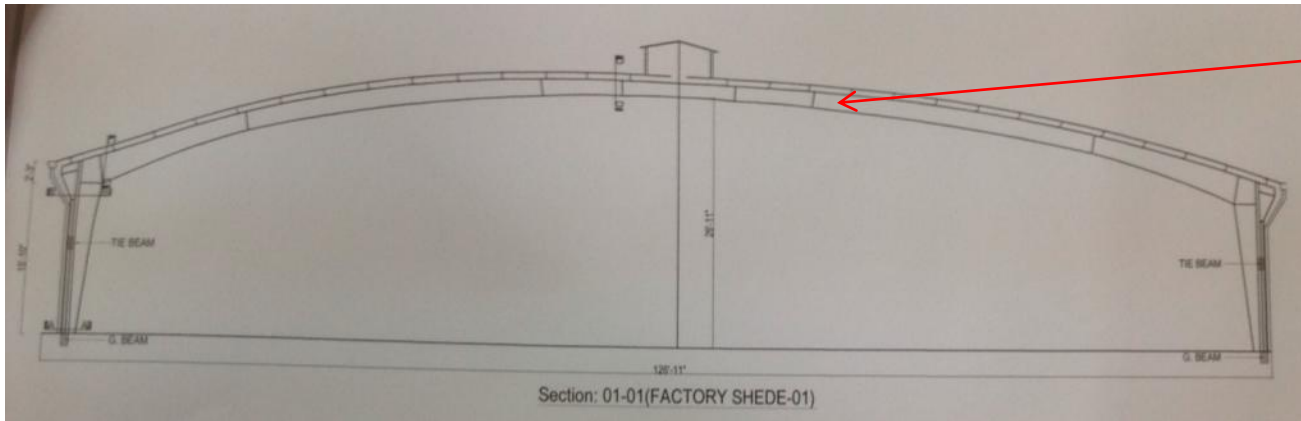


As-designed structure

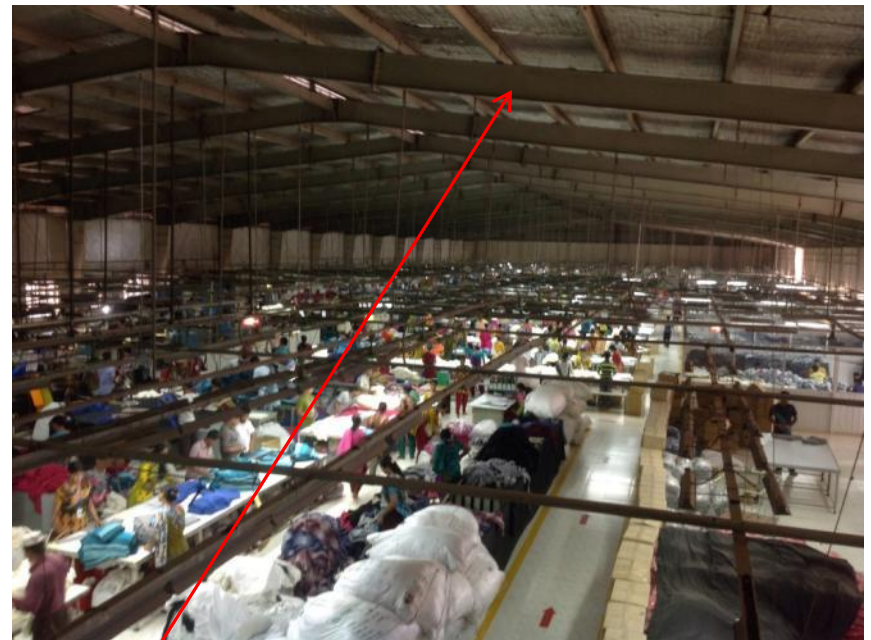


# Building 1

**Structure not in accordance with design**



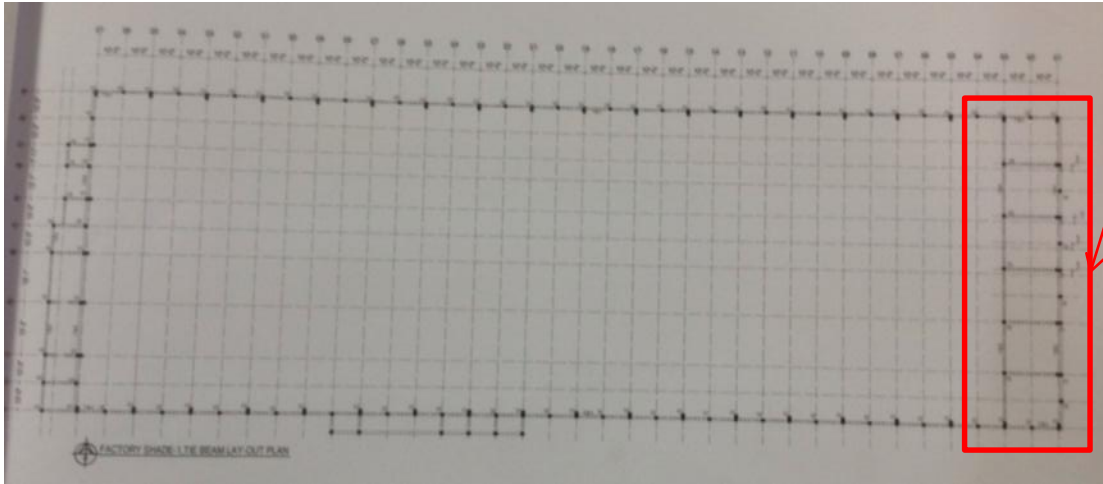
Curved rafter structure as designed



Straight rafter structure as built



## Building 1/ Mezzanine



RC Beam/column simple structure as designed

RC Beam supported by steel column

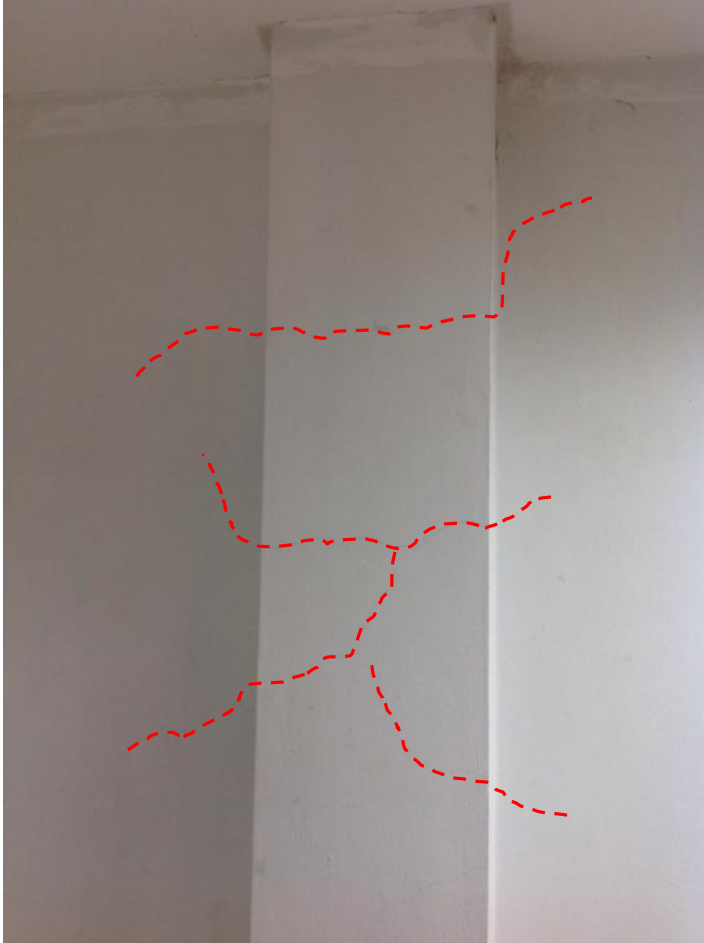


Secondary Beam supported by primary beam





# Cracks in internal brick walls



# Finished goods store

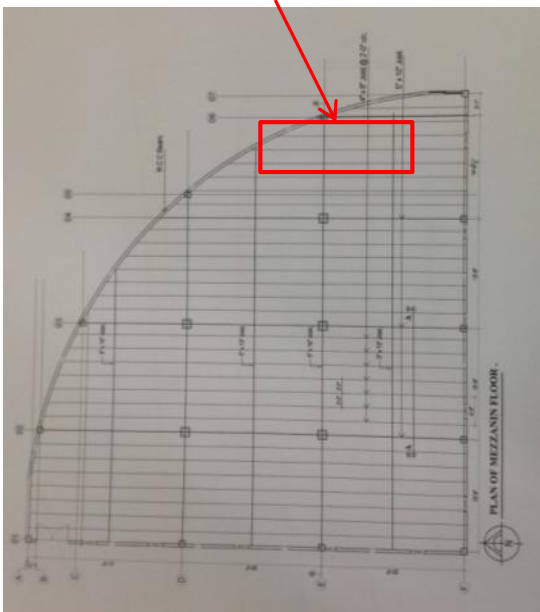
# Untrimmed stair opening



Steel beams terminated at the edge of stair opening floor 1. Works as cantilever



Additional steel stairs, location



Finished goods store plan



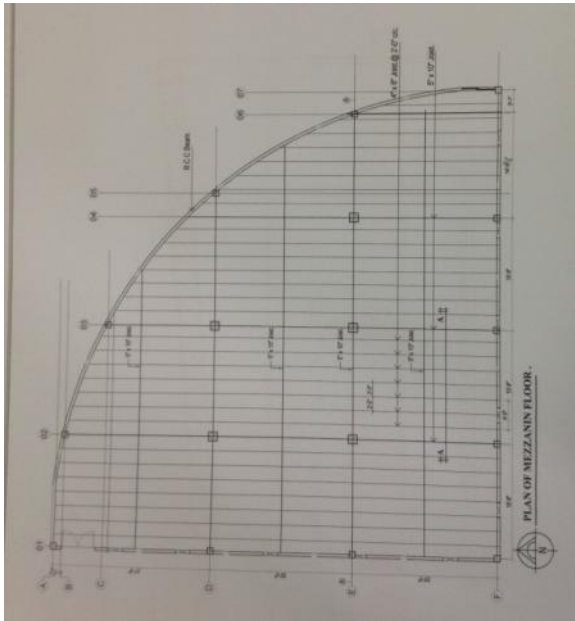
Additional steel stairs

# Localised areas of high loading





Localised areas of heavily loaded storage over whole floor. Steel sheeting supported by steel beams system structure as a floor.



Finished goods store. 1<sup>st</sup> floor

# **Unclear support mechanism to brickwork spanning over large opening**



Boiler room crack along  
lintel



Boiler room  
View from other side

# Non-engineered steel roof structures





Yarn storage roof structure, some trusses supported off racking system



Boiler room roof structure



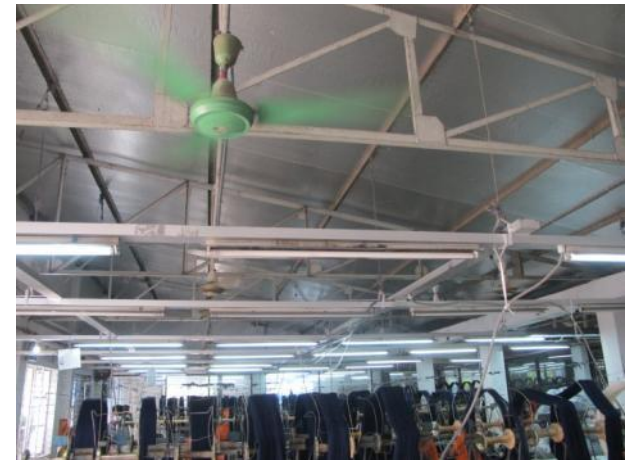
Building 2 - adjacent steel structure



Chemical/waste storage roof structure; bamboo prop where truss missing



Generator room roof structure



Winding section roof structure

# Problems Observed

1. Unconventional support structure for the RC mezzanine beams
2. Untrimmed stair opening in Finished Goods Store
3. Unclear support to brickwork spanning over large opening
4. Discrepancies between designed and as-built structures
5. Non-engineered steel roof structures
6. Localised areas of high loading
7. Cracks in internal brick walls

# Priority Actions

| Item No. | Observation                                                 | Recommended Action Plan                                                                                                              | Recommended Timeline |
|----------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1        | Unconventional support structure for the RC mezzanine beams | Building engineer to check the as-built structure with reference to proper stability and sufficient strength of structural elements. | 6-months             |
| 2        | Unconventional support structure for the RC mezzanine beams | Incorporate as-built structure into documentation and drawings.                                                                      | 6-months             |
| 3        | Untrimmed stair opening in Finished Goods store             | Building engineer to check if introduced changes to design are affecting existing structure.                                         | 6-months             |
| 4        | Untrimmed stair opening in Finished Goods store             | Extend terminated beams so that they will be supported from both sides.                                                              | 6-months             |
| 5        | Unclear support to brickwork spanning over large opening    | Building engineer to check support details, and prop if there is no adequate support                                                 | 6-weeks              |
| 6        | Discrepancies between designed and as-built structures      | Building engineer to incorporate all additional structures to the design and to correct the as-built drawings.                       | 6-months             |
| 7        | Discrepancies between designed and as-built structures      | Prepare documentation that is missing for existing structures.                                                                       | 6-months             |



| Item No. | Observation                          | Recommended Action Plan                                                                                                                                                                                         | Recommended Timeline |
|----------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 8        | Non-engineered steel roof structures | Building engineer to check the roof structure and connections, and propose additional reinforcements and stability system to ensure the proper functioning of the structure.                                    | 6-months             |
| 9        | Localised areas of high loading      | Building engineer to ensure the structure is not loaded beyond capacity. Produce and actively manage a loading plan for all floor plates within the factory, giving consideration to floor and column capacity. | 6-months             |
| 10       | Cracks in internal brick walls       | Fill in brickwork cracks and monitor for further movement                                                                                                                                                       | 6-months             |