

KAS Group Knitwear Ltd.

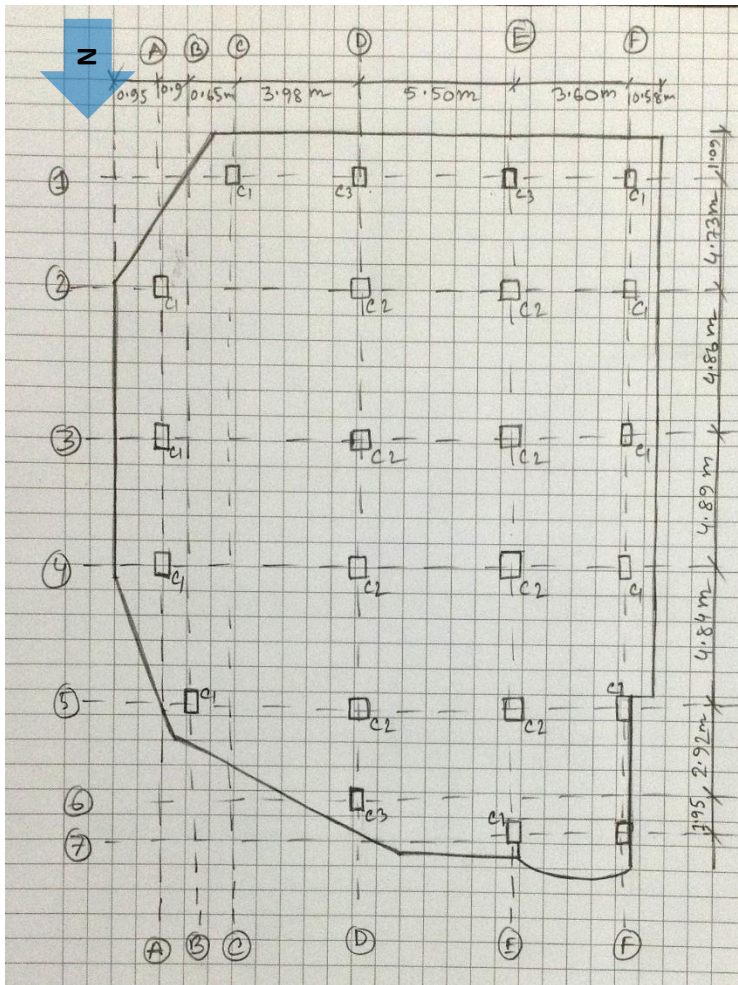
Bypass Road, Peyarabagan, Joydevpur, Gazipur
(23.977060 N, 90.376332 E)

1st November 2015

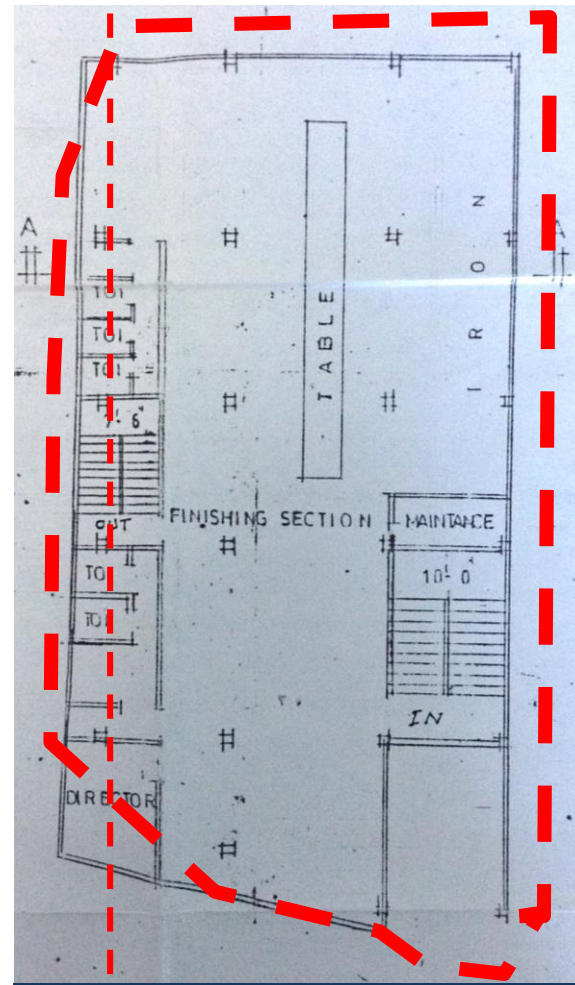


Observations

Discrepancies between Permit Drawings and as-built structure



As-built floor plan



Permit Drawing Floor Plan

Differences at:-
Column locations
Floor extents and cantilevers

Structural drawings were not
presented

Uncontrolled high storage loads on floors



Stacked cardboard and packed finished goods stored at 1st and 3rd floors.

Vibration on 1st floor was noticeable when packing process is ongoing.

Note flat slab at 2nd Floor: punching shear failure is a concern. Excessive storage must be prevented.



Building Engineer to create controlled loading plans for all floors which will designate where storage can be placed.

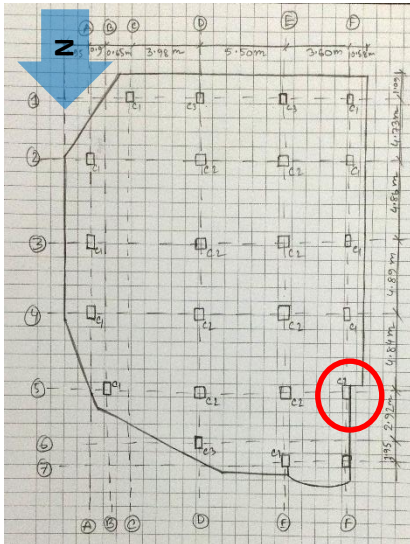
Services chased through structural members



Services chased through slab



A significant portion of column has been removed, possibly cutting rebar.



Water accumulation at roof level



Significant water accumulation observed at roof level.



Moisture was observed due to water ingress at 3rd floor under Roof slab causing deterioration of structure

No edge protection provided at roof



No edge protection provided at roof level.

Exposed rebars of slabs/beams at South elevation



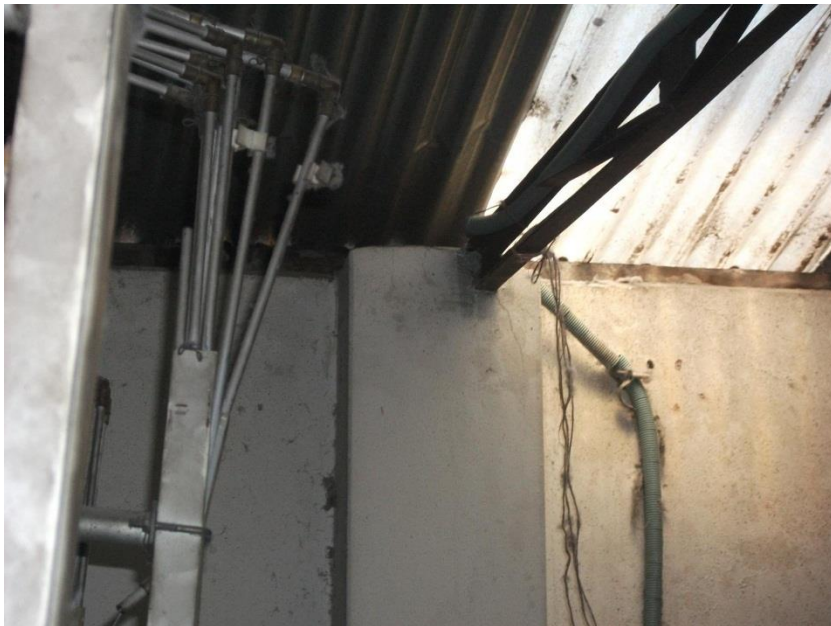
Exposed beam and slab rebars observed from cantilever portion at South elevation. Indication of possible further expansion contradicting the permit drawings. Factory Management should ensure that this should be avoided. Edge columns may become overstressed.

Non-engineered steel sheds used for Knitting Shed and Generator Shed



Non-engineered wooden framing of Generator/Storage building

Non-engineered steel truss system with lack of proper supports at columns/brick walls without any stability bracing. Unlikely to resist any strong wind action.



Priority Actions

Problems Observed

- ITEM 1: Discrepancies between Permit drawing and As-built condition**
- ITEM 2: Uncontrolled high storage loads on floors**
- ITEM 3: Services chased through structural members**
- ITEM 4: Water accumulation at roof level**
- ITEM 5: No edge protection provided at roof**
- ITEM 6: Exposed reinforcing bars for slab/beam extension at South elevation**
- ITEM 7: Non-engineered steel sheds used for Knitting Shed and Generator Shed**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Discrepancies between Permit drawing and As-built condition	Building engineer to be appointed to produce accurate and complete as-built documentation.	6-weeks
2	Discrepancies between Permit drawing and As-built condition	Building engineer to produce accurate and complete as-built documentation. A note should be put on the drawings warning that no extension of the building should be permitted without structural checks being carried out.	6-months
3	Cardboard and packed boxes stacked in dense piles	Building Engineer to create controlled loading plans for all floors designating location and intensity of storage.	6-weeks
4	Cardboard and packed boxes stacked in dense piles	Continue to implement load plan.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
5	Damage on columns due to service pipes.	Engineer to inspect penetration through altered column and check column capacity. Relocate services and repair column with high-strength mortar.	6-weeks
6	Water accumulation at roof level	Building Engineer to inspect areas with water damage, propose measures to prevent further damage and carry out repair works.	6-months
7	No edge protection provided at roof	Provide proper edge protection to prevent risk of falling.	6-weeks
8	Exposed reinforcing bars for slab/beam extension at South elevation	Exposed rebars to be cut back to prevent further expansion.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
9	Non-engineered shed structures - Generator Building and Knitting Building.	Inspect the adequacy of current construction and stability of metal roofing.	6-weeks
10	Non-engineered shed structures - Generator Building and Knitting Building.	Shed structures should be designed and upgraded to support code wind and live loads as determined by the Building Engineer, or they should be vacated and removed.	6-months