

Y.K Knitwear Ltd. #10331

Plot S-7 & S-8, Estate Kanabari, Gazipur Sadar

(+24.00710N, 90.32436E)

05.May.2014



Identified Priority 1 Concerns

No adequate loading plan is in place – loading to be reduced



1st Priority 1 - Concern

The current loading plan evaluates the total load on the total floor area. A proper loading plan is required for every floor which splits the loading into tributary areas associated columns.

Reduce loading to 3 kPa until capacity assessment is made.

Furthermore, heavy loading was found on the cantilever section at the joint on the storage floor. Managing Director and Factory Engineer were advised to reduce loading on cantilevered section

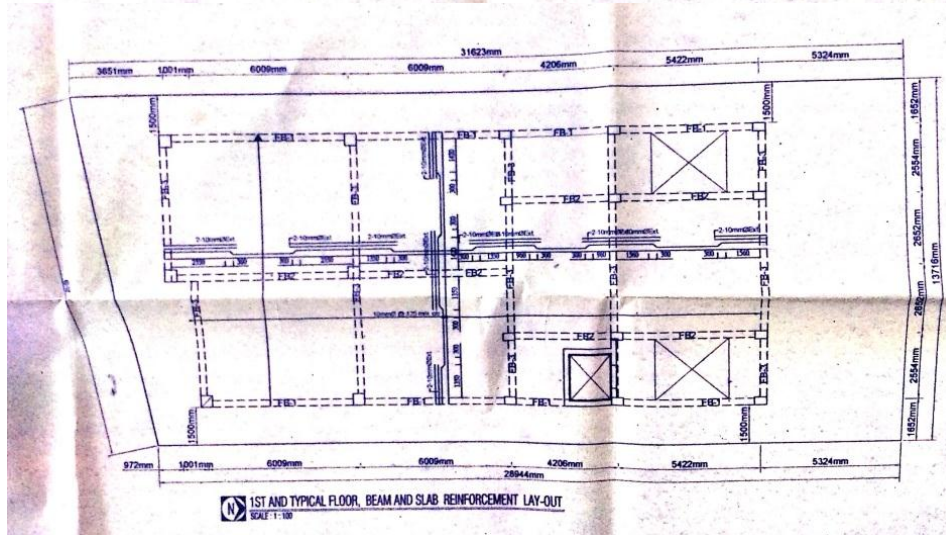
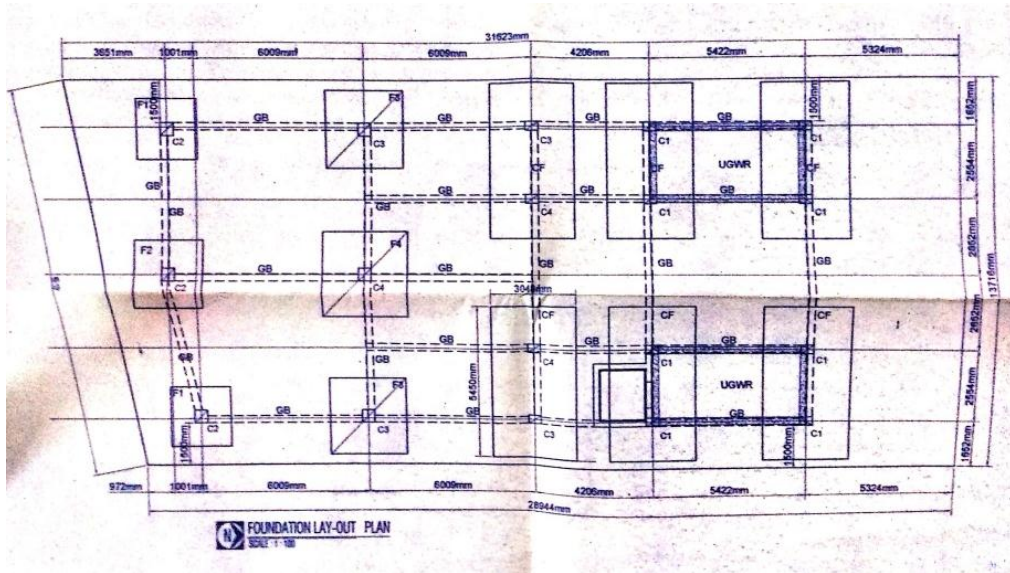
Identified Priority 2 Concerns

Engineering documents do not match actual site conditions

Cantilevered grade beam supporting a column

1st Priority 2 - Concern

For the 7 storey building, we found some differences between the structural drawings and the actual site conditions. For example, we were confirmed by the Factory Engineer, that the column layout was modified just before construction

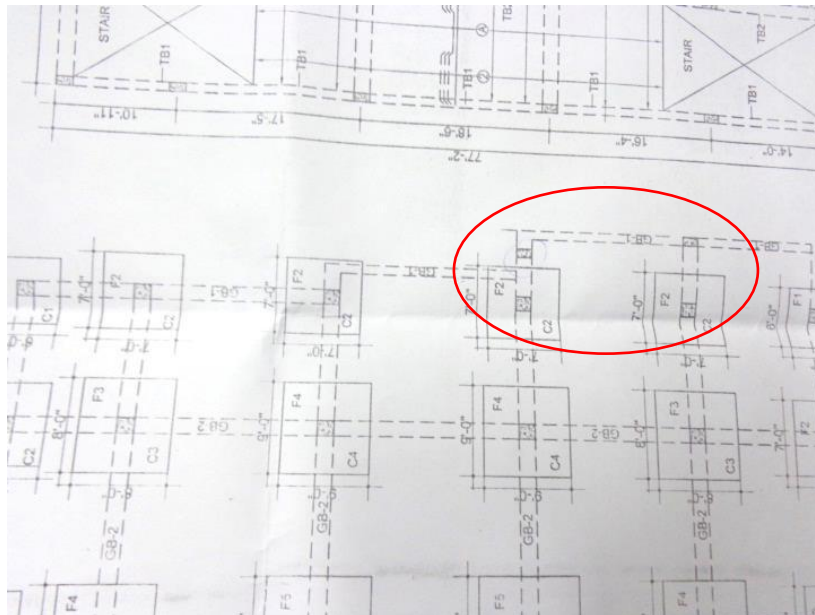




2nd Priority 2 - Concern

In the 6 storey section, there is small section at the back where there is a small column that runs down to a cantilevered grade beam. The column is not in the schedule and the rebar for the grade beam seems low as it shows only 5 top bars.

This area needs to be verified in a Detailed Engineering Assessment



Partial plan view - column layout

Overall Stability System



During our visit, we found the 7 storey building had only 2 bays wide, for a total width of roughly 10m. We believe this building section to have minimal overturning resistance and lateral stability.

Like the 6 storey section, sway stability of building could probably be expected from rigid frame system (beam and column participation) although no ductile detailing is provided in structural plans. Masonry infill is unrestrained and cannot be considered.

We require the lateral stability of these buildings be investigated in a Detail Engineering Assessment immediately

Water Ingress at Roof Level



No waterproofing membrane was visible on these roofs. This means that any cracks in the surface finishes on the roof will allow water to seep into the concrete slab and cause long-term soaking of the slab.



Priority Actions

Problems Observed Summary

ITEM 1: Priority 1 – No adequate loading plan is in effect.

ITEM 2: Priority 2 – Engineering document do not match actual site conditions for 7 storey building.

ITEM 3: Priority 2 – Cantilevered grade beam supporting a column

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	No adequate loading plan is in effect.	Lower storage loads to 3 kPa on the upper floors Factory engineer to confirm allowable design floor loadings. Verify in situ concrete stresses with 100mm concrete cores	immediate – now
2	No adequate loading plan is in effect.	Factory engineer to produce and actively manage a loading plan for all floor plates within the factory giving consideration to slab beam, column and foundation capacity	6-weeks
3	No adequate loading plan is in effect.	Maintain Loading Plan.	6-months
4	Engineering document do not match actual site conditions for 7 storey building.	Produce a Detailed Engineering Assessment including verification of the whole part of the 7 storey section in regard the structure on the site. Produce As build drawings of the 7 storey section.	6-weeks
5	Engineering document do not match actual site conditions for 7 storey building.	Complete implementation of any works deemed necessary by Detailed Engineering Assessment.	6-months
6	Cantilevered grade beam supporting a column	Include in the Detailed Engineering Assessment the verification of column not in the schedule as well as the cantilevered grade beam in the 6 storey building section	6-weeks
7	Cantilevered grade beam supporting a column	Complete implementation of any works deemed necessary by factory engineer verification.	6-months