

Confidence Knitwear Ltd.

South Dhanua, Nayanpur, Maona, Sreepur, Gazipur.
(24.255162, 90.389317)

29 April 2014



Observations

Ongoing deep excavation in close proximity to Building 1



Deep excavation for new building in very close proximity to Building 1. No retaining wall apparent.



Emergency exit from Building 1 leads directly into deep excavation and has not been blocked off. Risk of injury.

Ongoing excavation adjacent to rear of Building 1 and Building 3

Insufficient stability system for Building 1, Building 2 and Building 3



Steel cable bracing in Building 1 was observed to be very loose. Cables can be pulled out of plane by 75mm



Cross bracing in Building 1 does not always continue to supports. Catenary shape visible in slack cables.

Insufficient stability system for Building 1, Building 2 and Building 3



Braced bay observed in roof of Building 2. Vertical bracing removed from this bay.



Steel cables removed or disconnected at a number of locations in Building 2.



No engineered roof bracing provided in Building 3.



No vertical bracing provided in Building 3. Lateral stability in long direction unclear.

Concentrated areas of high loading



**Approx.
3.5m**

High storage loads on first floor of Building 2. Up to 3.5m high fabric storage observed.



Uncontrolled storage on mezzanine floor in Building 1. Non-engineered lightweight steel structure for mezzanine supported on masonry walls.

Concentrated areas of high loading

Non-engineered building extensions

Structure appears non-engineered.
Slabs RC, piers and walls masonry, beams sometimes present in steel, sometimes omitted.
Columns at first floor typically did not align with columns at ground floor.



No structural engineering drawings or details are available for extension to front of Building 1.



Evidence of movement of cantilever
in Building 1 extension.



Load bearing unreinforced masonry piers
observed at ground floor level. No evidence
of reinforced concrete piers in Building 1
extension.



Building 3 – rear stair and toilet extension



No apparent stability system in rear extension to Building 2 in one direction.



No apparent stability system in front extension to Building 3

No fire protection to first floor in Building 2



No visible fire protection to steelwork supporting first floor in Building 2.



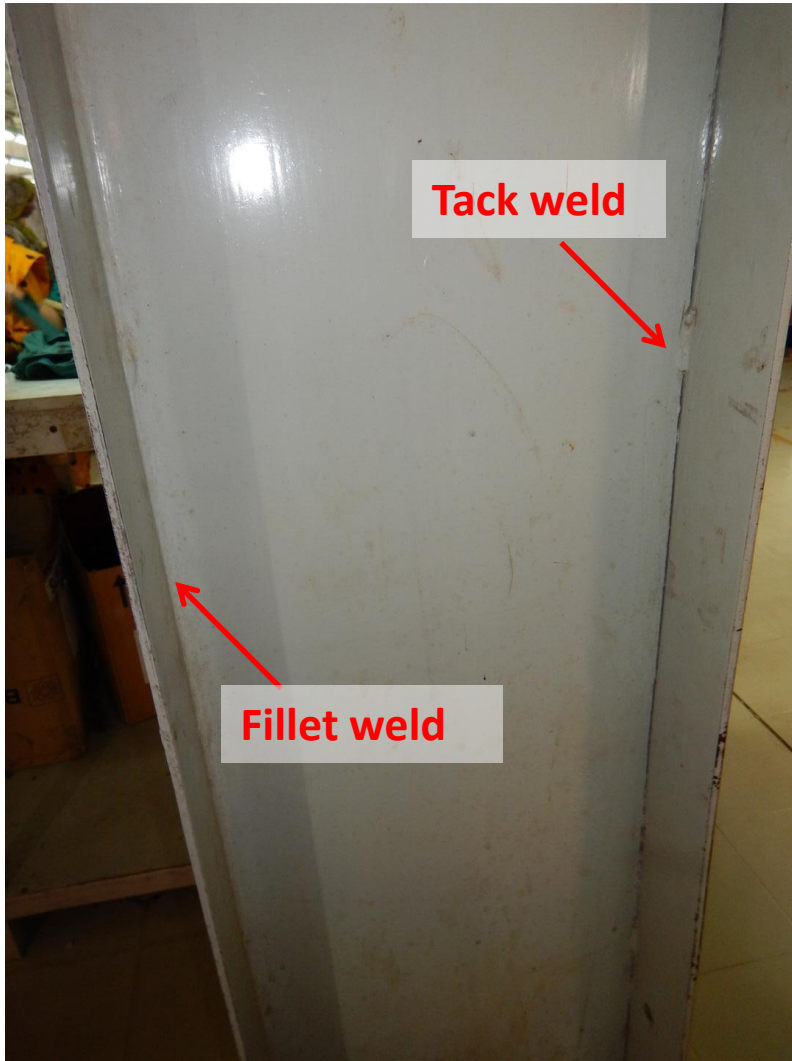
First floor in Building 2 houses cutting, printing tables and storage.

No edge protection to roofs



Unprotected edge at top of stairs and around roof perimeter, leading to risk of falls (note roof is used for drying clothes).

Steel construction



Building 1 columns comprise of built up sections fillet welded on one side and tack welded on the other.

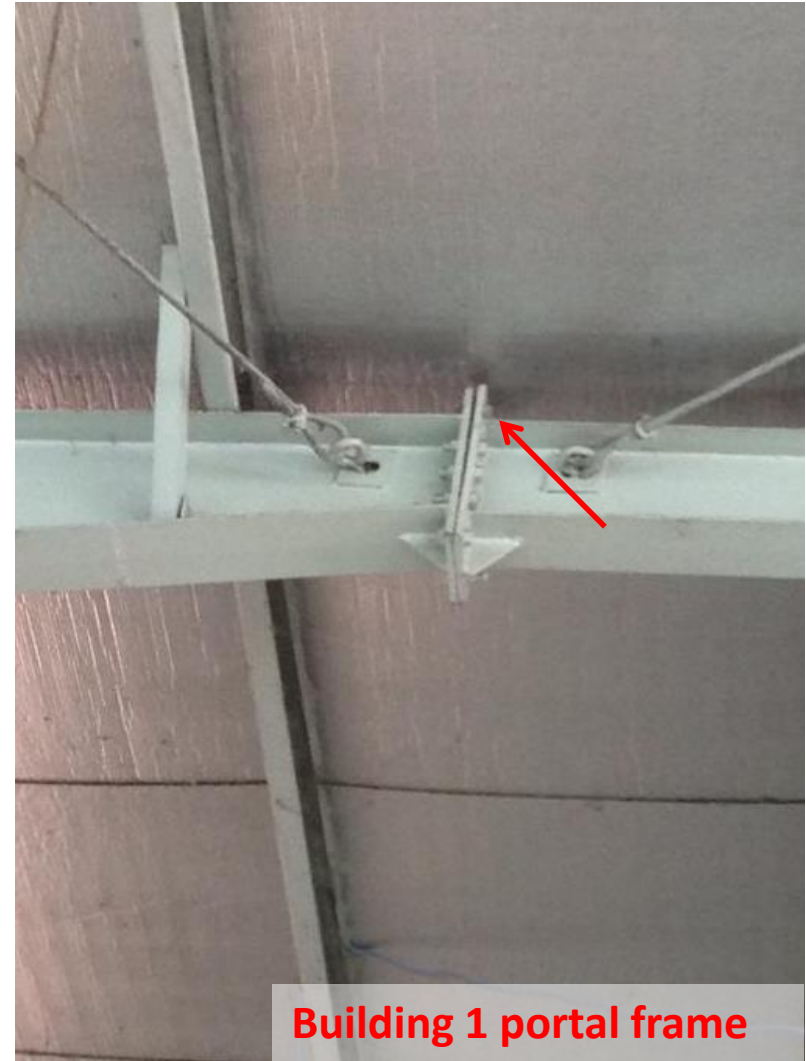


Building 2 columns fully fillet welded, beams fillet welded on one side and tack welded on the other.



Building 1 portal frame

Bolted connections at eaves of portal frame in Building 1 appear to be opening up.



Building 1 portal frame

Bolted end plate connections within rafter span in Building 1 appear to be opening up.

Problems Observed

1. Ongoing excavation in close proximity to Building 1
2. Insufficient stability system for Building 1, Building 2 and Building 3
3. Concentrated areas of high loading
4. Non-engineered building extensions
5. Fire protection to first floor in Building 2
6. No edge protection to roofs
7. Steel Construction

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Ongoing excavation in close proximity to Building 1	Exit signage indicating safe exit to rear of Building 1 (at location of ongoing construction) to be removed, and escape door to be closed	Immediate - Now
2	Ongoing excavation in close proximity to Building 1	A qualified Fire Engineer to verify that existing fire routes are adequate or to advise on alternative routes.	Immediate - Now
3	Ongoing excavation in close proximity to Building 1	Building Engineer to verify that the ongoing excavation adjacent to the rear (west) of Building 1 and Building 3 is not undermining existing building foundations.	6-weeks
4	Ongoing excavation in close proximity to Building 1	Building Engineer to verify that the new building (under construction) is capable of withstanding the surcharge loading from Building 1 and Building 3.	6-weeks
5	Unclear stability system for Building 1, Building 2 and Building 3	Reinstate disconnected cables in braced bays in Building 2.	6-weeks
6	Unclear stability system for Building 1, Building 2 and Building 3	Existing cables in braced bays in Building 1 and Building 2 to be tightened.	6-weeks
7	Unclear stability system for Building 1, Building 2 and Building 3	Building Engineer to review the lateral stability systems for Building 1, Building 2 and Building 3 and to design upgrading works, as required.	6-months
8	Unclear stability system for Building 1, Building 2 and Building 3	Upgrading works to stability systems in Building 1, Building 2 and Building 3 to be implemented as required, to Building Engineer's details.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
9	Concentrated areas of high loading	Building Engineer to develop loads plans for all buildings, accounting for usage, floor build ups, solid partition walls and areas of concentrated loading. Factory management to implement load plans.	6-weeks
10	Concentrated areas of high loading	Continue to implement loads plans.	6-months
11	Non-engineered building extensions	Building Engineer to undertake a design review of Building 1 extension, paying particular attention to building stability system and capacity of masonry columns	6-months
12	Non-engineered building extensions	Building Engineer to undertake a design review of Building 2 and 3 extensions, paying particular attention to building stability system.	6-months
13	Non-engineered building extensions	Structural drawings to be updated to include all extensions throughout the complex.	6-months
14	Fire protection to first floor in Building 2	Building Engineer / Fire Engineer to advise on requirements for providing fire protection to steel elements to meet code requirements.	6-months
15	Edge protection to roofs	All roofs directly accessible by stairs to be provided with handrails or parapets around all edges.	6-months
16	Steel Construction	Steelwork connections throughout all buildings to be reviewed by engineer and recommendations made for adjustment.	6-months