

Safia Apparels Ltd

Plot-b-46/47 & 64/65, BSCIC Industrial Estate, Panchobati, Fatullah, Narayanganj
(23.62576, 90.47897)

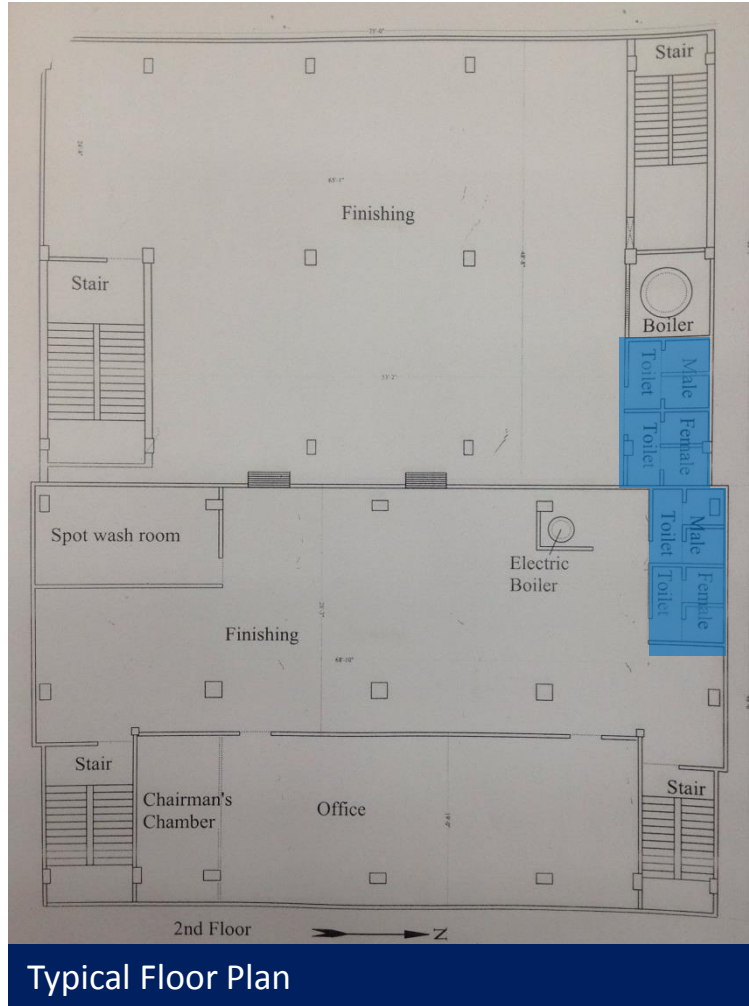
12th April 2014



Observations

**Heavy floor loading: Toilet areas of both buildings
(slab build-up) and cantilever slab to Building 1
(high storage)**

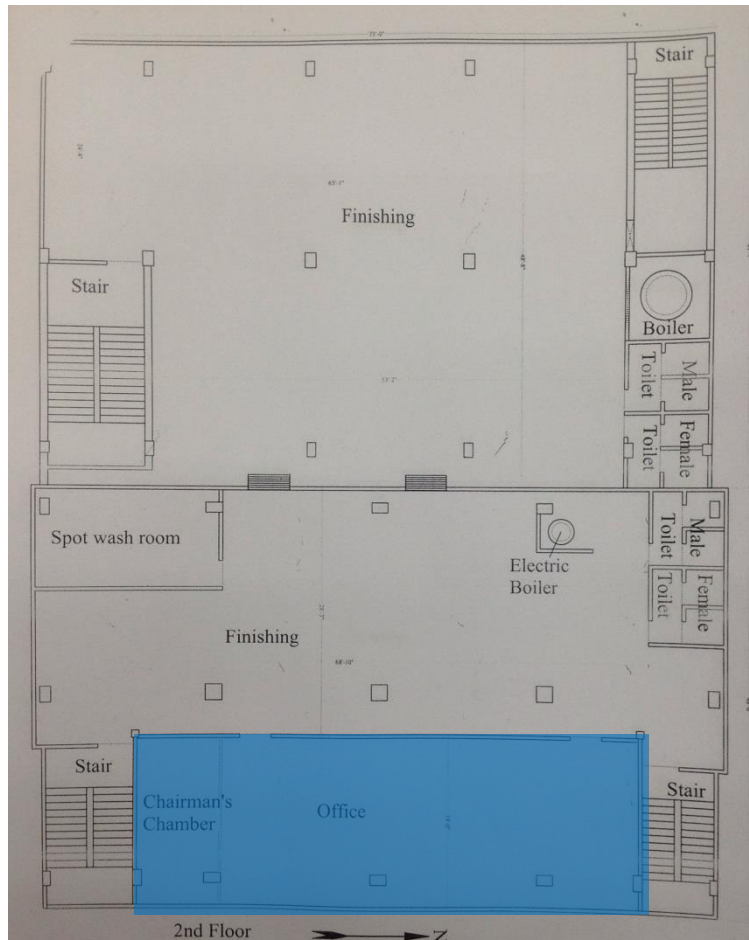
Heavy loading was noted in the toilets along the North elevation of Buildings 1 & 2, in the form of plinths and walls. Building Engineer to check that the slabs and beams have been adequately designed to accommodate this loading.



300mm Plinth to Toilets

Extent of Toilets to all Floors

Heavy loading, in the form of temporary storage of fabric, was noted along the North elevation of Buildings 1, particularly to 4th and 5th Floor levels. Building Engineer to check that the slabs and beams have been adequately designed to accommodate these loadings, particularly at the cantilever location where there are no downstand beams.



Typical Floor Plan



Fabric Storage – Up to 2.5m High

Extent of Storage Loading to 4th and 5th Floors

Lack of any guarding / edge protection at Roof Level

There is no edge protection to either building Roof, where construction works are ongoing. Building Engineer to install adequate fall barrier with immediate effect.



Height of Parapet to Roof



Lower Roof Parapet

6-Storey Building Roof

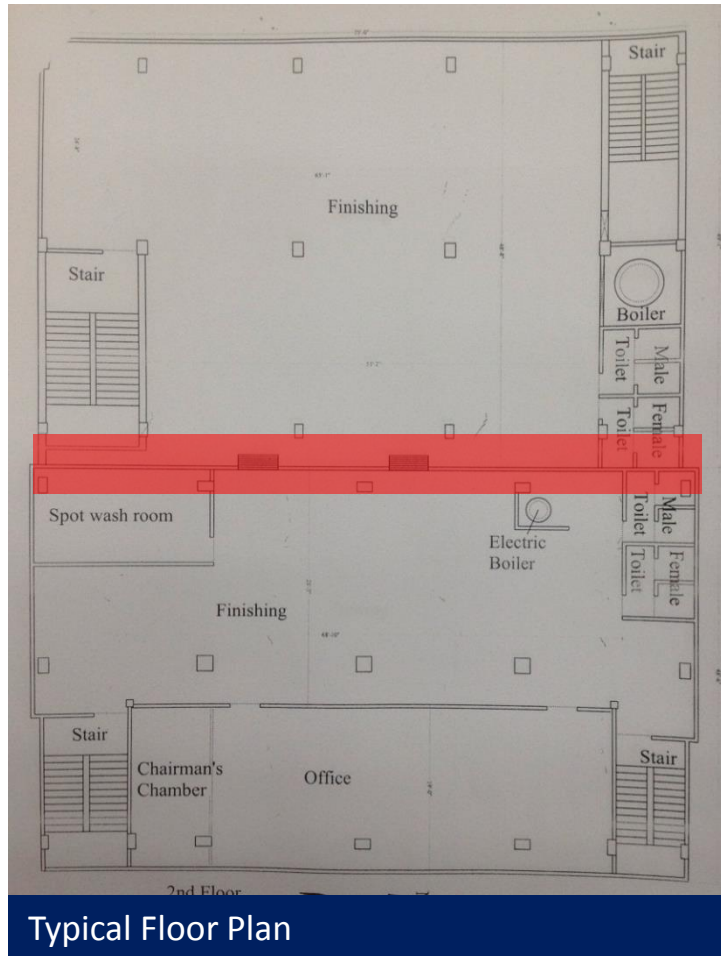
4-Storey Building Roof

Edge Protection to be Provided

Edge Protection

Bridging Detail at Building Interface

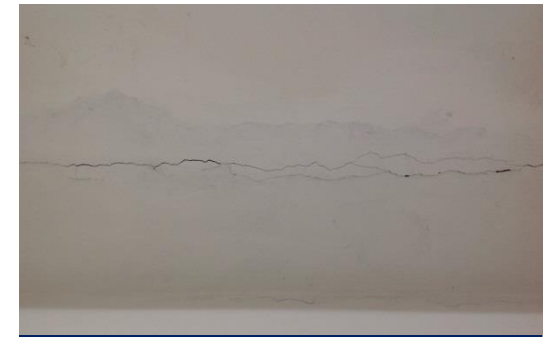
The connection detail between Buildings 1 & 2 bridging the expansion joint does not appear to be robust. The detail appears to consist simply of a slab that spans onto each building, but is not connected to either. Cracking was observed at the interface of both buildings. Building Engineer to clarify design and robustness of connection detail between Buildings 1 and 2, and to carryout any remedial works as required.



Location of connection detail bridging both buildings



Cracking at slab interface



Cracking in wall



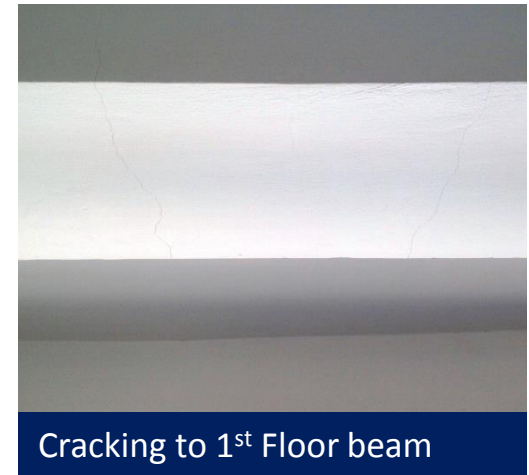
Connection between buildings



Cracking in staircore

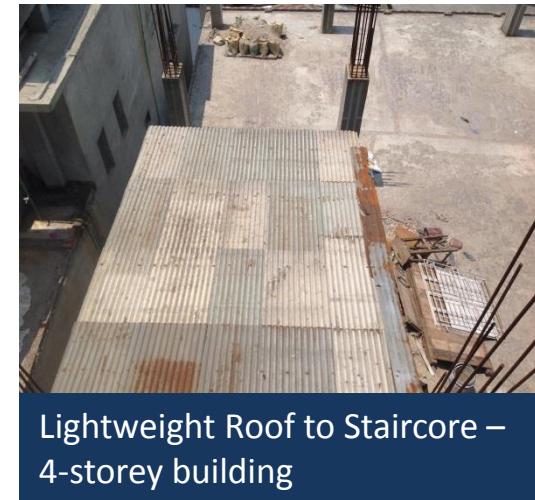
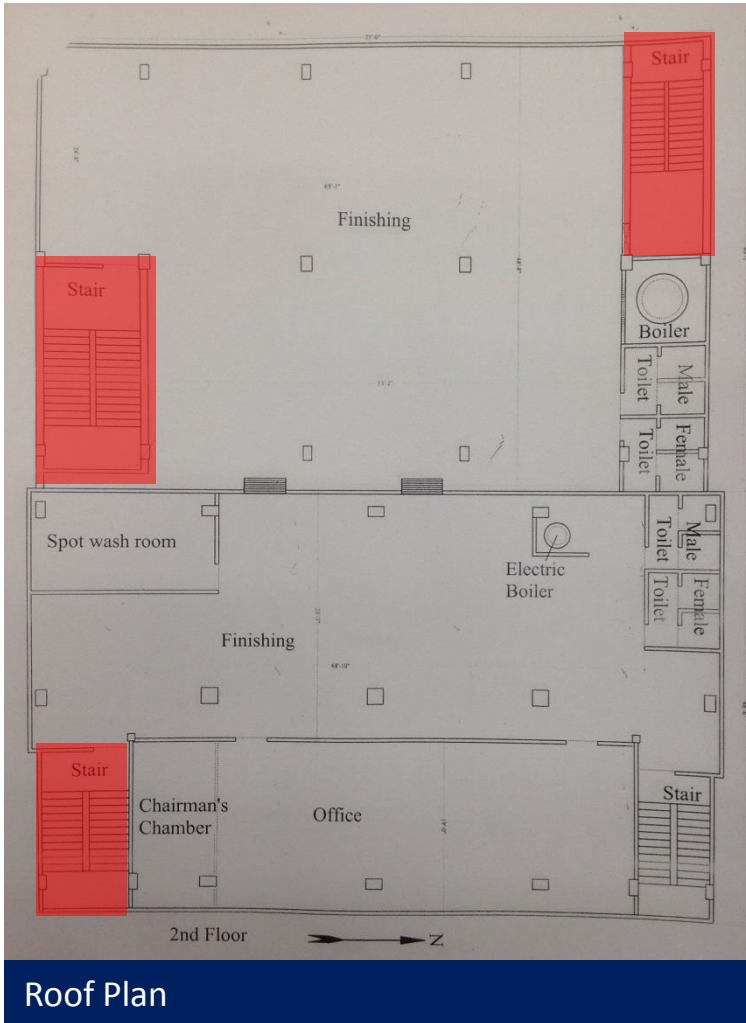
Hairline cracking on beams and some slab soffit areas

Hairline cracking was observed to the soffit of a number of beams and slabs at 1st, 2nd, 3rd and 4th Floor levels. Building Engineer to investigate and carry out remedial works to the structure as required.



Apparently non engineered roof structure to stair enclosures above main roofs

Building Engineer to review the design of the lightweight roof structures the staircores to both buildings, which do not appear to be engineered. Building Engineer to implement any upgrade works, including removing / securing loose metal sheeting, as required.



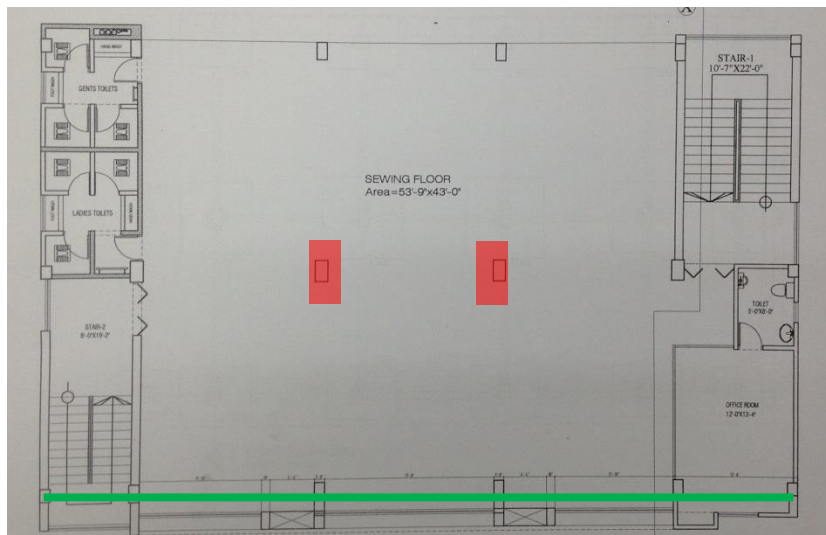
Lightweight Steel Roofs

Differences between actual construction and information on design drawings

For Building 2, currently under construction, a set of As-built Structural Drawings (dated 2013), by ADEPT Consultants Ltd, was made available for review on the day of the survey. There are a number of inconsistencies between these drawings and the constructed building. A non-exhaustive list of issues include:

- Incorrect column sizes, particularly at Ground Floor level where the uniformity in internal column size indicated in the drawings is not apparent;
- Incorrect column reinforcement – the number of bars observed at Ground Floor level using the Ferroscanner was not in accordance with the drawings;
- The building line to the North elevation, adjacent to the South Elevation of Building 1, does not appear to be correct.

Building Engineer to review and provide clarification.



Building 2 – Typical Floor Plan



Over-sized Columns



Apparent Building Line

Priority Actions

Problems Observed

ITEM 1: Heavy floor loading in toilet areas (slab build-up) and at cantilever slab of Building 1 (high storage).

ITEM 2: Lack of any guarding / edge protection at Roof Level.

ITEM 3: Bridging Detail at Building Interface

ITEM 4: Hairline cracking on beams and some slab soffit areas.

ITEM 5: Apparently non engineered roof structure to stair enclosures above main roofs

ITEM 6: Differences between actual construction and information on design drawings.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Heavy floor loading in toilet areas (slab build-up) and at cantilever slab of Building 1 (high storage)	Engage a Building Engineer to investigate the floor loading, and advise on any necessary alterations taking account of floor capacity and column capacity	6-weeks
2	Heavy floor loading in toilet areas (slab build-up) and at cantilever slab of Building 1 (high storage)	Make any structural alterations as advised by Building Engineer	6-months
3	Lack of any guarding/edge protection at Roof Level of both buildings	Provide adequate edge protection at Roof Level	6-weeks
4	Bridging detail at buildings interface: Slab design and connection detail of slab to each building unknown	Engage a Building Engineer to check the slab design and also check the connection of the slab to each building for robustness, ties, etc	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
5	Hairline cracking in beams and slab soffits	Monitor cracks on beams. Engage a Building Engineer to investigate if cracks are only in the plastering	6-months
6	Hairline cracking in beams and slab soffits	Engage a Building Engineer to advise on load reduction and repair and strengthening of the beams if required	6-months
7	Apparently non engineered roof structure to stair enclosures above main roofs	Engage a Building Engineer to check the capacity of the lightweight roof and make any necessary alterations	6-months
8	Differences between actual construction and information on design drawings	Engage a Building Engineer to survey the structure and prepare a full set of accurate “as-constructed” drawings.	6-weeks