

Radiance Fashion Ltd. Radiance Jeans Ltd. Pearls and Pouce Ltd.

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(23.890479, 90.324316)

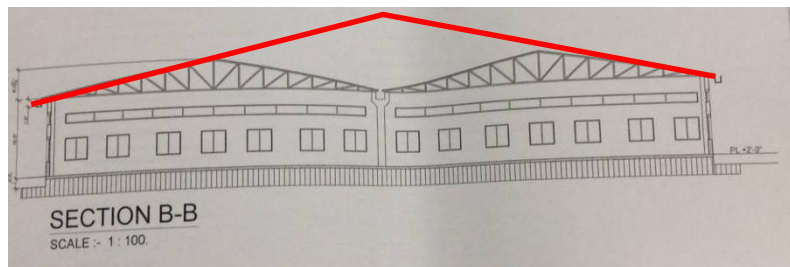
15th March 2014



Observations

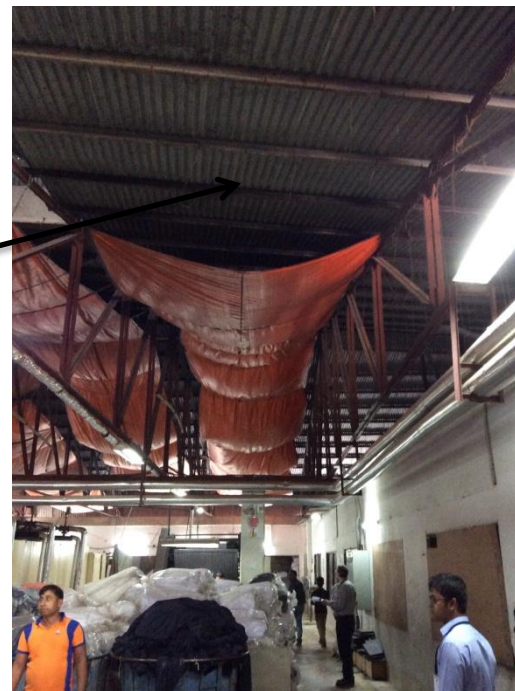
Building 1

Drawings do not match as-built: steel roof



Lack of in-plane roof bracing

Different shape of roof to that shown on drawings



The drawings do not match the as built structure most notably for the roof structure. The roof structure as built has twice the height of the roof shown in the drawings. We were unable to see an obvious bracing system or adequate tying down details.

Lack of adequate tying down detail



Building 1: Drawings do not match as-built

Building 1

Non-engineered structure: other structures

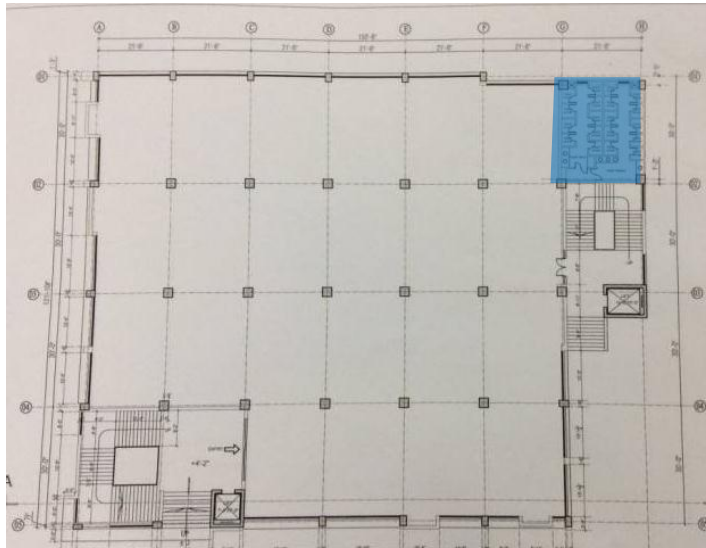


Various structures appear non-engineered and possibly unstable including tall unrestrained masonry walls, slender makeshift columns near to trafficked areas etc

Building 1: Various non-engineered structures

Building 2

High loading from storage and toilets on half landing structure



Heavy toilet build-up or storage in this half-landing location on most floors

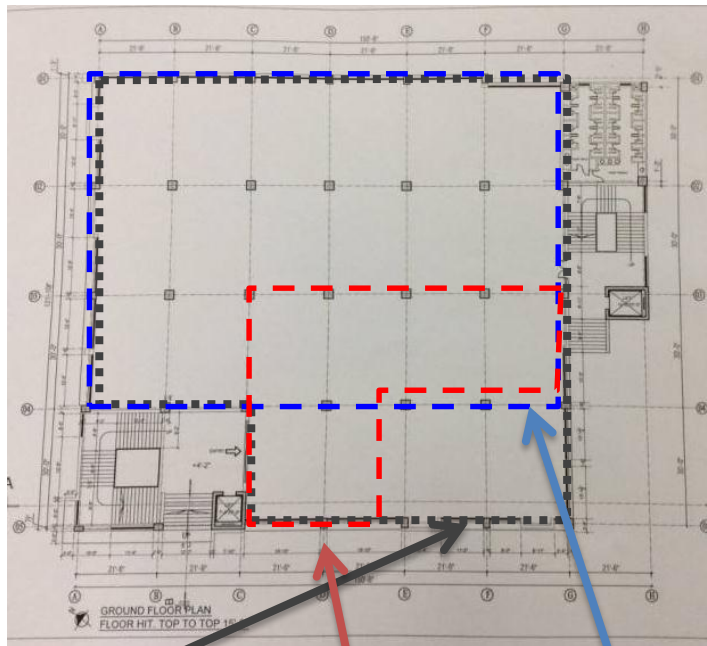


Building 2: Floor loading – half-landing areas

Building 2

High storage loading

High live loads arising from apparently uncontrolled storage loads. Selected examples shown below. Loading plans (i.e. plan and height restrictions) to be introduced to prevent future overloading – to be developed by building engineer



L1
storage

L3
storage

L4
storage

Storage areas occur throughout the floor plate on L1 and L4 and in localised areas on L3

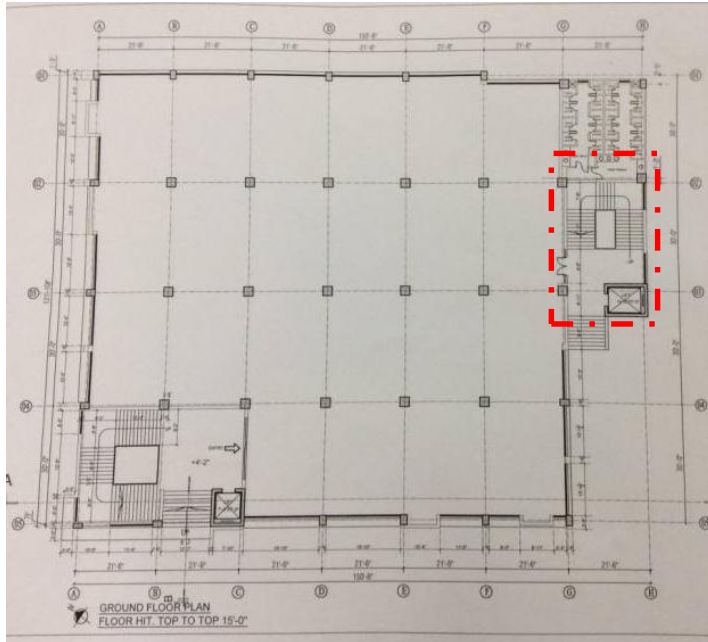


Building 2: Floor loading – storage areas

Building 2

Thick non-structural build-up on stairs

High dead loads arising from thick non-structural build-up on stairs.
Level of non-structural dead loading and actual structural depth of stair waists to be checked by building engineer



Building 2

Unrestrained masonry walls



Internal masonry walls lacking top restraint



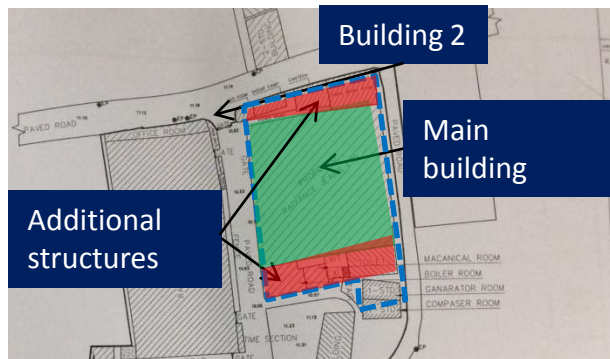
External masonry walls lacking top restraint



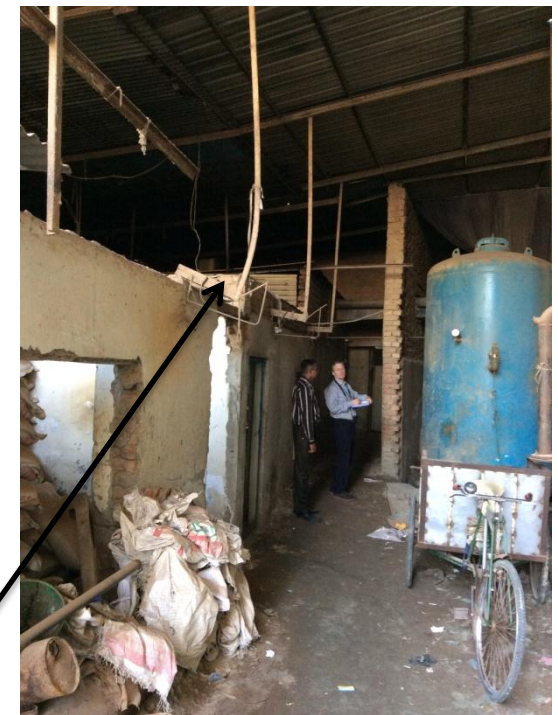
Building 2: Unrestrained masonry walls

Building 2

Non-engineered structures



Non-engineered additional structures



Various structures appear un-engineered and possibly unstable including slender makeshift columns, a non-engineered roof structure on the top level of the main building and some possibly temporary bamboo structures

Non-engineered roof structure (roof level of main building), apparently lacking bracing, tying down details and other standard engineering details



Building 2: Various un-engineered structures

Building 2

Column damage

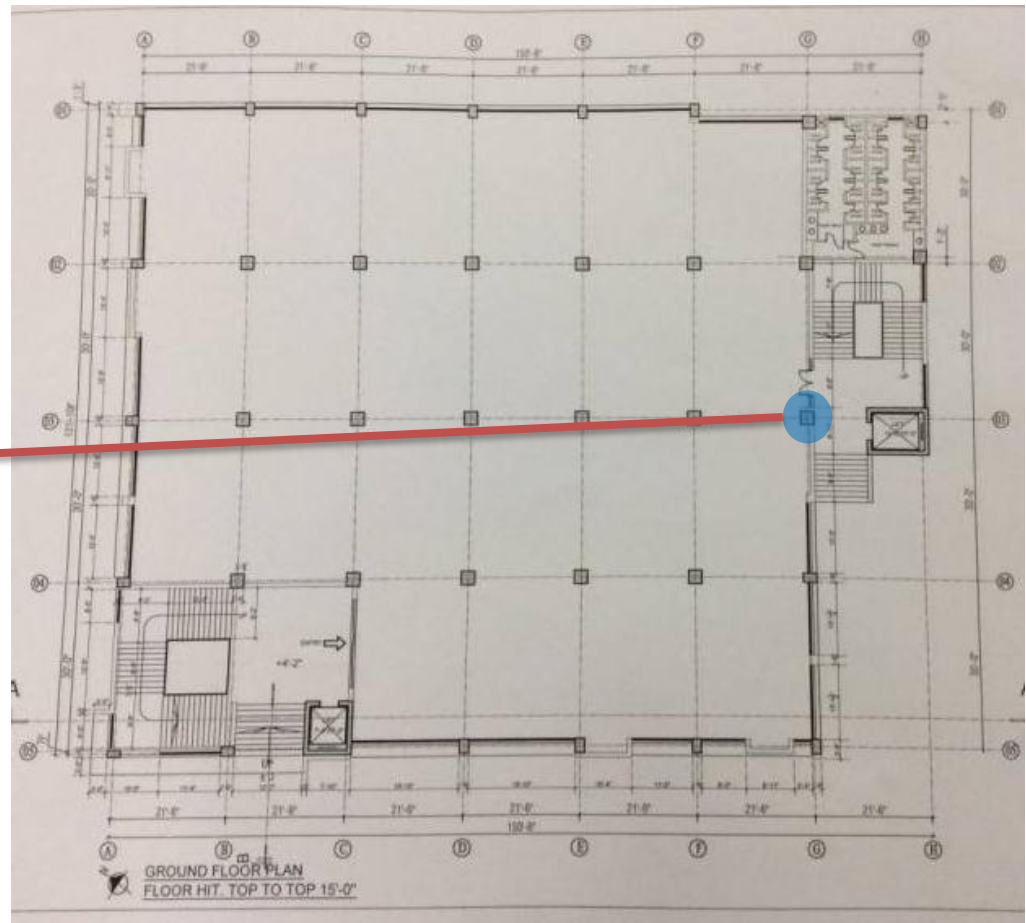
Building column damaged by vehicles



Stone aggregate



Column location tested



Column near entrance has sustained damage from passing vehicles, removing render.

Design drawings are in good agreement with as-built structure. Opening up confirms aggregate type is stone throughout, and scanning on several columns indicates levels of reinforcement in agreement with drawings.

Building 2: Column Damage

Building 3

Edge protection and non-engineered stairs



Edge protection only in place to prevent falls off of the tanks but not into tanks



Apparently non-engineered stairs mainly fixed in place with welded reinforcement

Building 3: Edge protection/non-engineered stairs

Priority Actions

Problems Observed

BUILDING 1

ITEM 1: Structural Steelwork Detailing on the main roof.

ITEM 2: Non Engineered Steelwork to ancillary buildings.

BUILDING 2

ITEM 1: Storage and Toilet Loading at Intermediate Levels between Floors.

ITEM 2: Storage Loading at First Floor.

ITEM 3: Non Structural Build up on Stairs.

ITEM 4: Unrestrained Brickwork External Walls

ITEM 5: Non Engineered Steelwork to ancillary buildings and Storage Area at Roof Level.

BUILDING 3

ITEM 1: Inadequate protection along Tank perimeter.

ITEM 2: Non Engineered Steelwork to access stairs.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	BUILDING 1 Structural Steelwork Detailing on the main roof	Building engineer to check the structures and propose additional reinforcements and stability system, if required	6-months
2	BUILDING 1 Non Engineered Steelwork to ancillary buildings	Building engineer to check the structures and propose additional reinforcements and stability system, if required	6-months
3	BUILDING 2 Storage and Toilet Loading at Intermediate Levels between Floors	Produce and actively manage a loading plan for all floor plates within the factory and Roof, giving consideration to floor capacity and column capacity.	6-months
4	BUILDING 2 Storage Loading at L1, L3 and L4	Produce and actively manage a loading plan for all floor plates within the factory, giving consideration to floor capacity and column capacity.	6-months
5	BUILDING 2 Non Structural Build up on Stairs.	Building engineer to check the structures and propose additional reinforcements, if required	6-months
6	BUILDING 2 Unrestrained Brickwork External Walls	Building engineer to check the external wall elements and propose additional lateral posts or the completion of the walls to floor level.	6-months
7	BUILDING 2 Non Engineered Steelwork to ancillary buildings	Building engineer to check the structures and propose additional reinforcements and stability system	6-months
8	BUILDING 3 Inadequate protection along Tank perimeter.	Provide protection (guard rail) along the walkway at the top of the tanks to prevent possible falls into the tanks.	6-months
9	BUILDING 3 Non Engineered Stairs (external access stairs)	Building engineer to check the structure of the stairs and propose additional reinforcements.	6-months