Pandora Sweaters Ltd.

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(24.187444, 90.424696)
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ACCORD on Fire and Building Safety in Bangladesh

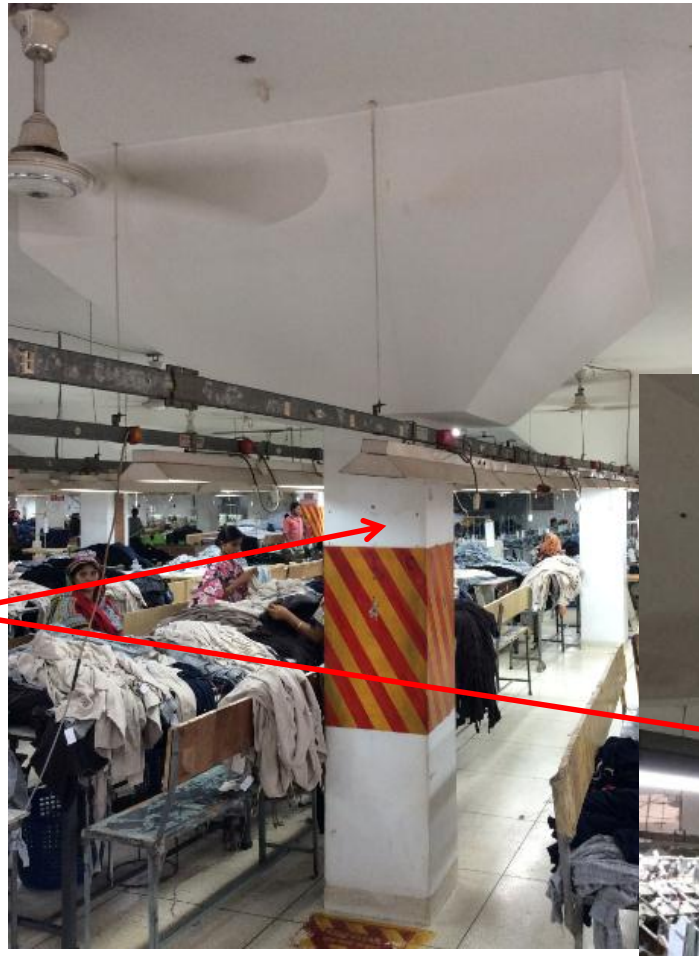
ARUP

Observations

High stress in columns in the two main production buildings

Cursory calculations indicate that internal and external column's working stress is at a high level in the two main production RC buildings.

In-situ concrete strengths to be confirmed by Building Engineer.



High stress in columns

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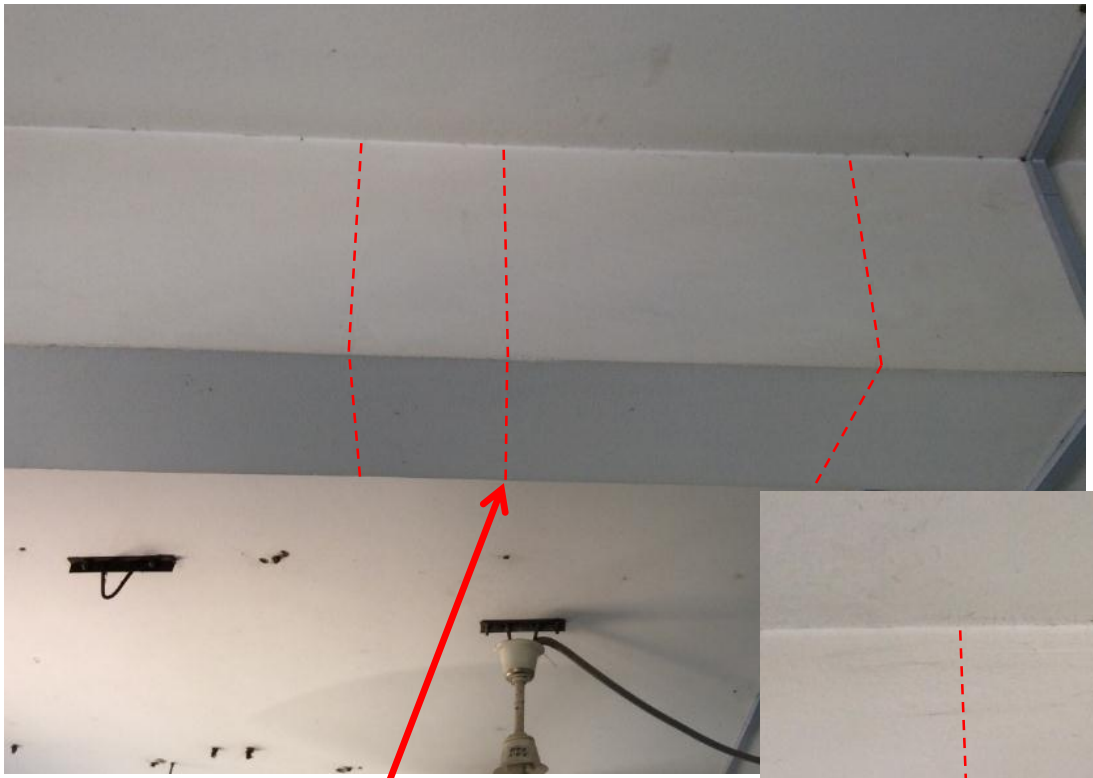
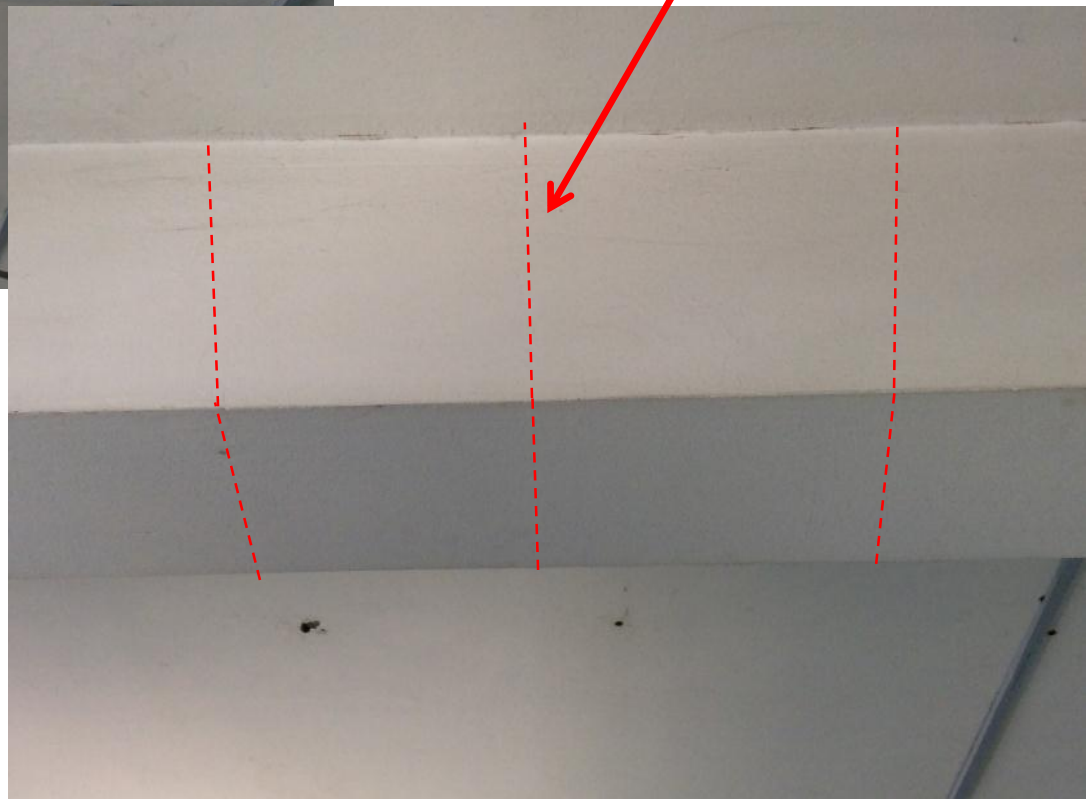
Cracking in Beams in 6-Storey Building, Third Floor



Hairline cracks to the beams at mid-span occur on the 3rd Floor of the 6-storey building.



Building engineer to confirm cracks are typical of normal structural behaviour, and to ensure the load on the 4th floor does not increase.

Cracking in Beams

Modified truss configurations in Boiler/Generator Building need investigation

New 6 Storey building impinged on existing boiler and generator building.

Part of the existing steel truss has been cut to allow for the new building (see also next slide).

Modified Truss Section

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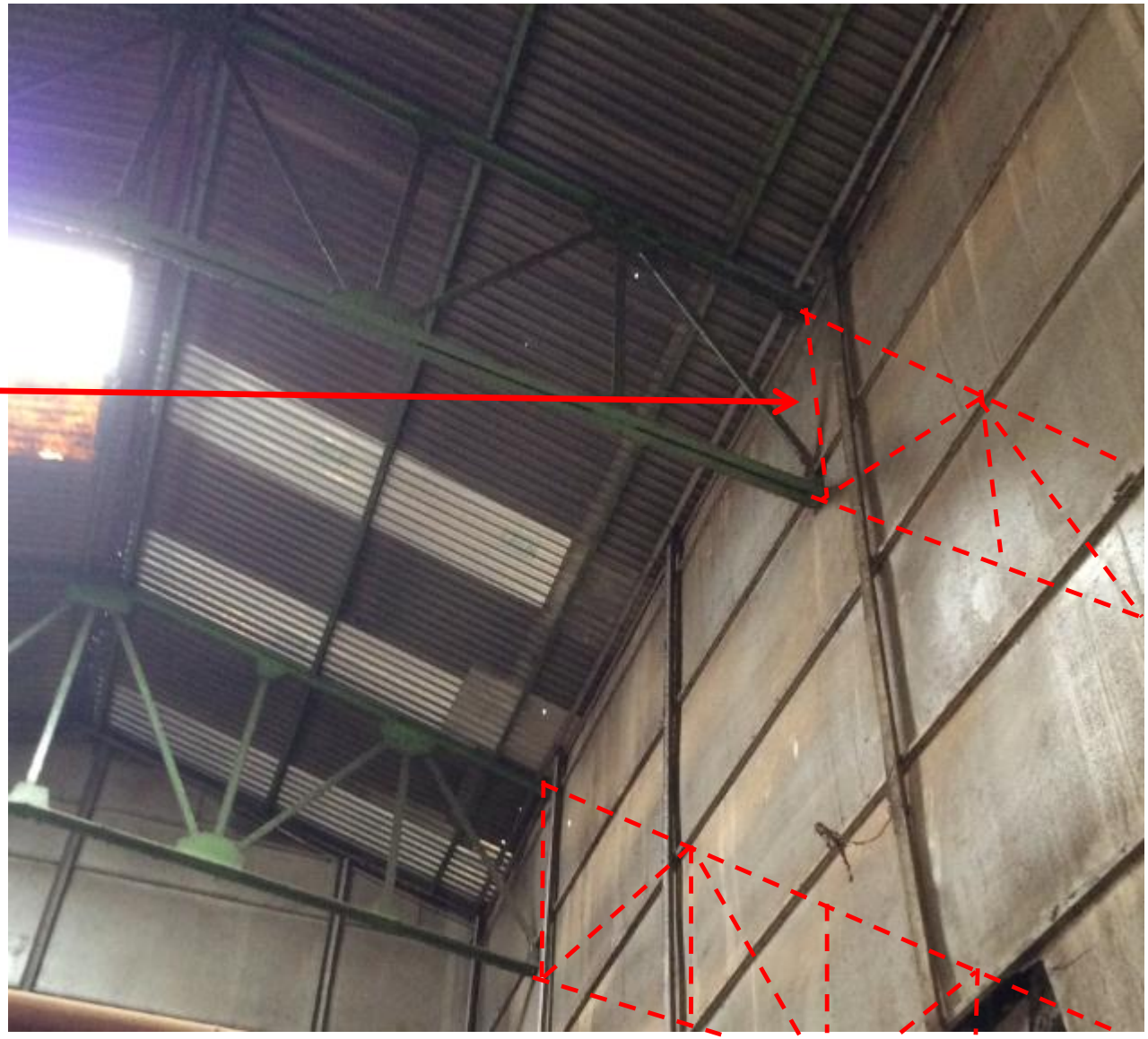
Part of the existing steel truss has been cut to allow for the new production building. New connection into brickwork wall and vertical tie in truss missing at the support.

Building Engineer to investigate adequacy of truss support at wall



Modified Truss Section

Steel canopy at entrance of ad-hoc construction

Steel canopy entrance of ad-hoc construction with substantial deflection.

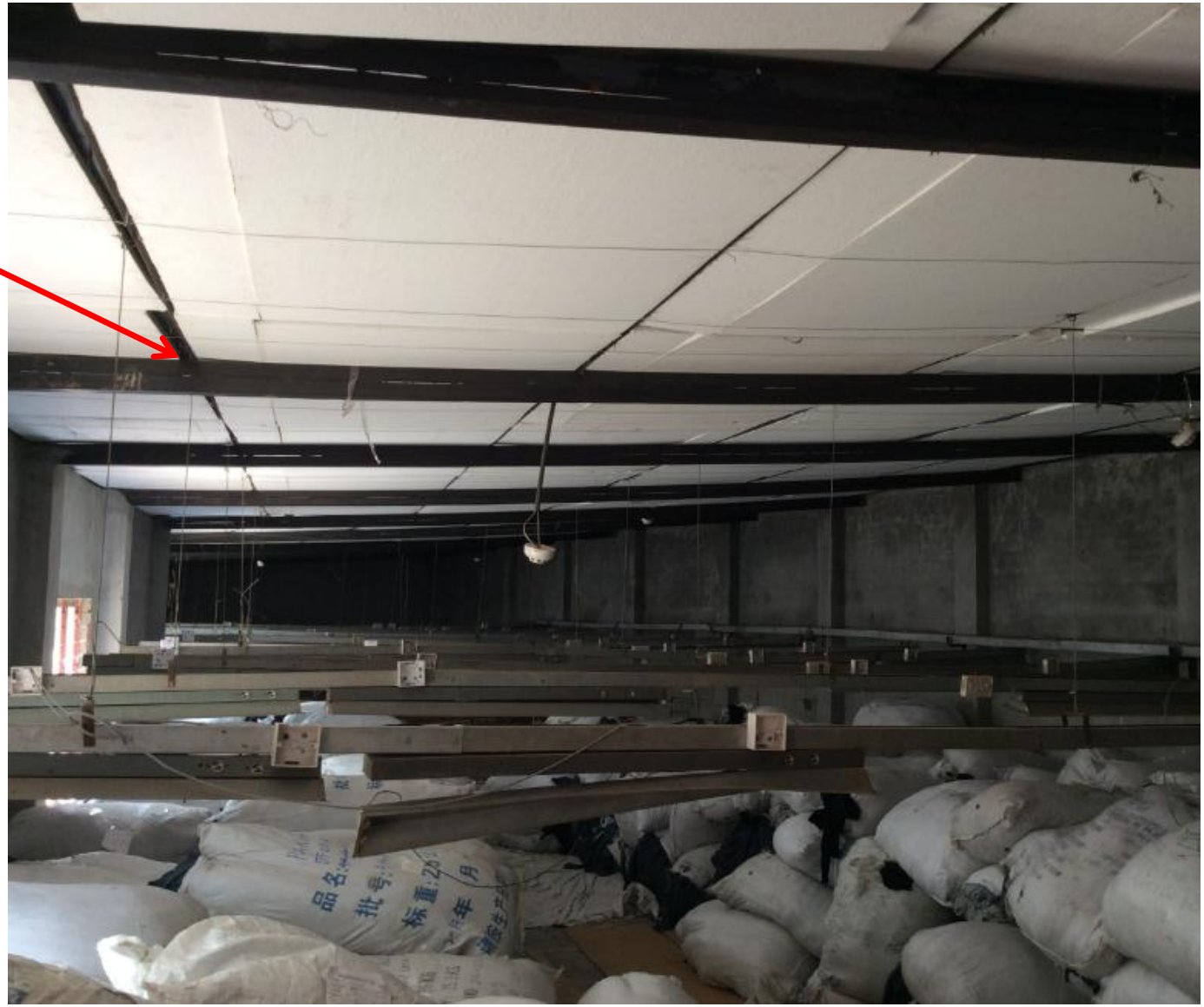
Purlins appear inadequate to support 7.0m span. Building Engineer to recommend new canopy structure.

Steel canopy at entrance

Roof over Single-Storey Storage Area at Rear

Roof to storage area at rear is made from angled sections tack welded together to create a channel section. These appear to be deflecting over the large span.

Sections appear inadequate to support the roof. Building Engineer to design strengthening or replacement structure for roof.



Roof over storage Area

Problems Observed

1. High stress in columns in the two main production buildings
2. Cracking in Beams in 6-Storey Building, Third Floor
3. Modified truss configurations in Boiler/Generator Building need investigation
4. Steel canopy at entrance of ad-hoc construction
5. Roof over Single-Storey Storage Area at Rear

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	High stress in columns in the two main production buildings.	Factory Engineer to review columns stresses at the ground floor in the 4-storey and 6-storey main production buildings.	**6-weeks**
2	High stress in columns in the two main production buildings.	Verify in-situ concrete strength either by cores or utilising existing cylinder strength data for the columns in the buildings.	**6-weeks**
3	High stress in columns in the two main production buildings.	Prepare Loading Management Plans for each floor showing allowable loadings in each area.	**6-weeks**
4	High stress in columns in the two main production buildings.	Continue to actively manage the loading plans for all floor plates within the factory giving consideration to floor capacity and column capacity.	**6-months**
5	Cracking in Beams in 6-Storey Building at 3rd Floor to be investigated by the Building Engineer.	Sections of plaster finish to beams on 3rd floor of 6 storey building to be removed to investigate if cracks are reflected in the building structure.	**6-weeks**
6	Cracking in Beams in 6-Storey Building at 3rd Floor to be investigated by the Building Engineer.	Building Engineer to carry out design check on beams to confirm that these cracks are within allowable structural behaviour.	**6-months**
7	Cracking in Beams in 6-Storey Building at 3rd Floor to be investigated by the Building Engineer.	Building Engineer to prepare Allowable Floor Loading Plans. (See also Item 1)	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
8	Modified truss sections in Boiler/Generator Building need investigation	Building Engineer to check the steel truss configuration and design strengthening as required, particularly at the supports	**6-weeks**
9	Modified truss sections in Boiler/Generator Building need investigation	Implement strengthening measures as required.	**6-months**
10	Steel canopy at entrance of ad-hoc construction	Building engineer to check the design of the canopy roof and propose strengthening to the existing structure or recommend a new structure.	**6-weeks**
11	Steel canopy at entrance of ad-hoc construction	Construct strengthening or replacement structure.	**6-months**
12	Roof over Single-storey Storage Area to rear	Building engineer to check the design of the storage room roof and recommend strengthening measures, if required.	**6-weeks**
13	Roof over Single-storey Storage Area to rear	Implement strengthening measures where required.	**6-months**