Bellissima Apparels Ltd

BSCIC, Inds Estate, Tungi, Gazipur, Bangladesh
(23.8933359N,90.4099056E)

30 April 2014

ACCORD on Fire and Building Safety in Bangladesh ARUP

Building Observations

The use of a previously designed external roof area for production and propose canteen

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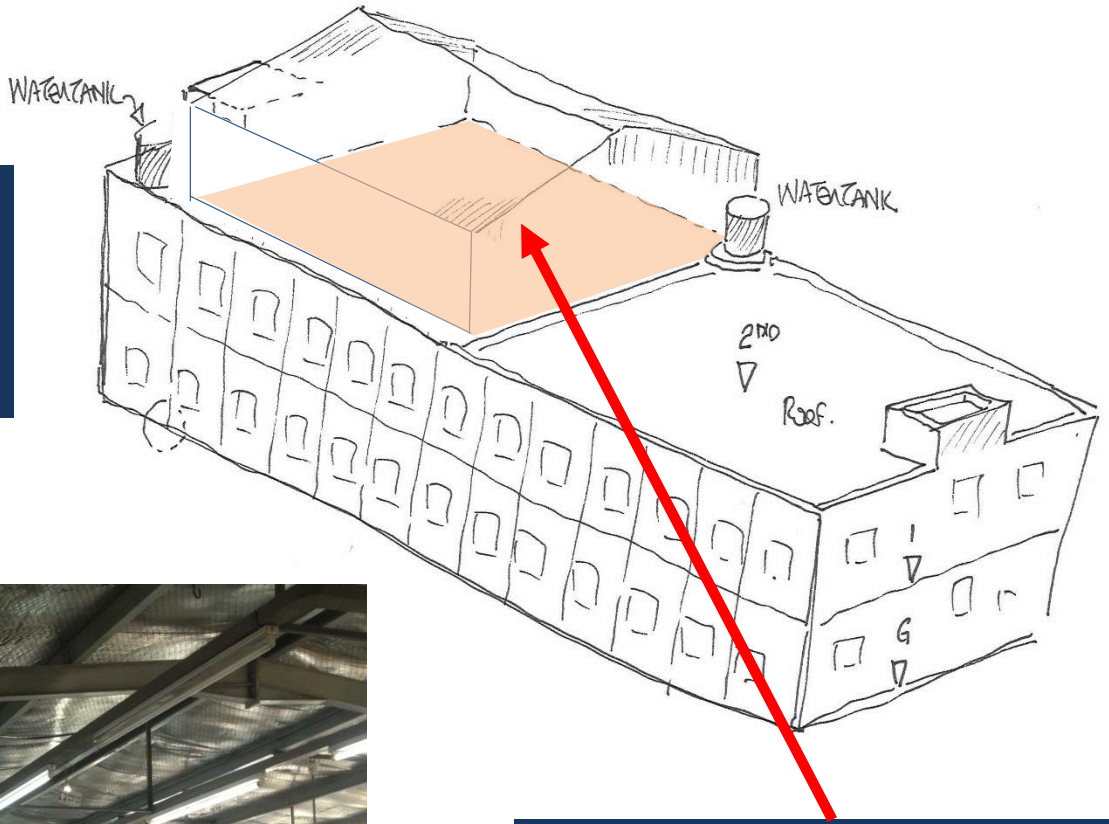

The steel roof is recent and the roof is now a factory, with heavier loading including finishes.
Note: Beams and slab depths to level 2 are less than level 1.

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Concentrated loads due to water tanks and toilet block (including plinth mount) located on roof slab

Concentrated loads due to additional toilet block + water tank located on roof slab

Concentrated loads due to water tanks located on roof slab

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Addition of a new steel frame to the roof area (design check of steel frame including roof bracing requirement required)

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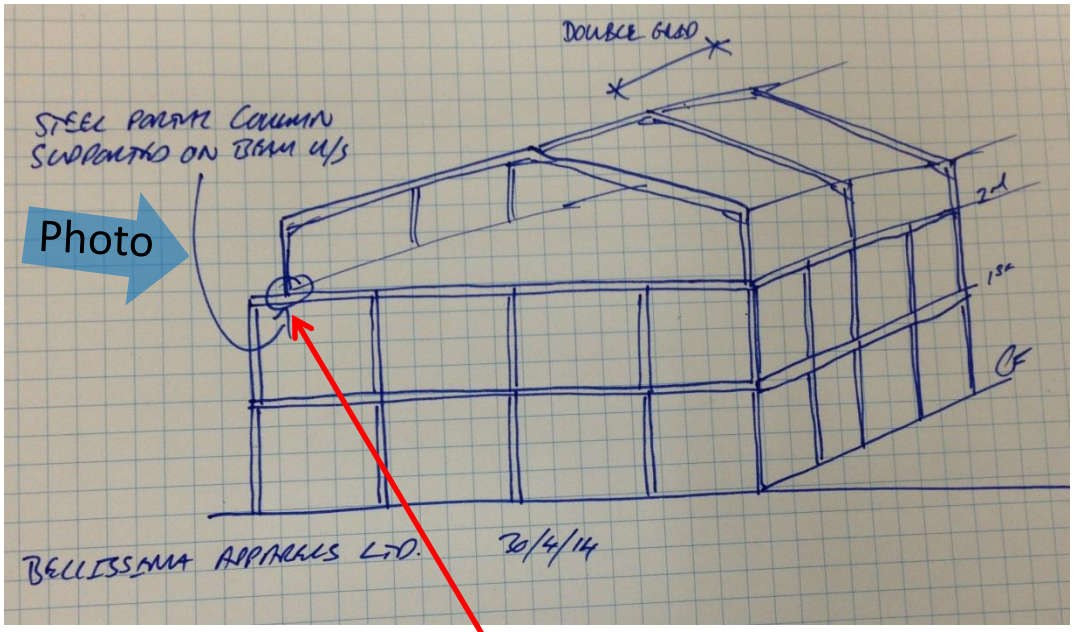
Existing concrete beams, acting as effective transfer beams, support new steel roof portal columns



Column under alignment

Steel portal alignment

Existing concrete beams, acting as effective transfer beams, support new steel roof portal columns

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Chasing in concrete slab for door sill guide.

Detail

Chasing in concrete slab for door sill rail (check rebate has not compromised the reinforced concrete slab and beam

Priority Actions

Problems Observed

- **ITEM 1:** The use of a previously designed external roof area for production and propose canteen and concentrated loads including water tanks/toilet block and plinth located on roof slab and steel portal columns support on RC beam below.

- **Item 2:** Addition of a new steel frame to the roof area (design check of steel frame including roof bracing in N/S direction requirement required).

- **Item 3:** Chasing in concrete slab for door sill guide.

- **Item 4:** Inconsistencies between as-built drawings and observations made on site

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	level 2 used for production, canteen, water tanks and toilet block when it appears that this level was designed as a roof area originally and without the current Steel Portal Framed roof	Limit all 2nd floor storage to 0.5m at max 50% floor area within single bay.	**6-weeks**
2	level 2 used for production, canteen, water tanks and toilet block when it appears that this level was designed as a roof area originally and without the current Steel Portal Framed roof	Produce calculations for the 2nd floor slab and beams for new loading in steel frame area including factory activities, additional screed and steel column point load on beam below	**6-weeks**
3	level 2 used for production, canteen, water tanks and toilet block when it appears that this level was designed as a roof area originally and without the current Steel Portal Framed roof	Produce 2nd floor calculations for concentrate load such as water tank areas and toilet block (including plinth mounting).	**6-weeks**
4	level 2 used for production, canteen, water tanks and toilet block when it appears that this level was designed as a roof area originally and without the current Steel Portal Framed roof	Implement any strengthening specified by the building engineer.	**6-months**
5	level 2 used for production, canteen, water tanks and toilet block when it appears that this level was designed as a roof area originally and without the current Steel Portal Framed roof	Implement a load plan for 2nd floor	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
6	Addition of a new steel frame to the roof area (design check of steel frame including roof bracing requirement required)	Inspect and confirm adequacy of portal frame design including bracing in north south direction and base bolt connections.	**6-weeks**
7	Addition of a new steel frame to the roof area (design check of steel frame including roof bracing requirement required)	Implement any strengthening specified by the building engineer.	**6-months**
8	As-Built Drawings do not match what was observed on Site	Review rebate and determine adequacy of slab depth and reinforcement cover	**6-weeks**
9	As-Built Drawings do not match what was observed on Site	Implement any strengthening specified by the building engineer.	**6-months**