Grameen Fabrics & Fashions Ltd. (11501)

Grameen Industrial Park, Sarabo, Kashimpur, Gazipur Sador, Gazipur

(+23.974352N, 90.263969E)

25.June.2014

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Identified Priority 1 Concerns

1st Priority 1 Concern

Storage loading to upper floors of the main factory building and first floor of utility building.

Rolls of yarn were calculated to weigh up to 5.5kPa.

Mass of 1 roll – 25kg
Stacked 10 rolls high
Dimensions 1500mm long, 300mmØ
[(25 x 9.81)/(1.5 x 0.3)] x 10 = 5.45kPa

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2nd Priority 1 Concern

Cantilevers around the stairs on main factory are excessive, poorly detailed and not on the structural drawings.

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Identified Priority 2 Concerns

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1st Priority 2 Concern

Telecommunications mast on the roof of the main factory is not adequately guyed down to the slab.

Guy wires are connected to a steel angle which does not appear to be adequately sized or fixed to the slab.

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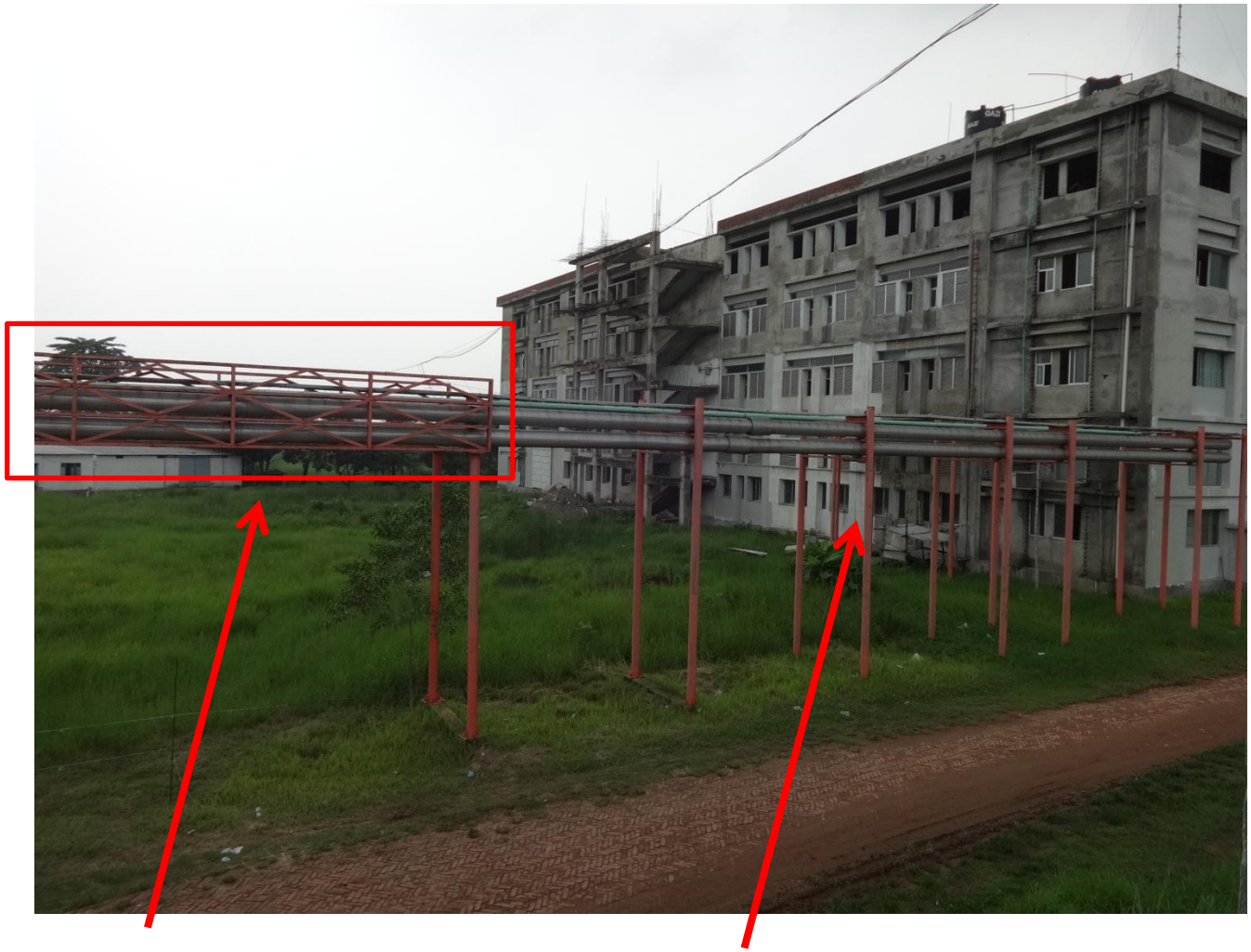
2nd Priority 2 Concern



Trussed bridge

Piers only

Inconsistent detailing to pipe bridge, inadequate base plate details and no structural drawings exist.

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3rd Priority 2 Concern

Water tank supported by steel frame cantilevered off column in Boiler Room. There are only 2 bolts each side holding the steel bracket to the concrete column.

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3rd Priority 2 Concern Continued

Pipes supported on brackets cantilevered off concrete columns. There are only 4 bolts each side holding the steel bracket to the concrete column.

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4th Priority 2 Concern

Inadequate detailing to timber roofs to “temporary” shed buildings.

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Identified Priority 3 Concerns

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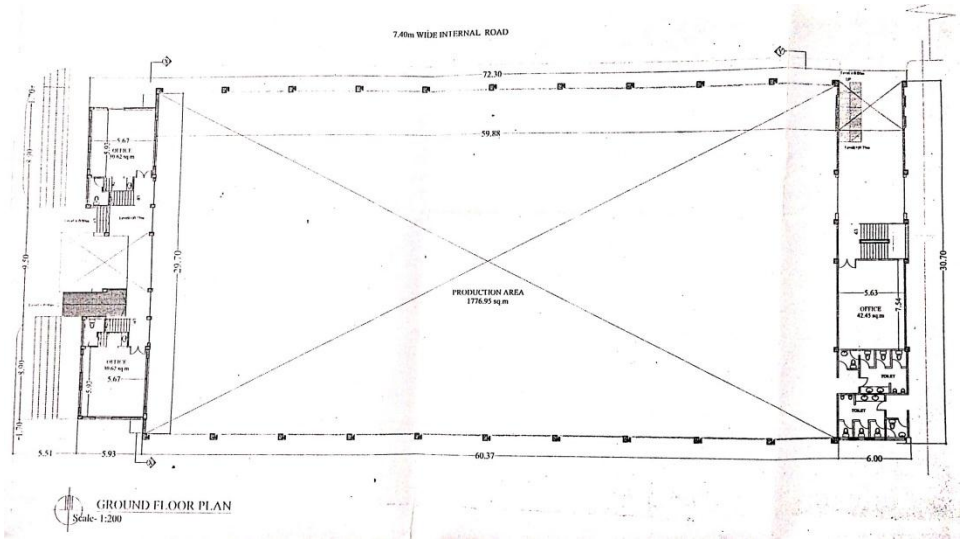
1st Priority 3 Concern



No steelwork drawings for knitting shed roof.

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2nd Priority 3 Concern

No drawings for any of the “temporary” shed buildings.

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Overall Stability System

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The building did not feature any core or shear walls. Stability was achieved through sway action between beams and columns and masonry infill walls.

We require that these items be investigated in an Engineering Assessment

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Water Ingress at Roof Level

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No waterproofing membrane was visible on the roof of the main factory building. This means that any cracks in the surface finishes on the roof will allow water to seep into the concrete slab beneath the finishes, and cause corrosion of the reinforcing steel.

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Priority Actions

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Problems Observed Summary

ITEM 1: (1st Priority 1) Storage loading to upper floors of the main factory building and first floor of utility building.

ITEM 2: (2nd Priority 1) Cantilevers around the stairs on main factory are excessive, poorly detailed and not on the structural drawings.

ITEM 3: No obvious stability system to any of the buildings.

ITEM 4: (1st Priority 2) Telecommunications mast on the roof of the main factory is not adequately guyed down to the slab.

ITEM 5: (2nd Priority 2) Inconsistent detailing to pipe bridge and no structural drawings.

ITEM 6: (3rd Priority 2) Water tank cantilevered off column in Boiler Room & pipes supported on cantilevered brackets off columns in Main Factory.

ITEM 7: (4th Priority 2) Inadequate detailing to timber roofs to "temporary" shed buildings.

ITEM 8: (1st Priority 3) No steelwork drawings for knitting shed roof.

ITEM 9: (2nd Priority 3) No drawings for any of the "temporary" shed buildings.

ITEM 10: No waterproofing to concrete roofs.

ITEM 11: Unable to survey the sub store.

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Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	1st Priority 1 - Storage loading to upper floors of the main factory building and first floor of utility building.	Reduce loading on slab to 3kPa (60psf)	Immediate - Now
2	1st Priority 1 - Storage loading to upper floors of the main factory building and first floor of utility building.	Produce loading plans for each level of each building. Ensure these are displayed and managed at each level.	6-weeks
3	2nd Priority 1 - Cantilevers around the stairs on main factory are excessive, poorly detailed and not on the structural drawings.	Do not store any construction materials on the cantilevers.	Immediate - Now
4	2nd Priority 1 - Cantilevers around the stairs on main factory are excessive, poorly detailed and not on the structural drawings.	Carry out an Engineering Assessment to establish if the cantilevers are adequate for the design loading.	6-weeks
5	2nd Priority 1 - Cantilevers around the stairs on main factory are excessive, poorly detailed and not on the structural drawings.	Carry out all recommendations of the Engineering Assessment. Update structural drawings to show cantilevers as necessary.	6-months
6	No obvious stability system to any of the buildings.	Carry out an Engineering Assessment on the building to verify that it is stable under lateral loading.	6-weeks
7	No obvious stability system to any of the buildings.	Carry out all recommendations of the Engineering Assessment.	6-months
8	1st Priority 2 - Telecommunications mast on the roof of the main factory is not adequately guyed down to the slab.	Carry out an Engineering Assessment concentrating on the anchor points to establish if the slab and connections are sufficient for the applied loadings.	6-weeks
9	1st Priority 2 - Telecommunications mast on the roof of the main factory is not adequately guyed down to the slab.	Carry out actions from the Engineering Assessment. Update structural drawings to show mast.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
10	2nd Priority 2 - Inconsistent detailing to pipe bridge and no structural drawings.	Carry out an Engineering Assessment concentrating on the base connections to verify if the pipe bridge is stable and able to carry the load adequately.	6-weeks
11	2nd Priority 2 - Inconsistent detailing to pipe bridge and no structural drawings.	Carry out actions from the Engineering Assessment. Produce as built drawings for the pipe bridge.	6-months
12	3rd Priority 2 - Water tank cantilevered off column in Boiler Room & pipes supported on cantilevered brackets off columns in Main Factory.	Carry out Engineering Assessment on steel to concrete connections of brackets.	6-weeks
13	3rd Priority 2 - Water tank cantilevered off column in Boiler Room & pipes supported on cantilevered brackets off columns in Main Factory.	Carry out recommendations highlighted in Engineering Assessment. Update structural drawings to show brackets and fixings.	6-months
14	4th Priority 2 - Inadequate detailing to timber roofs to "temporary" shed buildings.	Carry out Engineering Assessment on steel roof to determine if any strengthening works are required.	6-weeks
15	4th Priority 2 - Inadequate detailing to timber roofs to "temporary" shed buildings.	Carry out recommendations highlighted in Engineering Assessment.	6-months
16	1st Priority 3 - No steelwork drawings for knitting shed roof.	Produce as built steelwork drawings for the roof of the knitting shed.	6-months
17	2nd Priority 3 - No drawings for any of the "temporary" shed buildings.	Produce as built structural drawings for these buildings based on site conditions.	6-months
18	No waterproofing to concrete roofs.	Cover the concrete roofs with a suitable waterproofing membrane, e.g. waterproof screed.	6-months
19	Unable to survey the sub store.	Carry out a structural survey of the sub store highlighting any defects and undertaking a repair schedule where necessary.	6-months