

Knit Moon Ltd. (11332)

Plot # S-10, BSCIC Industrial Area, Kalurghat, Chittagong

(+22.383168, 91.863982E)

07.July.2014



Identified Priority 1 Concerns

1st Priority 1 Concern



Concentration of “temporary” water tanks on the roof sited on 150mm plinth. Cracking of beam underneath.

2nd Priority 1 Concern



Uncontrolled storage in bonded warehouse and localised overloading.

Rolls of yarn were calculated to weigh up to 4.16kPa. (86psf)

Mass of 1 roll – 26.5kg
Stacked up to 6 rolls high
Dimensions 1500mm long, 250mmØ
$$[(26.5 \times 9.81)/(1.5 \times 0.25)] \times 6 = \underline{4.16\text{kPa}}$$

Identified Priority 2 Concerns

1st Priority 2 Concern



Cracking of several beams supporting the roof and third floor.

2nd Priority 2 Concern



Inadequate detailing to steel roofs above stairs and over the waste shed.

3rd Priority 2 Concern



Inadequate fixing details to the fire escape ladder.



Overall Stability System



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.

Water Ingress at Roof Level



No waterproofing membrane was visible on the roof of the 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.

Priority Actions

Problems Observed Summary

- ITEM 1: (1st Priority 1) Concentration of “temporary” water tanks on the roof sited on 150mm plinth. Cracking to beam underneath.**
- ITEM 2: (2nd Priority 1) Uncontrolled storage in bonded warehouse and localised overloading.**
- ITEM 3: (1st Priority 2) Cracking of several beams supporting the roof and third floor.**
- ITEM 4: No obvious stability system to the building.**
- ITEM 5: (2nd Priority 2) Inadequate detailing to steel roofs above stairs and over the waste shed.**
- ITEM 6: (3rd Priority 2) Inadequate fixing details to the fire escape ladder.**
- ITEM 7: No waterproofing membrane to the roof.**
- ITEM 8: Foundations are designed for a 5 storey building only.**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	1st Priority 1 - Concentration of “temporary” water tanks on the roof sited on 150mm plinth. Cracking to beam underneath.	Drain all water from the central 2,000litre tank.	Immediate – Now
2	1st Priority 1 - Concentration of “temporary” water tanks on the roof sited on 150mm plinth. Cracking to beam underneath.	Relocate tanks around the roof to spread out the load. Consult the factory engineer for exact locations though close to columns is preferable.	6-weeks
3	2nd Priority 1 - Uncontrolled storage in bonded warehouse and localised overloading.	Do not load the slab above 3.0kPa (60psf) in storage areas and bonded warehouse.	Immediate – Now
4	2nd Priority 1 - Uncontrolled storage in bonded warehouse and localised overloading.	Carry out an Engineering Assessment on the building to establish what load each floor can safely support.	6-weeks
5	2nd Priority 1 - Uncontrolled storage in bonded warehouse and localised overloading.	Produce accurate loading plans for each level based on the Engineering Assessment. Ensure that these plans are displayed and actively managed.	6-months
6	1st Priority 2 - Cracking of several beams supporting the roof and third floor.	Monitor cracking over a 6 month period to establish if cracks are propagating.	6-weeks
7	1st Priority 2 - Cracking of several beams supporting the roof and third floor.	If no further movement is detected repair cracks with a suitable chemical resin. If cracks are propagating carry out an Engineering Assessment to determine the exact cause and provide remedial measures.	6-months
8	No obvious stability system to the building.	Carry out an Engineering Assessment on the building to verify that it is stable under lateral loading specified by BNBC.	6-weeks
9	No obvious stability system to the building.	Carry out all recommendations of the Engineering Assessment.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
10	2nd Priority 2 - Inadequate detailing to steel roofs above stairs and over the waste shed.	Carry out Engineering Assessment on steel roof to determine if any strengthening works are required.	6-weeks
11	2nd Priority 2 - Inadequate detailing to steel roofs above stairs and over the waste shed.	Carry out recommendations highlighted in Engineering Assessment.	6-months
12	3rd Priority 2 - Inadequate fixing details to the fire escape ladder.	Await results of fire safety survey to determine if escape is a suitable size for the factory.	Immediate – Now
13	3rd Priority 2 - Inadequate fixing details to the fire escape ladder.	Carry out an Engineering Assessment on escape, or replace if it does not pass fire safety survey.	6-weeks
14	3rd Priority 2 - Inadequate fixing details to the fire escape ladder.	Carry out actions highlighted in the Engineering Assessment as required.	6-months
15	No waterproofing membrane to the roof.	Install temporary waterproofing system on the roof if an additional story is going to be built within 1 year. Or install a permanent waterproofing membrane to the present roof if construction is to stop for more than one year.	6-months
16	Foundations are designed for a 5 storey building only.	Do not construct any more than 5 storeys. Carry out Engineering Assessment on the foundations to establish their exact design loads prior to any future storeys being built.	6-months