



# Natural Woolwear Ltd.

49/3, Bangabandhu Road, Charabag, Gouripur, Ashulia  
(23.894750N, 90.310454E)  
27<sup>th</sup> August 2017





# Observations



# **Lack of as-built documentation (Medical & Daycare shed and Dining shed)**



Dining shed



Typical truss frame which supported by reinforcement column



Poor connection detail between RC column and Truss



Corner joint between RC column and truss

The support condition of the steel truss was very weak and non engineered due to poor detailing of connection. In addition, factory could not provide any document of the shed.

**Observations:** Lack of as-built documentation of Medical & Daycare shed and Dining shed



Medical & Daycare shed



Typical internal truss



Connection between truss and peripheral RC column

The support condition of the steel truss was not clear and apparently non engineered. In addition, factory could not provide any structural document of the shed.

Factory could not provide any structural drawing for **Medical & Daycare shed** and **Dining shed**. Building Engineer is required to produce a full set of as built drawing reflecting on site condition and will assess the lateral stability against vertical and lateral load for those buildings.

**Observations:** Lack of as-built documentation of **Medical & Daycare shed** and **Dining shed**



# **Corrosion on roof top exposed reinforcement and Water clogging on roof top of Factory building , Store building and Utility building**



Factory Building



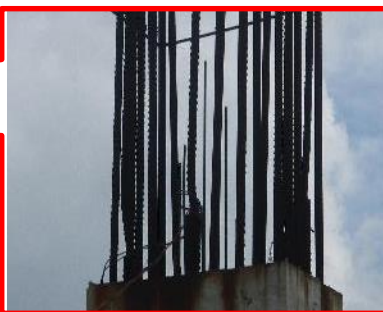
Extensive corrosion was found on exposed rebar



Utility Building



Store Building



Extensive corrosion was found on exposed rebar



Extensive corrosion was found on exposed rebar

During inspection, corrosion was observed on almost all exposed reinforcement of column on roof top. Moreover, water clogging was observed on above mentioned building's roof top.

**Observations:** Corrosion on roof top exposed reinforcement and Water clogging on roof top of Factory building , Store building and Utility building



**Proper edge protection were not present at  
roof of Store building**



No edge protection was found on any corner of roof top.

**Observations:** Proper edge protection were not present at roof of Store building



# **Steel stair appeared to be non engineered of Utility building**



South side Steel stair



The joint between Pipe and steel landing was observed flimsy



Weak support connection between Steel pipe and Utility building

The support condition of the steel stair was very weak and non engineered due to poor detailing of connection of members

**Observations:** steel stair appeared to be non engineered of Utility building



# Excessive column stresses in fully completed Factory building (6-storeys)



Exposed reinforcement on roof top and building permission for 6-storey was indicate further extension of the building. For any future extension may cause a significant increase in column loads. Details Engineering Assessment would required to be carryout before construction of additional floor above 4 storey.

**Observations:** Excessive column stresses in fully completed  
Factory building (6-storeys)



# Problems Observed

**Item 1:** Lack of as-built documentation (Medical & Daycare shed and Dining shed)

**Item 2:** Corrosion on roof top exposed reinforcement and Water clogging on roof top of Factory building , Store building and Utility building

**Item 3:** Proper edge protection were not present at roof of Store building

**Item 4:** Steel stair appeared to be non engineered of Utility building

**Item 5:** Excessive column stresses in fully completed Factory building (6-storeys)



# Priority Actions



Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Lack of as-built documentation (Medical & Daycare shed and Dining shed)	Building engineer to survey the whole sheds and produce as-built documentation which reflecting the as constructed condition.	6-weeks
2	Lack of as-built documentation (Medical & Daycare shed and Dining shed)	Building engineer to check the connections & stability system of the sheds against lateral load.	6-weeks
3	Lack of as-built documentation (Medical & Daycare shed and Dining shed)	Carry out remedial works resulting from engineering assessment where necessary	6-months
4	Corrosion on roof top exposed reinforcement and Water clogging on roof top of Factory building , Store building and Utility building	Building Engineer is required to investigate the extent of corrosion and suggest necessary repairing action	6-weeks
5	Corrosion on roof top exposed reinforcement and Water clogging on roof top of Factory building , Store building and Utility building	Implement repairing works as per engineer's advice	6-months



Item No.	Observation	Recommended Action Plan	Recommended Timeline
6	Proper edge protection were not present at roof of Store building	Install adequate edge protection on roof level	<b>Immediate - Now</b>
7	Steel stair appeared to be non engineered of Utility building	Building engineer to check the adequacy of the lightweight stair under current loading	<b>6-weeks</b>
8	Steel stair appeared to be non engineered of Utility building	Carry out remedial works resulting from engineering assessment if necessary.	<b>6-months</b>
9	Excessive column stresses in fully completed Factory building (6-storeys)	In case of any extensions or modifications of the existing building needs to be carryout Details Engineering Assessment by a Structural Engineer and in full compliance with the BNBC provision.	<b>6-months</b>