

N.K. Sweaters Ltd

Mazukhan, Ratonpur, Kaliakoir, Gazipur-1751.

(24.05740476201759, 90.29289619444694)

10 March 2024



1. Building Information

- i) Shed-01
- ii) Shed-02
- iii) Shed/Building 3
- iv) Security Post
- v) Prayer, Childcare, Doctors Room & Store
- vi) Toilet Block
- vii) Dining shed
- viii) Utility Building
- ix) Cycle stand
- x) Boiler Room
- xi) Wastage Room
- xii) Staff Dining.

2. Observations

Observation-01: Missing bracing and a beam. (Shed-1, Shed-2 & Shed/Building 3)



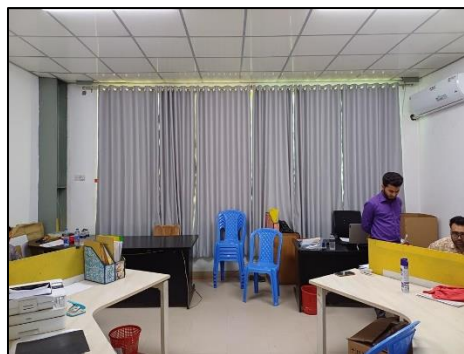
Description: Some vertical bracings are missing in Sheds 1 & 3, and the main beam is missing in Shed 2. So, the lateral stability in these sheds is incomplete.

The building engineer is required to check the lateral stability system & prepare design documents accordingly.

Observation-02: Discrepancy in the as-built drawings. (Shed-1, Shed-2 & Shed/Building 3)



Main Beam



Missing Bracing



Column



Flange Thickness

Description: During inspection, some wall bracings were found missing in all sheds.

In Shed-1 column C-104 was found 300X6; 175X8 instead of 348X6; 225X10.

In Shed-2 stair top main beam was found 340X6; 225X8 instead of 445X8; 175X10. The main beam on the ground floor & roof bracing were missing.

In Shed/Building 3 main beam depth was found 175 instead of 200.

The building engineer is required to update the as-built drawings of shed-1, shed-2 & shed-3 as per actual site condition.

Observation-03: Severe corrosion was found. (Shed-1, Shed-2 & Shed/Building 3)



Corrosion at main beam



Corrosion at stair



Corrosion at column



Corrosion at connection

Description: During the inspection, severe corrosions were found in steel members in all sheds. The building is required to identify the location, investigate the reason for corrosion, and prepare an investigation report with remedial actions and repair as per the recommendation of the report.

Observation-04: Bolt missing, Connection gap, & Loose cable bracing were found. (Shed-1, Shed-2 & Shed-3)



Missing bolt



Connection gap



Missing bracing

Description: During inspection, some bolts missing, connection gaps & loose cable bracing were found in all sheds. The building engineer is required to install missing bolts, repair connection gaps & tighten cable bracing, and carry out periodic maintenance work.

Observation-05: Falling hazard. (Shed-2 & Shed-3)



Shed-2



Shed-3



Shed-3 Stair

Description: During inspection, falling hazards (Missing Parapet, Railing missing around stair) were found in shed-2 & shed-3. The building engineer is required to provide barriers to prevent potential falling hazards.

Observation-06: Non-engineered structures were found. (Dining Shed, Toilet, Medical & prayer, Boiler Shed, Wastage Shed, Staff Dining and Cycle Shed)



Dining Shed



Cycle Shed



Toilet



Medical & Prayer



Wastage Shed



Boiler Shed

Description: During the inspection, some non-engineered structures were found on the factory premises. The building engineer is required to update the connection & prepare as-built documents.

Observation-07: Lack of information in as-built drawing. (All ancillary structures)



Description: Lack of information was observed in the as-built drawings of the mentioned structures. The building engineer is required to update the as-built drawing as per the actual site condition and comply with BNBC 1.9 requirements.

Observation-08: Lack of waterproofing on MCAC construction. (Shed 1, Shed 2, Building/Shed 3)



Shed-2



Shed-2



Shed/Building-3

Description: During the inspection, lack of waterproofing was observed on the structures mentioned. The deck slab is made of MCAC. The building engineer is required to provide a waterproofing layer on the slab with an adequate slope for roof drainage.

Observation-09: Dampness. (Utility Building)



Description: During the inspection dampness was found in the roof slab of the utility building. The building engineer is required to seal the water sources and repair the dampness with a suitable method.

Observation-10: Exposed rebar. (Utility Building)



Description: During the inspection, exposed rebar was found on the roof of the utility building. The building engineer is required to apply rust-proof coating on the exposed rebar.

3. Action Plan

Observation	Action Plan	Timeline
Shed 1		
Missing bracing. (Shed-1)	The building engineer is required to check the lateral stability system & prepare design documents accordingly.	within 6 weeks
	Carry out remediation work if required.	within 6 months
Discrepancy in the as-built drawings. (Shed-1)	The building engineer is required to update the as-built drawing as per the actual site condition.	within 6 weeks
Severe corrosion was found. (Shed-1)	The building is required to identify the location, investigate the reason for corrosion, and prepare an investigation report with remedial actions and repair as per the recommendation of the report.	within 6 weeks
Bolt missing, Connection gap & Loose cable bracing were found. (Shed-1)	The building engineer is required to install the missing bolt, repair the connection gap & tighten cable bracing, and carry out periodic maintenance work.	within 6 months
Lack of waterproofing on MCAC construction. (Shed 1)	The building engineer is required to provide a waterproofing layer with an adequate slope for roof drainage.	within 6 months
Shed 2		
Missing beam. (Shed-2)	The building engineer is required to check the lateral stability system & prepare design documents accordingly.	within 6 weeks
	Carry out remediation work if required.	within 6 months
Discrepancy in the as-built drawings. (Shed-2)	The building engineer is required to update the as-built drawing as per actual site condition.	within 6 weeks
Severe corrosion was found. (Shed-2)	The building is required to identify the location, investigate the reason for corrosion, and prepare an investigation report with remedial actions and repair as per the recommendation of the report.	within 6 weeks
Bolt missing, Connection gap & Loose cable bracing were found. (Shed-2)	The building engineer is required to install the missing bolt, repair the connection gap & tighten cable bracing, and carry out periodic maintenance work.	within 6 months
Falling hazard. (Shed-2)	The building engineer is required to provide barriers to prevent potential falling hazards.	within 6 weeks
Lack of waterproofing on MCAC construction. (Shed 2)	The building engineer is required to provide a waterproofing layer with an adequate slope for roof drainage.	within 6 months

Building/Shed 3		
Missing bracing. (Building/Shed 3)	The building engineer is required to check the lateral stability system & prepare design documents accordingly.	within 6 weeks
	Carry out remediation work if required.	within 6 months
Discrepancy in the as-built drawings. (Building/Shed 3)	The building engineer is required to update the as-built drawing as per the actual site condition.	within 6 weeks
Severe corrosion was found. (Building/Shed 3)	The building is required to investigate the reason for corrosion & repair as per the recommendation of the report.	within 6 weeks
Bolt missing, Connection gap & Loose cable bracing were found. (Building/Shed 3)	The building engineer is required to install the missing bolt, repair the connection gap & tighten cable bracing, and carry out periodic maintenance work.	within 6 months
Falling hazard. (Building/Shed 3)	The building engineer is required to provide barriers to prevent potential falling hazards.	within 6 weeks
Lack of waterproofing on MCAC construction. (Building/Shed 3)	The building engineer is required to provide a waterproofing layer with an adequate slope for roof drainage.	within 6 months
All Ancillaries		
Non-engineered structures were found. (Dining Shed, Toilet, Medical & prayer, Boiler Shed, Wastage Shed, Staff Dining and Cycle Shed)	The building engineer is required to update the connection & prepare as-built documents.	within 6 weeks
	Carry out remediation work if required.	within 6 months
Lack of information in as-built drawing. (All ancillary structures)	The building engineer is required to update the as-built drawing as per the actual site condition.	within 6 weeks
Utility Building		
Dampness. (Utility Building)	The building engineer is required to seal the water sources and repair the dampness with a suitable method.	within 6 weeks
Exposed rebar. (Utility Building)	The building engineer is required to apply rust-proof coating on the exposed rebar.	within 6 months

Survey Limitations and Assumptions

This report is for the private and confidential use of RSC for whom it was prepared together with their professional advisors as appropriate. It should not be reproduced as a whole or in part or relied upon by third parties for any use without the express written permission of RSC.

This report can be used in discussion with the supplier or factory owner to rectify or address any observations made. The report is not comprehensive and is limited to what could be observed during a visual inspection of the building.

This Report is not intended to be treated as a generalized inspection and does not cover the deterioration of structural members through dampness, fungal or insect attack, nor does it deal with problems and defects of a non-structural nature. Other non-structural aspects of the building such as fire safety have not been assessed in this survey.

Except as otherwise noted, drains and other services were not viewed or tested during our inspection and are therefore similarly excluded from this Report. We have not inspected any parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect.

External inspection of the façade walls has generally been carried out from ground level only by visual sighting. No opening up works were carried out (except as noted) and we relied on the Architects and Engineers drawings provided to us for our views on concealed parts of the structure and in particular foundations. Strengths of materials and components are untested, and we recommend that the factory owners Building Engineer carries out in situ testing over and above those suggested to satisfy themselves with the material strengths and component details.

Recommendations, given, are for the purpose of providing indicative advice only, are not exhaustive, relate solely to identifying key and obvious structural defects as identified in this presentation, and do not take the form of or constitute a specification for works. We take no responsibility for the construction. This report does not interfere with the factory owners Building Engineers responsibility for the structural performance of this building, The Building Engineer remains fully responsible for the structural adequacy of the building.

This report does not comment in detail on the future seismic performance of the building and only highlights the fact that the building may experience significant damage or collapse in a seismic event along with many others in the Dhaka region.

The observations in this report are based on the Engineering Judgement of the lead surveyor/engineer at the time of the survey. We assume in making these observations that no covering up of faults defects, filling or plastering over cracking or significant repair work has been carried out by the building owner. Any future alteration or additional work by the building owner will void this report.