

SUPREME EMBELLISHMENT LIMITED

140/1, East Baghbari, Kashimpur, Gazipur-1700

(23.9539838, 90.3110571)

12 November 2023



1. Building Information

- **Shed1:** Single storied steel shed.
- **Shed 2:** Single storied steel shed.
- **Shed 03 (Color Room):** Single storied steel shed.
- **Shed 4 (Dining shed):** Single storied steel shed.
- **Shed 5 (Generator shed):** Single storied steel shed.
- **Shed 6 (New Sub-Station Room):** Single storied steel shed.
- **Shed 7 (ETP Operate Room):** Single storied steel shed.
- **ETP:** Single storied RC structure.
- **Toilet Block:** Single storied masonry structure.

2. Observations

Observation-1: Lack of lateral stability (Shed 1).



Description: The structure has no lateral load transfer media (compression strut) along long direction. Also, the foundation detail of the structure was missing in the drawing. During inspection no design documents were available for this shed.

The building engineer is required to carry out Detail Engineering Assessment (DEA) to check the lateral stability and adequacy of all structural elements of the structure based on in-situ material strength and software-based analysis which shall be prepared in compliance with section 1.9.1, part-6 of BNBC. Also, investigate the foundation system and incorporate the adequacy check in the DEA.

Observation-2: Lack of as built drawings (Shed 1).



Description: As built drawing of the shed was not available on-site. The building engineer is required to prepare as-built drawing for the shed with necessary connection details.

Observation-3: Lack of Lack of lateral stability (Shed 2).



Description: The structure has no lateral load transfer media (compression strut) along long direction. Also, the foundation detail of the structure was missing in the drawing. During inspection no design documents were available for this shed.

The building engineer is required to carry out Detail Engineering Assessment (DEA) to check the lateral stability and adequacy of all structural elements of the structure based on in-situ material strength and software-based analysis which shall be prepared in compliance with section 1.9.1, part-6 of BNBC. Also, investigate the foundation system and incorporate the adequacy check in the DEA.

Observation-4: Lack of as built drawings (Shed 2).



Description: As-built drawing of the structure was not available on-site. The building engineer is required to prepare as-built drawing of the structure with necessary connection details.

Observation-5: Lack of design report (Shed 4).



Description: As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. During inspection, the design report and as built structural drawing was not available on site.

The building engineer is required to prepare a set of design documents including as built drawings, live load plan at roof and a design report based on in-situ material strength and software-based analysis which shall be prepared in compliance with section 1.9.1, part-6 of BNBC.

Observation-6: Lack of as built drawings (Shed 4).



Description: As-built drawing of the structure was not available on-site. The building engineer is required to prepare as-built drawing of the structure with necessary connection details.

Observation-7: Apparently non-engineered structures. (Shed 3, Shed 5 & Shed 6).



Shed 3



Shed 5

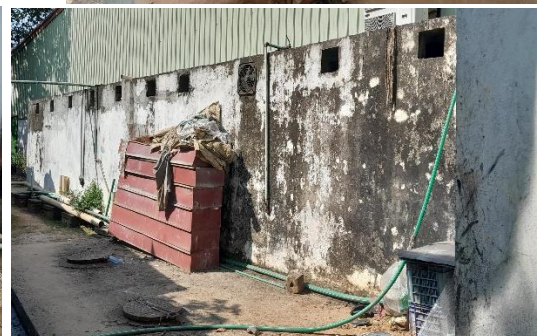


Shed 6



Description: Lack of lateral stability system (strut and bracing), apparent inadequate members and non-engineered connection was observed. Also, structural elements (Truss) were found cutoff at several places in Shed 5. The building engineer is required to check the member, connection & stability system of the structure and suggest proper alternatives accordingly.

Observation-8: Lack of as-built drawings (Shed 3, 5, 6, 7, ETP & Toilet Block).



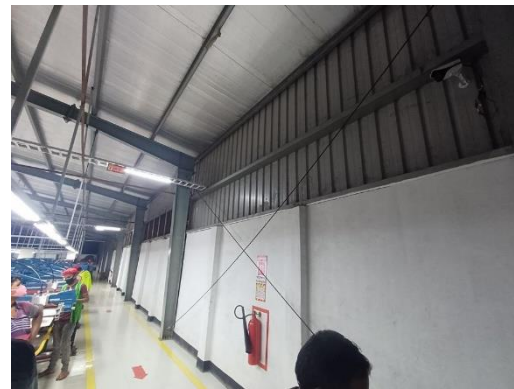
Description: As-built drawing of the structures was not available on-site. The building engineer is required to prepare as-built drawing of the structure with necessary connection details.

Observation-9: Corrosion observed on steel member.



Description: During inspection, corrosion was observed on steel members at several sheds. The building engineer is required to remove corrosion and provide anti corrosive coating.

Observation-10: Loose cable bracing (Shed 2).



Description: During inspection, loose cable bracing was observed at Shed 2. The building engineer is required to identify and tighten all the loose bracings.

Observation-11: Lack of anchorage/braced of non-structural elements.



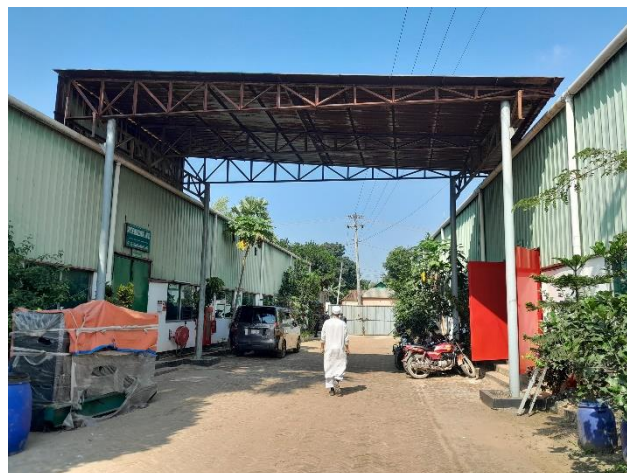
Description: During inspection, non-structural elements (Racks & water tanks) were found not anchored & unbraced. The factory is required to brace/anchor all the non-structural elements.

Observation-12: Crack on brick wall (Toilet Block)



Description: During inspection, diagonal cracks in brick walls were observed at several places in the toilet block. The building engineer is required to produce a crack investigation report and suggest proper remedial measures. The factory is required to repair the crack as per the investigation report.

Observation-13: Lack of as-built drawings for the steel canopy.



Description: During inspection, an undocumented canopy was found at the middle of shed 1 and shed 2. The building engineer is required to survey the structure and prepare as-built drawings accordingly.

3. Action Plan

Item No.	Observation	Action Plan	Timeline
1.	Lack of lateral stability (Shed 1).	The building engineer is required to carry out Detail Engineering Assessment (DEA) to check the lateral stability and adequacy of all structural elements of the structure based on in-situ material strength and software-based analysis which shall be prepared in compliance with section 1.9.1, part-6 of BNBC. Also, investigate the foundation system and incorporate the adequacy check in the DEA.	within 6 weeks
2.	Lack of lateral stability (Shed 1).	Produce and actively manage load plan for mezzanine floor.	within 6 weeks
3.	Lack of lateral stability (Shed 1).	Carry out suggested remedial works where required.	within 6 months
4.	Lack of as built drawings (Shed 1)	The building engineer is required to prepare as-built drawing for the shed with necessary connection details.	within 6 weeks
5.	Lack of lateral stability (Shed 2).	The building engineer is required to carry out Detail Engineering Assessment (DEA) to check the lateral stability and adequacy of all structural elements of the structure based on in-situ material strength and software-based analysis which shall be prepared in compliance with section 1.9.1, part-6 of BNBC. Also, investigate the foundation system and incorporate the adequacy check in the DEA.	within 6 weeks
6.	Lack of lateral stability (Shed 2).	Carry out remedial works if required.	within 6 months
7.	Lack of as built drawings (Shed 2)	The building engineer is required to prepare as-built drawing for the shed with necessary connection details.	within 6 weeks
8.	Lack of design report. (Shed 4)	The building engineer is required to prepare a design report based on in-situ material strength & software-based analysis and submit the documents to RSC for review.	within 6 weeks
9.		Carry out remedial works if required.	within 6 months
10.	Lack of as built drawings (Shed 4)	The building engineer is required to prepare as-built drawing for the shed with necessary connection details.	within 6 weeks

11.	Apparently non-engineered structures. (Shed 3, Shed 5 & shed 6).	The building engineer is required to check the member, connection & stability system of the structure and suggest proper alternatives accordingly.	within 6 weeks
12.	Apparently non-engineered structures. (Shed 3, Shed 5 & shed 6).	Carry out suggested remedial works.	within 6 months
13.	Lack of as-built drawings (Shed 3, 5, 6, 7, ETP & Toilet block).	The building engineer required to prepare as built drawing of the Shed 3, 5, 6, 7, ETP & Toilet block.	within 6 weeks
14.	Corrosion observed on steel member.	The building engineer is required to remove corrosion and provide anti corrosive coating.	within 6 months
15.	Loose cable bracing (Shed 2).	The building engineer is required to identify and tighten all the loose bracings.	within 6 months
16.	Lack of anchorage/braced of non-structural elements	The factory is required to adequately brace/anchor all the non-structural elements.	within 6 months
17.	Crack on brick wall (Toilet Block)	The building engineer is required to produce a crack investigation report and suggest proper remedial measures.	within 6 weeks
18.	Crack on brick wall (Toilet Block)	The factory is required to repair the crack as per the investigation report.	within 6 months
19.	Lack of as-built drawings for the steel canopy.	The building engineer is required to survey the structure and prepare as-built drawings accordingly.	within 6 weeks

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 in 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 as a means 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 rely 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, where 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 works as constructed. 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.