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1. Building Information:

a) Building – 1 (All Over Print)
b) Building – 2 (Jhut Boiler Room)
c) Building – 3 (33KVA Sub Station Room)
d) Building – 4 (AOP Utility)
e) Building – 5 (Central Warehouse Shed)
f) Building – 6 (Wastage Warehouse Shed)
g) Building – 7 (Chemical Store Shed)
h) Building – 8 (Digital Printing -1 Shed)
i) Building – 9 (Digital Printing -2 Shed)
j) Building – 10 (New Utility (MS Lario) Shed)
k) Building – 11 (Fire Pump Room)
l) Building – 12 (ETP Building-01)
m) Building – 13 (ETP Building-02)
n) Building – 14 (Workshop Building)
o) Building – 15 (General Store Shed)
p) Building – 16 (RMS Room)
q) Building – 17 (Main Gate Security Room)
r) Building – 18 (Ansar Camp Shed)
s) Building – 19 (Fire Control Room).

2. Observations:

Observation-1: Lack of design documents. (All Over Print Shed, Jhut Boiler Room, AOP Utility Building, Central Warehouse Shed)

All Over Print Shed

Jhut Boiler Room

AOP Utility Building

Central Warehouse Shed

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. The design document shall include a design report and a set of structural drawings, which shall be prepared in compliance with sections 1.9.1.1 and 1.9.1.2 as per BNBC.

At the time of inspection, design documents (design report, structural drawings, and material test reports) were not available, which are required to be prepared in compliance with section 1.9.1 (part 6, BNBC). However, as-built drawings are available only for the All Over Print Shed and Central Warehouse Shed.

Observation-2: Lack of lateral stability system. (Wastage Warehouse Shed, Chemical Store Shed, And Ansar Camp Shed)



Wastage warehouse shed | Chemical store shed | Ansar camp shed

Description: Lack of lateral stability system, apparent inadequate members, and non-engineered connections were observed. The building engineer is required to check the structure's members, connections, and stability system and suggest proper remediation accordingly.

Observation-3: Lack of as-built drawing. (33 KV Substation Room And Fire Control Room).


33 KV Sub-Station Room


Fire Control Room

Description: The as-built drawings of the 33 KV Substation and Fire control room were not available on site. The building engineer is required to prepare the as-built drawing of these structures.

Observation-4: Lack of design report (Digital Printing-01 Shed).

Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. During the inspection, the design report was not available on site. The building engineer is required to prepare a design report in compliance with BNBC (Part-6).

Observation-5: Lack of design report (Digital Printing-02 Shed).

Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. During the inspection, the design report was not available on site. The building engineer is required to prepare a design report in compliance with BNBC (Part-6).

Observation-6: Lack of design documents (New Utility (MS Lario) Shed).

Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. During the inspection, the design report/as-built drawing/geotechnical investigation report was not available on site. The building engineer is required to prepare a design report with as-built structural drawings in compliance with BNBC (Part-6).

Observation 7: Corrosion on steel members (All Over Print Shed And Chemical Store Shed), Digital Printing-02 Shed & New Utility (MS Lario) Shed).

All over print shed

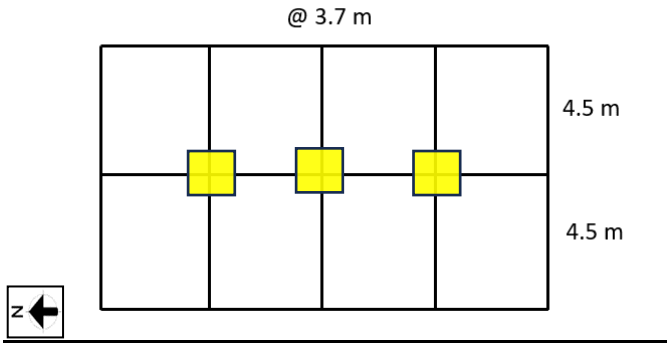
Chemical store shed

Building 10

Building 09

Description: Corrosion was found on steel members at several locations. The building engineer is required to provide rust-proof paint on steel members to protect them from corrosion.

Observation-08: Stress in column exceeds normal design limit (Workshop Building).



Description: No design documents & geotechnical investigation reports were available on site. The cursory calculation indicates that stress in the marked columns exceeds the normal design limit considering the live load of 2 kPa for typical floors (rest house). We have considered minimum concrete strength (14.10 MPa) based on aggregate type.

The building engineer is required to review, design, and column stresses based on in-situ concrete strength. Produce and actively manage load plans for all floor plates based on floor, column, and foundation capacities.

Observation-09: Columns appear to be slender (Workshop Building).

Unsupported length 3.8m
Column size: 300X250 mm

Description: Cursory calculation shows that slenderness in all columns exceeds the normal design limit due to long unsupported lengths. The building engineer is required to carry out an adequacy check of all the considering slenderness effect.

Observation-10: Lack of lateral stability of truss roof (Workshop Building).

Description: Stability is provided through truss action only. No bracing system is provided for the shed and the size of the truss is apparently inadequate. The building engineer is required to check the lateral stability of the shed.

Observation-11: Incomplete load path of steel stair (Workshop Building).

Description: The load path of the vertical load-bearing member was incomplete. The building engineer is required to check the load path and the structural stability of the steel stair.

Observation-12: Lack of design report (ETP Building 1).

Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. During the inspection, the design report was not available on site for ETP building 1 and external steel stairs. The building engineer is required to prepare a design report in compliance with BNBC (Part-6).

Observation-13: Lack of design report (ETP Building 2).

Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. During the inspection, the design report was not available on site. The building engineer is required to prepare a design report in compliance with BNBC (Part-6).

Observation-14: Lack of design documents (General Store).

Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provision of Section 1.9.1. During the inspection, the design report/as-built drawing/geotechnical investigation report was not available on site. The building engineer is required to prepare a design report with as-built structural drawing in compliance with BNBC (Part-6).

Observation-15: Lack of as-built drawing (Fire Pump Room, RMS Room).

Description: As-built drawing of the Fire Pump Room and RMS Room were not available on site. The building engineer is required to prepare the as-built drawing of these structures.

Observation-16: Column susceptible to vehicle impact. (Central warehouse shed)

Description: Columns in the loading/unloading area were found susceptible to vehicle impact. The building engineer is required to provide barriers around the columns to prevent vehicle impact.

5. Action Plan:

Observation	Action Plan	Timeline
Lack of design documents. (All Over Print Shed)	The building engineer is required to prepare design documents (including design reports, structural drawings, and material test reports) in compliance with section 1.9.1 (part 6, BNBC).	within 6 weeks
	Carry out the suggested remedial works.	within 6 months
Lack of design documents. (Jhut Boiler Room)	The building engineer is required to prepare design documents (including design reports, structural drawings, and material test reports) in compliance with section 1.9.1 (part 6, BNBC).	within 6 weeks
	Carry out the suggested remedial works.	within 6 months
Lack of as-built drawing. (33 KV Substation room)	The building engineer is required to prepare as-built drawings.	within 6 weeks
Lack of design documents. (AOP Utility Building)	The building engineer is required to prepare design documents (including design reports, structural drawings, and material test reports) in compliance with section 1.9.1 (part 6, BNBC).	within 6 weeks
	Carry out the suggested remedial works.	within 6 months
Lack of design documents. (Central Warehouse Shed)	The building engineer is required to prepare design documents (including design reports, structural drawings, and material test reports) in compliance with section 1.9.1 (part 6, BNBC).	within 6 weeks
	Carry out the suggested remedial works.	within 6 months
Lack of lateral stability system. (Wastage Warehouse Shed)	The building engineer is required to check the structure's members, connection & stability system and suggest proper remediation accordingly.	within 6 weeks
	Carry out remedial work if required.	within 6 months
Lack of lateral stability system. (Chemical Store Shed)	The building engineer is required to check the structure's members, connection & stability system and suggest proper remediation accordingly.	within 6 weeks
	Carry out remedial work if required.	within 6 months

Lack of design report (Digital Printing-01 Shed).	The building engineer is required to prepare a design report in compliance with BNBC (Part-6).	within 6 weeks
	Implement remediation work if required.	within 6 months
Lack of design report (Digital Printing-02 Shed).	The building engineer is required to prepare a design report in compliance with BNBC (Part-6).	within 6 weeks
	Implement remediation work if required.	within 6 months
Lack of design documents (New Utility (MS Lario) Shed).	The building engineer is required to prepare a design report in compliance with BNBC (Part-6).	within 6 weeks
	Implement remediation work if required.	within 6 months
Corrosion on steel members (All over the print shed and Chemical store shed), Digital Printing-02 Shed & New Utility (MS Lario) Shed).	The building engineer is required to provide rust-proof paint on steel members to protect them from corrosion.	within 6 months
Stress in columns exceeds the normal design limit (Workshop Building).	The building engineer is required to review, design, and column stresses based on in-situ concrete strength.	within 6 weeks
	Take a minimum of 4 concrete cores from the columns.	within 6 weeks
	Produce and actively manage load plans for all floor plates based on floor, column, and foundation capacities.	within 6 weeks
	Implement remedial works.	within 6 months
Columns appear to be slender (Workshop Building).	Factory engineer is required to carry out adequacy check of all the considering slenderness effect.	within 6 weeks
Lack of lateral stability of truss roof (Workshop Building).	The building engineer is required to check the lateral stability of the roof shed.	within 6 weeks
	Implement remediation work if required.	within 6 months
Incomplete load path of steel stair (Workshop Building).	The building engineer is required to check the load path and the structural stability of the steel stair.	within 6 weeks
	Implement remediation work if required.	within 6 months
Lack of design report (ETP Building 1).	The building engineer is required to prepare a design report in compliance with BNBC (Part-6).	within 6 weeks
	Implement remediation work if required.	within 6 months

Lack of design report (ETP Building 2).	The building engineer is required to prepare a design report in compliance with BNBC (Part-6).	within 6 weeks
	Implement remediation work if required.	within 6 months
Lack of design documents (General Store).	A geotechnical engineer is required to prepare a geotechnical investigation report.	within 6 weeks
	Carry out a Detailed Engineering Assessment (DEA) including as-built drawing and design report as per BNBC (Part-6).	within 6 months
	Implement remediation work if required.	within 6 months
Lack of as-built drawing (Fire Pump Room, RMS Room).	The building engineer is required to prepare an as-built drawing.	within 6 weeks
The column is susceptible to vehicle impact. (Central warehouse shed)	The building engineer is required to provide barriers around the column to prevent vehicle impact.	within 6 weeks
Lack of lateral stability system. (Ansar Camp Shed)	The building engineer is required to check the structure's members, connection & stability system and suggest proper remediation accordingly.	within 6 weeks
	Carry out remedial work if required.	within 6 months
Lack of as-built drawing. (Fire control room).	The building engineer is required to prepare as-built drawings.	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 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 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 Architect's and Engineer's drawings provided for us for our views on concealed parts of the structure and in particular foundations. The strengths of materials and components are untested, and we recommend that the factory owners' Building Engineer carry out in situ testing over and above those suggested to satisfy themselves with the material strengths and component details.

Recommendations, where given, are to provide 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 owner's 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.