

Green Smart Shirts Ltd (Extension)

Tapirbari, Mawna, Sreepur, Gazipur
(24.2373838, 90.4342180)
18 September 2023



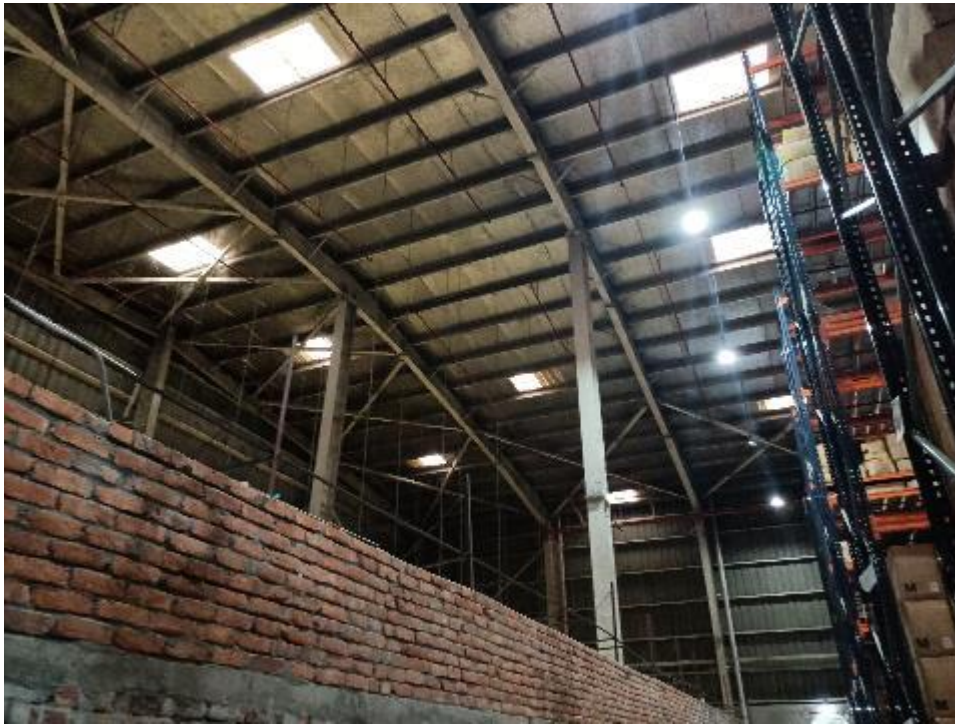
Building Information

1. **Finished Goods Warehouse (G):** The structure is a single-storied prefabricated steel shed.
2. **Raw Materials Warehouse (G+M):** The structure is a single storied prefabricated steel shed with mezzanine floor.
3. **After Wash Shed (G):** The structure is a single-storied (G) prefabricated steel shed.
4. **Gate House (G):** The structure is a single-storied (G) prefabricated steel shed.
5. **STP Shed (G):** The structure is a single-storied (G) shed.

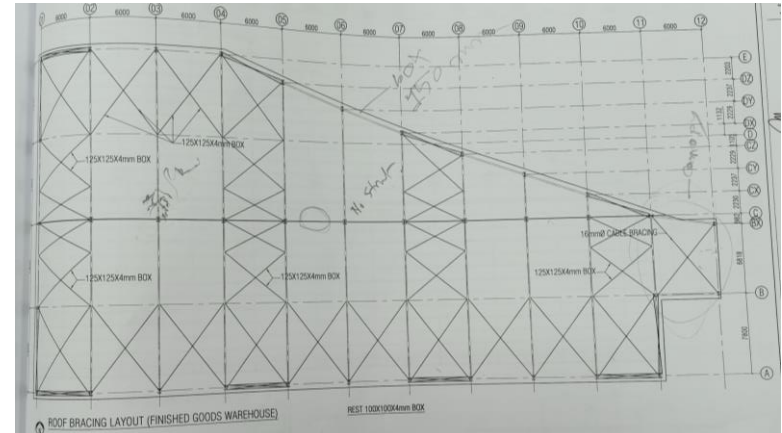
Observations

Incomplete lateral stability system

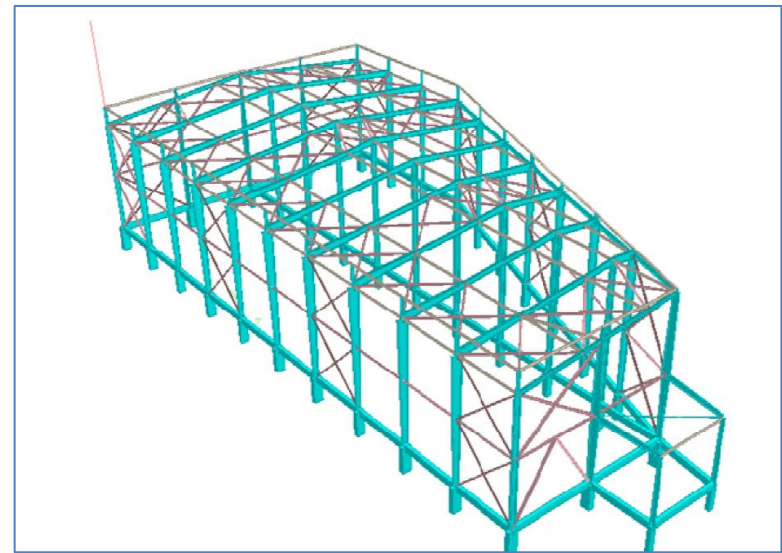
Observation: Finished Goods Warehouse



No compression strut was found along the ridge lines of the long direction. So lateral stability in the long direction is incomplete. The building engineer is required to check the stability system of the existing structure.



Bracings and strut layout



Provided design report

Observation: Finished Goods Warehouse

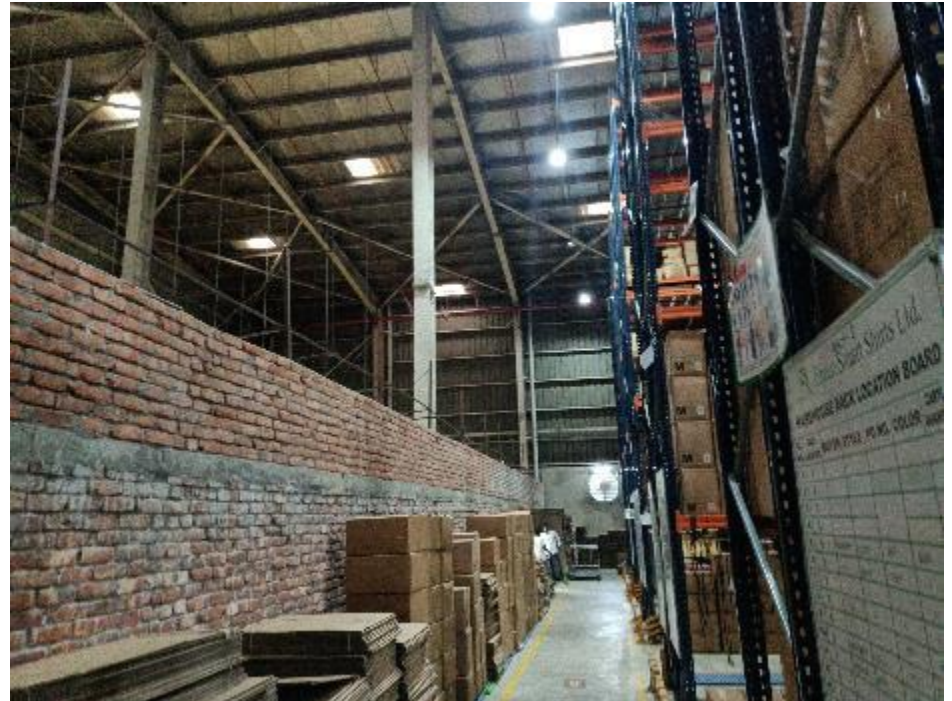
Paucity in as-built drawing

Observation: Finished Goods Warehouse



Bracing joint

Column splice and connection details were not found in the provided as-built drawings. Building engineer is required to incorporate the connection details in the as-built drawing.



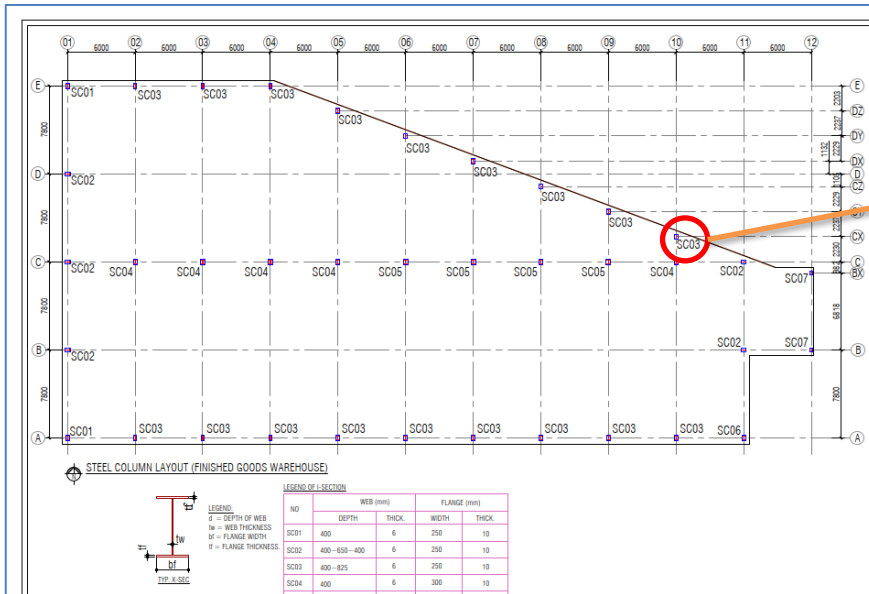
Column splice/ Rafter joint

Observation: Finished Goods Warehouse

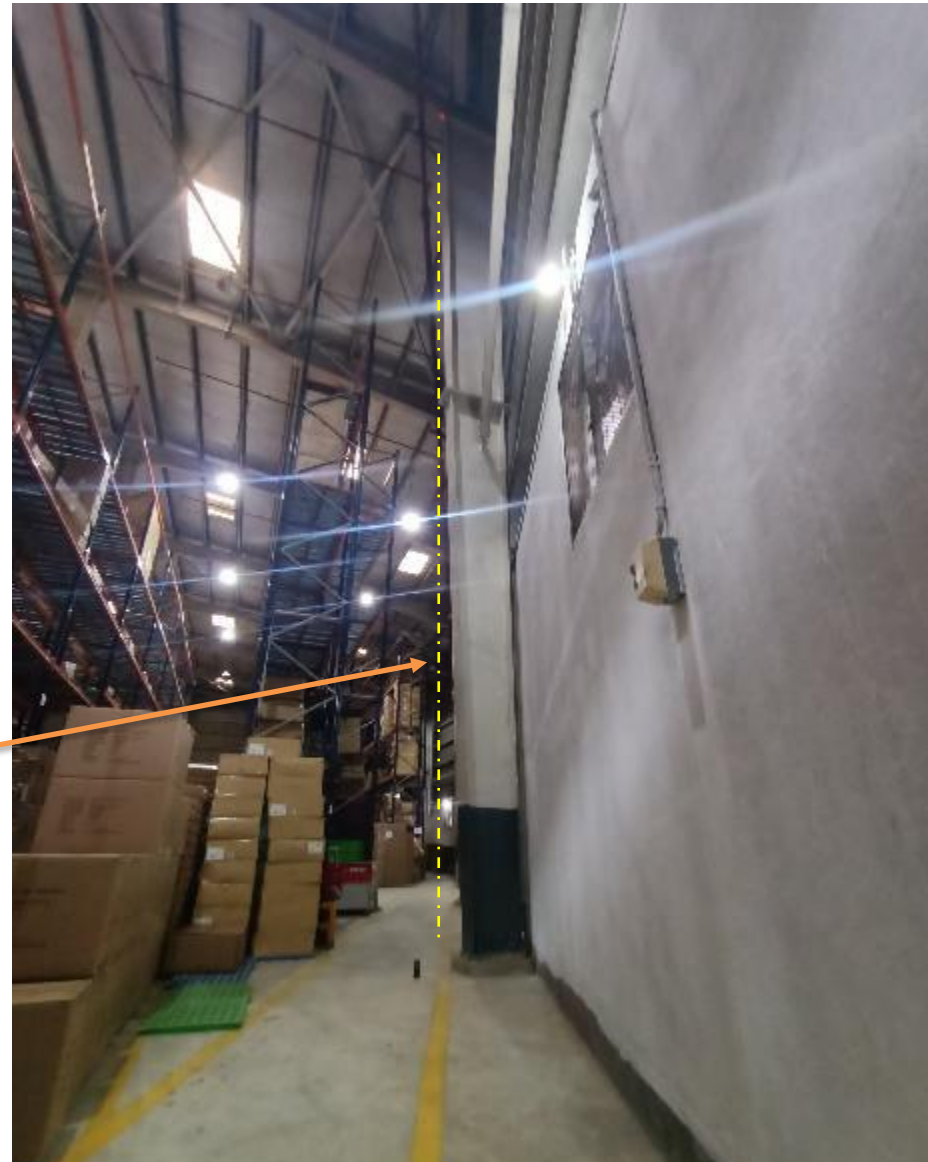
Inclined steel column

Observation: Finished Goods Warehouse

An inclined steel web column was found on the North side of the shed. The stability of the distorted columns and related elements need to be checked.



Column Layout

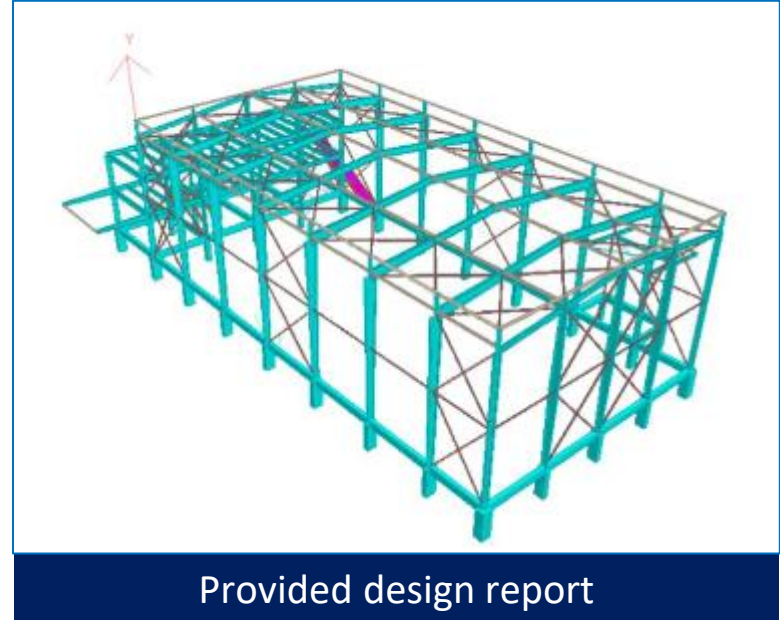


Inclined steel column

Observation: Finished Goods Warehouse

lateral stability system required review

Observation: Raw Materials Warehouse



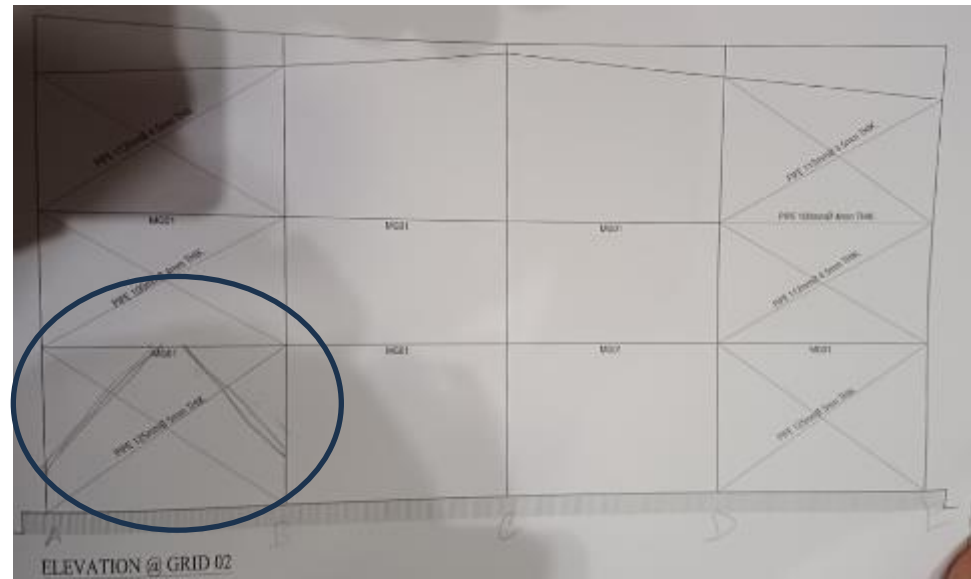
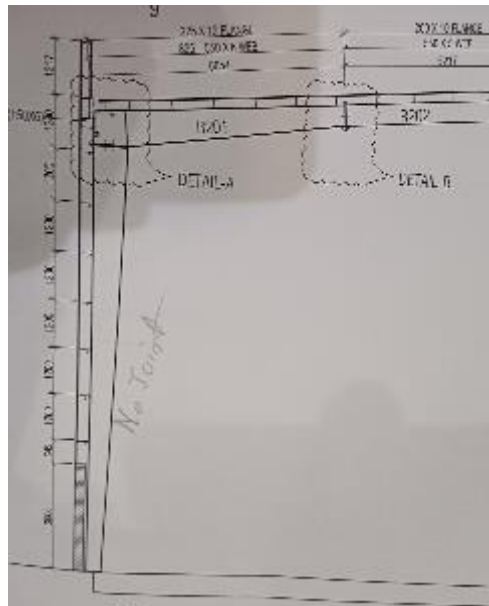
Provided design report

No compression strut was found along the ridge of the long direction. So lateral stability in the long direction is incomplete. The building engineer is required to check the stability system of the existing structure.

Observation: Raw Materials Warehouse

Inconsistencies in as-built drawing

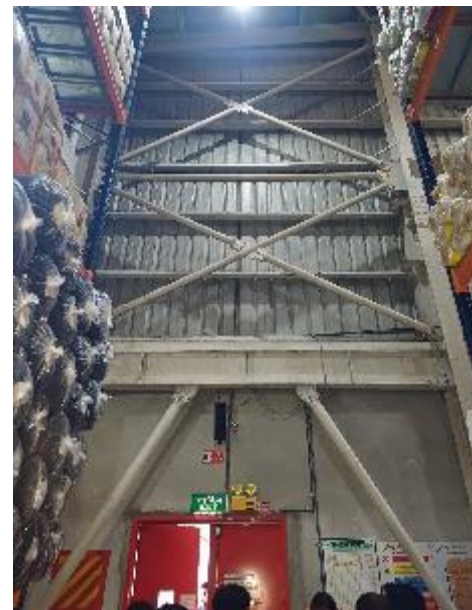
Observation: Raw Materials Warehouse



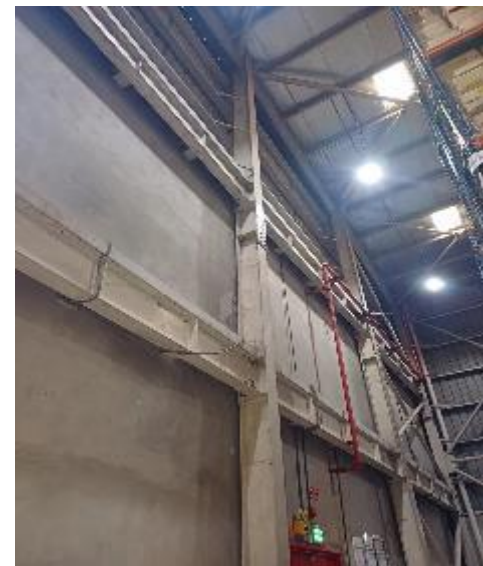
Column joint

Inverted V bracing was found instead of cross bracing at grid 2. Column splice detail is not found in the provided as-built drawings. Moreover, all connection details are not found in the drawings.

Building engineer is required to revise the as-built drawing showing connection details with complete information.



Inverted V bracing



connection details not shown in the drawing

Observation: Raw Materials Warehouse

Lack of lateral stability

Observation: After Wash Shed



No load transfer media along long direction

Load transfer media is not provided along long direction for this shed. Therefore, lateral stability system of the shed is apparently incomplete. Building engineer is required to check the lateral stability of the structure.

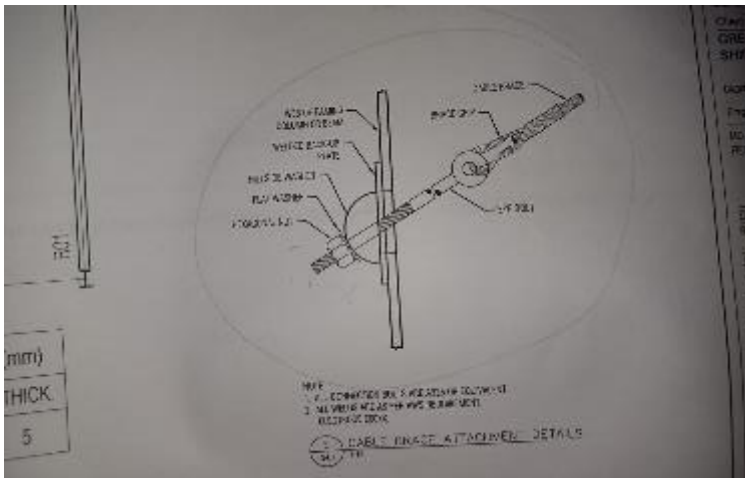
Observation: After Wash Shed

Improper bracing connection

Observation: After Wash Shed



Bracings connection on site



Bracings connection as per drawings

Bracings are not connected as per drawings. Only hooks are used for connection. Building engineer is required to replace the connection as per drawings.

Observation: After Wash Shed

Lack of lateral stability system

Observation: Gate House

Load transfer media is not provided along long direction for this shed. Only cable bracings were found but strut member has not been provided. Therefore, lateral stability system of the shed is apparently incomplete. Building engineer is required to check the lateral stability of the structure.



No load transfer media along long direction

Observation: Gate House

Corrosion in steel member

Observation: Gate House

Corrosion in steel member of Gatehouse were observed in several locations. The building engineer is required to suggest proper remedial measures accordingly



Corrosion

Observation: Gate House

Lack of drawings

Observation: STP Shed

Structural and architectural drawings were found for the STP shed. The building engineer is required to survey the whole structure and prepare a full set of as-built drawings in compliance with section 1.9.1.2, part 6 of BNBC.



Inside of STP shed



STP Shed

Observation: STP Shed

Apparently non-engineered connection

Observation: STP Shed

Apparently inadequate connections were observed at the lightweight roof of the single storied Sheds. The building engineer to check the connection adequacy of the lightweight roof against the uplift pressure of wind.



Steel angel



Steel angel connection with wall

Observation: STP Shed

Problems Observed

Finished Goods Warehouse:

Item-01: Incomplete lateral stability system.

Item-02: Paucity in as-built drawing.

Item-03: Inclined steel column.

Raw Materials Warehouse :

Item-04: lateral stability system required review.

Item-05: Inconsistencies in as-built drawing.

After Wash Shed :

Item-06: Lack of lateral stability.

Item-07: Improper bracing connection.

Gate House:

Item-08: Lack of lateral stability system.

Item 09: Corrosion in steel member.

STP Shed:

Item 10: Lack of drawings.

Item 11: Apparently non-engineered connection.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Incomplete lateral stability system. (Finished Good Warehouse)	Building engineer is required to check the lateral stability of the structure.	6-weeks
02	Incomplete lateral stability system. (Finished Good Warehouse)	Implement remediation work if required.	6-months
03	Mismatches in as built drawings. (Finished Good Warehouse)	Building engineer is required to survey the structure and prepare accurate as-built drawings.	6-weeks
04	Inclined steel column. (Finished Good Warehouse)	Building engineer to review design of distorted steel column considering the as-built condition of the column.	6-weeks
05	Inclined steel column. (Finished Good Warehouse)	Carry out remedial works (if any) after review by RSC.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
06	lateral stability system required review. (Raw Materials Warehouse)	Building engineer is required to check the lateral stability of the structure.	6-weeks
07	lateral stability system required review. (Raw Materials Warehouse)	Implement remediation work if required.	6-months
08	Inconsistencies in as built drawings. (Raw Materials Warehouse)	Building engineer is required to prepare a full set of structural drawings in compliance with section 1.9.1.2, part-6 of BNBC and submit it to RSC for review.	6-weeks
09	Lack of lateral stability. (After Wash Shed)	Building engineer is required to check the lateral stability of the structure.	6-weeks
10	Lack of lateral stability. (After Wash Shed)	Implement remediation work if required.	6-months
11	Improper bracing connection. (After Wash Shed)	Building engineer is required to replace the bracing connection as per drawings.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
12	Lack of lateral stability system. (Gate House)	Building engineer is required to check the lateral stability of the structure.	6-weeks
13	Lack of lateral stability system. (Gate House)	Implement remediation work if required.	6-months
14	Corrosion in steel member (Gate House)	Building engineer to remove the corrosion and apply suitable corrosion resistance coating.	6-weeks
15	Lack of drawings. (STP Shed)	Building engineer is required to prepare the as-built structural drawing in compliance with section 1.9.1.1 as per BNBC.	6-weeks
16	Apparently non-engineered connection. (STP Shed)	Building engineer is required to check the connection of the steel roof for the uplift pressure of wind.	6-weeks
17	Apparently non-engineered connection. (STP Shed)	Complete implementation of remedial works if required.	6-months