

Dana Sweater Industries Ltd (New)

Holding No-97, Shoildubi, Kashimpur, Gazipur.

(23.964841, 90.296959)

18 December 2023



1. Building Information

Building-1: Two storied (G+1) prefabricated steel building.

Production Building-2: Four storied (G+3) reinforced concrete (RC) building.

HR & Admin Building: Two storied (G+1) reinforced concrete (RC) building.

Security Office Building: Two storied (G+1) masonry structure with a steel truss roof.

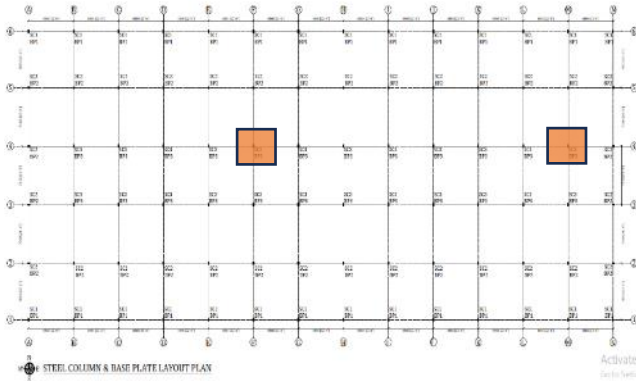
Pump Room: Single storied masonry structure.

Cooling Tower Building: Two storied (G+1) reinforced concrete (RC) building.

RMS Room: Single storied masonry structure.

2. Observations

Observation-1: High stress in ground floor columns that required immediate design review (Production Building-1).



Description: Cursory calculation indicates high stress in ground floor columns (marked above) considering prepared live load 4 kPa for typical floor and minimum steel strength. The building engineer is immediately required to carry out a Detailed Engineering Assessment (DEA) for the structure. Also, maintain live load 2 kPa on 1st floor until the DEA is finalized.

Observation-2: Lack of lateral stability (Production Building-1)



Description: The compression member was absent in the bracing system which may cause inactive lateral stability of the roof. Also, for the ground floor, pin connection is provided along east-west direction, but no vertical bracing is provided. The building engineer is required to check the lateral stability system of the structure and suggest necessary remedial action accordingly.

Observation-3: Undocumented horizontal expansion at west side (Production Building-1).



Description: Undocumented horizontal expansion was found at west side of the structure. The factory is required to collect updated permit drawings from the local authority. The building engineer is required to update the as-built drawing and design report accordingly.

Observation-4: Severe corrosion found on steel members (Production Building-1).



Description: Severe corrosion was found on steel members. The building engineer is required to provide rust proof paint on steel members.

Observation-5: Dampness on wall (Production Building-1).



Description: Dampness was found on brick wall. The building engineer is required to repair the damp areas.

Observation-6: Falling hazard at 1st floor (Production Building-1).

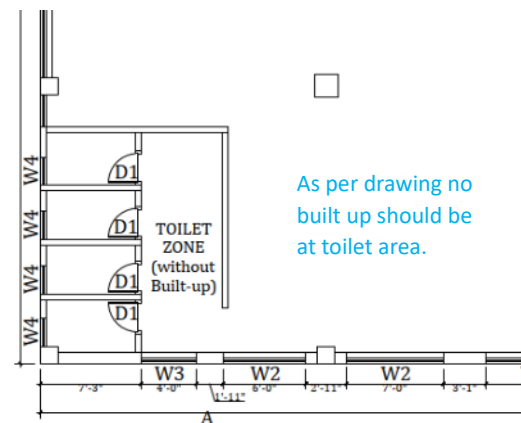


Description: Parapet/railing was not found on the 1st floor. The building engineer is required to provide edge protection to avoid falling hazard.

Observation-7: Discrepancy in architectural drawing (Production Building-2)



Undocumented toilet built up at second floor.



Toilet built up is not shown for typical floor.

Description: Undocumented floor built-up found at toilet areas. The building engineer is required to update the as-built drawing and analysis model accordingly.

Observation-8: Lack of load plan for 1st floor (Production Building-2).



Description: Load plan for 1st floor was not available at the time of inspection. The building engineer is required to produce load plan for 1st floor and include in design report.

Observation-9: Corrosion on steel ladder at roof (Production Building-2)



Description: Corrosion was found on steel members. The building engineer is required to provide rust proof paint on steel members.

Observation-10: Lack of design documents (HR & Admin Building, Security Office Building, Cooling Tower Building).



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 section 1.9.1.1 and section 1.9.1.2 as per BNBC. At the time of inspection, design report/as-built drawing was not available. The building engineer is required to prepare a set of as-built drawing and design reports as per 1.9.1 of BNBC.

Observation-11: Dampness/vegetation on wall/water ponding on roof slab (HR & Admin Building)



Description: Dampness/vegetation was found on brick wall. Also, water ponding was found on roof slab. The building engineer is required to repair the damp areas. Also, improve drainage system on roof slab.

Observation-12: Apparently inadequate slab (Security Office Building)



Description: Brick wall is supported by a strip of slab only which appeared to be inadequate. The building engineer is required to check the adequacy of the load bearing slab and propose any suitable alternatives.

Observation-13: Lack of as-built drawing (Pump Room, RMS Room).



Description: As-built drawing was not available for the Pump Room and RMS Room. The building engineer is required to produce as-built drawing.

3. Action Plan

Observation	Action Plan	Timeline
Production Building-1		
High stress in ground floor columns that required immediate design review (Production Building-1)	Factory is required to maintain live load 2 kPa for 1 st floor until the DEA is finalized	Immediate
High stress in ground floor columns that required immediate design review (Production Building-1)	The building engineer is immediately required to carry out a Detailed Engineering Assessment (DEA) for the structure.	within 6 weeks
High stress in ground floor columns that required immediate design review (Production Building-1)	Implement remediation work if required.	within 6 months
High stress in ground floor columns that required immediate design review (Production Building-1)	Implement floor load plan.	within 6 months
Lack of lateral stability (Production Building-1).	The building engineer is required to check the lateral stability system of the structure and suggest necessary remedial action.	within 6 weeks
Undocumented horizontal expansion at west side (Production Building-1).	The factory is required to collect updated permit drawings from the local authority.	within 6 months
Undocumented horizontal expansion at west side (Production Building-1).	The building engineer is required to update the as-built drawing.	within 6 weeks
Undocumented horizontal expansion at west side (Production Building-1).	Update design report accordingly.	within 6 weeks
Severe corrosion found on steel members (Production Building-1).	The building engineer is required to remove the corrosion and provide rust proof paint on steel members.	within 6 weeks
Dampness on wall (Production Building-1).	The building engineer is required to repair the damp areas.	within 6 weeks
Falling hazard at 1 st floor (Production Building-1).	The building engineer is required to provide edge protection to avoid falling hazard.	within 6 weeks

Observation	Action Plan	Timeline
Production Building-2		
Discrepancy in architectural drawing (Production Building-2)	The building engineer is required to update the as-built drawing and analysis model accordingly.	within 6 weeks
Lack of load plan for 1st floor (Production Building-2).	The building engineer is required to produce load plan based on column & foundation capacity.	within 6 weeks
Lack of load plan for 1st floor (Production Building-2).	Implement remediation work if required.	within 6 months
Corrosion on steel ladder at roof (Production Building-2)	The building engineer is required to provide rust proof paint on steel members.	within 6 weeks
HR & Admin Building		
Lack of design documents (HR & Admin Building)	The building engineer is required to prepare a set of as-built drawing and design reports as per 1.9.1 of BNBC.	within 6 weeks
Lack of design documents (HR & Admin Building)	Carry out remedial works where required.	within 6 months
Dampness/vegetation on wall/Water ponding on roof slab (HR & Admin Building)	The building engineer is required to repair the damp areas.	within 6 weeks
Dampness/vegetation on wall/Water ponding on roof slab (HR & Admin Building)	Improve drainage system on roof slab.	within 6 weeks
Security Office Building		
Lack of design documents (Security Office Building)	The building engineer is required to prepare a set of as-built drawing and design reports as per 1.9.1 of BNBC.	within 6 weeks
Lack of design documents (Security Office Building)	Carry out remedial works if required.	within 6 months
Apparently inadequate slab (Security Office Building)	The building engineer is required to check the adequacy of the load bearing slab and propose any remediation work if required.	within 6 weeks
Cooling Tower Building		
Lack of design documents (Cooling Tower Building)	The building engineer is required to prepare a set of as-built drawing and design reports as per 1.9.1 of BNBC.	within 6 weeks
Lack of design documents (Cooling Tower Building)	Carry out remedial works if required.	within 6 months
Pump Room, RMS Room		
Lack of as-built drawing (Pump Room, RMS Room).	The building engineer is required to prepare a set of as-built drawing.	within 6 weeks