

KAC Fashion Wear Ltd (Extension 2)

12/13 Tetui Bari, Sarabo, Gazipur

(23.977401, 90.263207)

29 November 2023

Structural Inspection Report

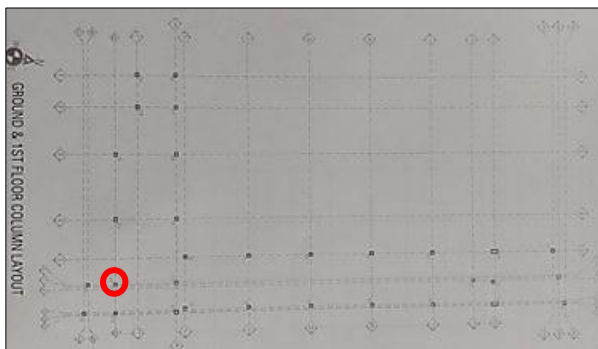


1. Building Information

Office Building: 3 storey (G+2) building.

2. Observations

Observation-1: High stress in column & foundation.



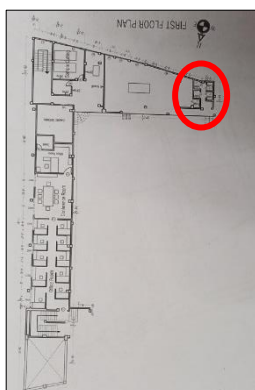
Column layout



OHT, tower & electrical equipment at roof

Description: Cursory calculation indicates that the stress in column & foundation exceeds normal design limit considering 2 kPa floor live load, overhead water tank loads based on minimum concrete strength (14.1 MPa) and ultimate soil bearing capacity (1.5 tsf) from test report. The building engineer is required to check the design, loads and stress of columns & foundations of the building based on in-situ material strength & actual soil bearing capacity and suggest necessary remedial actions accordingly. Also, suggest immediate action if required by further testing & calculation.

Observation-2: High loading on cantilever slab.



Description: High floor-built ups (350mm at left toilets & 200 mm at right toilets) and partition walls were observed on the 125 mm cantilever slab. The span-depth ratio of the slab exceeds the normal design limit. The building engineer is required to check the design, loads and stress in the cantilever slabs of the building based on in-situ material strength and suggest necessary remedial actions.

Observation-3: Lack of information in provided drawing.



Description: Telecom tower, high floor-built ups, steel connection details and level difference & expansion joint between north & south parts were not mentioned in the drawings.

Observation-4: Severe corrosion of rebar in column & slab.



Description: Severe rebar corrosion was found on the 2nd floor column & roof slab. Furthermore, appearance of corrosion in re-bar were found in several locations of the building. The building engineer is required to investigate the reason & extents of corrosion and prepare an investigation report with necessary remedial actions.

Observation-5: Dampness throughout the building.



Description: Dampness was found throughout the building. The building engineer is required to seal the source of water and carry out necessary remedial works as per engineers' suggestion.

3. Action Plan

Item	Observation	Action Plan	Timeline
01	High stress in column & foundation. (Office Building)	Verify in-situ material strength by taking a minimum of 4 cores from the lower tier of existing column.	within 6 weeks
02	High stress in column & foundation. (Office Building)	Investigate the bearing capacity of soil around the close vicinity of the building foundations.	within 6 weeks
03	High stress in column & foundation. (Office Building)	Conduct Detail Engineering Assessment (DEA) to check the design, loads and stress of columns & foundations of the building based on in-situ material strength and soil bearing capacity.	within 6 weeks
04	High stress in column & foundation. (Office Building)	Produce and actively manage a floor loading plan for all floor plates based on foundation, column & floor capacity.	within 6 weeks
05	High stress in column & foundation. (Office Building)	Carry out suggested remedial works if required.	within 6 months
06	High stress in column & foundation. (Office Building)	Implement floor load management program.	within 6 months
07	High loading on cantilever slab.	The building engineer is required to check the design, loads and stress in the cantilever slabs based on in-situ material strength and suggest necessary remedial actions.	within 6 weeks
08	High loading on cantilever slab.	Carry out suggested remedial works.	within 6 months
09	Lack of information in provided drawing.	The building engineer is required to survey the whole structure and prepare accurate as-built drawings.	within 6 weeks
10	Severe corrosion of rebar in column & slab.	The building engineer is required to investigate the reason & extents of corrosion and prepare an investigation report with necessary remedial actions.	within 6 weeks
11	Severe corrosion of rebar in column & slab.	Carry out suggested remedial works.	within 6 months
12	Dampness throughout the building.	The building engineer is required to seal the source of water and carry out necessary remedial works as per engineers' suggestion.	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 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.