INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

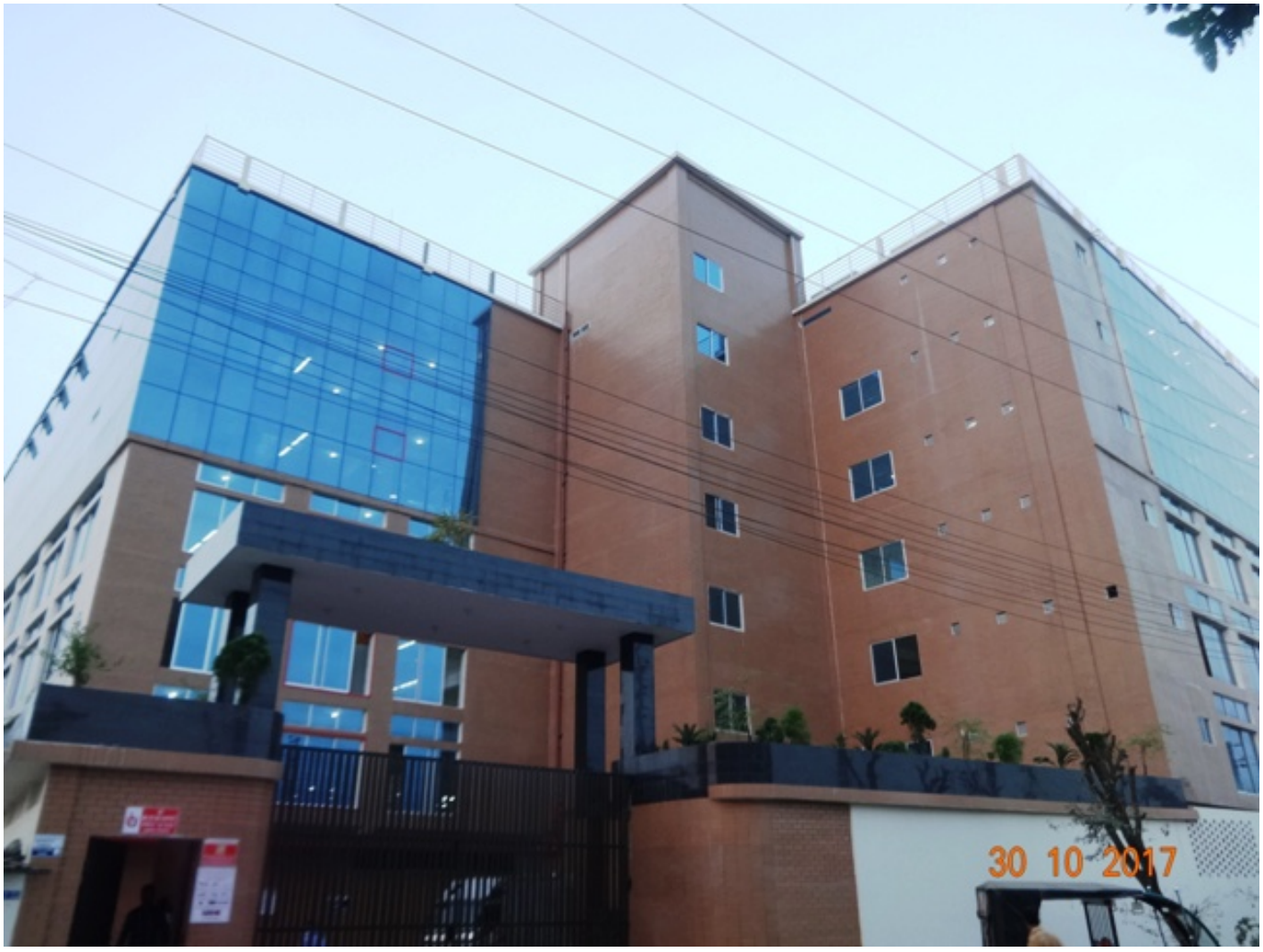
Factory Name:	**Crown Exclusive Wears Ltd.**
Address:	**Mawna, Sreepur, Gazipur. Gazipur Bangladesh**
Assessor:	**Shaheedullah**
Date:	**30 Oct 2017**

Introduction to the Report

The following report contains a site profile and summary of non-conformities identified during an onsite assessment commissioned by the Alliance for Bangladesh Worker Safety (Alliance) and conducted by a third-party Qualified Assessment Firm (QAF). The assessment was conducted against the Alliance for Bangladesh Worker Safety Assessment Protocols (APs) and Fire Safety and Structural Integrity Standard, which is harmonized with the factory assessment guidelines developed by Bangladesh University of Engineering and Technology (BUET) for the Bangladesh National Tripartite Plan of Action (NTPA). The goal of the Alliance process is to provide clear and practical technical requirements by which Bangladeshi Ready Made Garment (RMG) Factories producing for Alliance members may be consistently and fairly evaluated for fire, structural, and electrical safety in a non-duplicative manner. Each assessment will prompt action plans that will be used by RMG factories to systematically and sustainably improve safety conditions for garment workers. Beyond tracking and reporting on action steps taken in a transparent manner, the Alliance organization and its members will seek to further support factory improvements through technical assistance, training, implementation support for functional Worker Committees, and in some cases financial assistance and wage support for workers if factories are closed for remediation.

The contents of the report do not constitute a guarantee of compliance with the applicable laws, the Alliance Standard or the absolute or continued safety against fire, electrical and/or structural integrity issues that may lead to injury or loss of life. The report is designed to provide a non-exhaustive summary of risk issues, based on a limited sampling and duration of time onsite by the named QAF. Neither the QAF nor the Alliance can certify or guarantee the quality, outcome, or effectiveness of actions taken in response to the report.

For more information and report feedback please go to: www.bangladeshworkersafety.org.



GENERAL INFORMATION

General Information	
Factory Name:	Crown Exclusive Wears Ltd.
Address:	Mawna, Sreepur, Gazipur. Gazipur Bangladesh
Country:	Bangladesh
Province:	
City:	Gazipur
Zip Code:	
Audit Duration:	2 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	13.11.2017
Final Report Date :	17.01.2018
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex :	There are 6 buildings in the factory complex. Out of 6 buildings 1 is production building and 5 are ancillary buildings. Name of the production building is given below: 1) 7-storied Rc production building.
Number of Building Levels (Stories) :	7-storied Rc production building: 7 storied above grade (G+6).
Approximate Building Area (SF) :	Area is about 2,25,000 sft
Date of Building Construction :	2017
Date of Last Building Renovation/Addition :	No renovation or addition has been noticed.
Is the Building mixed use?:	Yes
Ancillary Structures in Complex :	There are 5 ancillary buildings. Name of the 5 ancillary buildings are given below: 1) 1-storied Rc Boiler, Generator and storage Building. 2) 1-storage Rc utility Building#1. 3) ETP. 4) 1-storied Rc security Room attached with gate-01. 5) 1-storied Rc security Room and Chemical store attached with gate-02.
Number of Ancillary Levels (Stories) :	All ancillaries are 1-story above grade.

Approximate Ancillary Structures Area (SF) :	1) 1-storied Rc Boiler, Generator and storage Building: about 4,535 sft. 2) 1-storage Rc utility Building#1: about 3,190 sft. 3) ETP. 4) 1-storied Rc security Room attached with gate-01: about 950 sft. 5) 1-storied Rc security Room and Chemical store attached with gate-02: about 1,143 sft.
Number of Occupants :	Total = 1,223 Persons.
Exterior Facade Description :	R.C. framework in filled with 5/10 inch thick masonry wall and curtain glass wall.
Structural System Description :	Frame work of the building is composed of RC slab, Beams and columns supported by spread footings and combined footings.
Issues were not found during the structural integrity assessment that required the Emergency Escalation Protocol (and referral to NTC Review Panel)?:	Yes

ASSESSMENT FINDINGS

Structural System Design		
Question:	Are the available FoS for the columns adequate based on Preliminary calculation?	
Priority Level:	High	
Non-Compliance Level:	2	
Description:	FoS for 7-storied R.C. production building considering minimum live load 42 psf has been found adequate based on preliminary calculation. FoS for 7-storied R.C. production building considering live load 60 psf (observed onsite), the exterior columns has been found inadequate based on preliminary calculations. Some doubts about safety.	
Source of Findings:	Uploaded Document: FoS of 7-storied R.C. production	
Suggested Plan of Action:	Under guidance from a qualified structural engineer arrange Detail Engineering Assessment of the structure. This assessment should included destructive core testing to validate the in-situ concrete compressive strength of structural elements. The assessment should focus on the exterior columns as indicated by the upload FoS calculations.	
Suggested Deadline Date:	15 Mar 2018	
Standard:	Provide results of preliminary calculations in space provided. a) column capacity; FoS > 1.86 - Safe b) column capacity; FoS 1.5 -1.86 - Needs Evaluation c) Column capacity; FoS 1.25-1.5 - Needs Evaluation d) Column capacity; FoS <1.25 - Unsafe In case of a critically low FoS (<1.25), consider Immediate Escalation Protocol	
Question:	Have provisions been made in floors or decks for a concentrated load (such as heavy equipment, water tanks, stored materials, etc) applied at a location wherever this load acting upon an otherwise unloaded floor would produce stresses greater than those caused by a uniform load?	 
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	2-nos of iron machine at 1st floor and dry cell batteries at 4th and 5th floor have been noticed.	
Source of Findings:	Photograph: Picture attached, Visual Assessment: Visual inspection	
Suggested Plan of Action:	Engage a qualified structural engineer to confirm and document that provisions have been made to accommodate concentrated loads. If provisions have not been made, have a qualified structural engineer develop a remediation plan.	
Suggested Deadline	15 Mar 2018	

Date:		
Standard:	Alliance Standard Part 8 Section 8.13 and 8.14	
Question:	Are Certificates of Occupancy available for review?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Certificate of Occupancy has not been found.	
Source of Findings:	Document Review: Seen all documents	
Suggested Plan of Action:	Certificate of occupancy shall be obtained from appropriate authority.	
Suggested Deadline Date:	15 Mar 2018	
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment	
Structural System Construction		
Question:	Are any structural elements constructed with MCAC exposed to rainfall or other sources of water sealed with a protective coating to prevent water intrusion?	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	Roofs all of building made of MCAC have been found exposed to rainfall.	
Source of Findings:	Photograph: Picture attached, Visual Assessment: Visual inspection	
Suggested Plan of Action:	Provide a protective coating over the structural elements constructed with MCAC exposed to rainfall or other sources of water. Have protective coating approved by the Alliance or a qualified structural engineer.	
Suggested Deadline Date:	15 Mar 2018	
Standard:	Alliance Standards Part 7 Building Materials Section 7.2 Masonry-chip aggregate concrete (MCAC).	
Question:	Is expansion joint material free from cracking and other forms of deterioration?	
Priority Level:	Low	
Non-Compliance Level:	2	
Description:	Expansion joint top coping material has been found cracked.	
Source of Findings:	Visual Assessment: Visual inspection	

Suggested Plan of Action:	Remove deteriorated expansion joint material and provide new approved material at the expansion joint.
Suggested Deadline Date:	15 Mar 2018
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance