

# INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

Factory Name: **4 YOU CLOTHING LTD**  
Address: **367/1 Senpara Parbata, Mirpur-10, Dhaka Dhaka  
Dhaka Bangladesh**  
Assessor: **Bureau Veritas**  
Date: **01 Jun 2014**





## 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](http://www.bangladeshworkersafety.org).





## GENERAL INFORMATION

General Information	
Factory Name:	4 YOU CLOTHING LTD
Address:	367/1 Senpara Parbata, Mirpur-10, Dhaka Dhaka Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Dhaka
Zip Code:	1216
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	06-01-2014
Final Report Date :	06-30-2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex :	There is one building in the factory premises. The building is named as: 1) Ten story RCC Main Production Building.
Number of Building Levels (Stories) :	1) Ten story RCC Main Production Building: Stories above grade: 10, Stories below grade: 0, Occupied levels: 10.
Approximate Building Area (SF) :	Total area of all buildings in the factory premises: 86176.75 sft. Building wise breakdown as follows: 1) Ten story RCC Main Production Building: 86176.75 sft Ground floor: 7834.25 sft, 1st floor: 7834.25 sft, 2nd floor: 7834.25 sft, 3rd floor: 7834.25 sft, 4th floor: 7834.25 sft, 5th floor: 7834.25 sft, 6th floor: 7834.25 sft, 7th floor: 7834.25 sft, 8th floor: 7834.25 sft, 9th floor: 7834.25 sft, Roof: 7834.25 sft.
Date of Building Construction :	Factory personnel informed the date of construction as follows: 1) Ten story RCC Main Production Building: Started in December-1995 but no record for finished time.
Date of Last Building Renovation/Addition :	Factory personnel informed the date of last building renovation as follows: 1) Ten story RCC Main Production Building: Renovation works are going on.
Is the Building mixed use?:	No
Ancillary Structures in Complex :	There is no ancillary structure on the factory premises.
Number of Ancillary	There is no ancillary structure on the factory premises.



Levels (Stories) :	
Approximate Ancillary Structures Area (SF) :	There is no ancillary structure on the factory premises.
Number of Occupants :	Total number of occupants: 1640. 1) Ten story RCC Main Production Building: 1640 (Ground floor: 60, 1st floor: 210, 2nd floor: 212, 3rd floor: 230, 4th floor: 80, 5th floor: 235, 6th floor: 90, 7th floor: 218, 8th floor: 225, 9th floor: 80).
Exterior Facade Description :	The exterior of the building is of infilled brick wall in frame of the structure. Windows and Exhaust fan are exists in exterior face. The overall condition of the façade is good without any crack and defect.
Structural System Description :	This building is a Moment Resisting RCC structure. The foundation type of the building is piles interconnected by mat foundation.



## ASSESSMENT FINDINGS

### Structural System Design

Question:	If the structure has been previously expanded, was the structural impact on the entire structure analytically evaluated and confirmed by a qualified structural engineer.	
Priority Level:	Medium	
Non-Compliance Level:	2	
Description:	There are two RCC water tanks at the top of the staircase without any documentation. The impact of these RCC water tanks on the entire structure has not been analytically evaluated and confirmed by a qualified structural engineer.	
Source of Findings:	Document Review: Document review on site., Visual Assessment: Visual inspection on site.	
Suggested Plan of Action:	Have a qualified structural engineer complete an analytical evaluation of the structural impact of the addition.	
Suggested Deadline Date:	09 Aug 2014	
Standard:	Reference Alliance Standards Part 8 Section 8.1 Applicability of Building Code.	
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:	There is one plastic tank, with a two ton capacity, on roof. There are two RCC water tanks at the top of the staircase without any documentation. There is no analytical information on the provisions for the tanks in the design.	
Source of Findings:	Visual Assessment: Visual assessment on site.	
Suggested Plan of Action:	Engage a qualified structural engineer to confirm and document that provisions have been made to accommodate these water tanks. If provisions have not been made, have a qualified structural engineer develop a remediation plan.	
Suggested Deadline Date:	15 Aug 2014	
Standard:	Alliance Standard Part 8 Section 8.13 and 8.14	



Question:	Are credible structural design documents available for review and kept on site?
Priority Level:	Medium
Non-Compliance Level:	1
Description:	There is a set of credible design document available for review and kept on site. Mr.Fazlul Karim but his IAB no. and the signature are not available in the design of the building.
Source of Findings:	Document Review: Document review on site.
Suggested Plan of Action:	Provide the full credential of the Architect of Record.
Suggested Deadline Date:	01 Dec 2014
Standard:	Alliance Standard Part 8 Section 8.19 Required Structural Documentation for New and Existing Factories
Question:	Where density of operations, storage of materials, or equipment weights require live load capacity in excess of 2.0 kN/m <sup>2</sup> (42 psf), do the design documents confirm that the required load capacity exists? Or has the load capacity been analytically confirmed and certified by an Alliance-qualified structural engineer?
Priority Level:	Medium
Non-Compliance Level:	1
Description:	The density of operation in 9th floor exceeds 42 psf. The estimated live load in 9th floor is 105 psf but as per design report the live load should not exceed 80 psf.
Source of Findings:	Document Review: Document review on site., Visual Assessment: Visual assessment on site.
Suggested Plan of Action:	Have a qualified structural engineer confirm that capacity to support the load is available. Load Plans complying with the Alliance Standard Part 8 Section 8.20.4.3 should also be developed.
Suggested Deadline Date:	09 Aug 2014
Standard:	Alliance Standards Part 8 Section 8.15 Minimum Floor Design Loads
Question:	Are Certificates of Occupancy available for review?
Priority Level:	Low
Non-Compliance Level:	1
Description:	The factory has not obtained the Certificate of Occupancy from the authority.
Source of Findings:	Document Review: Document review on site.





Suggested Plan of Action:	Apply for a certificate of occupancy and obtain it as soon as possible from the authority.
Suggested Deadline Date:	09 Aug 2014
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment

### Structural System Construction

Question:	If the building is currently being renovated or expanded, are the Construction Practices and Safety requirements of Section 9 being followed?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	AN renovation work is going on during inspection, but construction Practices and Safety requirements of Section 9 are not followed, For example: 1) Workers did not wear safety equipment's.
Source of Findings:	Visual Assessment: Visual inspection on site.
Suggested Plan of Action:	Construction Practices and Safety requirements of Section 9 should be followed for any kind of construction work
Suggested Deadline Date:	01 Dec 2014
Standard:	Alliance Standard Part 9 Construction Practices and Safety.
Question:	Have all areas of needed maintenance, including areas with efflorescence, dampness, standing water on rooftops, and corrosion been addressed.
Priority Level:	Medium
Non-Compliance Level:	1
Description:	There is standing water on the roof top.
Source of Findings:	Document Review: Document review on site., Visual Assessment: Visual assessment on site.
Suggested Plan of Action:	Under guidance from a qualified structural engineer, address all areas of needed maintenance by correcting the identified issues.
Suggested Deadline Date:	09 Aug 2014
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance







Question:	Are all non-structural elements suspended from, attached to, or resting atop the structure adequately anchored and braced to resist earthquake forces?
Priority Level:	Medium
Non-Compliance Level:	1
Description:	In the store room, on the ground floor and 6th floor, there are racks which are not braced for earthquake force.
Source of Findings:	Visual Assessment: Visual inspection on site.
Suggested Plan of Action:	Adequately anchor and brace all non-structural elements to resist earthquake forces to comply with the BNBC and the Alliance Standard.
Suggested Deadline Date:	09 Aug 2014
Standard:	Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6



### Structural Safety Programs

Question:	Is a program in place to ensure that the live loads for which a floor or roof is or has been designed will not be exceeded?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	There is no program that will ensure that the designated load in each floor will not be exceeded.
Source of Findings:	Document Review: Document review on site.
Suggested Plan of Action:	Develop a program to ensure that all live loads, for which a floor or roof is designed, will not be exceeded. The designated Load Manager shall oversee this program and ensure it is enforced.
Suggested Deadline Date:	09 Aug 2014
Standard:	Alliance Standard Part 13 Section 13.7 and Part 8 Section 8.9.
Question:	Have Load Plans been prepared for each floor documenting the actual maximum operational loading that is intended and/or allowable on each floor.
Priority Level:	Low
Non-Compliance Level:	3
Description:	There is no Load Plan available to show the actual maximum operational loading allowable.
Source of Findings:	Document Review: Document review on site.





Suggested Plan of Action:	Have a qualified structural engineer develop Floor Loading Plans per the requirements of Part 8 Section 8.20.5.3.	
Suggested Deadline Date:	09 Aug 2014	
Standard:	Alliance Standard Part 8 Section 8.10 Floor Loading Plans (Load Plans)	
Question:	Are Floor Load Plans posted as required?	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	Floor Load Plans are not posted as required.	
Source of Findings:	Visual Assessment: Visual assessment on site.	
Suggested Plan of Action:	Have a qualified structural engineer prepare load plans including the information required in Section 8.20 of the Alliance Standard and post them in all required location.	
Suggested Deadline Date:	09 Aug 2014	
Standard:	Alliance Standard Part 8 Section 8.20.5.3	
Question:	Are areas used for storage of work materials and work products, clearly marked to indicate the acceptable loading limits as described in the Load Plan for that floor?	
Priority Level:	Low	
Non-Compliance Level:	3	
Description:	There is no Load Plan, or marking on the floor to designate spaces and height for the storage of work materials.	
Source of Findings:	Visual Assessment: Visual inspection on site.	
Suggested Plan of Action:	Have a qualified structural engineer prepare a Load Plan for each floor and have the floors marked for designated storage areas as per the developed Load Plan.	
Suggested Deadline Date:	09 Aug 2014	
Standard:	Alliance Standard Part 8 Section 8.11 Floor Load Markings	