

# INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

Factory Name: **AJ Super Garments Ltd (Woven)**  
Address: **Aj Garden, Goshbagh Zirabo Zirabo, Savar Savar  
Dhaka Bangladesh**  
Assessor: **Sumerra**  
Date: **23 Mar 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

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Factory Name:	AJ Super Garments Ltd (Woven)
Address:	Aj Garden, Goshbagh Zirabo Zirabo, Savar Savar Dhaka Bangladesh
Country:	Bangladesh
Province:	Dhaka
City:	Savar
Zip Code:	1341
Audit Duration:	2 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	March 24, 2014
Final Report Date :	April 28, 2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex :	1 Building
Number of Building Levels (Stories) :	6
Approximate Building Area (SF) :	160,800 sft
Date of Building Construction :	Construction started in 2004 & completed up to 5th floor in 2007.
Date of Last Building Renovation/Addition :	Building completed in 2007
Is the Building mixed use?:	No
Ancillary Structures in Complex :	Generator Room, Waste Room, Child Care (Ansar)
Number of Ancillary Levels (Stories) :	All 1 story
Approximate Ancillary	3604 sft

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Structures Area (SF) :	
Number of Occupants :	2536 persons
Exterior Facade Description :	Basic brick facade on RCC frame. Standard windows and doors. Exterior facade is in good condition.
Structural System Description :	RCC frame structure with 5' brick wall



## ASSESSMENT FINDINGS

### Structural System Design


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:	3	
Description:	Live load has not been calculated for storage area (Bonded Warehouse) on Ground floor used for storage of fabric and other raw material.	
Source of Findings:	Visual Assessment: Visually observed areas of potential excess live loads.	
Suggested Plan of Action:	Factory should engage an expert structural engineer to calculate actual live load for each critical section of the floor, particularly storage area and sewing section. Measured live load should be verified with the designed live load considering factor of safety. If it is overloaded, immediately excess live load from that part should be removed.	
Suggested Deadline Date:	10 Jun 2014	
Standard:	Alliance Standards Part 8 Section 8.15 Minimum Floor Design Loads	
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:	A concentrated load of materials (fabrics) are piled up in the storage area in ground floor and no live load has been calculated or posted.	
Source of Findings:	Photograph: Fabrics store in Ground floor	
Suggested Plan of Action:	Engage a qualified structural engineer to confirm and document that appropriate provisions have been made to accommodate concentrated loads in the storage area (although on ground floor, there may be question regarding quality of castings). If appropriate provisions have not been made, have a qualified structural engineer develop a remediation plan.	
Suggested Deadline Date:	10 Jun 2014	








Standard:	Alliance Standard Part 8 Section 8.13 and 8.14
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**Structural System Construction**

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:	3	
Description:	Racks for accessories in accessories store on Ground floor are not anchored as per Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6.	
Source of Findings:	Photograph: Rack without anchorage in gground floor	
Suggested Plan of Action:	Adequately anchor and brace accessories rack systems to resist earthquake forces to comply with the BNBC and Alliance Standard.	
Suggested Deadline Date:	10 Jun 2014	
Standard:	Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6	

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:	Water ponding in roof top of north side stair case therefor not in compliance with Alliance Standard Part 8 Section 8.26 Durability and Maintenance. Additionally, exposed rebar was observed in 11 columns on roof top & in two beam in west exterior.	
Source of Findings:	Photograph: Photos of exposed rebar Photo of ponding on roof	
Suggested Plan of Action:	Remove ponded water from rooftop. As noted elsewhere, install roof drainage system and proper roof slope to prevent water from ponding on roof.	
Suggested Deadline Date:	23 Jun 2014	 
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance	

**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?
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Priority Level:	Medium
Non-Compliance Level:	3
Description:	Fabrics in ground floor area should be kept as per load plan as per 2006 BNBC Part 6 Chapter 1 Section 1.4.6 and Alliance Standard Part 13 Section 13.7 and Part 8 Section 8.9.
Source of Findings:	Worker Interviews: Management confirmed no program in place for monitoring live loads.
Suggested Plan of Action:	Develop a program to ensure that all live loads for which a floor or roof has been designed for will not be exceeded. The designated Load Manager shall oversee this program and ensure it is enforced.
Suggested Deadline Date:	10 Jun 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:	Load Plans have not been prepared for each floor documenting the actual maximum operational loading that is intended and/or allowable on each floor as per Reference Alliance Standards Part 8 Structural Design Section 8.10 Floor Loading Plans (Load Plans).
Source of Findings:	Document Review: No load plans available for review.
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:	10 Jun 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:	Assessment team did not see any load plan anywhere in the building as per Alliance Standard Part 8 Section 8.20.5.3.
Source of Findings:	Visual Assessment: Assessment team did not observe any load plan anywhere in the building as per Alliance Standard Part 8 Section 8.20.5.3.
Suggested Plan of	As noted elsewhere, have a qualified structural engineer prepare load plans



Action:	including the information required in Section 8.20 of the Alliance Standard. For each section of a floor, live load should be posted in the adjacent column, particularly for the critical sections.
Suggested Deadline Date:	10 Jun 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:	Assessment team did not observe any load plans posted as per Reference Alliance Standards Part 8 Structural Design Section 8.11 Floor Load Markings.
Source of Findings:	Visual Assessment: Assessment team did not observe any load plans posted
Suggested Plan of Action:	Provide signage or the appropriate markings at all areas used for storage to indicate the acceptable loading limits detailed in the Load Plan.
Suggested Deadline Date:	10 Jun 2014
Standard:	Alliance Standard Part 8 Section 8.11 Floor Load Markings
Question:	Is a designated representative (Factory Load Manager), who is onsite full time, trained regarding the structural floor capacity, and serves as an ongoing vendor resource and monitor of operational factory floor loadings?
Priority Level:	Low
Non-Compliance Level:	3
Description:	Load Manager is not present. Load Manager should be required for load planning properly in every floor as per Alliance Standards Part 8 Section 8.9 Factory Load Manager.
Source of Findings:	Worker Interviews: Management confirms they have not designated Load Manager
Suggested Plan of Action:	Designate a representative as the Factory Load Manager. The Factory Owner shall ensure that at least one individual, the Factory Load Manager who is located onsite full time at the factory, is trained in calculating operational load characteristics of the specific factory. The Factory Load Manager shall serve as an ongoing resource to factory and be responsible to ensure that the factory operational loads do not at any time exceed the factory floor loading limits as described on the Floor Loading Plans.
Suggested Deadline Date:	27 May 2014



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Standard: Alliance Standards Part 8 Section 8.9 Factory Load Manager