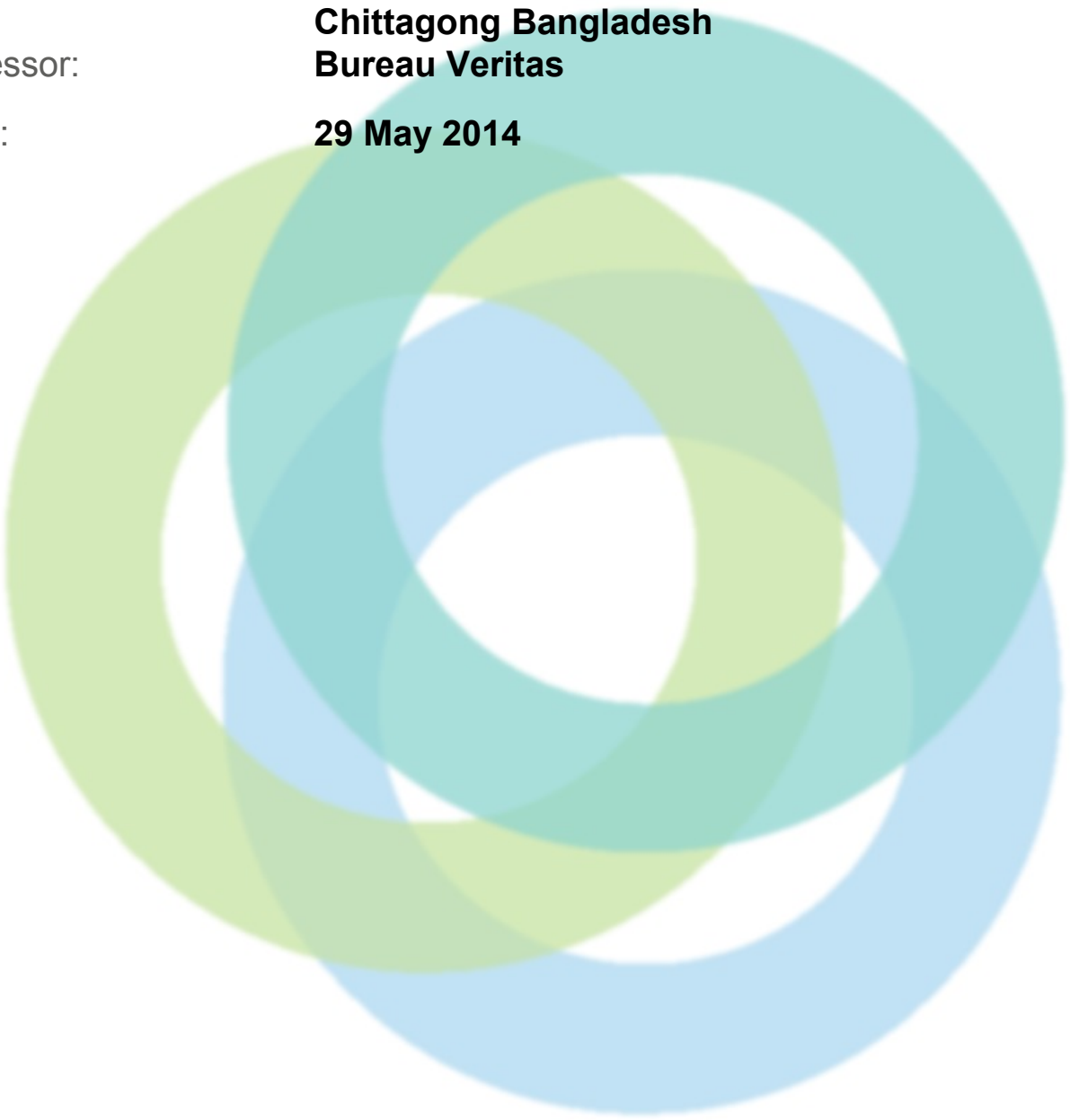


INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

Factory Name: **KDS Fashion Ltd.**
Address: **253-254, Nasirabad I/A Baizid Bostami Road
Chittagong Bangladesh**
Assessor: **Bureau Veritas**
Date: **29 May 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.





GENERAL INFORMATION

General Information	
Factory Name:	KDS Fashion Ltd.
Address:	253-254, Nasirabad I/A Baizid Bostami Road Chittagong Bangladesh
Country:	Bangladesh
Province:	
City:	Chittagong
Zip Code:	
Audit Duration:	8 Hours
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	06-06-2014
Final Report Date :	10-18-2014
Are all Action Items From Previous Assessment Completed?:	N/A
Buildings in Complex :	There are five buildings in the factory premises out of which one is main production building and four are ancillary buildings. The buildings are named as: 1) Seven story main production building , 2) Two story RCC utility building, 3) Single story maintenance and quality shed, 4) Single story security building, 5) Single story parking prefab shed.
Number of Building Levels (Stories) :	Total area of buildings in the factory premises: 301061 sft. Building wise breakdown as follows: 1) Seven story main production building: Stories above grade: 7, Stories below grade: 0, Occupied levels: 7, 2) Two story RCC utility building: Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, 3) Single story maintenance and quality shed: Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 4) Single story security building: Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 5) Single story parking prefab shed: Stories above grade: 1, Stories below grade: 0, Occupied levels: 1.
Approximate Building Area (SF) :	Total area of all buildings in the factory premises: 194220 sft. Building wise breakdown as follows: 1) Seven story main production building: 188200 sft (Ground floor: 26360 sft, 1st floor: 28900 sft, 2nd floor: 28900 sft, 3rd floor: 28900 sft, 4th floor: 28900 sft, 5th floor: 28900 sft, 6th floor: 17340 sft), 2) Two story RCC utility building: 2000 sft (Ground floor: 1000 sft, 1st floor: 1000 sft), 3) Single story maintenance and quality shed: 3500 sft, 4) Single story security building: 100 sft, 5) Single story parking prefab shed: 420 sft.
Date of Building Construction :	Factory personnel informed the date of construction as follows: 1) Seven story main production building: Finished in 2008, 2) Two story RCC utility building: Finished in 2008, 3) Single story maintenance and quality shed: Finished in 2008, 4) Single story security building: Finished in 2008, 5) Single story parking prefab shed: No information of construction date found.
Date of Last Building Renovation/Addition :	No record for date of renovation or addition was found from factory personnel.



Is the Building mixed use?:	No
Ancillary Structures in Complex :	1) Two Story RCC utility building, 2) Single story maintenance and quality shed, 3) Single story security building, 4) Single story parking prefab shed.
Number of Ancillary Levels (Stories) :	1) Two story RCC utility building: Stories above grade: 2, Stories below grade: 0, Occupied levels: 2, 2) Single story maintenance and quality shed Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 3) Single story security building: Stories above grade: 1, Stories below grade: 0, Occupied levels: 1, 4) Single story parking prefab shed: Stories above grade: 1, Stories below grade: 0, Occupied levels: 1.
Approximate Ancillary Structures Area (SF) :	1) Two story RCC utility building: 2000 sft (Ground floor: 1000 sft, 1st floor: 1000 sft), 2) Single story maintenance and quality shed: 3500 sft, 3) Single story security building: 100 sft, 4) Single story parking prefab shed: 420 sft.
Number of Occupants :	Total number of occupants: 2864. 1) Seven story main production building: 2817 (Ground floor: 105, 1st floor: 550, 2nd floor: 550, 3rd floor: 550, 4th floor: 550, 5th floor: 510, 6th floor: 2), 2) Two story RCC utility building: 15 (Ground floor: 10, 1st floor: 5, 3) Single story maintenance and quality shed: 30, 4) Single story security building: 02, 5) Single story parking prefab shed: 0.
Exterior Facade Description :	The building is RCC frame structure with infilled masonry wall. Exterior face of the masonry wall is of plaster and paint works. The main door of the building is a steel door and the windows are of sliding glass type.
Structural System Description :	This building is a moment resisting frame with monolithic beam slab. Foundation is unknown.



ASSESSMENT FINDINGS

Structural System Design

Question:	Are credible structural design documents available for review and kept on site?	
Priority Level:	Medium	
Non-Compliance Level:	3	
Description:	Structural documents are not available for review.	
Source of Findings:	Document Review: Documents unavailable.	
Suggested Plan of Action:	Have a qualified structural engineer prepare credible as-built documents based on the requirements of Part 8 Section 8.19 of the Alliance Standard.	
Suggested Deadline Date:	12 Aug 2014	
Standard:	Alliance Standard Part 8 Section 8.19 Required Structural Documentation for New and Existing Factories	
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 are six plastic tanks (5 tons each tank) above lift machine room roof located south-east corner of main building (roof of 6th floor) which has not approved by designer. There is no analytical information of this tanks in design.	
Source of Findings:	Visual Assessment: Confirmed visually.	
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 Date:	12 Aug 2014	
Standard:	Alliance Standard Part 8 Section 8.13 and 8.14	
Question:	Can credible structural documentation indicating general conformance with 2006 BNBC or other comparable applicable international model building code be produced?	
Priority Level:	Medium	



Non-Compliance Level:	1
Description:	The building is designed and constructed after 2006 but there is no indication that the design accommodates the requirement of BNBC 2006.
Source of Findings:	Document Review: Confirmed by reviewing documents.
Suggested Plan of Action:	Engage a qualified structural engineer to develop the required documents to confirm the structural integrity of the buildings. Documents must comply with Alliance Standard Part 8 Section 8.19 and 8.20
Suggested Deadline Date:	12 Aug 2014
Standard:	Reference Alliance Standards Part 8 Section 8.2 Structural Integrity of Existing Factory Buildings
Question:	If built after 2006, can documented compliance with the seismic and wind requirements of the 2006 BNBC be provided?
Priority Level:	Medium
Non-Compliance Level:	1
Description:	The building is constructed after 2006. However, there is no indication that the building has been design taking into consideration the seismic and wind load.
Source of Findings:	Document Review: Document pertaining to the relevant information unavailable.
Suggested Plan of Action:	Have a qualified structural engineer document compliance with the seismic and wind requirements stated in the 2006 BNBC.
Suggested Deadline Date:	12 Aug 2014
Standard:	Alliance Standards Part 8 Section 8.17 Design for Lateral Loads and 2006 BNBC Part 6 Section 1.5
Question:	Can documentation be provided that the building is compliant with the requirements for wind loading and storm surge loadings as detailed in BNBC Part 6 Section 1.5.3?
Priority Level:	Medium
Non-Compliance Level:	1
Description:	There is no clear information available on the design document to understand the consideration of storm surge and wind loading in the design of the building.
Source of Findings:	Document Review: Document pertaining to the relevant information unavailable.
Suggested Plan of Action:	Engage a qualified structural engineer to confirm satisfactory structural performance of the buildings under wind loading.
Suggested Deadline	12 Aug 2014



Date:		
Standard:	2006 BNBC Part 6 Section 1.5. Compliance may be waived if the Factory Owner provides satisfactory evidence of a cyclone operations plan that includes full evacuation of the factory in advance of any approaching cyclone"	
Question:	Are Certificates of Occupancy available for review?	
Priority Level:	Low	
Non-Compliance Level:	1	
Description:	The factory has not obtained the Certificates of Occupancy from authority.	
Source of Findings:	Document Review: Documents unavailable.	
Suggested Plan of Action:	Apply for issuance of Certificates of Occupancy and pursue the matter to obtain the same.	
Suggested Deadline Date:	12 Aug 2014	
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment	
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:	2	
Description:	There are few racks at storage zone of 1st floor, 2nd floor and 3rd floor which are not braced for earthquake forces. There are 5 plastic water tanks on roof, which are not braced and anchored.	
Source of Findings:	Visual Assessment: Confirmed visually.	
Suggested Plan of Action:	Adequately anchor and brace all non-structural elements to resist earthquake forces to comply with the BNBC and Alliance Standard.	
Suggested Deadline Date:	12 Aug 2014	
Standard:	Alliance Standards Part 8 Section 8.18 Seismic Bracing of Key Non-Structural Elements and 2006 BNBC Part 6	



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:	1
Description:	The roof of the building is made of MCAC aggregate but no protective sealing is available.
Source of Findings:	Visual Assessment: Confirmed visually.
Suggested Plan of Action:	Provide a protective coating at 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:	12 Aug 2014
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:	1
Description:	There is an expansion joint which are filled with mortar. This will make the expansion joint ineffective.
Source of Findings:	Visual Assessment: Confirmed visually.
Suggested Plan of Action:	Remove deteriorated expansion joint material and provide new approved material at the expansion joint.
Suggested Deadline Date:	01 Dec 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?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	There is no program in place to ensure that the live loads for which a floor or roof is or has been designed will not be exceeded.
Source of Findings:	Visual Assessment: Confirmed visually.
Suggested Plan of	Develop a program to ensure that all live loads for which a floor or roof has



Action:	been designed for will not be exceeded. The designated Load Manager shall oversee this program and ensure it is enforced.	
Suggested Deadline Date:	29 Jul 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:	Floor Load Plans are available without any supporting documents (design report)	
Source of Findings:	Document Review: Confirmed by reviewing documents.	
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:	12 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 available without any supporting documents (design report)	
Source of Findings:	Visual Assessment: Confirmed visually.	
Suggested Plan of Action:	Have a qualified structural engineer prepare load plans including the information required in Section 8.20 of the Alliance Standard. Floor load plans should be visibly posted on all levels of all buildings."	
Suggested Deadline Date:	12 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 marking on the floor to designate spaces and height for storage of	



	work materials.	
Source of Findings:	Visual Assessment: Confirmed visually.	
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:	29 Jul 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:	There is no 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.	
Source of Findings:	Visual Assessment: Confirmed visually.	
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 RMG vendors 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:	29 Jul 2014	
Standard:	Alliance Standards Part 8 Section 8.9 Factory Load Manager	