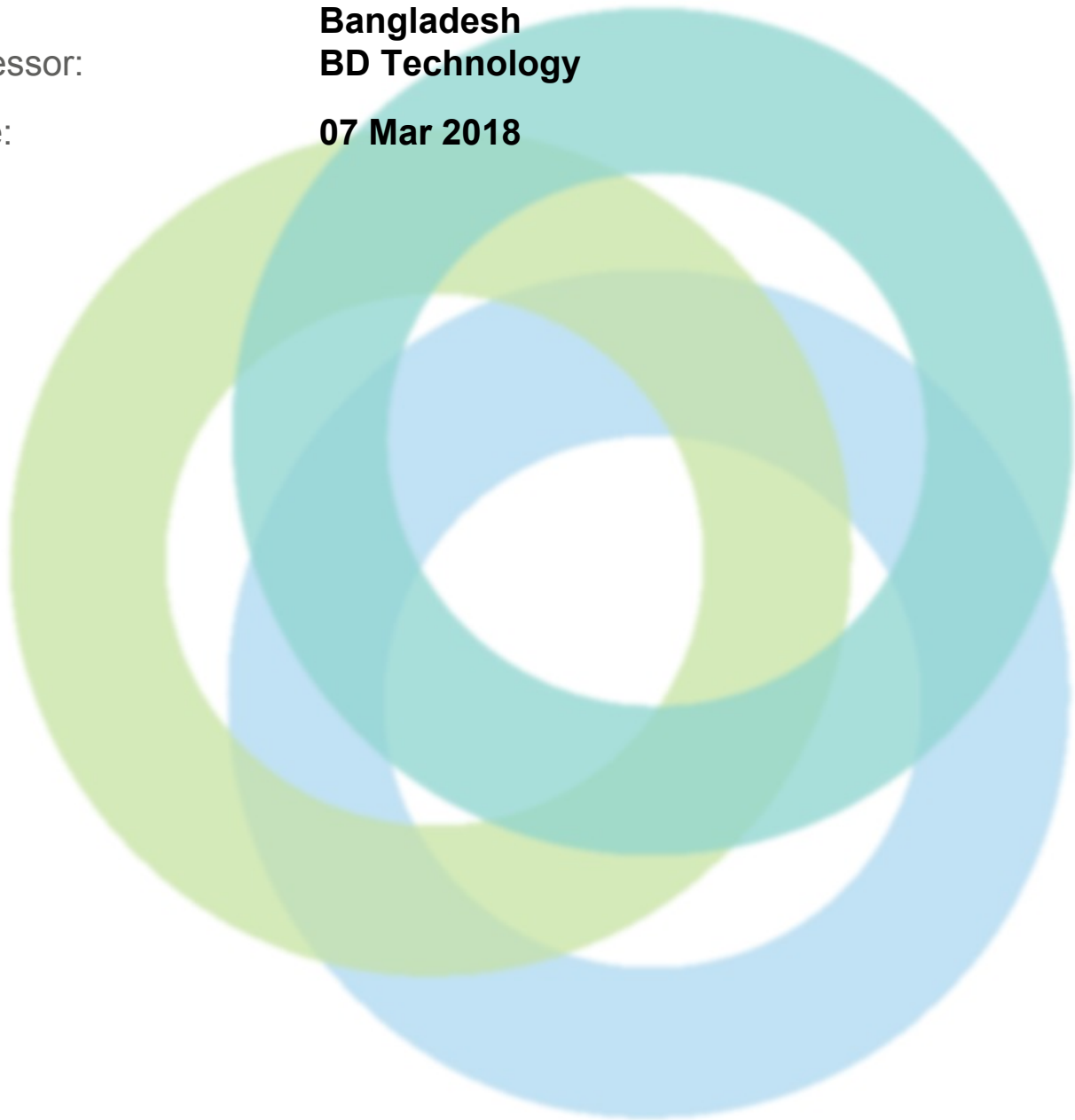


INITIAL STRUCTURAL INTEGRITY ASSESSMENT REPORT (SIAR)

Factory Name: **Modern Needle Craft Ltd.**
Address: **B-52, BSCIC Industrial Area, Tongi Gazipur
Bangladesh**
Assessor: **BD Technology**
Date: **07 Mar 2018**





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.



Factory Name: **Modern Needle Craft Ltd.**

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FOR BANGLADESH WORKER SAFETY

GENERAL INFORMATION

General Information

Factory Name:	Modern Needle Craft Ltd.
Address:	B-52, BSCIC Industrial Area, Tongi Gazipur Bangladesh
Country:	Bangladesh
Province:	
City:	
Zip Code:	
Audit Duration:	1 Days
Re-Audit:	Re-Audit After 0 Months
Draft Report Date :	March 25, 2018.
Final Report Date :	April 6, 2018.
Buildings in Complex :	There are 3 buildings in the factory premises. Among them one main production building and two ancillary buildings. Ancillary buildings are 2 storied admin building and single story generator room.
Number of Building Levels (Stories) :	Main Production building is Single story Pre-fabricated steel shed building. It's Ground Floor is used for Embroidery Section and Office Room.
Approximate Building Area (SF) :	Approximate Building Area of Main Production Building: 6990 sft; Admin building: 2267 sft; Generator Room: 161 sft; Thus Total Area: 9418 sft;
Date of Building Construction :	Date of Building Construction of Main Production building: 2010-2011, Admin Building: 2014-2015 and Generator Room: 2014.
Date of Last Building Renovation/Addition :	N/A
Is the Building mixed use?:	No
Ancillary Structures in Complex :	There are 2 Ancillary Structures available in the factory premises. They are 2 storied admin building and single story generator room.
Number of Ancillary Levels (Stories) :	Admin building is 2 storied. It's Ground Floor is used for Security Section and First Floor is used for Office Room. Generator room is single story.
Approximate Ancillary Structures Area (SF) :	Approximate Area of Admin building: 2267 sft and Generator Room: 161 sft.
Number of Occupants :	Number of Occupants in Production Building: 150 persons; Admin Building: 20 Persons(Gr.F:5; 1stF: 15) Generator Room: 1 persons.

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Exterior Facade Description :	The perimeter façade of the main production building, admin building and generator room typically consists of non-bearing masonry infill walls. A plaster and paint finish is also provided in the exterior surface of the masonry walls. Aluminium framed glass windows are available in the periphery masonry walls.
Structural System Description :	Structural System of main production building is Structural steel framing with steel shed. The lateral load resisting systems are also steel main beam. The foundation system is Isolated Footing. Structural System of Admin building is Structural steel framing with RC decking slab in ground floor and steel shed in roof. The lateral load resisting systems are also steel main beam and sub beam. The foundation system is Isolated Footing. The Structural System of generator room is periphery brick masonry wall above it steel frame shed roof.
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 credible structural design documents available for review and kept on site?
Priority Level:	Medium
Non-Compliance Level:	3
Description:	A few structural documents for the main factory building and Admin Building are available for review and kept on site but the documents are not credible as per BNBC part 6 section 1.9 and the requirements of Part 8 Section 8.19/8.20 of the Alliance Standard. Also mismatch is found between available documents and structural member. Design Report for the Main Factory Building and Admin Building is not available. As-built drawing for Generator Room is not available.
Source of Findings:	Document Review: Document reviewed during Site visit March 7, 2018. , Visual Assessment: Visual Assessment on Site visit March 7, 2018.
Suggested Plan of Action:	Have a qualified structural engineer prepare credible as-built documents based on the requirements of Part 8 Section 8.19/8.20 of the Alliance Standard. The documents should be prepared for all buildings within the factory complex. Also Design Report for the Main Factory Building and Admin Building should be prepared.
Suggested Deadline Date:	31 May 2018
Standard:	Alliance Standard Part 8 Section 8.19 Required Structural Documentation for New and Existing Factories
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:	3
Description:	Credible structural documentation indicating general conformance with 2006 BNBC or other comparable applicable international model building code could not be produced.
Source of Findings:	Document Review: Document reviewed during Site visit March 7, 2018.
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:	31 May 2018



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:	3	
Description:	Some structural drawings are available but are not in compliance with Part 8 Section 8.20 of the Alliance Standard and do not indicate compliance with the seismic and wind requirements of the 2006 BNBC.	
Source of Findings:	Document Review: Document reviewed during Site visit March 7, 2018.	
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:	31 May 2018	
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:	3	
Description:	No credible documentation are available to indicate the building is compliant with the requirements for wind loading and storm surge loadings as detailed in BNBC Part 6 Section 1.5.3.	
Source of Findings:	Document Review: Document reviewed during Site visit March 7, 2018.	
Suggested Plan of Action:	Engage a qualified structural engineer to confirm satisfactory structural performance of the buildings under wind loading.	
Suggested Deadline Date:	31 May 2018	
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:	2	
Description:	No certificates of occupancy are available for review.	



Source of Findings:	Document Review: Document reviewed during Site visit March 7, 2018.
Suggested Plan of Action:	Provide Certificates of Occupancy for review.
Suggested Deadline Date:	31 May 2018
Standard:	Alliance Standard Part 8 Section 8.3 Preliminary Structural Assessment

Structural System Construction

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:	2
Description:	During visual assessment corrosion is found in the steel member and dampness also available in Brick wall.
Source of Findings:	Visual Assessment: Visual Assessment on Site visit March 7, 2018.
Suggested Plan of Action:	Under guidance from a qualified structural engineer, address all areas of needed maintenance by correcting the identified issues. All steel members should be corrosion free. Dampness in brick walls should be removed properly.
Suggested Deadline Date:	31 May 2018
Standard:	Alliance Standard Part 8 Section 8.26 Durability and Maintenance
Question:	Are structural steel members free of corrosion, physical damage or other types of deterioration?
Priority Level:	Medium
Non-Compliance Level:	2
Description:	During visual assessment corrosion is found in the steel member.
Source of Findings:	Visual Assessment: Visual Assessment on Site visit March 7, 2018.
Suggested Plan of Action:	Complete further testing on areas of deterioration and have a qualified structural engineer develop a remediation plan.
Suggested Deadline Date:	31 May 2018
Standard:	Alliance Standard Part 8 Section 8.26





Question:	Is the building free of active signs of water intrusion or ponding due to lack of performance of the façade system?
Priority Level:	Low
Non-Compliance Level:	2
Description:	Signs of water intrusion due to lack of performance of the facade system was observed in the Admin building.
Source of Findings:	Visual Assessment: Visual Assessment on Site visit March 7, 2018.
Suggested Plan of Action:	Repair the exterior façade system to prevent water intrusion.
Suggested Deadline Date:	31 May 2018
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:	2
Description:	There is no program in place for Admin Building 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: Visual Assessment on Site visit March 7, 2018.
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:	31 May 2018
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:	2
Description:	Load Plans have not been prepared for each floor of the Admin Building documenting the actual maximum operational loading that is intended and/or allowable on each floor.
Source of Findings:	Visual Assessment: Visual Assessment on Site visit March 7, 2018.



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:	31 May 2018	
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:	2	
Description:	Floor Load Plans are not posted as required for Admin Building.	
Source of Findings:	Visual Assessment: Visual Assessment on Site visit March 7, 2018.	
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 the Admin Building.	
Suggested Deadline Date:	31 May 2018	
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:	2	
Description:	Areas used for storage of work materials and work products for Admin Building are not clearly marked to indicate a acceptable loading limits.	
Source of Findings:	Visual Assessment: Visual Assessment on Site visit March 7, 2018.	
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:	31 May 2018	
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:	2	

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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: Visual Assessment on Site visit March 7, 2018.
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:	31 May 2018
Standard:	Alliance Standards Part 8 Section 8.9 Factory Load Manager