

Islam Garments Ltd.

Zirabo, Ashulia, Savar, Dhaka.

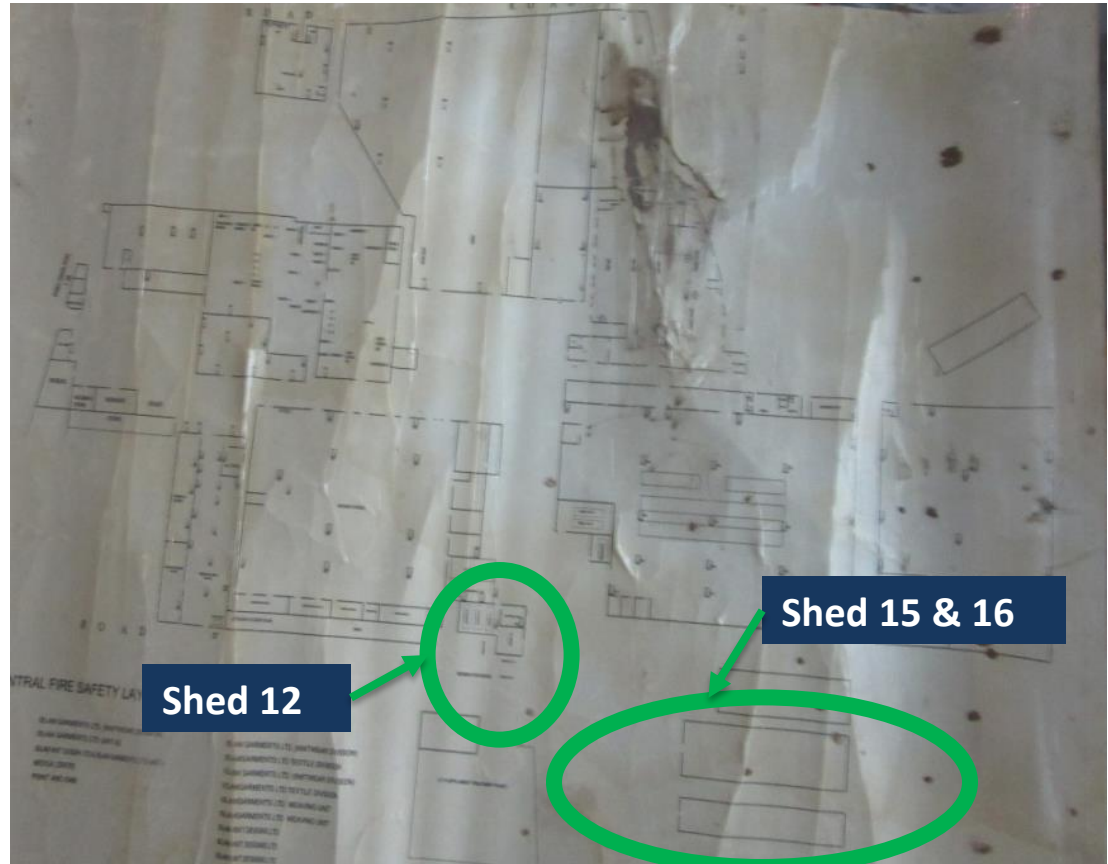
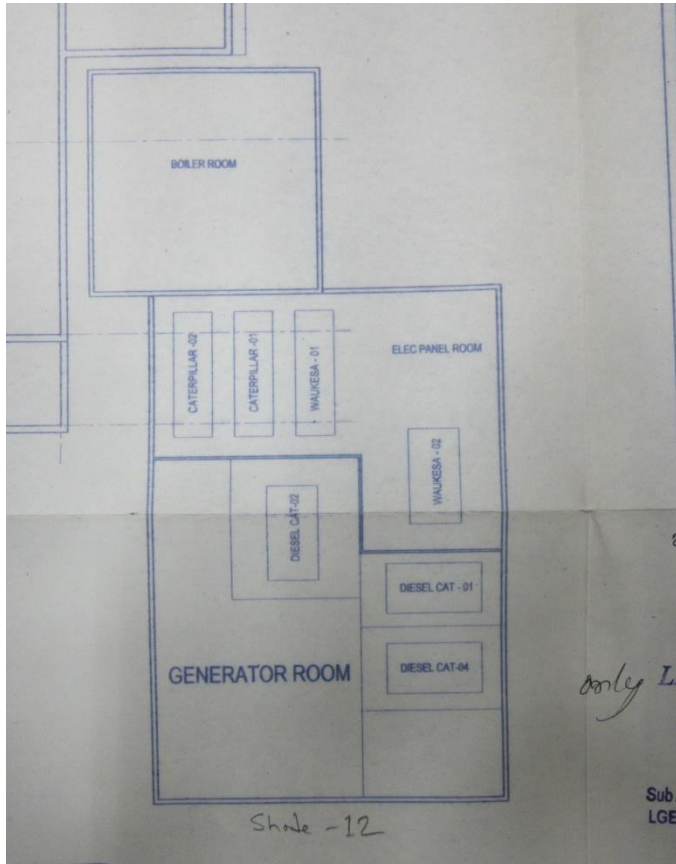
(23.9955 N, 90.3263 E)

16 April 2015



Observations

Absence of relevant technical documentation



No relevant structural and/or architectural documents were available. For survey purposes industrial permit drawings were used without indication of any proper measurements or technical information.

Observations General (S12 ; S15 ; S16)

Apparently non engineered sheds with no apparent lateral stability system



Apparently non engineered sheds with non apparent lateral stability system.

Observations General (S12 ; S15 ; S16)

Excessive working condition (Heat, Vibration)



Excessive heat and vibrations from boiler and generator were observed. High temperature steam is evacuated directly on the surface of structural elements.

Observations shed 12

Apparently non-engineered connection between brick wall and steel structure



No drawings with connection details were found on site. The connections seem non-engineered

Observations shed 12

Hair line cracking



Few hairline cracks were observed on the ceiling slab

Observations shed 12

Falling hazard of deteriorated elements (cracked columns and beam on roof)



Some non loadbearing RC elements situated on the roof are in non-service condition which could present a falling hazard

Observations shed 12

Heavy loading on roof



Large water coolers for boiler use were placed in a close proximity on roof

Observations shed 12

Lack of edge protection on roof

Observations shed 12



Lack of edge protection may cause falling hazard

Observations shed 12

Apparently non engineered stair



Steel stairs appear to be non engineered.

Observations shed 12

Problems observed

General (for Sheds 12 ; 15 ; 16):

1. Absence of relevant technical documentation.
2. Apparently non-engineered sheds with no-apparent lateral stability system.

Shed 12

3. Excessive working conditions (heat, vibration, steam).
4. Apparently non-engineered connection between brick wall and steel structure.
5. Hair line cracking.
6. Falling hazard of deteriorated elements (cracked columns and beam on roof).
7. Heavy loading on roof.
8. Lack of edge protection on the roof.
9. Apparently non-engineered stairs.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Absence of relevant technical documentations	Building Engineer to survey as constructed buildings. As-built drawings to be prepared showing the correct as constructed layouts, reinforcement in the main structural elements and precisions on the roof structures with the connection to the load bearing elements.	6-months
2	Apparently non-engineered sheds with no-apparent lateral stability system	As part of the preparation of the As-built documentation the Building Engineer to investigate the code adequacy of the load bearing structure and the lateral stability of the sheds.	6-months
3	Apparently non-engineered sheds with no-apparent lateral stability system	Building engineer to verify the code adequacy of the connections and the transfer of horizontal and vertical loads from the roof to the vertical load bearing structural elements and then to the foundations,	6-months
4	Apparently non-engineered sheds with no-apparent lateral stability system	If necessary remedial works to be defined.	6-months
5	Apparently non-engineered sheds with no-apparent lateral stability system	Make any structural alterations as advised by Building Engineer.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
6	Excessive working conditions (heat, vibration, steam)	Building engineer to prescribe measures for protection of the structure of the shed from vibration, heat and steam direct impact.	6-months
7	Excessive working conditions (heat, vibration, steam)	Make any structural alterations as advised by Building Engineer	6-months
8	Apparently non-engineered connection between brick wall and steel structure	As part of the preparation of the As-built documentation the Building Engineer to investigate the connection between the steel shed roof and the brick walls. The parameters of the these connections and the eventual existence of concrete elements to be defined precisely.	
9	Apparently non-engineered connection between brick wall and steel structure	Building engineer to verify the code adequacy of the connections and the transfer of horizontal and vertical loads from the roof to the vertical load bearing structural elements.	6-months
10	Apparently non-engineered connection between brick wall and steel structure	Make any structural alterations as advised by Building Engineer	6-months
11	Hair line cracking	As part of the preparation of the As-built documentation the Building Engineer to investigate the reason for appearance of the hairline cracking	6-months
12	Hair line cracking	Carry out any remedial structural works arising from investigation.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Falling hazard of deteriorated elements (cracked columns and beam on roof)	Building engineer to prescribe measures to eliminate the existing risk of falling hazard either by removal of the cracked elements or by strengthening of this elements.	6-months
14	Falling hazard of deteriorated elements (cracked columns and beam on roof)	Make any work alterations as advised by Building Engineer	6-months
15	Heavy loading on roof	As part of the preparation of the As-built documentation, Building Engineer to confirm design loading of slabs.	6-months
16	Heavy loading on roof	Produce a loading plan and actively manage the floor loading for all floor plates giving consideration to floor capacity and column capacity.	6-months
17	Heavy loading on roof	Continue to implement the load management plan	6-months
18	Lack of edge protection on the roof	Secure appointed areas of hazards and provide an appropriate fall protection.	6-months
19	Lack of edge protection on the roof	Monitor fall protection over time and insure their maintenance.	6-months
20	Apparently non-engineered stairs	As part of the preparation of the As-built documentation Building Engineer to survey and investigate the steel stairs	6-months
21	Apparently non-engineered stairs	Adequacy for code vertical and horizontal loads to be ensured.	6-months
22	Apparently non-engineered stairs	Complete any structural alterations as advised by Building Engineer.	6-months