

Mars Stitch Ltd (10053)

1E, Nayem Uddin Mullah Road, Ayuchpara, 1712, Tongi, Gazipur

(+ 23.917064N, 90.393861E)

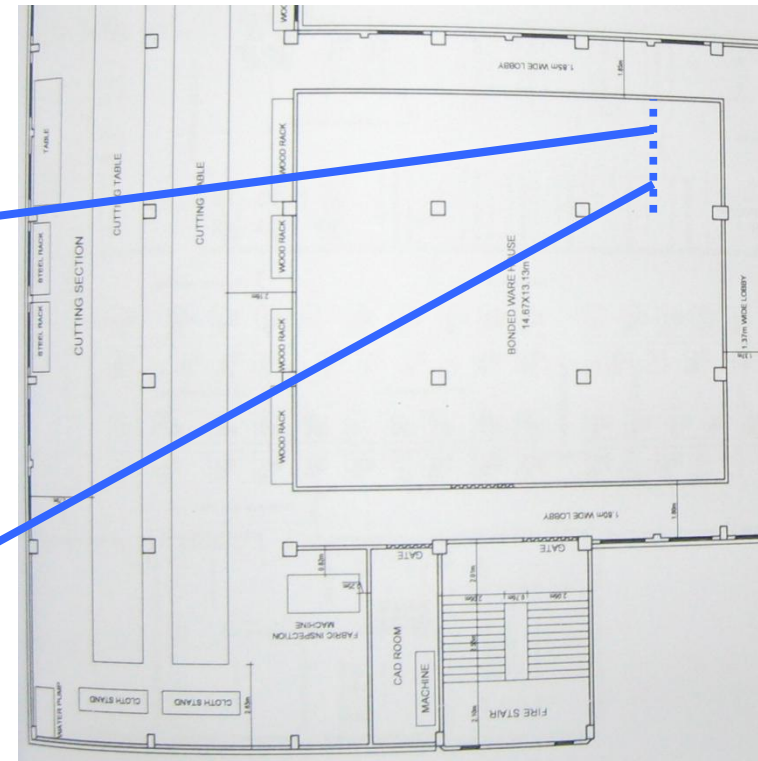
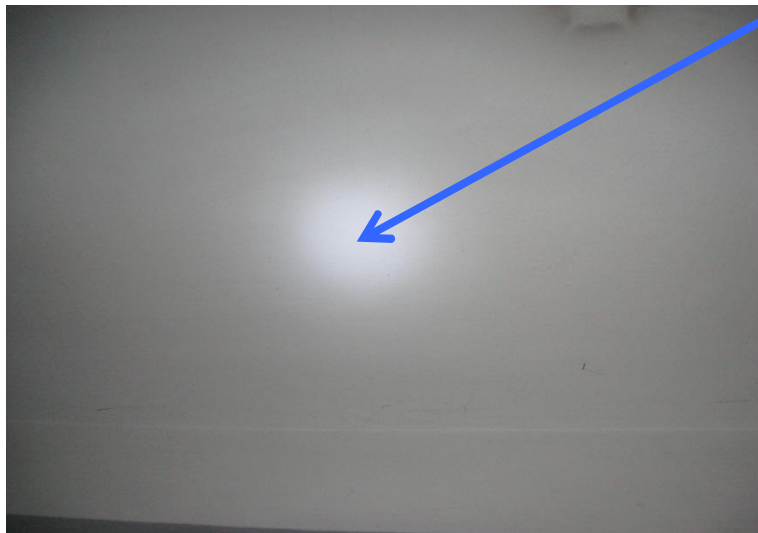
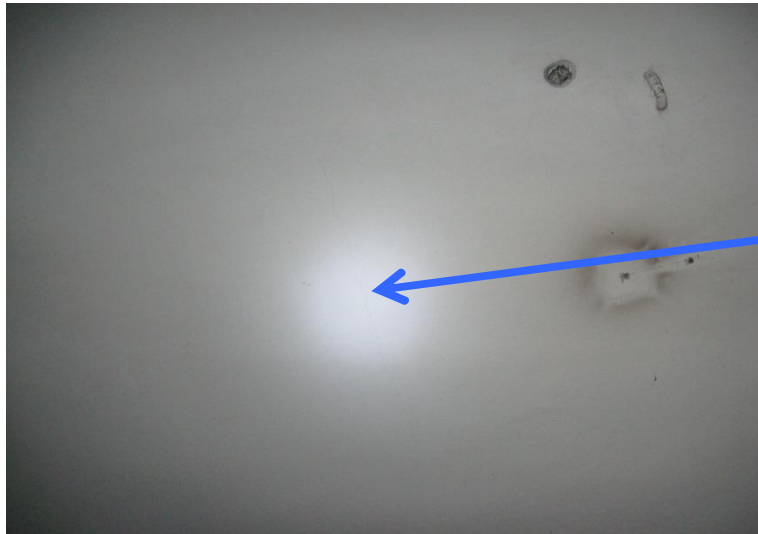
15.APRIL.2014



Identified Priority 2 Concerns

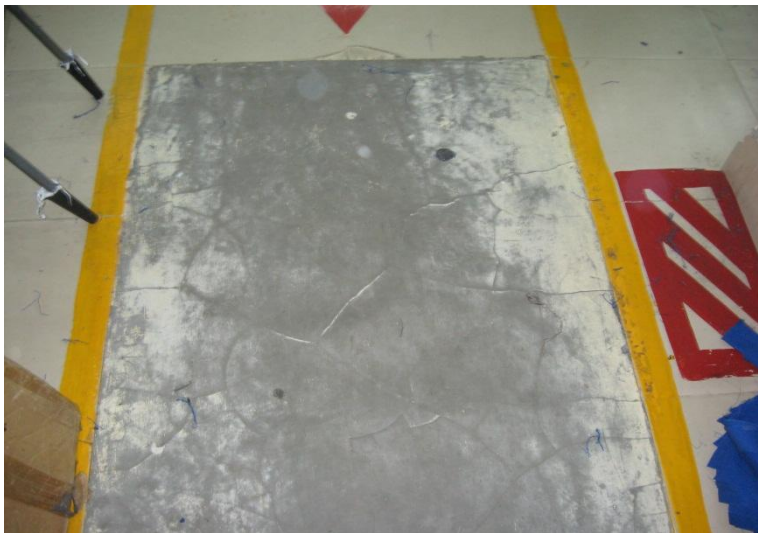
- Cracks on 2nd floor slab soffit in area (E-F/5-6).
- Uncontrolled heavy storage loading on 1st floor.
- Adequacy of cantilevered slabs in area (H-M/2-3).

1st Priority 2 Concern



There are cracks in the middle of 2nd floor slabs' soffit in area (E-F/5-6). It also appears that some form of repair has been attempted to cracks on the surface of floor slab above.

Additional Comment



There are signs of crack repairs on the surface of floor slab above, where some finishes have been removed.

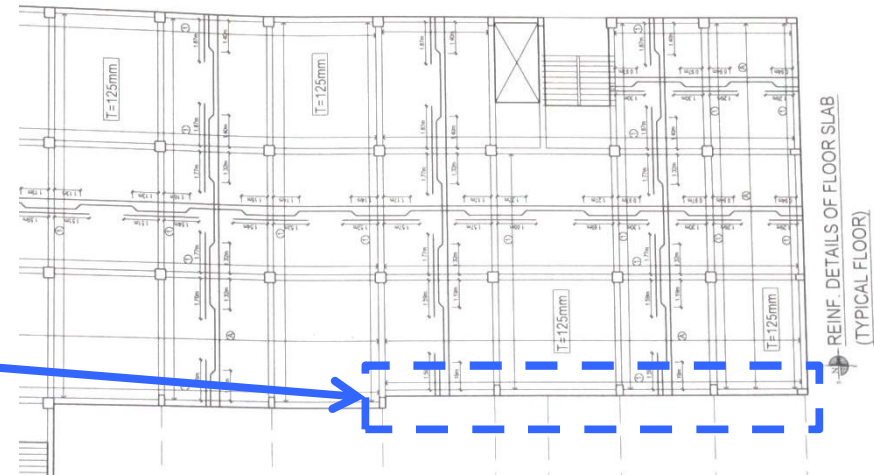
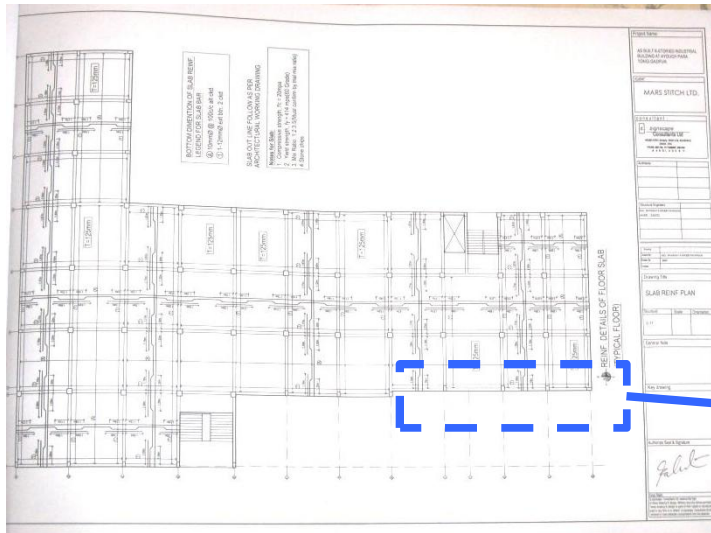
2nd Priority 2 Concern



There is uncontrolled heavy storage loads on the 1st floor in the warehouse. The actual live load under this load is believed to be approx. 8.75kPa (assumed 50 Kg per roll, 35 rolls per stack, 0.5 stack per sq.m.)

[illegible]

3rd Priority 2 Concern



There are cantilevered slabs in area (H-M/2-3) that do not appear on the structural drawings.

Identified Priority 3 Concern

- Reinforcement left exposed.
- No fireproofing material (if required).

1st Priority 3 Concern



Reinforcement left exposed. It is unclear if rust proof paint is applied.



2nd Priority 3 Concern



Structural steel elements in all areas.
It is unclear if fire proofing material is
applied or required.

Overall stability system / moment frame capacity

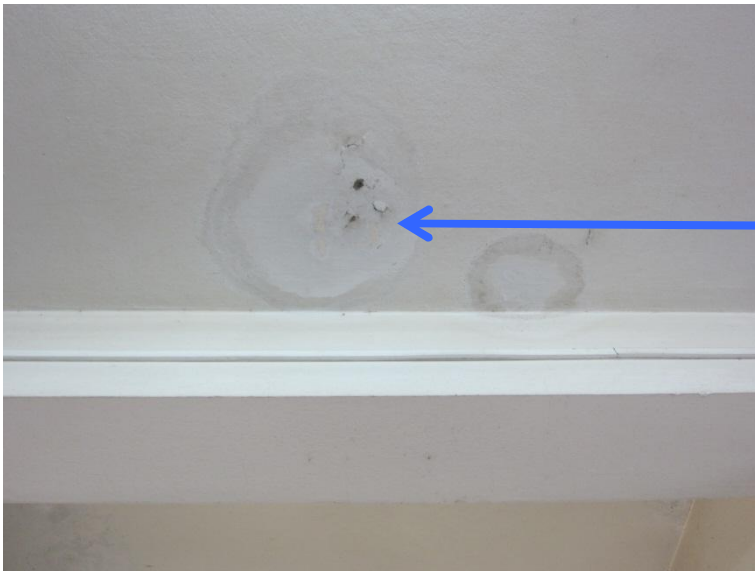


Concerns on the stability system for lateral loading and seismic loading. Façade brickwork walls lack of moment capacity in their connections between columns and beams.

We require that these items be investigated as part of a Detailed Engineering Assessment.



Water ingress



Water ingress found on structural elements. In some areas mould could be seen. This may lead to further deterioration and spalling of concrete in the future.



A waterproofing layer is recommended on the provided structural drawing, in its “General Notes”. However, no waterproofing material was seen on site.

Priority Actions

Problems Observed Summary

- ITEM 1: (Priority 2) Cracks on 2nd floor slab soffit in area (E-F/5-6).
- ITEM 2: (Priority 2) Uncontrolled heavy storage loading on 1st floor.
- ITEM 3: (Priority 2) Adequacy of cantilevered slabs in area (H-M/2-3).
- ITEM 4: (Priority 2) Overall stability system / moment frame capacity.
- ITEM 5: (Priority 2) Evidence of water ingress.
- ITEM 6: (Priority 3) Reinforcement left exposed.
- ITEM 7: (Priority 3) No fireproofing material applied for structural steel (If required).
- ITEM 8: (Priority 3) No waterproofing material applied on the roof slab.

Item 1 and actions

Cracks on 2nd floor slab soffit in area (E-F/5-6).

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- Carry out a Detailed Engineering Assessment of this area .
- The distress found is recommended to be repaired with suitable proper methods. Repair by re-plastering is not suitable.

Priority 3 (within 6-months)

- Set up and maintain a Loading Plan. Establish a quality control system to ensure that the loading plan is correctly followed so that problems do not arise in the future.

Item 2 and actions

Uncontrolled heavy storage loading on 1st floor.

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- Reduce stacking height to ensure total load does not exceed 3kPa.
- Adopt some sort of signage/staff guidance to ensure that the maximum weight of storage is not exceeded.

Priority 3 (within 6-months)

- Maintain standards of quality control to ensure that storage procedures are correctly followed and the Loading Plan is followed.

Item 3 and actions

Adequacy of cantilevered slabs in area (H-M/2-3).

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- Factory Engineer to review design, loads and columns stresses in area identified above.
- Verify in-situ concrete strengths either by cores or existing cylinder strength data for. Cores through the suspect slabs.

Priority 3 (within 6-months)

- Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor and column capacities.

Item 4 and actions

Overall stability system / moment frame capacity.

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- The Detailed Engineering Assessment of the overall building is to be carried out and in particular, stability and foundation aspects should be investigated in detail.

Priority 3 (within 6-months)

- None required.

Item 5 and actions

Evidence water ingress.

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- For both serviceability and durability, it's recommended to repair the distresses found with suitable methods.
- Install a waterproofing system to the roof above.

Priority 3 (within 6-months)

- Ensure that an appropriate layer of waterproofing is included on the final roof slab.

Item 6 and actions

Reinforcement left exposed.

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- None required.

Priority 3 (within 6-months)

- Engineer to inspect the reinforcement where corrosion has occurred.
- For both durability and serviceability, rust proof paint is recommended.

Item 7 and actions

No fireproofing material applied for structural steel (If required).

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- None required.

Priority 3 (within 6-months)

- Fireproofing material for structural steel element is recommended based on BNBC regulations.
- Maintain standard of quality control.

Item 8 and actions

No waterproofing material applied on the roof slab.

Priority 1 (Immediate – Now)

- None required.

Priority 2 (within 6 – weeks)

- None required.

Priority 3 (within 6-months)

- A Structural Engineer is to inspect the water damaged structural elements and propose a suitable repair method.
- For both durability and serviceability, waterproofing on the roof slab is recommended. The roof slab drainage system should also be improved.