

Torque Fashion Ltd. (Ref No. 10924)

Shadu Para, Paragaon, Ashulia, Savar

(+23.877264N, 90.332634E)

12.MAY.2014



Identified Priority 1 Concerns

None Identified.

Identified Priority 2 Concerns

Connection details may not provide adequate resistance against uplift.

Priority 2 Concern

These images show examples of connections at beam ends where the resistance against uplift is questionable. It should be noted that in most locations the connections appeared appropriate, and in the under-construction Building 4 the construction methods and details seemed perfectly reasonable.



Building 1, where a connection is visible at the head of the column but cover is so small that pull-out resistance would be negligible.



Truss-end connection in Building 6. An arbitrary attempt has been made to connect down, but the bricks are loose.

Priority 2 Concern Continued



This image is from Building 3, where a roof truss is held down to the column only by a small fillet weld between it and an angle section.



Steel rebar visible, bent over the truss end. It is unclear whether such details are present at other locations across the site. Photo taken in Building 1.

Identified Priority 3 Concerns

Diaphragm action and overall stability of Building 1 to be checked in more detail.

Priority 3 Concern



First pitch of the roof of Building 1 (Main entrance to the left), where no bracing is present and the connections between purlins and roof sheeting may not be sufficient for diaphragm action.



External view of Building 1, showing the lightweight roofing which may provide insufficient lateral stiffness against wind actions.

Overall Stability System

The steel buildings gain their stability predominantly from masonry infill walls. The diaphragm action of the roofs generally appear ok, with the exception of Building 1 which should be checked further. Below is Building 4, with a well-braced roof and masonry walls connected to the webs of columns.



The reinforced concrete structure (Building 2, above) gains its stability from the beam-column connections and diaphragm action of the concrete floor.

Water Ingress at Roof Level



Roof level of Building 2 (the only non-steel roof on the site), with no waterproofing present.



View from inside Building 2, at 1st floor level. As this image shows, no signs of water ingress were evident.

No waterproofing was observed on the roof of the concrete building. Although no ponding or signs of water ingress were observed on site, the factory owner may wish to consider applying a waterproofing membrane.

Priority Actions

Problems Observed Summary

ITEM 1: (Priority 2) Connection details to be further investigated for capacity against uplift.

ITEM 2: (Priority 3) Diaphragm action and overall stability of Building 1 to be checked in more detail by Factory Engineer.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Connection details to be further investigated for capacity against uplift.	Factory Engineer to review all steel structure anchorage details on site and provide design for any corrective works required.	6-weeks
2	Connection details to be further investigated for capacity against uplift.	Implement any corrective measures identified by Factory Engineer.	6-months
3	Diaphragm action and overall stability of Building 1 to be checked in more detail by Factory Engineer.	Factory Engineer to review the lateral stability of Building 1. Any corrective measures identified to be implemented.	6-months