

Blue Planet Knit Composite Ltd.

Barotopa, Rathura, Mawna, Sreepur, Gazipur

(24.20763, 90.38593)

5th July and 28th August 2022



Buildings Information

1. Building-1 (Dyehouse Shed Building) (single storied)
2. Building 2 (Utility Shed) (single storied)
3. Building 3 (ETP Building) (G+1)
4. Building-4 (Security Guard House) (single storied)
5. Building 5: (Bonded Warehouse Shed) (single storied)
6. Building 6: (WTP & Pump House) (single storied)
7. Building 7 (Cooling Tower) (single storied)
8. Building 8 (Security Dormitory Shed) (single storied)
9. Building 9 (ETP Chemical Shed) (single storied)
10. Building-10 (Staff Canteen) (single storied)
11. Building-11 (Sub-Station Building) (single storied)
12. Building-12 (CP- Cathodic Protection Room) (single storied)
13. Building-13 (RMS Room) (single storied)

Observations

Discrepancy in as-built drawing

MARK	DEPTH Hw (mm)	WEB THICKNESS tw (mm)	FLANGE WIDTH Bf(mm)	FLANGE THICKNESS tf (mm)
B1	600	6	250	8
B4	500	6	200	8
B5	300	6	200	8
B6	400	6	200	10
B7	400	8	200	10
B8	200	6	100	8
B9	500	6	300	16
B20	400	6	250	8
P1	CC 200-2-20-70			

Thickness of flange shown as 10mm for Beam B7



Flange thickness was measured 8mm

Thickness of the flange measured as 8mm instead of 10mm for beam B7. Building engineer is required to re-survey the whole structure and update the as-built drawing to as-built condition as well as revise the design documents for all steel members.

Corrosion in steel section



Corrosion was found in the baseplate of steel column. Factory is required to remove corrosion and apply rust proofing on the corroded areas to protect the steel members from corrosion.

Corrosion in steel column

Prepared design report to be updated

TABLE OF CONTENTS

8		
1.	<i>Introduction</i>	2
2.	<i>Design Assumptions</i>	2
3.	<i>Applicable Design Codes</i>	2
4.	<i>Design Loads</i>	2
5.	<i>Load Cases</i>	4
6.	<i>Load Combination</i>	5
7.	<i>Material Properties</i>	5
8.	<i>The framing System of the Buildings</i>	6
9.	<i>Unity check results</i>	6
10.	<i>Foundation adequacy check</i>	16
11.	<i>Grade beam & Pedestal Design</i>	17
12.	<i>Conclusion</i>	17

A design report was prepared for Utility Shed which doesn't include the connection adequacy check for the steel connections. Building engineer is required to incorporate all necessary checks including the connection adequacy check in the design report and submit to RSC for review.

Prepared design report doesn't include the connection adequacy check

Non-structural elements found unbraced/not anchored



Storage rack found within the building without braced/anchored

Factory is required to brace/anchor all non structural elements.

Absence of design documents

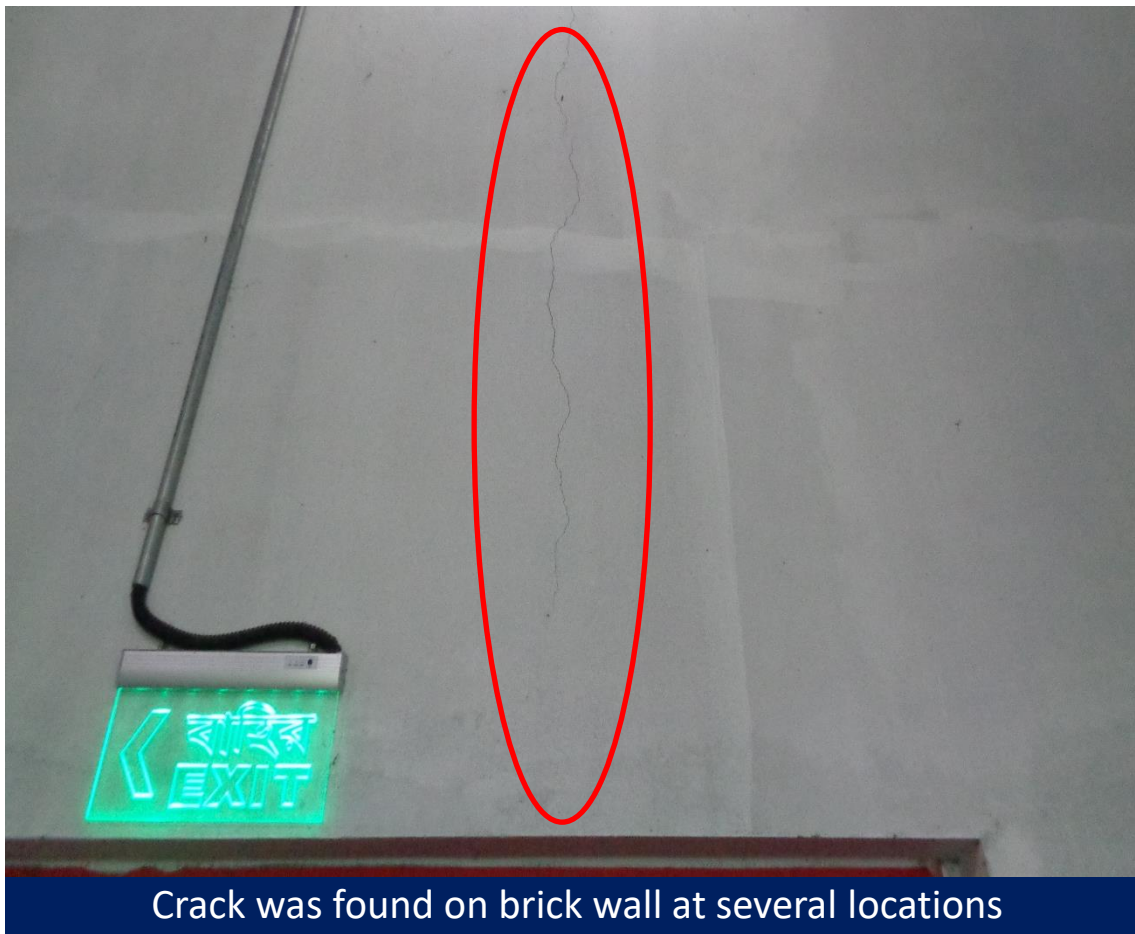
Observations: Building 3 (ETP Building)



ETP Building

As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 of BNBC (part-6). At the time of inspection, design report was not available which is required to be prepared in compliance with section 1.9.1 of BNBC (part-6).

Crack on brick wall



Crack was found on brick wall at several locations

Building engineer is required to investigate the cause of crack and repair with a suitable method.

Prepared design report to be updated

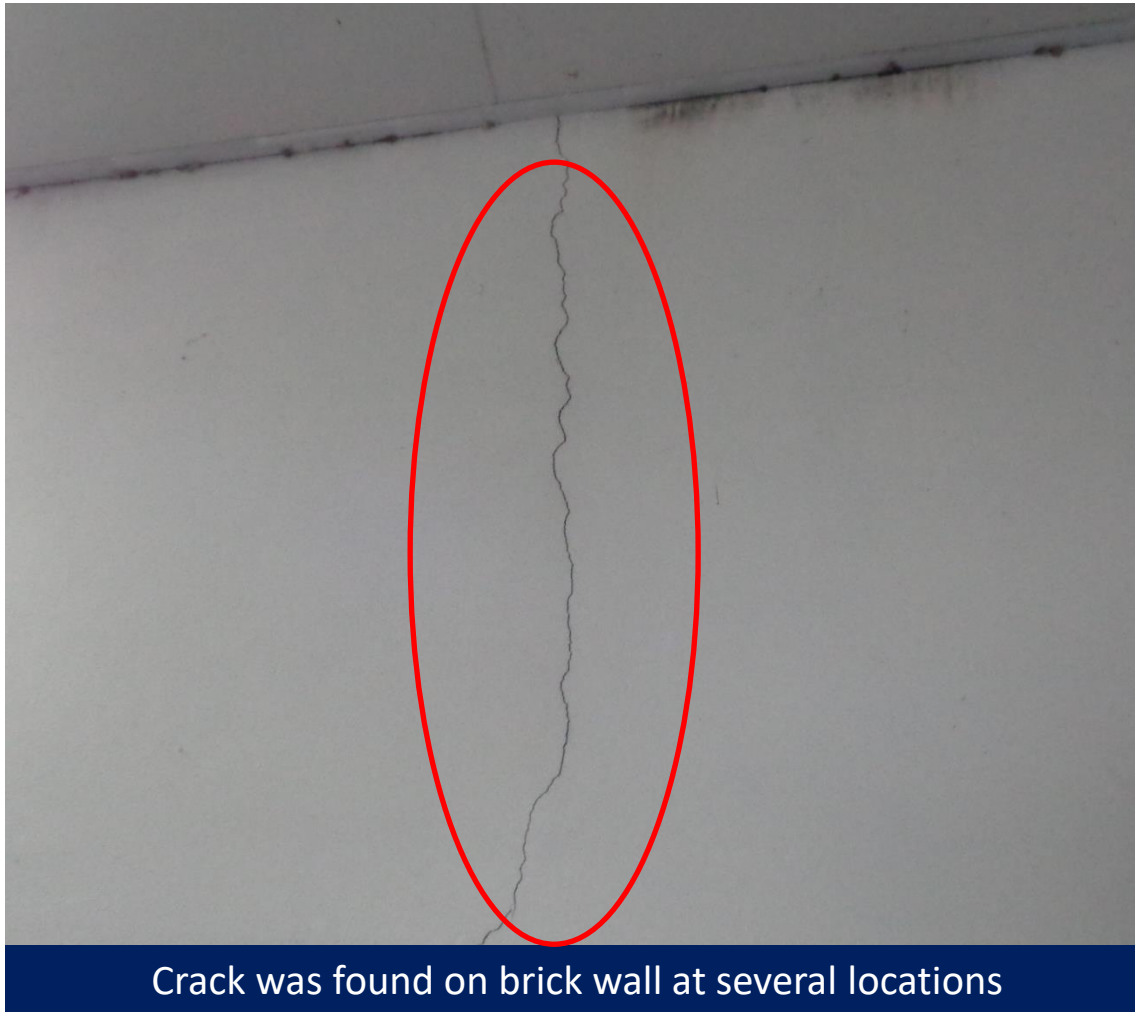
TABLE OF CONTENTS

1. Introduction	2
2. Design Assumptions	2
3. Applicable Design Codes	2
4. Design Loads	2
5. Load Cases	4
6. Load Combination	5
7. Material Properties	5
8. The framing System of the Buildings	6
9. Unity check results	6
10. Foundation adequacy check	11
11. Grade beam & Pedestal Design	11
12. Conclusion	12

A design report was prepared for Bonded Warehouse Shed which doesn't include the connection adequacy check for the steel connections. Building engineer is required to incorporate all necessary checks including the connection adequacy check in the design report and submit to RSC for review.

Prepared design report doesn't include the connection adequacy check

Crack on brick wall



Crack was found on brick wall at several locations

Building engineer is required to investigate the cause of crack and repair with a suitable method.

Absence of design documents

Observations: Building 6 (WTP & Pump House)



WTP & Pump House

As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 of BNBC (part-6). At the time of inspection, design report was not available which is required to be prepared in compliance with section 1.9.1 of BNBC (part-6).

Absence of design documents



Security Dormitory Shed

As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 of BNBC (part-6). At the time of inspection, design report was not available which is required to be prepared in compliance with section 1.9.1 of BNBC (part-6).

Crack on brick wall



Crack was found on brick wall at several locations

Building engineer is required to investigate the cause of crack and repair with a suitable method.

Corrosion on steel members



Corrosion on steel member and cable bracing

Corrosion was observed on steel members and cable bracing. Factory is required to remove the corrosion and provide rust proof paint on all steel members to protect from corrosion.

Apparently incomplete lateral stability system

Observation: Building 10 (Staff Canteen)



No lateral load transfer media provided

No lateral load transfer media provided from frame to frame to transfer the lateral load therefore lateral stability system of the shed is apparently incomplete.
Building engineer is required to check the lateral stability of the structure.

Lack of structural drawing



Staff Canteen

As-built structural drawing was not available for Canteen Shed. Building engineer is required to produce full set of as-built drawing with connection details for the structure.

Lack of information in as-built drawing



CP Building

As-built drawing was available for the CP Building, but for slab has been included in as-built structural drawing. Building engineer is required to produce accurate as-built drawing for structure.

Problems Observed

Building-1 (Dyehouse Shed Building):

Item 01: Discrepancy in as-built drawing.

Item 02: Corrosion in steel section.

Building 2: (Utility Shed):

Item 03: Prepared design report to be updated

Item 04: Non-structural elements found unbraced/not anchored

Building 3: (ETP Building):

Item 05: Absence of design documents

Item 06: Crack on brick wall.

Building 5: (Bonded Warehouse Shed):

Item 07: Prepared design report to be updated

Item 08: Crack on brick wall

Building 6: (WTP & Pump House):

Item 09: Absence of design documents

Building 8: (Security Dormitory Shed):

Item 10: Absence of design documents

Item 11: Crack on brick wall

Building 9: (ETP Chemical Shed):

Item 12: Corrosion on steel members

Problems Observed (Continued)

Building-10 (Staff Canteen):

Item-13: Apparently incomplete lateral stability system

- Item-14: Lack of structural drawing

Building-12 (CP- Cathodic Protection Room):

Item-15: Lack of information in as-built drawing.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Discrepancy in as-built drawing (Building 1 (Dyehouse Shed Building))	Building Engineer is required to update the as-built drawings.	6-weeks
02	Discrepancy in as-built drawing (Building 1 (Dyehouse Shed Building))	Building Engineer to update the design document including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2 of BNBC (part-6).	6-weeks
03	Discrepancy in as-built drawing (Building 1 (Dyehouse Shed Building))	Implement the recommendations of design report.	6-months
04	Corrosion in steel column (Building 1 (Dyehouse Shed Building))	Factory is required to remove the corrosion and provide rust proof paint on all steel members to protect from further corrosion.	6-weeks
05	Prepared design report to be updated (Building 2 (Utility Shed))	Building Engineer is required to update the design report by including connection adequacy check and submit to RSC for review.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
06	Prepared design report to be updated (Building 2 (Utility Shed))	Implement remediation work if required.	6-months
07	Non-structural elements found unbraced/not anchored (Building 2 (Utility Shed))	Factory is required to brace/anchor all non-structural elements.	6-weeks
08	Absence of design documents (Building 3 (ETP Building))	Building Engineer is required to prepare a design report in compliance with section 1.9.1 of BNBC (part-6).	6-weeks
09	Absence of design documents (Building 3 (ETP Building))	Implement remediation work if required.	6-months
10	Crack on brick wall (Building 3 (ETP Building))	Building Engineer is required to investigate the cause of crack and repair with a suitable method.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
11	Prepared design report to be updated (Building 5 (Bonded Warehouse Shed))	Building Engineer is required to update the design report by including connection adequacy check and submit to RSC for review.	6-weeks
12	Prepared design report to be updated (Building 5 (Bonded Warehouse Shed))	Implement remediation work if required.	6-months
13	Crack on brick wall (Building 5 (Bonded Warehouse Shed))	Building Engineer is required to investigate the cause of crack and repair with a suitable method.	6-weeks
14	Absence of design documents (Building 6 (WTP & Pump House))	Building Engineer is required to prepare a design report in compliance with section 1.9.1 of BNBC (part-6).	6-weeks
15	Absence of design documents (Building 6 (WTP & Pump House))	Implement remediation work if required.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
16	Absence of design documents (Building 8 (Security Dormitory Shed))	Building Engineer is required to prepare a design report in compliance with section 1.9.1 of BNBC (part-6).	6-weeks
17	Absence of design documents (Building 8 (Security Dormitory Shed))	Implement remediation work if required.	6-months
18	Crack on brick wall (Building 8 (Security Dormitory Shed))	Building Engineer is required to investigate the cause of crack and repair with a suitable method.	6-weeks
19	Corrosion on steel members (Building 9 (ETP Chemical Shed))	Factory is required to provide rust proof paint on all steel members to protect from corrosion.	6-weeks
20	Apparently incomplete lateral stability system (Building-10 (Staff Canteen))	As part of Engineering Assessment (EA), the building engineer is required to check the lateral stability of the structure.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
21	Apparently incomplete lateral stability system (Building-10 (Staff Canteen))	Carry out remedial works as per EA recommendations.	6-months
22	Lack of structural drawing (Building-10 (Staff Canteen))	Building Engineer is required to produce as-built drawing for both toilet blocks.	6-weeks
23	Lack of information in as-built drawing (Building 12)	Building Engineer is required to produce as-built drawing for both toilet blocks.	6-weeks