NetworkRail	NETWORK RAIL Additional Examination	NetworkRail
ELR: COL	Contract Mileage: 189 m 0838 yds 38.09 ch	Struc. Ref: 66

Examination Type: Additional Exam	NR ID: 12010424	Exam Date: 23/07/2024
GPS:		OS Ref: SJ83849748
Structure Name: VIADUCT	Type: BU	Exam ID: 3788092
Route: London North Western		Complete Exam: no

Section A: To Be Completed By The Examining Organisation

HIDDEN PARTS NOT EXAMINED (EXCLUDING FOUNDATIONS)	Part	Reason
1	Parts of soffit and entire abutments	Due to cladding and property furniture - tenanted structure

ITEM	DESCRIPTION	LOCATION	Est. Cost £ +/- 20%	Priority Within	Quantity	Severity	Probability	Risk Score	Works Category
1	Ensure as a minimum, the entire soffit is free of any PNE's. Continue with the 3 monthly monitoring of the soffit.	Soffit of COL-66	1000	6mths	1unit	3	4	E12	Other
2	Develop renewal plan (provisionally to be delivered CP7 year 3 2026/27) - for under ringing the arch	COL-66	1000	6mths	1unit	3	4	E12	Other
3	Continue liaising with the interface management team and Arch Co, ensuring there is plan going forward for the duration of the additional until the arch has been under rung (note this will be also the case for COL-63, COL-64, COL-65 and COL-67), renewal is provisionally scheduled for CP7 year 3 (2026/27)	COL-66	1000	6mths	1unit	3	4	E12	Other
4	Create new individual A3 additional remit for this structure. Currently using the previous additional group remit that included COL-63 through to COL-66.	CARRS and Additional Exam Tracker	1000	6mths	2unit	2	2	E4	Other

Data in this table prior to this examination date is imported from CES, Amey does not verify its completeness or accuracy

No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for closure	Engineer Comments
1	Broken metal strapping.	LM down side.	29/04/2013	Yes	D		6	Yes	Baseline	No	N	New defect
1	Broken metal strapping.	LM down side.	25/03/2014	Yes	V		6	Yes	No	No	N	No change
1	Broken metal strapping.	LM down side.	20/05/2015	Yes	V		6	Yes	No	No	N	Old standing with little deterioration
1	Broken metal strapping.	LM down side.	17/02/2017	Yes	V		4	Yes	No	No	N	NO CHANGE
1	Broken metal strapping.	LM down side.	03/11/2017	Yes	V		4	Yes	No	No	N	Old standing with no deterioration
1	Broken metal strapping.	LM down side.	11/12/2019	Yes	D		6	Yes	No	Yes	N	US strapping repaired, description updated.

NetworkRail	NETWORK RAIL Additional Examination	NetworkRail
ELR: COL	Contract Mileage: 189 m 0838 yds 38.09 ch	Struc. Ref: 66

No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for closure	Engineer Comments
1	Broken metal strapping.	LM down side.	26/02/2022	No	V		6	Yes	Not Viewed	Yes	N	No access. CARRS WI 1904797 with the risk scores of 6.
1	Broken metal strapping.	LM down side.	12/01/2023	No	V		6	Yes	Cannot Determine	Yes	N	Cannot be determined from ground level. CARRS WI 1904797 with the risk scores of 6.
1	Broken metal strapping.	LM down side.	24/01/2024	No	V		6	Yes	Cannot Determine	No	N	Cannot be determined from ground level. CARRS WI 1904797 with the risk scores of 6.
2	Running water on the face of HM internal pier	Internal face of HM pier	20/05/2015	Yes	V		5	Yes	Baseline	No	N	Safety hazard
2	Running water on the face of HM internal pier	Internal face of HM pier	17/02/2017	Yes	V		4	Yes	No	No	N	Dry at time of exam, CARRS ID 1568532
2	Running water on the face of HM internal pier	Internal face of HM pier	03/11/2017	Yes	V		4	Yes	No	No	N	Old standing with no deterioration
2	Running water on the face of HM internal pier	Internal face of HM pier	11/12/2019	Yes	D		6	Yes	Yes	No	N	Dry at time of exam, no evidence of repair. Further dampness ./ staining apparent to brickwork since previous DE.
2	Running water on the face of HM internal pier	Internal face of HM pier	26/02/2022	No	V		6	Yes	Not Viewed	No	N	No access inside this structure. CARRS WI 1904821 and 1568532- with the risk scores of 5. Correspondence.
2	Running water on the face of HM internal pier	Internal face of HM pier	12/01/2023	No	V		6	Yes	Not Viewed	No	N	No access inside this structure. CARRS WI 1904821 and 1568532- with the risk scores of 5. Correspondence
2	Running water on the face of HM internal pier	Internal face of HM pier	24/01/2024	Yes	V		6	Yes	Cannot Determine	No	N	No access inside this structure. CARRS WI 1904821 and 1568532- with the risk scores of 5. Correspondence
3	vegetation growing in brickwork joints to parapet, spandrel, and string course	both elevations	03/11/2017	Yes	V		6	No	Baseline	No	N	Remove vegetation.
3	vegetation growing in brickwork joints to parapet, spandrel, and string course	both elevations	11/12/2019	Yes	D		6	No	No	No	N	None located on pier face, located to parapet, spandrel, and string course. Description updated.
3	vegetation growing in brickwork joints to parapet, spandrel, and string course	both elevations	26/02/2022	Yes	V		6	No	No	No	N	No deterioration. CARRS WI 1904798 with the risk scores of 6.
3	vegetation growing in brickwork joints to parapet, spandrel, and string course	both elevations	12/01/2023	Yes	V		6	No	No	No	N	No deterioration at the time of examination. CARRS WI 1904798 with the risk scores of 6.
3	vegetation growing in brickwork joints to parapet,	both elevations	24/01/2024	Yes	V		6	Yes	Little Deterioration	No	N	Part repaired but still some growth CARRS WI 1904798 with the risk scores of 6.

No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for closure	Engineer Comments
	spandrel, and string course											
5	7No. longitudinal fractures 3.7-6.5m L HL-1mm.	Barrel soffit		Yes	ADDIT		6	Yes	No Deterioration	No	N	No deterioration noted to the soffit fractures since the last additional examination
5	7No. longitudinal fractures 3.7-6.5m L HL-1mm.	Barrel soffit	11/12/2019	Yes	D		6	No	Baseline	No	N	New tracked defect, barrel not visible at previous detailed exam.
5	7No. longitudinal fractures 3.7-6.5m L HL-1mm.	Barrel soffit	26/02/2022	No	V		6	No	Not Viewed	No	N	No access inside this structure. CARRS WI 1904799 with the risk scores of 6.
5	7No. longitudinal fractures 3.7-6.5m L HL-1mm.	Barrel soffit	12/01/2023	No	V		6	No	Not Viewed	No	N	No access inside this structure at the time of examination. CARRS WI 1904799 with the risk scores of 6.
5	7No. longitudinal fractures 3.7-6.5m L HL-1mm.	Barrel soffit	24/01/2024	No	V		6	Yes	Cannot Determine	No	N	No access inside this structure at the time of examination. CARRS WI 1904799 with the risk scores of 6.
6	Fractures and displacement to parapet and separation fracture between arch face and under-ringing repair..	US elevation	11/12/2019	Yes	D		6	No	Baseline	No	N	OS, new to tracker.
6	Fractures and displacement to parapet and separation fracture between arch face and under-ringing repair..	US elevation	26/02/2022	Yes	V		6	No	No	No	N	No deterioration. CARRS WI 1904800 with the risk scores of 8.
6	Fractures and displacement to parapet and separation fracture between arch face and under-ringing repair..	US elevation	12/01/2023	Yes	V		6	No	No	No	N	No deterioration at the time of examination. CARRS WI 1904800 with the risk scores of 8.
6	Fractures and displacement to parapet and separation fracture between arch face and under-ringing repair..	US elevation	24/01/2024	Yes	V		6	No	No Deterioration	No	N	No deterioration at the time of examination. CARRS WI 1904800 with the risk scores of 8.
7	Deep open joints, bulging with LTH bricks and voids	DS Infill wall	11/12/2019	Yes	D		8	Yes	Baseline	No	N	New tracked defect
7	Deep open joints, bulging with LTH bricks and voids	DS Infill wall	26/02/2022	Yes	V		8	Yes	No	No	N	No deterioration
7	Deep open joints, bulging with LTH bricks and voids	DS Infill wall	12/01/2023	Yes	V		8	Yes	No	No	N	No deterioration at the time of examination. See WI 1904800 with the RS of 8

NetworkRail	NETWORK RAIL Additional Examination	NetworkRail
ELR: COL	Contract Mileage: 189 m 0838 yds 38.09 ch	Struc. Ref: 66

No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for closure	Engineer Comments
7	Deep open joints, bulging with LTH bricks and voids	DS Infill wall	24/01/2024	Yes	V		8	Yes	Cannot Determine	No	N	No deterioration at the time of examination. See WI 1904800 with the RS of 8
8	loose patch of concrete repair.	Soffit, US LM corner	11/12/2019	Yes	D		5	Yes	Baseline	No	N	New tracked defect
8	loose patch of concrete repair.	Soffit, US LM corner	26/02/2022	No	V		5	Yes	Not Viewed	No	N	No access to internal areas. CARRS WI 1904822 with the risk scores of 5.
8	loose patch of concrete repair.	Soffit, US LM corner	12/01/2023	No	V		5	Yes	Not Viewed	No	N	Not viewed at the time of examination. see CARRS WI 1904822 with the risk scores of 5.
8	loose patch of concrete repair.	Soffit, US LM corner	24/01/2024	No	V		5	No	Not Viewed	No	N	Not viewed at the time of examination. see CARRS WI 1904822 with the risk scores of 5.
9	8No. Longitudinal fractures and 1No. Bulge section (approx. 1m2)	Soffit	23/07/2024	Y	ADDIT	Y	12	Y	Baseline	N	N	New tracked defect - continue with the 3 monthly monitoring of the soffit until renewal has been carried out (currently scheduled to under ring the arch CP7 year 3 - 2026/27).

Engineers Notes

New tracked defect created to monitor the longitudinal fractures and bulge to the soffit.
Continue with the 3 monthly monitoring of the arch. Ensure prior to carrying out the next additional, the soffit is free of any PNE's.

[redacted]

NETWORK RAIL Additional Examination		
ELR: COL	**Contract Mileage: 189 m 0838 yds 38.09 ch**	**Struc. Ref: 66**

Exam ID	3788092	**Exam Date**	23/07/2024	**SAD ID**	12010424
Name:		VIADUCT			

EXAMINER COMMENTS

Defect(s) present on this structure

I confirm that the previous detailed and visual reports have been reviewed and the dates of said reports are given in this report.

Please note that the previous additional examination dated 15/05/2024 was also reviewed at this time, however there is no previous additional date, option or tab present in Alarm 2".

The last Detailed Examination was incomplete

Parts not examined at last detailed exam:

Cladding obscures:
- Upside and downside internal walls
- Most of the LM pier (pier 65), and part of the HM pier (pier 66).

Unable to access spans 65 and 67 to examine the low mileage face of pier 65 and the high mileage face of pier 66 due to the tenanted arch access issues.

[redacted]

ADDITIONAL GENERAL COMMENTS

These spans are owned by Arch Co but currently (23/07/24) empty. Internal cladding to be removed locally around fractures where possible and left down. Plastic sheeting to cover areas where water ingress is an issue. Renewal strategy to be confirmed.

All seen
Areas of soffit sheeting remained in place as highlighted in the sketch.
Trackside elements, piers and the downside elevation have not been viewed as part of this examination.

Continuation Sheet
Initial Exam Date: 17/05/2022

Current Examination Date: 23/07/2024

Change: No deterioration to the old standing fractures at this examination.

Trigger Levels: Trigger level not met.

Network Rail Instruction: 3 Monthly examinations.

Visual examination of fractures from mezzanine levels. Tapping around fractures with pole. Marking up of plan drawings from most recent detailed exams.

Summary:
This structure shows no deterioration from the previous additional examination.

Other:
No changes in loading or the surrounding environment observed since the previous examination.

METHOD OF EXAM/TOOLS USED

Visual examination of fractures from mezzanine levels. Tapping around fractures with pole. Marking up of plan drawings from most recent detailed exams.

NEW DEFECT(S)

NONE

PREVIOUSLY RECORDED SIGNIFICANT (OPEN) DEFECT(S)

NONE

PREVIOUS RECOMMENDATION(S)
- See Recommendation(s) below

NONE

Monitoring Devices Present (if Yes - see Element detail for advice)	
Date Tab	No
Plumb Points	No
Avongards	No
Inclinometers	No
Total stations	No

Photos

OFFICIAL

COL/63 PRIVATE

ELR:	COL	Structue ID:	63

Elevation Photo

Defect Photo

Description:	PRIVATE
Mileage:	189.0798
Area:	Central East
Asset Type:	
Exam ID:	3425413
Start Date:	06/05/2022
Frequency of Detailed Exams:	6 Yearly
Severity:	4
Probability:	3
Risk Score:	12
Frequency:	0 Years 6 Months 0 Days
Engineer:	Mark Brundle, Marcus Dockray

Defect	Cause of Defect	Consequence of Failure
Multiple Longitundinal fractures throughout Spans 63-66.	Overloading	Debris falling into buisnessess and line restrictions.

Trigger Level Cause for Action	Action Steps
Any lengethening or widening of fractures clear from ground level. new missing/loose brickwork. Significant increase in water penetration.	Targeted brickwork repairs.

Remove Additional Exam When...	Comments
Structural renewal.	Exam encompases structure COL/63 to COL/66, but has been put against 63 for reporting. Spans are owned by Arch Co but currently (22/04/22) empty. Internal cladding to be removed locally around fractures where possible and left down. Plastic sheeting to cover areas where water ingress is an issue. Renewal strategy to be confirmed.

Type of Exam	Additional Visual Exam

Method of Visual Exam

Visual examination of fractures from mezzanine levels. Tapping around fractures with pole. Marking up of plan drawings from most recent detailed exams.

Remote Monitoring	
Supplier	0
Initial Cost(£)	0
Ongoing Costs (£)pa	0
Frequency of Measurement:	0

Specification

0

COL BU 66

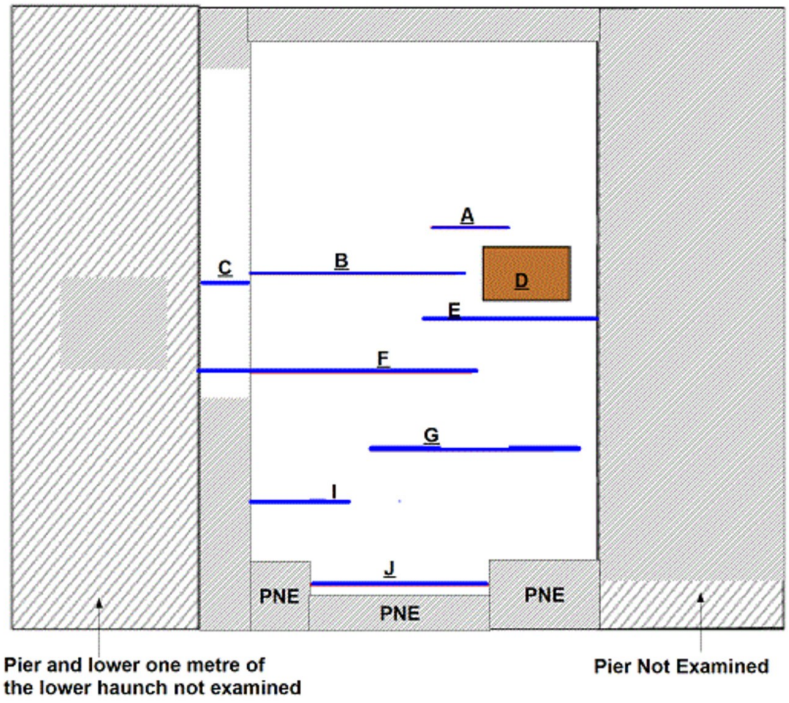
Soffit defects

Sketch 1

Low Mileage

NTS

Soffit general view photos P02 to P04



Examiner comments

No signs of any movement to the soffit when under load on both the up and down lines

Sheeting remained in place to areas of the low mileage lower haunch approximately 1 metre high from the PCL.

Defects,

A- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 2.5 metres in length, O.S N.F.D photo P05.

B- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 3.7 metres in length O.S N.F.D photo P06.

C- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 1.2 metres in length O.S N.F.D photo P07.

D- Bulging section to the soffit by 50mm x 1m² (appears as built) O.S N.F.D photo P08.

E- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 4.5 metres in length, O.S N.F.D photo P09.

F- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 6.5 metres in length O.S N.F.D photos P10 and P11.

G- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 5 metres in length, with seepage noted from the base of this fracture, O.S N.F.D photos P12 and P13.

I- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 2.5 metres in length, (this continues behind the sheeting which was not able to be removed), O.S N.F.D to the areas seen photos P14 and P15.

J- Longitudinal fracture running through both bricks and mortar open H/ L-1mm x 4.3 metres in length, (this continues behind the sheeting which was not able to be removed), O.S N.F.D to the areas seen photos P16 to P18.



Photo 1: P01 Upside elevation 23-07-24



Photo 2: P02 Soffit general view looking towards the low mileage haunch 23-07-24



Photo 3: P03 Soffit general view 23-07-24



Photo 4: P04 Soffit general view looking towards the high mileage haunch 23-07-24



Photo 5: P05 Longitudinal fracture shows no deterioration 23-07-24



Photo 6: P06 Longitudinal fracture shows no deterioration 23-07-24



Photo 7: P07 Longitudinal fracture shows no deterioration 23-07-24

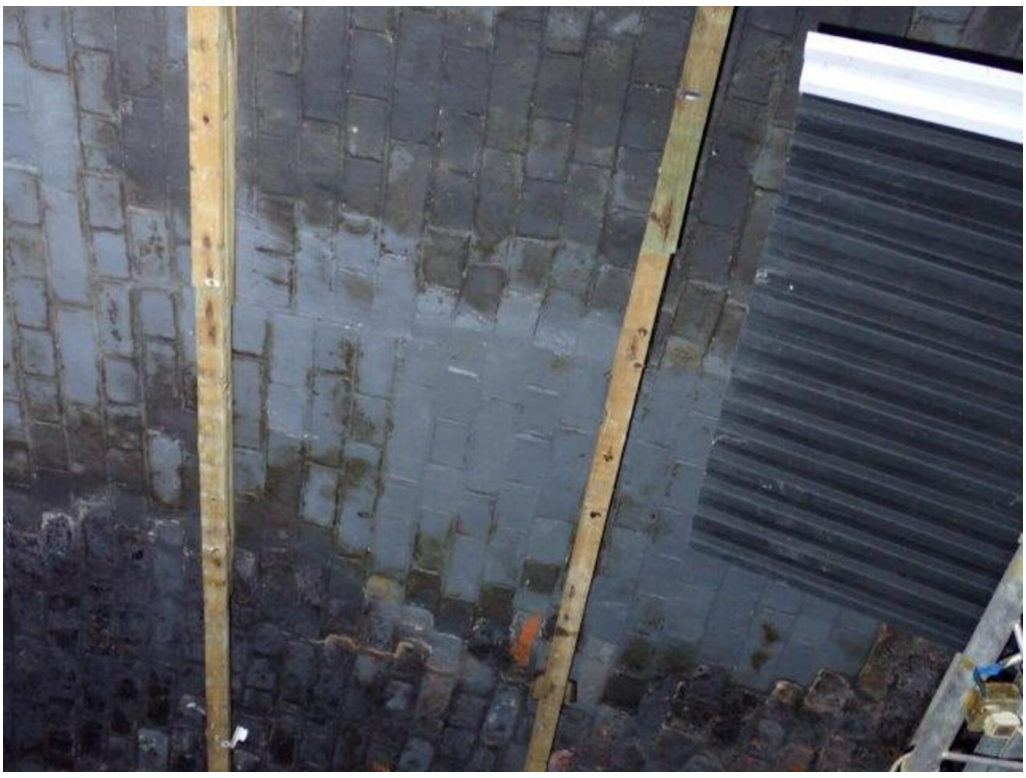


Photo 8: P08 Old standing bulged section to the soffit 23-07-24

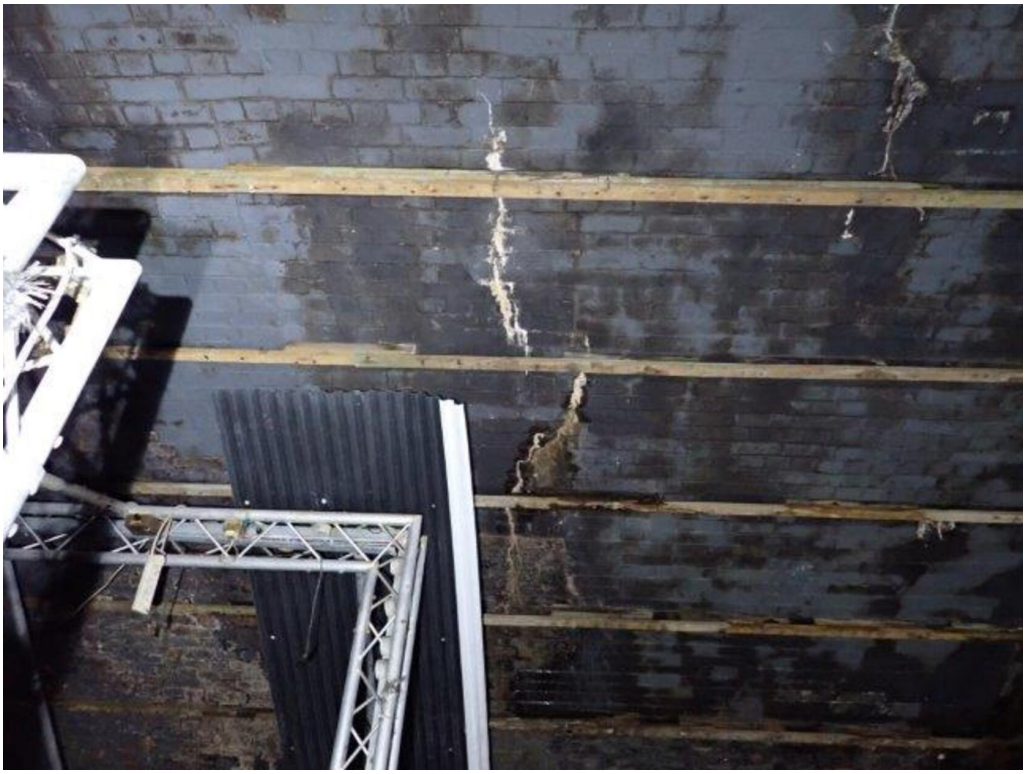


Photo 9: P09 Longitudinal fracture shows no deterioration 23-07-24



Photo 10: P10 Longitudinal fracture shows no deterioration 23-07-24



Photo 11: P11 Longitudinal fracture shows no deterioration 23-07-24



Photo 12: P12 Longitudinal fracture shows no deterioration 23-07-24



Photo 13: P13 Longitudinal fracture shows no deterioration 23-07-24



Photo 14: P14 Longitudinal fracture shows no deterioration 23-07-24



Photo 15: P15 The fracture may continue behind the sheeting 23-07-24



Photo 16: P16 Longitudinal fracture continues behind the sheeting 23-07-24

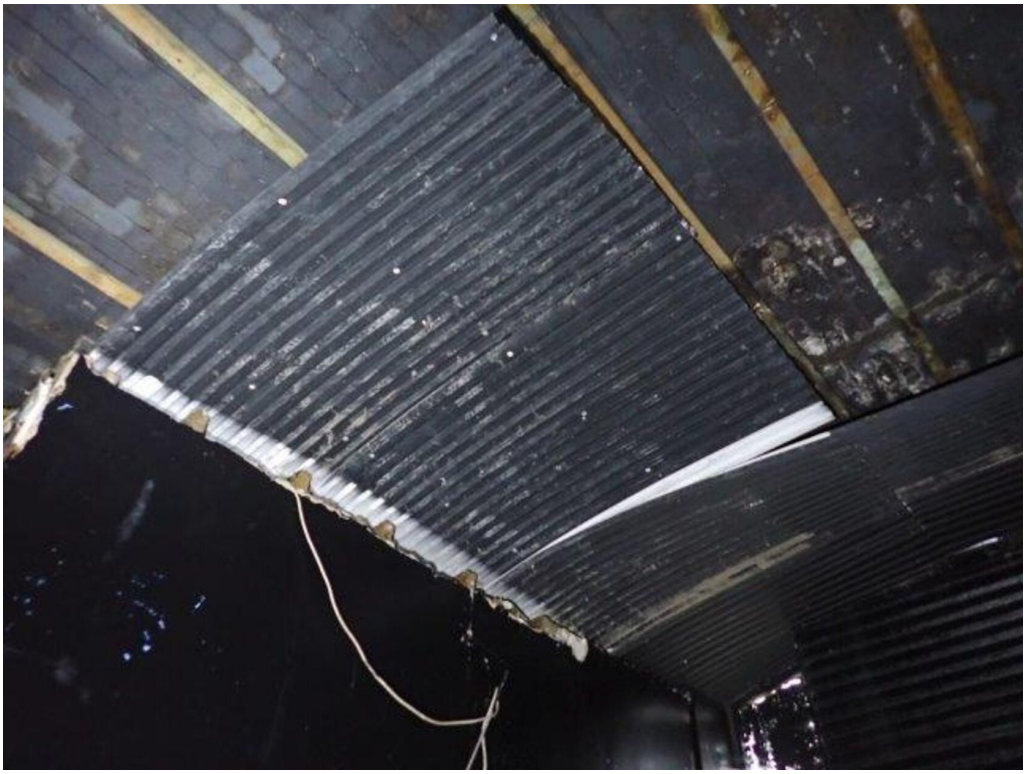


Photo 17: P17 The fracture may continue behind the sheeting 23-07-24



Photo 18: P18 The fracture may continue behind the sheeting 23-07-24