NETWORK RAIL

Bridge Visual Examination Report

ELR: COL	Contract Mileage: 189 m 0825 yds 37.50 ch	Struc. Ref: 65
Examination Type: Bridge Visual	NR ID: 12010422	Exam Date: 10/10/2024
GPS:		OS Ref: SJ8383397490
Structure Name: VIADUCT	Type: BU	Exam ID: 16390977
Route: London North Western		Complete Exam: yes

Section A: To Be Completed By The Examining Organisation

HIDDEN PARTS NOT EXAMINED (EXCLUDING FOUNDATIONS)	Part	Reason
1	downside elevation	no access
2	soffit and piers	cladded

ITEM	DESCRIPTION	LOCATION	Est. Cost £ +/- 20%	Priority Within	Quantity	Severity	Probability	Risk Score	Works Category
1	Please follow up Renewal WI 2136693 in CARRS, see CARRS for full details of the renewal , Proposed implementation year 2026/2027	structure		2yrs	1unit	4	3	E12	Other
2	Please follow up WI 2135894 in CARRS, Continue with the 3 monthly monitoring of the soffit until renewal	soffit		6mths	1unit	3	4	E12	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	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	23/07/2012	No	V		9	Yes	Baseline	No	N	Taken from the Detailed of 28/02/2008. Stitching and tie bars recommended. Not viewed at this examination.
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	29/04/2013	No	D		9	Yes	N/A	No	N	unknown no access to view.
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	08/02/2014	No	V		9	Yes	Not Viewed	No	N	Taken from the Detailed of 28/02/2008. Stitching and tie bars recommended. Not viewed at this examination.
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	11/04/2015	No	V		9	Yes	Not Viewed	No	N	Not viewed
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of	Arch barrel	21/03/2017	No	V		9	Yes	Not Viewed	No	N	Unable to view.

No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for closure	Engineer Comments
	profile, wetness and loss of material											
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	03/11/2017	No	V		9	Yes	Not Viewed	No	N	Unable to view.
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	25/11/2021	Yes	D		12	Yes	Yes	No	N	Further deterioration, fracture aperture has increased with distortion to profile noted and loss of brickwork. Some previous JL fractures have sealed with calcite. Updated from PAN form raised during
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	25/11/2021	Yes	P.A.N		12	Yes	Yes	No	N	Further significant deterioration. Description updated. PAN LNW UD 1363.
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	19/08/2023	Yes	V		12	Yes	Cannot Determine	No	N	Cannot determine at time of examination. See WI1942145 in CARRS renewal
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	10/10/2024	N	V	Y	12	Y	Cannot Determine	N	N	Unable to view, Soffit sheeted unable to view, renewal, see WI 2136693 in CARRS also WI 2082978
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	29/10/2024	Yes	ADDIT		12	Yes	Little Deterioration	No	N	Work has been under WI 2082978, fractures D and G seem to have failed.
1	9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material	Arch barrel	29/10/2024	Yes	ADDIT		12	Yes	No Deterioration	No	N	No deterioration noted since the last examination. See WI1942145 in CARRS renewal
2	Open joints and fractures	Parapets and spandrels	23/07/2012	Yes	V		4	No	Baseline	No	N	Taken from the Detailed of 28/02/2008. Pointing recommended. Risk reduced from 8 to 2x2=4
2	Open joints and fractures	Parapets and spandrels	29/04/2013	Yes	D		4	No	N/A	Yes	N	some repairs appear to have been carried out.
2	Open joints and fractures	Parapets and spandrels	08/02/2014	No	V		4	No	Not Viewed	Yes	N	Not seen at exam
2	Open joints and fractures	Parapets and spandrels	11/04/2015	Yes	V		4	No	No	No	N	Old standing with no deterioration

No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for closure	Engineer Comments
2	Open joints and fractures	Parapets and spandrels	21/03/2017	Yes	V		4	No	No	No	N	no change
2	Open joints and fractures	Parapets and spandrels	03/11/2017	Yes	V		4	No	No	No	N	Old standing with no deterioration
2	Open joints and fractures	Parapets and spandrels	25/11/2021	Yes	D		4	No	Yes	No	N	Some slight deterioration.
2	Open joints and fractures	Parapets and spandrels	19/08/2023	Yes	V		4	No	No	No	N	No deterioration noted at the time of examination.
2	Open joints and fractures	Parapets and spandrels	10/10/2024	Y	V	N	4	Y	No Deterioration	N	N	no change as viewed from GL,
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	23/07/2012	No	V		1	Yes	Baseline	No	N	Unexamined parts, not viewed at this examination.
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	29/04/2013	No	D		1	Yes	N/A	No	N	sheets need removing toallow internal inspection.
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	08/02/2014	Yes	V		1	Yes	N/A	No	N	Sheeted over so unable to view internal elements
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	11/04/2015	Yes	V		1	Yes	N/A	No	N	No change
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	21/03/2017	Yes	V		1	Yes	N/A	No	N	Unable to view.
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	03/11/2017	Yes	V		1	Yes	N/A	No	N	No change
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	25/11/2021	Yes	D		9	Yes	No	No	N	70% of soffit examined. Some previously recorded fractures not able to be viewed.
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	19/08/2023	Yes	V		9	Yes	Cannot Determine	No	N	Cannot determine at time of examination. See WI1994794 in CARRS at RS1
3	Unexamined parts - Internal elements sheeted, Downside restricted.	Internal elements, Downside	10/10/2024	N	V	N	9	Y	Cannot Determine	N	N	Still sheeted, see WI 2135894 in CARRS (risk 12), Correspondence
5	Separation fracture between face ring and spandrel wall	US elevation, HM haunch	25/11/2021	Yes	D		6	No	Baseline	No	N	New tracked defect

NetworkRail	NETWORK RAIL Bridge Visual Examination Report	NetworkRail
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No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for closure	Engineer Comments
5	Separation fracture between face ring and spandrel wall	US elevation, HM haunch	19/08/2023	Yes	V		6	No	No	No	N	No deterioration at the time of examination. See WI1994793 in CARRS at RS9
5	Separation fracture between face ring and spandrel wall	US elevation, HM haunch	10/10/2024	Y	V	N	6	Y	No Deterioration	N	N	No change, see WI 1994793 in CARRS (risk 9)
6	Vertical fractures to parapet. 1m L x HL from string course. FH x 5-10mm with 1m2 of 10mm displacement to wall and 1 no string stone.	US elevation, midspan and above HM pier respectively.	25/11/2021	Yes	D		9	No	Baseline	No	N	Old standing, new to tracker. No change.
6	Vertical fractures to parapet. 1m L x HL from string course. FH x 5-10mm with 1m2 of 10mm displacement to wall and 1 no string stone.	US elevation, midspan and above HM pier respectively.	19/08/2023	Yes	V		9	No	No	No	N	No deterioration at the time of examination. See WI1994793 in CARRS at RS9
6	Vertical fractures to parapet. 1m L x HL from string course. FH x 5-10mm with 1m2 of 10mm displacement to wall and 1 no string stone.	US elevation, midspan and above HM pier respectively.	10/10/2024	Y	V	N	9	Y	No Deterioration	N	N	No change, see WI 1994793 in CARRS (risk 9)
7	Loose brick at height	US elevation, HM pier, below padstone.	25/11/2021	Yes	D		5	No	Baseline	No	N	New tracked defect
7	Loose brick at height	US elevation, HM pier, below padstone.	19/08/2023	Yes	V		5	No	Cannot Determine	No	N	No deterioration at the time of examination. See WI1994793 in CARRS at RS9
7	Loose brick at height	US elevation, HM pier, below padstone.	10/10/2024	N	V	N	5	Y	Cannot Determine	N	N	Cannot determine, see WI 1994793 in CARRS (risk 9)

Engineers Notes

Signed For Employer	Kareem Ali	Name	Kareem Ali	Date	06/11/2024

NETWORK RAIL Bridge Visual Examination Report			
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Struc. Type BU	**NR ID** 12010422	**OS Ref** SJ8383397490	**Exam ID** 16390977
Dimensions	Height 6.35m Length 12.35m Span 10.6m No. Spans 1		**Exam Date** 10/10/2024
Primary Material	RBE - Brick		**Last Detailed** 25/11/2021
Secondary Material			**Last Visual** 19/08/2023
Structure Carries	Rail	**Over**	Land

The examiner should record any deterioration in condition or development of defects or other factors, which might place at risk the rail traffic, customers, staff or the public at large. Special reference should be made to those structures or parts of structures whose condition may require action before the next examination.

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

The last Detailed Examination was incomplete

Parts not examined at last detailed exam:

30% of cladding to soffit could not be accessed.

Pier faces tiled and cladded both sides and to adjacent spans faces.

No indications of failure at track level

Has all the structure been viewed? no (if no, see report for details)

No access to the downside elevation, the parapet only was viewed from approximately 40 metres away only.

The soffit and piers are fully sheeted.

Has the structure been viewed under load? yes

Signed	Lee Davies	**Name** Lee Davies	**Date** 14/10/2024

Name Of Part	Status
Main Girders	Not Applicable
Cross Girders	Not Applicable
Rail Bearers	Not Applicable
Deck / Floor	Not Applicable
Rivets and Bolts	Not Applicable
Arch Ring / Barrel	Not Included
Spandrels / Headwalls	Not Included
Abutments	Not Applicable
Piers	Not Included
Wing and Retaining Walls	Not Applicable
Pointing	Not Included
Parapets and Pilasters	Viewed
Columns and Cylinders	Not Applicable
Trestles and Crossheads	Not Applicable
Bedstones and Cills	Not Included
Bearing	Not Applicable
Ballast Plates and Boards	Not Applicable
Longitudinal Timbers	Not Applicable
Water Proofing	Not Included
Drainage	Not Included
Gutters and Downpipes	Not Applicable
Handrails	Not Applicable
Painting	Not Applicable
Track / Road Condition	Viewed
Revetment Walls	Not Applicable
Vegetation	Yes
Debris	Yes
Rubbish	Yes
Signs/Plates	Viewed
OLE Attachments	Viewed

Elements not Included and reason

1. Arch Ring / Barrel: Soffit sheeted.
2. Spandrels / Headwalls: No access to view the downside spandrel
3. Piers: Piers fully sheeted.
4. Pointing: Soffit and piers fully sheeted
5. Bedstones and Cills: Bedstones fully sheeted.
6. Water Proofing: Water proofing would not have been expected to be viewed at a visual.
7. Drainage: Drainage would not have been expected to be viewed at a visual.

Record of Observations Under Load

Load Type	Area Observed	Result Of Observation	Date & Time
Loco-hauled Passenger Train	Arch soffit sheeting	No Deformation Noted	10/10/2024 12:01

Comments	No movement noted to the soffit sheeting.

ADDITIONAL GENERAL COMMENTS

The majority of the downside elevation is not seen, there is no direct access to this area.

The soffit is fully sheeted with monitoring attached to the high mileage pier.

METHOD OF EXAM/TOOLS USED

Visual examination undertaken on 10-10-24 to view all off track elements, the trackside elements were viewed inside a safeguarded possession on 18-08-24.

NEW DEFECT(S)

NONE

PREVIOUSLY RECORDED SIGNIFICANT (OPEN) DEFECT(S)

DEFECT NUMBER 1
Defect Location: Arch barrel
Defect Description: 9No. longitudinal fractures. 2 open 10mm+ with distortion of profile, wetness and loss of material
Identified on: 23/07/2012
Status: Unable to view
Defect Comment: Soffit sheeted unable to view
Previous Defect Photo: 8 - P08 Live defect 1 soffit sheeted unable to view any fractures to the soffit (10/10/2024)

DEFECT NUMBER 2
Defect Location: Parapets and spandrels
Defect Description: Open joints and fractures
Identified on: 23/07/2012
Status: No deterioration
Defect Comment: No deterioration to the areas seen
Previous Defect Photo: 9 - P09 Live defect 2 open joints to the parapet (10/10/2024)

DEFECT NUMBER 3
Defect Location: Internal elements, Downside
Defect Description: Unexamined parts - Internal elements sheeted, Downside restricted.
Identified on: 23/07/2012
Status: No deterioration
Defect Comment: No deterioration
Previous Defect Photo: 10 - P10 Live defect 3 soffit sheeted (10/10/2024)
Previous Defect Photo: 11 - P11 Downside elevation largely not seen (10/10/2024)

DEFECT NUMBER 5
Defect Location: US elevation, HM haunch
Defect Description: Separation fracture between face ring and spandrel wall
Identified on: 25/11/2021
Status: No deterioration
Defect Comment: No deterioration.
Previous Defect Photo: 12 - P12 Live defect 5, separation fracture to the upside face rings (10/10/2024)

DEFECT NUMBER 6
Defect Location: US elevation, midspan and above HM pier respectively.
Defect Description: Vertical fractures to parapet. 1m L x HL from string course. FH x 5-10mm with 1m2 of 10mm displacement to wall and 1 no string stone.
Identified on: 25/11/2021
Status: No deterioration
Defect Comment: No deterioration.
Previous Defect Photo: 13 - P13 Live defect 6, vertical fracture to the upside parapet (10/10/2024)

DEFECT NUMBER 7
Defect Location: US elevation, HM pier, below padstone.
Defect Description: Loose brick at height
Identified on: 25/11/2021
Status: Cannot determine
Defect Comment: Cannot determine, the location of this defect on the last detailed examination was noted as the downside elevation not the upside.
Previous Defect Photo: 14 - P14 Live defect 7 unable to determine any loose brickwork on the downside elevation (10/10/2024)

PREVIOUS RECOMMENDATION(S)

- See Recommendation(s) below

NONE

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

Environmental Factors Present: No

Photos



Photo 1: P01 Upside elevation (10/10/2024)



Photo 2: P02 Downside elevation (10/10/2024)



Photo 3: P03 Soffit general view from the upside (10/10/2024)



Photo 4: P04 Soffit general view from the downside (10/10/2024)



Photo 5: P05 Monitoring device present to the high mileage pier (10/10/2024)

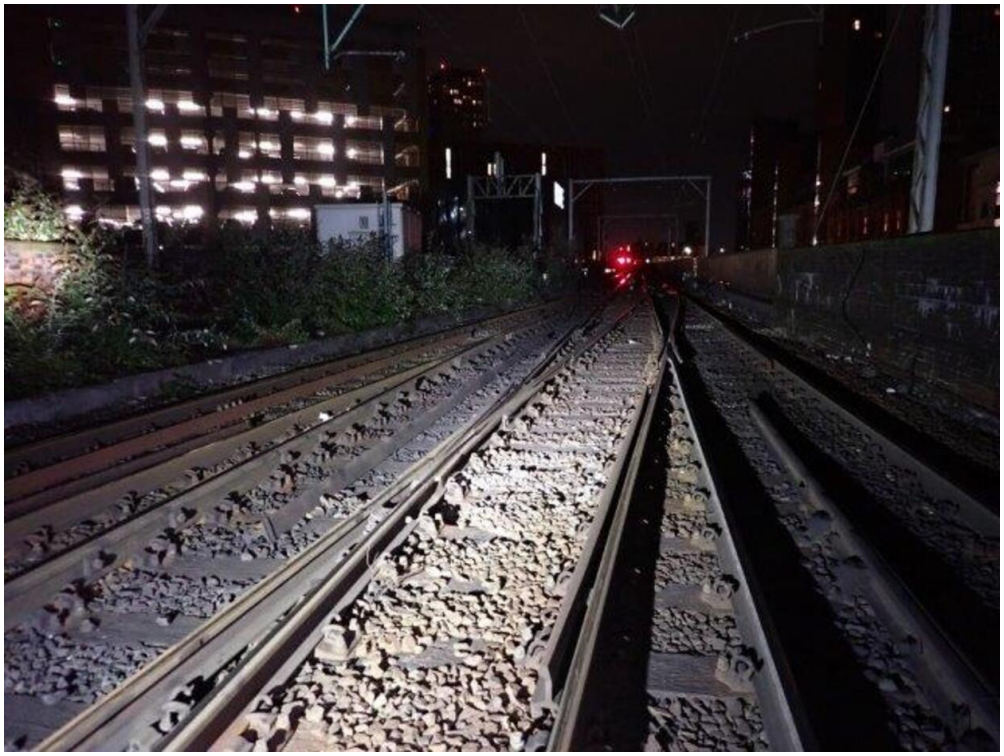


Photo 6: P06 Track view from low mileage (18/08/2024)

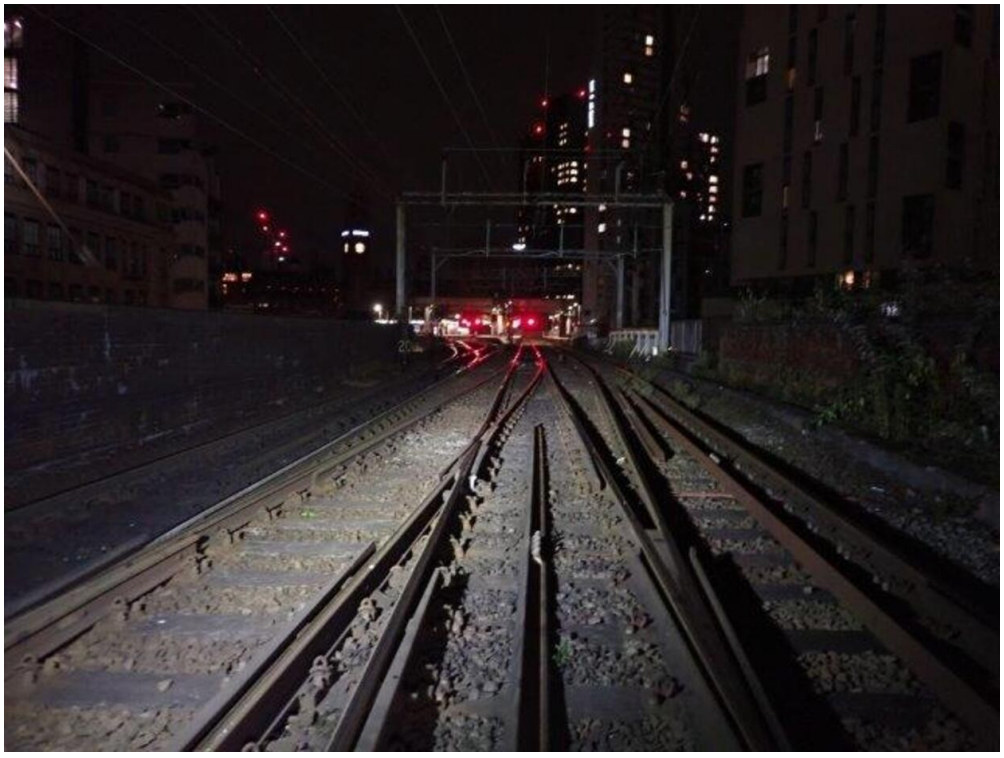


Photo 7: P07 Track view from high mileage (18/08/2024)



Photo 8: P08 Live defect 1 soffit sheeted unable to view any fractures to the soffit (10/10/2024)



Photo 9: P09 Live defect 2 open joints to the parapet (10/10/2024)



Photo 10: P10 Live defect 3 soffit sheeted (10/10/2024)



Photo 11: P11 Downside elevation largely not seen (10/10/2024)



Photo 12: P12 Live defect 5, separation fracture to the upside face rings (10/10/2024)



Photo 13: P13 Live defect 6, vertical fracture to the upside parapet (10/10/2024)

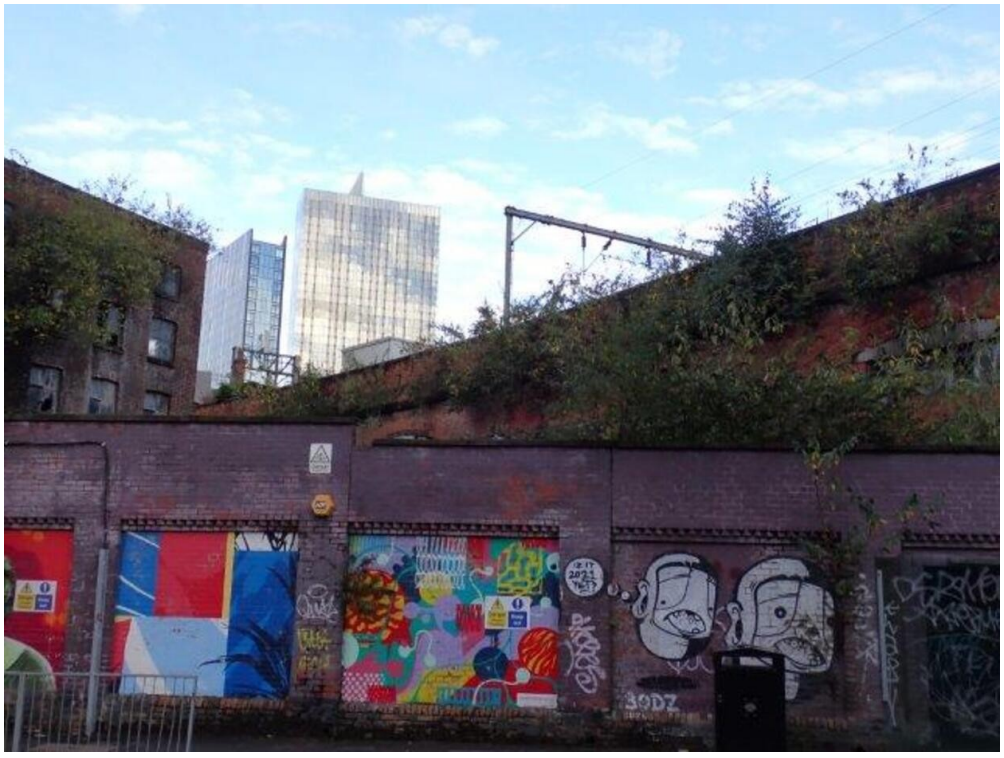


Photo 14: P14 Live defect 7 unable to determine any loose brickwork on the downside elevation (10/10/2024)