



1223 – WITHNELL STATION BRIGE

GENERAL INSPECTION

Inspection Date: 26/05/2026

Inspectors: Alex Cooper, Callum Bushell

Engineer: Paul Sellars

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1. Introduction

Withnell Station Bridge carries the A675 Bolton Road over a disused railway, which is historically owned and maintained by National Highways Historic Railway Estate. A 2022 Structural Assessment (*CCT/23 CS 454 / BE4 Assessment and Inspection Report*) by Jacobs, on behalf of National Highways HRE, identified that a 7.5T weight restriction is required due to the overall condition of the structural elements.

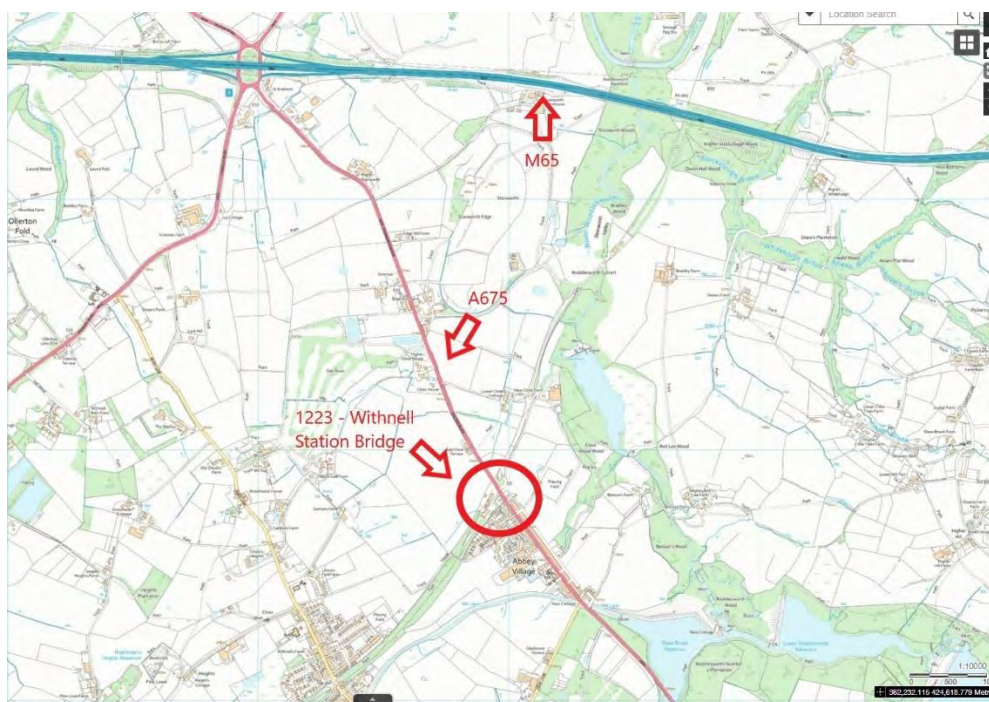
Lancashire County Council subsequently installed temporary traffic control measures as a response to the finding, in the form of a 2-way traffic control with traffic diverted away from the North side of the carriageway, to limit the overall loading on the area of concern.

Lancashire County Council have since entered Legal proceedings to allow the local highway authority to undertake site investigations with the intention that a legal transfer of ownership will take place, so that the structure is owned in the future by the local highway authority. It is anticipated that a future scheme by Lancashire County Council is to be undertaken to bring the structure into a condition that will allow for full weight capacity to resume, and subsequently remove the current traffic restrictions that are in place on a major highway network route.

This General Inspection has been undertaken to capture the latest condition of all accessible bridge elements, in accordance with *CS450 Inspection of Highway Structures*.

2. Location

1223 – Withnell Station Bridge carries the A675 Bolton Road over the former Chorley – Cherry Tree railway line, located in Abbey Village, Chorley, Lancashire. Grid Reference: 363941, 422865.



3. Construction Details

Withnell Station Bridge is a skewed, single span bridge with cast iron deck girders and brick jack arches. The clear span is 8.44m and the width is 10.18m, with a skew angle of 33°. The cast iron girders are supported on coursed stone masonry abutments, with coursed stone masonry wing walls. The parapets are formed from cast iron panels that are fixed to the top flanges of the cast iron deck girders.

4. Inspection Methodology

The General Inspection was carried out in accordance with CS450 Inspection of Highway Structures. The inspection was undertaken by foot at highway level, the land below the bridge (disused railway), and adjacent embankments, so that all visible bridge elements were inspected from a visible distance. The inspection was undertaken during daylight hours only.

Personnel:

The lead inspector was Alex Cooper (BICS Inspector), assisted by Callum Bushell – Bridge Inspector. Engineer Review by Paul Sellars BSc Hons CEng ChPP C.WEM FICE MStructE MAPM MCIWEM RPP.

Constraints/Restrictions:

None

Weather Conditions:

The weather conditions during the inspection were clear, sunny, and reasonably warm. 23°.

5. Inspection Findings

☒ GENERAL

☐ PRINCIPAL

Form 1 of 1 for this bridge

Bridge Name:		Withnell Station		Road Name:		A675 Bolton Road	
Bridge Ref/No:		1223		Road Ref/No:		A675	
Map Ref:		Span 1 of 1		Primary deck element form (Table 2)		4	
O.S.E 363942		O.S.N 422865		Span Length (m):		8.44	
All above ground elements inspected: YES ☒ NO ☐		Photographs? YES ☒ NO ☐		Primary deck element material (Table 3)		F	
Number of construction forms in bridge/span ☒ 1 ☐ 2 ☐ 3 ☐ more ☐		(*delete as appropriate)		Secondary deck element form (Table 3)		23	
				Secondary deck element mat. (Table 4)		K	

Set	No	Element Description	S	Ex	Def	W	P	Cost	Comments / Remarks
Deck Elements	1	Primary deck element (Table 2)	3	E	M	Yes	H		Multiple defects, see below
	2	Secondary deck element/s							
	3	Transverse Beams							
	4	Element from Table 3	4	B	M	Yes	H		Multiple defects, see below
	5	Half Joints							
	6	Tie beam/rod							Not visible
	7	Parapet beam or cantilever							None present
Load-bearing Substructure	8	Deck bracing							
	9	Foundations	1	A					No evidence of any failure/movement. Assumed sound
	10	Abutments (incl. arch springing)	3	B	M	No			Multiple defects, see below
	11	Spandrel wall/head wall							
	12	Pier/column							
	13	Cross-head/capping beam							
	14	Bearings							Not visible
Durability Elements	15	Bearing plinth/shelf	2	C	3.2	No			Mortar loss to stone bearing plinth joints
	16	Superstructure drainage							
	17	Substructure drainage	1	A	8.1	No			Drainage gully under structure is clear
	18	Waterproofing	4	E	14.1	No			Extensive water seepage throughout
	19	Movement/expansion joints							
	20	Painting: deck elements	5	E	4.1	Yes	H		Total loss of paint coat to cast iron beams
	21	Painting: substructure elements							
Safety Elements	22	Painting: parapets/safety fences	5	E	4.1	Yes	H		Total loss of paint coat to parapets
	23	Access/walkways/gantries							
	24	Handrail/parapets/safety fences	3	E	M	Yes	H		Multiple defects, see below
	25	Carriageway surfacing	2	C	9.1	No			Minor wear
Other Bridge Elements	26	Footway/verge/footbridge surfacing	3	E	M	Yes	M		Multiple defects, see below
	27	Invert/river bed							
	28	Aprons							
	29	Fenders/cutwaters/collision prot.							
	30	River training works							
	31	Revetment/batter paving							
	32	Wing walls	2	C	5.1	No			Generally sound. Minor vegetation growth
	33	Retaining walls							
	34	Embankments	3	E	5.2	No			Established tree/vegetation growth
Ancillary Elements	35	Machinery							
	36	Approach rails/barriers/walls	3	C	M	No			Multiple defects, see below
	37	Signs	1	A	1.1	No			All traffic signs remain sound
	38	Lighting							
	39	Services							
	40								
	41	Miscellaneous							
	42	Miscellaneous							

MULTIPLE DEFECTS

Item No.	Defect 1			Defect 2			Defect 3			Comments / Remarks
	S	Ex	Def	S	Ex	Def	S	Ex	Def	
1	3	E	1.1	2	C	1.2				Extensive corrosion to all cast iron beams with localised pitting. Localised delamination and section loss to bottom flanges.
3	4	B	3.1	3	E	3.2	3	E	3.6	Partial collapse of jack arch at SE corner with missing bricks, extensive mortar loss to joints to all jack arches, spalls to over 50% of bricks, areas of displacement and flattening to arches.
9	3	B	3.5	2	B	14.1				Localised crack to bricks, seepage through east abutment.
23	3	E	1.1	3	C	2.3				Extensive moderate corrosion to parapets, loss of cast iron members, displacement and leaning.
25	3	E	5.2	3	B	5.1	2	C	9.6	Overgrown vegetation growth to highway verge with large trees present. Displacement to flags on surfacing below bridge. Loss of timber rails to NW approach fence. Mortar loss to masonry approach walls.

INSPECTOR'S COMMENTS

	Withnell Station Bridge is in an overall fair condition, with some bridge components extremely poor. Extensive corrosion and localised pitting to all cast iron beams is present, along with localised delamination and section loss to the bottom flanges of some cast iron girders. The brick jack arch has sustained a loss of masonry/partial collapse at the SE end of the structure, which has resulted in a void above the jack arch according to the 2022 assessment. Mortar loss, areas of deformation and flattening, and spalls to the bricks are also present. The masonry abutments are generally in an overall fair condition despite a localised crack and visible water seepage being present. The masonry wing walls are also in an fair condition. The cast iron parapets are poor, with extensive corrosion present along with some areas of missing cast iron members in the upper areas. Both the deck girders and parapets have sustained a total loss of protective paintwork. Following the 2022 assessment, the bridge is now subject to temporary traffic measures to direct vehicular loading away from the southbound side of the carriageway, as a 7.5T restriction was recommended. It is recommended that a full deck and superstructure replacement is undertaken as a high priority.
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Name Alex Cooper Signed A.Cooper Date 26 / 5 / 2026

ENGINEER'S COMMENTS

	The Inspector's comments are a true and fair reflection of the current condition of the bridge. It is anticipated that the BCI Ave score will be at the high end of the poor range (40 to 65). The bridge deck should be replaced and temporary traffic measures kept in place until that can be arranged. The parapets are in very poor condition and, given the current imposition of temporary measures, should be assessed using the DfT local authority roads guidance to determine if additional measures are required to cater for an errant vehicle.
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Name Paul Sellars Signed Paul RC Sellars Date 9 / 6 / 2026

WORK REQUIRED

Ref. No	Suggested Remedial Works	Priority	Estimated Cost	Action/Work Ordered
	Full deck and superstructure replacement scheme required as a high priority.	H	£6m	
	Replacement of deck and all superstructure elements, including parapets.			

S- severity, Ex - extent, Def - defect

W - work required, P - work priority

BCS_{Av} = 3.06

BCS_{Crit} = 4.00

BCI_{Av} = 56.42

BCI_{Crit} = 31.00

Inspection Date 26 / 5 / 2026

Next Insp. (month/yr) 5 / 2028



6. Inspection Photos



1. Photo over the bridge looking north along the A675



2. Photo over the bridge looking south along the A675



3. North East elevation



4. South West elevation



5. View of highway surface with temporary traffic measures in place



6. Corrosion and loss of cast iron member to the top of the SW parapet



7. Further loss of cast iron section to top of parapet



8. View over the bridge showing the highway surface and current temporary traffic restrictions



9. South West parapet



10. North East parapet



11. South West parapet and overgrown tree and vegetation growth to highway verge



12. Photo looking south showing the carriageway surface and highway verge



13. North East parapet and tree and vegetation growth along verge



14. Missing timber rails to NW approach fencing



15. View of the rear of the NE parapet and external cast iron beam, with visible corrosion and damage to the top flange



16. General view of the internal deck beams and brick jack arches



17. Corrosion and delamination to the cast iron beams at the SE end of the bridge



18. Missing bricks to the jack arch due to partial collapse



19. General view of the cast iron girders and brick back arches



20. Visible delamination, corrosion and pitting to the deck girder along with missing bricks to the jack arch



21. Photo showing corrosion to internal deck girders and spalls and mortar loss to brick jack arches



22. General view of the cast iron girders and brick back arches



23. General photo of deck elements



24. SW corner of deck. Visible water drips to external cast iron beam



25. Overview of deck elements



26. General view of the deck looking eastwards



27. External end beam (west)



28. External end beam (east) – mortar loss and deformation can be seen to the jack arches



29. Overview of the west end of the bridge



30. Corrosion and section loss to the top flange of the east beam



31. Spalls and displacement to the jack arch



32. NW Abutment



33. SE Abutment



34. Localised crack to a single stone block



35. Seepage stains to the SE abutment



36. SE corner with a localised visible crack to a single stone



37. General view of the NW abutment



38. Photo of the SE abutment and stone bearing plinth



39. SE wing wall and embankment



40. NE wing wall and embankment



41. SW wing wall and embankment



42. NW wing wall and embankment



43. Surfacing under the bridge



44. General view of the flagged and concrete surface under the bridge



45. Drainage gully under the bridge is clear of blockages

7. DEFECT SKETCH

