



**Bridge Detailed Examination Report**

<b>ELR:</b> LJT2		<b>Contract Mileage:</b> 024 m 0528 yds 24.00 chs				<b>Struc. Ref</b> 112	
<b>Examination Type:</b>		Bridge Detailed		<b>NR ID:</b>	12015186	<b>Exam Date:</b>	11-Feb-2014
<b>Area:</b>	Central West			<b>BRS:</b>	0	<b>OS Ref:</b>	SH70404460
<b>Structure Name:</b>	BR112 TANYDDYNGWYN			<b>Type:</b>	BO	<b>Exam ID</b>	5026678
<b>Route:</b>	Blaneau Ffestiniog Branch			<b>Complete Examination:</b>		No	

**Section A: To Be Completed By The Examining Organisation**

HIDDEN PARTS NOT EXAMINED (EXCLUDING FOUNDATIONS)		Part				Reason				
ITEM	DESCRIPTION	LOCATION	Est. Cost £ +/- 20%	Priority Within	Quantity	Severity	Probability	Risk Score	Works Category	
1	Prior to considering recommendation items below, review long term plan for this structure and consider reconstruction.	Structure		1yr	1 unit				Other	
2	Carry out HCE examination to confirm condition of main girders hidden by jack arches and tie bar ends (JAS, BZ and CUFPO).	Main girders and tie bars	2000.00	1yr	1 unit	4	2	E8	Other	
3	Carry out site investigations to determine remaining thickness to bottom flange of main girders with an ultrasonic meter and update level 0 assessment to determine current capacity.	Main girders	2000.00	1yr	1 unit	4	2	E8	Other	
4	Remove defective paintwork throughout structure, clean exposed steel to sound surface, repair as necessary and apply an approved coating system.	Main girders, tie bars and parapets.	10000.00	4yrs	1 unit	2	3	E6	Painting	
5	Rake out to sound material and re-paint isolated areas of deep open joints.	Abutments, wingwalls and parapets	4000.00	4yrs	20 m2	2	3	M6	Hand Pointing	

History of Live Significant Defects												
No	Description	Location	Exam Date	Access Gained	Exam Type	Rec Raised	Risk Score	Access Req'd	Deter - ioration	Repaired	Flagged for Closure	Engineer Comments
0	There is no electronic information regarding a detailed examination on this structure	N/A									N	

**Engineers Notes**

<b>Signed</b> For Employer		<b>Name</b>		<b>Date</b> 24-Apr-2014
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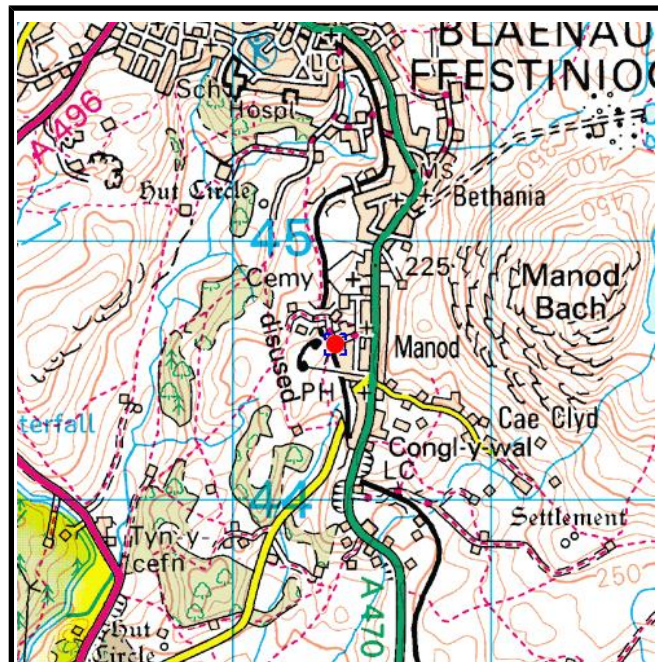
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<b>Structure Type</b> BO	<b>NR ID</b> 12015186	<b>Rpt ID</b> 6405	<b>Exam ID</b> 5026678	
<b>OS Ref:</b> SH70404460	<b>Contract Mileage:</b> 024 m 0528 yds 24.00 chs			<b>Exam Date</b> 11/2/2014 Last Detailed 14/10/2007 Last Visual 28/11/2013
<b>Primary Material:</b> Not Recorded		<b>Secondary Material:</b> Not Recorded		
<b>Line:</b> Blaneau Ffestiniog Branch				
<b>Name:</b> BR112 TANYDDYNGWYN				

Site Sketch / Elevation Photograph



Location Plan





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### Name of Part

N/E = Not Examined  
N/A = Not Applicable

Main Girders	Poor
Cross Girders	-
Rail Bearers	-
Jack Arches Floor	Good
Rivets & Bolts	-
Arch Ring	-
Spandrels	-
Abutments	Fair
Piers	-
Wing & retaining Walls	Fair
Pointing	Fair
Parapets & Pilasters	Fair
Columns & Cylinders	-
Trestles & Crossheads	-
Bedstones & Cills	Good
Bearings	-
Ballast Plates/Boards	-
Longitudinal Timbers	-
Waterproofing	Fair
Drainage	-
Gutters & Downpipes	-
Handrails	-
Painting	Poor
Track & Road Condition	Poor
Revetment Walls	-
Vegetation	YES
Debris	NO
Visibility of Signs	-
Rubbish	NO
Tie Bars	Poor
-	-
-	-
-	-
Insert 'X' for	
Change of Construction	
Closed Line	X
C.W.R.	
Rail Joints	X
25T Axle/Abnormal Rd Loads	
Weight Restriction Plates	X
Inaccessible Parts	X
Tell Tales/Avonguards	
Plumbing Points	

### Examiner's General Comments

Structure in generally fair condition at time of examination' but in need of repainting.

Has all the structure been viewed? No

Underside of both inner main girders only examined, remainder hidden by jack arches

Has the structure been viewed under load? No

No road vehicles using bridge at time of examination.

SIGNED



EXAMINERS NAME



DATE

23-Apr-2014

**Bridge Detailed Examination Report**

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**STATUS OF PREVIOUSLY RECORDED SIGNIFICANT DEFECTS and STATUS OF RECOMMENDATIONS MADE AT PREVIOUS EXAMINATION**

There is no history of live significant defects on this structure and there were no recommendations made on the previous report for this structure

The last detailed examination report was incomplete and the unexamined parts are identified below  
Underside of both inner main girders only examined, remainder hidden by jack arches

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

**GENERAL DESCRIPTION**

This structure carries an occupation road leading to open fields on the upside, over a disused branch line. It is constructed of four steel main girders with three brick jack arches in between on stone abutments and wing walls the parapets on the span are of mild steel panels.  
The examination was tactile and carried out utilising ladders, prodders and hammers.

**DIMENSIONS**

Running edge of down rail to downside parapet – 1m.  
Running edge of up rail to upside parapet – 1m.  
Height – 4.5m  
Length of abutment – 4m  
Span – 4.1m

**MAIN GIRDERS 305mm high x 130mm wide**

Both outer main girders – severe corrosion with knife edging throughout outer edge of top flange Photo 6,  
Both outer and both inner main girders – extensive moderate/severe corrosion sores throughout bottom face of bottom flange. Photos 7,8

**JACK ARCHES**

All 3no brick jack arches in generally good condition, apart from water seepage - see Waterproofing item.

**PAINTING**

Paint cover generally broken down, and now largely non-existent - allowing extensive corrosion throughout superstructure. Photo 9.10

**ABUTMENTS**

Both abutments – similar, 1mm wide vertical, stepped bed joint fractures, from ground level to cill, at centre of abutments – as last detailed examination. Photos 11,12  
Occasional, isolated open joints, to 150mm deep, generally throughout both abutments – 4m.sq total. Photo 13

**WING WALLS**

Occasional, isolated open joints, to 100mm deep, generally throughout all 4no wing walls – 8m.sq total. Photo 14

**PARAPETS** 10mm thick steel plate panels on 75mm.sq. angle stiffeners, over branch, line both sides. Masonry walls on approaches.

All 3no plate panels on each parapet show extensive moderate/severe surface corrosion throughout, Photos 15,16

Occasional, isolated open joints, to 100mm deep, generally throughout all 4no parapet approach walls – 8m.sq total. Photo 17

**POINTING**

See open joints at abutments, wing walls and parapet approach walls – 20m sq total.

**PADSTONES**

All padstones carrying main inner and outer girders in good condition.

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**WATER PROOFING**

Areas of moderate/heavy water seepage, generally throughout all 3no jack arches, mainly at connection with main girders, and down inner face of both abutments. Photo 18

**ROAD OVER**

Concrete surfaced road over, leading to open fields on upside, appears little used except as a footpath. Note- this (freight only) line has not carried rail traffic for approximately 20 years, with the line in the vicinity of this structure now heavily overgrown with brambles, saplings etc. Photos 19,20

**VEGETATION**

Bushes/saplings growing within 2m of all 4no outer quoins of wing walls. Photo 21

**TIE BARS** 1no. at centre of each jack arch

All 3no. tie bars severely corroded at connection with jack arches, wasted to 10mm out of original 35mm. Photo 22

**WEIGHT RESTRICTION PLATES**

6 Ton weight restriction plates on both approaches to span – clear and visible with no evidence of non-compliance. Photo 23

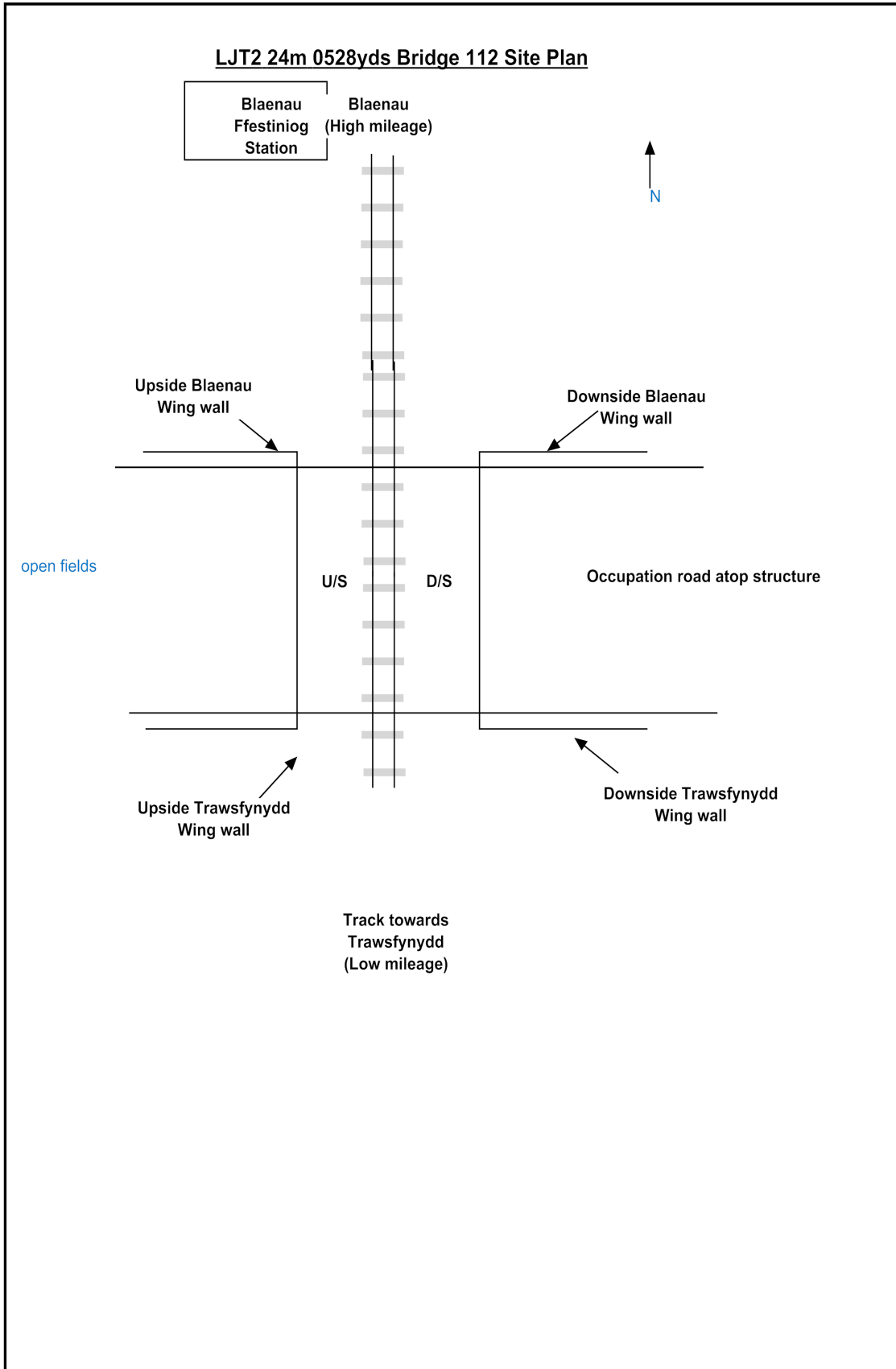
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Photo 1 Blaenau end elevation 11/02/2014



Photo 2 Trawsfynydd end elevation 11/02/2014

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Photo 3 road over looking towards downside 11/02/2014



Photo 4 road over looking towards upside 11/02/2014



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Photo 5 general view of soffit 11/02/2014



Photo 6 typical corrosion to outer main girder 11/02/2014

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Photo 7 typical corrosion to underside of main girders 11/02/2014



Photo 8 typical corrosion to underside of main girders 11/02/2014

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Photo 9 typical paint failure at main girders 11/02/2014



Photo 10 typical paint failure at parapets 11/02/2014

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Photo 11 fracture at downside abutment 11/02/2014



Photo 12 fracture at upside abutment 11/02/2014

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Photo 13 typical open joints at abutments 11/02/2014



Photo 14 typical open joints at wingwalls 11/02/2014

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Photo 15 typical corrosion at Trawsfynydd end parapet 11/02/2014



Photo 16 typical corrosion at Blaenau end parapet 11/02/2014

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Photo 17 typical open joints at parapet walls 11/02/2014



Photo 18 typical water seepage at jack arches 11/02/2014

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Photo 19 track view looking towards Blaenau 11/02/2014



Photo 20 track view looking towards Trawsfynydd 11/02/2014



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Photo 21 typical bush/sapling at wingwall quoins 11/02/2014



Photo 22 typical corroded tie bar 11/02/2014

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Photo 23 weight restriction plate 11/02/2014

**NETWORK RAIL BCMI EXAMINATION REPORT FORM**

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Territory	ELR	Structure No	Start Mileage	Group	Type	RAR ID	Structure Name	Exam Date	Task Year	Exam Type	Examiners Name	Weather
TWES	LJT2	112	24.0528	BB	BBO		TANYDDYNGWYN	11/02/2014	13_14	D		FAIR

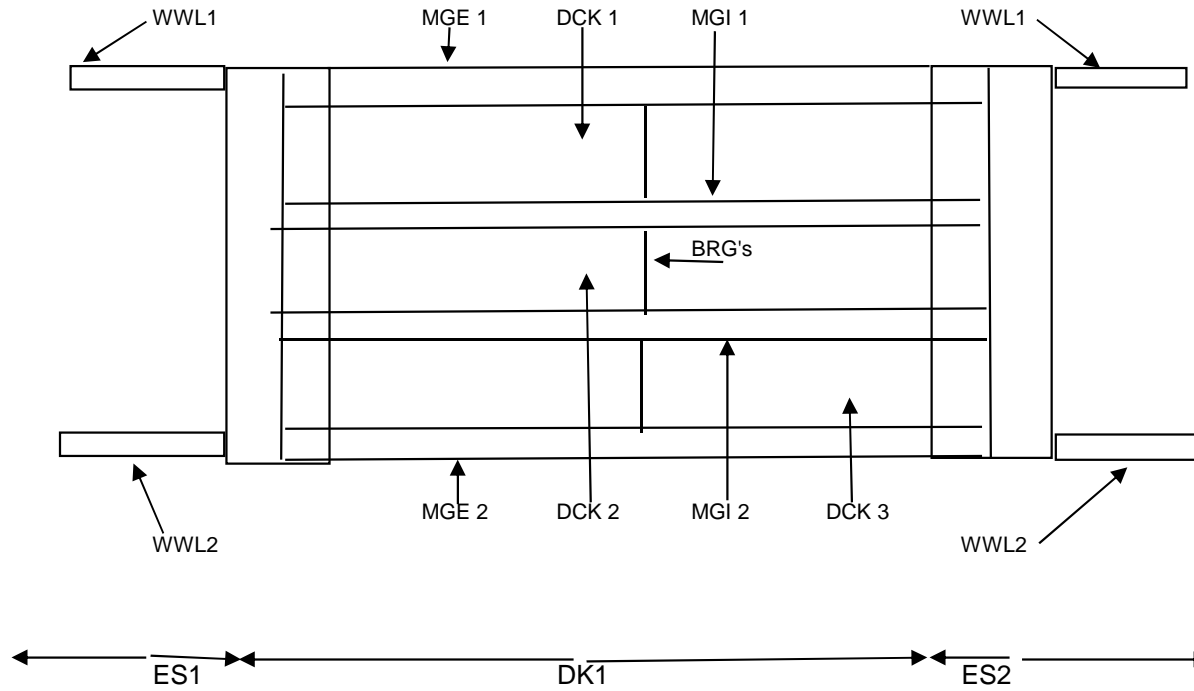
Major Element		Minor Element			Metal / Masonry / Concrete / Timber		Coated Metal / Cracked Masonry		V	Comments
Code	No	Code	No	Material	S/Ex 1	S/Ex 2	S/Ex 1	S/Ex 2		
ES	1	WWL	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout.
ES	1	WWL	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout.
ES	1	ABT	1	B	C3	B3	J7	A1	✓	Occasional isolated open joints to 150mm deep. Areas of heavy water staining throughout. 1No vertical bed joint fracture of longstanding.
ES	1	PCL	1	B	B5	A1	A1	A1	✓	Moderate water staining throughout inner face of pad stones
ES	2	WWL	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 50mm deep. Areas of slight water staining throughout.
ES	2	WWL	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout.
ES	2	ABT	1	B	C3	B3	J7	A1	✓	Occasional isolated open joints to 150mm deep. Areas of heavy water staining throughout. 1No vertical bed joint fracture of longstanding.
ES	2	PCL	1	B	B5	A1	A1	A1	✓	Moderate water staining throughout inner face.
DK	1	PPT	1	M	C5	B5	L6	A1	✓	Extensive surface corrosion throughout parapet panels. Paint cover broken down.
DK	1	PPT	2	M	C5	B5	L6	A1	✓	Extensive surface corrosion throughout parapet panels. Paint cover broken down.
ES	1	PPT	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout
ES	1	PPT	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout
ES	2	PPT	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout
ES	2	PPT	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout
DK	1	MGE	1	M	F3	D5	L6	A1	✓	Extensive corrosion with loss of section throughout outer edges. Moderate corrosion sores throughout bottom flange. Paint cover broken down.
DK	1	DCK	1	B	B5	A1	A1	A1	✓	Moderate water staining throughout jack arch
DK	1	MGI	1	M	D5	C5	L6	A1	✓	Extensive moderate surface corrosion sores throughout bottom flange. Paint cover broken down.
DK	1	DCK	2	B	B5	A1	A1	A1	✓	Moderate water staining throughout jack arch
DK	1	MGI	2	M	D5	C5	L6	A1	✓	Extensive moderate surface corrosion sores throughout bottom flange. Paint cover broken down.
DK	1	DCK	3	B	B5	A1	A1	A1	✓	Moderate water staining throughout jack arch
DK	1	MGE	2	M	F3	D5	L6	A1	✓	Extensive corrosion with loss of section throughout outer edges. Moderate corrosion sores throughout bottom flange. Paint cover broken down.
DK	1	BRG	1	M	E5	D5	L6	K5	✓	Extensive section loss, only 10mm remaining in places, no paint cover.
DK	1	BRG	2	M	E5	D5	L6	K5	✓	Extensive section loss, only 10mm remaining in places, no paint cover.
DK	1	BRG	3	M	E5	D5	L6	K5	✓	Extensive section loss, only 10mm remaining in places, no paint cover.

# NETWORK RAIL BCMI EXAMINATION REPORT FORM

Major Element				
Code	No	Material	Span No	V
ES	1	B	1	✓
DK	1	M	1	✓
ES	2	B	1	✓

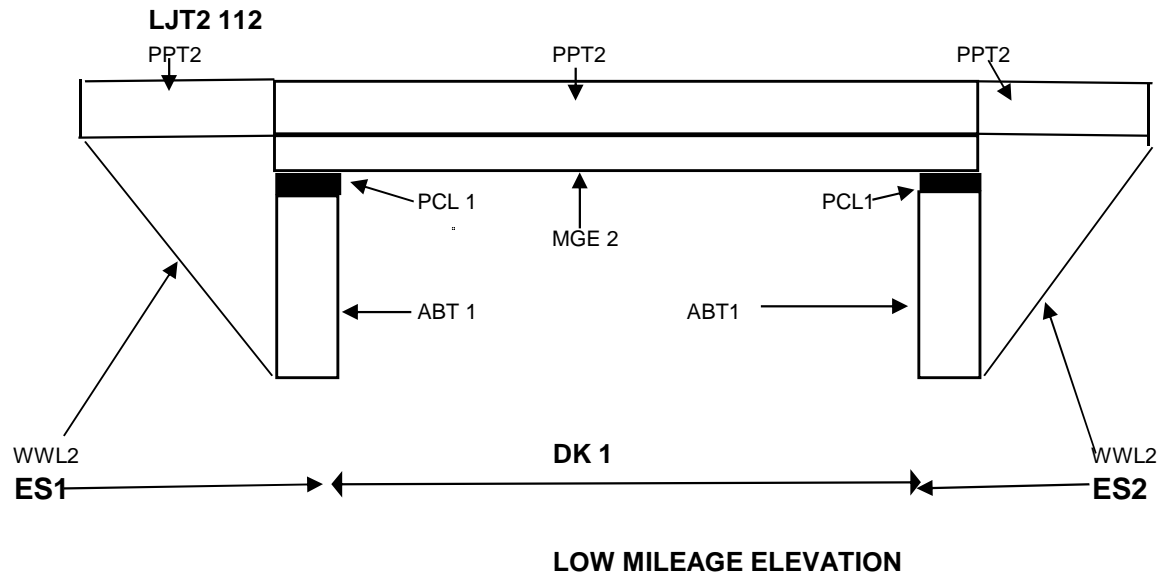
# NETWORK RAIL BCMI EXAMINATION REPORT FORM

## PLAN

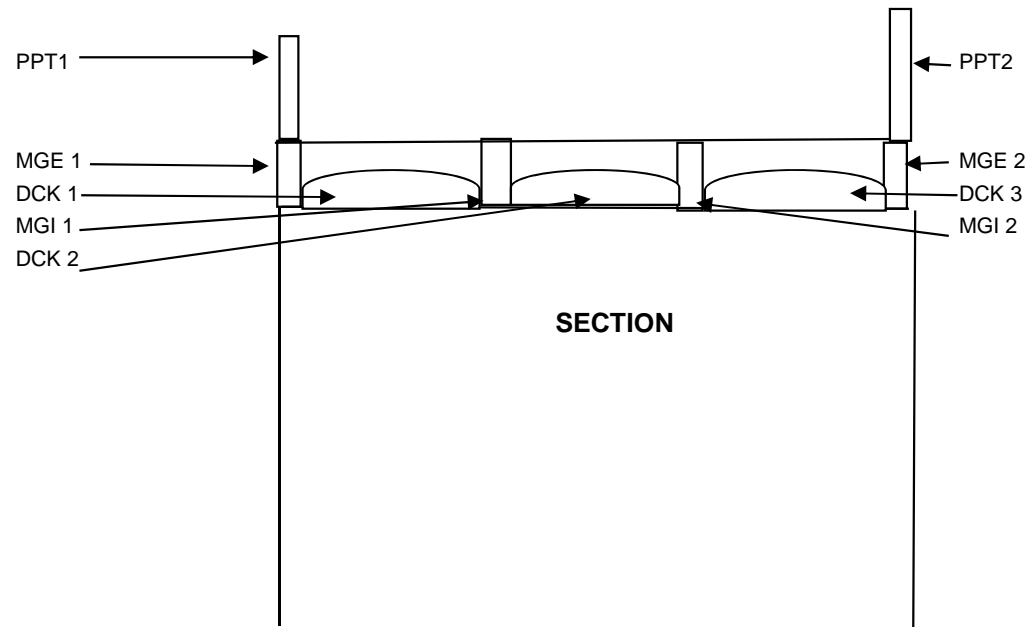


## LOW MILEAGE

# NETWORK RAIL BCMI EXAMINATION REPORT FORM



# NETWORK RAIL BCMI EXAMINATION REPORT FORM



NETWORK RAIL BCMI EXAMINATION REPORT FORM

Territory	ELR	Structure No	Start Mileage	Group	Type	RAR ID	Structure Name	Exam Date	Task Year	Exam Type	Examiners Name	Weather
TWES	LJT2	112	24.0528	BB	BBO		TANYDDYNGWYN	11/02/2014	13_14	D		FAIR

Major Element		Minor Element			Metal / Masonry / Concrete / Timber		Coated Metal / Cracked Masonry		V	Comments	Scores		
Code	No	Code	No	Material	S/Ex 1	S/Ex 2	S/Ex 1	S/Ex 2			Min EI BCMI	Maj EI BCMI	BCMI
Note: This free text area of the report should be used extensively and can be enlarged as necessary.													
DK	1	BRG	1	M	E5	D5	L6	K5	✓	Extensive section loss, only 10mm remaining in places, no paint cover.	15	42	67
DK	1	BRG	2	M	E5	D5	L6	K5	✓	Extensive section loss, only 10mm remaining in places, no paint cover.	15		
DK	1	BRG	3	M	E5	D5	L6	K5	✓	Extensive section loss, only 10mm remaining in places, no paint cover.	15		
DK	1	DCK	1	B	B5	A1	A1	A1	✓	Moderate water staining throughout jack arch	85		
DK	1	DCK	2	B	B5	A1	A1	A1	✓	Moderate water staining throughout jack arch	85		
DK	1	DCK	3	B	B5	A1	A1	A1	✓	Moderate water staining throughout jack arch	85		
DK	1	MGE	1	M	F3	D5	L6	A1	✓	Extensive corrosion with loss of section throughout outer edges. Moderate corrosion sores throughout bottom flange. Paint cover broken down.	30		
DK	1	MGE	2	M	F3	D5	L6	A1	✓	Extensive corrosion with loss of section throughout outer edges. Moderate corrosion sores throughout bottom flange. Paint cover broken down.	30		
DK	1	MGI	1	M	D5	C5	L6	A1	✓	Extensive moderate surface corrosion sores throughout bottom flange. Paint cover broken down.	35		
DK	1	MGI	2	M	D5	C5	L6	A1	✓	Extensive moderate surface corrosion sores throughout bottom flange. Paint cover broken down.	35		
DK	1	PPT	1	M	C5	B5	L6	A1	✓	Extensive surface corrosion throughout parapet panels. Paint cover broken down.	40		
DK	1	PPT	2	M	C5	B5	L6	A1	✓	Extensive surface corrosion throughout parapet panels. Paint cover broken down.	40		
ES	1	ABT	1	B	C3	B3	J7	A1	✓	Occasional isolated open joints to 150mm deep. Areas of heavy water staining throughout. 1No vertical bed joint fracture of longstanding.	70	80	
ES	1	PCL	1	B	B5	A1	A1	A1	✓	Moderate water staining throughout inner face of pad stones	85		
ES	1	PPT	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout	85		
ES	1	PPT	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout	85		
ES	1	WWL	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout.	85		
ES	1	WWL	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout.	85		
ES	2	ABT	1	B	C3	B3	J7	A1	✓	Occasional isolated open joints to 150mm deep. Areas of heavy water staining throughout. 1No vertical bed joint fracture of longstanding.	70	80	
ES	2	PCL	1	B	B5	A1	A1	A1	✓	Moderate water staining throughout inner face.	85		
ES	2	PPT	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout	85		
ES	2	PPT	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout	85		
ES	2	WWL	1	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 50mm deep. Areas of slight water staining throughout.	85		
ES	2	WWL	2	B	C3	B3	A1	A1	✓	Occasional isolated open joints to 100mm deep. Areas of slight water staining throughout.	85		