NETWORK RAIL

Detailed Examination - Culvert

Report Type: Detailed Examination - Culvert		
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12
Struct Type: B/C		**OS Ref:** SN370111
Exam Type: Detailed		**Rpt ID:** [xxxxxx]
Structure Name: 5' stone arch with tidal flap on downside	**Route:** Wales	
Area: Towy		**Exam ID:** 15608180
Any Hidden Parts: Yes	**Observed Under Load:** Yes	**Exam Date:*** 12/09/2023
SCMI Score:* [xxxxxx]	**SCMI Date:*** [dd/mm/yyyy]	**Complete Exam:** Yes
Structure Carries: Rail	**Structure Over :** Water	

Section A: To Be Completed By The Examining Organisation

Hidden parts not examined (excluding foundations)	**Part***	**Reason***
	Invert	Silt and water levels
	Downside headwall	Tidal flap

ITEM*	DESCRIPTION*	LOCATION	Est. Cost £ +/- 20%	Priority Within	Quantity	Severity	Probability	Risk Score Inc. Extent	Works Category
1	Rake out and repoint areas of open joints and displaced brickwork (PR).	Culvert barrel	2000.0	1yr	9 m2	2	3	S 6	Hand Pointing
2	Replace area of missing masonry (PR).	Low mileage abutment 4.3m from Downside end	1000.0	1yr	1 m2	2	3	S 6	Brickwork/Stone Repairs

History of Live Significant Defects

Defect ID	Description	Location	Exam Date	Access Gained*	Exam Type	Rec Raised	Risk Score*	Access Required*	Deterioration	Repaired*	Flagged For Closure	Engineer Comments
1	Displacement of up to 80mm, DOJ	Crown, 3.8m from Downside end, 0.5m2	03/10/17	Y	D	Y	6	Y	Baseline	N	N	Heavy maintenance will extend the life of the structure
1	Displacement of up to 80mm, DOJ	Crown, 3.8m from Downside end, 0.5m2	16/08/18	Y	V	Y	6	Y	Cannot Determine	N	N	No access
1	Displacement of up to 80mm, DOJ	Crown, 3.8m from Downside end, 0.5m2	17/07/19	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
1	Displacement of up to 80mm, DOJ	Crown, 3.8m from Downside end, 0.5m2	09/07/20	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
1	Displacement of up to 80mm, DOJ	Crown, 3.8m from Downside end, 0.5m2	24/06/21	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
1	Displacement of up to 80mm, DOJ	Crown, 3.8m from Downside end, 0.5m2	14/07/22	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
1	Displacement of up to 80mm, DOJ	Crown, 3.8m from	12/09/23	Y	D	Y	6	Y	N	N	N	NFD at exam.

		Downside end, 0.5m2										
2	Joints open up to 300mm, total area 8m2	Abutments	03/10/17	Y	D	Y	6	Y	Baseline	N	N	Heavy maintenance will extend the life of the structure
2	Joints open up to 300mm, total area 8m2	Abutments	16/08/18	Y	V	Y	6	Y	Cannot Determine	N	N	No access
2	Joints open up to 300mm, total area 8m2	Abutments	17/07/19	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
2	Joints open up to 300mm, total area 8m2	Abutments	09/07/20	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
2	Joints open up to 300mm, total area 8m2	Abutments	24/06/21	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
2	Joints open up to 300mm, total area 8m2	Abutments	14/07/22	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
2	Joints open up to 300mm, total area 8m2	Abutments	12/09/23	Y	D	Y	6	Y	N	N	N	NFD at exam.
3	Missing masonry 0.4m x 0.12m x 0,3m	LM abutment 4.3m from Downside end	03/10/17	Y	D	Y	6	Y	Baseline	N	N	Heavy maintenance will extend the life of the structure
3	Missing masonry 0.4m x 0.12m x 0,3m	LM abutment 4.3m from Downside end	16/08/18	Y	V	Y	6	Y	Cannot Determine	N	N	No access
3	Missing masonry 0.4m x 0.12m x 0,3m	LM abutment 4.3m from Downside end	17/07/19	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
3	Missing masonry 0.4m x 0.12m x 0,3m	LM abutment 4.3m from Downside end	09/07/20	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
3	Missing masonry 0.4m x 0.12m x 0,3m	LM abutment 4.3m from Downside end	24/06/21	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
3	Missing masonry 0.4m x 0.12m x 0,3m	LM abutment 4.3m from Downside end	14/07/22	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
3	Missing masonry 0.4m x 0.12m x 0,3m	LM abutment 4.3m from Downside end	12/09/23	Y	D	Y	4	Y	N/A	N	N	NFD at exam.
4	Loose masonry including one missing block	Down LM wing wall	03/10/17	Y	D	Y	6	N	Baseline	N	N	Grouting
4	Loose masonry including one missing block	Down LM wing wall	16/08/18	Y	V	Y	6	N	N	N	N	No access
4	Loose masonry including one missing block	Down LM wing wall	17/07/19	N	V	Y	6	Y	NV	N	N	Unable to view at this exam; risk score unchanged
4	Loose masonry including one missing block	Down LM wing wall	09/07/20	N	V	Y	4	Y	NV	N	N	Not fully viewed but repairs appear to have been carried out, risk score reduced 2x2, confirm status at next DE
4	Loose masonry including one missing block	Down LM wing wall	24/06/21	Y	V	Y	4	Y	N	N	N	No change
4	Loose masonry including one missing block	Down LM wing wall	14/07/22	Y	V	Y	4	N	N	N	N	No change
4	Loose masonry including one missing block	Down LM wing wall	12/09/23	Y	D	Y	4	Y	Y	N	N	SSD at exam. Monitor at next exam.
5	PNE - Access, Vegetation, high water (tide) and tidal flap	Entire structure	16/08/18	N	V	Y	6	N	Baseline	N	N	Form safe access
5	PNE - Access, Vegetation, high water (tide) and tidal flap	Entire structure	17/07/19	N	V	Y	6	Y	NV	N	N	Clear vegetation to enable access
5	PNE - Access, Vegetation, high	Entire structure	09/07/20	N	V	Y	6	Y	NV	N	N	No change

	water (tide) and tidal flap											
5	PNE - Access, Vegetation, high water (tide) and tidal flap	Entire structure	24/06/21	N	V	Y	4	Y	NV	N	N	Detailed undertaken in 2017
5	PNE – No access due to vegetation on steep embankment and tidal flap	Barrel and upside headwall	14/07/22	N	V	Y	6	Y	NV	N	N	Upside accessed at 2017 exam, how vegetation on embankment has started to cause access issue on steep embankment
5	PNE – No access due to vegetation on steep embankment and tidal flap	Barrel and upside headwall	12/09/23	Y	D	Y	0	N/A	N/A	N/A	Y	Veg removed - close.

Examining Engineers Comments

None

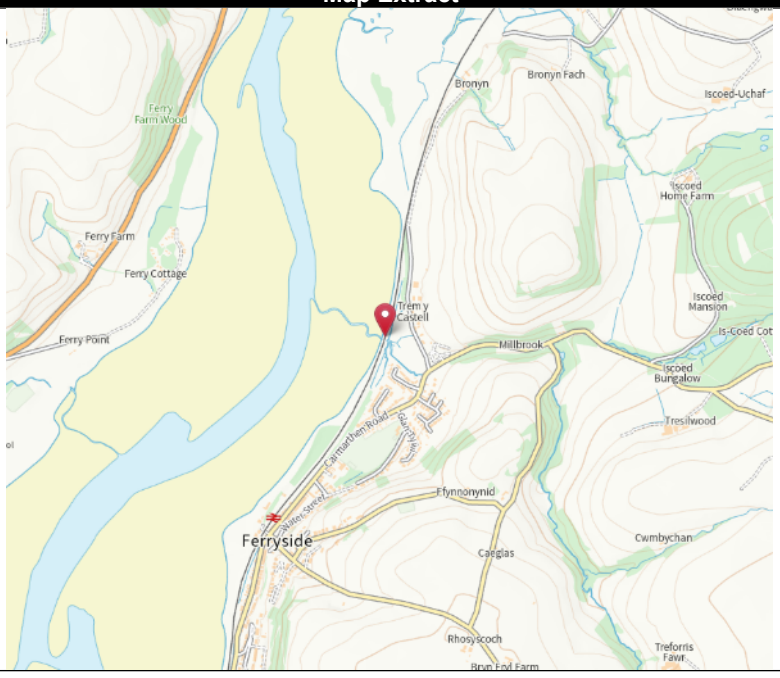
Signed: 	**Name:*** Mike Hirst	**Date:*** 31/10/2023

NetworkRail	**NETWORK RAIL** **Detailed Examination - Culvert**	inspire Structures Ltd

ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs			**Struct Ref:** 239 12
Struct Type: B/C	**NR ID:** auto complete	**Rpt ID:** auto complete	**OS Ref:** SN370111	**Exam ID:** 15608180
Dimensions: Length: 20m Diameter: 1.55m Cover: 2.5m				**Exam Date:** 12/09/2023
Primary Material: CUL - Stone			**Last Detailed:** 03/10/2017	
Secondary Material: [xxxxxx]			**Last Visual:** 14/07/2022	
Structure Carries: Rail			**Structure Over:** Water	
Line: SOUTH WALES MAIN LINE: GLOUCETSER YARD JCT TO JOHNSTON				
Structure Name: 5’ stone arch with tidal flap on downside				

Elevation Photograph

Map Extract



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Examiners General Comments:

CONSTRUCTION

SWM2 239 12 is a transverse culvert consisting of a stone arch barrel. The upside consists of a stone headwall. The downside consists of a stone headwall with timber tidal flap. The structure carries a watercourse beneath 2no lines at 239m 0264yds. Flow runs from upside to downside.

METHOD OF EXAMINATION

The structure was examined by Inspire Structures Ltd using CCTV equipment and hand tools during daytime working hours.

Access Data	
Method of Access	**Comments**
CCTV	COSS +1

CONDITION SUMMARY

The structure was found to be in generally fair condition during this examination.

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

The last detailed examination was incomplete, and the unexamined parts are shown below: -

Downside Voussoir/Headwall – Due to Tidal Flap.

Has all of the structure been viewed?
No. Invert viewed at ends only due to silt and water levels within barrel. Downside headwall not viewed due to tidal flap.

Has the structure been viewed under load?
Yes.

Signed: 

Examiners Name: Chris Rae

Date: 10/10/2023

NetworkRail	NETWORK RAIL Detailed Examination - Culvert	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Element Status Table		
Element Name	**Status**	**Condition**
Barrel/Bore	Examined	Fair
Ballast Plates and Boards	N/A	N/A
Bearings	N/A	N/A
Cross Girders	N/A	N/A
Floor/Deck	N/A	N/A
Longitudinal Timbers	N/A	N/A
Main Girders	N/A	N/A
Parapets and Pilasters	N/A	N/A
Rail Bearers	N/A	N/A
Headwalls	Examined	Good
Waterproofing	N/A	N/A
Abutments	N/A	N/A
Bedstones and Cills	N/A	N/A
Columns and Cylinders	N/A	N/A
Piers	N/A	N/A
Trestles and Crossheads	N/A	N/A
Wing and Retaining Walls	Examined	Fair
Clearances	N/A	N/A
Coping and Cappings	N/A	N/A
Debris	N/A	N/A
Drainage	Examined	Fair
Foundations	N/A	N/A
Invert	Not Examined	Cannot Determine
Handrails	N/A	N/A
Painting	N/A	N/A
Pointing	Examined	Poor
Revetment Walls	Examined	Poor
Rivets and Bolts	N/A	N/A
Signage	N/A	N/A
Track/Road	Examined	Good
Vegetation	Examined	Fair

Monitoring Devices Present	
Date Tabs	No
Plumb Points	No
Avongards	No

Environmental Factors Present		
Item Number	**Description**	**Location**
[x]	N/A	[xxxxxx]

Record of Observations Under Load *(Bridges and culverts only)*			
Load Type	**General Area Observed**	**Result of Observation**	**Date and Time**
Multiple Units	Barrel	No movement noted	12/09/2023
Comments	[xxxxxx]		

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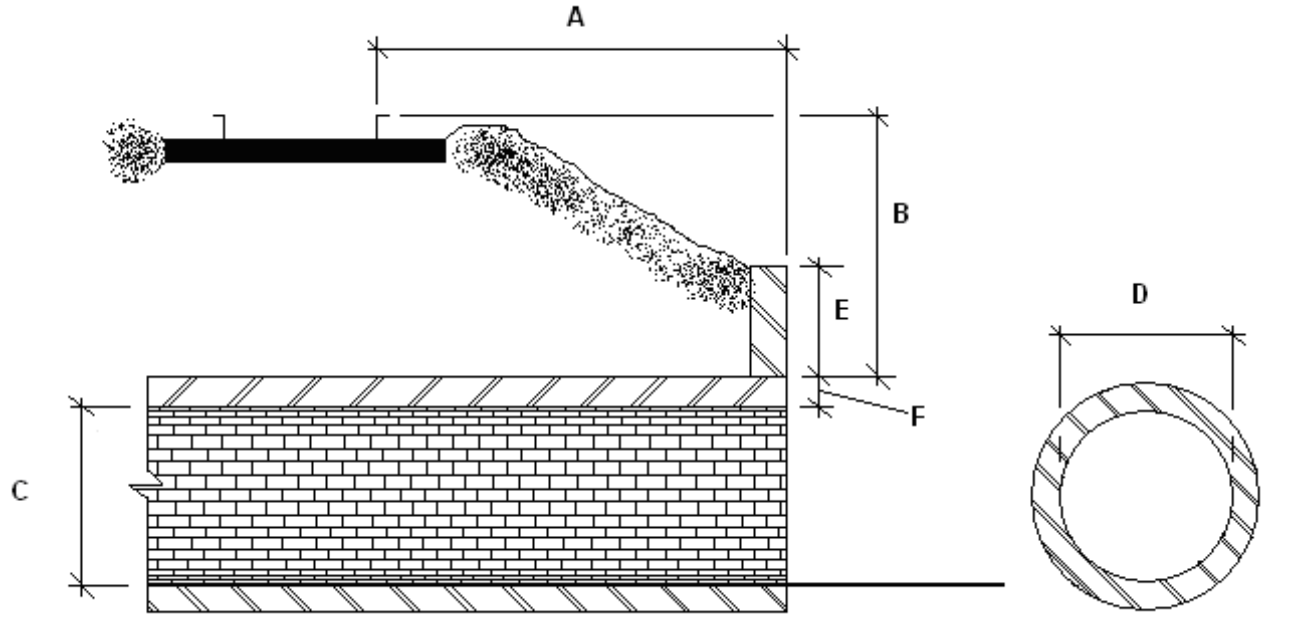
DESCRIPTION AND MATERIAL

SWM2 239 12 is a transverse culvert consisting of a stone arch barrel. The upside consists of a stone headwall. The downside consists of a stone headwall with timber tidal flap

DIMENSIONS

	A	B	C	D	E	F
End of Culvert	+/- 1m	+/- 100mm	+/- 100mm	+/- 100mm	+/- 100mm	+/- 10mm
UP side	4 m	2500 mm	1600 mm	1550 mm	200 mm	450 mm
DOWN side	3 m	4000 mm	1600 mm	1550 mm	0 mm	0 mm



Can detailed exam be undertaken in due year?	Yes	Invert not viewed due to silt and water levels.
Direction of flow:	Up to Down	[xxxxxx]
Watercourse functional?	Yes	[xxxxxx]
Approach ditch functional?	Yes	[xxxxxx]
Depth of water	150 mm	[xxxxxx]
Depth of silt	100 mm	[xxxxxx]
Length of culvert	20 m	[xxxxxx]
Lack of airflow?	Yes	[xxxxxx]
Biological/toxic hazard/fumes?	No	[xxxxxx]
Confined spaces?	Yes	[xxxxxx]
Services in culvert?	No	[xxxxxx]
Do services prevent of restrict examination of culvert?	No	[xxxxxx]

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DRAINAGE MANAGEMENT – Inspection and maintenance in accordance with NR/L3/CIV/005

Please score (0 to 5) the serviceability state of the culvert – tick as appropriate

SCORE	***0***	***1***	***2***	***3***	***4***	***5***
	☐	☐	☐	☒	☐	☐
Guidance	Not inspected due to access issues i.e. Vegetation preventing access.	Clear, no sediment in drainage, no obstructions, no debris on screen, minor accumulation of vegetation, no debris in catchpits	Superficial deposits, sediment <5% of cross section, superficial obstruction to flow, some sediment in catchpit but below pipe invert, light debris on screen, minor accumulation of vegetation	Performance slightly reduced, sediment <25% of cross section, minor obstruction to flow, catchpit full of sediment but not effecting flow, debris half way up trash screen, vegetation becoming established	Performance severely reduced, sediment levels between 25% and 75% of cross section, significant obstruction to flow, catchpit full of sediment and effecting flow, debris more than half way up trash screen, shrubs and large established plants	Blocked, sediment levels >75%, severe or complete obstruction to flow, catchpit full of sediment to above soffit, debris covering full screen, flow blocked or surcharging due to litter/vegetation

For culverts where the serviceable state scores ≥3, a recommendation for clearance must be raised.
Please start this recommendation with "DRAINAGE AND OFF-TRACK – SCORE XX - ".

Embankments – Actions for Safe Access

Score	***1***	***2***	***3***
Upside	☐	☒	☐
Downside	☐	☒	☐
Guidance	Shallow embankment, secure underfoot conditions. No specialist PPE / access equipment needed	Steep embankment (>45deg) and / or uneven / unseen underfoot conditions. **However, a Dynamic Risk Assessment determines that <u>on this occasion</u> the embankment can be accessed using safe walking techniques and / or specialist access techniques.**	Unsafe if ANY of the following criteria are met: • Steep embankment (>45deg) • uneven / unseen underfoot conditions. • Shale / slippery material • Unable to maintain and secure safe working level upon embankment • Unable to undertake a controlled descent
	Safe Access	**Proceed with caution**	**Unsafe Access**

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

Defect No: 1
Description: Displacement of up to 80mm, DOJ
Location: Crown, 3.8m from Downside end, 0.5m²
Status: NFD. Not actioned.
Recommendation From Previous Year: Rake out and repoint areas of open joints and displaced brickwork.
Photo: 15

Defect No: 2
Description: Joints open up to 300mm, total area 8m²
Location: Abutments
Status: NFD. Not actioned.
Recommendation From Previous Year: Rake out and repoint areas of open joints and displaced brickwork.
Photo: See barrel general photos.

Defect No: 3
Description: Missing masonry 0.4m x 0.12m x 0.3m
Location: Low Mileage Abutment 4.3m from Downside end.
Status: NFD. Not actioned.
Recommendation From Previous Year: Replace area of missing masonry.
Photo: 13

Defect No: 4
Description: Loose masonry including one missing block
Location: Down Low Mileage wingwall
Status: SSD was 1m² now 2.5m². Missing masonry appears to have been repaired.
Recommendation From Previous Year: None.
Photo: 32

Defect No: 5
Description: PNE – Access, Vegetation, high water (tide) and tidal flap.
Location: Barrel and upside headwall
Status: Vegetation cleared prior to exam. Compliant DE conducted utilizing CCTV equipment. Actioned.
Recommendation From Previous Year: Clear vegetation and treat to prevent regrowth to allow access at future exams (provide access steps if deemed required after removal to allow safe access).
Photo: See report for details.

OTHER RECOMMENDATIONS MADE BY THE ENGINEER ON LAST REPORT

None.

STRUCTURE DIMENSIONS

See Data Sheet.

GENERAL PHOTOGRAPHS
P1 – Upside Elevation
P2 – Downside Elevation
P3 – Upside Barrel view
P4 – Downside Barrel view
P5 – Upstream view
P6 – Downstream view
P7 – Track view Low to High Mileage
P8 – Track view High to Low Mileage
P9 – Track view Upside to Downside

SUMMARY OF ELEMENTAL PARTS

Culvert Barrel – Fair Condition
Stone construction. 20m long.

Defects measured from Upside (0m):

@2.2m in crown, Transverse Fracture open approx. 2-4mm wide x 3.1m long. NEW. See P10.

------ @4m Approx. Upside Cess Rail Position ------

@6m, Longitudinal Fracture open approx. 3mm wide x 1m long. NFD. See P11.

@9.3m in crown, area of stonework displaced down by approx. 25mm x 100mm wide x 2m long. NFD. See P12.

@13.5m in Low Mileage sidewall, 1no missing stone. NEW. See P13.

@16.3m, Longitudinal Fracture open approx. 1-3mm wide x 1m long. NEW. See P14.

@17m in crown, area of stonework displaced down by approx. 15mm x 0.5m² total area. NFD. See P15.

------ @17m Approx. Downside Cess Rail Position ------

@20m end of culvert

Culvert Barrel General Comments:

Throughout barrel, open joints to typically approx. 60mm deep, max 250mm deep x 15m² total area. NFD. See barrel general photos.

Culvert Barrel General Photos:

Culvert barrel general view @0m. See P3
Culvert barrel general view @5m. See P16
Culvert barrel general view @10m. See P17
Culvert barrel general view @15m. See P18

Upside Headwall – Good Condition
E: 237067, N: 211163. Stone construction. See P19.

No significant defects noted at time of exam. See P19.

Downside Headwall – Cannot Determine
E: 237049, N: 211170. Not viewed due to tidal flap. See P4.

Throughout tidal flap. Algae staining to front of tidal flap. See P20.

Bolts to tidal flap are secure at time of exam. See P21.

Metallic fillet to topside of tidal flap has been replaced. See P22.

To wall above tidal flap, vertical fracture open HL-1mm wide x 300mm long. NEW. See P23.

Upside Low Mileage Wing Wall – Fair Condition
Stone construction. See P24.

Defects measured from upside headwall:

@0.6m, diagonal step fracture open 1mm wide x 2.1m long. NEW. See P25.

@1.5m, diagonal step fracture open 2-4mm wide x 2.4m long. NEW. See P26.

Throughout wingwall, open joints to typically 20mm deep, max 240mm deep x 1m² total area. NEW. See P27.

Upside High Mileage Wing Wall – Fair Condition
Stone construction. See P28.

Defects measured from upside headwall:

At offside end of wingwall, area of missing stonework to 400mm deep x 400mm wide x 420mm high with 1no stone displaced forwards by 25mm. NEW. See P29

Throughout wingwall, open joints to typically 40mm deep, max 60mm deep x 2.5m² total area. SSD was 0.75m². See P30.

Downside Low Mileage Wing Wall – Fair Condition
Stone construction. See P31.

Defects measured from downside headwall:

Top section, area of stonework is LTH to 2.5m² total area. SSD was 1m². See P32.

Top section at offside end, area of stonework displaced forwards by 20mm x 1m² total area. NEW. See P33.

Throughout wingwall, open joints to typically 70mm deep, max 100mm deep x 1.5m² total area. NEW. See P34.

Downside High Mileage Wing Wall – Fair Condition
Stone construction. See P35.

Defects measured from downside headwall:

Throughout wingwall, open joints to typically 50mm deep, max 100mm deep x 1m² total area. SSD was 0.25m². see P36.

Drainage – Fair Condition
Watercours is clear with a steady rate of flow at time of exam. See barrel general photos.

Invert – Good Condition
Where viewed, no significant defects noted at time of exam. See P37 and P38.

Pointing – Poor Condition
See barrel and wingwall sections for details.

Upside Low Mileage Revetment Wall – Poor Condition
Stone construction. See P39.

Dry stone revetment wall has collapsed at time of exam. NEW. See P39.

Upside High Mileage Revetment Wall – Poor Condition
Stone construction. See P40.

Dry stone revetment wall has collapsed at time of exam. NEW. See P40.

Track – Good Condition
CWR on concrete sleepers with no deformation noted at track level when viewed from a position of safety. See P7, P8 and P9.

Vegetation – Fair Condition
Vegetation cleared from structure prior to exam. See P1 and P2.

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SITE LOCATION SKETCH

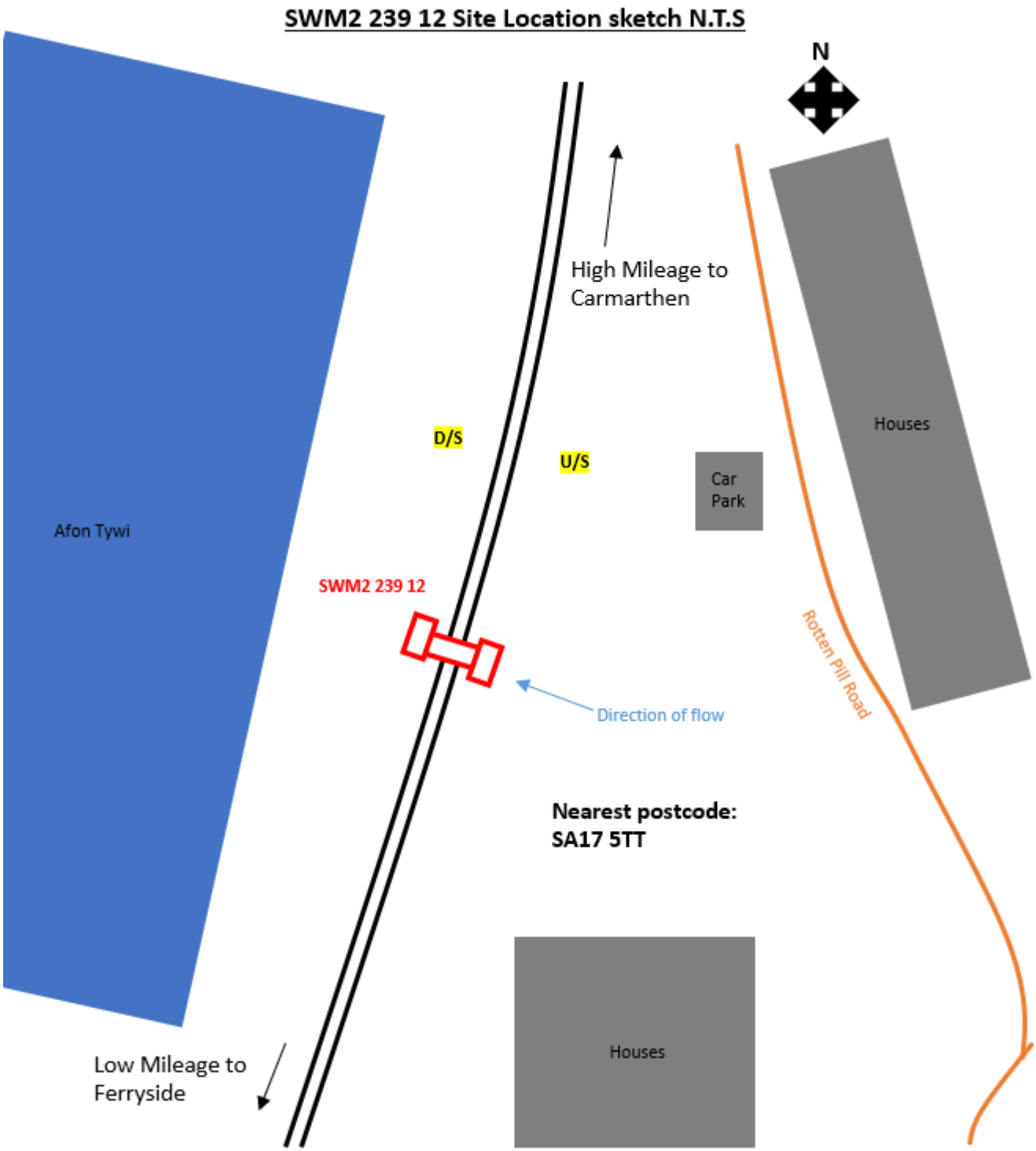

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Photo Evidence

Photo Index*: 1	**Description*:** Upside Elevation	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 2	**Description*:** Downside Elevation	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

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Photo Evidence

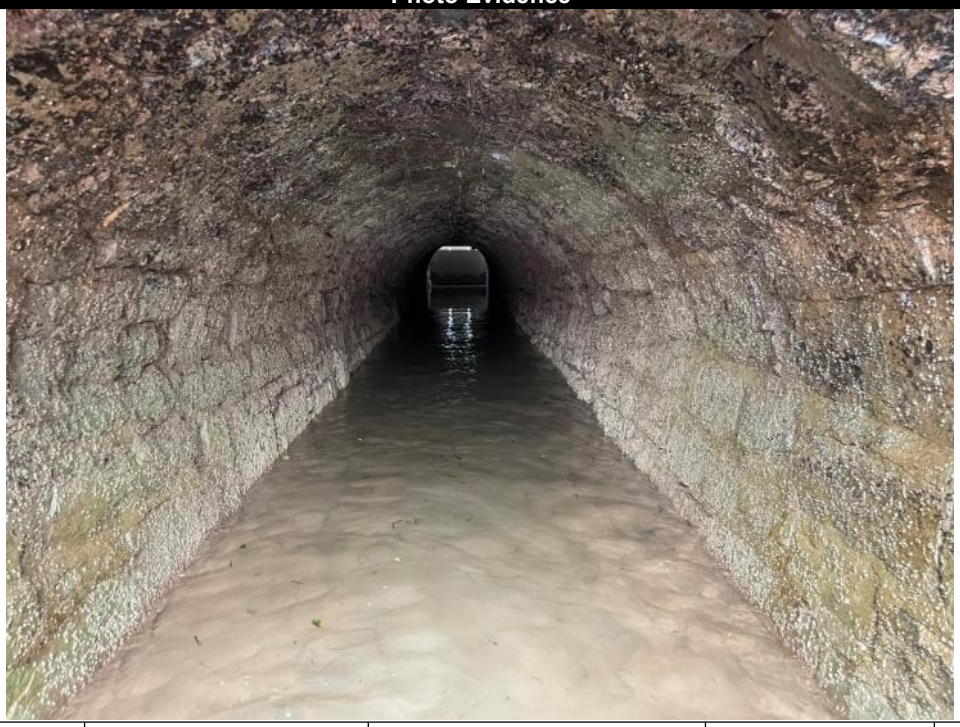

Photo Index*: 3	**Description*:** Upside Barrel view	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 4	**Description*:** Downside Barrel view	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

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Photo Evidence

Photo Index*: 5	**Description*:** Upstream view	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 6	**Description*:** Downstream view	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

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Photo Evidence

Photo Index*: 7	**Description*:** Track view Low to High Mileage	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 8	**Description*:** Track view High to Low Mileage	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

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Photo Evidence

Photo Index*: 9	**Description*:** Track view Upside to Downside	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 10	**Description*:** @2.2m Transverse Fracture	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

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Photo Evidence

Photo Index*: 11	**Description*:** @6m Longitudinal Fracture	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 12	**Description*:** @9.3m Displacement	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

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Photo Evidence

Photo Index*: 13	**Description*:** @13.5m Missing Stone	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 14	**Description*:** @16.3m Longitudinal Fracture	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

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Photo Evidence

Photo Index*: 15	**Description*:** @17m Displacement	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 16	**Description*:** Barrel general view @5m	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

NetworkRail	NETWORK RAIL **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 17	**Description*:** Barrel general view @10m	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 18	**Description*:** Barrel general view @15m	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

NetworkRail	**NETWORK RAIL** **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 19	**Description*:** Upside Headwall	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 20	**Description*:** Algae to Tidal Flap	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

NetworkRail	NETWORK RAIL **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

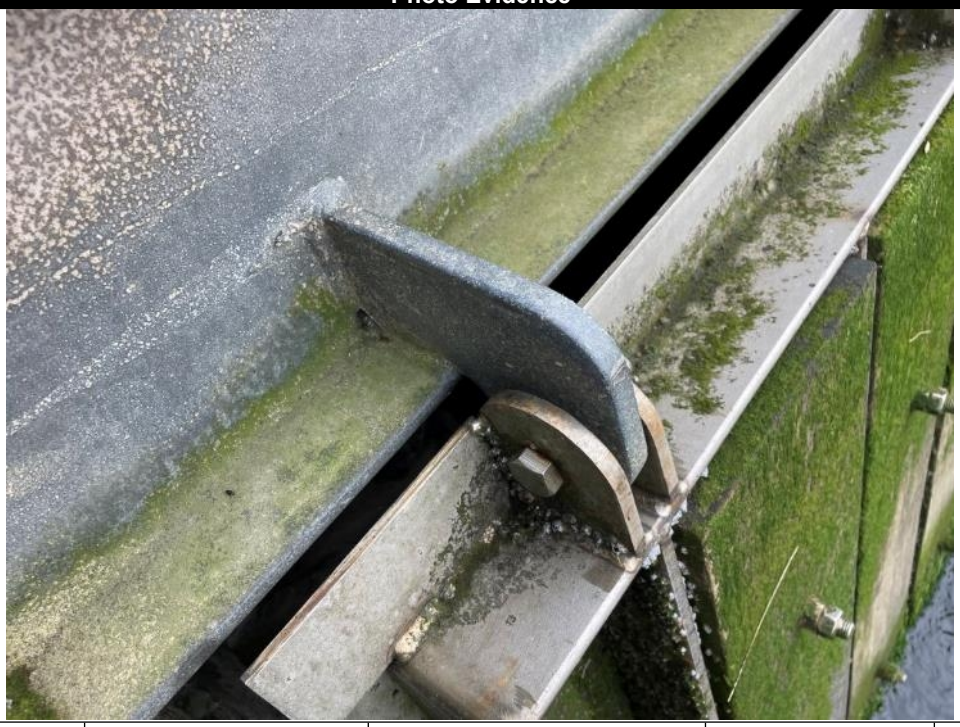

Photo Index*: 21	**Description*:** Tidal Flap Bolts	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 22	**Description*:** Repairs to Tidal Flap	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

NetworkRail	**NETWORK RAIL** **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 23	**Description*:** Downside Vertical Fracture	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 24	**Description*:** Upside Low Mileage Wingwall	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

NetworkRail	NETWORK RAIL **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 25	**Description*:** @0.6m Diagonal Step Fracture	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 26	**Description*:** @1.5m Diagonal Step Fracture	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

NetworkRail	NETWORK RAIL **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

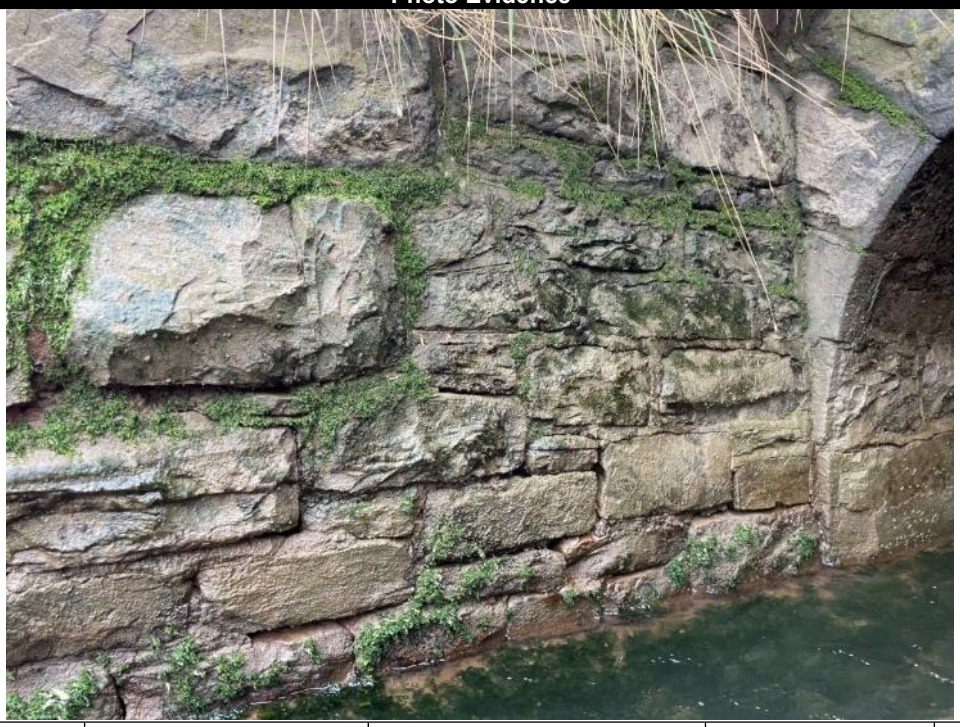

Photo Index*: 27	**Description*:** Typical Open Joints	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 28	**Description*:** Upside High Mileage Wingwall	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

NetworkRail	**NETWORK RAIL** **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 29	**Description*:** Missing/ Displaced Stonework	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 30	**Description*:** Typical Open Joints	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

NetworkRail	**NETWORK RAIL** **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

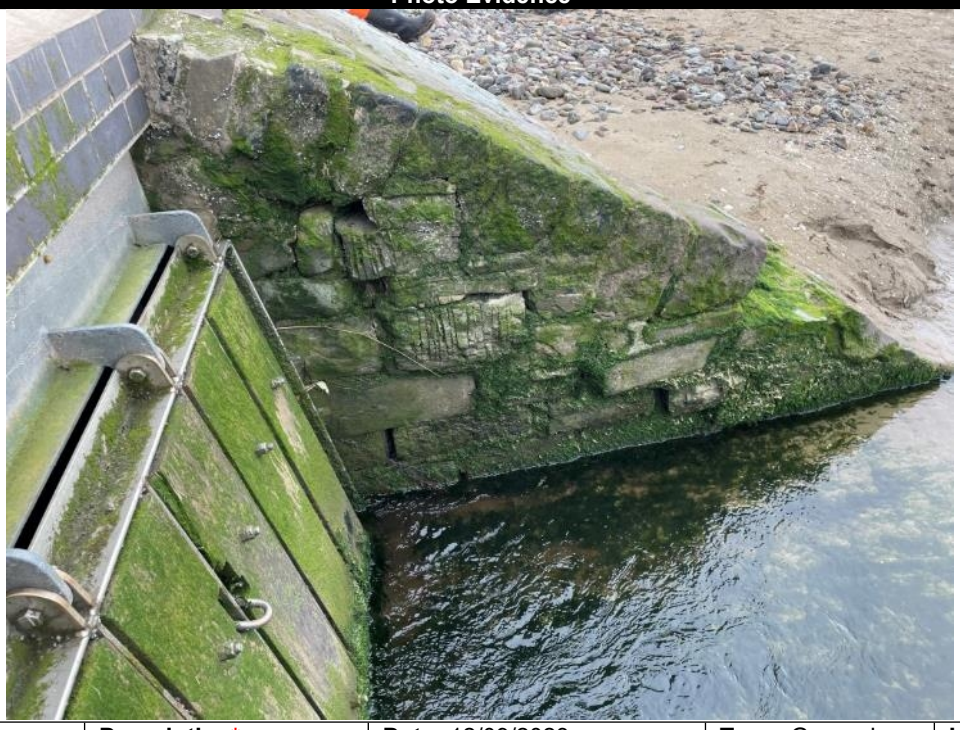

Photo Index*: 31	**Description*:** Downside Low Mileage Wingwall	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 32	**Description*:** Loose Stonework	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

NetworkRail	**NETWORK RAIL** **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 33	**Description*:** Displaced Stonework	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

Photo Index*: 34	**Description*:** Typical Open Joints	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

NetworkRail	NETWORK RAIL **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 35	**Description*:** Downside High Mileage Wingwall	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 36	**Description*:** Typical Open Joints	**Date:** 12/09/2023	**Type:** Defect	**Link:** [xxxxxx]

NetworkRail	NETWORK RAIL **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

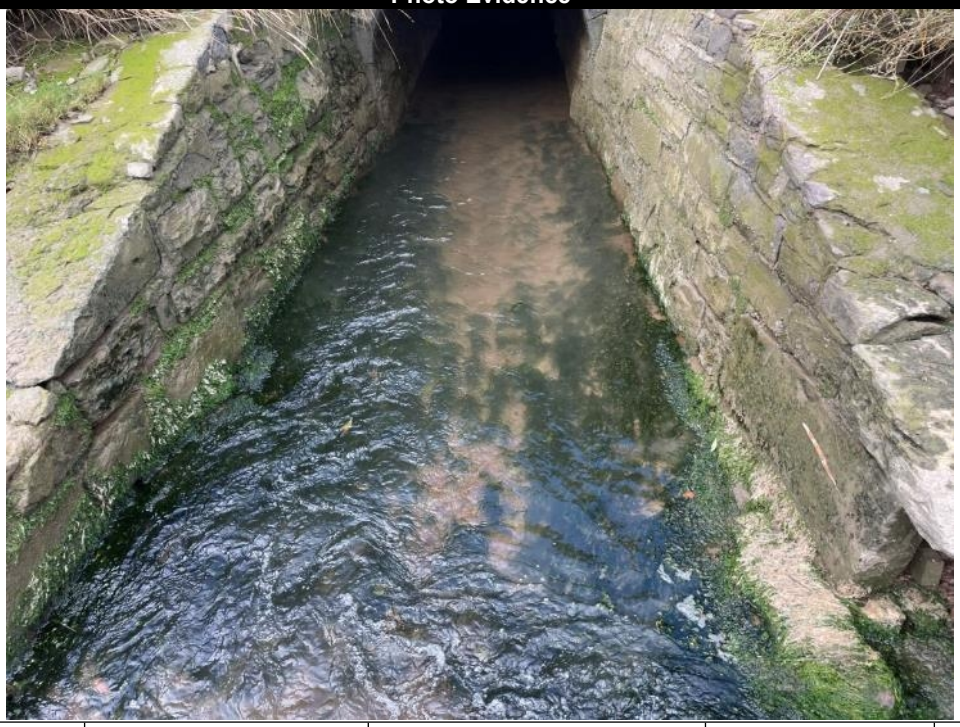

Photo Index*: 37	**Description*:** Upside Invert	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 38	**Description*:** Downside Invert	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

NetworkRail	NETWORK RAIL **Detailed Examination - Culvert**	inspire Structures Ltd
ELR: SWM2	**Contract Mileage:** 239m 0264yds 12.00chs	**Struct Ref:** 239 12

Photo Evidence

Photo Index*: 39	**Description*:** Upside Low Mileage Revetment Wall	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]

Photo Index*: 40	**Description*:** Upside High Mileage Revetment Wall	**Date:** 12/09/2023	**Type:** General	**Link:** [xxxxxx]