

Appendix J National Highways Limited Cymmer Tunnel Inspection Report

Historical Railways Estate Tunnel Visual Examination Report

ELR: BAL

ROUTE: Bridgend to Abergwynfi

Sheet 1 of 29

Caerau (Cymmer) Tunnel	Examination Date	Preliminaries
Tunnel / Air Shaft (Delete as appropriate) Bridge No.: Not on record Mileage: 10M 17ch O. S. Ref.: SS 855 945	04/02/2020 No. of Spans 1	Risk Assessment – the examination was carried out in accordance with the risk assessments in Appendix V of the Generic Method Statement for the Examination of Structures - ES080-BBR-JA-RGS-MS16034. Access Route to Structure – Via small track off the A4063 at Caerau, Maesteg. Site Issues and Impediments to carrying out repairs, DE's or other works – Confined space with access from the South Portal only. Date of Last Examination – 05/02/2019. Structure Examined within 12 months? – Yes. Reason for Exceeding 12 months interval – N/A.
I certify that I have carried out a Visual Examination of this structure, which appears to be in a satisfactory condition except where recorded in this report. Examined by: 		

GENERAL VIEW - BRIDGEND PORTAL



Recommendations:

Refer to the recomm's in the last DE report dated 05/02/2019.

Remove the white spray paint mess from along the up sidewall - P1.

Complete the track drainage mtce/repair works and tidy solum before the next examination - P1.

Signed:



STE2/STE6 Examining Engineer: 

Historical Railways Estate Tunnel Visual Examination Report (Continuation Sheet)

Line: Bridgend to Abergwynfi	Structure Identifier: BAL/10m 17ch Stonework Bridgend Portal and brickwork & stonework lining.
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Remarks (Refer to parts by name)

Sheet 2 of 29

Mist within the tunnel reduced the quality of some of the photos taken on the day.

General Comments – Track drainage maintenance/repair works are in progress and therefore solum naturally untidy with poor underfoot conditions on the day.

Severe Defects – See below.

New Defects – See below.

Changes to Existing Defects since Last Examination – See below.

Changes to the Use of the Structure and/or the Surrounding Area since Last Examination – None.

Evidence of Repair / Maintenance / Investigation Work that appears to have been carried out since Last Examination – Further drainage works have been commenced along the tunnel so the solum is naturally a wee bit untidy at present, however general housekeeping could be far better as litter, snack wrappers and coffee/sugar sachets are left throughout the tunnel and there's a location where the ballast is used as a toilet in the up cess.

Tablet numbers were fitted along the down sidewall a couple of years ago but new unnecessary numbers have been sprayed along the opposite sidewall at irregular centres, some have also been sprayed over presumably because they were initially measured in error which compounds the mess already made and would leave an equivocal chainage legacy going forward. Seems an unnecessary time-consuming activity adding significant expense for someone and requiring remedial works to remove the mess.

Use of Structure – None.

Condition of Approach Fencing and Risk to the Public – N/A.

Are Fenced-off Portals Secure? – Yes.

Nature of Vandalism and/or Trespass – None.

If 'No' what measures taken – N/A.

New Mortar Tabs, Avongards, Plumbing Points, Pins, etc. Fitted during this Examination – None.

New Padlock(s) Fitted to Access Gates / Doors during this Examination – None.

Historical Railways Estate
Tunnel Visual Examination Report
(Continuation Sheet)

Line:

Bridgend to Abergwynfi

Structure Identifier:

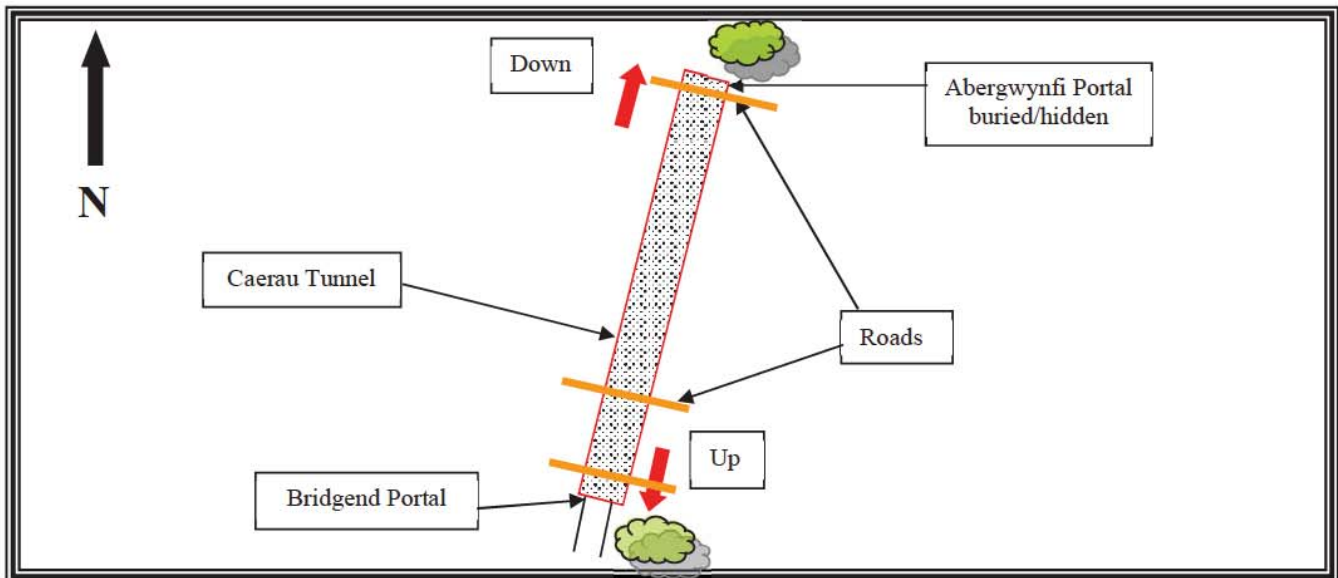
BAL/10m 17ch

Stonework Bridgend Portal and brickwork & stonework lining.

Remarks (Refer to parts by name)

Sheet 3 of 29

Orientation of Structure –



Historical Railways Estate
Tunnel Visual Examination Report
(Continuation Sheet)

Line: Bridgend to Abergwynfi	Structure Identifier: BAL/10m 17ch Stonework Bridgend Portal and brickwork & stonework lining.
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Remarks (Refer to parts by name)

Sheet 4 of 29

Photo No.1: Bridgend Portal Down, Wingwall, Copings missing and loose blocks, area 8sq.m.

Photo No.2: Bridgend Portal Up, Wingwall, Copings missing and loose blocks, area 8sq.m.

Photo No.3: Bridgend Portal Up, missing & loose blockwork, gap allows easy trespass access into tunnel. Bridgend Portal, existing padlock found cut-off on the solum reason unknown, tumblers still operable.

Photo No.5: Bridgend Portal, oiling door padlock.

Photo No.6: Bridgend Portal, oiling door hinges.

Photo No.7, 8, 9 & 10: Full Length of Tunnel, Sidewall Up, unnecessary & unsightly graffiti, large spray paint numbers and numbers sprayed over ostensibly to try to correct an initial measuring.

Photo No.11 & 12: Full Length of Tunnel, Solum Up & Down, drainage WIP, large ballast, bricks & smashed track drainage pipes churned up during excavation works, poor underfoot conditions, hazard.

Photo No.13 & 14: Full Length of Tunnel, Solum Up & Down, drainage WIP, rail irons from broken out catch-pits & new construction materials found in refuges.

Photo No.15: Bridgend Portal, Solum Down, drainage WIP, new construction materials found in cess.

Photo No.16: Bridgend Portal, Solum Up & Down, drainage WIP, new cover found in 6'.

Photo No.17: Bridgend Portal, Solum Up, drainage WIP, new construction materials found in cess.

Photo No.18 & 19: Bridgend Portal, Solum Down, drainage WIP, old metal door dumped in tunnel hidden by a new stockpile of pipes.

Photo No.20: 010+02 Refuge Up, Brickwork, Arch, spalled and missing bricks, depth 100mm, area 1.5sq.m.

Photo No.21: 011+16 Refuge Up, Brickwork, Arch, spalling, depth 75mm, area 1sq.m., damp, light (archive photo).

Photo No.22: 016+07 Refuge Up, Brickwork, Arch, hollow, area 1sq.m., with missing bricks, depth 100mm, area 0.25sq.m., medium.

Photo No.23: 016+18 Sidewall & Haunch Down, Stonework, 2No. downpipes fitted to Haunch with running water. Possible Hidden Shaft.

Photo No.24 to 31: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.

Historical Railways Estate
Tunnel Visual Examination Report
(Continuation Sheet)

Line: Bridgend to Abergwynfi	Structure Identifier: BAL/10m 17ch Stonework Bridgend Portal and brickwork & stonework lining.
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Remarks (Refer to parts by name)

Sheet 5 of 29

Photo No.32: 042+13 to 043+20 Low Haunch Up & Down, Brickwork, longitudinal cracking, width 1mm, length 27m. Various bricks crushed and spalled to downside, depth 25mm, area 3sq.m.

Photo No.33: 043+17 Solum Up & Down, Open Catch-pit to six-foot blocked, new flooding from 040+15 to 050+11 flowing northwards. Water subsided, new chamber, shallow mud/silt.

Photo No.34: 043+17 Solum Up, broken out catch-pit dumped in cess.

Photo No.35: 046+00 to 048+20 Sidewall & Haunches Up & Down, Brickwork, bulging 75mm with random vertical and longitudinal fractures, max. width 1mm, hollow, area 20sq.m.

Photo No.36: 046+10 Refuge Down, Brickwork, spalling, depth 100mm, area 2sq.m., vertical fractures, length 1.6m to both Quoins, hollow.

Photo No.37: 061+19 to 062+00 Solum Down, 2No. trial pits. Partially backfilled.

Photo No.38: 062+00 Solum Up, workman toilet waste, hazard.

Photo No.39, 40 & 41: 062+15 to 073+05 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted proud on solum, hazard.

Photo No.42: 063+10 Solum Up & Down, Open catch-pit to six-foot with water welling up from inside. New cover fitted but displaced/ill-fitting. Now not surcharging.

Photo No.43: Full length of tunnel, Solum Up & Down, drainage WIP, smashed track drainage pipes, poor underfoot conditions, hazard (typical example found at 071+11 cess down).

Photo No.44: 071+19 to 072+15 Solum Up & Down, Mud and flooding, depth 3".

Photo No.45: 072+11 to 073+05 Solum Up & Down, Debris.

Photo No.46: 073+05 Portal Up & Down, View of blocked up Abergwynfi Portal from inside tunnel.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 6 of 29



GENERAL VIEW – APPROX. LOCATION OF ABERGWYNFI PORTAL



Photo No.1: Bridgend Portal Down, Wingwall, Copings missing and loose blocks, area 8sq.m.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 7 of 29



Photo No.2: Bridgend Portal Up, Wingwall, Copings missing and loose blocks, area 8sq.m.



Photo No.3: Bridgend Portal Up, missing & loose blockwork, gap allows easy trespass access into tunnel.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 8 of 29



Photo No.4: Bridgend Portal, existing padlock found cut-off on the solum reason unknown, tumblers still operable.



Photo No.5: Bridgend Portal, oiling door padlock.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 9 of 29



Photo No.6: Bridgend Portal, oiling door hinges.



Photo No.7: Full Length of Tunnel, Sidewall Up, unnecessary & unsightly graffiti, large spray paint numbers and numbers sprayed over ostensibly to try to correct an initial measuring.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 10 of 29



Photo No.8: Full Length of Tunnel, Sidewall Up, unnecessary & unsightly graffiti, large spray paint numbers and numbers sprayed over ostensibly to try to correct an initial measuring.



Photo No.9: Full Length of Tunnel, Sidewall Up, unnecessary & unsightly graffiti, large spray paint numbers and numbers sprayed over ostensibly to try to correct an initial measuring.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 11 of 29



Photo No.10: Full Length of Tunnel, Sidewall Up, unnecessary & unsightly graffiti, large spray paint numbers and numbers sprayed over ostensibly to try to correct an initial measuring.



Photo No.11: Full Length of Tunnel, Solum Up & Down, drainage WIP, large ballast, bricks & smashed track drainage pipes churned up during excavation works, poor underfoot conditions, hazard.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 12 of 29



Photo No.12: Full Length of Tunnel, Solum Up & Down, drainage WIP, large ballast, bricks & smashed track drainage pipes churned up during excavation works, poor underfoot conditions, hazard.



Photo No.13: Full Length of Tunnel, Solum Up & Down, drainage WIP, rail irons from broken out catch-pits & new construction materials found in refuges.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 13 of 29



Photo No.14: Full Length of Tunnel, Solum Up & Down, drainage WIP, rail irons from broken out catch-pits & new construction materials found in refuges.



Photo No.15: Bridgend Portal, Solum Down, drainage WIP, new construction materials found in cess.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 14 of 29



Photo No.16: Bridgend Portal, Solum Up & Down, drainage WIP, new cover found in 6'.

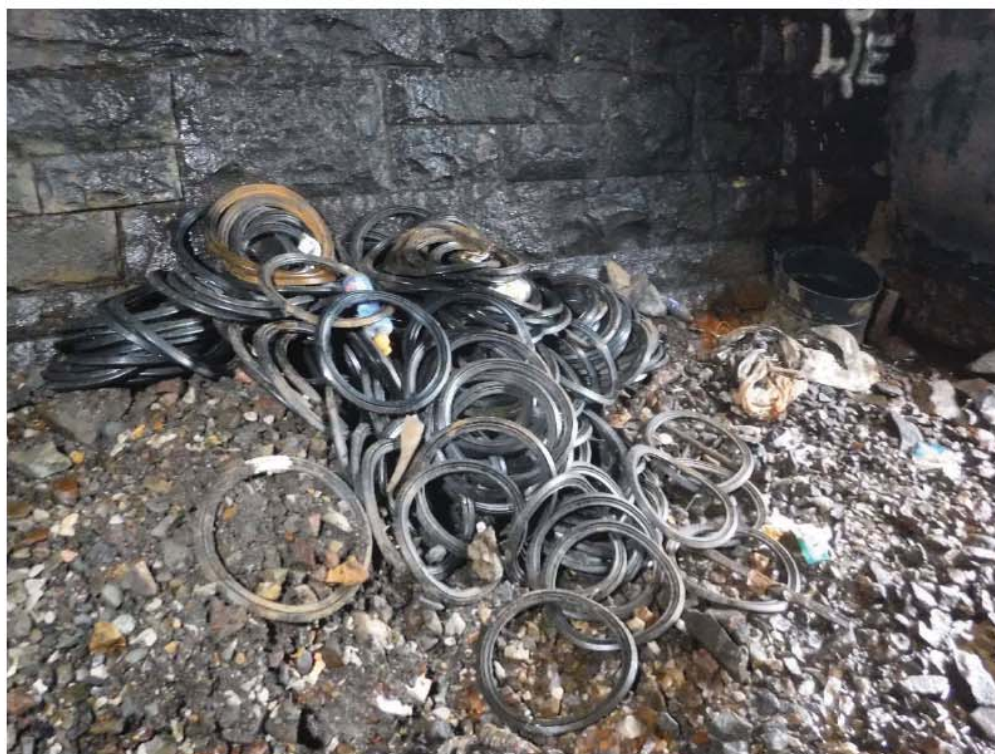


Photo No.17: Bridgend Portal, Solum Up, drainage WIP, new construction materials found in cess.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 15 of 29



Photo No.18: Bridgend Portal, Solum Down, drainage WIP, old metal door dumped in tunnel hidden by a new stockpile of pipes.



Photo No.19: Bridgend Portal, Solum Down, drainage WIP, old metal door dumped in tunnel hidden by a new stockpile of pipes.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 16 of 29



Photo No.20: 010+02 Refuge Up, Brickwork, Arch, spalled and missing bricks, depth 100mm, area 1.5sq.m.



Photo No.21: 011+16 Refuge Up, Brickwork, Arch, spalling, depth 75mm, area 1sq.m., damp, light (archive photo).

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 17 of 29



Photo No.22: 016+07 Refuge Up, Brickwork, Arch, hollow, area 1sq.m., with missing bricks, depth 100mm, area 0.25sq.m., medium.



Photo No.23: 016+18 Sidewall & Haunch Down, Stonework, 2No. downpipes fitted to Haunch with running water. Possible Hidden Shaft.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 18 of 29



Photo No.24: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.



Photo No.25: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 19 of 29



Photo No.26: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.



Photo No.27: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 20 of 29



Photo No.28: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.



Photo No.29: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 21 of 29



Photo No.30: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.



Photo No.31: 000+00 to 038+20 Solum Up & Down, drainage WIP, catch-pits and/or earthenware pipes broken out, new inspection chambers fitted mostly at 1ch centres, some covers missing or displaced.

**EXAMINATION REPORT
PHOTOGRAPHS OF STRUCTURE**

ELR: BAL Br. No.: 00

Mileage: 10 M 17 ch Sheet 22 of 29



Photo No.32: 042+13 to 043+20 Low Haunch Up & Down, Brickwork, longitudinal cracking, width 1mm, length 27m. Various bricks crushed and spalled to downside, depth 25mm, area 3sq.m.



Photo No.33: 043+17 Solum Up & Down, Open Catch-pit to six-foot blocked, new flooding from 040+15 to 050+11 flowing northwards. Water subsided, new chamber, shallow mud/silt.