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Deception Bay, QLD, 4508
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28 February 2025

RE: Urgent Inspection of Kilcunda Viaduct bridge, Kilcunda

A Wood Research and Development (WRD) Level II Certified Inspection and Restoration Technician attended the Kilcunda Viaduct Bridge located off Kilcunda Ridge Road, Kilcunda Victoria, at approximate GPS coordinates, -38.546554, 145.471308, to conduct a defect inspection as requested.

This bridge is a 5 span former railway trestle bridge located on the former rail alignment as it entered the township of Kilcunda from the west. The bridge has been deteriorating severely over a significant period and council has taken action to protect the public by erecting barriers at each end of the bridge to prevent access to the deck and some temporary fencing through the middle span which wraps around the abutments to prevent access beneath the bridge in spans, 1, 2, 4, and 5. There is also a steel mesh net above the remaining accessible span to catch any debris which might fall from the structure in this span.

See some of the defects identified in the attached standard reporting format for collating photograph in accordance with procedures described in the VicRoads Roadside Structures Inspection Manual (RSIM).

Having reviewed the defect photos attached and discussed the site conditions with the attending WRD Technician and yourself, I conclude that the bridge is at a significantly increased risk of collapsing and therefore the structure should be **completely closed to the public** until a further investigation can be conducted to determine any residual capacity to support repairs or restoration.

Sincerely,



Dan Tingley Ph.D., P. Eng.(Canada), MIEAust, CPEng, RPEQ
RPEQ Number 11561
Senior Wood Technology/ Structural Engineer
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T: (07) 5432 3063
Engineers Australia Contact ID Number 4001959

Encl:

Wood Research and Development – Kilcunda viaduct Bridge, Letter of Advice.

Defective Components Report

Structure ID No.:

Location (Km):

Road Name:

Nyora-Wonthaggi Rail Trail

Road Number

Crossing/General Location:

Kilcunda Viaduct Trestle Bridge, Cnr of Bass Hwy and Kilcunda Ridge Rd

Region:

Bass Coast Shire

Map Reference:

-38.546555, 145.471295

Inspector:

S Richards

Date

27/02/2025

Film/Exposure No.	Sketch No.	Location			Description	Id
		Modification	Group	Component		
20250227_084418					Collapsed deck behind fenced off area	1
20250227_084434					Girders failed under deck causing collapse of deck	2
20250227_084738					4 of 6 girders completely failed due to deterioration. Remaining girder severely deteriorated and ready to collapse.	3
20250227_084753					Girders failed and collapsed due to deterioration	4
20250227_085500					Steel Connection severly corroded	5
20250227_085639					Settlement of pile at abutment	6
20250227_085840					Internal Decay of Inner girder. Girder severly rotated.	7
20250227_085922					Severe decay to girder end at abutment with damage to underside	8
20250227_090207					Pipe Damage to split head stocks at abutment	9
20250227_090848					Significant Split in timber pile with internal decay	10
20250227_090959					Cavity to top of pile with large checks.	11
20250227_091743					Significant settlement of piles at abutment with failed girders due to internal decay. Connectors have severe corrosion.	12

Pictures

Structure ID No.:

Location (Km):

Road Name:

Nyora-Wonthaggi Rail Trail

Road Number

Crossing/General Location:

Kilcunda Viaduct Trestle Bridge, Cnr of Bass Hwy and Kilcunda Ridge Rd

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Bass Coast Shire

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Date

27/02/2025

Field	Data	Image
Id	1	
Date	27/02/2025	
Film/Exposure No.	20250227_084738	
Sketch No.		
Description	Collapsed deck behind fenced off area	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	2	
Date	27/02/2025	
Film/Exposure No.	20250227_084434	
Sketch No.		
Description	Girders failed under deck causing collapse of deck	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	3	
Date	27/02/2025	
Film/Exposure No.	20250227_084738	
Sketch No.		
Description	4 of 6 girders completely failed due to deterioration. Remaining girder severely deteriorated and ready to collapse.	
Mod		
Category		
Number		
Comp Code		
Comp No		

Pictures

Structure ID No.:

Location (Km):

Road Name:

Nyora-Wonthaggi Rail Trail

Road Number

Crossing/General Location:

Kilcunda Viaduct Trestle Bridge, Cnr of Bass Hwy and Kilcunda Ridge Rd

Region:

Bass Coast Shire

Map Reference:

-38.546555, 145.471295

Inspector:

S Richards

Date

27/02/2025

Field	Data	Image
Id	4	
Date	27/02/2025	
Film/Exposure No.	20250227_084753	
Sketch No.		
Description	Girders failed and collapsed due to deterioration	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	5	
Date	27/02/2025	
Film/Exposure No.	20250227_085500	
Sketch No.		
Description	Steel Connection severly corroded	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	6	
Date	27/02/2025	
Film/Exposure No.	20250227_085639	
Sketch No.		
Description	Settlement of pile at abutment	
Mod		
Category		
Number		
Comp Code		
Comp No		

Pictures

Structure ID No.:

Location (Km):

Road Name:

Nyora-Wonthaggi Rail Trail

Road Number

Crossing/General Location:

Kilcunda Viaduct Trestle Bridge, Cnr of Bass Hwy and Kilcunda Ridge Rd

Region:

Bass Coast Shire

Map Reference:

-38.546555, 145.471295

Inspector:

S Richards

Date

27/02/2025

Field	Data	Image
Id	7	
Date	27/02/2025	
Film/Exposure No.	20250227_085840	
Sketch No.		
Description	Internal Decay of Inner girder. Girder severly rotated.	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	8	
Date	27/02/2025	
Film/Exposure No.	20250227_085922	
Sketch No.		
Description	abutment with damage to underside	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	9	
Date	27/02/2025	
Film/Exposure No.	20250227_090207	
Sketch No.		
Description	Pipe Damage to split head stocks at abutment	
Mod		
Category		
Number		
Comp Code		
Comp No		

Pictures

Structure ID No.:

Location (Km):

Road Name:

Nyora-Wonthaggi Rail Trail

Road Number

Crossing/General Location:

Kilcunda Viaduct Trestle Bridge, Cnr of Bass Hwy and Kilcunda Ridge Rd

Region:

Bass Coast Shire

Map Reference:

-38.546555, 145.471295

Inspector:

S Richards

Date

27/02/2025

Field	Data	Image
Id	10	
Date	27/02/2025	
Film/Exposure No.	20250227_090848	
Sketch No.		
Description	Significant Split in timber pile with internal decay	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	11	
Date	27/02/2025	
Film/Exposure No.	20250227_090959	
Sketch No.		
Description	Cavity to top of pile with large checks.	
Mod		
Category		
Number		
Comp Code		
Comp No		

Field	Data	Image
Id	12	
Date	27/02/2025	
Film/Exposure No.	20250227_091743	
Sketch No.		
Description	Significant settlement of piles at abutment with failed girders due to internal decay. Connectors have severe corrosion.	
Mod		
Category		
Number		
Comp Code		
Comp No		