



# BRIDGE MANAGEMENT PLAN

2025/26 – 2029/30

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## Overview

Bridges form a critical component of Western Australia's road network, enabling the safe and efficient crossing of natural and constructed obstacles and facilitating economical movement between locations. A significant proportion of the State's bridges were constructed prior to the 1960s. While they were fit for purpose at the time, many were not designed to accommodate contemporary traffic volumes, axle loads, or heavy vehicle configurations.

As these structures continue to age, diligent asset management is essential to maximise their serviceable life. Local governments are responsible for the management of their bridge assets and have a duty of care to ensure safe passage for all road users. Demonstrating this responsibility requires the implementation of structured inspection and preventative maintenance programs, including both routine (annual), periodic (5 years) and specific (as required) maintenance.

## Bridge Inspections

Bridge inspections play a key role in supporting the effective management, prioritisation, and scheduling of works on structural assets across a Shire. They enable early identification of defects and deterioration, allowing maintenance to be undertaken in a timely manner. This proactive approach reduces the likelihood of critical failures, improves safety outcomes, and supports the long-term sustainability of the asset network.

### **1. Level 1 Bridge Inspection Reports:**

A routine visual assessment of each bridge asset is undertaken annually by the Shire to evaluate the overall safety and performance of the structure. This includes identifying any significant incidents, damage or deterioration, as well as any evident defects or failures in structural components.

The inspection also provides an opportunity to identify and prioritise routine maintenance requirements, and to review the completion and effectiveness of previously undertaken works. Upon completion, the report is submitted to Main Roads Western Australia (MRWA), with the findings used to inform the scheduling and budgeting of maintenance and renewal works.

### **2. Level 2 Bridge Inspection Reports:**

The Level 2 Condition Assessment, commonly referred to as a Detailed Visual Bridge Inspection, is undertaken by Main Roads Western Australia (MRWA) at five-year intervals. This inspection plays a critical role in determining maintenance, rehabilitation, or replacement requirements, and in identifying the need for further investigative testing.

Level 2 inspections involve a detailed visual examination of individual bridge components, with the collection of quantitative data to support further analysis and deterioration modelling. The process provides a comprehensive assessment of the structural condition of the asset, including photographic documentation of key elements and the recording of any identified defects.

Following the inspection, findings may be referred to a MRWA engineer for further assessment. Where necessary, operational restrictions, such as load limits, may be implemented if maintenance works are not undertaken. A copy of the completed report is provided to the Shire once finalised by the relevant regional MRWA office.

## Preventative Maintenance

Preventative maintenance is the responsibility of Local Government and includes the following three maintenance categories, a full comprehensive list of all activities can be found in Appendix 1 of this document.

- 1. Routine Maintenance:** Activities required to preserve the structure which is estimated at \$4000/bridge. The frequency of this type of maintenance is typically annual and includes:
  - Level 1 inspection
  - cleaning of scuppers, drainage, expansion joints
  - vegetation and debris clearing
  - termite inspection and treatment (if required)
  - guardrail maintenance
  - signage etc.
  
- 2. Periodic Maintenance:** Activities required to preserve the structure which is estimated using a rate of \$500/m<sup>2</sup> deck area. The frequency of this type of maintenance is 5 yearly and includes:
  - fungicide treatment to stingers, piles, sill beams etc
  - timber end grain sealing
  - fastener maintenance
  
- 3. Specific Maintenance (minor works):** Activities required to preserve the structure. Estimated per bridge using a rate of \$10,000. The frequency of this type of maintenance is undertaken as required and includes:
  - repair splits in piles and stringers including bolting and banding
  - abutment sheeting repairs
  - shimming and packing of stringers and halfcaps etc

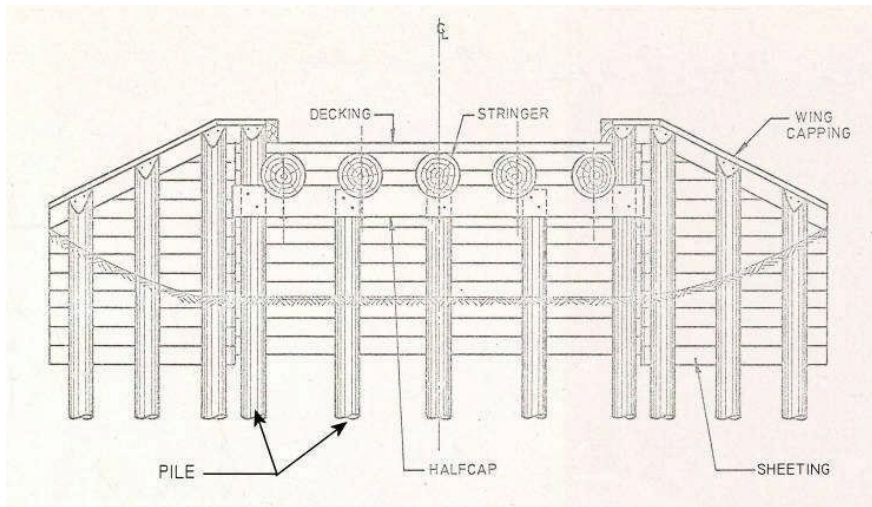
The five-year maintenance program for the period 2025/26 to 2029/30 is provided in Appendix 2 of this document. The program outlines the anticipated budgetary requirements for each year to ensure that bridge assets are maintained in accordance with industry standards.

## Funding Eligibility

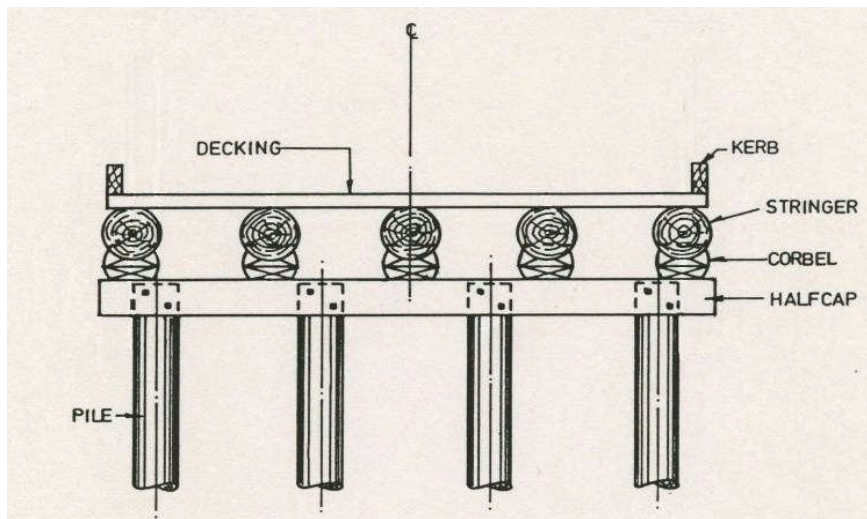
To be eligible for Special Project funding under the State Road Funds to Local Government Agreement (SRFLGA), Local Governments must demonstrate that annual Level 1 bridge inspections have been completed and that appropriate routine and preventative maintenance has been undertaken to prevent undue deterioration.

This funding, administered in conjunction with Commonwealth Financial Assistance Grants through the Western Australian Local Government Grants Commission (WALGGC), is critical in supporting the rehabilitation or replacement of bridges that are approaching the end of their serviceable life.

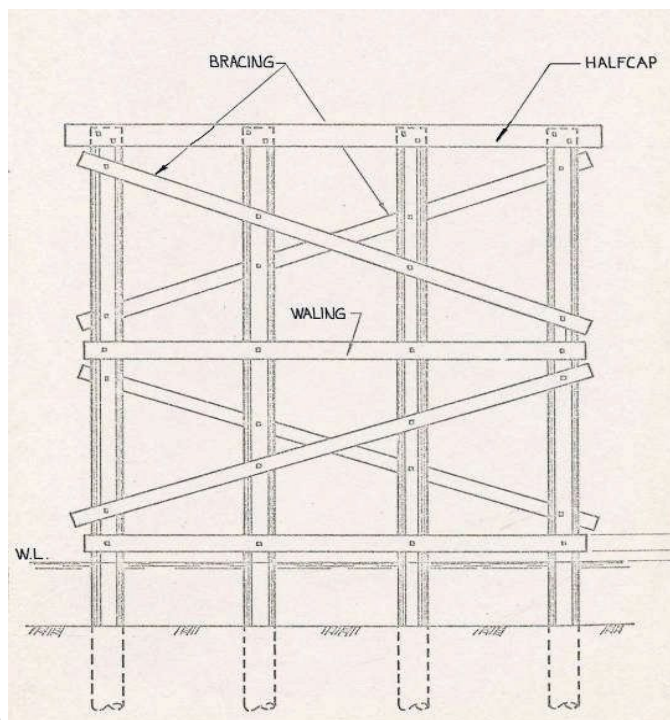
# Bridge Components



Abutment View



Pier View (Top)



Pier View (Bottom)

## Cranbrook Bridge Inventory

The Shire of Cranbrook has thirteen (13) bridges within its transport network, summarised below:

### Bridge Number: 0272

Road Name:	Boyup Brook-Cranbrook Rd
Crossing Name:	Cowenup Brook
Location:	East of Cowerup Brook Rd
SLK:	28.58
Date Built:	30 December 1933
Structure Type:	Timber
Spans:	3
Length (m):	14.16
Width (m):	4.07
Deck Area (m2):	57.63
MRWA Inspection:	30/06/2029



Figure 1 - Approach to bridge 0272 eastward facing



Figure 2 - LHS view of bridge 0272

Comments: Preventative maintenance was last undertaken in 2022/23.

## Bridge Number: 0273

Road Name:	Boyup Brook-Cranbrook Rd
Crossing Name:	Uannup Brook
Location:	East of Shamrock Rd
SLK:	33.07
Date Built:	30 December 1933
Structure Type:	Timber
Spans:	7
Length (m):	33.70
Width (m):	5.80
Deck Area (m2):	195.46
MRWA Inspection:	30/06/2031



Figure 3 - Approach to bridge 0273 eastward facing



Figure 4 - RHS view of bridge 0273

Comments: Preventative maintenance was last undertaken in 2024/25.

## Bridge Number: 0274A

Road Name:	Boyup Brook-Cranbrook Rd
Crossing Name:	Slab Hut Gully
Location:	East of Bonshaw Rd
SLK:	46.90
Date Built:	1 October 1984
Structure Type:	Timber
Spans:	5
Length (m):	39.30
Width (m):	4.50
Deck Area (m2):	176.85
MRWA Inspection:	30/06/2031



Figure 5 - Approach to bridge 0274A eastward facing



Figure 6 - LHS view of bridge 0274A

Comments: Preventative maintenance was last undertaken in 2024/25.

## Bridge Number: 0275A

Road Name: Boyup Brook-Cranbrook Rd  
Crossing Name: Gordon River  
Location: North of Cranbrook-Frankland Rd  
SLK: 60.73  
Date Built: 2 September 1983  
Structure Type: Timber  
Spans: 7  
Length (m): 42.10  
Width (m): 4.52  
Deck Area (m2): 190.29  
MRWA Inspection: 30/06/2029



Figure 2 - Approach to bridge 0275A westward facing



Figure 1 - RHS view of bridge 0275A

Comments: Preventative maintenance was last undertaken in 2024/25.

## Bridge Number: 0488

Road Name:	Wingebellup Rd
Crossing Name:	Unknown
Location:	East of Poison Hill Rd
SLK:	41.13
Date Built:	30 December 1954
Structure Type:	Timber
Spans:	1
Length (m):	7.70
Width (m):	7.79
Deck Area (m2):	59.98
MRWA Inspection:	30/06/2029



Figure 9 - Approach to bridge 0488 westward facing



Figure 10 - Abutment 1 wingwall

Comments: Preventative maintenance was last undertaken in 2020/21.

In 2027/28 this bridge will be replaced with a culvert under Roads to Recovery 6 Programme funding (\$1,786,000)

## Bridge Number: 0489

Road Name:	Kojonup - Frankland Rd
Crossing Name:	Riversdale Bridge
Location:	West of Tambellilup Rd
SLK:	15.13
Date Built:	1 January 1952
Structure Type:	Timber
Spans:	10
Length (m):	61.80
Width (m):	7.84
Deck Area (m2):	484.51
MRWA Inspection:	30/06/2029



Figure 11 - Approach to bridge 0489 southward facing



Figure 12 - RHS view of bridge 0489

Comments: Preventative maintenance was last undertaken in 2024/25.

## Bridge Number: 4253A

Road Name:	Unanup Rd
Crossing Name:	Slabhut Gully
Location:	East of Chingebup Rd
SLK:	10.77
Date Built:	1 June 1978
Structure Type:	Timber
Spans:	3
Length (m):	21.30
Width (m):	4.38
Deck Area (m2):	93.29
MRWA Inspection:	30/06/2028



Figure 13 - Approach to bridge 4253A eastward facing



Figure 14 - LHS view of bridge 4253A

Comments: Preventative maintenance was last undertaken in 2020/21.

## Bridge Number: 4254

Road Name:	Shamrock Rd
Crossing Name:	Gordon River
Location:	South of Boyup Brook-Cranbrook Rd
SLK:	9.29
Date Built:	1 January 1962
Structure Type:	Timber
Spans:	10
Length (m):	66.50
Width (m):	4.81
Deck Area (m2):	319.87
MRWA Inspection:	30/06/2030



Figure 15 - Approach to bridge 4254 southward facing



Figure 16 - RHS view of bridge 4254

Comments: The preventative maintenance of this bridge is budgeted for completion in 2025/26.

## Bridge Number: 4255A

Road Name:	Wingebellup Rd
Crossing Name:	Frankland River
Location:	West of Frankland-Kojonup Rd
SLK:	35.42
Date Built:	9 November 1972
Structure Type:	Timber
Spans:	9
Length (m):	55.85
Width (m):	7.94
Deck Area (m2):	443.45
MRWA Inspection:	30/06/2030



*Figure 17 - Approach to bridge 4255A eastward facing*



*Figure 18 - LHS view of bridge 4255A*

Comments: Preventative maintenance was last undertaken in 2022/23.

## Bridge Number: 4256A

Road Name:	Boyacup Rd
Crossing Name:	Gordon River
Location:	South of Boyup Brook-Cranbrook Rd
SLK:	5.84
Date Built:	29 June 1979
Structure Type:	Timber
Spans:	7
Length (m):	45.30
Width (m):	4.71
Deck Area (m2):	213.36
MRWA Inspection:	30/06/2026



Figure 19 - Approach to bridge 4256A eastward facing



Figure 20 - LHS view of bridge 4256A

Comments: Preventative maintenance was last undertaken in 2024/25.

## Bridge Number: 4257

Road Name:	Brooklyn Rd
Crossing Name:	Slabhutt Gully (Ham's Bridge)
Location:	West of Albany Hwy
SLK:	0.25
Date Built:	1 January 1964
Structure Type:	Timber
Spans:	3
Length (m):	18.80
Width (m):	7.80
Deck Area (m2):	146.64
MRWA Inspection:	30/06/2026



Figure 21 - Approach to bridge 4257 eastward facing



Figure 22 - LHS view of bridge 4257

Comments: Preventative maintenance was last undertaken in 2024/25.

## Bridge Number: 4258A

Road Name:	Yeriminup Rd
Crossing Name:	Frankland River
Location:	East of Kojonup-Frankland Rd
SLK:	53.73
Date Built:	16 January 1980
Structure Type:	Timber
Spans:	7
Length (m):	43.76
Width (m):	5.10
Deck Area (m2):	223.18
MRWA Inspection:	30/06/2026



Figure 23 - Approach to bridge 4258A westward facing



Figure 24 - RHS view of bridge 4258A.

Comments: The preventative maintenance of this bridge is budgeted for completion in 2025/26.

## Bridge Number: 0888

Road Name:	Old Cranbrook- Frankland Alignment
Crossing Name:	Nardarup Creek
Location:	West of Cook Rd (SLK 0.09)
Structure Type:	Timber
Spans:	1
Deck Area (m2):	37.26

Comments: Bridge not used, in discussion with Main Roads WA, this bridge was to be demolished as part of the road realigned works in 2004/05. An application for demolition permit is required with the Heritage Council prior to these works occurring.

## Appendix 1 – Maintenance Activities

Below is a comprehensive list of activities that a local government is to undertake as part its routine and preventative maintenance categories provided by MRWA.

<b>Maintenance Category</b>	<b>Elements</b>	<b>Activities</b>	
Routine Maintenance - Annual	Inspections	Annual Visual Inspections	
	Drainage - Deck	Clean deck gully drains / scuppers / down pipes	
	Drainage - Internal	Clean, repair drainage systems inside abutments	
	Guard railing	Clean / repaint	
		Repair accident damage	
		Install / Replace delineators	
		Replace broken bolts, tighten loose bolts	
	Expansion Joints / Deck Joints	Clean seals	
		Replace broken bolts, tighten loose bolts	
	Bearings	Clean bearings	
	Approaches	Level pavements	
		Lines	
		Kerbs	
	Signs	Width markers, Signs	
	Deck	Clean fascia panels, repair / replace damaged removable panels	
	Other	Remove debris & vegetation from roadway, waterway, under bridge & clear zones	
		Remove Graffiti	
		Clean plaques	
		Maintain landscaping / artwork	
		Minor Scour repairs	
Maintain access doors & security / locks			
Remove fences attached to bridges			
Termites Eradicate			
Maintain Footpaths			

<b>Maintenance Category</b>	<b>Elements</b>	<b>Activities</b>
Periodic Maintenance – 5 yearly	Superstructure	Seal all exposed timber decking end grain
		Reseal all exposed timber decking end grain
		Fungicide treatment of timber stringers - spiral grain
		Fungicide treatment of outside timber stringers
		Fungicide treatment of ends of wandoo stringers (end spans only)
		Stringer / corbel bolting and repair splits
	Substructure	Seal all exposed timber end grain
		Abutment / wingwall piles
		Abutment sheeting
		Halfcaps
		Fullcaps
		Braces
		Walers
		Reseal all exposed timber end grain
		Abutment / wingwall piles
		Abutment sheeting
		Halfcaps
		Fullcaps
		Braces
		Walers
		Tighten all existing bolts and fasteners
		Tighten all existing bolts and fasteners within 1.5m of ground line
		Fungicide treatment of timber piles at ground line
		Fungicide treatment of timber piles in permanent water
		Fungicide treatment of bedlogs and bearers (in contact with ground)
		Fungicide treatment of timber bearers, pier bedlogs (off ground)
		Pile banding and repair splits
		Marine organism protection
Specific Maintenance – minor works as required	Repair gaps in the abutment / wingwall sheeting	
	Repair rotten abutment / wingwall sheeting - new timber sheet.	
	Scour repairs	
	Reinstall wingwall capping	
	Remove old bolts - dangerous	
	Remove fences off bridge or guardrailing	
	Packing of Halfcaps	
	Packing of Stringers and Corbels	
	Guardrail maintenance - Replace fishtails with bullnoses	
	Treatment of decking planks - top surface	
	Treatment (fungicide) of gravel pavement	

## Appendix 2 – Bridge Maintenance Program 2025/26 to 2029/30

Bridge No	Road Name	SLK	Deck Area (m2)	Budget Estimate				
				Year 1	Year 2	Year 3	Year 4	Year 5
				Year 2025/26	Year 2026/27	Year 2027/28	Year 2028/29	Year 2029/30
<b>Periodic Maintenance</b>		<i>Estimated at \$500/m2 deck area</i>						
0272	Boyup Brook - Cranbrook Rd	28.58	57.63		\$28,815			
0273	Boyup Brook - Cranbrook Rd	33.07	195.46				\$97,730	
0274A	Boyup Brook - Cranbrook Rd	46.90	176.85				\$88,425	
0275A	Boyup Brook - Cranbrook Rd	60.73	190.29		\$95,145			
0488	Wingebellup Rd	41.13	59.98			**\$1.78M Replace with culvert		
0489	Kojonup - Frankland Rd	15.13	484.51					\$242,255
4253A	Unanup Rd	10.77	93.29		\$46,645			
4254	Shamrock Rd	9.29	319.87	\$159,935				
4255A	Wingebellup Rd	35.42	443.45			\$221,725		
4256A	Boyacup Rd	5.84	213.36				\$106,680	
4257	Brooklyn Rd	0.25	146.64					\$73,320
4258A	Yeriminup Rd	53.73	223.18	\$111,590				
<b>Routine Maintenance</b>		<i>Estimated \$4000/bridge (inc Level 1 Inspection and termite inspections and treatments, if required)</i>		\$48,000	\$48,000	\$48,000	\$48,000	\$48,000
<b>Specific Maintenance</b>		<i>Estimated at \$10,000/bridge</i>		\$20,000	\$30,000	\$10,000	\$30,000	\$20,000
			<b>TOTAL</b>	<b>\$339,525</b>	<b>\$258,605</b>	<b>\$279,725</b>	<b>\$370,835</b>	<b>\$383,575</b>

\* Note: Estimated prices for periodic and specific maintenance provided by Main Roads WA

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