Shire of Dardanup

12.4 Infrastructure Directorate

APPENDICES

ORDINARY COUNCIL MEETING

To Be Held

27th May 2026
Commencing at 5.00pm

At

ADMINISTRATION CENTRE EATON
1 Council Drive - EATON

This document is available in alternative formats such as:
~ Large Print
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Upon request.

RISK ASSESSMENT TOOL

OVERALL RISK TITLE: *Changes to the reseal program result in roads in poor condition identified in the current program not being addressed in a timely manner.*

RISK THEME PROFILE:

1 - Asset Sustainability Practices
2 - Business and Community Disruption

RISK ASSESSMENT CONTEXT: Strategic

CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATEMENT OR CONTROL		
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING
HEALTH	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
FINANCIAL IMPACT	Roads in poor condition are not identified for renewal resulting in high maintenance costs to ensure roads user safety.	Minor (2)	Rare (1)	Low (1 - 4)	Not required.	Not required.	Not required.	Not required.
SERVICE INTERRUPTION	Roads in poor condition are not identified for renewal resulting in road failures and closures impacting the road network service.	Minor (2)	Rare (1)	Low (1 - 4)	Not required.	Not required.	Not required.	Not required.
LEGAL AND COMPLIANCE	Increased likelihood of personal injury or property damage claims arising from untreated road defects.	Moderate (3)	Rare (1)	Low (1 - 4)	Not required.	Not required.	Not required.	Not required.
REPUTATIONAL	Shire's reputation and public confidence are impacted due to perceived poor decision-making, asset failures, or ineffective use of public funds.	Major (4)	Rare (1)	Moderate (5 - 11)	Not required.	Not required.	Not required.	Not required.
ENVIRONMENT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
PROPERTY	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.

Appendix 12.4.1B Road Renewal Prioritisation

Road Renewal projects were previously ranked according to the following multi-criteria analysis.

Factor	Code	Variation	Low Value			High Value		
Factor Weighting			0	1	2	3	4	5
Budget	B$	Budget Unavailable						
		10% Annual Budget Unallocated						
		20% Annual Budget Unallocated						
		30% Annual Budget Unallocated						
		40% Annual Budget Unallocated						
		50% or more Annual Budget Unallocated						
Black Spots	Bs	Not Present						
		Grant Available						
		Grant Unavailable						
RRG Roads	R	Not RRG						
		Grant Available						
		Grant Unavailable						
Average Daily Traffic	ADT	<10						
		11 - 250						
		251 - 500						
		501 - 1000						
		1001 - 3000						
		>3000						
Hierarchy (Non RRG Roads)	H	RRG						
		Urban District Distributor						
		Urban Local Distributor						
		Urban Local Road 1 Sealed						
		Urban Local Road 2 Sealed						
		Urban Local Road 1 Unsealed						
		Urban Local Road 2 Unsealed						
		Urban Right of Way (ROW)						
		Rural District Distributor						
		Rural Local Distributor						
		Rural Local Road 1 Sealed						
		Rural Local Road 2 Sealed						
		Rural Local Road 1 Unsealed						
		Rural Local Road 2 Unsealed						
		Rural Right of Way (ROW)						
Seal Age	Sa	Unsealed						
		<5						
		6-7						
		8-9						
		10-11						
		12-13						
		14-15 or more						
Pavement Age	Pa	<5						
		5-10						
		11-15						
		16-20						
		21-25						
		26-30 or more						
Treatment Type	T	Shoulder Grading						
		Drainage						

Factor	Code	Variation	Low Value			High Value		
Factor Weighting			0	1	2	3	4	5
		Gravel Re-sheeting					■	
		Other Rehabilitation				■		
		Reconstruction		■				
Public Transport Route	PT	No Public Transport	■					
		PTA Bus Route				■		
		School Bus Route						■
The Sum of the Weighted Criterion will be multiplied by the Assessed VCR Condition to derive the Project Priority								
VCR Condition	C	Weight = Condition	■	■	■	■	■	■

This analysis resulted in all Shire roads competing for the same funding pool. This often meant that lower-traffic roads in poor condition were not included in the program, while higher-traffic roads in adequate condition were programmed for reseal works.

The updated approach to the Shire's road renewal funding applies a road-type based assessment to determine renewal priorities. Under this framework, four distinct renewal programs are created to allow roads to be prioritised according to their surface type and functional role.

- Asphalt Reseal Program
- Chip Seal Reseal Program
- Regional Road Group (RRG) Program
- Gravel Re-sheeting program

By prioritising roads by type and function, rather than adopting a whole of network approach, it prevents comparisons between roads of different roles and service demands within the same funding pool. For example, an unsealed road with low traffic volumes, such as Panizza Road, is not ranked against a higher-order urban distributor such as Eaton Drive.

Each financial year a percentage of the total allocated funds for road renewal projects is allocated to each program. This ensures renewal funds are distributed appropriately across all road categories.

Transitioning to this approach shift the priority emphasis away from traffic volumes, which have historically resulted in roads of a high traffic volume, but not poor condition, being prioritised over roads of lower traffic volume and poorer condition. This allows the renewal program to better focus on roads that are in poor condition, allowing timely renewals of all roads to prevent water ingress into pavements, protecting road assets from needing costly reconstruction works.

Updates have also been made to how the overall condition score of roads are calculated. Road condition is determined through evaluation of the key pavement components and surface defects that influence safety, serviceability, and remaining asset life. Condition ratings are based on a combination of visual inspections, defect severity, and extent. For example, structural and non-structural cracking are assessed by assigning a severity score to reflect the seriousness of the defect and an extent score to represent how widespread the cracking is across the road.

To calculate an overall condition score, the individual defect scores are combined using a condition index. Historically this condition index has been calculated using a method developed by WALGA in 2011. A limitation of this method is that this index is dependent on the defect type with the worst condition score even if this defect type does not have the largest impact on the roads reaming useful life.

An alternative condition index method has been adopted, consistent with contemporary road asset management practices, in which defects of a road are weighted based on their impact on the useful life of road. Under this approach, defects that indicate structural deterioration are assigned a higher weighting than surface-related defects. For example, the structural cracking severity and extent score are weighted higher than non-structural cracking, as structural cracking demonstrates as issue with the road pavement while non-structural cracking is a result of seal aging.

The following new multi-criteria analysis has now been adopted to better reflect the Shire's road network use, distribution and condition.

FACTOR	VARIATION	SCORE					
		0	1	2	3	4	5
Average Daily Traffic (Asphalt and Chip Seal Roads)	ADT > 4000				■		
	ADT 2000-4000			■			
	ADT 500-2000		■				
	ADT 100-500	■					
	ADT < 100	■					
Average Daily Traffic (RRG Roads)	ADT > 4000						■
	ADT 2000-4000					■	
	ADT 500-2000				■		
	ADT 100-500			■			
	ADT < 100		■				
Surface Age	26 or more						■
	21 - 25					■	
	16 - 20				■		
	11-15			■			
	5-10		■				
	Less than 10	■					
Crash Data (only for Chip Seal and RRG Roads)	Crashes on treatment length				■		
	No crashes on treatment length	■					
Crack Sealing	Crack sealed				■		
	Not crack sealed	■					
Customer Requests/Internal Feedback	Received				■		
	None received	■					
Condition	Condition = Score						

The priority of each road is then calculated by summing the scores assigned to each assessment factor and multiplying the total by the road's condition rating.