



Livingstone Shire Council

UNSEALED ROADS FACTSHEET

Livingstone Shire Council is responsible for the maintenance of approximately 850km of unsealed roads.

Unsealed roads are a highly dynamic asset as the condition of the road rapidly changes due to traffic movement, weather, and variability in terrain. Soil type and gravels also add to the complexity of maintaining unsealed roads.

Unlike sealed roads, permanent speed limit signs are not used on unsealed roads because the condition of the roads cannot be assured and vehicles must always drive to suit the conditions. Council has four grader crews that are used for maintenance grading, resheeting and road reconstruction works. We also regularly hire contractors to supplement our fleet.

MAINTENANCE GRADING

The main purpose of a maintenance grade is to provide a good running-surface and to reform crossfall in the road so that water runs off and does not pool or cause scouring. This process includes the use of a grader roller and water truck to shape and compact the material with the optimum water content.

If the road is too wet, the grader can cause more damage to the road. On these occasions, it is beneficial for the grader to leave the road unfinished and return once the weather permits.

Council also generally only grades roads when grading is required. That means that when we are in an area, we only work on the roads that have reached intervention levels for maintenance. Grading roads that don't require grading just because we are in an area wastes money and prevents the grader from moving to other roads that are actually rough enough to require intervention.

UNSEALED ROAD CLASS

To help in managing its unsealed road network, Council has classified each of its roads. Each unsealed road is classified into a road class based on criteria, which dictates the level of service that the road provides to the community. This also forms a risk-based approach to maintenance which allows Council to prioritise works according to the risk profile. Roads that are used at a higher frequency generally deteriorate quicker and therefore require intervention more frequently.

ROAD CLASS	ESTIMATED AVERAGE DAILY TRAFFIC (ADT)	FUNCTION	NETWORK LENGTH	UNSEALED NETWORK %
150	>125	Major movements between population centres - part of the primary network	10km	1%
125	100- 125	Roads that link to primary network Connecting local centres	15km	2%
100	75 - 100	Minor roads accessing 10 farms and dwellings	150km	18%
75	30 - 75	Typically no through roads 5 - 10 residences	225km	20%
30	10-30	Provides access to properties Only 2 - 5 residences Low use Access to minor tourism site	300km	35%
10	<10	Used for infrequent recreation May provide access to rivers or paddocks 1 -2 residences	150km	18%

DID YOU KNOW?

It costs an additional \$12,000 per KM per year to own and maintain bitumen road.

To seal all of our gravel roads would increase the the Council maintenance budget by \$6.3m per year (a 19% rate rise).

ROUTINE INSPECTIONS

Livingstone Shire Council's routine inspection frequency on our unsealed roads are based on the road class as highlighted in the table below. During an inspection a calibrated roughometer is used to determine the roughness of the road, and also a visual inspection is undertaken to identify any defects/hazards. This information is used to determine if the road has met the intervention level for maintenance grading and/or if isolated gravel patching is required.

To get an accurate reading of the roughness, it is essential for the inspector to maintain a constant speed along the entire length of road being recorded. So if you see the inspection vehicle, please give way to allow the inspection to be completed.

ROAD CLASS	INSPECTION FREQUENCY
150	4 months
125	8 months
100	10 months
75	12 months
30	18 months
10	24 months



One of Council's grading teams: Eliza Hudson, John Motton, Jason Hamilton, Norman Ellery and Steven Green.

RESHEETING

Unsealed roads lose gravel over time which requires the placement of additional gravel. The process is called 'resheeting', and involves the following:

- Reshaping the road to the correct cross sectional profile
- The addition of new road material with a depth of up to 100mm
- Reshaping table drains
- Resetting of the road profile
- Unfortunately Council can not afford to provide new gravel to all roads, thus gravel coverage ranges from 10% on class 10 roads, to 75% on class 150 roads.

Currently Livingstone Shire Council has an annual budget of approximately \$3.7 million dedicated to unsealed road resheeting.

The factors that are used to determine if a road is to be resheeted includes, gravel depth, road profile and the cost of maintenance spent over the last few years. Resheeting is generally undertaken where it will provide the greatest reduction in maintenance.

WHAT YOU CAN DO TO HELP

- 1. SLOW DOWN**
Travelling quickly on unsealed roads causes more dust. Accelerating and braking causes more potholes and corrugations.
- 2. UNDERSTAND THE NATURE OF UNSEALED ROADS**
They will be rough and muddy or dusty at times; does the road really need grading now?
- 3. RESPECT THE INSPECTORS**
Give way to inspectors so they can do their job effectively.
- 4. DRIVE TO SUIT THE CONDITIONS**
Drivers are responsible for their own safety and that of other users of the road. If a road is known to be rough or slippery, drive at an appropriate speed.
- 5. EXPECT THE UNEXPECTED**
Never assume an unsealed road is going to be the same as it was the last time you drove on it, even if it is the same day.

CHANGING ROAD CONDITIONS

Over time, unsealed roads become corrugated, potholed, rough, slippery, muddy and/or dusty. All of these are normal and unavoidable conditions that change often, and drivers must remain vigilant when driving on unsealed roads, i.e travel at lower speeds and expect the unexpected.

It is also important to note that road conditions change after grading; unsealed roads are often more slippery after they have been graded than they were before the grading.

If rain follows soon after a road has been graded, the road may become soft and very slippery. Sometimes, a road may be better left with potholes and corrugations than be graded.

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