

Understanding Road Maintenance



East Gippsland Shire Council maintains a 2,958-kilometre network of local roads, registered on our Public Road Register. Of these, 1,246km are sealed and 1,712km unsealed. Each road is categorised into a hierarchical class dependent on the types of access it provides. Periodic maintenance is carried out on all classes of roads, most to a programmed schedule and others on a reactive basis.

How Council manages roads is also outlined in the Road Management Plan available from our website or customer service centres. This information sheet provides an explanation of road classification, and materials and methods used in maintaining and improving the road network.

Road Hierarchy Definitions

Urban Link Roads

Provide a linkage between significant residential, industrial and commercial nodes and or the arterial road network. These roads have an identifiable origin and destination (e.g. suburbs, industrial areas or places of significance).

Urban Collector Roads

Primarily provide a route between and through residential, industrial and commercial areas and convey traffic to the urban link or arterial road network system.

Urban Access

A road, street, court or laneway that primarily provides direct access for abutting residential, industrial and commercial properties to their associated nodes with minimal to no through traffic.

Urban Limited Access

An un-constructed road that provides direct access or a laneway that provides secondary access for abutting residential, industrial and commercial properties.

Rural Link Roads

Primarily provide a direct linkage between significant population centres and major traffic generators such as residential, industrial, commercial, agricultural and tourist areas and declared roads. These roads have an identifiable origin and destination (e.g. townships and places of significance).

Rural Collector Roads

Primarily provide a route between, and through, residential, industrial, agricultural, tourist and forest traffic nodes and the rural Link and/or arterial road network.

Rural Access

A road or laneway in this category primarily provides direct access for abutting residential, industrial, commercial, forestry, tourist and agricultural properties and connect into either the link, collector or arterial road network. There is minimal to no through traffic.

Rural Limited Access

Roads that are un-constructed but provide direct access for abutting property or roads that provide direct access for vacant abutting property.

Rural Fire Access

A road, laneway or track that primarily provides access for fire-fighting purposes.

Road Pavement Maintenance Process

Sealed or Unsealed Pavement Reconstruction

Works can be either scheduled or reactive.

Scheduled: Surveys are carried out every four years to measure defects and data is used to schedule works according to urgency.

Reactive: Maintenance may be undertaken if pavement is in danger of immediate failure due to excessive loading, moisture ingress, cracking or issues with underground infrastructure etc.

Materials and methods:

Existing pavement materials are recycled using additives to strengthen the supply (e.g. cement, lime, enzymes). Several methods can be used to reconstruct pavement including complete excavation removal and replacement with materials of higher-strength value. Materials are replaced to specification and compacted to achieve a specified minimum density (95-100%). Proofing is undertaken using a fully loaded truck (gross mass minimum 20 tonnes) and if no defect is identified is deemed suitable for opening to traffic.

See more over page.



Road Pavement Maintenance Process

Unsealed Pavement Grading Maintenance

Council's roads supervisors regularly monitor the condition of their respective roads and order grading works through a schedule of rates contract. As specified in Council's Road Management Plan, the higher an unsealed road is on the Road Hierarchy the more frequently it receives maintenance (two-three scheduled grades per year). A rural access road which is further down the hierarchy will receive less (one grade per year). Occasionally works need to be done reactively if excessive loading or adverse weather conditions have damaged the pavement.

Materials and methods:

Council has improved the quality of the gravel materials used on unsealed roads with the use of processed fine crushed rock to improve the longevity of the surface and lessen the requirement for maintenance grading. Council's roads supervisors source gravel pavement materials from a panel of providers, enabling them to choose from a range of products of varying cost and quality to suit the specific needs of the class of road being maintained.

Resealing

Pavement resealing is determined by a program that has been established through formal investigation of the existing pavement surface condition. This is done by a specialist consultant with advanced technology that measures defects and stress in the existing sealed or asphalt pavement.

Materials and methods:

There are predominantly two types of pavement sealing products used by Council, a spray seal and asphalt. Both are substantially made up of bitumen which can be ordered in various strengths and viscosities to suit traffic volumes and loading requirements. Stone of various sizes are used to provide the body of the pavement and to increase rigidity and durability. In recent years recyclable products have begun entering the market which can be used as a substitute for stone and bitumen, this is reducing our reliance on traditional limited natural resources. Some of these products are glass, fly ash, plastic, crumb rubber and polymers. Council is proactive in working with contractors and suppliers to bring the use of these materials into practice.

Dust Suppression Seal

Council's Dust Suppression Seal Program applies to rural, rural residential and urban gravel roads to provide dust suppression, reduce overall maintenance costs and enhance driver comfort and safety. Allocation of works on unsealed roads is based on their ranking against the following evaluation criteria:

Minimum width: Either have sufficient width or be easily upgraded to enable a minimum seal width of six metres.

Existing pavement: Have an existing solid, well compacted road base (minimum gravel depth 50-75mm) that can be added to by gravel re-sheeting.

Reasonable alignment: Have reasonable gradients, drainage and road alignment that will not cause problems or compromise safety if sealed.

The criteria also considers if the road:

- Provides through access or a direct link to other roads
- Provides access to specific areas of interest (i.e. nature reserves, parks, beaches)
- Has strategic significance e.g. tourist facility/focus, complementing land development, complete a sealed road link, etc.
- Is a school bus or heavy vehicle route.

It also considers traffic volumes per day. Public concerns reported by the public - and the average number of hours per km on the section of road within 20m of the road.

Materials and methods:

Minor maintenance of dust suppression seal principally consisting of patching with hot or cold mix asphalt has occurred on various roads and has been covered under the savings generated through the road maintenance contract.

The Dust Suppression Seal Program has been running successfully for five years with only minimal maintenance having been required on some of the treated roads, predominantly pothole patching, edge breaks and shoulder drop offs which are inherent in any sealed road. Council intends to continue with the reseal program for approximately another three years and then conduct a review to ensure that all roads previously identified by the program have been treated. A second coat will be applied after about seven years to ensure the life of the pavement for a further 15-20 years.

We hope this has helped explain how Council manages roads. If you require more information, please read our Road Management Plan. To understand what roads Council is responsible for, please read the Public Road Register. Both these documents are available on our website at <https://www.eastgippsland.vic.gov.au/building-and-development/roads> or through our customer service centres.