

# » road resurfacing explained

## Factsheet on Ballina Shire Council's method of road resurfacing



### » What is a road surface?

A road surface or pavement is the protective layer that comes into direct contact with vehicles. It is routinely replaced in an attempt to maximise its life. Council has examined two surface options, asphalt (hot mix) and spray seal. Both surfaces are explained below, but have no influence on road pavement strength or structural capacity.

**Asphalt** is a mixture of a bitumen binder, aggregates and fillers to form a paste that can be mechanically 'spread' and compacted onto a road pavement. Asphalt surfaces are more beneficial on medium to high traffic roads with higher than normal heavy vehicle movements.

**Spray Seal** is constructed using the same basic ingredients, but the bitumen and aggregate are applied to the road separately. The bitumen is heated to a high temperature and sprayed directly onto the pavement then a layer of aggregate is applied. The surface is then compacted with rollers and mechanically swept for loose aggregate. Spray seals are used for 'general purpose' roads.

### » What are we doing?

As part of a review of our work practices, Ballina Shire Council commissioned a study on road sealing patterns on our road networks.

Four scenarios were modelled and projected over 80 years, this modelling included total annual costs and changes in the surface. The scenarios included:

**Scenario 1:** keep the status quo (base-line)

**Scenario 2:** revert all road surfacing to spray seal

**Scenario 3:** selected roads remain with asphalt surfacing and the remaining revert to spray seal

**Scenario 4:** revert all road surfacing to asphalt



Example of a rural road with a spray seal surface.

### » Why are we doing it?

Significant long term savings were found in applying scenario two and three, with minor loss of surface roughness for scenario three. Significant additional revenue was required for scenario four. Based on this information, Council adopted scenario three.

### » How soon after can I drive on a resealed road?

The community can drive on the resealed road as soon as construction crews have completed sweeping the surface.

## » Comparing asphalt and spray sealed road resurfacing

	ASPHALT	SPRAY SEALING
Cost and Life	4 to 5 times the cost of spray seal. Design life up to 80% more than a spray seal.	Costs significantly less and a better cost-benefit ratio.
Aesthetics	More aesthetically pleasing due to a smoother surface.	Less aesthetically pleasing in first 6 months, but settles after that time.
Noise	No additional noise under traffic.	Slight additional noise under traffic.
Surface Texture	Little surface texture due to no exposed aggregate.	Greater surface texture due to the level of exposed aggregate.
Loose Aggregate (stones)	Less susceptible to stone loss.	More susceptible to stone loss.
Bitumen Bleeding (where bitumen rises to near the top of the exposed aggregate)	Less susceptible to bleeding.	More susceptible to bleeding.
Skid resistance	Less skid resistance in wet weather.	Greater skid resistance in wet weather.
Construction time	4 - 5 hours to complete 1000 sq. metres	1 - 2 hours to complete 1000 sq. metres

## » Roads that will remain as asphalt surface

### ALSTONVILLE

Ballina Road  
Bugden Avenue  
Lismore Road  
Main Street

### BALLINA EAST

Hill Street  
Pine Avenue  
The Coast Road

### BALLINA NORTH

Ballina Heights Drive  
Power Drive

### BALLINA WEST

River Street

### BALLINA ISLAND

Bangalow Road  
Bentinck Street  
Cherry Street  
Kerr Street  
Kingsford Smith Drive  
River Street  
Angels Beach Drive  
Bangalow Road  
Kerr Street  
River Street  
Tamarind Drive

### LENNOX HEAD

Byron Bay Road  
The Coast Road

### RURAL

Rifle Range Road, Alstonvale  
Dalwood Road, Dalwood  
Ross Lane, Knockrow  
Wardell Road, Meerschaum Vale  
Byron Bay Road, Newrybar  
Teven Road, Teven  
Tamarind Drive, Tintenbar  
Tintenbar Road, Tintenbar  
Rifle Range Road, Tuckombil  
Tuckombil Road, Tuckombil  
The Coast Road, Skennars Head  
River Street, Wardell  
Lismore Road, Wollongbar  
Rifle Range Road, Wollongbar



*If you have any questions or concerns please contact:*

Civil Services Group on 6686 4444.



**ballina**  
shire council