

## **Key Benefits of Bitumen Emulsions** *(revised December 2015)*

### **Use of bitumen emulsion is a low risk, effective option.**

- Bitumen emulsions have a long, history of successful use in many applications.
- Well known and trusted technology.
- Demonstrable evidence that bitumen emulsions used in surface dressing and micro-asphalt greatly reduce pothole formation and joint unravelling greatly extending pavement life.

### **Low temperature of emulsion during application and of storage minimises thermal degradation.**

- Manufacture of hot mix typically hardens bitumen by “one grade”.

### **Bitumen emulsion waterproof and seals cracks in road surface to extent service life.**

- Sealing hairline cracks is critical for the long life of road surfaces; bitumen emulsion penetrates easily into hairline cracks in a road surface where a hot system will not.

### **Emulsions have “built-in” wetting-out and adhesion properties.**

- Bitumen emulsions can be used on damp (not wet) surfaces, whereas hot bitumen and solvent/bitumen (Cut-back) will not bond.
- Cationic bitumen emulsions have a “natural” affinity to aggregate surfaces.

### **Low temperature application & storage minimises hazards from fuming improving safety.**

- Hot bitumen and solvent/bitumen have associated Health & Safety issues.

### **Fire risk is minimised.**

- Bitumen droplets are encased in a water phase that eliminates the risk of bitumen igniting.

### **Energy use is minimised by the low temperature of storage & application.**

- Use of bitumen emulsion can lower the carbon footprint.

### **Surface treatments such as surface dressing and micro-asphalt are sustainable.**

- Surface dressing and micro-asphalt utilise bitumen and high quality aggregate where it is most needed - at the road surface - to provide improved texture and impermeability; none is “wasted” below the surface.

### **Surface treatments such as surface dressing and micro-asphalt are quick.**

- Surface dressing and micro-asphalt can be typically applied under mobile works traffic management and the installation typically takes less than one day causing minimal disruption to traffic and residents.