

## Innovation In Surface Dressing Equipment

Alan Anderson MEng, BSc, BEng, AEng MIEI, MIAT



WE OPEN THE WAY

#### Introduction

#### What is Surface Dressing?

Surface dressing, also known as chip seal in some parts of the world, is a road maintenance technique that involves applying a layer of bituminous binder followed by a layer of aggregate to the road surface.

This method is widely used in Ireland and Europe for extending the life of road pavements. The technology and equipment used in surface dressing have evolved significantly over the past 50 years, driven by advances in materials science, engineering, and environmental considerations.

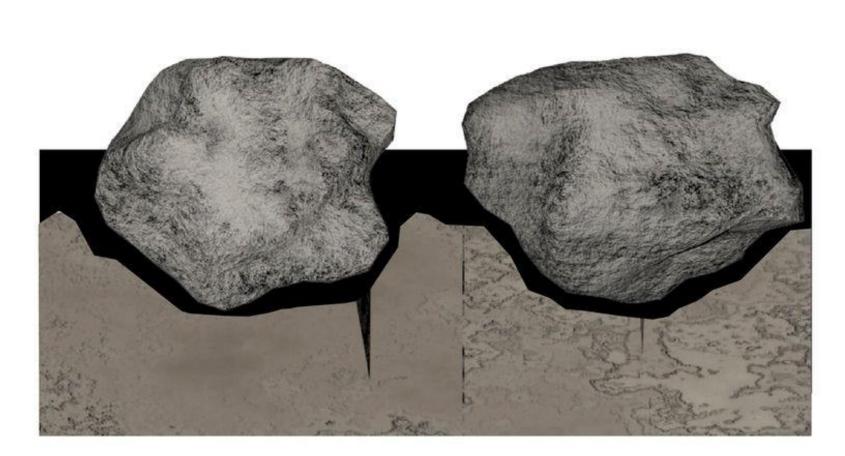










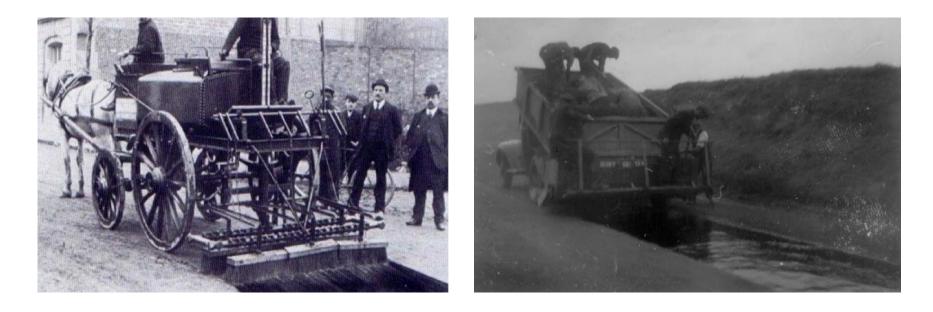




## Evolution of Surface Dressing Equipment



#### 1920s-1980s



- Basic Mechanical Spreaders
- Manual Labour Intensive



#### 1920s-1980s



- Basic Mechanical Spreaders
- Manual Labour Intensive
- First Generations of Bitumen Emulsions



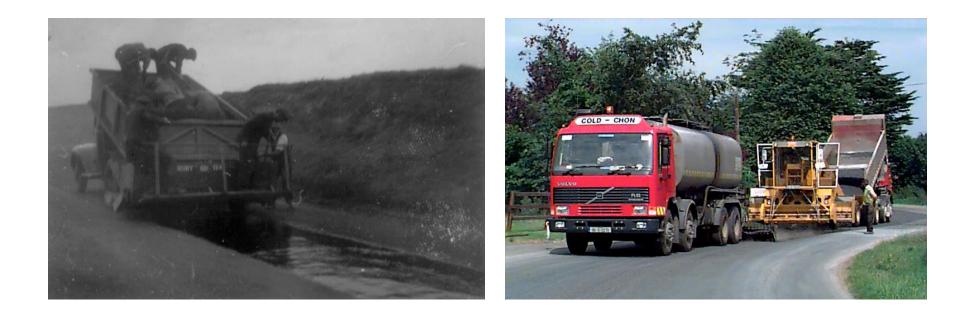




• Introduction of Computer-Controlled Spraying



#### **1990s**



- Introduction of Computer-Controlled Spraying
- Self-Propelled Chipping Spreaders









• Integrated Surface Dressing Units



#### **2000s**



- Integrated Surface Dressing Units
- Automated spraybar controls Single operator







- Integrated Surface Dressing Units
- Automated spraybar controls Single operator
- First edition IAT guidelines published



#### 2010s - Present





## SURFACE DRESSING

Rolling Floor Gritter



# COMBI SURFACE DRESSING

## Self Contained Road Surfacing Solution



#### 2010s - Present





# OB VARIO SURFACE DRESSING

## Self Contained Road Surfacing Solution



#### 2010s - Present





## SURFACE DRESSING

## Front Gritter



#### **Fibremat**





#### Fibremat





# Surface Dressing (Fibremat)

### **Fibremat** Improves Tensile Strength and Reduces Reflective Cracking



## **Road Surveys**





Users collect data in the field using a range of Apps

 PSCI Condition Rating App •Works App (Record Projects) •Surface Inventory App (Record surface of road) •Speed Limits App (Record location of Speed Limit Signs) •Bridges App (Carryout Visual Inspections) •Footways App (Record Hazards and Condition of Footways) •Public Lighting App (Record lights and condition rating)





App

MapRoad Public Lighting





Signs App

MΔP **GVOE** Mobile PSCI

App



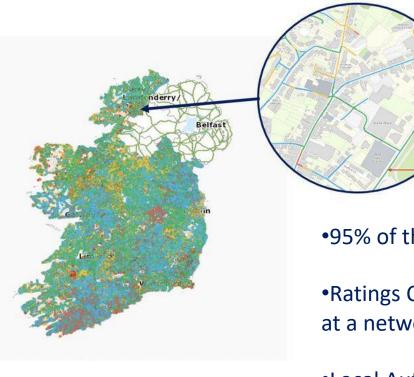




### **Road Surveys**









•95% of the Road Network has a valid PSCI Rating

•Ratings Captured by Local Authorities via the PSCI App, at a network level and the Works App at a project level.



•Local Authorities are allocated a PSCI Grant to in sure the Network is up to date (Valid PSCI rating in accordance with the Pavement Survey Standard



### **Surface Dressing India**





### **Surface Dressing India**





### **Jim Campbell**





### Thank you for your attention Any questions?



Alan Anderson MEng, BSc, BEng, AEng MIEI, MIAT

