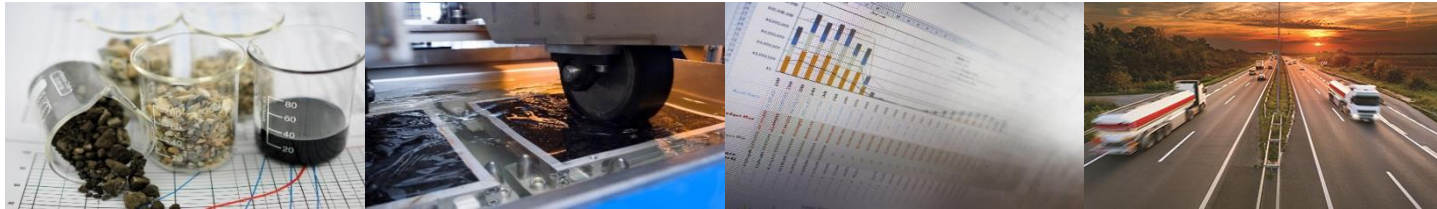


# SUSTAINABLE MATERIALS

## CIHT YOUNG PROFESSIONALS CONFERENCE 2019



**James Stokes**

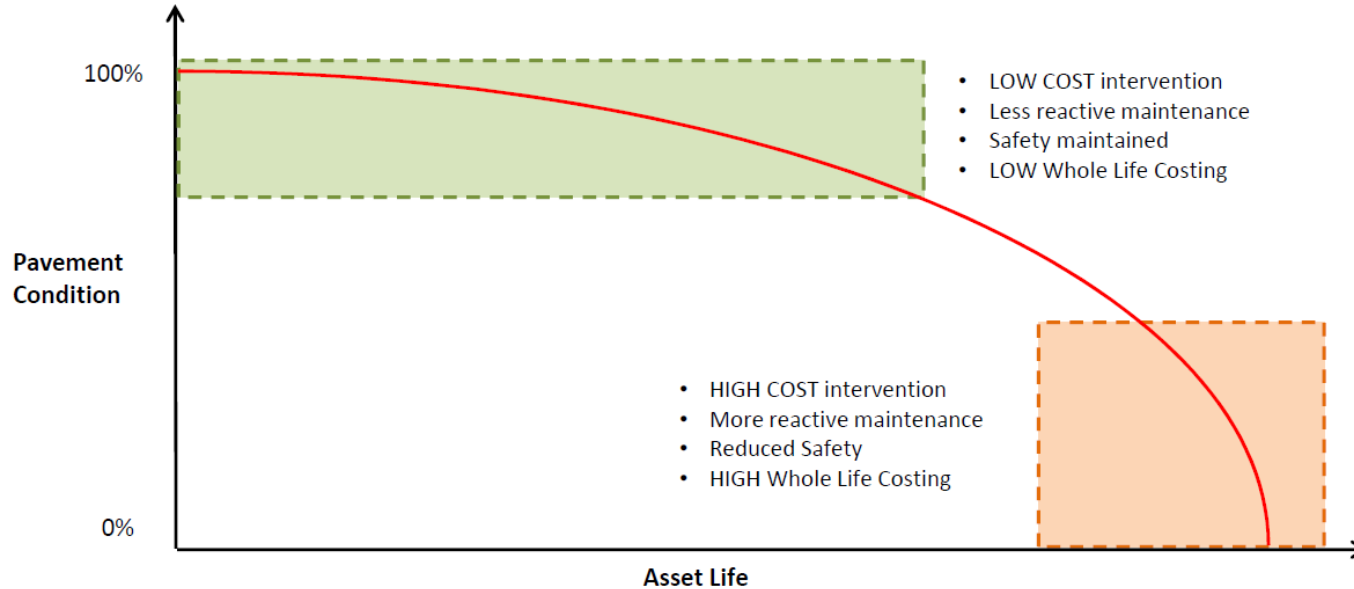
# 01 PROFILE



<p><b>EUROVIA ROADSTORE</b></p> <p><b>EST</b></p> <p><b>POLYBITUMENS</b></p> <p><b>WIGHT Building Materials</b></p> <p><b>NKR North Kent Roadstore</b></p> <p>Production</p>	<p><b>EUROVIA CONTRACTING</b></p> <p><b>EUROVIA SURFACING</b></p> <p><b>SWH</b></p> <p>Contracting</p>	<p>worcestershire highways</p> <p>Gloucestershire County Council</p> <p><b>Highways</b></p> <p>Wiltshire Council</p> <p>Cheshire West and Chester</p> <p>Milton Keynes Council</p> <p>North Yorkshire County Council</p> <p>highways NORTH YORKSHIRE</p> <p>LINC</p> <p>Services</p>	<p>RINGWAY Working on behalf of</p> <p>Hertfordshire</p> <p>Bracknell Forest Council</p> <p>RINGWAY</p> <p>highways england</p> <p>Plymouth City Council</p> <p>Plymouth Highways</p> <p>PPP</p>	<p>Hounslow Highways</p> <p>Delivering better streets</p> <p>Island Roads</p> <p>RINGWAY JACOBS</p> <p>Joint Ventures</p>	<p><b>JEAN LEBEVRE (U.K.) LIMITED</b></p> <p><b>AVUS</b> (agreement evaluation of underground services)</p> <p>Solutions</p>
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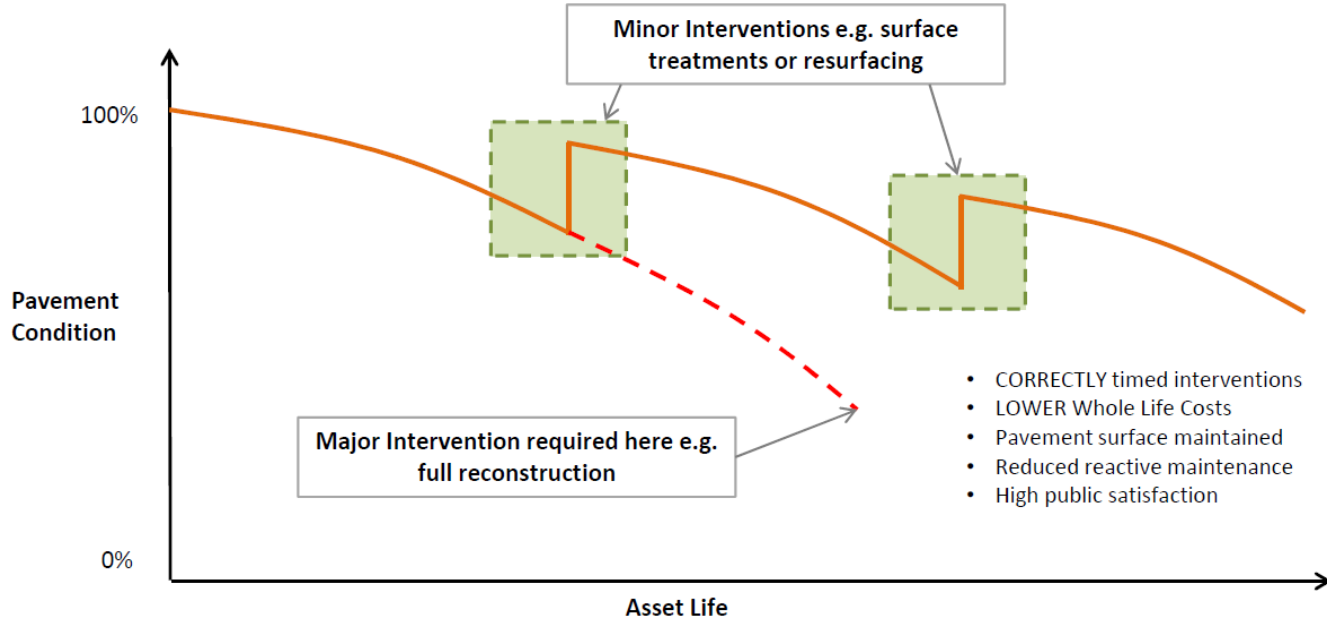
# 02 SUSTAINABILITY AND ASSET MANAGEMENT

## ■ First step for sustainability – increasing durability



# 02 SUSTAINABILITY AND ASSET MANAGEMENT

## ■ Resilient asset management strategy



## 02 SUSTAINABILITY AND ASSET MANAGEMENT

**Durability = Sustainability**



# 03 SUSTAINABILITY – RECYCLING

- Recofoam®
  - ▶ Cold Recycled Bound Material – alternative to base and binder
  - ▶ Up to 90% RAP
  - ▶ Foam bitumen technology
  - ▶ 50% reduction in CO<sub>2</sub>e emissions



# 03 SUSTAINABILITY – RECYCLING

## ■ Recofoam®

- ▶ Encapsulation of Asphalt Waste Containing Coal Tar
- ▶ Conventional solution
  - ▶ Remove & transport AWCCT to specialist landfill
  - ▶ Replace with 3x asphalt layers
- ▶ Agreed solution
  - ▶ 2x RECOFOAM® layers | 1x asphalt surface course
  - ▶ Savings: 79% costs | 48% CO2e



## 04 FUTURE - THE 100% RECYCLED ROAD

### ▶ Our roads are 100% recyclable

- Recycling is not a cheaper option, it is a sustainable option!
- The performance of materials containing recycled aggregates should not be inferior
- Do not be misled into placing other waste products into your network – it will only cause you issues in the long term!



# 04 FUTURE - THE 100% RECYCLED ROAD

- ▶ August 2018: Ademe Project
  - Base course: 100% RAP
  - Binder course: 95% RAP
  - Surface course: 70% RAP

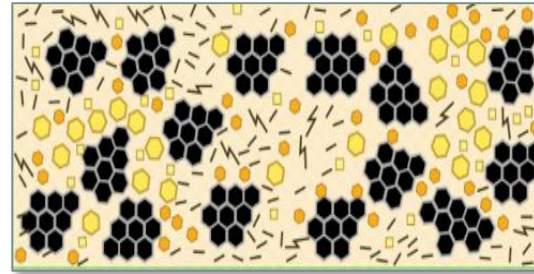
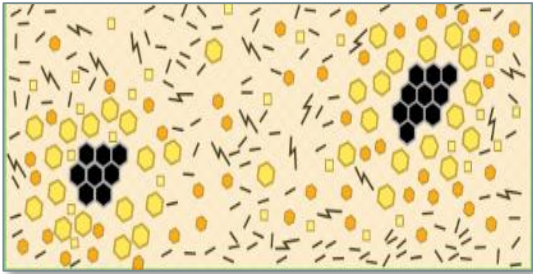


## THE 100% RECYCLED ROAD



# 04 FUTURE - THE 100% RECYCLED ROAD

- ▶ The homogeneity between new & recovered binder
- ▶ Binder properties at low temperature & after aging
- ▶ Rejuvenator properties & long term performance



# 05 SUSTAINABILITY – WARM MIX ASPHALT

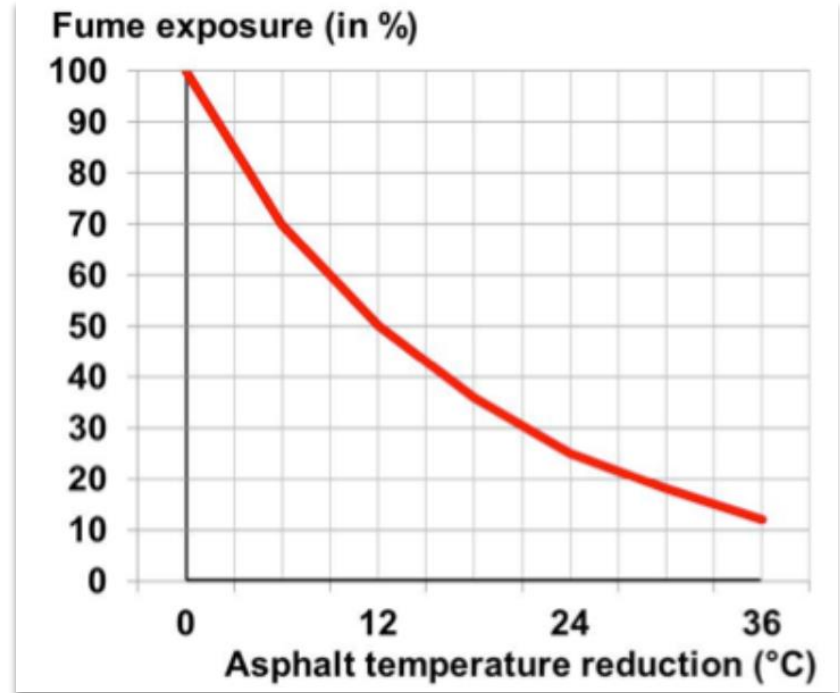
## ■ Tempera®



30 – 50°C temperature reduction

# 05 SUSTAINABILITY – WARM MIX ASPHALT

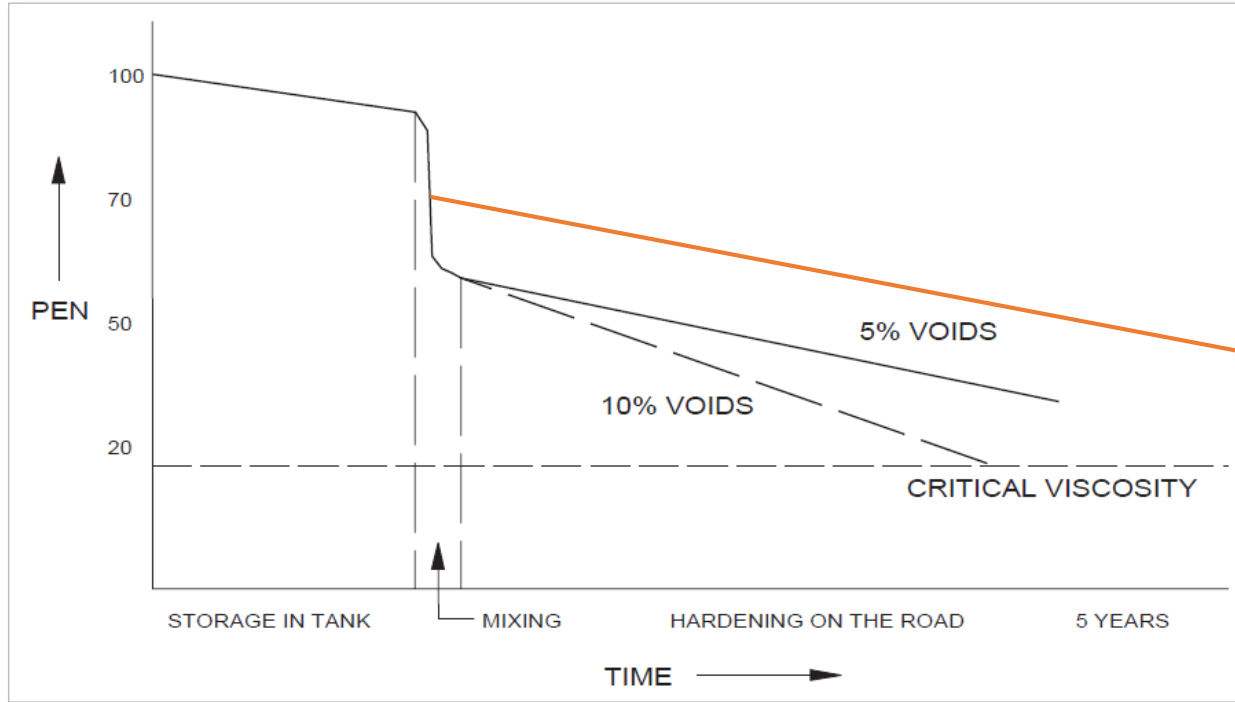
- ▶ 20 - 30% reduction in CO<sub>2</sub> emissions from production
- ▶ Reduced fumes
- ▶ Improved working environment



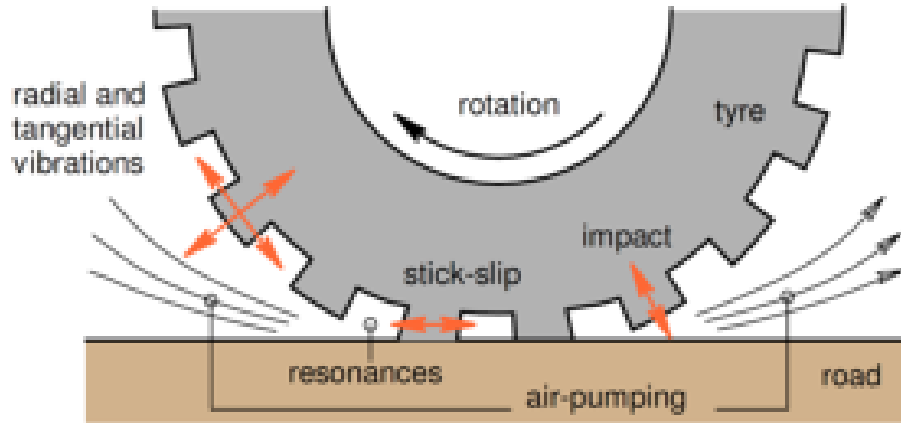
EAPA – Warm Mix Asphalt

# 05 SUSTAINABILITY – WARM MIX ASPHALT

## ▶ Improved durability



# 06 SUSTAINABILITY AND NOISE



## ■ Road noise: health impact

- ▶ 12m people affected by road noise pollution in UK
- ▶ Prolonged exposure affects:
  - Child development
  - Stress
  - High Blood Pressure
  - Heart Disease

## 06 SUSTAINABILITY AND NOISE

- **Ultraphone®**
  - ▶ 0/6 Gap graded
  - ▶ Enhanced skid resistance
  - ▶ 5.7 dBA noise reduction
  - ▶ Equivalent to 75% reduction in traffic

*“It’s been a life changing experience”*

*“The new surface is fantastic! We hardly know the main road is there anymore.”*



## 06 SUSTAINABILITY AND NOISE





**THANK YOU**  
[www.jluk.co.uk](http://www.jluk.co.uk)