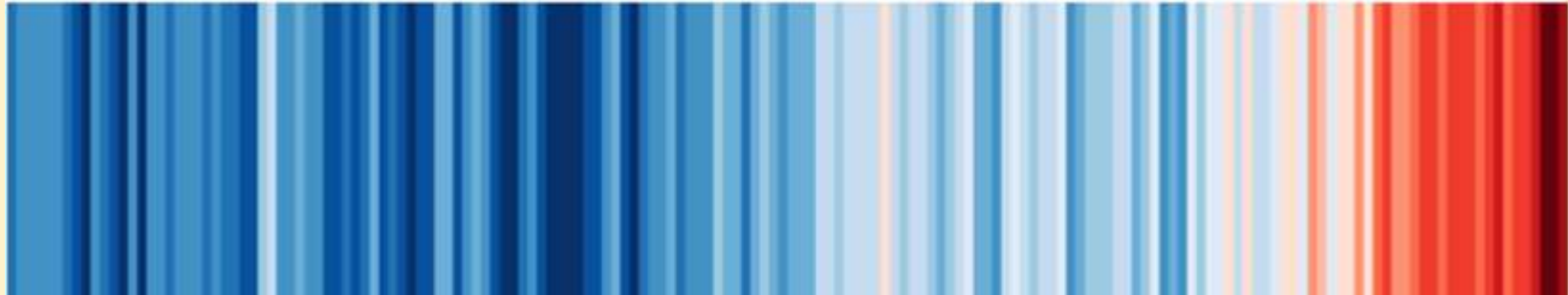


Annual global temperatures from 1850-2017



Understanding Carbon content in Road Markings

Paul Aldridge
WJ Group Sustainability
Director

Locations and Resources



- 4 Group businesses
- Turnover > £65 Million
- 10 Regional depots
- 207 Specialist vehicles
- Manufacture 12,000 tons hot applied road marking material annually

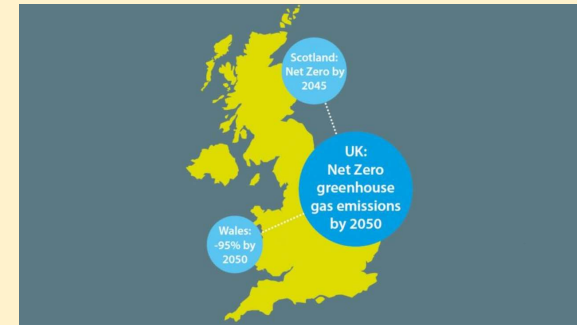
Time for a shared vision

WJ's vision for sustainability is aligned

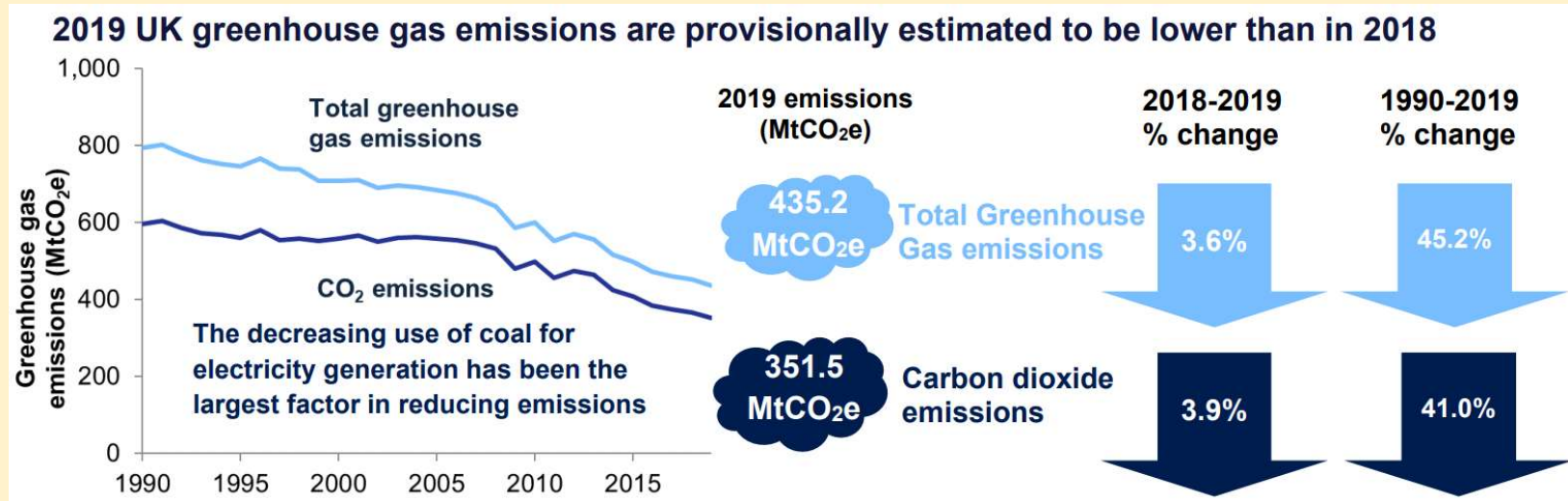
With the Climate Emergency

With Net Zero UK

With UN Sustainable Development Goals



Time for a shared vision

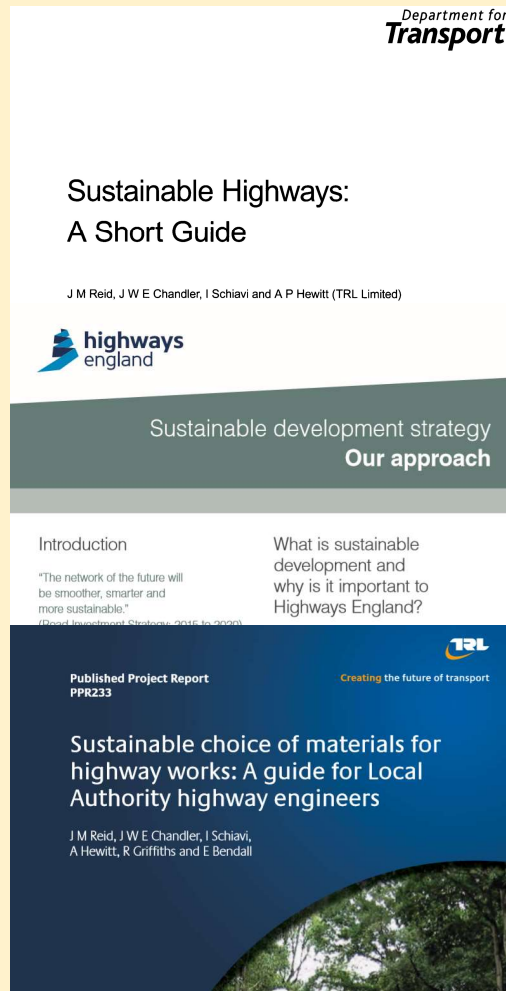


An Estimate for the UK

45% of Carbon Emissions come from construction, operation, and maintenance

However, the transport sector's emissions now represent 28% of total UK ghg emissions.

Time for a shared vision



Highways industry in the UK

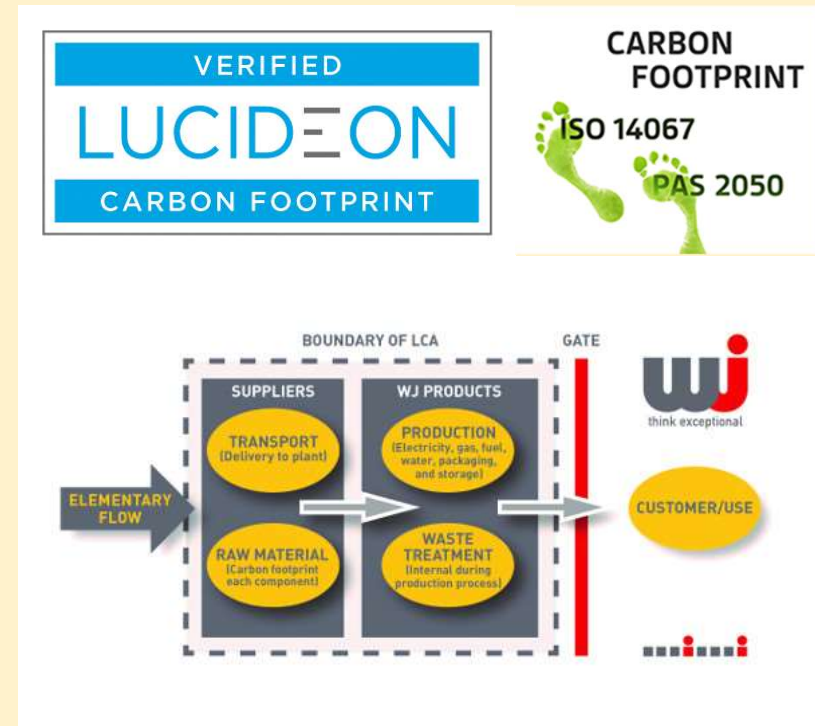
- Promote the use of sustainable products
- Efficiency in operations
- Life Cycle Assessment
- Measuring of sustainability
- Understanding environmental impact of operations

WJ Products Carbon Calculator

Verified externally and compliant to PAS 2050 and ISO 14067.

Cradle-to-gate

Shows efforts in responsible procurement, R&D, collaboration and sustainability



Hydrocarbon vs Bio Resin

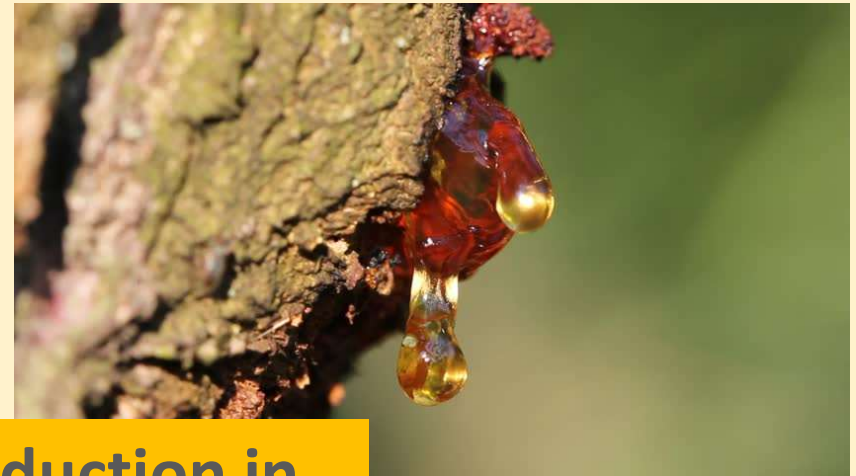
Comparison between standard materials

- Using C5 Hydrocarbon as



HIGHER ENVIRONMENTAL
IMPACT

- Using WJ / Kraton rosin ester



**Almost 81% reduction in
carbon footprint
from Bio Resins**

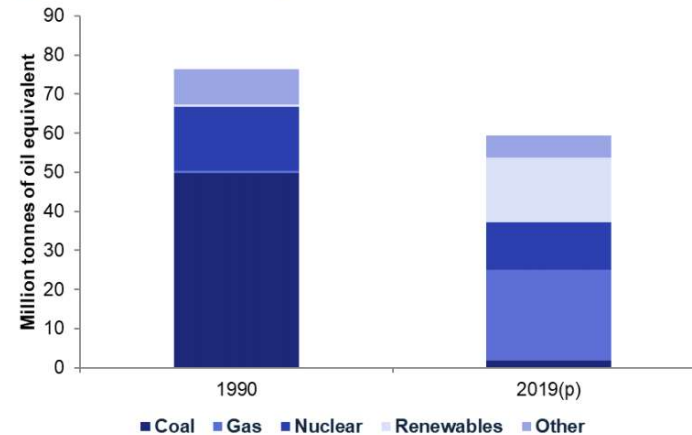
Carbon Saving

The energy supply sector experienced the largest reduction in CO₂ emissions in 2019

	2018-2019 % change	1990-2019 % change
Energy supply (including power sector)	↓ 8.4%	↓ 62.8%
Business	↓ 1.9%	↓ 42.1%
Transport	↓ 2.8%	↓ 4.6%
Residential	↓ 1.8%	↓ 16.7%
Public	↑ 0.5%	↓ 40.1%

For the sectors not included here, provisional CO₂ estimates for 2019 cannot be made as they cannot be derived from the energy statistics. Final 2019 estimates for all sectors will be published in February 2021, which will include total emissions by sector.

The reduction in power sector emissions has been driven by a shift away from using coal for electricity generation towards gas and renewables



Operational Footprint Scope 1 & 2
10,000t CO₂e per year

Bio Resins save 22,000t CO₂e per year

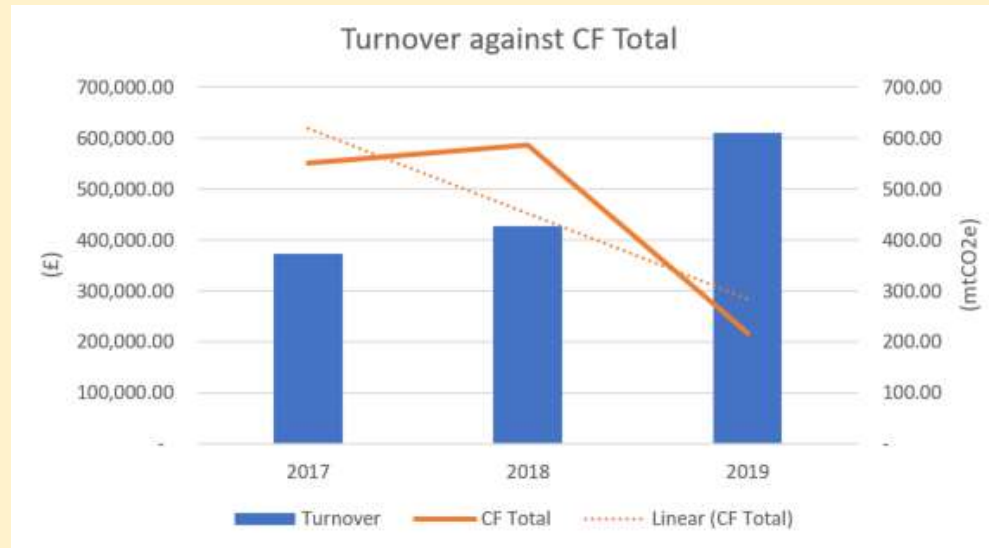
1 junction, 22 letters, 5 arrows

6993m x 100mm

tCO2e	Using C5 resin	Using Rosin Ester
Carbon footprint from product	0.36	0.07
Carbon footprint from product delivery	<div style="background-color: #FFD700; padding: 10px; text-align: center;"> REDUCTION IN CARBON FOOTPRINT: 44.61% </div>	
Carbon footprint from boilers/lances/e tc.		
Carbon footprint from travelling to site		
Total		
	0.65	0.36

tCO2e	Using C5 resin	Using Rosin Ester
Carbon footprint from product	8.53	1.62
Carbon footprint from product delivery	<div style="background-color: #FFD700; padding: 10px; text-align: center;"> REDUCTION IN CARBON FOOTPRINT: 67.35% </div>	
Carbon footprint from boilers/lances/e tc.		
Carbon footprint from travelling to site		
Total		
	10.26	3.35

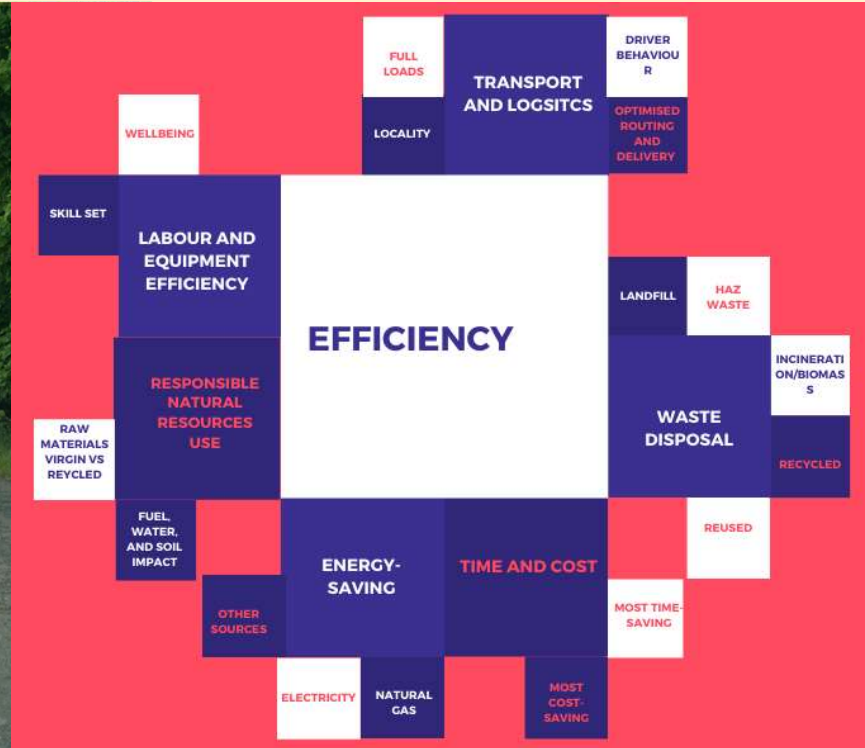
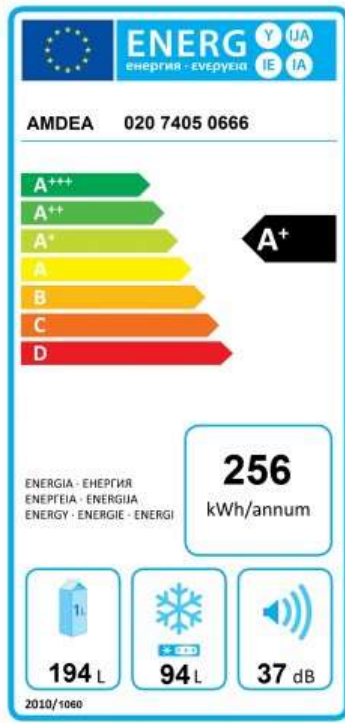
Carbon Efficiency



What we do is small, but will be significant for the industry



Carbon Efficiency





Thank You

