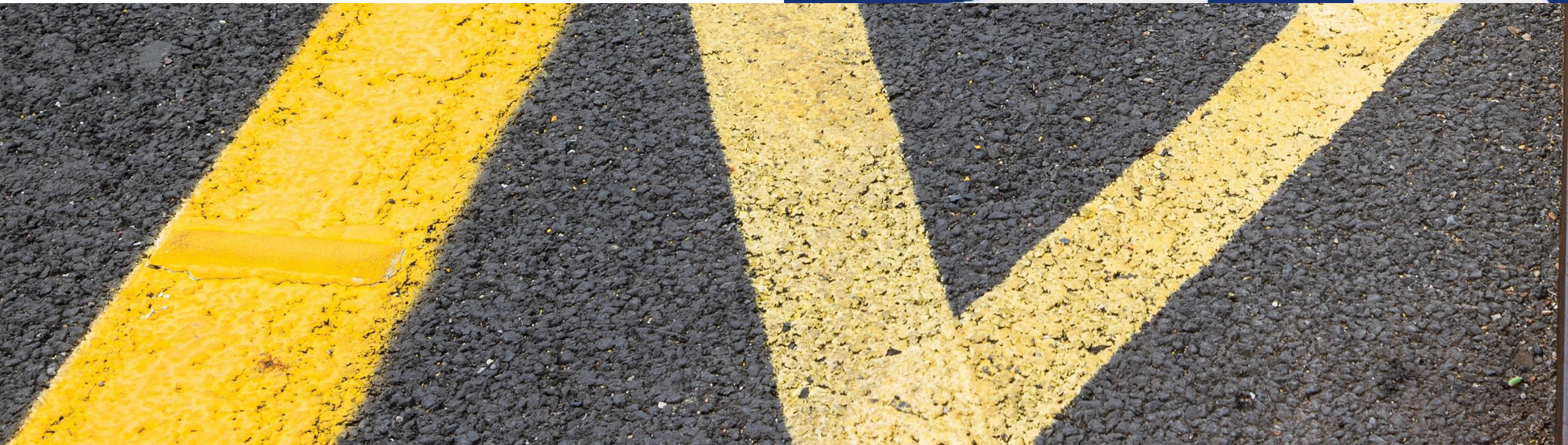


**SKANSKA**

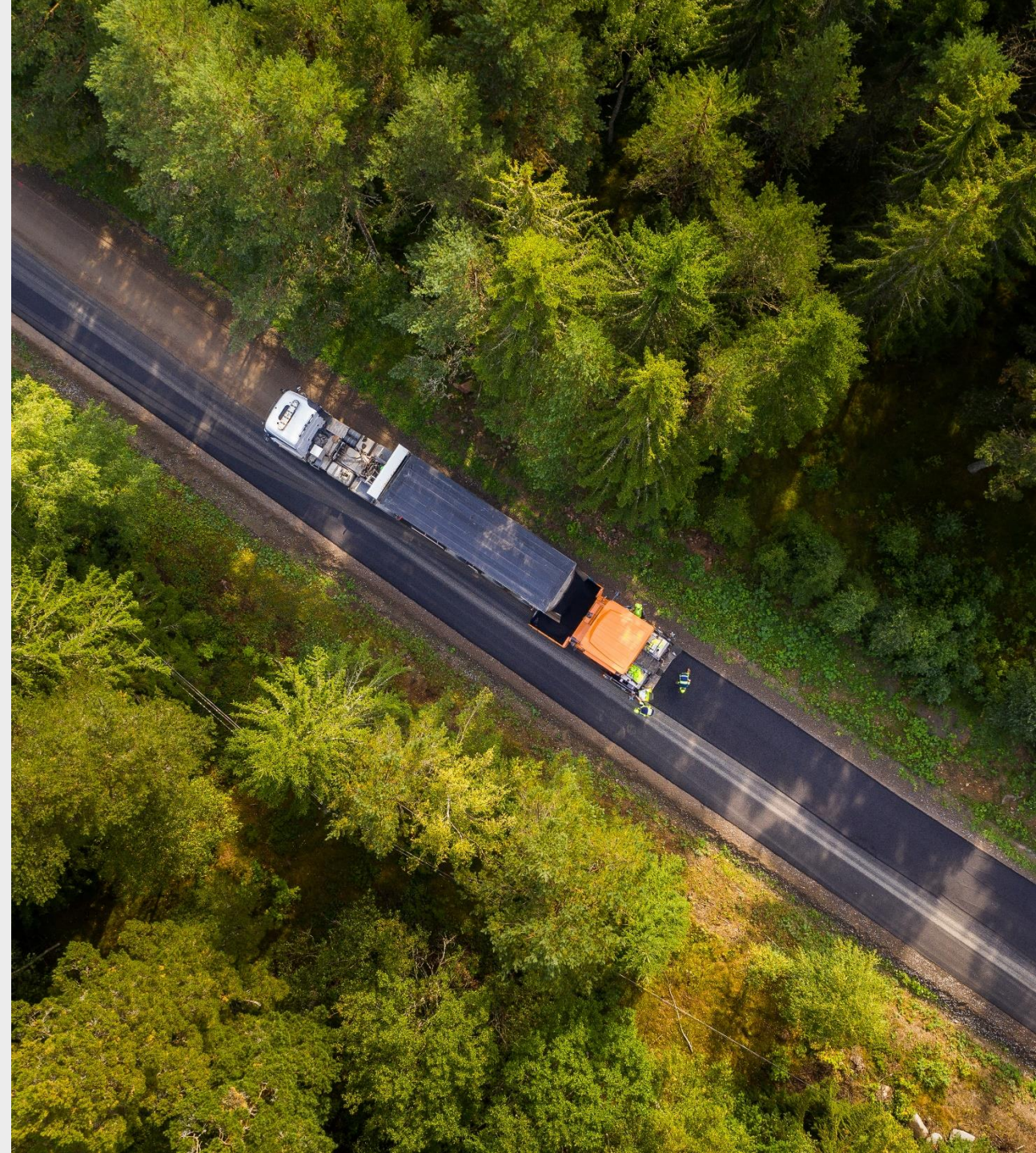
# Quality Asphalt, Lower Carbon

Zdenek Hegr,  
Skanska



# Reducing the carbon footprint of asphalt mixtures

It is possible to design asphalt mixtures with a considerably high amounts of Reclaimed Asphalt without negatively impacting its mechanical performance.

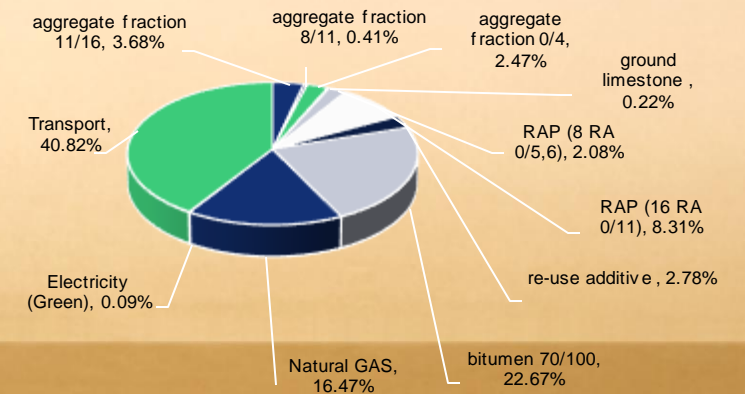
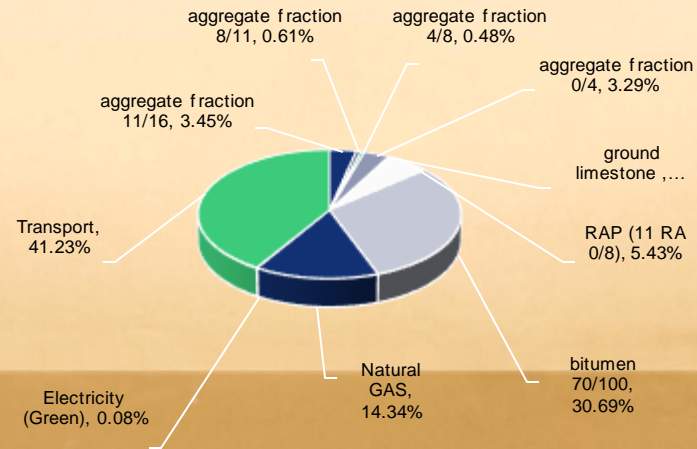
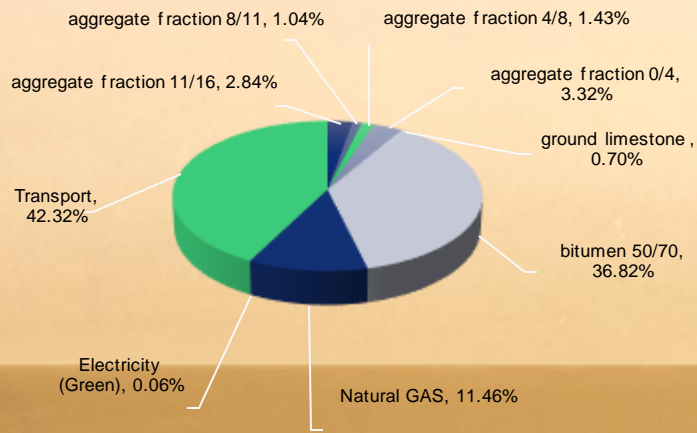


# Calculation of the carbon footprint

**AC 16 base, 50/70  
without RA (mixture No. 4)**

**AC 16 base, 50/70,  
with 30% of RA (mixture No. 5)**

**AC 16 base, 50/70,  
with 50% of RA (mixture No. 6)**

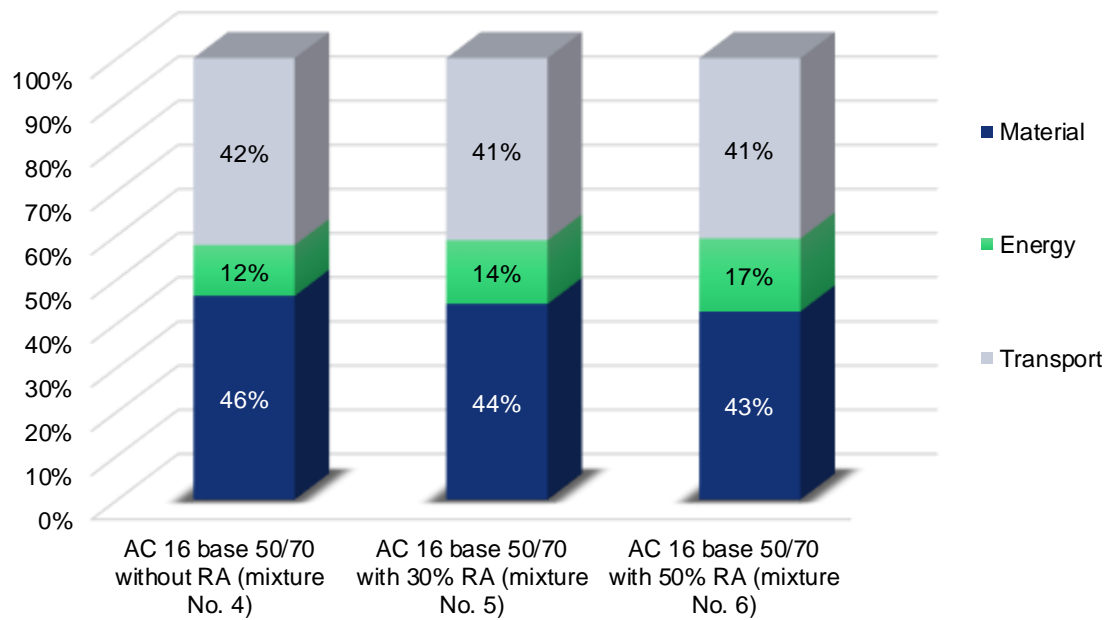


# Comparison of asphalt mixtures' carbon footprint

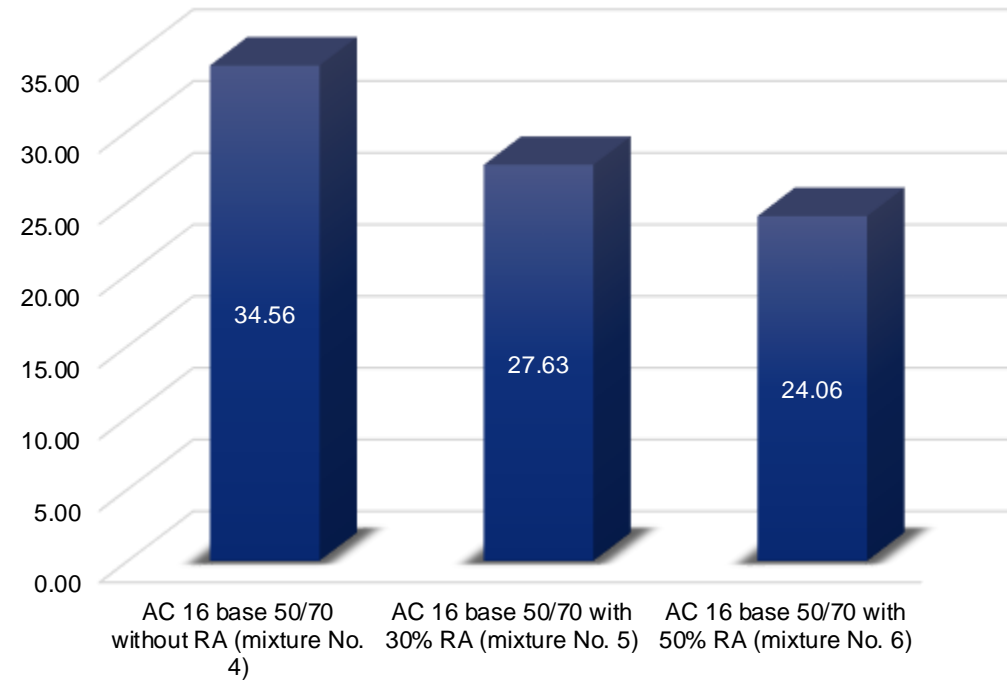
proportion of individual items	AC 16 50/70 (without RA)		AC 16 50/70 (with 30% RA)		AC 16 50/70 (with 50% RA)	
	CO <sub>2</sub> [kg/t]	CO <sub>2</sub> [%]	CO <sub>2</sub> [kg/t]	CO <sub>2</sub> [%]	CO <sub>2</sub> [kg/t]	CO <sub>2</sub> [%]
<b>Material</b>	15.95	46.16	12.26	44.35	10.25	42.62
<b>Energy</b>	3.98	11.53	3.98	14.42	3.98	16.56
<b>Transport</b>	14.63	42.32	11.39	41.23	9.82	40.82
<b>Total carbon footprint</b>	34.56	100.00	27.63	100.00	24.06	100.00

# Comparison of asphalt mixtures' carbon footprint

## Proportion of individual items



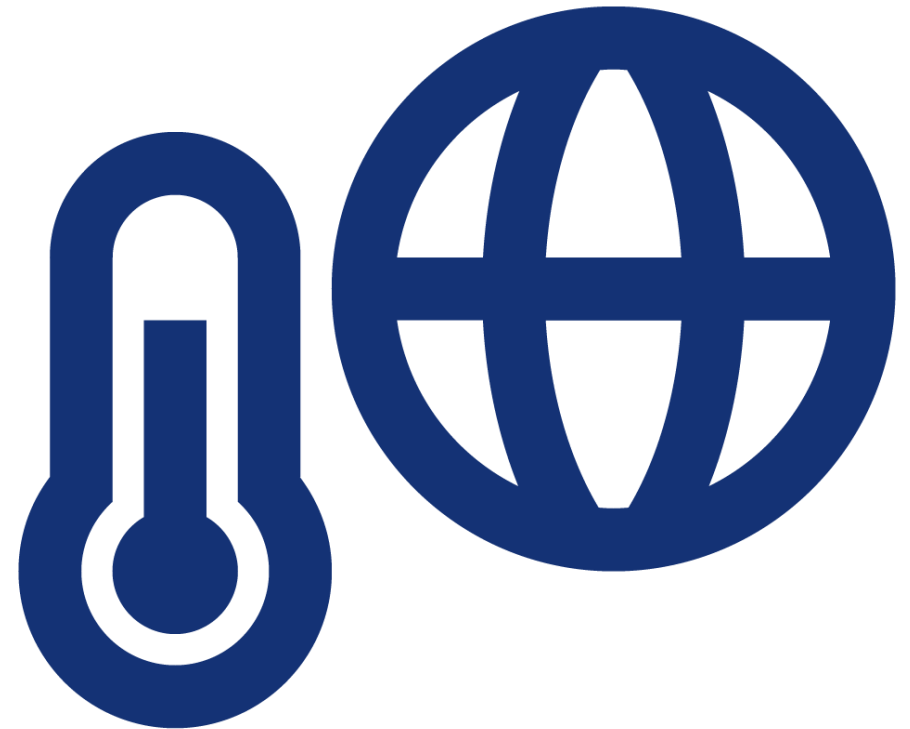
## Asphalt mixtures carbon footprint [kg/t]



# Reducing the carbon footprint of asphalt mixtures

Incorporation of Reclaimed Asphalt led to a **significant decrease of the asphalt mixture CO<sup>2</sup> footprint.**

- **30 % of RA** - difference about 7 kg of CO<sup>2</sup> per one ton of the asphalt mixture which makes about **20 % decrease.**
- **50 % of RA** - difference about 10 kg of CO<sup>2</sup> per one ton of the asphalt mixture which makes about **30 % decrease.**



# Thank you

[zdenek.hegr@skanska.cz](mailto:zdenek.hegr@skanska.cz)