



# DEVELOPING A FUTURE-READY HIGHWAYS NETWORK

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WSP

A nighttime cityscape featuring a mix of modern and historic architecture. On the left, a tall, dark skyscraper is under construction, with a crane and lights visible. In the center, a large, multi-story building is covered in scaffolding. To the right, a prominent historic building with a clock tower and a dome is illuminated. The sky is dark with some clouds, and the city lights create a vibrant glow.

Our designs are  
there for the **long  
term**

But will they meet  
the needs of our  
future society?

# Future Ready Key Trends

CLIMATE

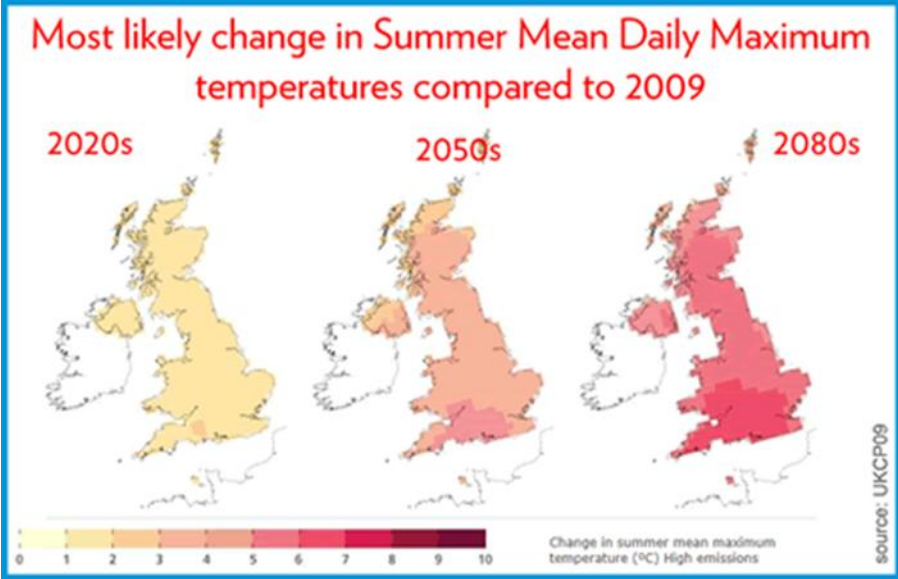
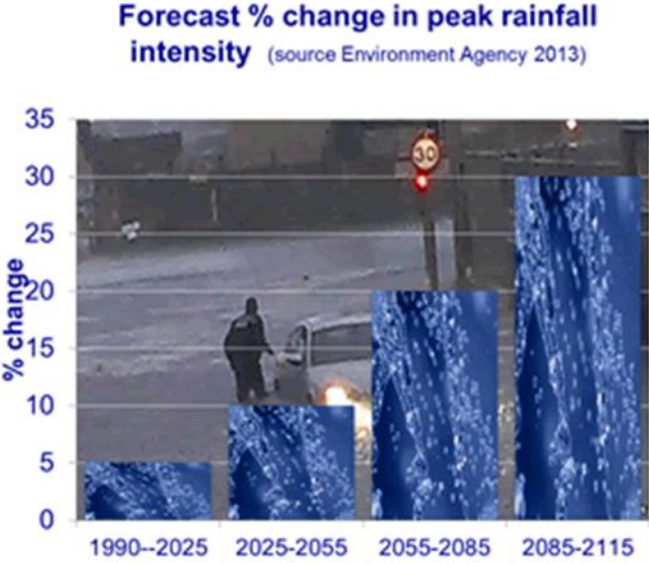
SOCIETY

TECHNOLOGY

RESOURCES

NET ZERO

# CLIMATE

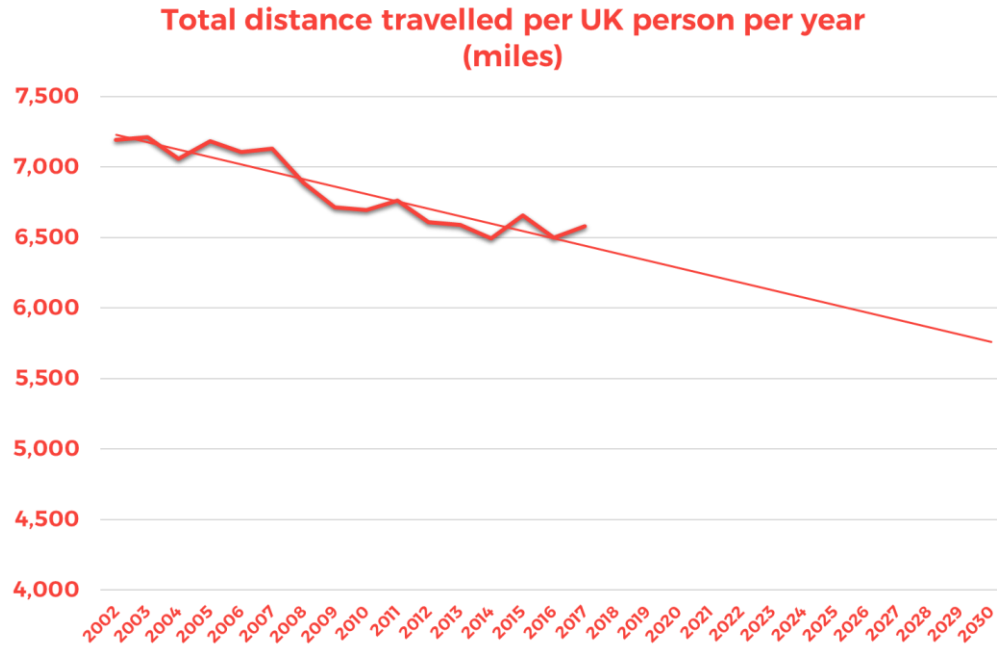


**Will the Gulf Stream really collapse by 2025?**

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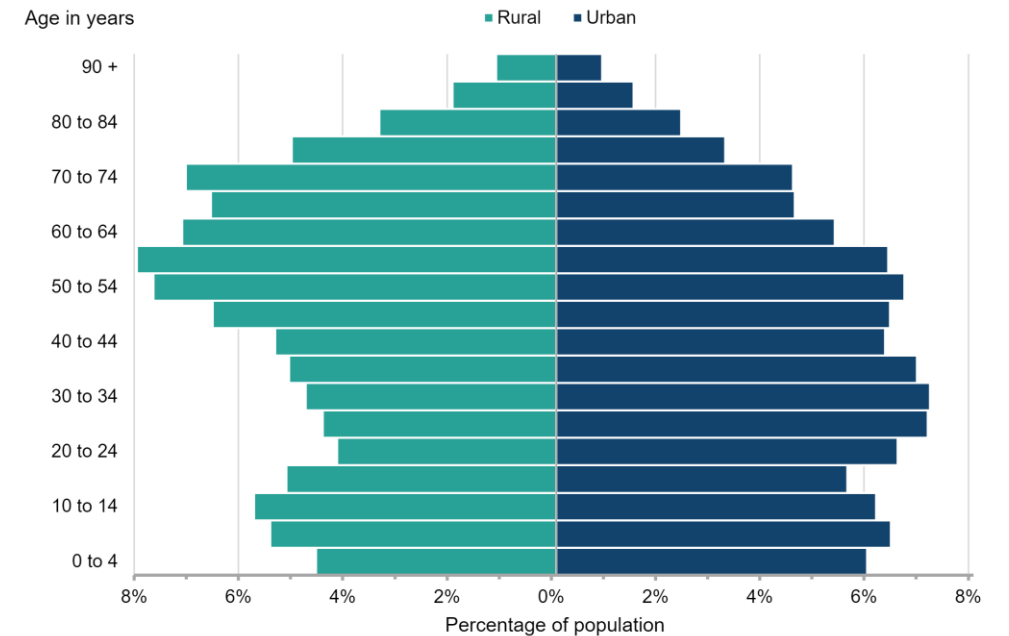
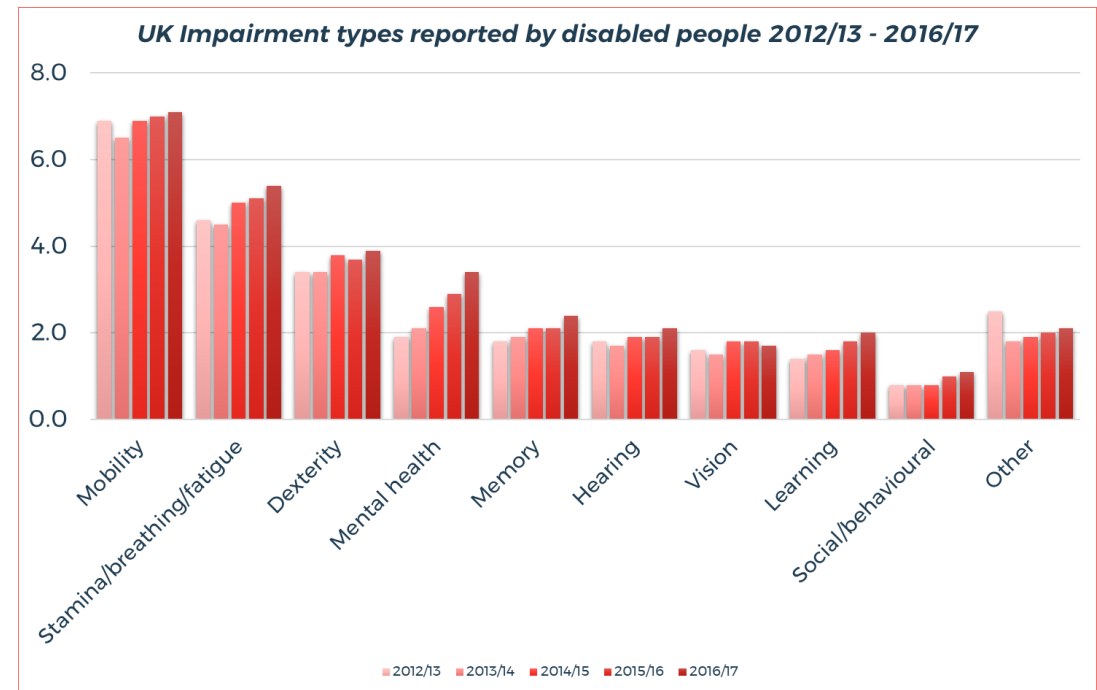


# SOCIETY



	Miles per Person per Year (2017)	2002-2017 Absolute Distance Change
Leisure (day trips, sport, entertainment)	910	+3%
Commuting	1309	-7%
Shopping	738	-19%
Escorting others	569	-7%
Business	510	-27%
Visiting friends	1212	-15%
Holiday	559	+13%
Personal business	493	-4%
Education	224	+8%
Other including just walk	56	+32%

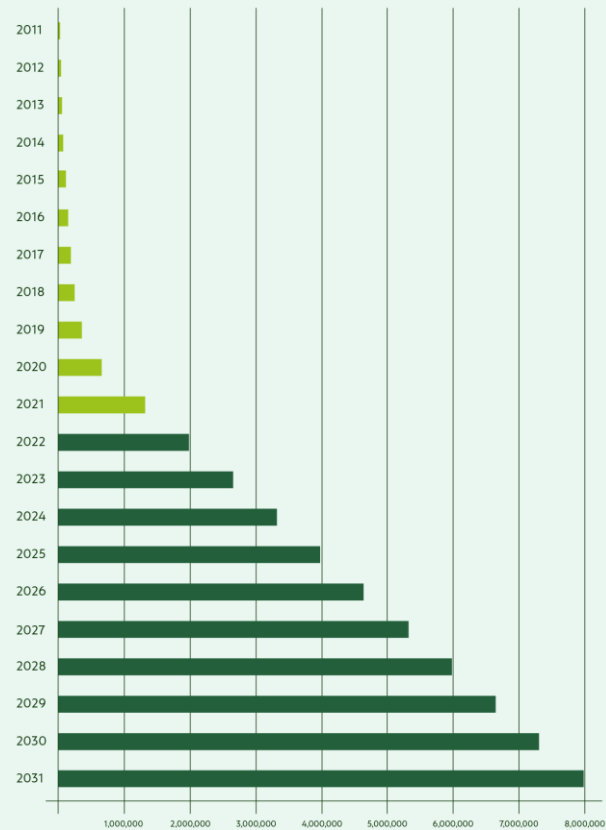
*N.B. Data not available for Scotland*



# TECHNOLOGY

## UK BEV registration predictions

Based on gov.uk data detailing the cumulative amount of registered battery electric vehicles (BEVs) every year

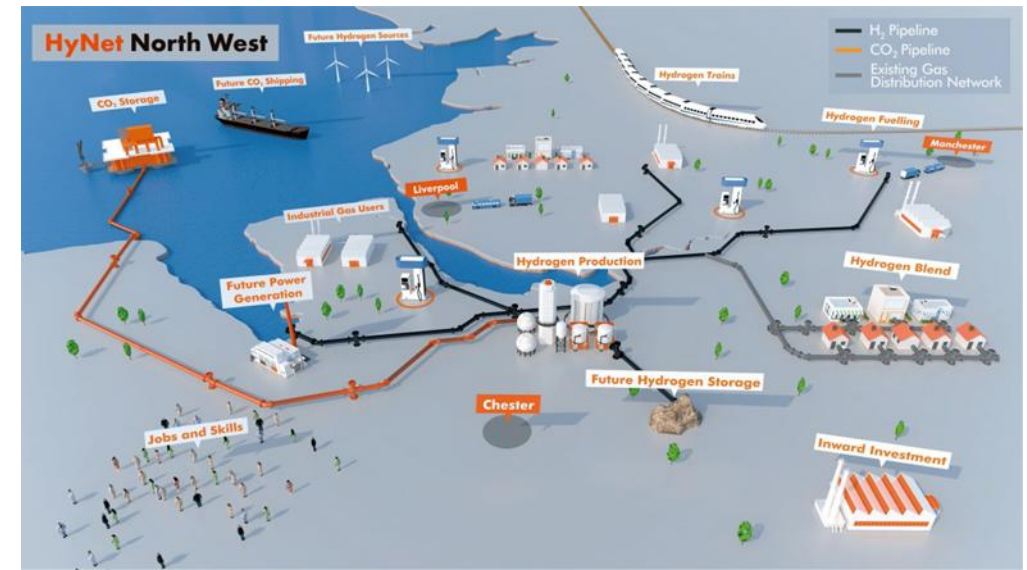
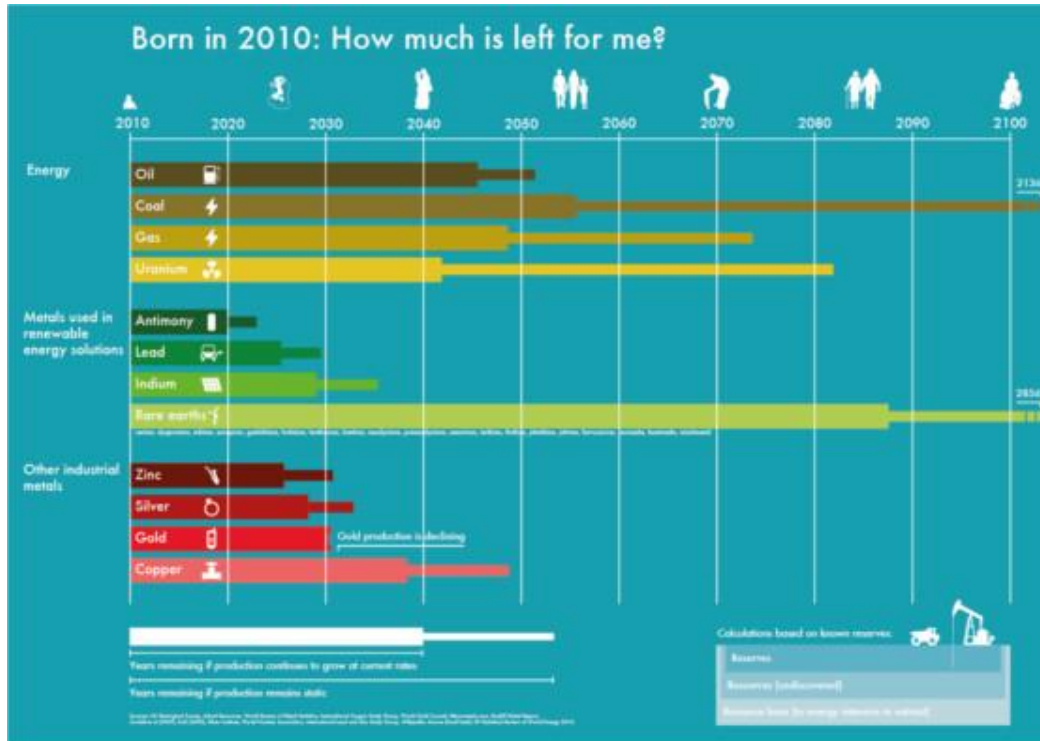


See the full report at:  
<https://www.gocompare.com/motoring/electric-cars/electric-car-adoption-prediction/>  
\*The growth levels during 2011-21 were applied to the next 10 years to produce a series of predictions

GoCompare

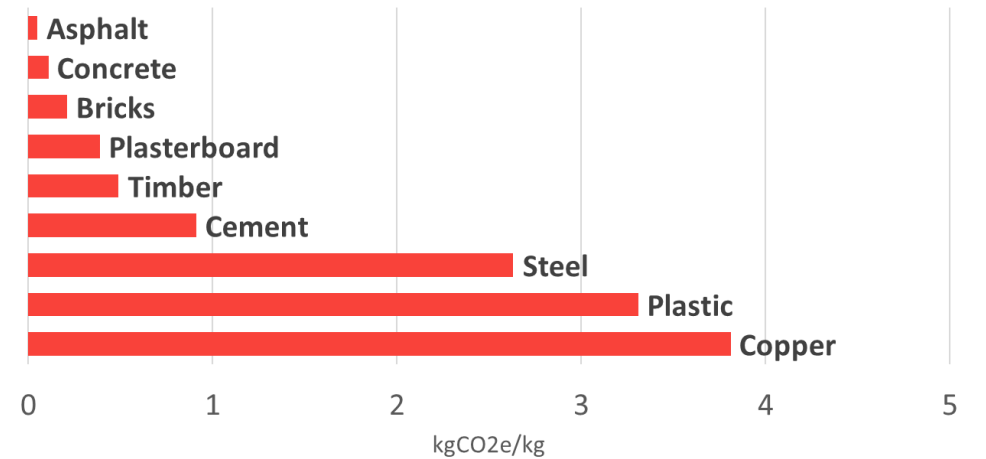


# RESOURCES



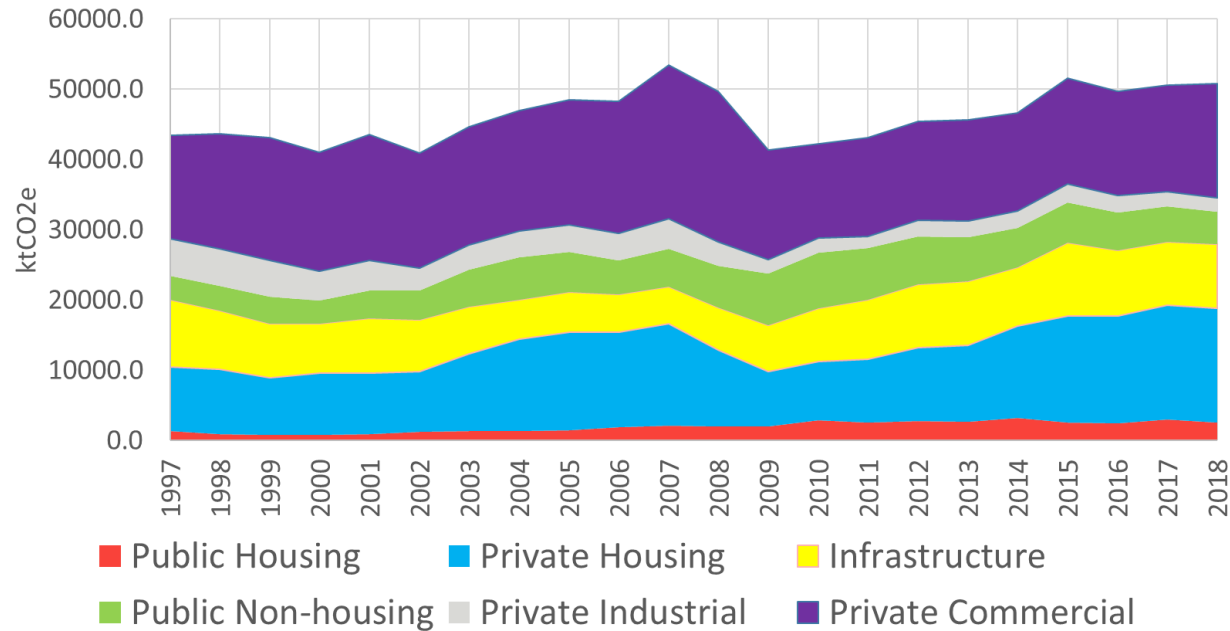
**Making the materials used in highways emits large amounts of greenhouse gases**

Construction Material Embodied Carbon (kgCO<sub>2</sub>e/kg)

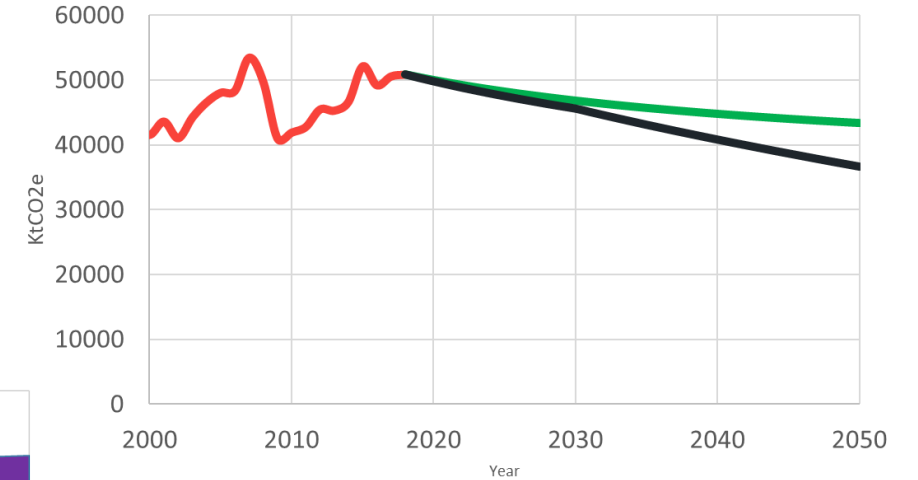


# NET ZERO

**Carbon emissions from UK construction have changed little over the past 20 years**



**In a Business As Usual world, construction carbon emissions reduce, but are still far from zero by 2045**



— Historic Emissions  
— Improvements in Resource Productivity  
— Uptake in Low Carbon Vehicles



# APPLICATION - INCEPTION



# APPLICATION - RENEWALS





# Future Ready Highways

- *Design for the future, as well as today*
- *Engineering teams have a key role*