

National Highways Net Zero Plan

Design 4 Net Zero

SUPPLY CHAIN SUSTAINABILITY

SCHOL

August 2022



What makes up our carbon footprint?



CORPORATE EMISSIONS

Net zero by 2030



- Vehicle fuel
- Buildings Gas
- Electricity
- Corporate purchases
- Business Travel



MAINTENANCE & CONSTRUCTION EMISSIONS

Net zero by 2040

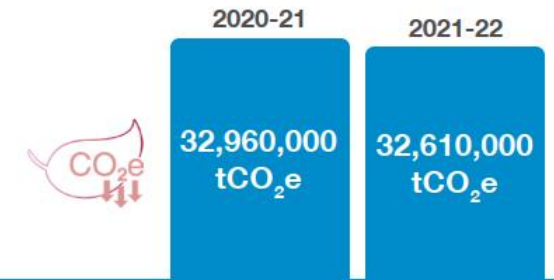


- Cement and concrete
- Material transport
- On-site plant
- Steel
- Asphalt
- Other materials & aggregates
- Supply chain operational energy



ROAD USER EMISSIONS

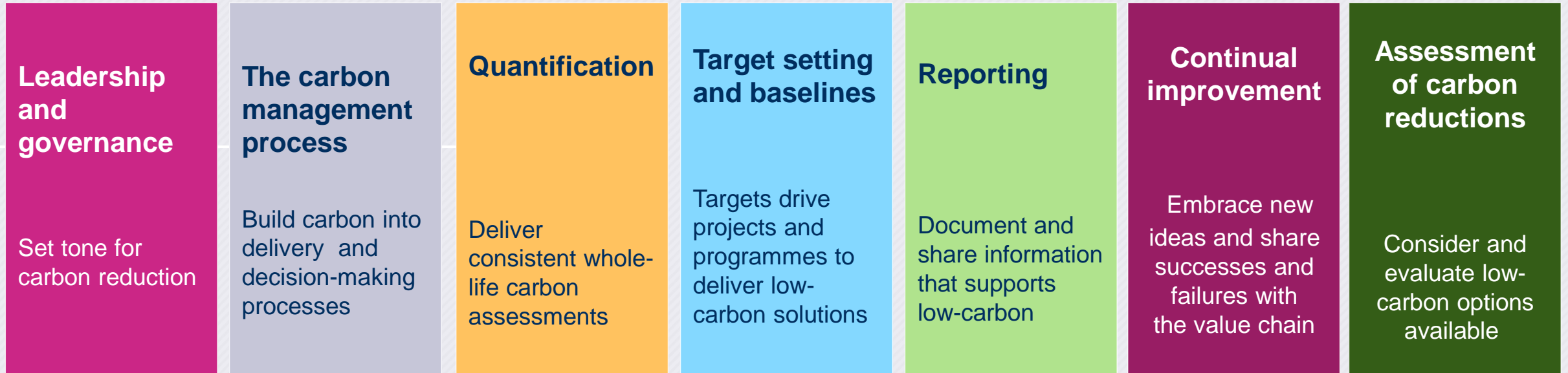
Net zero by 2050



- Cars
- Articulated HGVs
- Vans
- Rigid HGVs
- Buses and coaches

Design 4 net zero: PAS 2080

PAS 2080 is a global standard for managing infrastructure carbon. The framework looks at the whole value chain, aiming to reduce carbon and reduce cost through more intelligent design, construction and use.



We aim to be **accredited** in **PAS 2080** Carbon Management In Infrastructure Standard, this year.

Progress will be measured using a new Carbon Management System, at each PCF stage/ project gate

Design 4 net zero: Low Carbon Materials

Cemfree Concrete

- A14 Enhancement Scheme, used cemfree concrete in kerbs & drainage
- 80% ↓ carbon than portland cement

Lower-carbon 'warm asphalt'

- On the A160 between A180 Brocklesby Interchange and Immingham Harbour;
- Used 70,000 tonnes of lower-carbon 'warm asphalt', mixed at ~ 40°C lower than traditional asphalt, to reduce carbon by around 204 tCO₂e

Circular Economy

- Run CE pathfinder projects at the A14 and A303 to explore opportunities
- Authorised use of recycled car tyres material, can be an alternative to asphalt in emergency areas



Design for the future: Manuals, Metrics & Collaboration

Updating manuals and metrics

- Update MCHW documents to integrated net zero thinking by 2024
- In the meantime, there will be an Internal Memo issued shortly on low strength concrete changes that can reduce carbon emissions by up to 10% depending on its use
- Collaborative Performance Framework metric for zero carbon innovation in key contracts in supply chain

M42 collaborating to cut carbon

- Improvement works required transport of soil across carriageway
- Worked with local authority & parish council to close a section of local road
- Reduced 11km journey to 1.2km saving 174 tCO₂e



Design for the future: Road Users

EV Infrastructure

- Support 'Project Rapid' to deliver £950m charging infrastructure at MSAs
- Launch EV demonstrator lounge by 2025
- £11m to be spent on supporting MSAs to develop energy storage solutions

EV Transition Support

- Running a free Electric Van trial programme in various cities
- Traffic officer trained and ready for EV breakdowns by end of 2022

Active Travel & Public Transport

- For every 1km new road at LTC, we will build 3km of new or improved paths
- Collaborating with Network Rail and local council on a pilot Bike Hub to encourage active travel in Newark, possibility of going national
- Plan to improve public transport on the SRN due 2023



How can you get involved?

Like everyone, we don't have all the answers. We need **you** to get involved

Align to PAS2080 and develop certified carbon management systems by 2025

Share knowledge and innovation, support collaboration across the industry

Carbon Literacy e-Learning SCSS

Propose low carbon solutions and work together to implement

Support staff with developing behaviours required to reach net zero

Please contact us at carbon@nationalhighways.co.uk



Thank you

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