ADEPT Corporate Partner Climate Change Seminar 12th March 2020

ADEPT

The Association of Directors of Environment, Economy, Planning & Transport

Agenda

- Welcome and introductions
- Case studies from corporate partners
- Case studies from local authorities
- Roundtable discussions
- Summary and next steps

ADEPT

Taking rapid actions on climate emergency declarations

David Symons
WSP Future Ready Leader

Local authorities have 3 main influences

LEAD

In our own operations

ENABLE

a low carbon region with our programmes, policies and decisions

INSPIRE

Business and residents to take climate action themselves

UNDERPINNED BY A STRONG STRATEGY

1. Leading in our own operations

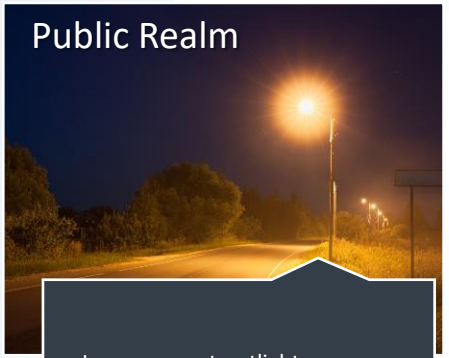
LEAD | ENABLE | INSPIRE

UNDERPINNED BY STRONG STRATEGY

Council's own emissions are only around 2% of total emissions, but there is still much opportunity to take action and cut costs

- Property strategies & standards
- Green memoranda with landlords
- Energy management & retrofit
- Renewables & Energy procurement

- Avoidance – by VC / skype
- Promoting low carbon travel choices for staff
- Fleet strategy

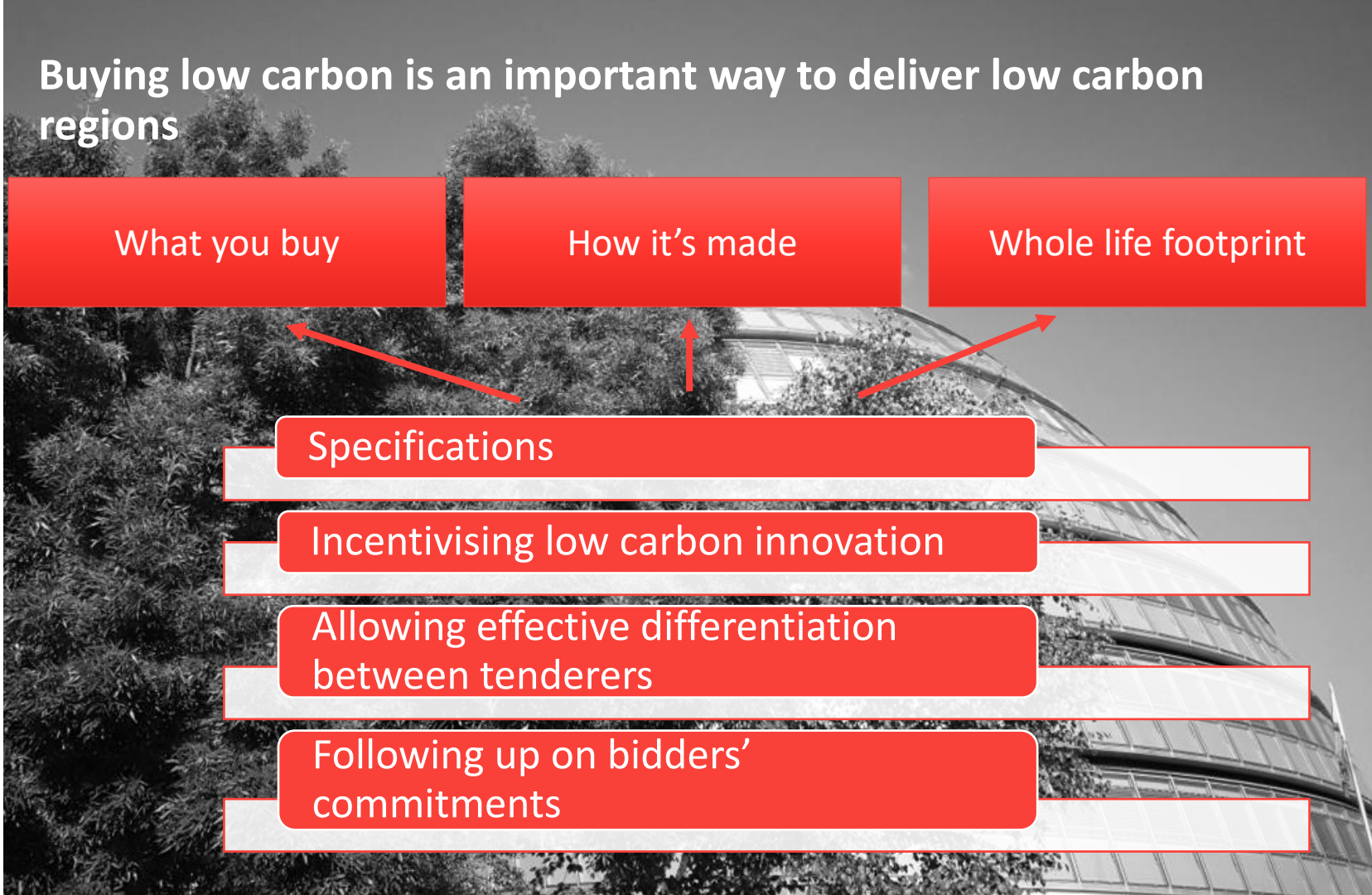


- Low energy streetlights
- Manging lighting levels

Buying decisions

- As a major buyer, procurement can lock in low carbon performance.
- Considering the energy used to produce products can also be a key way to support innovative low carbon approaches.

Buying low carbon is an important way to deliver low carbon regions

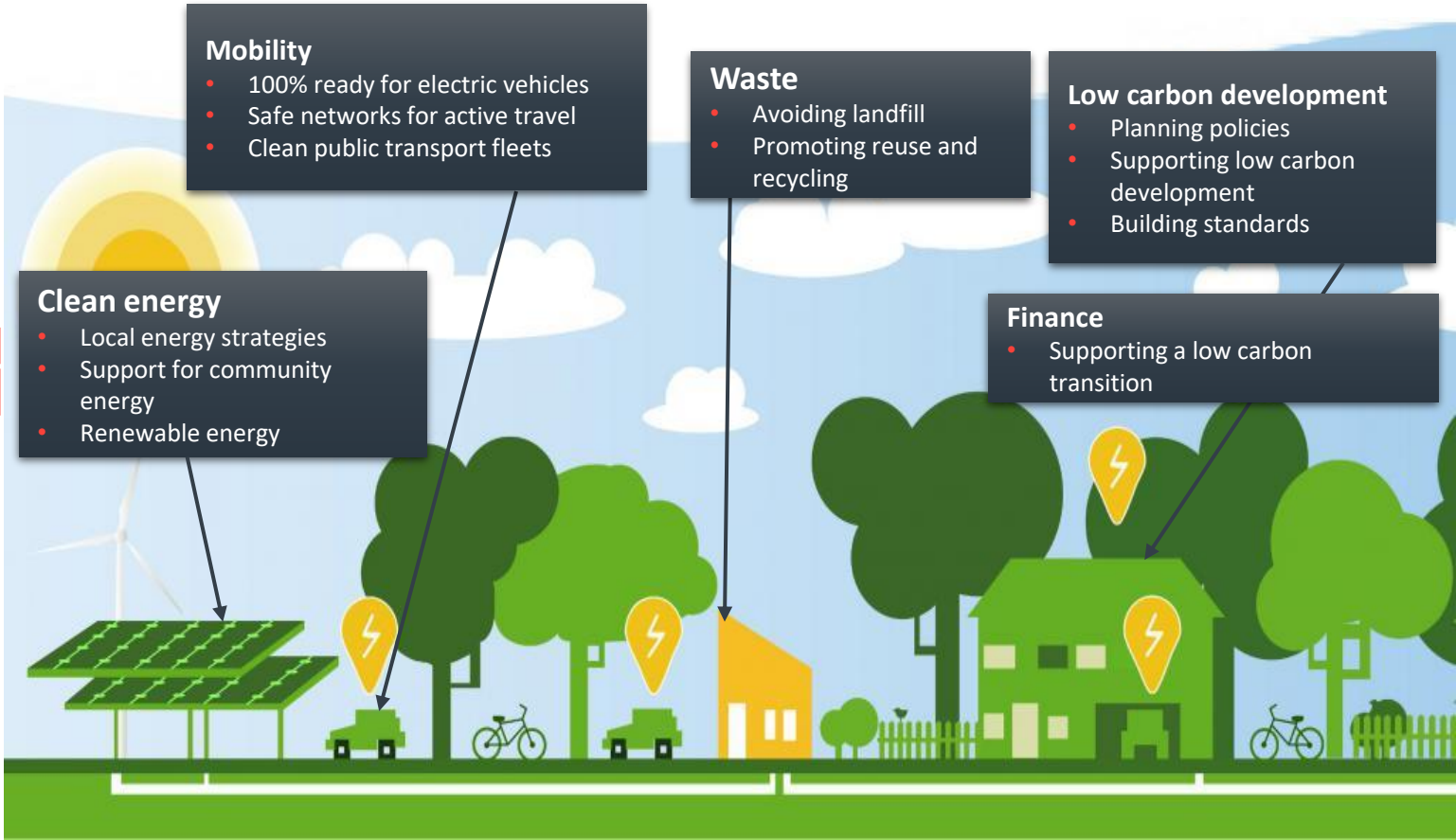


2.
Enabling a low carbon, resilient district

LEAD | ENABLE | INSPIRE

UNDERPINNED BY STRONG STRATEGY

Enabling a zero carbon, resilient region is probably councils' largest opportunity



3. Inspiring business and residents to lead

LEAD | ENABLE | INSPIRE

UNDERPINNED BY STRONG STRATEGY

Influencing all to play their part

Brand
- Use low carbon & resilience as a regional differentiator

Economic development
- Local jobs to reduce commuting
- New jobs in low carbon
- Promoting flexible working

Education
- Promoting climate awareness
- Supporting business transition
- Promoting active travel

Quality of life
- Linking low carbon with clean air, health and happiness

Influence & Leadership
- Use Members' influence to encourage others to take action

Matthew Young
Skanska

ADEPT

SKANSKA

Skanska's target:

Net-zero carbon

by 2045

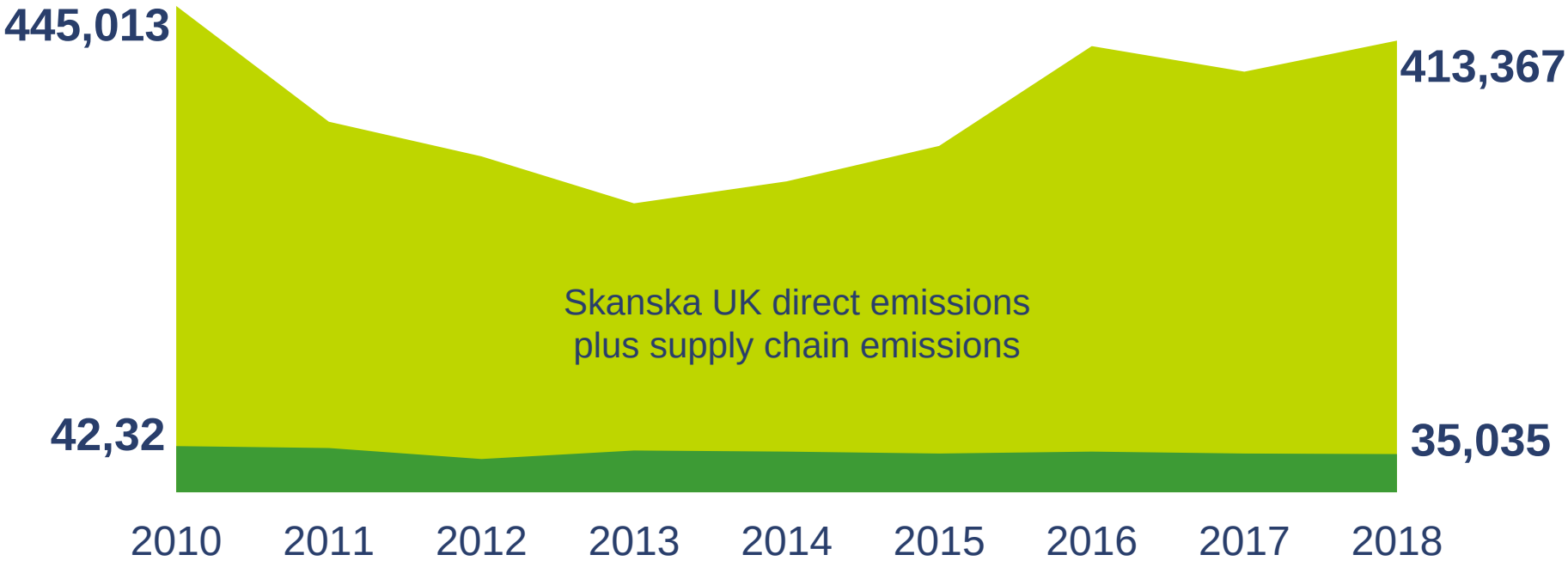
including our supply chain

Net-zero carbon emissions by 2045
The objective is for our portfolio of projects to be carbon-neutral without using carbon offsetting schemes.

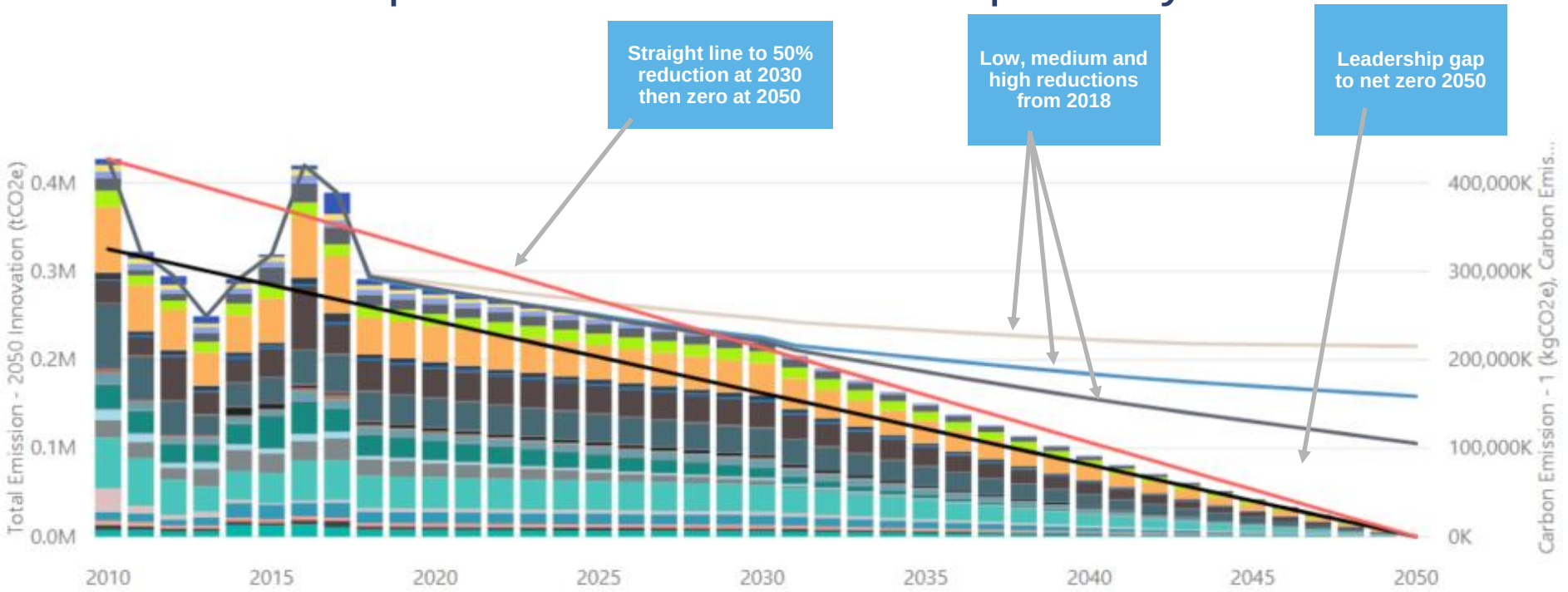
Reduce carbon emissions to 50 per cent of the 2010 level by 2030
The target is 223,000 tonnes of CO_2 equivalent gases.

Reduce carbon intensity to 130 by 2030
Carbon intensity is the amount of emissions, in tonnes of CO_2 equivalent gases, emitted for each £1 million of revenue.

The whole story



Visual representation of reduction pathways



SKANSKA

Infrastructure Services - Highways Sector

Carbon (kgC)2e)	Adjusted Spend	Carbon (tCO2e/£m)
158.90M	488.98M	324.95

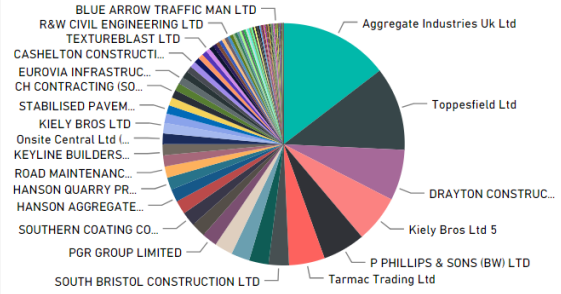
Subcategory 3 Description: Search

Contract Number: Search

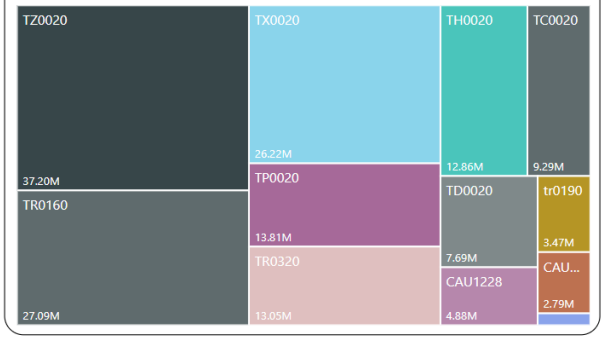
Account Name

- A COUPLAND (SURF...
- A P TRANSPORT GL...
- A T & R W AXTELL
- A&R CONTRACTING...
- ACORN RECRUITME...
- ACORN TRANSPORT...
- ACS TESTING LTD
- Actaccom Ltd
- ACTAVO (UK) LIMITED
- ACTIVE PRESENTATI...
- ADC (East Anglia) Lt...
- Addleshaw Goddard...
- ADIEN LIMITED
- Adler & Allan Ltd
- AECOM INFRASTRU...
- Aggregate Industrie...
- Ainscough Crane Hir...
- AMBASSADOR ELEC...
- AMEY LG LIMITED

Suppliers - spend (£) by Carbon (kgCO2e)



Contract Name (£) and Carbon (kgCO2e)



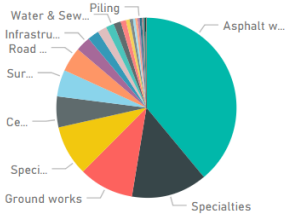
Year

- Select...
- 2018
- 2017
- 2016
- 2015
- 2014
- 2013

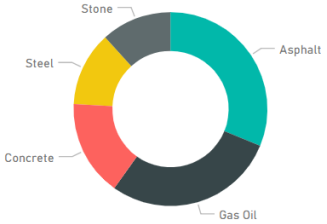
Subcat...

- Selec...
- A
- B
- C
- D
- E
- F
- G

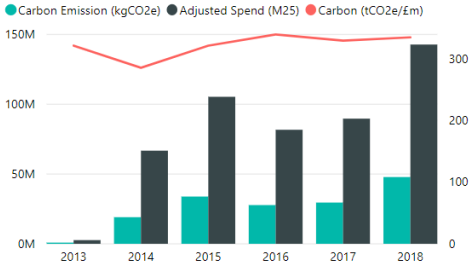
Carbon (kgCO2e) by Activity



Top Five Materials by Carbon



Carbon (kgCO2e) and spend by year

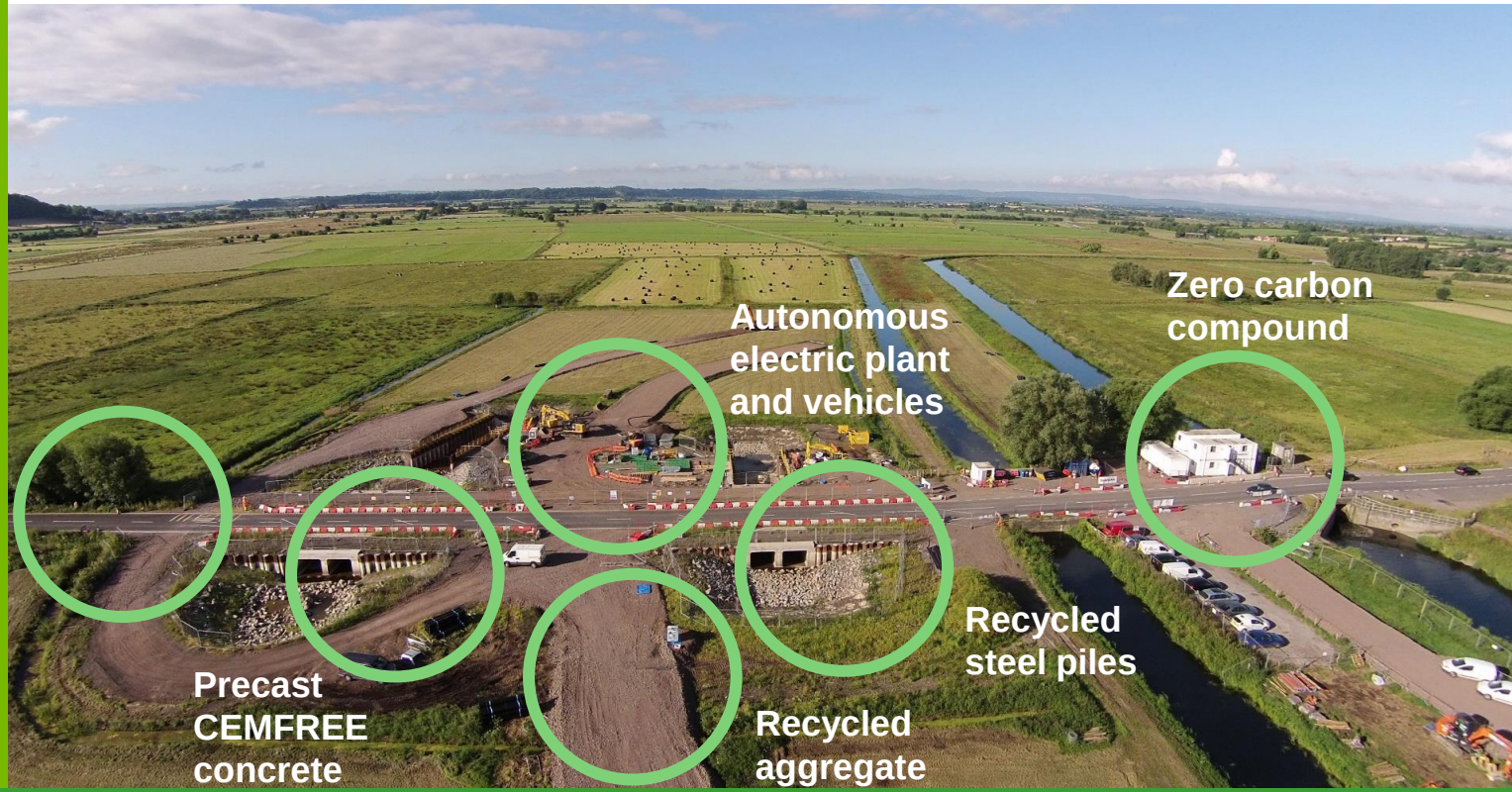


SKANSKA

Carbon Reductions in Highways

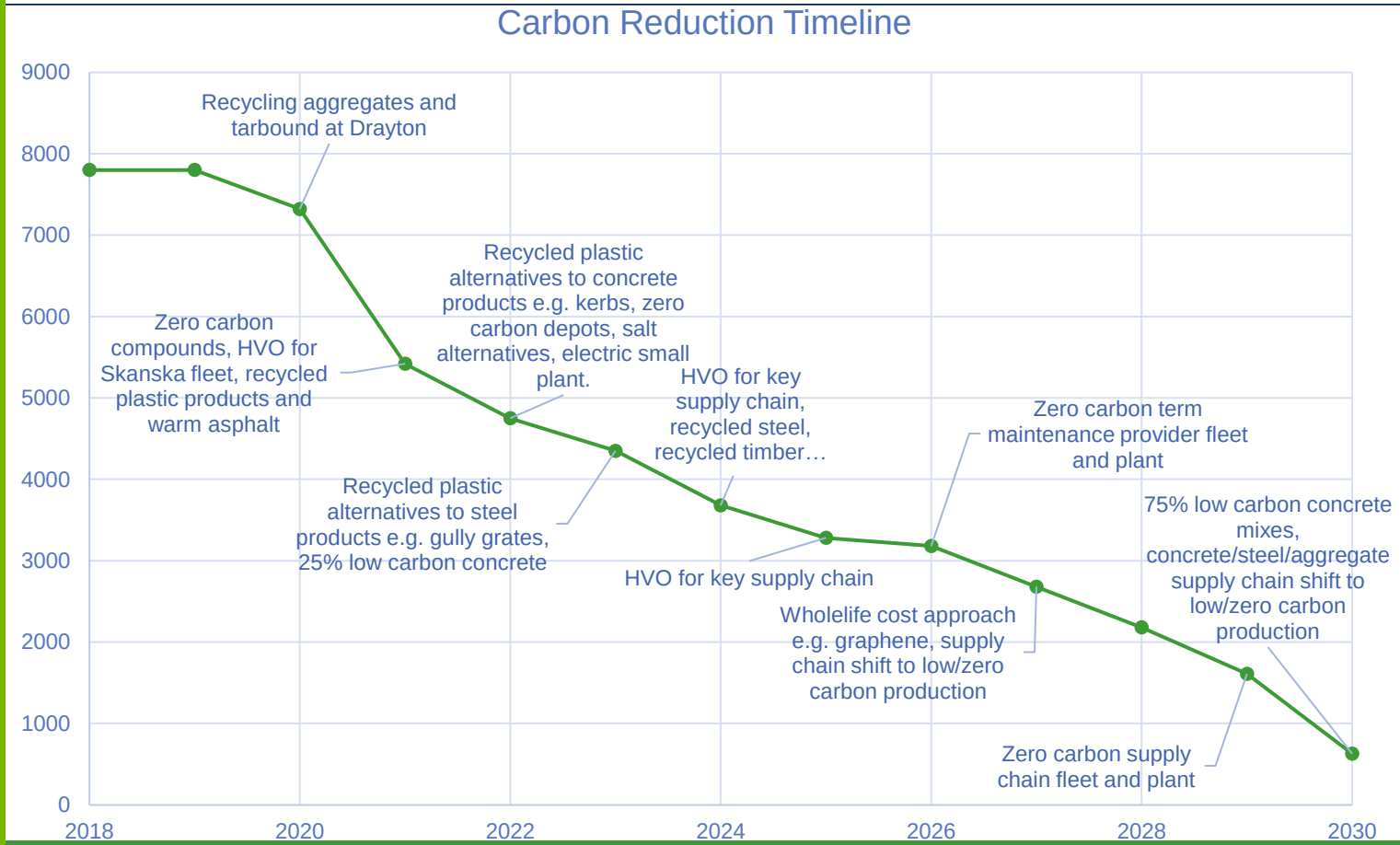
Practical solutions to reduce carbon & cost

Low temperature asphalt



The Route to Carbon Neutral by 2030

Practical solutions to reduce carbon & cost



Alex Meek
Costain

ADEPT

Climate Change Action Plan

ADEPT

Alex Meek – 12th March 2020

COSTAIN

Climate Change Action Plan

Addressing climate change is the biggest challenge of the 21st century and businesses, society and government all have a significant part to play.

We have set an ambition to lead UK infrastructure into a zero carbon future by 2035 at the latest, supporting the Government in meeting their 2050 target.

Our aim is to be a clean growth leader, enabling the uptake of low carbon solutions such as hydrogen and connected & autonomous mobility, areas we are currently actively working within.

We recognise that the response required to tackle climate change is more complex than carbon reduction alone and we have structured our strategy to reflect this. Notwithstanding this, addressing carbon reduction is fundamental to ensure we help shape UK infrastructure to mitigate and adapt to this global challenge.

Alex Vaughan,
CEO

We will achieve our ambition by ensuring:

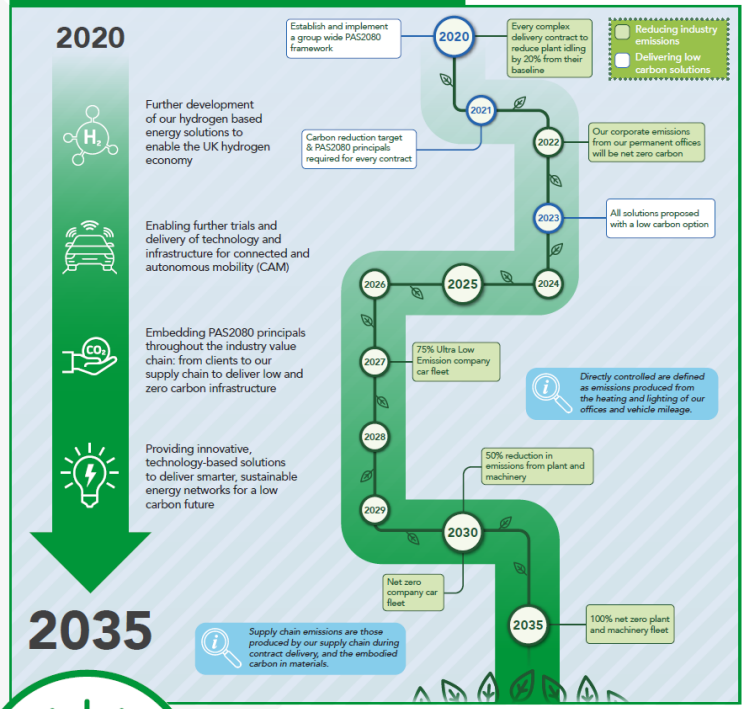
Net 0 — All our operations, including our supply chain will be net zero carbon by 2035 at the latest against our 2020 baseline

By 2023, every solution delivered by Costain for our clients will propose low carbon options

CO_2 — Our corporate emissions from our car fleets will be net zero carbon by 2030

Our corporate emissions from our permanent offices will be net zero carbon by 2022

Our plan to achieve net zero



Our climate change objectives are clearly linked and contribute to the United Nations Sustainable Development Goals (UN SDGs) both strategically and operationally. We already directly contribute to several of the SDGs through our core purpose of improving people's lives through smart and sustainable energy, water, defense and transportation infrastructure. Our climate change action plan strengthens and enhances our contribution to several goals, specifically Goal 13 Climate Action.

Our targets and objectives are clearly ambitious and achieving net zero emissions by at the latest 2035 will require considerable effort from our people and many others within our value chain, from clients to our supply chain. We are however confident that with effective support from government, close collaboration and industry knowledge sharing with our value chain, we can achieve these goals.

COSTAIN

The “rootmap”


Our plan to achieve net zero
2020
Establish and implement a group wide PAS2080 framework
2020
Every complex delivery contract to reduce plant idling by 20% from their baseline
Reducing industry emissions
Delivering low carbon solutions
2021
Carbon reduction target & PAS2080 principals required for every contract
2022
Our corporate emissions from our permanent offices will be net zero carbon
2023
All solutions proposed with a low carbon option
2024
2025
2026
Further development of our hydrogen based energy solutions to enable the UK hydrogen economy
Enabling further trials and delivery of technology and infrastructure for connected and autonomous mobility (CAM)
Embedding PAS2080 principals throughout the industry value chain: from clients to our supply chain to deliver low and zero carbon infrastructure
Providing innovative, technology-based solutions to deliver smarter, sustainable energy networks for a low carbon future
2027
75% Ultra Low Emission company car fleet
Directly controlled are defined as emissions produced from the heating and lighting of our offices and vehicle mileage.
2028
50% reduction in emissions from plant and machinery
2029
2030
Net zero company car fleet
2035
100% net zero plant and machinery fleet
2035
Supply chain emissions are those produced by our supply chain during contract delivery, and the embodied carbon in materials.

Case Study

East Sussex Highways

Sustainable Procurement and Minimising Economic, Social & Environmental Risk

Client Need:

'East Sussex Highways recognise the importance of the Highway network. The highway infrastructure is vital to not only the economic growth of the county but to keep local communities safe and connected as promoted by our councils priorities. The local highway network is without doubt the most valuable publicly owned asset…'

Approach:

- The contract is for the provision of services such as (but not limited to) maintenance of the highway network, emergency reactive services (which may be due to accidents or weather events that may affect the highway), winter maintenance (gritting etc.), professional services for the design and delivery of schemes and deliver works for developers and other third parties, (including parishes and individuals).
- Costain, on a monthly basis deliver scope 1 and 2 carbon monitoring for the client, monitoring the electricity, gas and fuel consumption on the project.
- Costain's carbon specialty has also been used for procurement and specific scheme decisions to ensure that carbon is taken into consideration when making the decision.
- Through consistent and visually friendly monitoring, East Sussex Highways has been able to use carbon monitoring to make informed decisions on their fleet and depot.

Benefits

Costain's Carbon Specialism on the framework has been used for the following benefits and changes:

- An idling campaign reducing idling figures by 70% from the beginning to the end, reducing total fuel consumption
- Costain's business case for electric vehicle has been submitted taking into account the carbon savings, linking these to cost over the contract.
- Recycled plastic and rubber kerbs have been added to the procurement list due to with the consideration of carbon benefits in mind.
- A trial for the use of more sustainable, cold lay HBM on the roads has been undertaken with considerations taken into the carbon benefits.

Case Study

Life Cycle Assessment of H_2 buses

Life cycle assessment applied to the use of H2 as fuel for buses in Liverpool – INOVYN Runcorn site

Helping local authorities to achieve zero carbon public or fleet transport

Client Need:

- ✓ INOVYN produces H_2 as a co-product of the chlor-alkali process
- ✓ Feasibility & initial engineering requirements to export this H_2 as fuel for fuel-cell vehicles
- ✓ Demonstration of environmental gains.

Approach:

1. Life cycle assessment to help understand the environmental and human health impacts associated with the use of hydrogen fuelled buses compared to standard diesel and electric buses. The base case is to provide 3.5 tons of H_2 per day, which could fuel up to 174 buses.
2. The analysis accounted for vehicle (chassis and powertrain production), fuel (production and distribution), and use phase impacts for the three scenarios.
3. The life cycle assessment was developed on a 'gate to gate' basis according to the ISO standards 14040:2006 & 14044:2006.
4. The results were categorised against four damage categories: Human health, Ecosystem quality, Climate change and Resources impacts.

Benefits

- H_2 v diesel - **72% Human Health** (PM2.5) **savings per bus** – For 174 buses, daily savings are equivalent to annual emissions associated with the average life activities of 45 UK citizens.
- H_2 v diesel - **55% Climate Change** (CO_2eq) **savings per bus** – For 174 buses, daily savings are equivalent to annual carbon footprint associated with the average life activities of 5 UK citizens.
- A daily bus journey using an electric bus yielded less impacts. However, a single bus could not provide the daily service at once and would need to go back to the depot and recharge. This **range constraint of electric buses** implies the use of approximately 62 additional vehicles to provide the service of 174 diesel or H_2 buses.
- Costain's life cycle engineering approach allowed stakeholders to identify the main sources of impacts for the use of H_2 buses in Liverpool. This enables targeting of effective solutions which could further reduce environmental and human health impacts of H_2 buses to EV buses levels.

COSTAIN

Where to find more information

- Externally: Our Climate Change Hub www.costain.com/what-we-do/climate-change-solutions/
  - Climate Change Action Plan
  - Thought leadership articles
  - Case studies
  - Recent news articles and publications

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