



# Building Net Zero Roads

Civil Engineering  
Contractors Association

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Working for Infrastructure

# Introduction

The challenges of climate change cannot be overestimated. We are living in a climate emergency and must act now to protect current and future generations.

In June 2019, the UK became the first major country to legislate for a net-zero target for carbon emissions by 2050.

Net zero recognises that there will be some form of carbon emissions but that these will be fully offset. The figures have been set relative to 1990's emission levels and will require sustained policy interventions across all sectors to achieve them.

In November 2020, the UK Government published a 10-point plan for a Green Industrial Revolution, setting out a path to Net Zero by 2050. *Net Zero Strategy: Build Back Greener*, published in October 2021, sets out the Government's plans to ensure that by 2035 the UK will be powered entirely by clean energy, subject to security of supply.

Departments and their agencies are building on this with their own plans, notably the Department for Transport via its Transport decarbonisation plan and National Highways' Net zero highways.

Industry also recognises the part it must play in preserving our environment. In early 2021, the Construction Leadership Council published CO2nstructZero, which is the construction sector's response, to the challenge.

How we build and maintain our roads plays a key role in meeting our net zero goals.

Despite changing work patterns, roads still form the critical backbone of our economy. Sectors heavily

dependent on the Strategic Road Network already contribute £314 billion in GVA to England's economy and will grow with further investment.

CECA is working closely with governments and public bodies on how we can sustainably build and maintain the world-class infrastructure we so desperately need.

This paper looks at how we can achieve net zero roads via policy change. While it is focused on England, it's recommendations can also apply to Scotland and Wales.

Our paper is complemented by a practical guide for SMEs on how they can also be part of the carbon challenge.

This paper focuses on:

- **Defining net zero;**
- **Achieving net zero via procurement;**
- **Developing innovative solutions;**
- **Reviewing standards and accreditations;**
- **Greening plant and machinery.**

CECA's net zero workstream is accompanied by member case studies, which demonstrate how industry is already meeting its environmental goals.

We cannot do this alone. Our drive to net zero roads, is one small part of a combined national and global effort to futureproof our planet.

To achieve this, we must all work together to ensure consistent and complementary policy making for the long term.

### The ten point plan for a green industrial revolution

The Government's Ten-Point Plan aims to reduce UK emissions by 180 million tonnes of carbon dioxide equivalent between 2023 and 2032, equal to taking all of today's cars off the road for around two years.

It is supported by individual sectoral plans and overseen by dedicated task force putting a systems approach at the heart of Government thinking.

### Transport decarbonisation plan

The Department for Transport's plan looks to decarbonise all forms of passenger, freight and logistics transport along with plans for decarbonising places, maximising the benefits of sustainable low carbon fuels and supporting the increased role of hydrogen in transport.

It notably focuses on:

- Encouraging walking and cycling;
- Encouraging public transport;
- Stopping long distance lorry movements and facilitating haulage by electrically electrification of the network; and
- More electric vehicles.

### Net zero highways

National Highways has published its roadmap to reduce carbon from road construction, maintenance and operations, and support the transition to zero emission vehicles.

The plan is based around three commitments: achieving net zero for National Highways own operations by 2030; delivering net zero road maintenance and construction by 2040; and supporting net zero carbon travel on our roads by 2050.

CECA's members will be working with National Highways to help meet these goals and collectively address the challenges that arise through the Partnership Agreement we signed with National Highways earlier this year.

### CO2nstructZero

CO2nstructZero sets out how the construction sector will meet the Government's Net Zero challenge. It uses the UK's Climate Change Committee's 6th Carbon budget to establish the priorities for its action plan and how they will be measured.

### Net Zero Strategy: Build Back Greener

In this document, published ahead of COP26, the UK Government sets out a delivery pathway showing indicative emissions reductions across sectors to meet targets up to the sixth carbon budget (2033-2037).

### COP26

The UK is hosting the 26<sup>th</sup> UN Climate Change Conference of the Parties (COP26) in Glasgow on 31 October – 12 November 2021.

This summit brings parties together to accelerate



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# The roads net zero challenge

## Define net zero

While the intention to reduce carbon emissions is clear, there is not yet any clear definition as to what this might look like.

The international Science Based Targets Initiative is working towards a commonly agreed definition. However, at a UK level, clients, businesses and local authorities are all currently working towards individually agreed definitions, resulting in confusion about what net zero means for the whole of the construction sector.

## CECA recommends:

- **Construction Leadership Council, as part of its CO2nstructZero to publish and seek support for one net zero definition for construction aligned with wider global and UK definitions and one recognised carbon calculator for the industry based on whole life Environmental Product Declarations.**

## Pipeline clarity

Visibility of pipeline at national, regional and local levels is vital for market confidence.

## CECA recommends:

- **IPA infrastructure pipeline must support industry to invest early in the skills and innovation needed to continually improve performance, quality and value.**

## Net zero via procurement

CECA has long argued that the UK procurement process requires urgent reform. We look forward to the publication of the Government's Procurement Bill in the Autumn which has the potential to radically change public sector procurement for the long term, and support industry in meeting net zero goals.

We especially welcome Government's intention to award future contracts based on the Most Advantageous Tender (MAT) rather than Most Economically Advantageous Tender and the establishment of the principle of Value For Money.

Often, low carbon solutions cannot be achieved at lowest cost. However commitment to a holistic solution, taking into account whole-life costs in all areas, means that innovative solutions can be considered.

The Construction Playbook and the Value Toolkit will also transform how contracting authorities and their supply chains work together.

However, in order to ensure net zero is effectively achieved via the procurement process CECA recommends:

## Guiding principles for effective procurement

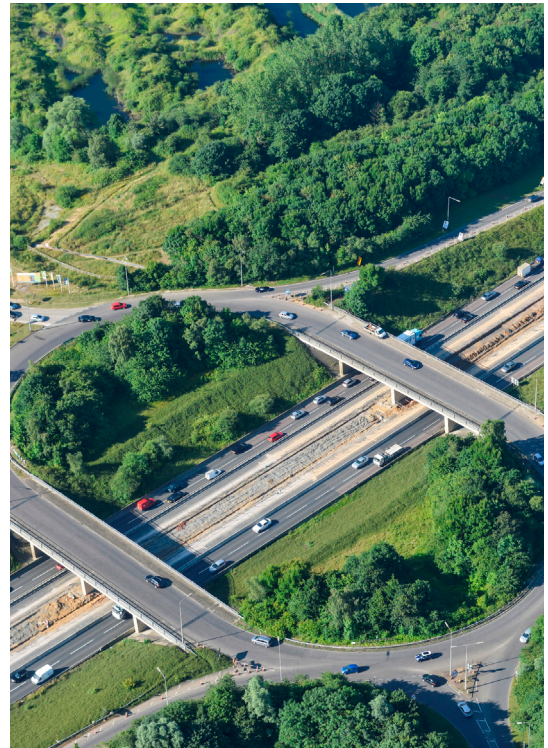
- **Full commitment to Most Advantageous Tender (MAT) and long-term Value For Money with clear definitions and weighting to consider and address low carbon goals based on whole life performance and reporting of residual carbon impact;**

- Commitment to the principles of the Construction Playbook and Value Toolkit which support net zero goals;
- Develop a consistent approach to project procurement and outcome delivery across all contracting authorities and all projects based on established best practice in reducing carbon and whole life assessment. This could include widespread adoption of PAS2080 or carbon management plans;
- Early Supplier Involvement that facilitates the supply chain contributing innovation and low carbon processes early to the design and enables timely preparation to establish and gear up resources, especially local SMEs;
- Regular client engagement to support journey to net zero;
- Longer pre construction phase in contracts to recognise improvement towards net zero delivery;
- Framework contracts that enable teams to take learning into next project;
- Complete checking and enforcement of net zero undertakings made by contractors in tender documents; and
- Procurement Policy Notices to define net zero targets and be accessible to SMEs.
- Monitor contractor performance on carbon reduction.



### *Guiding principles for effective net zero frameworks*

- Clear funded pipeline visibility with a steady and even workstream and a clear demand for low carbon options to incentivise net zero innovation;
  - Carbon reduction is built into funding assessments;
  - Drive collaborative culture from all involved with agreed, aligned net zero success criteria; this may include the facility to transform into enterprise models;
  - Involve contractors early in the project life-cycle to drive low carbon innovation by utilising tools such as Early Supplier Involvement (ESI) and Professional Services Contracts (PSC);
  - Balance the level of risk and reward between customer and supplier, not just as an aspiration, but enshrined in equitable forms of contract to incentivise net zero innovation with financial penalties for not achieving carbon commitments;
  - Incentivise excellent performance either financially, or via a maturity model that rewards those who meet net zero targets with more opportunities;
  - Clear assessment criteria and clear objectives to reduce carbon that are underpinned by specific feedback to all bidders;
- Clear consistent objectives for delivering net zero outcomes with clear understanding as to how they are measured; and
  - In line with Government targets for reduced carbon and social value, along with clearly defined commitments to measurement of same during the life of the framework.







### Develop innovative solutions

Innovation in infrastructure is about improvement and collaboration. But it is often very difficult to identify the benefit of its value.

Our sector has historically been slower than others in maximising the opportunities arising from innovation. CECA members have long expressed concern about few opportunities for innovation within the procurement process.

CECA believes that understanding innovation's value is vital in a fast moving business climate where markets and technologies are continually evolving. This can only be achieved in a regulatory environment which facilitates and supports innovation and the challenges it brings.

#### CECA recommends:

- All regulations and processes impacting upon the construction industry must work together in order to prioritise innovation in the supply chain;
- Utilise tools such as Early Supplier Involvement (ESI), Professional Services Contracts (PSC) and / or longer term strategic partnerships to drive real innovation;
- Outcome-based specifications in contracts to enable the supply chain to identify and propose innovations when tendering for work;
- Contracts to recognise value of specific net-zero innovations to encourage deeper and more widespread innovation; and

- Clients and designers adopt an open approach to low carbon materials and bids.

### Review standards and accreditations

Verified standards are available from a wide range of accrediting bodies and specific standards are often mandated by Tier One companies.

Businesses operating in the construction sector hold more standards on average than those in other sectors, with smaller suppliers often struggling to access to a standards regime that works for them.

Many current standards do not yet support the policy drive to net zero.

#### CECA recommends:

- Industry wide review of standards and accreditations to meet carbon reduction goals.

### Greening plant and machinery

#### Red Diesel

The Government will remove the tax rebate for red diesel use in the construction industry from April 2022.

At the same time the rebate for lower carbon alternatives such as hydrogenated vegetable oil (HVO) will also be removed.

CECA believes that in order to meet environmental goals, genuinely lower carbon fuels such as HVO have to be exempt from the same tax levels as standard fuels.

#### CECA recommends:

- **Government to work with industry on its transition to cleaner fuels and to continue with the rebate for fuels specifically defined as lower carbon.**

#### Super Deduction Allowance

Most users of plant and machinery on construction sites will not be able to benefit from the Super-Deduction Allowance (SDA), announced by the Chancellor in the March Budget. This allowance helps industry move towards more sustainable plant and machinery options.

#### CECA recommends:

- **Government urgently review the SDA to ensure the benefit is available to all UK contractors.**