



Net Zero Report Launch

Are we ready?

Speakers



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Director of Policy
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How ready?

- ...is the government policy framework to deliver the ambition of the Ten Point Plan for Net Zero?
- ...are the built environment sectors to make net zero projects standard?
- ...are consultancies ready to be the catalyst for change?

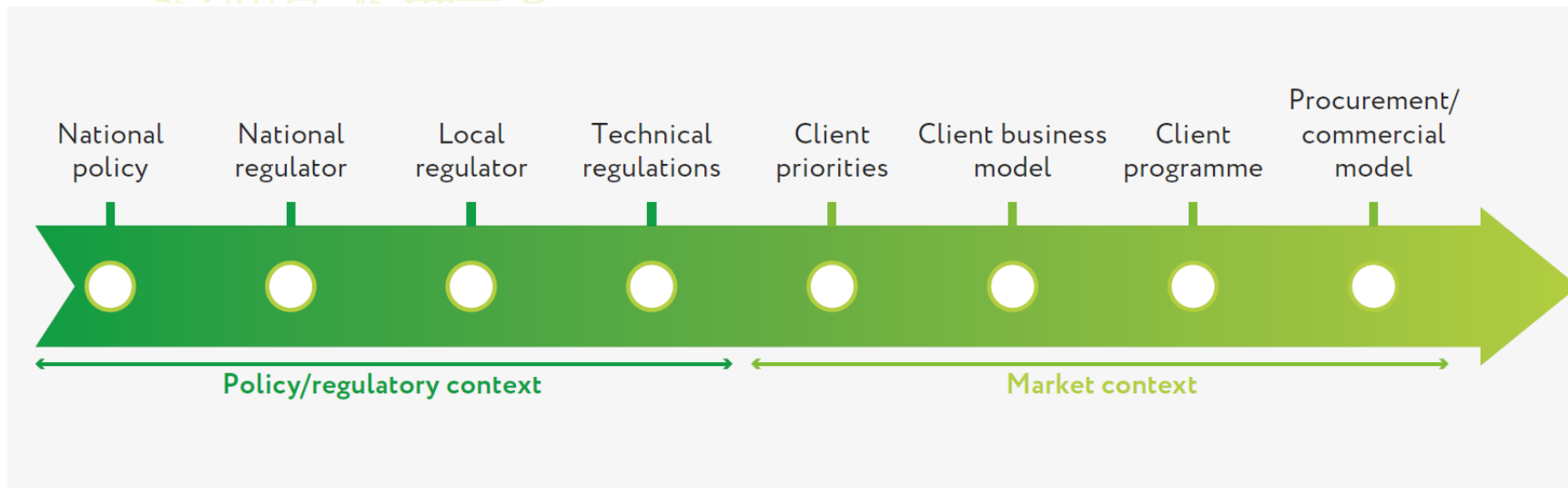


Figure four: Typical built environment project context

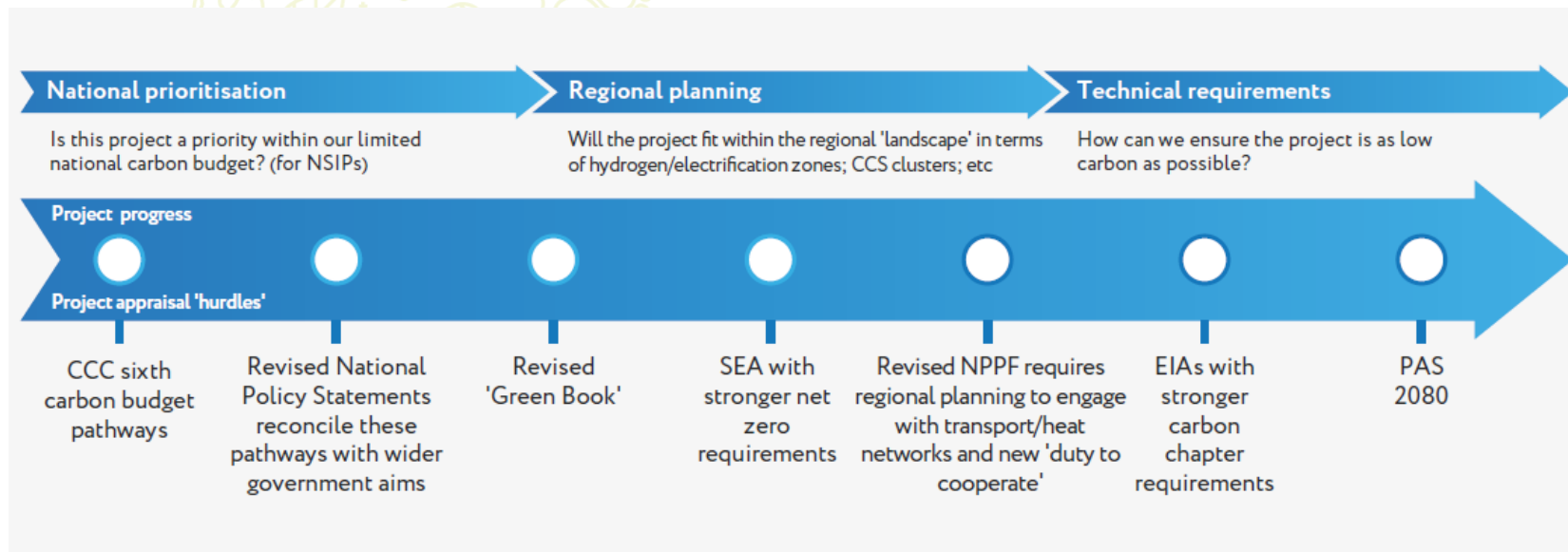


Figure nine: Key elements of a Net Zero built environment policy framework

	Technical feasibility	Capacity to deliver	Regulatory ease	Societal acceptability	Acceptability to private sector	Acceptability to public	Client-relevant technology	Investor appetite
Roads	5	5	5	6	5	6	5	5
Buildings	7	6	6	7	6	7	6	6
Water	4	4	3	7	6	5	4	5
Rail	8	8	7	8	8	8	8	8
Ports	2	3	2	9	3	7	3	3
Airports	3	4	5	4	5	5	6	5
Energy	6	5	4	7	6	6	6	5
General	6	6	5	7	5	6	6	6
Waste	6	6	5	7	7	5	6	6
Others	6	8	6	7	7	8	8	8

Are sectors ready to adopt the Committee on Climate Change pathways?

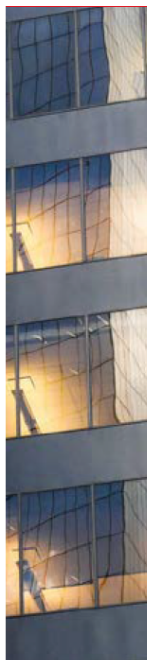
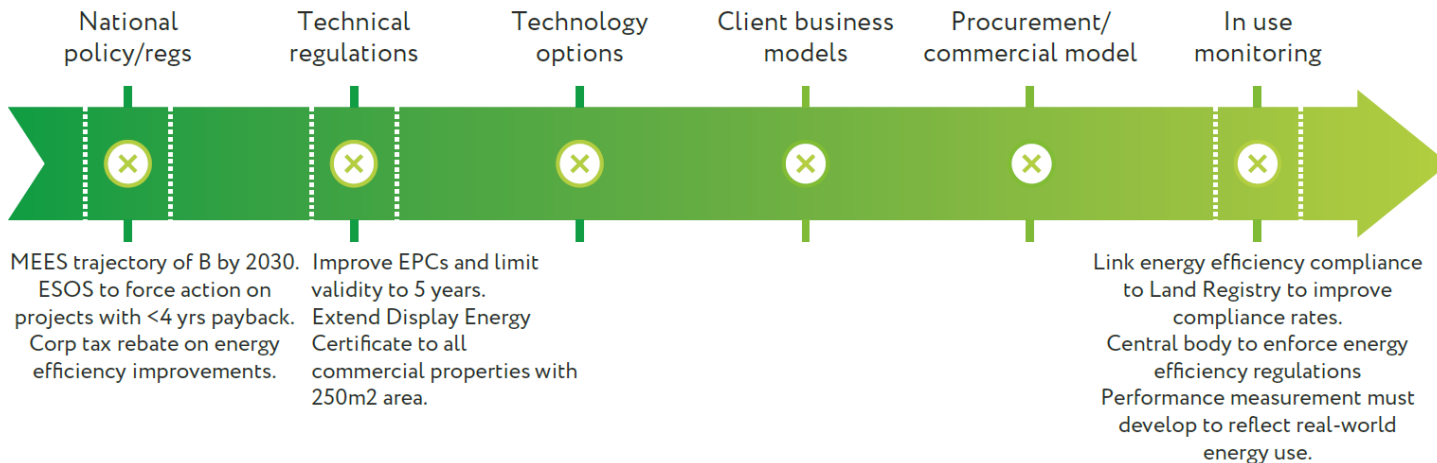
Figure seven: Most infrastructure is not ready for a Net Zero pathway

Source: ACE/EIC member survey; 10 fully ready – 1 no prospect.

Non domestic buildings

Economic opportunity:

Labour intensive insulation refurbishments



Initiative	Opportunity	Risk	Recommendation
Construction Innovation Hub Value Toolkit - Value Definition¹⁴	<p>Widely used to ensure carbon aims at project level explicitly understood.</p>	<p>Multiplicity of value options/indicators dilutes absolute nature of Net Zero obligations.</p>	<p>Minimum weighting for opcarb/ usecarb + Track % of uses of toolkit that prioritise carbon.</p>
Construction Innovation Hub Value Toolkit - Client & Market Approach¹⁵	<p>Widely used and highlights impact of delivery and commercial model on carbon strategy.</p>	<p>Carbon implications not highlighted.</p>	<p>Consultants use Client & market Approach Framework to ensure clients understand carbon implications of choices at key decision points.</p>
Construction Playbook	<p>Resets govt procurement approach to carbon.</p>	<p>Little focus on the Net Zero content in Playbook rollout sends wrong message.</p>	<p>Playbook must ensure public sector clients focus on net zero solutions.</p>
Modern methods of Construction (MMC)	<p>Wide take up of MMC lowers capcarb/concarb and performance gap.</p>	<p>Bias towards modular volumetric and poor quality OSM leads to weak carbon benefit.</p>	<p>Presumption in favour of MMC + strong monitoring on usecarb especially.</p>

	Projects in 2020s...	...must deliver for 2050
Capital Embedded carbon	Minimise and offset ^o	No offsetting allowed – capital inputs should be manufactured with zero emissions.
Construction carbon	Minimise and offset ^o	Zero emission construction machinery and vehicles.
Operational in use carbon	Design and assurance now should prioritise minimising this over time ^{o*}	Must be absolute zero (no offsetting) or asset will be stranded.
Asset users carbon ('usecarb')	Asset must be future proofed to facilitate relevant Sixth Carbon Budget pathways (for example, EVs, hydrogen boilers)	Asset must only be available to zero emission users (with exception of aviation) or will be stranded.

Figure 12: Built environment and Net Zero – 2020 vs 2050

^o Consultants must ensure that client offsetting is genuinely a last resort and to establish high quality control standards
^{o*} Depending on proportions, there is a case for minimising 'op-carb' at the expense of higher embedded emissions if necessary.



Recommendations for consultants



Taking a stand.

- Sign up to Pledge to Net Zero²⁰ and Engineers Declare²¹



Upskill for Net Zero.

- Ensure carbon literacy throughout the organisation so that all disciplines, whether structural or design engineering teams, are able to discuss Net Zero priorities with clients and embed them into wider design and engineering work on projects.




Codify best practice.

- Support IEMA to update EIA carbon chapter guidelines²²
- Promote and use PAS 2080²³



Help clients do the right thing.

- Commit to offering clients a Net Zero compatible design as an option, even if not prioritised by client in the value profile.
 - Help clients with land and asset portfolios optimise land use for climate/natural capital.
 - Help clients understand difference between Net Zero commitments now and what must be prioritised in run up to 2050.
- 

ACE/EIC Net Zero report launch

Tim Chapman FREng FICE FIEI



Tim Chapman
Director of Infrastructure
Arup

Choosing the right projects

NIC

provides government with impartial, expert advice on major long term infrastructure challenges (English focus)

**NATIONAL
INFRASTRUCTURE
COMMISSION**

IPA

works with government and industry to ensure that major projects of all types are delivered successfully and to improve performance over time



International agreements eg Paris



CCC

advise the UK / devolved governments on emissions targets and to report on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change

National Policy Statements

give reasons for the policy set out in the statement, and must include an explanation of how the policy takes account of government policy relating to the mitigation of, and adaptation to, climate change; comprise the government's objectives for the development of nationally significant infrastructure

Eg Overarching Energy, airports, ports, national networks

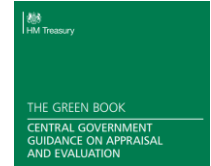


Regulators

CAA
ORR
Ofwat
Ofgem
etc

Promoting agency

(license)
HE, NR



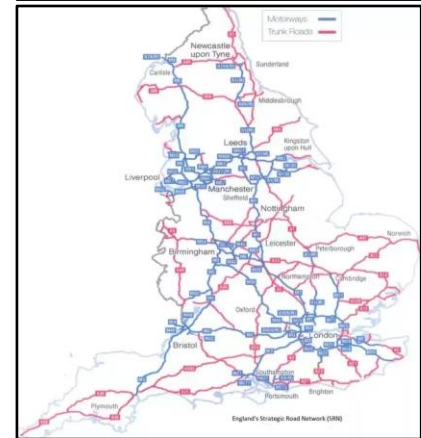
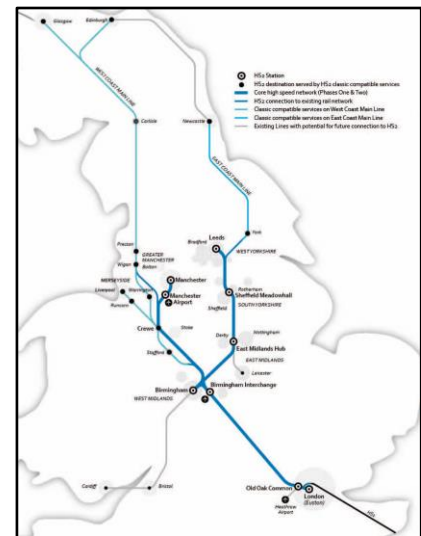
Project

How should we evaluate projects?

Purpose of infrastructure

- Happy, healthy, prosperous people
- Just sustainable society

- Cost benefit analysis
- Contribution to carbon abatement
 - Mitigation – cut carbon emissions 1.5 degree
 - Adaptation – expect adverse effects for resilience 4 degree
- Impact on Social Value
- Natural Capital (only via the EA?)





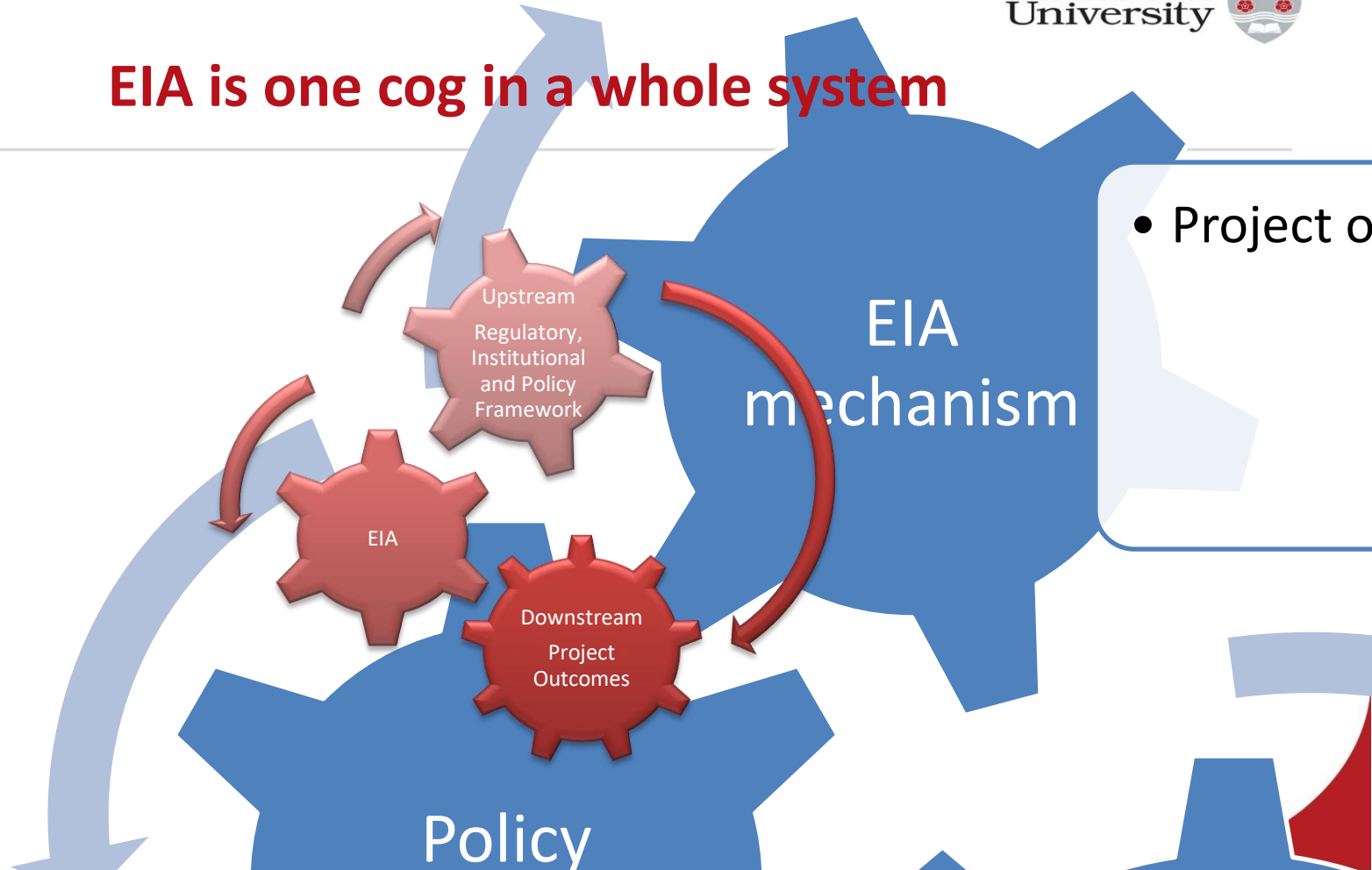
Dr Louise Carver
Lancaster University

The Role of EIA in Delivering Net Zero Infrastructure

Dr. Louise Carver

Lancaster Environment Centre | L.Carver@lancaster.ac.uk

EIA is one cog in a whole system



NSIP across sectors and IEMA guidelines

- Lack of consistency
- Sectoral Differences
- Assessing not managing
- Path dependencies

Sector	Baseline settings	Proportionally	Goal and scope definition	Study boundary definition	Calculation data	Calculation method	Uncertainties	Significance	Mitigation	Reporting	Monitoring
Transport (Road) 1	A	B	C	A	A	A	A	B	A	B	B
Transport (Road) 2	A	A	B	A	A	A	C	B	B	B	C
Transport (Road) 3	A	B	B	A	A	A	C	B	A	B	B
Transport (Air)	A	A	B	B	B	B	A	C	B	B	B
Energy/Transport (Air)	C	B	B	C	C	C	D	B	D	C	D
Energy	C	B	B	C	A	A	A	D	D	C	D
Energy/Waste	A	A	A	B	B	B	A	D	C	B	D

Views from consultancy

“Calculations are almost irrelevant, the most important thing is agreeing on the scope that you're going to report on; full lifecycle emissions, construction, operation and end of life..

***And are these emissions significant or not?
What level of mitigation is good enough?”***

“It's a relatively new area and the political context is changing now, but there's a lag.

You know, clients still don't understand that a multi-billion-pound project could fail on a small cost for an EIA. I still get clients asking “why are we even doing this?””

“I feel the industry is very much seeing Net Zero as something that needs to be achieved by 2050 and not something that they need to be worrying about at the moment”

“You need well-paid planning officers and the policy— you need all our policy statements upgraded in the light of the Climate Change Act and the 1.5 degree limit. Therefore we need our whole industrial strategy redone. Every sector of the economy needs an up to date decarbonisation plan and then written in to the planning policy statements.”



Daniel Johns
Head of Public Affairs
Anglian Water Services

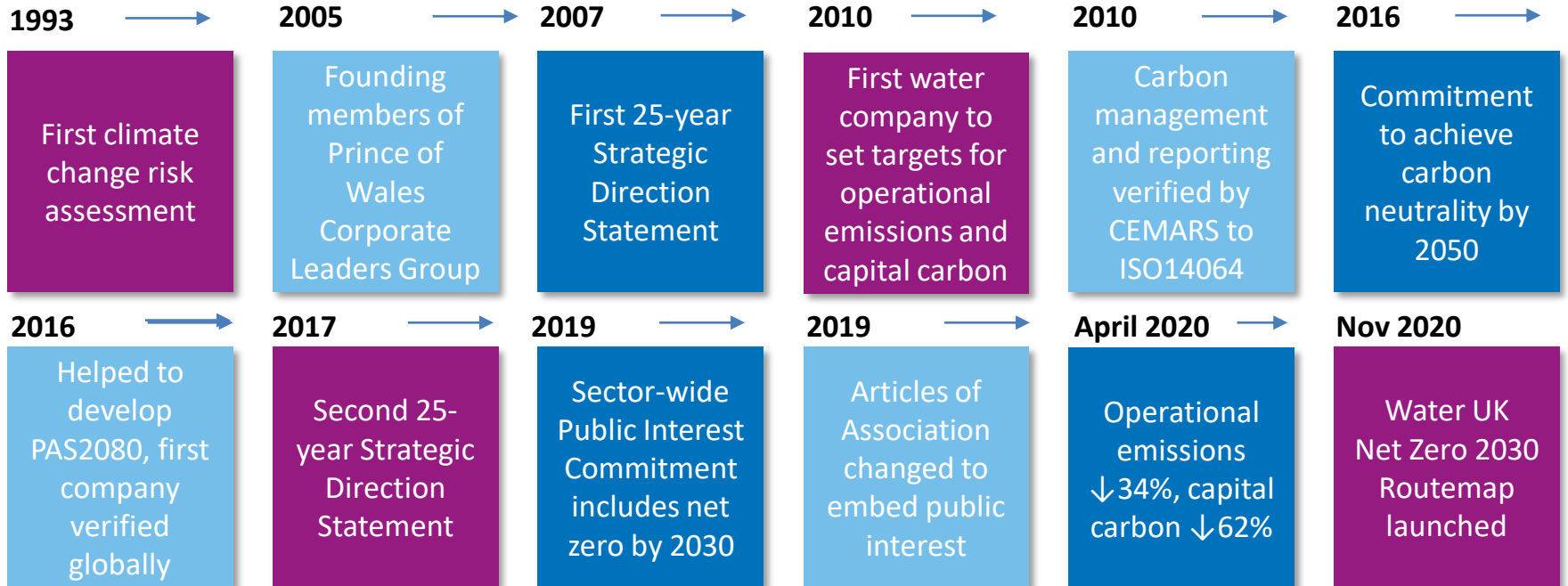
Achieving a net zero UK water sector by 2030



Daniel Johns
Head of Public Affairs



Anglian Water's carbon journey

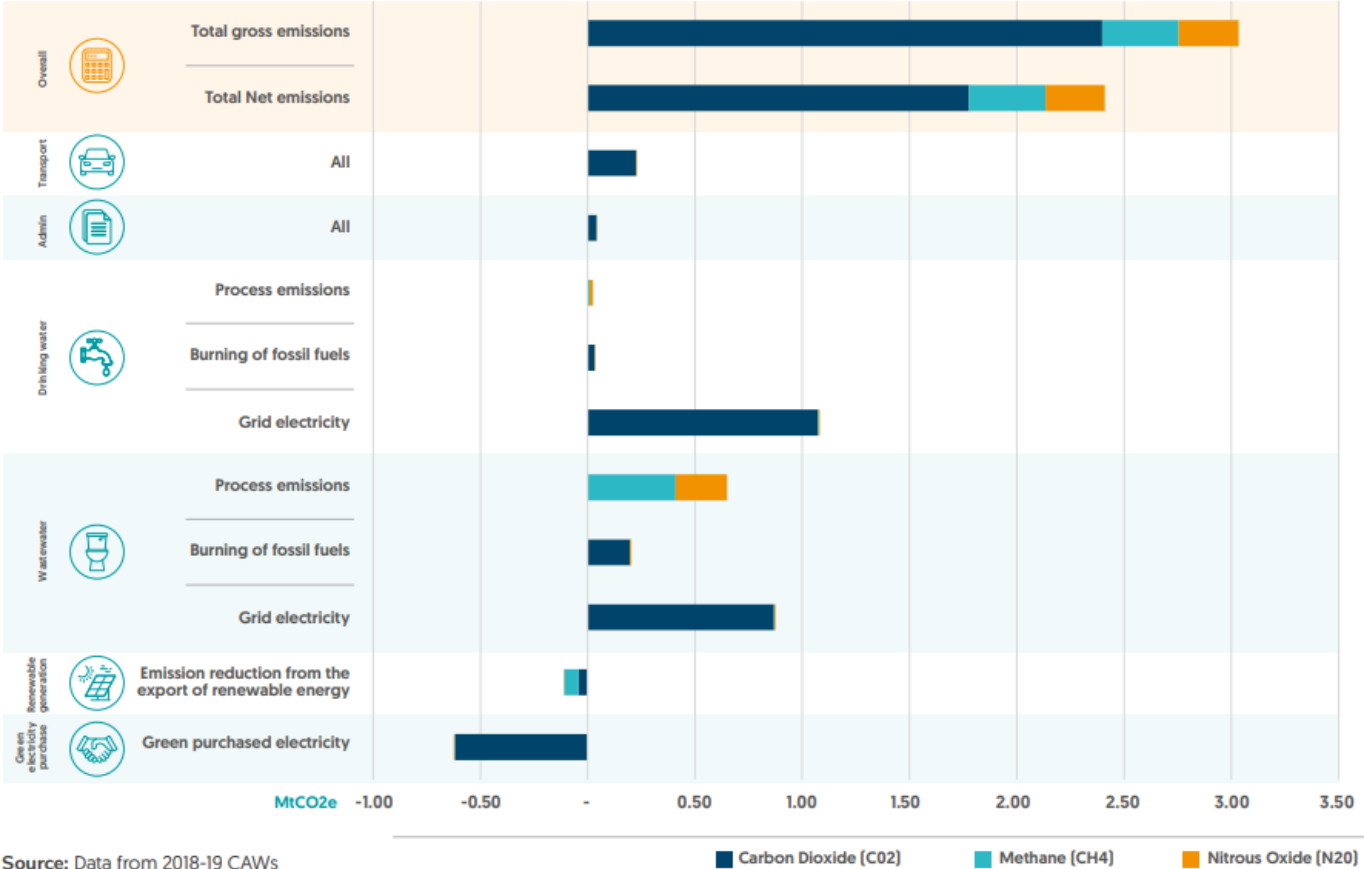




Water UK

**NET
ZERO
2030
ROUTEMAP**

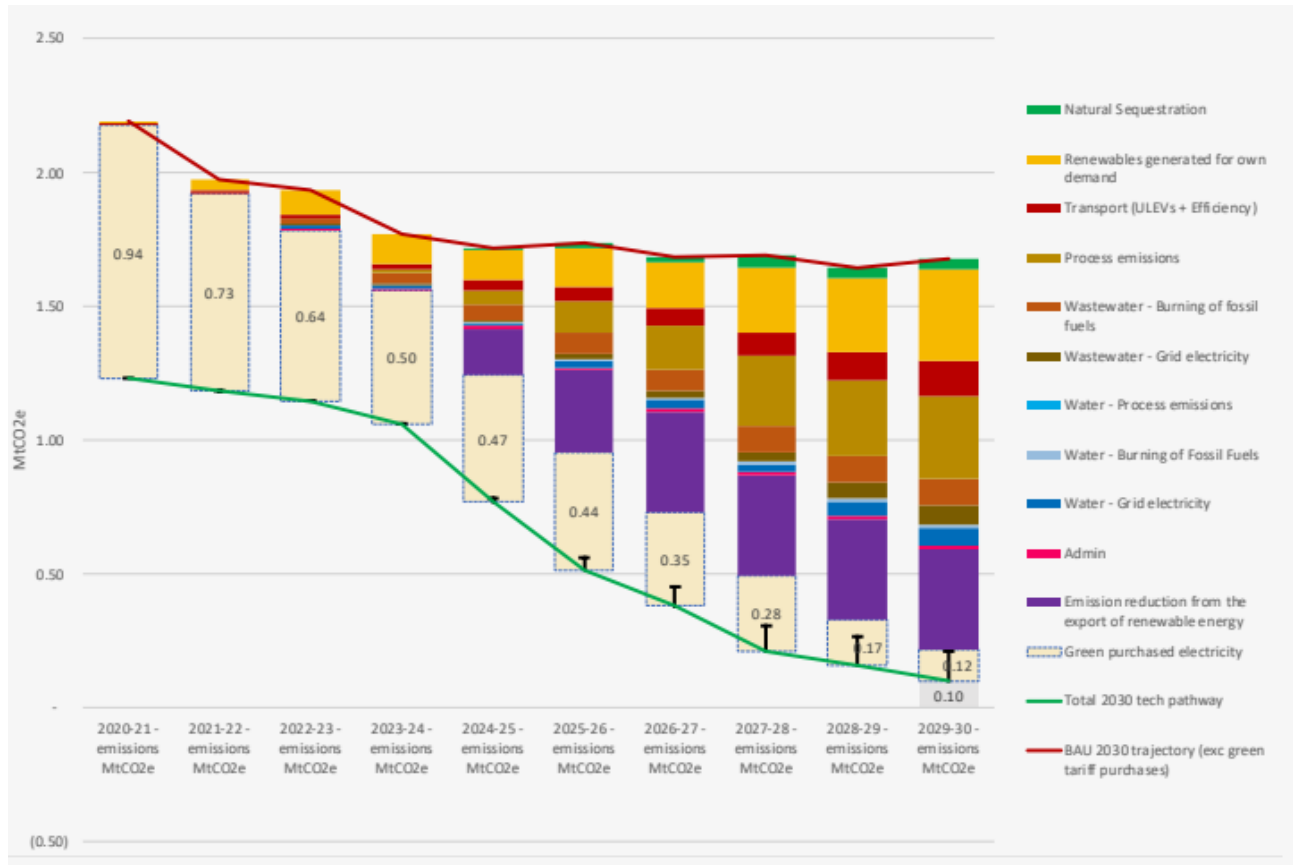
The water sector's GHG footprint



Source: Data from 2018-19 CAWs



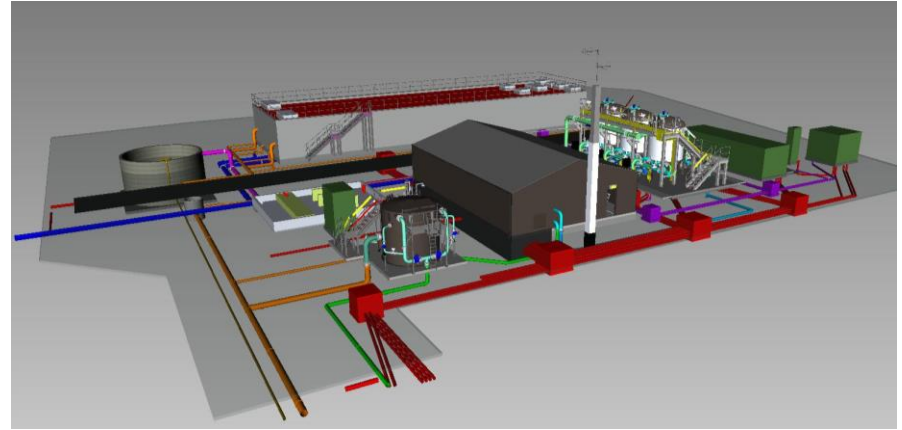
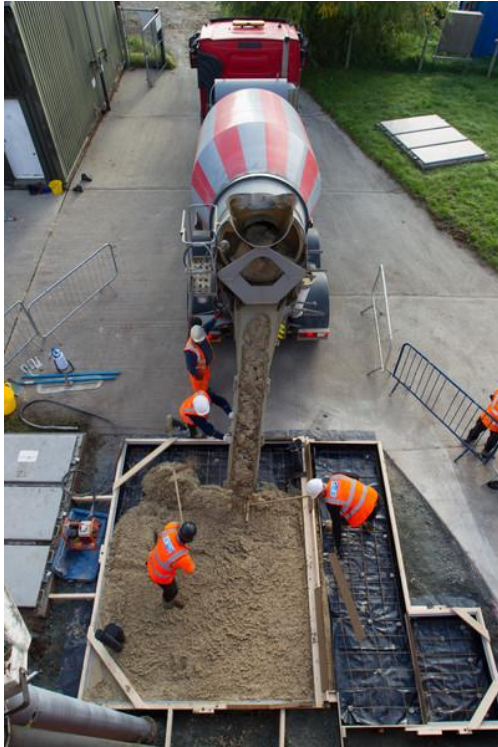
A pathway to net zero (technology-led)



Innovation challenge #1: process emissions



Innovation challenge #2: capital carbon



Target: **70% reduction**
by 2030 (vs 2010)

Next steps: embedding six-capitals thinking

SIX CAPITAL DECISION MAKING

We are creating a new approach that will ensure we always consider our wider impacts in our decision making, balancing financial objectives with social and environmental priorities.



PEOPLE



FINANCIAL



INTELLECTUAL



SOCIAL



MANUFACTURED



NATURAL

Thank you for listening



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Thank you!