

City Region and Regional Growth Deals

Whole Life Carbon Management

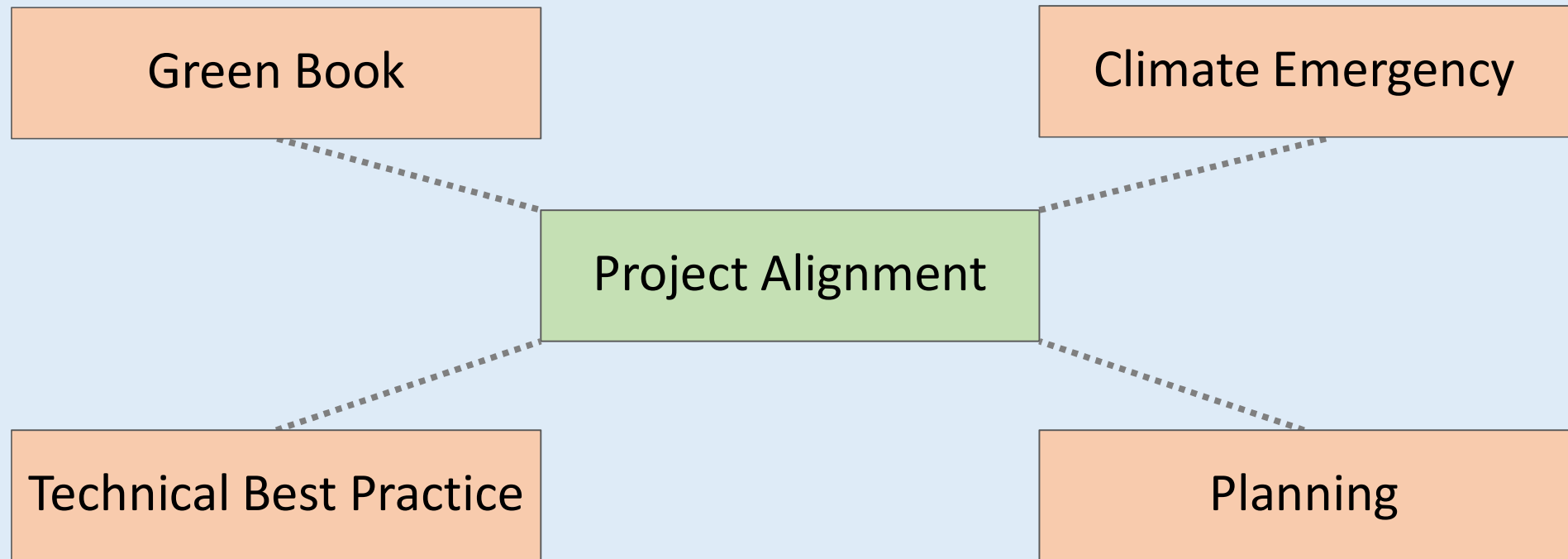
Lewis Barlow

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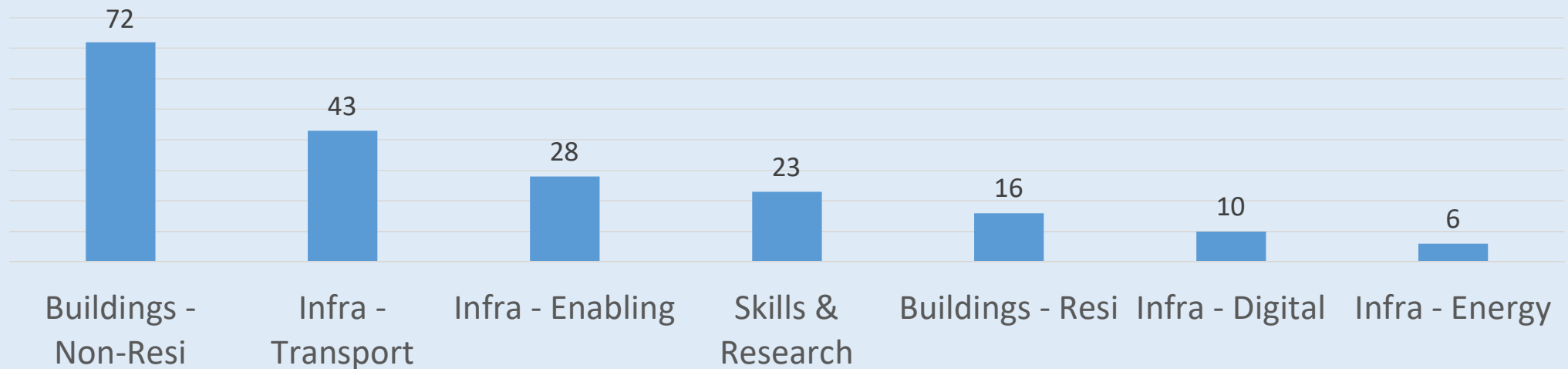
Joining the Dots



Scottish City Region and Growth Deals

- Long term, largely capital economic development programme covering the whole of Scotland
- Designed to drive inclusive, sustainable growth across our regional economies
- Delivered through a partnership between SG, UKG, local authorities, FE/HE, private sector and third sector

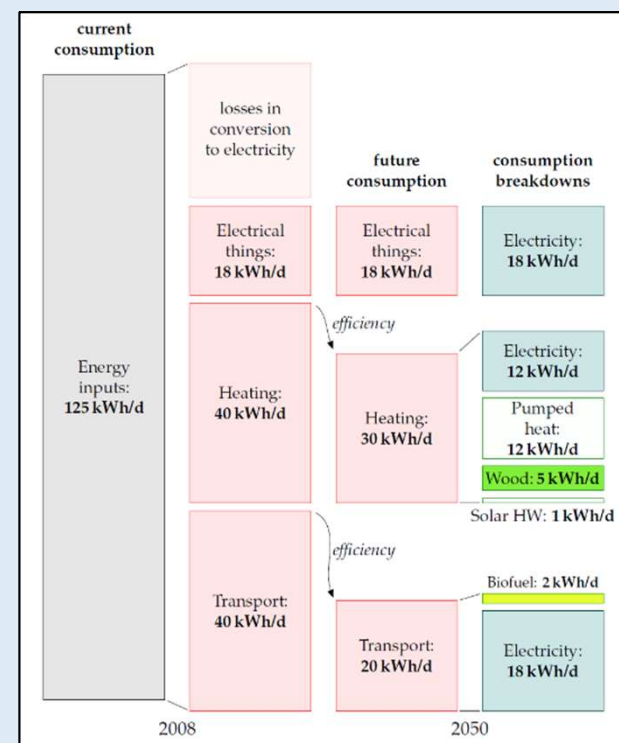
- 12 Deals
- 200 projects and programmes
- £1.9 billion SG commitment
- >£5 billion total investment



Key Objectives

1. Quantify project whole life carbon, direct & indirect
2. Minimise using best practice methodologies
3. Identify limits e.g. standards, technology, skills, materials
4. Feedback to accelerate wider net zero transition

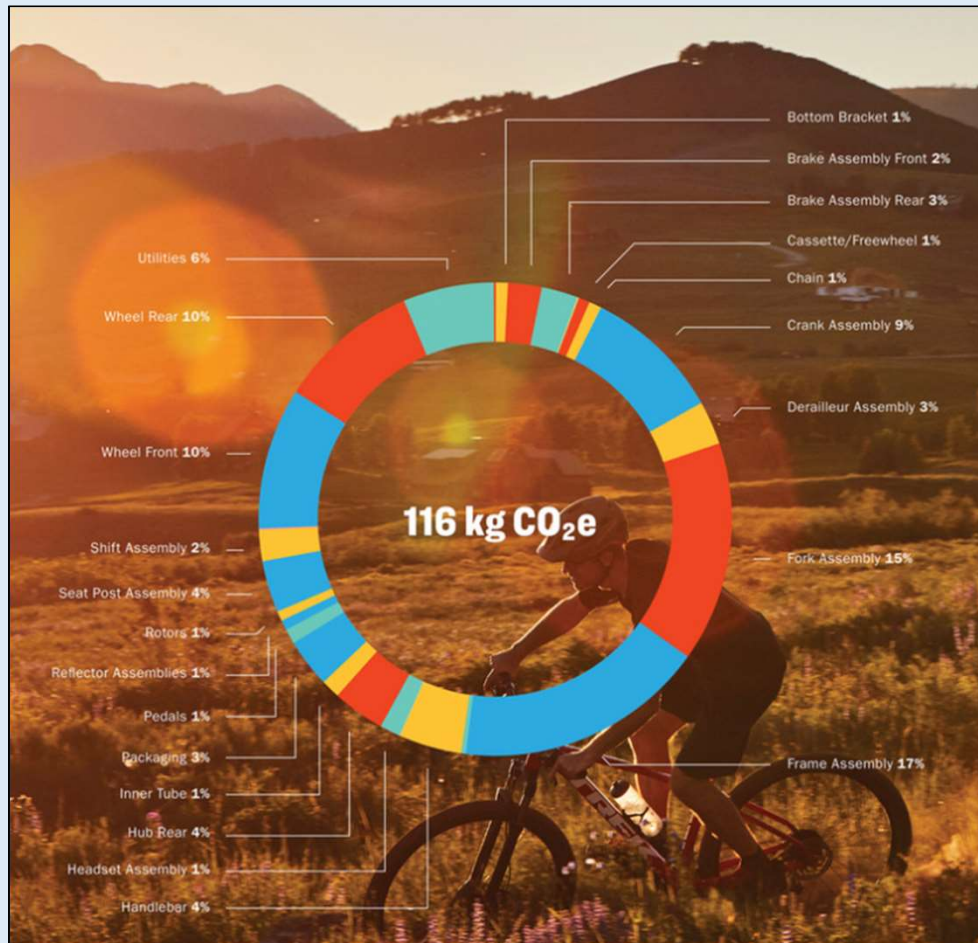
Numbers, Not Adjectives



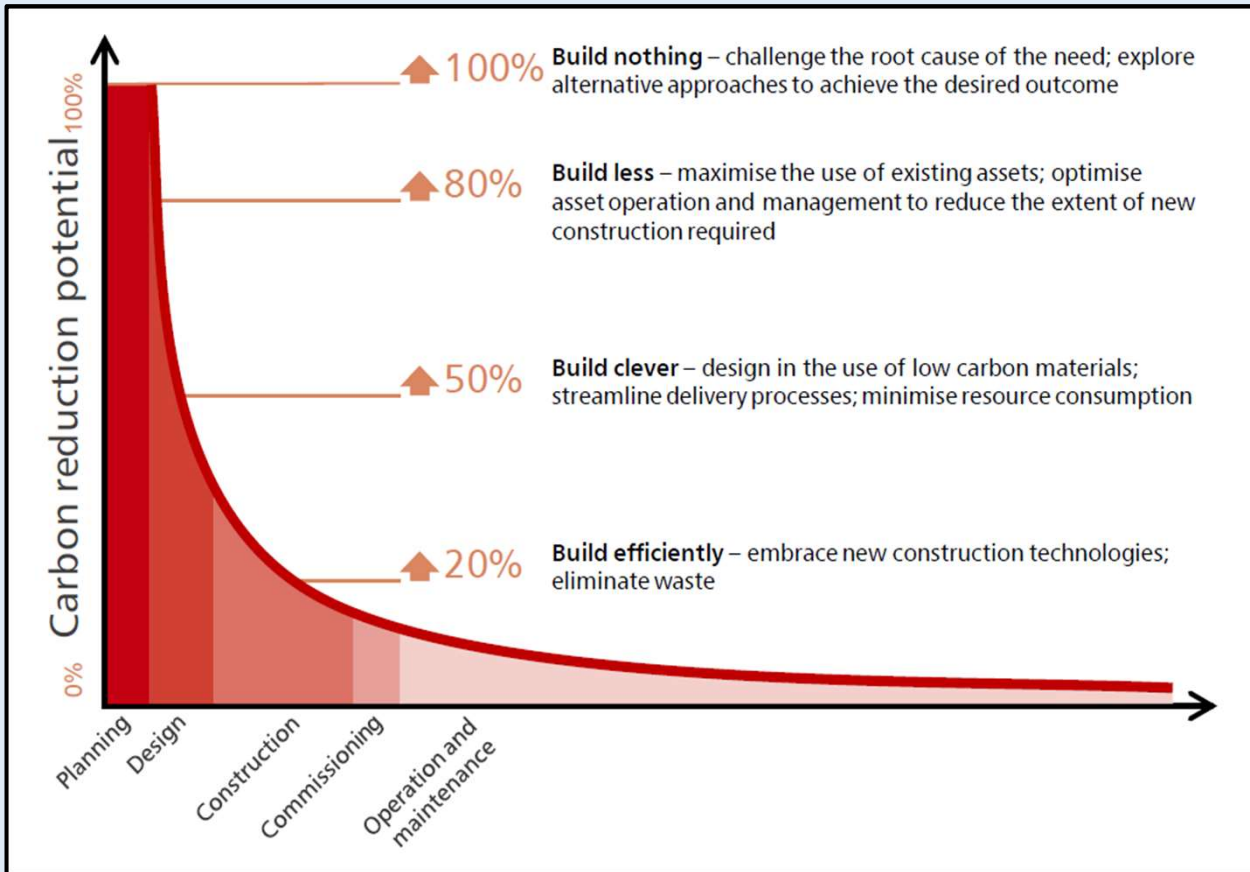
“I’m concerned about cutting UK emissions of twaddle”

- David Mackay

Whole Life Carbon Awareness

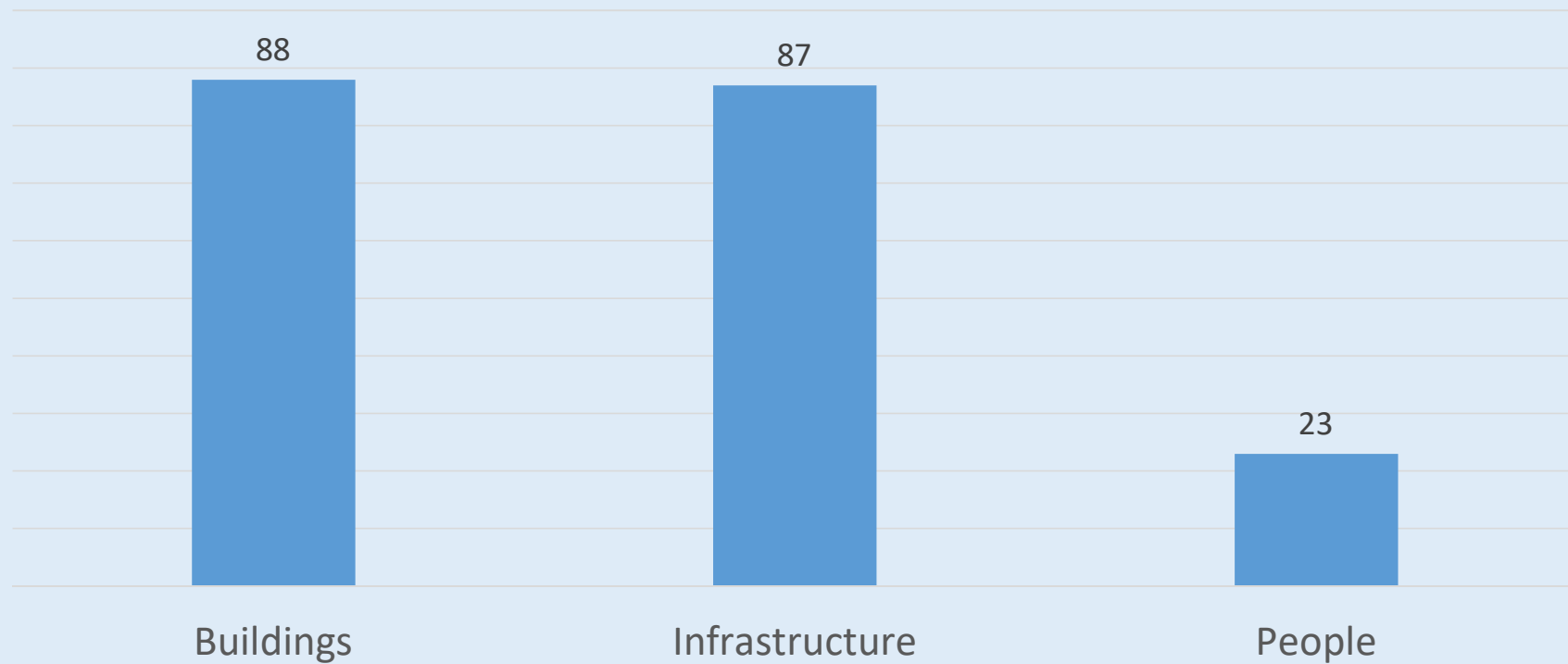


Infrastructure Carbon Review



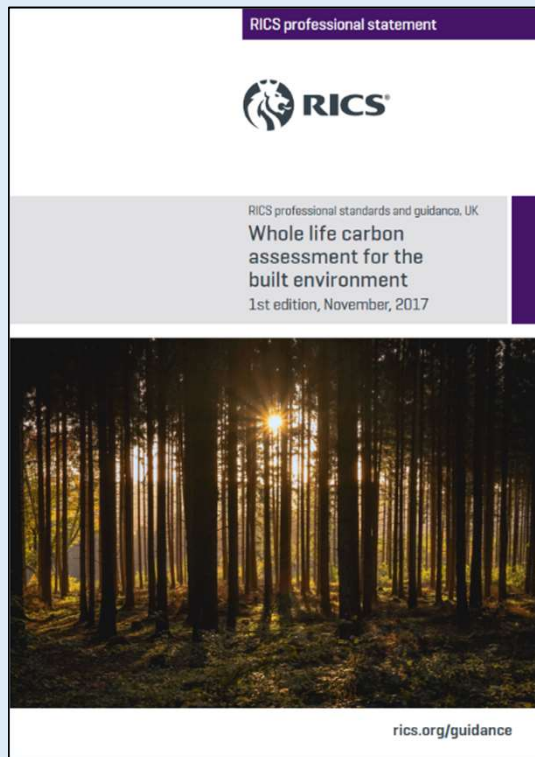
- Tackle carbon early
- Reduce carbon, reduce cost
- Supply chain involvement
- Strong leadership required

City Region and Regional Growth Deals: Projects

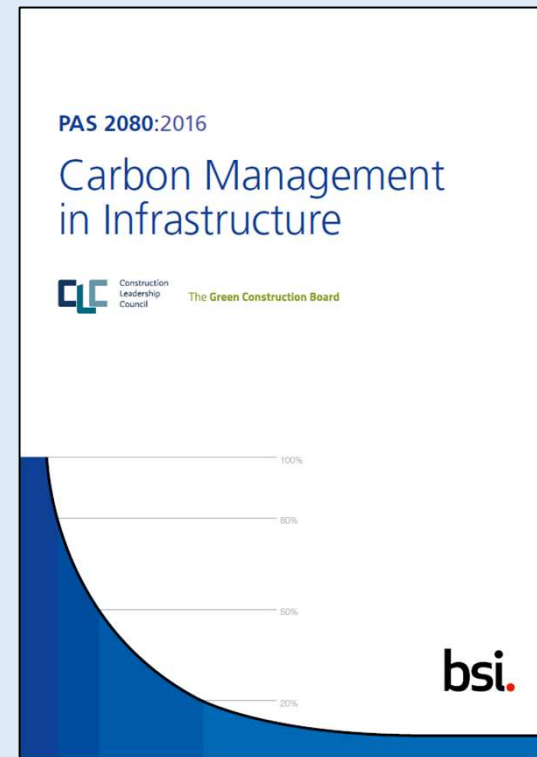


Carbon Management Procedures

Buildings



Infrastructure



Compatible with all best practice carbon management approaches

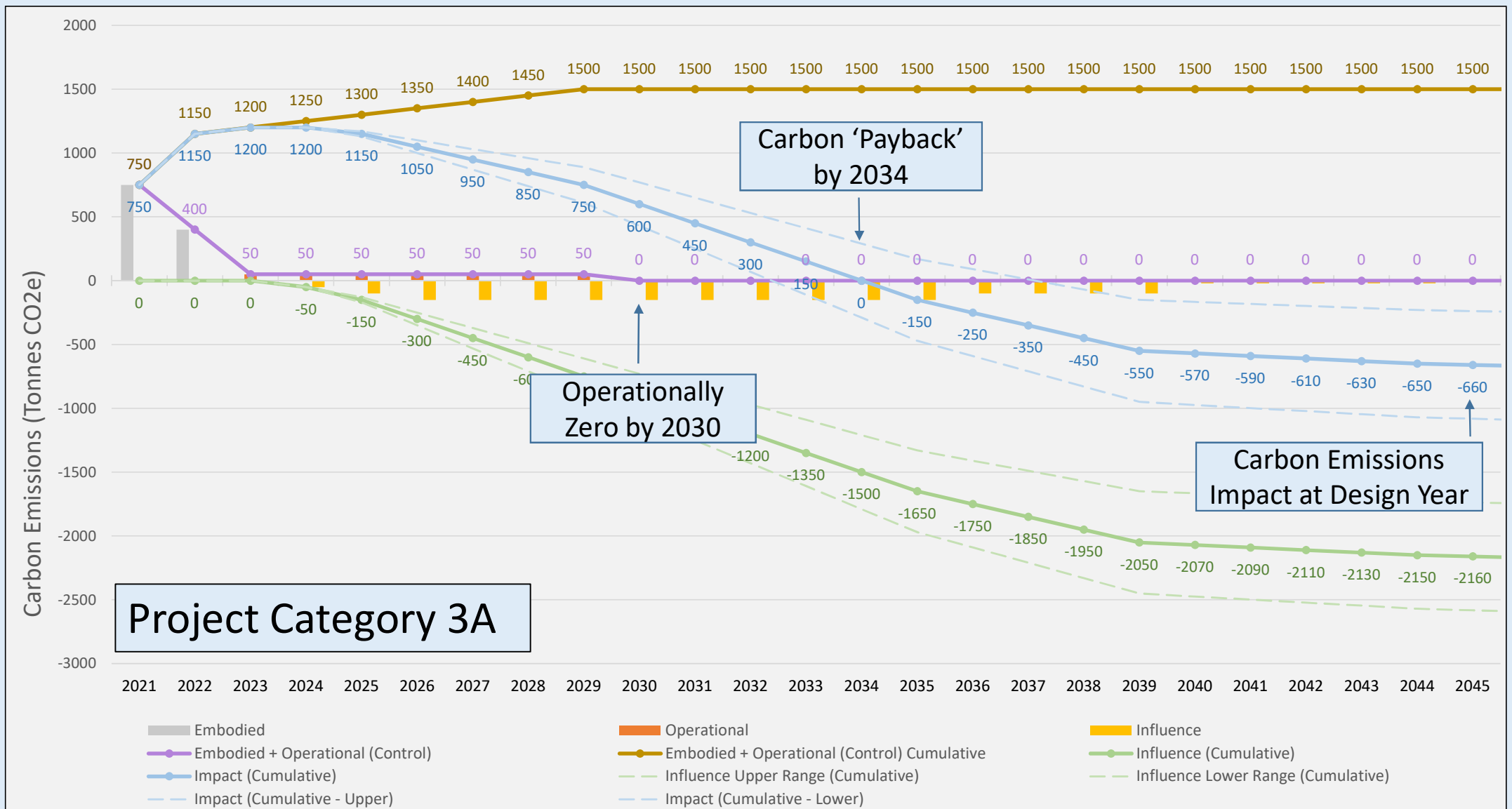
Carbon Emissions Impact: Control & Influence

Control: Where project owners have the ability to manage, through direct design and operational requirements, specific objectives for capital and operational carbon emissions

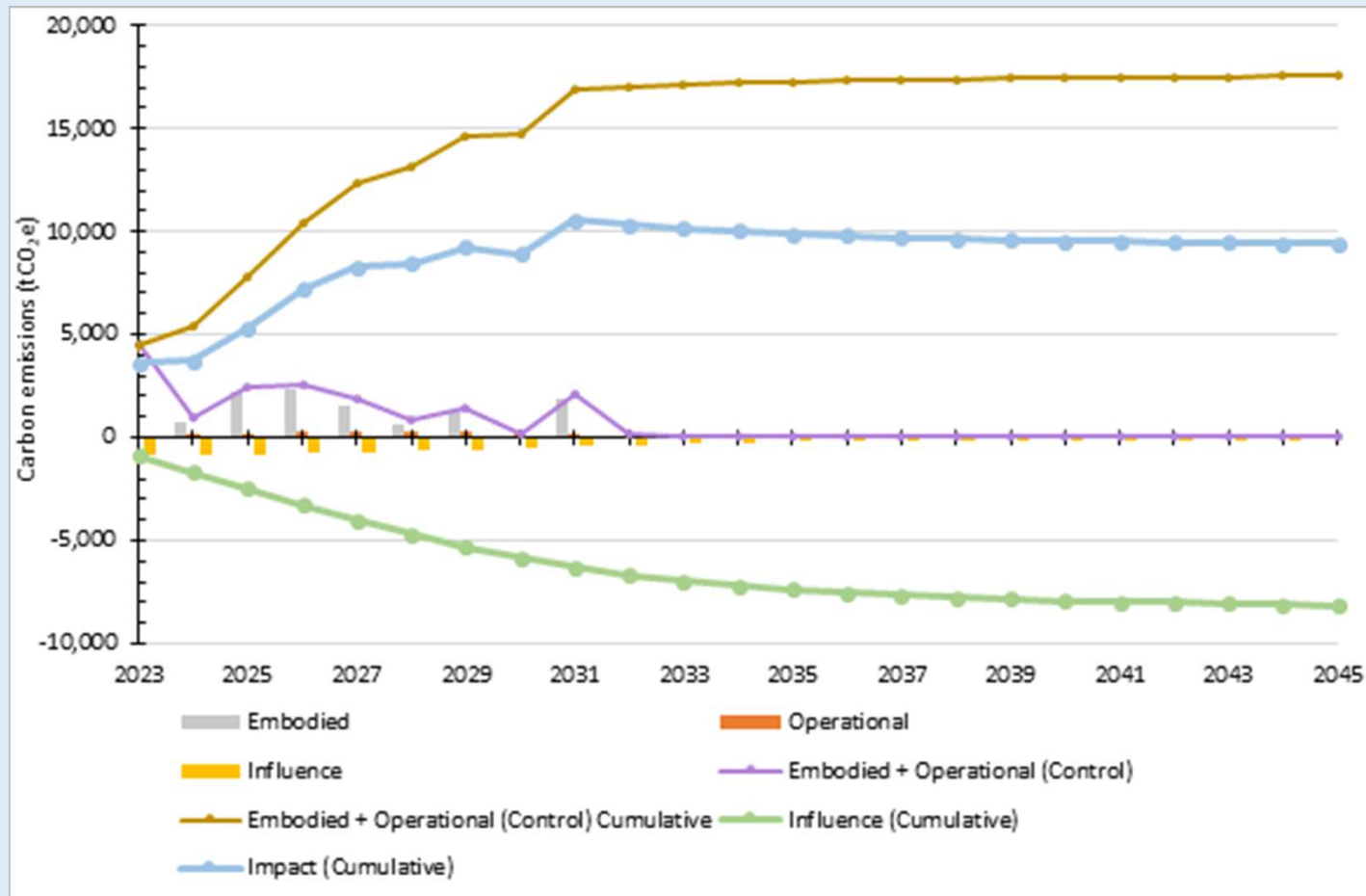
- 1: Whole life carbon negative
- 2: Whole life carbon net zero
- 3: Capital carbon increase, then operationally net zero
- 4: Capital and operational carbon increase
- 5: Operational carbon increase

Influence: Where the project may affect carbon emissions beyond the boundary of carbon control, e.g. through the use of project buildings or infrastructure.

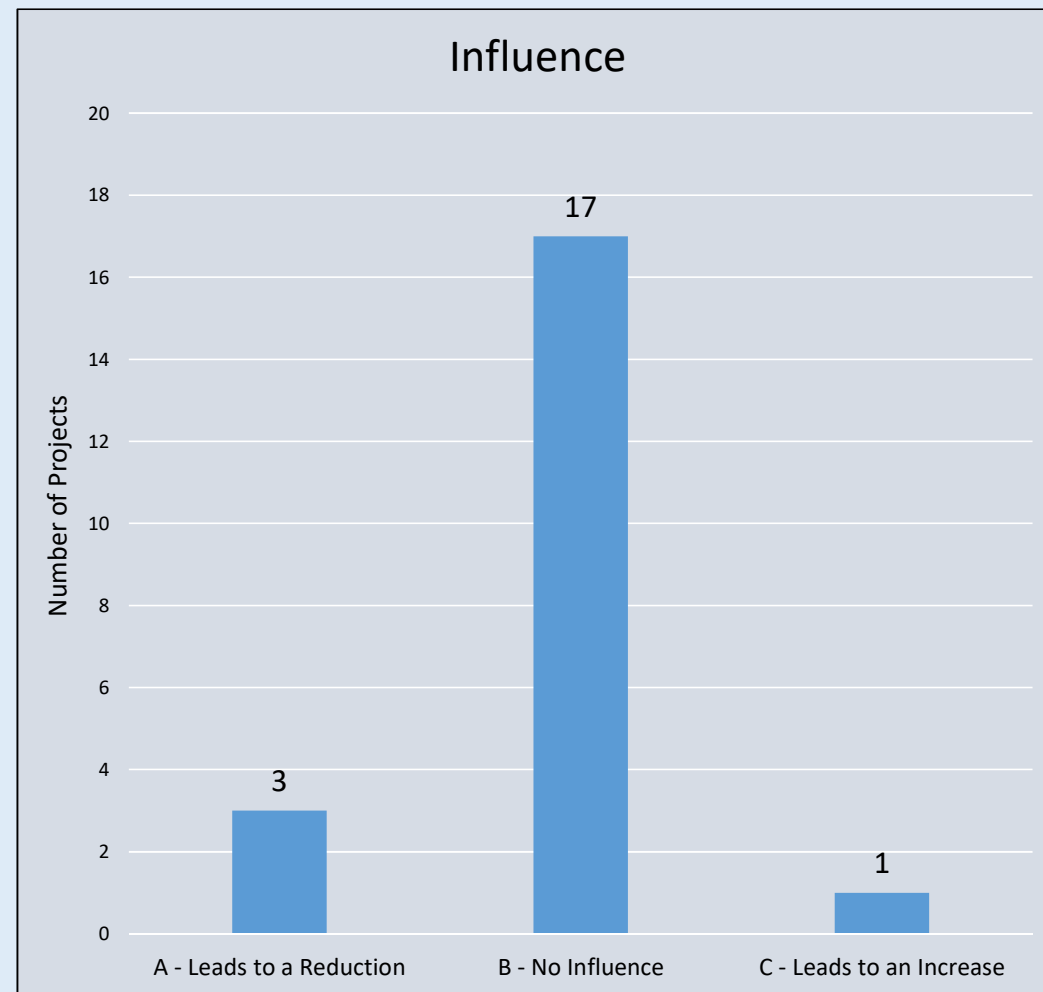
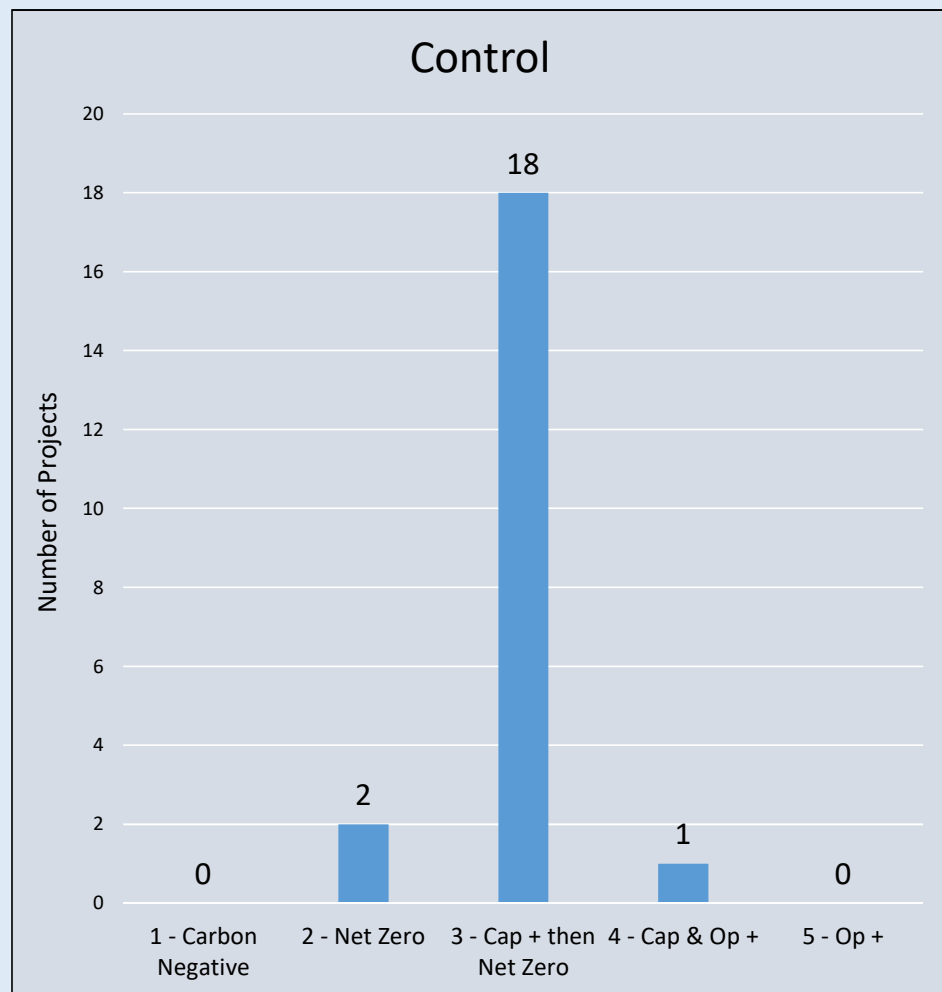
- A: Carbon savings, e.g. faster uptake of renewables
- B: Negligible, i.e. has no quantifiable influence
- C: Carbon increase, e.g. an increase in vehicle km



Example Project – Carbon Emissions Impact Graph



Example Deal – Project Carbon Categorisation



Green Book Carbon Requirements

HM Treasury, Green Book Review (Nov) 2020: Findings and Response

- Chapter 3: Appraising Environmental Impacts
- “Using the Green Book and supplementary guidance to appraise environmental policies”

Appraising policy to meet net zero

3.5 The UK's commitment to achieve net zero carbon emissions by 2050 provides a clearly defined strategic objective from which to develop strategies for tackling climate change, and portfolios, programmes and projects that can then be appraised using the new Green Book guidance. The changes set out in paragraphs 2.6-2.10 (and the actions for embedding them in appraisal, set out in Chapter 4, below) are as relevant to the delivery of net zero as they are to levelling up. As such, they will help ensure that interventions aimed at moving the UK towards the net zero target are appraised firstly in terms of their contribution to that target, as well as how well they deliver wider value for money.

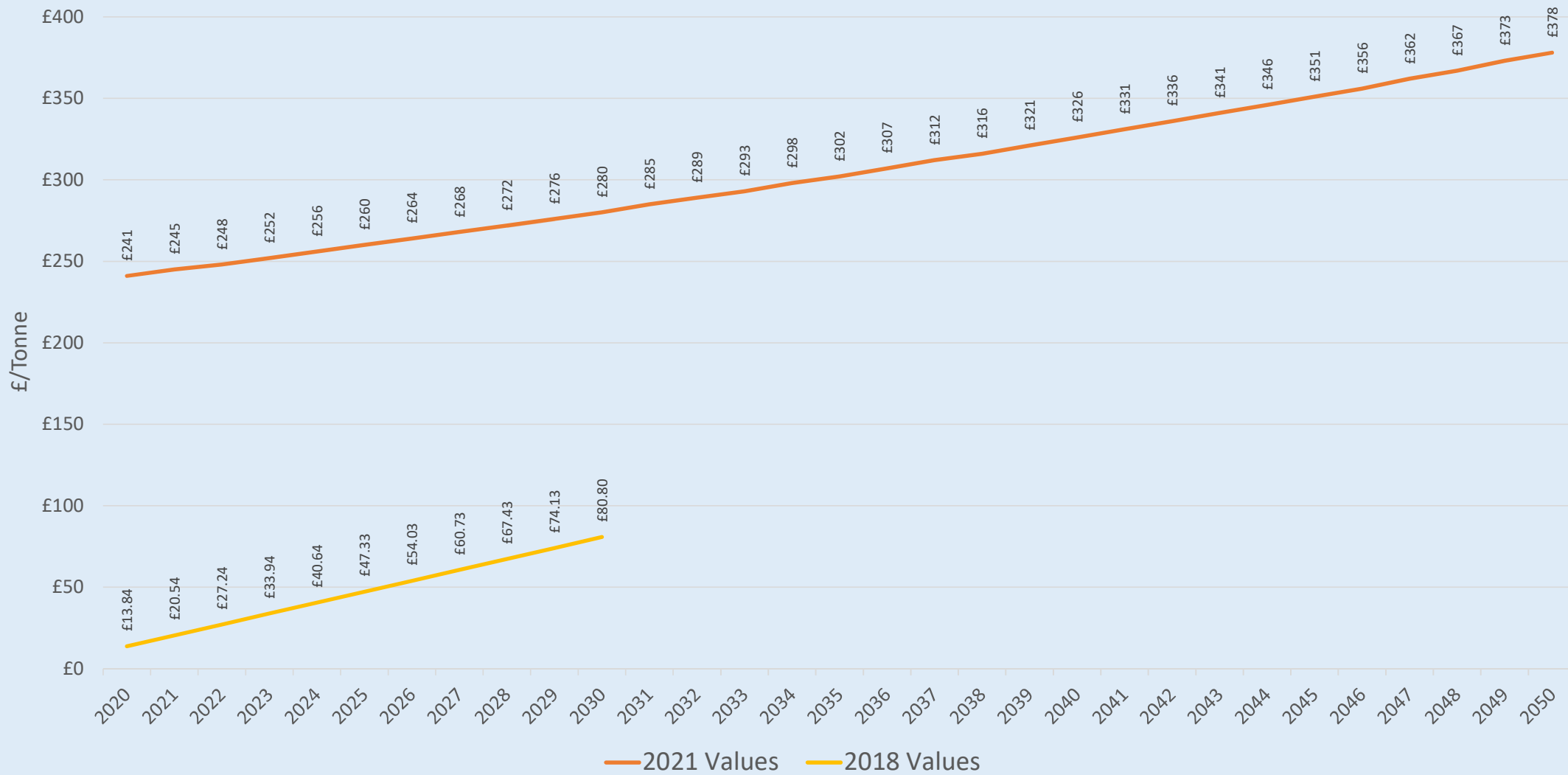
3.6 Furthermore, even where progressing the net zero target is not the primary objective of a proposal, appraisers should consider whether it acts as a relevant constraint, as highlighted in Box 2.A. Any environmental or carbon emissions impacts should also be captured in the economic case.

3.7 Carbon emissions should be assessed using the approach set out in BEIS Carbon Values². These values are calculated as the cost of removing an additional tonne of emissions from the atmosphere calibrated to a path of emissions consistent with meeting the UK's legal targets. Later this year, BEIS will publish an updated series of Carbon Values which are consistent with the UK's latest commitments under the Paris Agreement and Climate Change Act (2008).

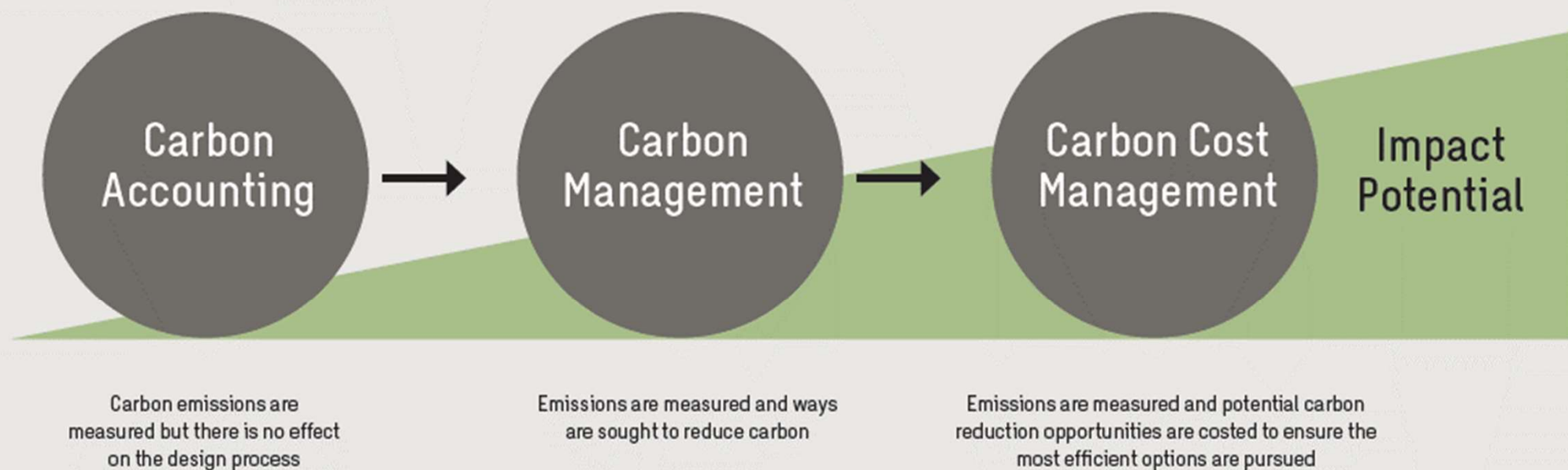
Green Book Carbon Requirements

- Business cases must quantify whole life carbon emissions (tonnes CO₂e)
- This is the *Carbon Emissions Impact* (tonnes CO₂e)
- Convert this to a financial cost using BEIS carbon values (£/tonne CO₂e)
- This is the *Carbon Emissions Impact Cost* (£)
- Include this in the Economic Case for all options
- Describe carbon management procedure in the Management Case
- BEIS carbon values have recently increased, making lower carbon options more economically viable

Department for Business, Energy & Industrial Strategy (BEIS) Carbon Values



THE EVOLUTION OF CARBON MANAGEMENT



Summary

- The Deals programme provides a unique opportunity to implement carbon management best practice at a national scale
- New carbon guidance reinforces existing processes and requirements
- Whole life carbon must be quantified and monetised in business cases
- Appropriate carbon management procedures should be in place for projects
- Guidance will be regularly updated based on policy and technical developments
- Best practice and lessons learnt will be communicated through the Deals network